

REDUPLICATION AS A COMPOUNDING PROCESS:
THE CASE OF [VV] CONVERBS IN TURKISH

ESRA YILDIZ

BOGAZİÇİ UNIVERSITY

2014

REDUPLICATION AS A COMPOUNDING PROCESS:
THE CASE OF [VV] CONVERBS IN TURKISH

Thesis submitted to the
Institute for Graduate Studies in the Social Sciences
in partial fulfillment of the requirements for the degree of

Master of Arts

in

Linguistics

by

Esra Yıldız

BOGAZİÇİ UNIVERSITY

2014

Thesis Abstract

Esra Yıldız, “Reduplication as a Compounding Process: The Case of [VV] Converbs in Turkish”

This study investigates the nature of Turkish [V(erb) V(erb)] constructions that are converbs (henceforth, [VV] converbs). Turkish [VV] converbs can bear various converbial markers and the ones focused in this study are constructed either with the imperative marker, the optative marker or the conjunctive marker.

This study argues that [VV] converbs are in fact compounds generated by the process of reduplication. To investigate their reduplicative status, Morphological Doubling Theory (MDT) of Inkelas and Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) is adapted in the study. MDT claims that the constituents of a reduplicative construction must have identical morphosyntactic features and they must be semantically-related. This study also shows that [VV] converbs are not ordinary reduplications because these structures have compound-like behaviors (e.g. inseparability).

This study further argues that being both reduplications and compounds renders [VV] converbs co-compounds (i.e. a sub-type of compounds). The model of Wälchli (2005) is adopted to explain their co-compound status. Wälchli (2005) claims that natural coordination (i.e. coordination of items which are expected to co-occur) and double-headedness mark co-compounds as a distinct class among compounds.

Moreover, the present study aims to investigate whether [VV] converbs in Turkish are constructed in phonology, morphology or syntax. After considering all three, this study proposes that only syntax appears to account for all of [VV] converbs properties.

All these theoretical considerations are made on data collected from dictionaries, the TS corpus (<http://tscorpus.com/tr>) and various blogs on the internet. This data shows that [VV] converbs are highly frequent and productive.

Tez Özeti

Esra Yıldız, “Birleşik fiil üretim yöntemi olarak ikileme: Türkçe’de zarf fiiller”

Bu çalışma, Türkçe’de iki fiilin bir araya gelmesiyle oluşan zarf fiillerin yapısını araştırmaktadır. Bu tür yapılar değişik zarf fiil ekleri taşıyabilirler ama bu çalışmada ele alınan zarf fiil yapıları sadece emir kipi, istek kipi ve bağlama ekiyle kurulabilen yapılardır.

Bu çalışma, söz konusu zarf fiil yapılarının ikileme yoluyla üretilen eşbağımlı birleşik fiil yapıları olduğunu iddia etmektedir. Bu yapıların ikileme özelliğini incelemek için Inkelas & Zoll (2000, 2005) ve Inkelas (2005, 2008, 2014)’ın Biçimbirimsel İkileme Teorisi’nden yararlanılmıştır. Sözü edilen teoriye göre ikilemeyi oluşturan parçaların aynı biçimbirimsel ve sözdizimsel özelliklere sahip olması ve anlamsal olarak ilişkili olması gerekmektedir. Ayrıca bu çalışma söz konusu zarf fiil yapılarının sıradan ikilemeler olmadığını göstermektedir, çünkü bu yapılar ikilemeyi oluşturan iki parçanın arasına bir başka söz veya söz grubunun girmesini engelleyerek birleşik kelimeler gibi davranmaktadır.

Bu çalışma aynı anda ikileme ve birleşik fiil olmanın söz konusu zarf fiil yapılarını eşbağımlı birleşik fiil kıldığını öne sürmektedir. Bu yapıların eşbağımlı birleşik fiil olduklarını açıklamak için Wälchli (2005)’in eşbağımlı birleşik kelime modeli benimsenmiştir. Wälchli (2005) eşbağımlı birleşik kelimelerin ayrı bir kategori olarak sınıflandırılmasını sağlayan iki önemli kriterden söz etmektedir. Bunlardan birincisi yapıyı oluşturan parçalar arasında doğal bir bağlanma ilişkisi olmasıdır. Bir başka deyişle, parçaların birbirleriyle ilişkili olması ve bir arada kullanımlarının beklenen bir durum olmasıdır. Diğer kriter ise yapının iki başlı olmasıdır.

Ayrıca bu çalışma söz konusu zarf fiil yapılarının nerede oluştuklarını da incelemektedir. Sesbilgisi, biçimbilgisi ve sözdizim ayrı ayrı ele alındıktan sonra bu çalışma sözdizimin söz konusu zarf fiil yapılarına en iyi açıklamayı getirdiğini ileri sürmektedir.

Bütün bu teorik iddialar sözlüklerden, derlemden ve çeşitli internet sitelerinden toplanan verilere uygulanmıştır. Bu veriler Türkçe’de zarf fiil yapılarının oldukça sık kullanılan üretken yapılar olduğunu ortaya koymuştur.

ACKNOWLEDGMENTS

I would like to thank my thesis advisor Aslı Göksel and my committee members Didar Akar and Nihan Ketrez for their guidance. I also would like to thank Balkız Öztürk and Aysun Kunduracı for their valuable comments and Orhan Bilgin who helped me so much with the TS corpus.

I would like to especially thank Treysi Terziyan and her household. She and her grandmother opened their home to me, they prayed for me, they showed me patience. But most importantly they believed in me and believed that I can successfully finish this thesis. Treysi became my other advisor. I can never repay her for her contribution. In my heart, this thesis also needs her signature on the approval page.

I also would like to thank Ömer Demirok. He never hesitated to answer my questions and he always provided me with important comments. I owe special thanks to my other linguistic fellows Betül Erbaşı, Faruk Akkuş, Begüm Avar, Yağmur Sağ, Derya Nuhbalaoğlu, Emre Hakgüder and my non-linguistic fellows Seda Yücekurt, Zeynep Kürük, Atak Ayaz, Çağrı Çevrim, Hazel Öргеç, Kübra Öztürk and to everyone who supported me somehow.

It goes without saying that without my family none of this would be possible. Last but definitely not least, I would like to thank my AnG who never gave up supporting me and showed me extraordinary patience during my writing period.

CONTENTS

CHAPTER 1: INTRODUCTION	1
CHAPTER 2: LITERATURE REVIEW	9
2.1 Reduplication	9
2.1.1 Functions of Reduplication	10
2.1.2 Forms of Reduplication	14
2.1.3 Meanings of Reduplication	17
2.1.4 The Component that Generates Reduplications	20
2.1.5 Repetition vs. Reduplication	27
2.2 Compounds	30
2.2.1 Basics of Compounds	30
2.2.1.1 Phonological Criteria	32
2.2.1.2 Semantic Criteria	35
2.2.1.3 Morphological Criteria	35
2.2.1.4 Orthographic Criteria	36
2.2.1.5 Syntactic Criteria	36
2.2.2 Compound Types	38
2.2.3 The Head in Compounding	39
2.2.4 Against a Unitary Head-Notion	40
2.2.4.1 Semantic Head in a Compound	41
2.2.4.2 Categorial Head in a Compound	42
2.2.4.3 Morphological Head	43
2.2.5 The Classification of Compounds	44
2.2.6 Theoretical Approaches to Compounding	46
2.2.6.1 The Lexicalist Approach to Compounding	47
2.2.6.2 The Syntactic Approach to Compounding	53
2.3 Co-Compounds	56
2.3.1 The Formal Properties of Co-Compounds	58
2.3.2 The Semantic Properties of Co-Compounds	61
2.3.2.1 Natural Coordination	61
2.3.2.2 Accidental Coordination	62
2.3.3 A Semantic Classification of Co-Compounds	63
2.4 Conclusion	64
CHAPTER 3: REDUPLICATIONS, COMPOUNDS AND CO-COMPOUNDS IN TURKISH	65
3.1 Turkish Reduplications	65
3.1.1 Different Types of Reduplications	66
3.1.1.1 Emphatic Reduplications	66
3.1.1.2 <i>m</i> -Reduplications	66
3.1.1.3 Onomatopoeic	66
3.1.1.4 Identical Doubling with Parallel Inflection	67
3.1.1.5 Identical Doubling with Separate Inflection	67
3.1.1.6 Non-Identical Doubling with Synonymous Constituents	67
3.1.1.7 Non-Identical Doubling with Antonymous Constituents	68
3.1.1.8 Non-Identical Doubling with Semantically Related Constituents	68
3.1.1.9 Interrupted Doubling	68
3.1.1.10 Non-Local Doubling	68
3.1.2 Different Kinds Relationships Between the Constituents of Reduplications	69
3.1.2.1 Phonological Reduplications	69
Emphatic reduplications	69
M-reduplication	69

Onomatopoeic reduplications	70
Doubling	70
3.1.2.2 Semantic Reduplications	72
Synonymous Reduplications	72
Antonymous Reduplications	72
Semantically-Related Reduplications	73
3.1.3 Reduplications as Various Lexical Categories	73
3.1.3.1 As Nouns	74
3.1.3.2 As Adjectives and Adverbs	74
3.1.3.3 As Only Adverbs	75
3.1.3.4 As Verbs	77
3.1.4 Reduplication as a Derivational Process vs. an Inflectional Process	78
3.1.5 Formal Properties of Reduplications	79
3.1.5.1 The Constraint of (No More or No Less) Two Constituents	80
3.1.5.2 The Inseparability of the Two Constituents	80
3.1.5.3 The Fixed Order of the Two Constituents	81
3.2 Turkish Compounds	82
3.2.1 Different Types of Turkish Compounds	83
3.2.2 Lexical Categories of Compounds	85
3.2.2.1 As Nouns	85
3.2.2.2 As Adjectives	86
3.2.2.3 As Adverbs	86
3.2.2.4 As Verbs	87
3.2.3 Derivational vs. Inflectional Functions	87
3.2.4 Different Kinds Semantic Relationships Between the Compound and Its Constituents	87
3.2.5 Formal Properties of Compounds	89
3.2.5.1 The Constraint of Having (Almost) Always Two Constituents	89
3.2.5.2 The Inseparability of the Two Constituents	90
3.2.5.4 Stress as a Distinctive Property Among Compounds	93
3.3 Turkish Co-Compounds	94
3.3.1 Lexical categories of Turkish Co-Compounds	95
3.3.2 Derivational vs. Inflectional Functions	95
3.3.3 Different Kinds Semantic Relationships Between the Constituents of Co- Compounds	95
3.3.4 Formal Properties of Co-Compounds	96
CHAPTER 4: DATA AND METHODOLOGY	98
4.1 The Relationships Between the Constituents of [VV] Converbs	99
4.1.1 Identical Doubling	100
4.1.2 <i>m</i> -Reduplication	100
4.1.3 Non-Identical Doubling	101
4.2 Formal Properties of [VV] Converbs	102
4.2.1 The Constraint of (No More or No Less) Two Constituents	102
4.2.2 The Inseparability of the Two Constituents	103
4.2.3 The Fixed Order of the Two Constituents	104
4.2.4 Stres Patterns	104
4.3 Converbial Markers	105
4.3.1 [V.IMP V.IMP] Converbs	105
4.3.2 [V-OPT V-OPT] Converbs	107
4.3.3 [V-CNJ V-CNJ] Converbs	109
4.4 Methodology	109
4.5 Data Report	110
4.5.1 [VV] Converbs with Identical Constituents	110

4.5.2 [VV] Converbs with Near Identical Constituents: <i>m</i> -reduplications	111
4.5.3 [VV] Converbs with Non-Identical Constituents.....	112
4.5.4 The Converbial Markers Constituting [VV] Converbs.....	114
4.5.4.1 Converbial Imperative marker	114
4.5.4.2 Converbial Optative marker.....	115
4.5.4.3 Converbial Conjunctive marker	115
4.6 Conclusion	115
CHAPTER 5: THE INTERNAL STRUCTURE OF [VV] CONVERBS.....	116
5.1 [VV] Converbs as Reduplications	116
5.1.1 Requirement 1: Identical Argument Structure	117
5.1.2 Requirement 2: Case-Matching	122
5.1.3 Requirement 3: Theta-Role Matching.....	124
5.1.4 Identical Inflection Markers.....	125
5.1.5 Different Categories of [VV] Converbs.....	127
5.1.5.1 Semantically Synonym	127
5.1.5.2 Semantically Identical.....	129
5.2 [VV] Converbs as Compounds.....	131
5.3 [VV] Converbs as Co-Compounds.....	138
5.4 Conclusion	144
CHAPTER 6: [VV] CONVERBS AS ADVERBIAL CLAUSES	145
6.1 Phonological Approach to [VV] Converbs.....	145
6.2 Morphological Approach to [VV] Converbs.....	146
6.3 Syntactic Approach to [VV] Converbs.....	148
6.3.1 Evidence for VP Layer.....	148
6.3.2 Evidence Against VP Coordination and AdvP Coordination	149
6.3.4 Further Evidence for VP Layer.....	154
6.3.5 Evidence for vP Layer.....	155
6.3.6 Evidence Against a Layer Encoding Tense (TP Layer).....	157
6.3.7 Evidence for a Layer Encoding Aspect (AspP Layer).....	158
6.3.8 Evidence for AdvP Layer and Explanation for Parallel Inflection	162
6.3.8.1 The IMP...IMP Converbial Marker.....	165
6.3.8.2 The ...-OPT...-OPT Converbial Marker	172
6.3.8.3 The ...-CNJ...-CNJ Converbial Marker	174
6.4 Conclusion	177
CHAPTER 7: CONCLUSION AND DISCUSSION.....	179
7.1 The Summary of the Findings	179
7.2 Limitations of the Study	180
7.3 Questions for Further Research	181
REFERENCES.....	183
APPENDIX.....	191

FIGURES

1. Semantic categorization of compounds.....	45
2. Halle (1973)'s model.....	48

TABLES

1. A semantic classification of co-compounds.....	63
2. The various semantic types of [VV] _{Adv} co-compounds in Turkish.....	142

ABBREVIATIONS

ABIL	ability marker	LOC	locative case
ABL	ablative case	N	noun
ACC	accusative case	NEC	necessity
Adj	adjective	NOM	nominalizer
ADJ	adjectivizer	NEG	negative
Adv	adverb	NEG.AOR	negative aorist marker
AOR	aorist	NEG ABIL	negative ability marker
AUX	auxiliary verb	OBLG	obligative
CAUS	causative	OPT	optative
COM	comitative	PART	participle
COND	conditional	PASS	passive
COND.COP	conditional copula	P.COP	past copula
CNJ	conjunctive	PF	perfective
COP	copula	PL	plural
CNV	converb marker	POSS	possessive
DAT	dative case	PROG	progressive
DEF	definite	PRON	pronominalizer
DER	derivational suffix	PSB	possibility
DET	determiner	REC	reciprocal
DIM	diminutive	RED	reduplication
NUM	enumerator	REF	reflexive
EV.COP	evidential copula	REL	relativizer
EV/PF	evidential/perfective	S	singular
FUT	future	SUB	subordinator
GEN	genitive	QP	question particle
HAB	habitual	T	tense
IMI	imitation	TAM	tense/aspect/modality
IMP	imperative	V	verb
INDEF	indefinite	VERB	verb deriving suffix
INF	infinitival	1 st	first person
INS	instrumental	2 nd	second person
INT	interrogative	3 rd	third person
lit.	literally	Ø	zero

CHAPTER 1

INTRODUCTION

This study aims to investigate the nature of a particular group of Turkish [V(erb) V(erb)] constructions that are converbs (henceforth, [VV] converbs). Converbs are nonfinite verbs that constitute adverbial clauses (Haspelmath, 1995). [VV] converbs are a specific kind of converb that are composed of reduplicated verbs. The [VV] converbs investigated in this study are given in (1-3).

- (1) a. *Yaz yaz bit-ir-e-me-di-m ödev-i.*
write.IMP write.IMP end-CAUS-NEG ABIL-NEG-PAST-1st S homework-ACC
“I could not finish the homework although I had worked on (it) for hours.”

b. *Sabah-tan beri yaz çiz kol-um yor-ul-du.*
morning-ABL since write.IMP draw.IMP arm-1st S tire-PASS-PAST
“My arms are tired because I have been writing and drawing (things) since this morning.”
- (2) a. *Yaz-a yaz-a ezberle-di-m.*
write-OPT write-OPT memorize-PAST-1st S
“I memorized (it) by writing and rewriting (it).”

b. *Yaz-a çiz-e anlat-tı.*
write-OPT draw-OPT tell-PAST
“He/she explained (it) by writing and drawing (it).”
- (3) a. *Mesaj yaz-ıp yaz-ıp kız-ı sinirlen-dir-di.*
message write-CNJ write-CNJ girl-ACC make angry-CAUS-PAST
“He/she made the girl by texting her again and again.”

b. *Gazete-ler-de yaz-ıp çiz-ip para kazan-ıyor.*
newspaper-PL-LOC write-CNJ draw-CNJ money earn-PROG
“He/she earns money by writing and drawing (things) for newspapers.”

Note that [VV] converbs can have either identical constituents (1-3)a or non-identical constituents (1-3)b. Turkish [VV] converbs can be constructed with various converbial markers; however, this study focuses on the converbial markers seen in (1-3). The

constituents of [VV] converbs in (1) are marked by the imperative marker {-Ø} on both sides and they are represented as [V.IMP V.IMP] throughout the study. The constituents of [VV] converbs in (2) are marked by the optative marker -(y)A and they are represented as [V-OPT V-OPT] throughout the study. The constituents of [VV] converbs in (3) are marked by the conjunctive marker -(y)Ip and they are represented as [V-CNJ V-CNJ] throughout the study.

In addition to the [VV] converbs in the focus of this study, there are also other [VV] converb structures in Turkish (4). This study has been restricted to only cover [VV] converbs with imperative, optative and conjunctive markers. These other types of [VV] converbs were not included in this study due to the following reasons: [VV] converbs in (4)a and (4)b do not bear parallel inflection and [VV] structures in (4)c and (4)d are actually part of a triplication construction (i.e. in these constructions the verb is repeated three times and the main verb and the verbs in [VV] structures have to be identical).

- (4) a. *Dur-up dur-urken* kavga et-ti-k.
 stop-CNJ stop-CNV fight-PAST-1st PL
 “We had a fight without there being a reason.”
- b. *Gel-ir gel-mez* Ahmet’i ara-dı-m.
 come-AOR come-NEG AOR Ahmet-ACC call-PAST-1st S
 “I called Ahmet as soon as I came (home).”
- c. *Bu iş-i yap-sa yap-sa* Ahmet yap-ar.
 this job-ACC do-COND do-COND Ahmet do-AOR
 “Only Ahmet can do this job.”
- d. *Al-a al-a* bu araba-yı al-mış.
 buy-OPT buy-OPT this car-ACC buy-EV/PF
 “He/she bought this car among all other choices.”

Besides [VV] converbs, there are other reduplicated verb constructions and these are also not included in this study (5). These verbs in these reduplicated constructions are finite¹ because they bear person markers. Moreover, they may be used in adverbial (5)a-c or verbal functions (5)d-f. The ones that are used in adverbial functions (5)a-c are not considered to be converbs

¹ Sezer (2001) states that a finite verb form has to bear at least tense marker and also agreement marker (p. 4).

because they are not nonfinite. Note that the imperative and the optative marker are used in converbial function in [VV] converbs and they do not bear any person marker; therefore, these markers cannot be analyzed as TAM markers.

- (5) a. *Oku-du-m moku-du-m hesap yap-a-ma-dım.*
read-PAST-1st S IMI-PAST-1st S calculation do-ABIL-NEG-PAST-1st S
“Even though I studied hard, I was not able to calculate (it).”
(<http://www.skiciyiz.biz/67684-post57.html>)
- b. *Çalış-mış-sın çalış-mış-sın anla-ma-mış-sın.*
work-EV/PF-2nd S work-EV/PF-2nd S understand-NEG-EV/PF-2nd S
“Eventhough you studied a lot, you were not able to understand (the material).”
- c. *Düşün-ür taşın-ır ev-i al-ma-ya karar ver-ir.*
think-AOR-1st S ponder-AOR-1st S house-ACC buy-NOM-DAT decision
give-AOR-1st S
“He/she decides to buy the house after thinking about it for a while.”
- d. *Ağlı-yor inli-yor ama anne-si-n-i kan-m-ıyor.*
cry-PROG moan-PROG but mother-3rd S POSS-ACC deceive-NEG-PROG
“He/she is crying and moaning but his/her mother is not buying (it).”
- e. *Gid-eceğ-im de gid-eceğ-im.*
go-FUT-1st S also go-FUT-1st S
“I will definitely go.”
- f. *Bütün gün uyu-yor-um uyu-yor-um sonra gece uyku-m gel-mi-yor.*
whole day sleep-PROG-1st S sleep-PROG-1st S after night sleep-1st POSS S
come-NEG-PROG
“I sleep all the day but then I cannot sleep at night.”

The [VV] converbs investigated in this study have been differentiated from other types of [VV] converbs and other kinds of [VV] constructions because they are unique in that they are a special kind of reduplication. First, their status as reduplications will be explained and second, how they are special will be elaborated on.

In this work three models will be taken as the basis for describing the structure of [VV] converbs. The morphosyntactic model of Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) will be used to explain the internal syntactic structure of [VV] converbs. To understand their semantic properties, Wälchli (2005)’s natural coordination will be

considered. To explain their structural properties, Keenan (1987) and Baker (2005) will be adopted. Based on their works, a phrase structure representation will be provided for these [VV] converbs.

The first model by Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) is related to reduplications and by showing that [VV] converbs abide by their model, this study aims to corroborate the reduplication status of the [VV] converbs. The second model adapted in this study by Wälchli (2005) is on co-compounds and by showing the [VV] converbs fit into his model, this study aims to demonstrate that [VV] converbs are in fact co-compounds. The third model based on Keenan (1987) and Baker (2005) is related to the syntactic structure of composite forms like [VV] converbs and this model is used to explain how [VV] converbs are visible to syntax (i.e. can take arguments). All models used in this study account for some property of [VV] converbs and they are all related. The third (syntactic) model allows for the relationship between the constituents that the first and second models require. The first (reduplication) and second (co-compound) models are intertwined considering that a compound is constructed via first (reduplication) model and has the qualities looked for by the second (co-compound) model. Below, how each of these models is used will be explained in more detail.

Even though this study has used the reduplication model to investigate whether [VV] converbs are reduplications, the literature on Turkish has elaborated on the reduplication status of [VV] converbs (Hatiboğlu, 1971, 1981; Göksel & Kerslake, 2005). However, these studies which claim that [VV] converbs are reduplications are mostly descriptive studies (given in Chapter 3). Moreover, these studies do not completely agree on the classification of reduplications. In fact, this seems to be a problem in reduplication studies in general (Marantz, 1982; Moravcski, 1978; Kiyomi, 1995; Inkelas & Zoll, 2000, 2005; Inkelas, 2005, 2003, 2013; Hurch et al 2008; Haugen & Kennard, 2011 inter alia). Morphological Doubling

Theory (MDT) of Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) is chosen in this study. This theory defines reduplications as constructions influenced not by phonology but by morphology and semantics. According to MDT, reduplications bring together two morphemes which have identical morphosyntactic features and that are semantically related. This theory has been chosen because it has the potential to account for all reduplications in Turkish. Turkish [VV] converbs will be analyzed according to this theory to verify their status as reduplications in Chapter 5.

The next model that is used in the current study is Wälchli (2005)'s Natural Coordination. Natural coordination refers to the co-occurrence of semantically related constituents. According to this model, [VV] converbs have all the properties of co-compounds because the constituents are semantically-related and their co-occurrence is expected. Co-compounds are a sub-type of compounds; therefore, the claim that [VV] converbs are co-compounds entails the claim that [VV] converbs are also compounds.

The observation that [VV] converbs are compounds is not a new claim (Göksel 2009). This study goes a step further and establishes that [VV] converbs are a specific type of compound, namely co-compounds. To substantiate this claim, [VV] converbs will be put to the test to see whether they satisfy the reliable criteria of compounding, in Chapter 5. The fact that [VV] converbs are special kinds of reduplication resulting in compounding will be shown. Not all reduplications result in compounds (5)e. The reduplication in (5)e does not constitute compounds because it does not abide by the criteria of compounding. The various criteria are discussed in detail in Chapter 2.

Being both reduplications and compounds renders [VV] converbs co-compounds. As a sub-type of compounds, co-compounds are composed of two (or sometimes more) constituents, which are on the same hierarchical level (Wälchli, 2005; Bauer, 2008; Ralli, 2009; Arcodia et al, 2009). To put it differently, constituents in a co-compound are equal in

terms of how they relate to the meaning of the whole compound. Another important property of co-compounds is that the constituents have to be semantically-related. Only constituents which are expected to co-occur can come together to form co-compounds. This condition is called Natural Coordination (Wälchli, 2005). [VV] converbs are evaluated according to this model in Chapter 5.

The model of Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) and the model of Wälchli (2005) are related to each other in that they both give importance to the semantics of constituents. In both models, the constituents are required to be semantically-related. The phrase structure representation, which is provided following Keanen (1987) and Baker (2005), conforms to the models used for reduplication and co-compound. The existence of duoV allows the two verbs to have their own complements and/or adjuncts and also they can take parallel inflection.

In this study after establishing the structure of [VV] converbs, the component of grammar which is responsible for creating them is investigated (Chapter 6). Three different components of language, namely phonology, morphology and syntax are considered here; however, syntax appears to be the most advantageous one to explain all the properties of Turkish [VV] converbs. The claim that [VV] converbs are generated in phonology is slim because as exemplified in (2-3)b the constituents can be non-identical. That is to say that these structures cannot be simply a product of phonological doubling. Morphological Doubling Theory can better account for [VV] converbs compared to phonological theories because it explains all the possible reduplications, while restricting which two constituents can come together. However, this theory overlooks some crucial properties of [VV] converbs (i.e. [VV] converbs can still take their complements and/or adjunct although they marked as adverbs). Syntax accounts better for Turkish [VV] converbs because only a syntactic account can explain how and why these two verbs share their complements and/or adjuncts, as shown

in Chapter 4 and Chapter 5. Following Keanen (1987) and Baker (2005), this study proposes that two bare verbs come together and constitute a duoV. Here, the term ‘duoV’ is created to refer to the V which is formed by two other Vs and still lets these two Vs to be seen by syntax (i.e. not turning them into a single lexical item). The level of duoV provides better explanations about how these two verbs can share arguments and also why they have parallel inflection (Chapter 6).

Consequently, in this work, [VV] converbs are analyzed with reference to three different constructions, namely reduplication, compound and co-compound (Chapter 5). The tests will be supported by examples from naturally occurring conversations. These examples are gathered from the TS corpus (www.tscorpus.com/tr), which is a large online data-base of written Turkish texts, as well as various online web-sites, which were searched in order to find colloquial language use. The descriptions of the data and some analysis on it are provided in Chapter 4. Of the three types of converbs, the ones with the optative marker were the most frequently occurring and the ones with the imperative marker the least frequent in the data. For all of the types of converbs, there were hundreds of examples that were cases of hapax legomena, i.e. they were only used once. This suggests that these structures are productive enough for speakers to spontaneously create [VV] converbs. The most frequently used type of construction was with identical constituents, whereas there were fewer examples of ones with non-identical constituents and almost none of the ones created via *m*-reduplication. A sample of [VV] converbs in the data is listed in the Appendix.

There are several gaps in the literature that this study aims to fill. First of all, even though [VV] converbs are mentioned in grammar books and studies on reduplication, to the knowledge of the author there has not been any detailed work done on these constructions. This study is the first in depth analysis of Turkish [VV] converbs. Secondly, the literature on Turkish compounding is mostly on nouns. The only study on [VV] compounds that the author

knows of is Güneş (2009) and also Göksel (2009) who only notes on the compound-like properties of [VV] converbs. However, there is no full-fledged study analyzing [VV] converbs as compounds. With this study, [VV] converbs have been truly introduced to the Turkish compounding literature. Third, Turkish co-compounds have not been investigated by many. They have been briefly mentioned in some studies (e.g. Göksel & Haznedar, 2007). Therefore, this study enlarges the scarce literature on Turkish co-compounds by providing and discussing data. Forth, reduplication being a derivational process that creates compounds has been noted before (Göksel & Haznedar, 2007; Göksel, 2009 *inter alia*). However, there is no study that analyzes which reduplicated constructions are compounds in Turkish. This study thus aims to pave the way for such a study. Finally, as Scalise & Bisetto (2011) pointed out, compounds with verbs have been mostly overlooked in linguistic studies; so this study contributes to a much needed area of linguistics.

This study is organized into 7 chapters. Chapter 2 is a literature survey on reduplications, compounds and co-compounds. Chapter 3 investigates the spectrum of these structures in Turkish reduplications, compounds and co-compounds by reference to the literature. Chapter 4 describes [VV] converbs, the data and methodology, which are the focus of the study. Chapter 5 establishes [VV] converbs as reduplications, as compounds, and as co-compounds. Chapter 6 investigates the component where [VV] converbs are formed. Finally, Chapter 7 draws conclusions from the findings.

CHAPTER 2

LITERATURE REVIEW

This chapter presents important concepts, namely reduplication, compound and co-compound, which are in the core of this study. Since this study claims that [VV] converbs have the properties of reduplications, compounds and co-compounds, there is a need to clarify what these concepts are as well as what their properties are. This chapter examines the place of these concepts in the literature. This chapter proceeds as follows: Firstly, studies on reduplications, investigating their properties and their formations, will be discussed. Secondly, studies on compounds, investigating their properties and their formations, will be discussed. Finally, studies on co-compounds will be summarized in terms of how they define co-compounds.

2.1 Reduplication

Reduplication is a common morphological process in the languages of the world. It has been observed that 85% of the languages among the 368 languages studied use a type of reduplication either partially or totally (<http://wals.info/feature/27A#2/28.3/148.9>, July 2014). Since reduplications are so common, the process of reduplication has been studied thoroughly in the linguistics literature (Moravcsik, 1978; Marantz, 1982; Niepokuj, 1991; Kiyomi, 1995; Regier, 1998; Raimy, 2000; Inkelas & Zoll, 2000, 2005; Inkelas, 2005, 2008, 2014; Haugen & Kennard, 2011 inter alia).

The studies on reduplication mainly focus on the functions, forms and meanings of reduplications (Moravcsik, 1978; Marantz, 1982; Niepokuj, 1991; Kiyomi, 1995; Regier, 1998; Haspelmath, 2002; Inkelas & Zoll, 2000, 2005; Hurch et al 2008; Inkelas, 2005, 2008, 2014; Haugen & Kennard, 2011, Stolz et al 2011 inter alia). Another concern of the studies on

reduplication is to unravel in which component of grammar these structures are created. In other words, whether these structures are products of phonology or morphology or both has been discussed by many linguists (Marantz, 1982; Raimy, 1999; Inkelas & Zoll, 2000, 2005, Haugen & Kennard, 2011 inter alia). A further concern of these studies is to determine the difference between repetition and reduplication, if there is any (Gil, 2005; Hurch et al 2008; Kallergi, 2009). Each of these issues will be addressed respectively in the following sections.

2.1.1 Functions of Reduplication

Reduplication can function either as a derivational or as an inflectional device, both cross-linguistically and within a particular language (Rubino, 2005; Inkelas, 2014). Inflection is claimed to be “a part of syntax”, whereas derivation is “a part of lexis” creating new lexemes (Bauer, 2003: 91). However, the distinction between inflection and derivation is not always clear-cut. Thus, a continuum approach has been preferred for the relationship between inflection and derivation (Haspelmath, 2002: 106). Both derivation and inflection can use reduplication as a word-formation process.

Of inflectional functions, plurality is the most attested one that reduplication is associated with (Inkelas, 2014). Rubino (2005) provides the following examples from Pangasian, an Austronesian language spoken in Phillippines.

- (1) Pangasian, an Austronesian
- | | | | | |
|----|--------------|--------|-------------------|---------|
| a. | <i>tukák</i> | “frog” | <i>tukaktúkak</i> | “frogs” |
| b. | <i>bangá</i> | “pot” | <i>bangabánga</i> | “pots” |
- (taken from Rubino, 2005: 12)

The examples provided in (1)a and (1)b illustrate that the nouns *tukák* “frog” and *bangá* “pot” are pluralized through reduplication. In addition, pluralization in verbs can surface in different forms such as pluralization of actors or pluralization of the action itself, as exemplified in (2) and (3) respectively.

- (2) Yurok, an Algie language
- | | | | |
|-------------|------------|------------------|------------------------------|
| <i>ckem</i> | “to count” | <i>ckem-ckem</i> | “to make small tattoo marks” |
|-------------|------------|------------------|------------------------------|

pegon “to split” *peg-pegon* “to split in several places”
prkwrh(s-) “to peck or knock” *prkw-prkwrh(s-)* “to peck or knock repeatedly”
(Wood and Garrett (2001) cited in Inkelas 2014: 8)

- (3) Mani, a South Atlantic language
- a. *pé fɔk sàkàtà nár gbèn*
 PRO.HAB perform sacrifice cow tomorrow
 ‘A cow will be sacrificed tomorrow’
- b. *pé fɔk-fɔk sàkàtà sì-nár gbèn*
 PRO.HAB perform sacrifice NCM-cow tomorrow
 ‘Many cows are being sacrificed tomorrow’
(Childs, 2011:179 cited in Inkelas 2014: 8)

The example (2) is an example for event-internal pluralization. In other words, reduplication in (2) provides the meaning that the action in question occurs repeatedly, more than once.

However, the example (3)b utilizes verb reduplication to pluralize an argument, which is *cow*. (3)a is provided for comparison.

Furthermore, Inkelas (2014) asserts that though not common, there are other inflectional categories for nouns which reduplication can mark, such as case and possession. As for verbs, reduplication can mark other aspectual categories such as frequentative, repetitive, continuation and progressive which are associated with pluralization of verbs exemplified in (2) and (3). In addition, Rubino (2004) argues that in some languages reduplication is used to encode tense. On the other hand, it has been claimed that person and gender markings in verbs by reduplication are rarely found cross-linguistically (Inkelas, 2014 p. 9).

Other than the various inflectional purposes stated above, reduplication can also function as derivation. Derivation is distinguished from inflection by its power to produce new lexemes. In addition, it can either change lexical category (Rubino, 2005 p. 19, Inkelas 2014 p.11) or argument structure (Inkelas, 2014 p. 10). Following this definition provided for derivation, one can argue that reduplication is a process used also for derivational functions. The examples in (4) from Aroma, an Austronesian language, illustrate the power of changing

word category through reduplication (i.e verbs from nouns in (4)a and nouns from verbs in (4)b. In addition, valency-changing operations can also be encoded by reduplication as in (5) where the intransitive form is created by the reduplication of the transitive form in Paamese, Austronesian language. The example (6), the unergative verb in Kokota, another Austronesian language, is also constructed by the process of reduplication.

- (4) Aroma, an Austronesian language
 a. *mega* ‘magic’ *megamega* ‘to make magic’
 b. *vawao* ‘to decorate’ *vawaovawao* ‘decoration’
 (Craig, 1980:127 cited in Inkelas, 2014)
- (5) Austronesian language
lahi-e ‘is carrying him’ *lahi-lahi* ‘is occupied’
 (taken from Kiyomi, 1995:1150)
- (6) Kokota, an Austronesian language
 a. *manei n-e-ke dupa-nou* ‘he punched me’
 he RL-3S-PFV punch-1SGO I
 b. *manei n-e du-dupa bla* ‘he was just punching’
 he RL-3S RD-punch 3.MT
 (Palmer, 2009 cited in Inkelas, 2014: 11)

In (4)a, (4)b and (5), the whole constituent is reduplicated whereas in (6) only the first syllable which is *du* is exposed to the process of reduplication. Since the examples in (4)a and (4)b result in grammatical category change and those in (5) and (6) create change in argument structure, these examples are considered to serve the derivational function of reduplication.

As shown above, reduplication can be used both for inflectional and derivational purposes. However, it is crucial to point out that the distinction between inflection and derivation is not always clear-cut (Haspelmath 2002; Bauer 2003). Sometimes determining whether reduplication is used for derivational or for inflectional purposes is problematic. For example, it has been claimed that reduplication can be used for various functions such as diminutivization, attenuation, augmentation, intensification, quantification, and conveying a sense of distribution or lack of control, which are harder to be categorized either as

derivational or inflectional processes. The examples in (7-13) are taken from Inkelas (2014) to show how these different functions are represented in various languages respectively.

- (7) Diminutivization in Lushootseed
 - a. *ǰsəd* ‘foot’ > *ǰi-ǰsəd* ‘little foot’
 - b. *báč* ‘fall down’ > *bi-báč* ‘drop in from time to time’
 (Urbanczyk, 2006 cited in Inkelas, 2014:13)

- (8) Attenuation/limitation in Alabama,
 - a. *kasatka* ‘cold’ > *kássatka* ‘cool’
 - b. *lamatki* ‘straight’ > *lámmatki* ‘pretty straight’
 (Rubino, 2005 cited in Inkelas, 2014: 13)

- (9) Intensification in Bikol
 - a. *gabos* ‘all’ > *gabos-gabos* ‘all (more than appropriate)’
 - b. *tumog* ‘wet’ > *tumog-tumog* ‘soaking wet’
 (Mattes, 2006 cited in Inkelas, 2014:13)

- (10) Distributivity in Ao
 - a. *asem* ‘three’ > *asem-sem* ‘three each’
 - b. *ténet* ‘seven’ > *ténet-net* ‘seven each’
 (Rubino, 2005 cited in Inkelas, 2014:13)

- (11) Quantification in Manambu
 - bap* ‘moon’ > *bap-a-bap* ‘month after month’
 - təp* ‘village’ > *təp-a-təp* ‘every village’
 (Aikhenvald 2010 cited in Inkelas, 2014:13)

- (12) Collectivity in Maltese
 - tarag* ‘stairs’ > *tarag-tarag* ‘flights of stairs’
 (Stolz et al, 2011 cited in Inkelas, 2014:13)

- (13) Out-of-control in Lushootseed
 - a. *dzáq* ‘fall’ > *dzáq-aq* ‘totter, stagger’
 - b. *čǎǎ* ‘spit’ > *sčǎǎčǎǎ* ‘cracked to pieces’
 (Urbanczyk, 2006 cited in Inkelas, 2014:14)

As shown in the examples (7-13), reduplication assigns new meanings; however, it is a rather controversial issue whether these reduplicated forms are to be considered as separate new lexemes. Therefore, these functions exemplified in (7-13) display that reduplication stands in-between categories in some cases. In addition, there are also cases where reduplication

functions without any change either in meaning or form (e.g. lexical category). This function reveals itself in two ways either as a concomitant of affixation (14) or as repair (15).

- (14) Hausa, an Afro-Asiatic language
- a. *gútsúrè:* ‘small fragment’
gútsàttsári: ‘small fragments’
 - b. *gáŕdàm* ‘dispute’, ‘argument’
gáŕdàndámí ‘disputes’, ‘arguments’
- (Newman, 2000 cited in Inkelas, 2014:15)
- (15) Kinande, a Bantu language
- a. *-hɔma* ‘beat’ *-hɔma+hɔma* ‘beat a little here and there’
 - b. *-swa* ‘grind’ *swa-swa+swa* ‘grind a little here and there’
- (Hyman, 2009 cited in Inkelas, 2014:17)

The examples (14)a and (14)b provide evidence for reduplication as concomitant of affixation. The nouns *gútsúrè:* ‘small fragment’ and *gáŕdà* ‘dispute, argument’ are pluralized by CVC reduplication as well as the suffixation of *-i*. Therefore, reduplications in such cases are considered to lack a particular semantic function. The existence of reduplication seems to stem from the suffixation process. On the other hand, phonological reasons may call for reduplication, illustrated in example (15)b. In (15)a, the whole *-hɔma* ‘beat’ is reduplicated, whereas - since Kinande only allows for the reduplication of disyllabic stems - in (15)b, triple stem reduplication surfaces. Therefore, one may claim that reduplication in (15)b is triggered by phonological subminimality without any semantic contribution.

As discussed in this section, reduplication is capable of having different functions (inflectional, derivational or sometimes a mixed category) both across and within languages. Another important issue which requires attention, namely the different forms of reduplication, will be discussed in the following section.

2.1.2 Forms of Reduplication

Based on the size of the reduplicant, two forms of reduplication are attested in the literature: total and partial reduplication. As indicated by the name, total reduplication - also known as full reduplication - is defined as repetition of entire words, word stems or roots (Rubino,

2005; Inkelas & Zoll, 2000, 2005; Inkelas, 2014 inter alia). As opposed to total (full) reduplication, there are also cases where a phonologically defined subpart of a word is repeated, which may or may not undergo a slight phonological modification. Examples of total and partial reduplications are provided in (16) and (17) respectively.

- (16) Tausug, an Austronesian language
- | | | |
|----|----------------------------|-------------------------|
| a. | <i>dayang</i> | ‘madam’ |
| | <i>dayangdayang</i> | ‘princess’ |
| b. | <i>mag-bichara</i> | ‘speak’ |
| | <i>mag-bichara-bichara</i> | ‘spread rumors, gossip’ |
- (taken from Rubino, 2005 : 11)
- (17) Pangasinan, an Austronesian language
- | | | |
|----|-----------------------|--------------------------|
| a. | <i>amigo</i> ‘friend’ | <i>amimigo</i> ‘friends’ |
| b. | <i>baley</i> ‘town’ | <i>balbaley</i> ‘towns’ |
| c. | <i>plato</i> ‘plate’ | <i>paplato</i> ‘plates’ |
- (taken from Rubino, 2005: 11)

(16)a is an example of full lexeme reduplication, whereas (16)b presents full root reduplication in Tausug, an Austronesian language. The examples in (17) exemplify different types of partial reduplication used for pluralization. In (17)a, -CV- (the first consonant and the following vowel) which is *-mi-* and in (17)b CVC- (the first syllable and the following consonant) which is *bal-* are reduplicated, whereas the first consonant and the vowel *a* is reduplicated in (17)c.

In addition to partial and total reduplication, another type of reduplication has been attested: echo reduplication. In this process, the word is reduplicated with a kind of phonological modification (e.g. replacement of the onset). English *schm*-reduplication can be considered as echo-reduplication as in (18)a and (18)b.

- | | | |
|------|-------------------------------|-----------------------------------|
| (18) | a. <i>table-schmable</i> | (taken from Ghomeshi et al, 2004) |
| | b. <i>Oedipus-schmoedipus</i> | (taken from Nevis & Vaux, 2003) |

As the examples in (18)a and (18)b show, the first consonant of the word, if there is one, is replaced with *schm-*. A fixed pattern occurring in the reduplicant is a very common process attested in different languages. The examples in (19) where East Bengali uses a fixed [t]

sound in echo reduplication and the examples in (20) where Hindi uses a fixed [v] sound in echo reduplication are provided below.

- (19) East Bengali
 a. *pani* ‘water’ *pani tani* ‘water, etc.’
 b. *kaši* ‘cough’ *kaši taši* ‘cough, etc.’
 (Khan, 2006 cited in Kirchner, 2010: 87)
- (20) Hindi
 a. *aam* ‘mangoes’ *aam vaam* ‘mangoes and the like’
 b. *tras* ‘grief’ *tras vras* ‘grief and the like’
 (Nevins, 2005 cited in Kirchner, 2010: 71)

Furthermore, Inkelas & Zoll (2000, 2005) add two new types to these three: synonym reduplication and syntactic reduplication. The examples of synonym reduplication composed of synonymous items provided by Inkelas & Zoll (2000, 2005) and Inkelas (2014) contain an item from the native language and also an item originating from another language. Hindi examples provided in (21) show that the first constituents in (21)a and (21)b are Hindi words, whereas the second constituents are Perso-Arabic originated.²

- (21) Hindi
 a. *tan-badan* ‘body + body > body etc.’
 b. *vivaah-šaadi* ‘marriage + marriage > marriage etc.’
 (Singh, 1982 cited in Kirchner, 2010: 122)

The last form of reduplication is syntactic reduplication. Syntactic reduplication is different from other reduplicative types in that syntactic reduplication can target constituents bigger than a word, as illustrated in the following English example.

- (22) a. Well, he didn’t GIVE-IT-TO-ME-give-it-to-me (he only lent it to me).
 b. I didn’t SLEEP-WITH-HER-sleep-with-her.
 (taken from Ghomeshi et al, 2004)

² A similar example of such type of reduplication in Turkish can be *ful-dolu* ‘very full’. The first part *ful* ‘full’ is borrowed from English and the second part *dolu* ‘full’ has native origin. In addition, there are other types of examples where the first part is Turkish but the second part is borrowed from a language such as *ilgi alaka* ‘very much attention’ and *geri iade et-* ‘to give (something) back’. In these three Turkish synonym reduplication structures, some property of the noun in question which seems to be amount here is intensified in this kind of reduplication.

As shown in (22)a and (22)b, constituents bigger than words can be reduplicated. In syntactic reduplication, the same word or the constituent is obliged to occur twice in a grammatical construction and there is often an intervening material in-between. Furthermore, syntactic reduplication is associated with a fixed meaning within the language it occurs. The examples in (23) are taken from Ewe, a Niger-Congo language.

- (23) Niger-Congo
- a. É-nyé *ɲútsu* gbó *ɲútsɔ*
 3SG-be man vicinity man
 ‘He is not a real man’ or ‘He is an effeminate/emasculated man’
 - b. *tɔ* gbó *tɔ-é* ke kúme
 father vicinity father-DIM this kind
 ‘this kind of pseudofather’
 (Ameka, 1999 cited in Inkelas, 2014:6)

The examples in (23) show that *ɲútsu* ‘man’ and *tɔ* ‘father’ are reduplicated and in both case *gbó* ‘vicinity’ is the intervening element. This construction type in Ewe is associated with a fixed derogative meaning.

In this section, five different forms of reduplication have been discussed. The first two types, partial and total reduplication, are defined based on the size of the reduplicant. The definition of echo-reduplication is also associated with the phonological shape of the reduplicant. On the other hand, synonym reduplication does not involve phonological size or form but it calls for semantic relationship between the reduplicants, while syntactic reduplication can target bigger syntactic units than words. In the following section, the meanings attained through reduplication will be discussed.

2.1.3 Meanings of Reduplication

Another important issue in the literature of compounding is whether the meaning of reduplication is iconically or non-iconically triggered. It has been argued that the meanings provided by reduplication are mostly iconic (Key, 1965; Haiman, 1980; Moravcsik, 1978; Lakoff & Johnson, 1980; Naylor, 1986 inter alia). Iconicity refers to the relationship between

the form and the meaning. In other words, the meaning of reduplication construction is directly related to the form. Many researchers point out the fact that reduplication is associated with several iconic meanings such as plurality, intensification and repetition (Key, 1965; Haiman, 1980; Moravcsik, 1978; Lakoff & Johnson, 1980; Naylor, 1986 inter alia).

On the other hand, reduplications can be both iconically and non-iconically motivated (Kiyomi, 1995; Bauer, 2003; Inkelas, 2014). Non-iconicity is used to refer to the cases where there is no motivation between the form and meaning. That is to say, reduplication can mean something different than expected. Kiyomi (1995) argues that the diminution meaning of reduplication is an example for non-iconicity. Lakoff and Johnson (1980) have asserted that reduplication intensifies the meaning of ‘smallness’ in the case of diminutives only if a word means something small. If this were true, then diminutive meaning would not be example of non-iconicity. Kiyomi (1995) has shown that even words without the meaning of “smallness” if reduplicated can have diminutive meanings, as in examples (24) and (25).

- (24) Toba-Batak, an Austronesian *language*
 a. *dólok* ‘mountain’
 b. *dólok dólok* ‘hill’
 (taken from Kiyomi, 1995: 1148)

- (25) Ambrym, an Austronesian *language*
 a. *man* ‘to laugh’
 b. *man-man* ‘to smile’
 (taken from Kiyomi, 1995: 1148)

The example in (24) from Toba-Batak, an Austronesian language, shows that the reduplicated stem *dólok* ‘mountain’ does not mean something small but when reduplicated conveys the meaning ‘small mountain’, i.e. ‘hill’. The same holds true for the example in (25) from Ambrym, another Austronesian language. The root *man* ‘to laugh’ has a grandeur meaning and when it is reduplicated, the meaning is dampened; therefore, Kiyomi (1995) claims that diminutive meaning in reduplication is in fact non-iconic. In addition to diminutive meaning,

reduplication can also function as a word category-changer in some languages as shown in (26).

- (26) Fijian, a Malayo-Polynesian language
- | | | | | |
|----|-------------|------------|------------------|--------------|
| a. | <i>kira</i> | “to guess” | <i>kira-kira</i> | “at a guess” |
| b. | <i>garo</i> | “lust for” | <i>garo-garo</i> | “lustful” |
- (taken from Kiyomi, 1995: 1162)

In (26)a, the verb *kira* ‘to guess’ in Fijian, a Malayo-Polynesian language, turns to be an adverb *kira-kira* ‘at a guess’ as a result of reduplication, whereas in (26)b the adjective *garo* ‘lustful’ is created by the reduplication of the noun stem *garo* ‘lust for’. The ability of changing the word class is claimed to be another proof for the non-iconic nature of reduplications.

Reduplication in some languages are claimed to mark tense as in Tagalog, another Austronesian language. The example (27) illustrates how reduplication can function with a less iconic meaning.

- (27) Tagalog, an Austronesian language
- | | | | | |
|----|----------------|------------|------------------|--------------|
| a. | <i>sumulat</i> | ‘to write’ | <i>su.sulat</i> | ‘will write’ |
| b. | <i>bumasa</i> | ‘to read’ | <i>ba.basa</i> | ‘will read’ |
| c. | <i>ʔumaral</i> | ‘to teach’ | <i>ʔa. ʔaral</i> | ‘will teach’ |
- (taken from Bauer 2003:32)

The examples in (27) show that reduplication in Tagalog can have inflectional function. As an extreme case of non-iconic nature of reduplication, it has been attested that reduplication does not express any meaning at all in some languages. In old Indo-European languages, it is used in the function of tense (Swadesh, 1971). For example, in Greek and Sanskrit reduplicated material is added to the verb stem like a prefix when the verb is too short. In such cases, reduplication does not contribute any meaning, but it is only used to form past tense as seen in (28)a and (28)b.

- (28) Greek
- | | | | | |
|----|---------------|-----------|-----------------|------------------|
| a. | <i>grapho</i> | “I write” | <i>gégrapha</i> | “I have written” |
| b. | <i>leipo</i> | “I leave” | <i>léloipa</i> | “I have left” |

(taken from Swadesh 1971:147)

Moreover, Kiyomi (1995) asserts that there are two processes associated with iconic meaning and one with non-iconic meaning. Firstly, these two processes linked with iconicity are cumulative processes and consecutive processes. In cumulative processes, both nouns and verbs are intensified. In nouns, the meaning of the stem is strengthened, whereas in verbs, the extent of the action is emphasized. However, in consecutive processes, nouns are pluralized, whereas verbs come out with the meaning of repetition/continuation. Secondly, Kiyomi (1995) states that reduplication may function like regular affixation in the case of non-iconicity because reduplication can change word-category as well as can be used just for phonological purposes without any semantic content.

Kiyomi (1995) further claims that the iconic and non-iconic natures of reduplication are not totally unrelated. The prototypical iconic meaning of reduplication refers to a “higher (greater) degree of ...”, whereas the prototypical non-iconic meaning is associated with a “lower (lesser) degree of...” (Kiyomi:1995, 1151). They have something in common which is claimed to be the prototypical meaning of reduplication:” a higher or lower degree of ...” (Kiyomi, 1995: 1151).

2.1.4 The Component that Generates Reduplications

In the literature of reduplication, there has been an ongoing debate on which component of the language production is responsible for reduplication. Some studies approach reduplications as a phonological phenomena in which the base is phonologically copied (Wilbur, 1973; Marantz, 1982; Steriade, 1988; McCarthy & Prince, 1986, 1995, 1999) For some, reduplication is a morphological process and does not involve phonological copying (Inkelas & Zoll, 2000, 2005; Inkelas 2005, 2008, 2014). Below these different views will be discussed respectively.

The phonological doubling theories assume that there is a reduplicant and a base and the reduplicant is a phonological copying of the base. According to these theories, reduplication is in fact similar to affixation processes. They further argue for the existence of RED (reduplication) morpheme. The difference between affixation and reduplication stems from the fact that the reduplicant which attaches to the stem resembles the base itself in the process of reduplication (Wilbur, 1973; Marantz, 1982; McCarthy & Prince, 1986, 1995, 1999).

In phonological copying theories, it is assumed that there is dependence relationship between the base and the reduplicant. This dependence arises as a result of need for phonological identity. Marantz (1982) and Steriade (1988) assert that reduplicants come out as total copies of their bases. Then morphologically conditioned phonological rules give them their last shape. To these theories, reduplicative phonology obeys the same principles with the non-reduplicative phonology. On the other hand, other phonological theories (McCarthy & Prince 1995, 1999) differ from the previous ones in that these theories argue that reduplication has its own reduplicative phonology to some extent.

The Correspondence Theory developed by McCarthy & Prince (1995, 1999) elaborates on the phonological copying theories. It has three assumptions: i) there is a RED morpheme which is the reduplicant; ii) the phonological content of the reduplicant is determined by the base and iii) there are correspondence constraints which result in a surface correspondence between the base and the reduplicant. The following example from Diyari, an Australian language, is provided to understand the arguments of the Correspondence Theory.

- (29) Diyari, an Australian language
 a. *wiɭa* *wiɭa- wiɭa* ‘woman’
 b. *ɬilparku* *ɬilpa-ɬilparku* ‘bird species’ (* *ɬilparku- ɬilparku*)
 (taken from Inkelas & Zoll, 2005:79)

- (30) Yidin^y, an Australian language
 a. *kin.tal.pa* ‘lizard sp.’

kin.tal.kin.tal.pa
**kin.ta.kin.ta.pa*

b. *mu.la.ri* ‘initiated man’
mu.la.mu.la.ri
**mu.lar.mu.la.ri*

(taken from Haugen, 2014:7)

In (29)a, the whole stem *wila* ‘woman’ is doubled, whereas (30)b is an example of truncation, meaning that, not the whole stem but a part of it is reduplicated. According to McCarthy & Prince (1986), the process of reduplication is similar to affixation. The reduplicant is added to the base as a prefix in (30)a, however, unassociated segments from the copying process are omitted by Stray Erasure as seen in (29)b.

The Correspondence Theory (McCarthy & Prince 1995, 1999) maintains the phonological copying aspect of the phonological copying theories. They argue that the base and the reduplicant have the same input, however, they try to explain the difference between the base and the reduplicant in (30)b by introducing some constraints: Input-Base faithfulness (FAITH_{IB}) and BASE-REDUPLICANT faithfulness (FAITH_{BR}) or Input-Reduplicant faithfulness (FAITH_{IR}). In Yidin^y (an Australian language), disyllabic reduplication is considered to prove that reduplication is interested in phonological constituents and there are phonological constraints in reduplication.

It has been observed that disyllabic reduplicants behave differently according to their syllable structure of the base. As seen in example (30)a, if the stem has a coda consonant in the second syllable ([i] sound in the *kin.tal.pa* example), it is copied in the reduplicant as in *kin.tal.kin.tal.pa*. On the other hand, if there is no coda in the second syllable of the stem, then the onset in the third syllable is not copied to supply a coda for the reduplicant as in *mu.la.mu.la.ri*. If the third onset of the third syllable is copied, it results in ungrammaticality as in **mu.lar.mu.la.ri*. As presented in the Yidin^y Disyllabic Reduplication example, the

Correspondence Theory solves the difference between the base and the reduplicant by applying some phonological rules.

On the other hand, there are researchers who noted that structures with identical constituents, which phonological copying theories call reduplications, behave quite similarly to other structures with different constituents (Inkelas & Zoll, 2000, 2005; Inkelas, 2005, 2008, 2014). These researchers have put forward Morphological Doubling Theory (henceforth MDT) and rejected the notion of RED morpheme-the reduplicant. Instead they claim that reduplication is a construction with two constituents (i.e. “daughters”). These daughters are morphologically separate items and they can have different phonological inputs. They prefer to use the term “daughter” instead of “the base and the reduplicant” because they assert that there is no hierarchical relationship between the two units in reduplicative construction. This argumentation of MDT is quite important for this study. The Chapter 5 presents how this claim accounts for [VV] converbs in Turkish.

MDT has three predictions: i) the generalized phonology prediction, ii) independent daughter prediction and iii) the mother node prediction. According to the generalized phonology principle, reduplicative phonology is not different than the non-reduplicative phonology. The same morphologically conditioned phonological rules hold true for the reduplicative morphologically conditioned phonological rules. The second prediction, independent daughter prediction, assumes that two daughters do not have to be phonologically-identical. This prediction differentiates MDT from phonological copying theories because MDT rejects the phonological identity between the base and reduplicant. The last prediction proposes that the mother node, the reduplication construction, requires its own morphologically conditioned phonological rules. Therefore, we can conclude that the last two

predictions suggest three different co-phonologies: 2 different co-phonologies³ for daughters and one for mother node.

Furthermore, MDT claims that two daughters in reduplication constructions have to agree in their morphosyntactic features instead of displaying phonological identity. In other words, a reduplicative construction in MDT needs to have two instances of the same morphological constituent but the term ‘same’ refers to the identity in meaning not in phonology. For MDT, a reduplicative construction calls for two daughters which have the same morphosyntactic features and are semantically similar. To recapitulate, MDT rejects the necessity of phonological identity between the base and the reduplicant. According to MDT, phonological similarity between the base and the stem can come out as a byproduct of morphosyntactic identity which is strictly required by two daughters.

The example in (31) from Sye language, an Austronesian language, where most verbs have two allomorphs: one in basic contexts and one in modified contexts. Therefore, some reduplicative verb constructions in Sye are composed of daughters, which are not phonologically identical but morphosyntactically identical.

- | | | |
|------|--|-----------------|
| (31) | Sye, an Austronesian language | |
| | a. Stem in basic contexts: | <i>omol</i> |
| | b. Stem in modified contexts: | <i>amol</i> |
| | c. Reduplicated stem in basic contexts: | <i>omolomol</i> |
| | d. Reduplicated stem in modified contexts: | <i>amolomol</i> |
| | (taken from Inkelas & Zoll, 2000:3) | |

The stem *omol* ‘fall’ has two allomorphs appearing in different contexts: *omol* and *amol*. As shown in (31), two different allomorphs of the stem *omol* can occur in the reduplicative construction. Thus, one may be inclined to say that the reduplicant does not have to be a phonological copying of the base. On the other hand, (31)d provides evidence for the fact that

³ The term co-phonology refers to the use of different phonologies for different morphological structures. According to the co-phonology theory, there are different co-phonologies for every morphological construction such as compounding, affixation, zero-derivation and reduplication. (Orgun, 1997; Inkelas, 1998; Inkelas & Orgun, 1998; Orgun, 1999; inter alia).

the requirement for the daughters is morphosyntactic identity and the semantic identity because two suppletive forms *omol* and *amal* have the identical meaning and they share the identical morphosyntactic features e.g. argument structure.

Recall that in the Yidin^y example provided in (31), reduplication is claimed to target phonological constituents. The supporters of the phonological view such as Haugen (2011) argues that the example in (31) cannot be explained by MDT because what reduplication targets is not morphological constituents but phonological constituents. On the other hand, it should be noted that MDT does not reject the fact that phonology plays a role in some cases of morphological reduplication. Thus, they argue that morphological reduplication can take place with phonological modification of one or both daughters. For example, if there is truncation as in (31) based on some syllable constraints, MDT explains this phenomena by introducing truncation co-phonology for the daughter which undergoes truncation such as *kin.tal* in (31)a and *mu.la* in (31)b. In addition, it should be emphasized that MDT does not arrange another truncation phonology for the process of reduplication. Instead, reduplicative processes use the same phonology with non-reduplicative processes as stated in Generalized Phonology principle mentioned above (Inkelas & Zoll, 2000, 2005; Inkelas, 2005, 2008, 2014). MDT also asserts that echo-reduplication where the similar phonological identity of two copies is broken also uses the same phonological modification mechanisms with ‘normal’ affixation where sometimes anti-homophony effects appear, as in (32).

- (32) Mixtepec Mixtec, a Native American language
- | | | | |
|------------------|------------|------------------|----------------|
| a. <i>sàmà</i> | ‘clothing’ | <i>sà mí ì</i> | ‘his clothing’ |
| b. <i>nda’ à</i> | ‘hand’ | <i>nda’ -í ì</i> | ‘his hand’ |
| c. <i>kachìi</i> | ‘cotton’ | <i>kachì-áá</i> | ‘his cotton’ |
| d. <i>sì’i</i> | ‘leg’ | <i>sì’ aá</i> | ‘his leg’ |
- (taken from Inkelas, 2008:359)

Inkelas (2008) states that in the examples (32) from Mixtepec Mixtec, a Native American language, the suffix *-ì* attaches to the stems as a possessive marker, if the stem does not end in

-i. If the last sound of the stem is -i, the suppletive allomorph of the possessive suffix -á is used instead. Thus, the stems ending in -á are marked by the possessive marker – ì in (32)a-b , whereas those ending in -i are marked by the suppletive form -á as in (32)c-d. Inkelas (2008) shows that the same phenomena is attested in reduplication as represented in the following Hindi example where the onset of reduplicant is turned to be *v* and the reduplicative construction has a fixed meaning which is “(the noun) and the like”.

- (33) Hindi
 a. *mez-vez* “table and the like”
 b. *tras-vras* “grief and the like”
 c. *aam-vaam* “mangoes and the like”
 (taken from Inkelas, 2008:358)

Inkelas (2008) claims that the onsets of the stems in (33)a and (33)b are replaced by *v*-sound. However, if there is no onset in the stem, then *v*-sound is added to the onset position as seen in (33)c. Therefore, Inkelas (2008) further argues that the phonological processes applying to reduplication such as dissimilation is not unique to reduplication and such phonological processes can also apply to other morphological processes such as affixation (Inkelas, 2008:358).

To summarize, the debate whether reduplication is a phonological or morphological copying has different tenets. Those who root for phonological copying argue that the phonological form of the copied element is strictly dependent on the base and the phonological identity between the base and the reduplicant is mandated. On the other hand, MDT argues that what is copied in the process of reduplication is a morphosyntactic feature bundle and the phonological identity can be only a result of morphosyntactic identity. In MDT, semantic identity is obligatory between the daughters of a reduplicative construction.

As discussed further in Chapter 5, MDT accounts for all [VV] converbs in Turkish. A phonological theory would require one to draw unnecessary line among [VV] converbs which is explained in Chapter 6. Since there exist similar constructions to [VV] converbs in Turkish,

there is a need to clarify the difference between repetitions and reduplications. In order to differentiate between [VV] converbs and the other structures as reduplications and repetitions in later chapters, studies comparing and contrasting these two structures will be summarized below.

2.1.5 Repetition vs. Reduplication

The difference between repetition and reduplication is another issue discussed in the literature (Gil, 2005; Hurch et al, 2008; Kallergi, 2009). Six criteria to differentiate between reduplication and repetition have been proposed although some are not as reliable as others.

The first criterion argues that the output in repetition is greater units than words, whereas the output in reduplication is equal to or smaller than word. Here the output refers to the item which appears as a result of either reduplication or repetition. It has been assumed that repetition generates bigger units than words. On the other hand, the unit of output can be either equal to a word or can be smaller than a word. It should be noted that this criterion can be considered problematic because the term “word” is not a well-defined concept (Williams, 1981). Another criterion used to distinguish repetition and reduplication is the existence of communicative reinforcement.

Unlike reduplication, repetition is claimed to serve for communicative functions. For example, repetition may take place when the speaker thinks that his/her message is not obtained. On the other hand, this criterion is not foolproof either.

Furthermore, reduplication mostly creates some particular meanings which can be iconic or non-iconic, whereas repetitions can also be associated with a particular meaning in different languages. Since both constructions have an iconic meaning, they can only be differentiated when there is no meaning. If no meaning is present, then the structure is repetition. However, if the construction has a non-iconic or arbitrary meaning, we can call this construction as reduplication.

Reduplication as a word-internal phenomenon is treated within one intonation group, whereas repetition may occur in two or more intonation groups as a multi-word construction.

The fifth criterion to for reduplications is adjacency between the daughters. In other words, the repeated elements are rarely separated by any material in reduplication. On the other hand, the identical copies can be separated by an item in the case of repetition. The final criterion is also related to the formal properties of reduplications and repetitions: reduplication mostly involves only two copies whereas repetition does not have a limit in the number of copies. However, there are some exceptions to this criterion too.

Gil (2005) points out that there are very clear cases of reduplication as well as problematic cases where it is difficult to determine whether the structure is an example of reduplication or repetition. Below, the clear cases of repetition and reduplication in Riau dialect of Indonesian are provided by Gil (2005).

- (34) Aqua *bang* *aqua* *aqua*
 mineral. water FAM|elder. brother mineral. water mineral. water
 aqua *roti* *roti* *roti* *ah* *roti* *aqua*
 mineral. water bread bread bread EXCL bread mineral. water
 aqua *aqua* *aqua* *aqua* *aqua*
 mineral. water mineral. water mineral. water mineral. water mineral. water
 [Vendor on boat selling foot and drinks]
 “Mineral water sir mineral water mineral water mineral water bread, bread bread
 mineral water mineral water, mineral water mineral water mineral water”
 (taken from Gil, 2005:40)
- (35) Main mony-monyet Vid
 play RED-monkey FAM|David
 [Asking to play a game on my laptop computer which involves a monkey]
 “I want to play the monkey game, David.”
 (taken from Gil, 2005:38)

Gil (2005) asserts that the example in (34) is a prototypical example of repetition because it satisfies all the criteria required for repetition. First of all, the units can be repeated more than twice and they are not next to each other because complex materials can intervene between them. Furthermore, the example in (34) occurs within more intonation groups and it serves for communicative functions in that the vendor tries to attract customers. The unit of output is

greater than word. There is no iconic meaning because repetition here does not add any meaning.

On the other hand, Gil (2005) points out that the example (35) can be considered as a clear example of reduplication because the partial reduplication construction *mony-monyet* ‘RED-monkey’ obeys the six criteria proposed for reduplication: First of all, the unit of the output is a sequence of sounds, many-many, so it is smaller than words. Secondly, there are exactly two copies and these copies are adjacent to each other. Furthermore, this construction stays within a single intonation group. The structure does not function to reinforce communication as in (36). Finally, reduplicative construction has a particular meaning because it refers to a game which involves monkeys in it.

In addition to these clear cases of reduplication and repetition, Gil (2005) provides the following examples whose reduplication status is not as clear as the ones given in (34) and (35). The structure (36) is given as a probable case of repetition, whereas (37) is an example of reduplication where the structure winks at repetition.

- (36) Makan berdua *Vi* *Vi* *Vid*
eat NON.PAT-two FAM|David FAM|David FAM|David
[Speaker inviting me to share a meal with him]
“Let's eat together, David.”
(taken from Gil, 2005:46)
- (37) Kalau si Pai *ambil-ambil-ambil-ambil* aja
TOP PERS Pai RED~take just
[Complaining about friend's behaviour]
“Pai just takes things all the time.”
(taken from Gil, 2005:55)

As Gil (2005) states, the example in (36) resembles partial reduplication at first glance, although three criteria for repetition are satisfied by this structure. It has been asserted that more than two copies are repeated and repetition does not contribute to the meaning. In addition, it has been observed that it only serves for communicative functions by making the

name of the person more likely to be heard. On the other hand, Gil (2005) states that the structure in (37) follows the five criteria proposed for reduplication. The parts are not adjacent and they fall within one single intonation group. The structure does not serve for communicative function but it is associated with iconic meanings. On the other hand, the number of copies is more than two (Gil, 2005 p. 55-56). Due to these reasons, Gil (2005) claims that the reduplication status of the examples in (36) and (37) are not clear. This uncertainty shows the fuzzy boundary between reduplications and repetitions.

In this section, reduplication has been defined and its formal and semantic properties have been discussed. Different theories, namely phonological doubling and morphological doubling, have been introduced. Moreover, the difference between reduplication and repetition has been drawn. In the following section, the literature on compounding will be discussed.

2.2 Compounds

In this study, three types of [VV] converbs are analyzed and claimed to be compounds. Before this claim is presented, the concept of compounds is introduced. In this section, the general properties of compounds, which is one of the most studied issues in the linguistic literature, are displayed in light of previous studies. Firstly, the term *compound* will be defined and its properties will be discussed. Then, in which component of grammar (i.e. phonology, morphology or syntax) compounds are created will be considered.

2.2.1 Basics of Compounds

In the literature, there have been various attempts to describe what the term *compound* refers to. Since compounding as a word formation process is a wide-spread process cross-linguistically, there have been numerous attempts to define what a compound is. Some of these definitions are provided below:

- (45)
- a. “when two or more words are combined into a morphological unit, we speak of a compound” (Marchand, 1960:11)
 - b. “...a compound word contains at least two bases which are both words, or at any rate, root morphemes” (Katamba, 1993: 54)
 - c. “...a word which consists of two or more words” (Fabb, 2001: 66)
 - d. “...a complex lexeme that can be thought of as consisting of two or more base lexemes” (Haspelmath, 2002: 85)
 - e. “The formation of a new lexeme by adjoining two or more lexemes” (Bauer, 2003: 40)
 - f. “...a morphologically complex word containing at least two elements which can otherwise occur as free forms” (Toman, 2003: 349)
 - g. “...two stems combined as one, with the compound as a whole bearing the category and morphosyntactic features of the right-hand stem” (Lieber, 2004: 47)
 - h. “...is a special type of derivation, since it involves the creation of one lexeme from two or more other lexemes” (Aronoff & Fudeman, 2005: 45)

The definitions given above refer to the units which form a compound: root, stem, word and lexeme. As seen in the definitions given in (45), different authors have proposed that different units take part in the formation of compounds. That is to say, the topic of which units are combined in order to form a compound is controversial. On the other hand, all seem to agree upon the idea that compounding as a word formation process is mostly composed of two *items*, creating new *items*. Here I prefer to use ‘item’ instead of *root*, *stem*, word or *lexeme* because of three reasons. First, there is no agreement in the literature when it comes to what units are combined to form a compound as previously stated. Second, there is an ongoing debate on the definition of these linguistic terms (Dixon, 2002). Third, these terms can be defined differently within different languages. To give an example, Ralli (2008) shows that the term *stem* refers to bound forms in Greek whereas stems are mostly free forms in English.

Guevera and Scalise (2010) provide a different perspective in defining what a compound is. They argue that a compound is composed of three lexical categories namely X, Y, and Z. ‘r’ represents the grammatical relation between two constituents X and Y. These relations between these constituents is schematized as such [X r Y]_Z. Although this definition is more advantageous because of not using the controversial terms (i.e. *root*,

stem, lexeme or *word*), there are still some unexplained issues regarding compounding, such as what about phrasal compounds⁴ with a constituent that is not a lexical category.

Although there is no strong agreement upon the definition of compounds, what should go unnoticed is that compounds seem to have some properties which differentiate them from other linguistic categories in a variety of different languages. In the characterization of compounding, different types of criteria have been proposed: phonological, semantic, and syntactic criteria (Hacken, 2000; Haspelmath, 2002; Toman, 2003; Dressler, 2006; Lieber & Štekauer, 2011 *inter alia*). Below each of these criteria will be discussed in relevance to their reliability in determining compoundhood.

2.2.1.1 Phonological Criteria

In the linguistic literature, English is the most studied language and this is also true for the compound literature. Therefore, criteria for compounding are primarily based on structure of English. This is especially evident for the phonological criteria. In English, the most important phonological criteria is considered to be stress. It has been argued that compounds and phrases can be differentiated by their stress patterns such as *bláckboard* vs. *black bóard*. Phrases in English are generally stressed phrase-finally, whereas compounds have a tendency to be stressed on the first element (Marchand, 1960; Lees, 1963; Chomsky & Halle, 1968). On the other hand, many other studies on stress in English compounds show that this generalization is problematic because there are abundant counterexamples to this claim (Kingdon, 1958; Roach, 1983; Bauer, 1983, 1988; Olsen, 2000, 2001; Giegerich, 2004, 2009). Some of these counterexamples are provided in (46).

- (46) a. apple píe
 b. scholar áctivist
 c. May flówers
 d. summer níght

⁴ Phrasal compounds are defined as “compounds headed by a noun with a phrasal non-head” (Lieber & Scalise, 2007) such as *God is dead theology*.

(taken from Plag, 2006:147)

The examples in (46) are claimed to be compounds but they display the stress pattern of phrases (Plag, 2007: 200). There have been various attempts to solve the puzzle of the so-called counterexamples to the compound stress rule in English (Marchand, 1960; Sampson, 1980; Olsen, 2000, Giegerich, 2004, 2011; Plag, 2003, 2006, 2007 inter alia).

Some of these attempts argue that the structural properties of compounds in English determine their stress properties. Among these syntactic explanations, Marchand (1960) claims that only those which have present or past participles in their second constituent behave differently than others in terms of stress such as *easy goíng* and *high-bórn*. On the other hand, this explanation can be refuted by many other counterexamples such as *trúck driving* or *hánd held*. The weakness of this explanation stems from the fact that Marchand (1960) tries to find explanation by only looking at a limited set of data. Giegerich (2004, 2011) also propose a syntactic explanation for the ‘exceptionally’ stressed compound in English by relying on the syntactic relationship between the constituents. He asserts that if there is a head-complement relationship between the parts such as *trúck driver*, then the stress falls on the right-hand member. The left-hand member is stressed if the relationship between the constituents is similar to modifier-head relationship such as *steel bridge*. On the other hand, this account can be refuted by some counterexamples where the compounds having modifier-head relationship such as *ópera glasses* can be left-prominent. The explanation for such cases offered by Giegerich (2004, 2011) is that both the degree of lexicalization and syntactic properties determine where the stress falls. Novel compounds with modifier-head relationship have a tendency to be left-stressed; therefore, the syntactic relationship between the constituents becomes of secondary importance. Since lexicalization and frequency go hand in hand, Giegerich should have found some right-stressed compounds among those who have complement-head relationship between their constituents, but there is no such example

in his data. This shows that although Giegerich's attempt explains some part of the issue, it does not always predict the existent structures.

There are also semantic explanations for the variability of stress in English compounds (Sampson, 1980; Ladd, 1984; Olsen, 2000, 2001). The semantic account for stress in English compounds is based on the different types of meaning relationships. For example, it has been claimed that if the first stem gives information about what the second one is made of, then right-hand stress is expected such as in *rubber bánd* (Sampson, 1980). However, this hypothesis can be refuted by many exceptions such as *ápple cake*. Furthermore, copulative compounds in which a coordination relation between the constituents is attested such as *scholar-áctivist* are regularly right-stressed (Olsen, 2001); however, there are a few exceptions such as *mán-servant*. Furthermore, stress properties of semantically very similar compounds can be different such as *Fifth Ávenue* and *Fifth Stréet* (Bauer, 1983, 1998). Therefore, semantic approach for the variable stress patterns in English compounding seems to be insufficient in so far as explaining the whole phenomena.

Another approach for right-prominent compounds comes from Plag (2003, 2006, 2007). He argues that stress assignment is determined by the analogy to NN compounds which are present in the mental lexicon. Here the term 'analogy' refers to the influence of existing compounds on the newly-constructed ones. The prototypical example given in this approach is the *street* and *avenue* compounds: those with *street* are left-prominent such as *Fifth Street* and those with *avenue* are right-stressed such as *Fifth Ávenue*. Plag's approach has been highly criticized for not being falsifiable and hence, has been called unreliable (Lieber & Štekauer, 2011).

As seen above, all three criteria proposed for the variability of stress in English compounds have some problems although they success to provide an explanation for a small section of the data. To recapitulate, it can be concluded that although most compounds in

English have a tendency to be stressed on their left-hand members, this is not the basic criterion determining compounds in English such as *apple pie*. Thus, stress does not seem to be a reliable criterion in English compounds.

Other than stress, there are many other phonological criteria which apply to various languages. These other phonological criteria include vowel harmony in Chuckchee (Bauer, 2011); vowel deletion in Hebrew (Borer, 2011) and segmental effects like fricative voicing in Slave (Rice, 2011). While numerous researchers have come up with these other phonological criteria, Lieber and Štekauer (2011) argue that the consistency of these criteria in differentiating compounds as a distinct word-formation process is unsound.

2.2.1.2 Semantic Criteria

Semantics is claimed to be used as a criterion to differentiate between compounds and phrases (Jespersen, 1942; Fabb, 2001). According to this view, a compound has to be semantically opaque, whereas a phrase has a semantic transparency. To put it differently, if the meaning of whole can be predicted by the meaning of the parts, the structure is an example of a phrase; however, if the meaning of the whole cannot be predicted, the structure is an example of a compound. On the other hand, this criterion fails in most of the cases as pointed out by Hacken (2000) and Giegerich (2011). Although compounds are often but not always semantically-opaque, there are numerous exceptions to this generalization such as *bird-watcher* or *coach driver*. Therefore, it has been claimed that both phonological and semantic criteria proposed in determining compounds in English fail to account for all of the data (Lieber & Štekauer, 2011; Giegerich, 2011 inter alia).

2.2.1.3 Morphological Criteria

It has been argued that phrases and compounds can be distinguished in terms of their morphological behaviors (Dressler, 2006; Lieber & Štekauer, 2011). According to

morphological criteria, the parts within a phrase can be inflected by agreement as in German *die Hoche-n Schule-n* ‘high school’, whereas prototypical compounds do not allow their constituents to be inflected by agreement such as *die Hoche Schule* ‘university’. As seen in phrasal German example *die Hoche-n Schule-n* ‘high school’, both parts are marked by gender, whereas the parts of the compound *die Hoche Schule* ‘university’ are not. On the other hand, this criterion is also falsifiable because of the existence of Italian compounds where both members can either be marked by plural or not e.g. *mezza-luna* ‘half-moon’ vs. *mezze-lune* ‘half-moons’ (Scalise, 1992).

2.2.1.4 Orthographic Criteria

As Bauer (1998) admits orthography does not have “linguistic value” (p. 68) but sometimes “orthography might reflect strong linguistic intuitions” (p. 69). In the case of English compounds, the value of orthography is evident, as can be seen from the examples *airport*, *birthday*, *campfire* and many others. If two words are written together without a space, they form a compound. However, as Bauer reveals, compounds are not unanimously written together. He also provides the example of *girl friend*, *girl-friend* and *girl-friend* all of which are acceptable. There are also other compounds that can be written in together or not. In conclusion, orthography can provide some insight into whether a structure is a compound; however, orthography cannot be used as definite test of compounds (Bauer, 1998; Lieber & Štekauer, 2011 inter alia).

2.2.1.5 Syntactic Criteria

There are also syntactic criteria proposed for differentiating compounds and phrases in English. One of these syntactic criteria that is very reliable is the inseparability of the constituents of a compound. The inseparability criterion refers to the strict adjacency between the constituents. That is to say, the constituents cannot be separated by any material and they

display syntactic integrity (Bauer, 1998; Toman, 2003; Aronoff, 2005; Dressler, 2006; Scalise & Vogel, 2010; Corbett, 2010; Lieber & Štekauer, 2011 inter alia). Although it is possible to insert a material between phrases as in (47), compounds cannot be broken by any material as in (48).

- | | | |
|------|--|---|
| (47) | a. <i>black bird</i>
b. <i>black ugly bird</i> | ‘a bird which is black’
‘a bird which is both black and ugly’ |
| (48) | a. <i>blackbird</i>
b. * <i>black ugly bird</i>
c. <i>ugly blackbird</i>
(taken from Lieber & Štekauer, 2011) | ‘Turdus merula (a variety of New world birds)’
Intended interpretation: ‘ugly Turdus merula’
‘ugly Turdus merula’ |

As seen in example (47)b, insertion between the constituents is permitted with phrases, whereas such an insertion is not possible with compound as shown in (48)b. The modifier *ugly* cannot intervene between the constituents of the compound *blackbird*, but it can modify the compound as a whole as in (48)c.

In addition, it has been attested that compounds do not allow for internal modification. Internal modification refers to inability to modify the constituents within a compound (Aronoff & Fudeman, 2005; Lieber & Štekauer, 2011; Giegerich, 2011 inter alia). A compound can be modified as a whole as seen in (48)c; however, the parts cannot be modified individually by a modifier (e.g. adjective or adverb) as in (49)a.

- | | |
|------|---|
| (49) | a. * <i>a very blackbird</i>
b. <i>a very black bird</i> |
|------|---|

Example (49)b is grammatical because *black bird* is a phrase and *very* can modify *black*. On the other hand, (49)a is ungrammatical because the compound *blackbird* is a noun and *very* cannot modify only *black* and *very*’s modifying *blackbird* as a whole is not syntactically sound, as adverbs do not modify nouns (Lieber & Štekauer, 2011).

Another difference between phrases and compounds is that the second item cannot be replaced by a pro-form in compounds (Bauer, 1998; Lieber & Štekauer, 2011). The second

item in a phrase can be substituted by *one* as in (50), whereas this is not possible in compounds as shown in (51).

(50) *black one* “the bird which is black”

(51) **black one* Intended interpretation: “the black *Turdus merula*”

Another syntactic criterion, which is relevant to inseparability criterion, is the resistance to co-ordination (Bauer, 1998). Bauer illustrates that compounds resist coordination in two ways. First, a constituent of a compound cannot be coordinated with another lexical item as **bread and buttercups* and **buttercup and saucer*. Second, compounds cannot be coordinated with each other as in **wind and flourmills*. However, he acknowledges that sometimes when the compounds are closely related, it is possible to co-ordinate them. Bauer provides the example *wind and watermills*. Compounds’ ability to sometimes be coordinated with each other has been claimed by others as well (e.g. Spencer, 2003). However, not all compounds can be coordinated with one and other and the ones that can might not be compounds at all (Lieber & Štekauer, 2011). Therefore, it can be inferred that of the syntactic criteria, inseparability is the more consistently reliable one and reluctance of co-ordination is only mostly reliable.

In this section, three criteria defining compounds in English, namely phonological, semantic, orthographic and syntactic criteria, were discussed respectively. It was shown that phonological, orthographic and semantic criteria were undependable but syntactic criteria were dependable. After defining and establishing compounds, the different types of compounds will be discussed in the next section by referring to the notion of head.

2.2.2 Compound Types

Like its definition, the classification of compounds is also a debated issue in the linguistic literature. There have been numerous problems attested in the classification of compounds. First of all, classifications are usually based on English and these classifications fail to explain the whole compounding phenomena cross-linguistically. In addition, as pointed out in Scalise

& Bisetto (2011), there are “neglected” compound types. That is to say that some compound types, more specifically [N+N]_N, [A+N]_N or [N+A]_N compounds, were highly studied in world-languages, but other types such as [V+V]_N, [Adj + V]_V and [N+V]_V have almost been disregarded. This is a crucial fact for this study as it is on [VV] converbs, which are argued here to be compounds. One of the purposes of this study was to fill a small amount of this gap in linguistics literature. Furthermore, as mentioned by Scalise & Fabregas (2010) in most of the classifications the notion of head is used; however, the notion of head is not homogenous and usually it is not clear what kind of head the authors are talking about. Therefore, the attempts in the classification of compounds are insufficient to account for compounding cross-linguistically. Before introducing the several attempts to classify compounds, the notion of head will be discussed.

2.2.3 The Head in Compounding

In the linguistic literature, the notion of *head* is used to refer to the part which characterizes the morphosyntactic properties of the entire word (Williams, 1981; Selkirk, 1982; Spencer & Zwicky, 2001; Haspelmath, 2002; Toman, 2003; Aronoff & Fudeman, 2005; Dressler, 2006; Guevera & Scalise, 2010; Bauer, 2011). This definition of the head coincides with the notion of *formal head* where morphosyntactic properties of the compound are expressed. For example, German example *Handschuh* ‘glove’ is composed of a feminine noun *Hand* ‘hand’ and a masculine *Schuh* ‘shoe’. The gender of the whole compound is determined by the head which is the masculine noun *Schuh* ‘shoe’. In addition, the formal head is the locus of inflection in compounds as in English example *lipstick-s* where the formal head *stick* is marked by plural, not the non-head *lip* (**lip-s stick*). The formal head is also the constituent that determines the lexical category of the compound. This is illustrated in the example *blackbird* which is a noun like its head *bird* and not an adjective like *black*.

As opposed to *formal head*, the notion *semantic head* is the constituent which determines the core meaning of the whole compound (Lieber, 2004; Guevera & Scalise, 2010 inter alia). For example, *catfood* refers to a type of *food*, not a type of *cat*. Thus, the whole compound denotes a hyponym of its semantic head which is *food* in the case of *catfood*. Following Allen (1978), “IS A” test can be used to show that the whole compound denotes a subclass of its head. For example, *blackboard* IS A *board* and *mailman* IS A man. However, as seen in these examples, this test proposed by Allen (1978) only focuses on the semantics of the whole compound disregarding the formal head. This problem will be touched upon later.

It has been attested that formal and semantic head can coincide in many of the cases. For example, *green card* is an example of [Adj + N]_N compound in English. Both the formal and semantic head of English compound *green card* are *card* which determines the lexical category of the whole compound as well as its meaning, a type of *card*. Upon noticing this, Fabb (2001) put forward the idea to unify the semantic and formal definitions of head. In other words, Fabb defined *head* as the constituent which determines both the lexical category and the meaning of the whole compound. This definition of head is found to be inadequate considering the examples explained below.

2.2.4 Against a Unitary Head-Notion

Scalise & Fábregas (2010) argue that there are some cases in which such kind of a head-definition is not sufficient to capture the whole phenomena. For example, Scalise & Fábregas (2010) provides two examples from Italian showing that the tests for the formal and semantic head do not always identify the same unit as shown in (52).

- | | | |
|------|------------------|--------------------------------|
| (52) | a. porta-lettere | ‘to carry + letters > postman’ |
| | b. testa rasata | ‘head+shaven > skin head’ |

The compound in (52)a is a noun and its category is given by its head which is *lettere* ‘letters’. However, the semantics of the whole compound is mostly related to the first

constituent *porta* because the whole compound addresses someone who is carrying something, not a type of letters. The same holds true for (52)b because the whole compound is a noun and the lexical category of the whole is determined by the formal head *testa* ‘head’. However, the meaning of the whole is mostly based on the non-head *rasata* ‘shaven’.

These examples in (52) provide evidence for the fact that the notion of *head* is not as simple as it has been thought to be. There seems to be other factors which play a role in the identification of the head in a compound.

Another problem in headedness is the position of the head. It has been lonely assumed that the head of a word is the rightmost constituent and this holds true for complex words such as compounds (DiSciullo & Williams, 1987; Williams, 1981). This generalization is called the Right Hand Head Rule principle. On the other hand, further research shows that this generalization is not foolproof because there are numerous languages in which the head is the left-hand constituent such as Spanish *camposanto* ‘field + holly > graveyard’. Moreover, the position of head can change even within the same language such as Chinese where nominal compounds are right-headed and verbal compounds are left-headed. These observations invalidate a universal Right Hand Head Rule. Therefore, it is better to assume that in every language there is a canonical position for the head of the compound although there may be such exceptions (Guevera & Scalise, 2010).

To recapitulate, the notion of *head* is very questionable. To unify many different aspects in one unit seems to cause problems. Therefore, Scalise and Fábregas (2010) propose that there are three different types of head in a compound which may overlap or all may be different from each other: semantic head, categorical head and morphological head.

2.2.4.1 Semantic Head in a Compound

The semantic head refers to the constituent which determines the semantic class of the whole word. In other words, the meaning of the whole is inferred by looking at the meaning of the

semantic head. Scalise and Fábregas provide the example *wife children* from Indian English which they claim to lack of semantic head following Allen (1978)'s 'IS A' rule because this compound refers to neither a type of wife nor a type of children. On the other hand, this compound is used to mean 'family' which is related to the parts *wife* and *children* semantically.

They also provide the example *pale face* which they argue does not have a semantic head because the compound does not refer to a type of *face* but someone who has a pale face. To claim that such compounds do not have a semantic head because they do not refer to a type of X is not reasonable because as seen in these examples the meaning of the whole is somehow related to its parts. To put it differently, in *wife children* both constituents contribute to the meaning of the whole, whereas in *pale face* the contribution is provided through metonymical relations (part-whole relations) because the constituent *face* is the part of the referent.

Scalise and Fábregas provide examples of compounds presented above that have no apparent semantic head. In those examples, the meaning of the compound is at least semantically related to its parts. They, moreover, provide another set of examples of compounds that do not have a semantic head. In these compounds, inferring the meaning of the whole does not seem to be possible via any semantic relationship to the parts. An example of such compound is Spanish *pati-difuso* 'leg distributed' which means 'puzzled'. *Puzzled* is not semantically related to *leg* or *distributed*; therefore, it can be concluded that there is no semantic head in this example.

2.2.4.2 Categorical Head in a Compound

Categorical head (also known as grammatical head) is the constituent which is responsible of the lexical category of the whole compound. Scalise & Fábregas (2010) provide the following

examples in (53) and (54) to show that there are cases where there is no grammatical head in a compound.

(53) bagna-asciuga ‘soak + dry > strand’

(54) subi-baja ‘ascend + descend > lift’

The combination of two verbs in (53) and (54) results in a noun although neither of the constituents is a noun and there is no morphological process turning them to nouns.

Therefore, such type of compounds are claimed to have no grammatical / categorical head. On the other hand, compounds like *singer-actor* where two nouns come together and the whole becomes a noun too. Such types of compounds have two grammatical heads because both constituents play an equal role in the identification of the grammatical head.

2.2.4.3 Morphological Head

The last type of head, morphological head, characterizes the formal properties of a compound. To put it differently, the morphological head is the locus of inflection such as gender or number. Scalise and Fábregas (2010) provide the following example in (55) where the semantic head and the morphological head do not point the same unit.

(55) *testa rasata* ‘head + shaven > skin head’

In Italian compound in (55), the first constituent *testa* is the grammatical head because it determines the category of the whole compound as a noun. However, the whole compound is masculine although *testa* is feminine. This provides further evidence for Scalise and Fábregas’s (2010) hypothesis which rejects the unitary head notion and proposes that there are three kinds of heads, namely semantic, categorical (grammatical) and morphological.

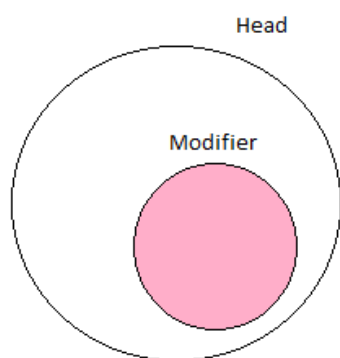
In this section, the notion of head was discussed. The fact that in a compound there can be three different types of heads, namely semantic, categorical and morphological, has been shown. Since [VV] converbs are claimed to be compounds, more specifically co-compounds, in this thesis, the discussion on head will provide implications in further chapters.

After having discussed the notion of head in this section, next section is dedicated to the classification of compounds where the semantic head is taken into consideration.

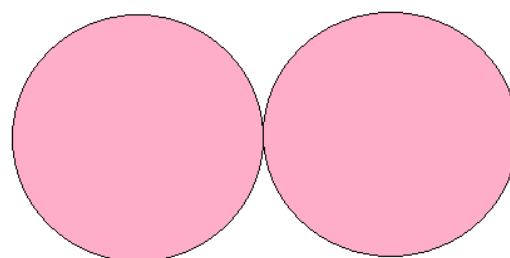
2.2.5 The Classification of Compounds

In the literature on compounding there are numerous ways researchers have categorized compounds (Bauer, 2003; Spencer & Zwicky, 2001; Haspelmath, 2002; Aronoff, 2005; Dressler, 2006 inter alia). In this section two types of categorizations (one based on semantic headedness and the other on formal headedness) are presented.

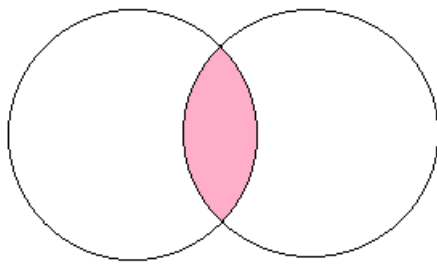
The first type of categorization of compounds presented in this section is one by Heine & Kuteva (2009). They divide compounds into 4 categories according to the relation between the meaning of the whole compound and the meaning of its parts. This relationship is integrated with the number of semantic heads. Their subject matter is noun-noun compounds; however, these categories can be applied to any compound. Their categorization is based on the relation between the meaning of the whole compound and the meaning of its parts. The figures below illustrate their four categories. Note that the gray represents the meaning of the whole compound.



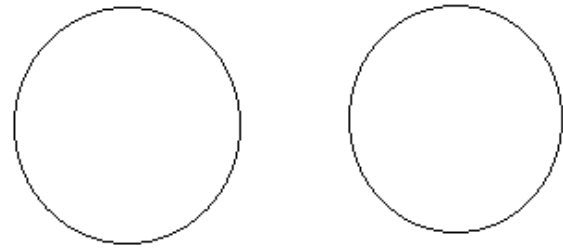
Modifying Compounds



Additive Compounds



Appositive Compounds



Alternative Compounds

Figure 1: Semantic categorization of compounds (following Heine & Kuteva, 2009)

In modifier compounds, one constituent modifies (i.e. specifies) the other constituent; therefore, the whole compound is only a subcategory of the modified constituent. Heine & Kuteva (2009) provide the example *apple tree*, in which ‘apple’ specifies what kind of a ‘tree’ it is and the compound ‘apple tree’ is a subcategory of ‘tree’. Both additive and appositive compounds are made up of two semantic heads but they differ on the relationship between the whole compound and its parts (Heine & Kuteva, 2009). In additive compounds (aka dvandvas), the whole compound is a sum of the two constituents. Heine & Kuteva (2009) provide the examples *whisky-soda* which has in it both ‘whisky’ and ‘soda’. Heine & Kuteva (2009) stress that the constituents must be related concepts. In appositive compounds, the whole compound is like the intersection of the constituent sets (Heine & Kuteva, 2009). Heine & Kuteva (2009) provides the example *servant girl*, which is both a ‘servant’ and a ‘girl’ but not just any ‘servant’ or any ‘girl’. They underline that these constituents can be chosen at random. In alternative compounds, there are no semantic heads and the meaning of the whole alternative compound cannot be deduced from either of the constituents (Heine & Kuteva, 2009). They point out that alternative compounds are usually metaphorical. They provide the example *egg head* which is neither an ‘egg’ nor a ‘head’ but it derives its meaning from a metaphor that has been long forgotten.

The second categorization of compounds is based on formal headedness. According Kiparsky (2009) the number of heads compounds can have are one, two (or more) and none. Kiparsky (2009) points out that single headed compounds have been referred as “determinative compounds” or “subcompounds”. He notes that compounds with both (or all) members as heads have been called “dvandvas” or “co-compounds” (The issue of co-compounds will be handled in the next section). He further asserts that compounds with neither constituent as a head have been called “exocentric compounds”, “bahuvrihis” or “attributive compounds”. Kiparsky (2009) states that this categorization is substantiated by the fact that there are morphosyntactic differences between these subtypes. He gives the example , if a compound constituted from two verbs has two formal heads, than the argument structures of the constituents need to be identical; however if a compound constituted from two verbs has only one formal head, than the argument structures of the constituents can be non-identical. This example he gives comes into play when this study verifies that [VV] converbs in Turkish do in fact have two heads (see Chapter 5).

This study focuses on a specific type of compounds: co-compounds. Since there are many categorizations of compounds in the literature and sometimes the terminology is misused, in this section the notion of headedness and how compounds can be categorized by different kinds of heads have been presented as they appear in the literature. In next section, in which component of the grammar compounds are generated will be discussed.

2.2.6 Theoretical Approaches to Compounding

In linguistic literature, one of the most debated issues is which component of grammar generates compounds. This sections aims to provide an outline of two basic theoretical approaches to compounds: lexicalist approach and syntactic approach. These two approaches will be introduced and discussed respectively.

2.2.6.1 The Lexicalist Approach to Compounding

Lexicalism assumes that the processes involved in the formation of complex words are different than the syntactic rules of the grammar (Halle, 1973; Jackendoff, 1975; Giegerich, 1999, 2011 inter alia). The lexicon is assumed to be a presyntactic component where complex words such as derivation and compounding operates. The lexicalist approach takes its roots from Chomsky (1970) who noted that derived nominals such as *refusal* are different from gerundive nominals such as *refusing*. According to Chomsky, the former is a lexical output, whereas the latter is a syntactic construction. This influential work paved the way for development of the lexicalist approach to compounding. Since then, the idea that there are different rules which are at work in the construction of complex words has been supported by many researchers.

Prompted by Chomsky, Halle (1973)⁵ differentiates syntactic rules and word-formation rules. His work is part of the initial movement arguing for an autonomous morphology component. In his model, morphology is composed of three components namely a List of Morphemes, Word-Formation Rules (WFRs) and a Filter. In Halle (1973)'s first component, morphemes which are listed in the lexicon are represented with a syntactic label such as N(oun), V(erb), etc., but affixes are labeled as Af(fix) without any syntactic category. His second component, Word-Formation Rules, take in morphemes and outputs plausible word in that language. His third component, the filter, has two basic functions. One, filter assigns idiosyncratic features, such as meaning, to plausible words. Two, filter accepts plausible words as a part of the language or rejects them (Halle, 1973).

Halle (1973) further argues that as a result of the interaction of the List of Morphemes, Word-Formation Rules and the Filter, the Dictionary is generated, where all words in a language are listed. Radically, Halle (1973) claims that both derivation and inflection are

⁵ Note that although Halle (1973) does not specifically mention compounds, his model also explains the formation of compounds because compounding is a process of word-formation.

handled in the same way by the Word-Formation Rules. Therefore, he assumes that the Dictionary also contains all the inflected forms of every word. The figure 1 taken from Scalise & Guevera (2005) is provided to summarize Halle (1973).

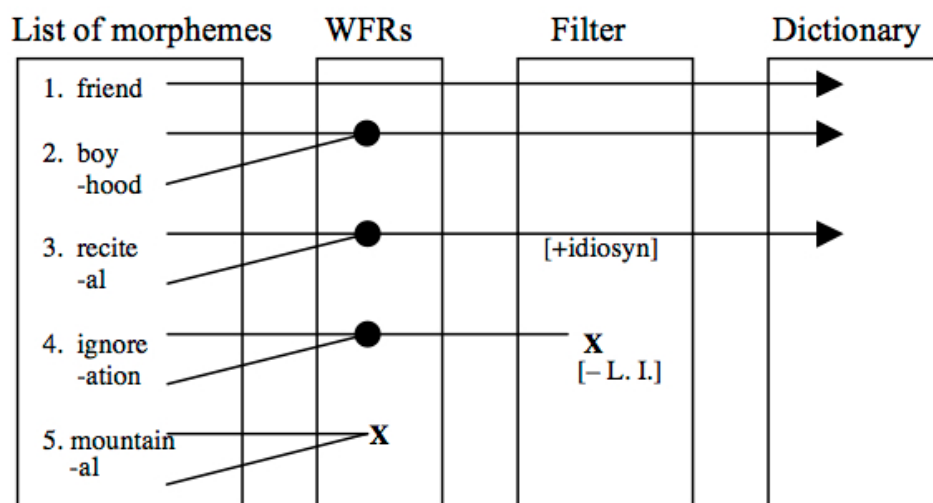


Figure 2: Halle (1973)'s model

It has been noted in the literature that Halle (1973) contributes to the development of the theory of morphology because word-formation processes are handled in a distinct place, the Lexicon by the lexical rules. Scalise & Guevera (2005) state that Halle's proposal draws the fundamental distinction between syntax and morphology. As Scalise & Guevera (2005) asserts, in Halle's model morphology uses the Filter to block the possible but non-existing words such as **ignoration*; however, there is no such mechanism in syntax to do the same for possible but non-existing sentences. In addition, as Scalise & Guevera (2005) observes that Halle's model has another advantage: the syntactic component gets rid of the burden of word-formation operations which are sometimes idiosyncratic.

In addition to its advantages, it has been noted that there are some problems in Halle (1973)'s account in that basic units of the lexicon are morphemes (Scalise & Guevera, 2005): Since simple words are mostly morphemes in English, this proposal works well; however, this

does not hold true for all languages. Furthermore, the idea that the List of Morphemes contains both derivational and inflectional affixes is found to be questionable by Scalise & Guevera (2005) because the distinction between “the formation of new words (or lexemes, e.g. *writ+er* from *write*)” and “the formation of words-forms (e.g. *write+s*, *writ+ing*)” is not always clear-cut (Scalise & Guevera, 2005 p. 10).

Another lexicalist model to compounding is proposed by Jackendoff (1975) whose lexicon is composed of a set of fully specified of existents words as well as a set of lexical redundancy rules. His lexical redundancy rules are involved in the lexicon and they are used to express the relationship between the items such as *decide* and *decision*.

Jackendoff (1975)’s lexical redundancy rules do not have any contribution in the derivation of sentences; however, they take part in the expression of relationships in the lexicon. If the information in a lexical entry is predictable by knowing another lexical entry, then this predictable information is counted as redundant. He argues that *transform*, *transformation*, *transformational* and *transformationalist* are listed as fully specified lexical entries in the lexicon (Jackendoff, 1975 p. 652). It has been stated that in such as case there are four words, the information in the word *transform*, idiosyncratic meaning which is added through derivation process plus three necessary redundancy rules (Jackendoff, 1975 p. 653).

Furthermore, only the words are present in Jackendoff’s lexicon. The productive affixes do not take place in his lexicon as they occur in Halle’s lexicon. Instead, these productive affixes exist as a part of lexical rules, whereas non-productive affixes even cannot find a place for themselves in the lexical component (Jackendoff, 1975 p. 655).

Jackendoff (1975) further argues that there is a distinction between morphological and semantic rules which are parts of his word-formation rules. The existence of such a distinction between morphological and semantic rules as well as the placement of productive affixes

among the lexical rules suggests that morphology is a process-based phenomenon in Jackendoff's terms.

Jackendoff's distinction of morphological and semantic rules further applies to the process of compounding. He claims that the meaning of each compound is built from its constituents in N(oun) N(oun) compounds, whereas how these meanings are formed in each compound differs from each other. For example, he provides the English examples of *garbage man* and *snowman*. The morphological rules for these NN compounds are provided in (55).

(55) Jackendoff (1975)'s morphological rule for NN compounds (p. 655 in (22))

$$\left[\begin{array}{c} /[\text{N}x] \text{ } [\text{N}y]/ \\ + \text{N} \end{array} \right] \leftrightarrow \left\{ \begin{array}{c} \left[\begin{array}{c} /x/ \\ + \text{N} \end{array} \right] \\ \left[\begin{array}{c} /y/ \\ + \text{N} \end{array} \right] \end{array} \right\}$$

The morphological rule given in (55) indicates that any two nouns can come together and form a compound. The lexical redundancy rule which is represented by ' ' holds a relation between the constituents, X and Y, and the compound. Below, the semantic rules which are at work for *garbage man* and *snow man* are shown in (56) and (57) respectively.

(56) Jackendoff (1975)'s semantic rule for *garbage man* (p. 656 in (23) a)

$$\left[\begin{array}{c} + \text{N} \\ Z \text{ THAT CARRIES } W \end{array} \right] \leftrightarrow \left\{ \begin{array}{c} \left[\begin{array}{c} + \text{N} \\ Z \end{array} \right] \\ \left[\begin{array}{c} + \text{N} \\ W \end{array} \right] \end{array} \right\}$$

(57) Jackendoff (1975)'s semantic rule for *snowman* (p. 656 in (23) b)

$$\left[\begin{array}{c} + \text{N} \\ Z \text{ MADE OF } W \end{array} \right] \leftrightarrow \left\{ \begin{array}{c} \left[\begin{array}{c} + \text{N} \\ Z \end{array} \right] \\ \left[\begin{array}{c} + \text{N} \\ W \end{array} \right] \end{array} \right\}$$

For Jackendoff (1975), the semantic rules given in (56) and (57) denote the semantic relations between the meaning of compounds and the meaning of constituents which are represented by Z and W. The semantic relation in *garbage man* (56) is “THAT CARRIES”, whereas the semantic relation is “MADE OF” in (57). Jackendoff (1975) states that such lexical redundancy rules in the lexicon determine the possible meanings for the relevant compound.

Jackendoff (1975) draws a sharp line between the lexicon and syntax as well as lexical and transformational rules. Firstly, he shows that lexical rules can denote partial relations such as compounds and its constituents, whereas syntactic rules cannot express such relations. Secondly, he points out that lexical rules are at work within the words, whereas syntactic rules do not have access to word-internal structure. Finally, he asserts that semantically opaque compounds such as *redhead* ‘someone who has red hair’ can be accounted by the help of lexical redundancy rules, whereas syntactic rules do not contain such information (Jackendoff, 1975 p. 657-658).

It has been shown that Jackendoff (1975) account for compounds by lexical redundancy rules which are composed of semantic and morphological rules. Compounds are treated as lexical processes rather than syntactic. In addition, it has been touched upon that compounds as lexical outputs are generated differently than phrases which are created in syntax for Jackendoff (1975).

The theory of Giegerich (1999) assumes that there exists level ordering (lexical stratification) which enables the phonology–morphology interaction. According to this approach, there is stratified lexicon which consists of an ordered arrangement of two or more morphological domains. For example, in English it has been claimed that there are two morphological domains. The outputs of stratum 1 often display formal or semantic irregularity (e.g the position of stress in *solemn* vs. *solemnity* or the meanings of *fraternal* vs. *fraternize*). The stratum 1 in English is claimed to be root-based. On the other hand, the stratum 2 in

English is word-based. In other words, all regular and rule-driven morphology (i.e. regular inflection, fully productive derivation and compounding) are in the domain of stratum 2. Hence, compounding and some particular affixation occur at the same level and there can be an interaction between these two in stratum 2.

Giegerich (2011) further develops his theory by considering the distinction between English noun phrases and compounds such as *black bird* and *blackbird* respectively. He states that noun phrases and noun compounds display different semantic relations as well as different morphosyntactic features such as stress as discussed above. NN compounds represent associative attribution whereas NPs represent ascriptive attribution. In ascriptive attribution, the adjective is used to express a property of the following noun. For example, the adjective *beautiful* denotes the property of the noun *picture* in *beautiful picture*. In addition, Giegerich realizes that ascriptive adjectives can be used in predicative functions as in *the picture is beautiful*. Such a predicative usage is not possible with associative attributes which does not express a property of the noun. Instead, associative attributives denote a property associated with the noun as in *dental decay* where the predicative usage is not allowed (e.g. **the decay is dental*). Giegerich (2011) concludes that compounds are generated in another component than phrases because of the formal and semantic differences attested among them.

In this section, an outline of lexicalist studies in linguistic literature has been provided. According to the lexicalist approach, the Lexicon is a highly dynamic component where word-formation takes place. The lexicalists argue that the rules which operate on word-formation are different than those which are at work in syntactic constructions. Among the many lexicalist studies, only Jackendoff (1975) and Giegerich (1999, 2011) directly refer to the compound-formation in their theory.

The lexicalist approach to compounding provides some theoretical advantages accounting for the structural and semantic differences between compounds and phrases. As

Giegerich (2011) points out that though not reliable, compounds are stressed differently than phrases in English (e.g. *wáitchmaker* vs. *blue bóok*). In addition to their different phonological behaviors, NNCs and NPs in English are attested to display different semantic meanings namely associative attribution and ascriptive attribution respectively. The lexicalist approach seems plausible to place compounds in a distinct component and as a result accounts for its peculiar structural and semantic properties.

On the other hand, the lexicalist approach is considered to be disadvantageous too. First of all, the existence of phrasal compounds in languages challenges the lexicalist approach (Lieber, 1992; Giegerich, 2011). The claim that compounding occurs in the Lexicon has trouble in explaining the formation of phrasal compounds where there is a phrase and a noun. Since the lexicalist rules are claimed to operate on lexical items not syntactic phrases, the phrasal compounds create some problems for the lexicalist approach.

2.2.6.2 The Syntactic Approach to Compounding

This section provides an outline of the syntactic approach to compounding (Lees, 1960, 1966; Levi, 1978; Baker, 1998). The general claim of this approach locates compounding in the syntax and argues that compounds are syntactic units. Below, each proposal will be discussed respectively.

Lees (1960, 1966) proposes that compounds are generated by the transformational rules which also create sentences. In other words, she has claimed that compounds such as *windmill* are created by the application of transformational rules on the underlying sentence structures like *wind powers the mill*. This argument implies that compounds in English underlyingly represent the grammatical relations such as subject, object, etc.

Another observation by Lees (1960, 1966) is that the ambiguous compounds can be accounted by different underlying structures. She provides the English compound *snake poison* as an example. According to Lees (1960, 1966), there are three possible interpretations

for the compound *snake poison*. First of all, *snake poison* can be interpreted as *the poison of snake* from the underlying sentence *the snake has the poison*. Another potential interpretation is *poison for snakes*. In this case, the underlying structure is *the poison is for the snake*. The third possible interpretation is *poison from the snake* which is derived from the sentence *X extracts poison from the snake*. He accounts for these multiple meanings with multiple structures.

Furthermore, Lees argues that although compounds like *windmill* and *flour mill* are NN compounds, they express different grammatical relations which can be accounted by different underlying structures matching them. For example, *windmill* is derived from the deep structure *wind powers the mill*, whereas the underlying structure of *flour mill* is *the mill grinds the flour*.

By assuming that the same grammatical relations (e.g. subject and object) hold between the two constituents of the compound, Lees (1960, 1966) states that compounds have the same structure with sentences. This infers that compounds are syntactic units generated by the transformational rules of sentences. Since in his theory transformations are required to be deleted (e.g. the deletion of verbs), its power has been criticized later in the linguistic theory (Chomsky, 1970; Allen 1978; Dede 1978; Scalise & Guevara 2005).

Another syntactic approach to compounding is proposed by Levi (1978). She proposes a similar account to Lees (1960, 1966). To her, NNCs are derived from the corresponding relative clauses. For example, *picture book* is derived from the underlying sentence *the book which has picture*. The first constituent *picture* is the direct object in the underlying relative clause structure. By the deletion of the predicate *have*, the compound *picture book* is obtained. Similarly, *student power* is another compound formed by the deletion of predicate *have* in the underlying structure *the student who has the power* where the first constituent is the subject of

the relative clause. In sum, Levi (1978) claims that compounds are generated in the syntax by applying transformational rules by making reference to their semantics as Lees (1960, 1966).

Baker (1998) provides an additional syntactic approach to compounding. He claimed that both root compounds⁶ and deverbal compounds are generated in the syntax. Baker (1998) declares that the second constituent in root compounds such as *pione-leg* assigns the thematic role to the first one as in deverbal compounds such as *taxi driver*. Therefore, these two types of compounds namely root and deverbal compounds are in fact syntactic units because they have similar structures in which the first constituent is the argument of the second one.

A reason for Baker (1998) to adapt a syntactic account to compounding is the issue of headedness. He argues that the head in English NNCs is in final position as in NPs. This suggests that both compound and other syntactic structures like phrases are the outputs of syntax. In sum, considering thematic roles and headedness Baker (1998) asserts that the rules of syntax are at work in the formation of compounds.

Compared to lexicalist approach, syntactic approach seems to be more plausible because syntactic approach can better account for phrasal compounds which cannot be explained by the lexicalist approach because of their phrasal nature.

Recall that this study investigates [VV] converbs, which are proposed to be compounds. As presented, the theories on compounding are based on nominal compounds. Since they are aiming to explain the construction of NN compounds, they try to answer questions only related to nominal compounds. As discussed in Chapter 5, there are some morphosyntactic and semantic restrictions on which two verbs can come together and form a compound. The theories discussed above are not meant to account for these restrictions.

⁶ According to Di Sciullo(2007), root compounds are compounds in which there is a modification relation between the constituents such as *catfish*. Di Sciullo (2007) argues that the constituents in a *deverbal* compound (also known as *synthetic* compounds) have a predicate-argument relation such as *cigar-cutter*. (For more information about root compounds and deverbal compounds see Di Sciullo (2007).

2.3 Co-Compounds

In the previous section, what makes a structure a compound as well as different types of compounds were considered. At this point, it is important to point out that compounds are not a unified category. In other words, they have sub-types based on the semantic relationships between the parts and the whole. Keeping this in mind, this section describes a specific kind of compound, namely co-compounds, will be focused on. More specifically, the qualities that define co-compounds and the kinds of co-compounds will be presented.

Heine & Kuteva (2009) are among many who have tried to categorize compounds (others include Fabb, 2001; Olsen, 2001; Haspetmath, 2002; Bauer, 2001; Booij, 2005; Scalise & Bisetto, 2009). In the categorization of Heine & Kuteva (2009), co-compounds (additive compounds) are composed of two semantic heads both of which contribute to the meaning. In other words, the whole refers to the sum of the two constituents. These structures are attested in many different languages and have been called by different names such as copulative (Olsen, 2001, 2004), dvandvas (Bauer, 2008; Ralli, 2008, 2009; Kiparsky, 2009) and co-compounds (Fabb, 2001; Wälchli, 2005). Copulative-compounds are claimed to embody a coordinative relation between the two constituents such *bartender-psychologist* which refers to someone who is both a 'bartender' and a 'psychologist' (Olsen, 2004). As another term for co-compounds, dvandvas are defined as structures in which “the members are syntactically coordinate: a joining together of words which in an uncompounded condition would be connected by the conjunction *and* (rarely *or*)” (Bauer, 2008 p. 1). In fact, the definitions of copulative compounds and dvandvas overlap with the definition of co-compounds where the two constituents are in a symmetrical relationship. Therefore, instead of trying to use all the names used for these structures, one will be chosen and used to refer at these structures throughout the study in order to be consistent. The designated term is co-compounds.

Wälchli (2005) is the most detailed work that elaborates on co-compounds cross-linguistically. After analyzing many different languages, he defines co-compounds as “word-like units consisting of two or more parts which express natural coordination” (Wälchli 2005, p. 1). Natural Coordination is defined as the coordination of items which are expected to co-occur because of their related meanings such as ‘husband’ and ‘wife’ and their tendency to form a conceptual unit such as ‘father and mother > parents. This property is very important in defining co-compounds and will be discussed later in detail.

Furthermore, co-compounds are observed to be associated with specific geographic areas. In other words, their distribution is not random. Co-compounds are commonly attested in the languages of Asia, easternmost Europe and New Guinea, whereas they seem to be absent in European languages like German or French (Wälchli, 2005; Arcodia et al. 2010). The following examples in (68) show the influence of Indian language on English. In Indian English examples (68), the meanings of the parts such as ‘wife and children’ are closely related to each other. The examples (69) from Erza Mordvin⁷, a Finno-Ugric (Uralic) language, are also composed of semantically related parts such as ‘skirt and shirt’ and ‘cook and bake’. The parts in these co-compounds can form conceptual units such as ‘family’, ‘clothes’, ‘prepare food’, respectively; therefore, the parts are claimed to be in a superordinate relationship to the meaning of the parts. This means that the referent *family* in the case of ‘wife and children’ has a more general meaning than its parts. This superordinate relationship will be handled when the semantic properties of co-compounds are discussed.

- (68) Indian English: reported speech in an English novel
 a. ‘Are you maybe married already, captain? Got *wife-children* waiting somewhere?’
 b. ‘However we can help our *father-mother* that is what is for us to do.
 (taken from Wälchli, 2005:1)

- (69) Erza Mordvin: examples from fairytales

⁷ Mordvin is a Finno-Ugric (Uralic) language, spoken in the European part of Russia. Mordvin has two major varieties, Erza and Mokša (Wälchli, 2005).

- a. *T'et'a.t-ćora.t* t'u.s.t' kudo.v.
 father.PL-son.PL depart.PAST.3rd PL house.LAT
 "Father and son went home"
- b. *Vard.iñe* saj.sinže *ruća.t panar.ot.*
 slave.DIM take.PRS3rdS>3rdPL skirt.your-shirt.your
 "The slave girl will take your clothes."
- c. *At'a.ś* *kil'd.ś-povod.ś* alaša.
 old: man.DEF harness.PAST3rdS-bridle.PAST3rdS horse
 "The old man harnessed and bridled the horse."
- d. *S'e.t'* *śim.d.s.t'-and.st.t'* ejsenze son
 that.PL drink.CAUS.PAST.3rd PL-feed.PAST.3rd PL them she
pid'e.ś-pan.ś t'enst.
 cook.PAST3rd S-bake.PAST3rd S DAT3rd PL
 "They provided food and drink for her, she prepared food for them."
 (taken from Wälchli, 2005:1, 2)

As shown in examples (68) and (69), co-compounds are composed of semantically related constituents and they have a tendency to form a conceptual unit (e.g. "family"). Furthermore, these structures are semantically double-headed. In other words, both constituents contribute to the meaning of the whole (almost) always equally. In addition, the areal distribution of such constructions is predictable. Although co-compounds are compounds by definition (i.e. they obey the criteria of compounds), they also have their own formal and semantic properties which mark them as a distinct class within compounds. In the next section, these formal and semantic properties of co-compounds will be discussed in detail.

2.3.1 The Formal Properties of Co-Compounds

As for formal characteristics of co-compounds, there are only a few criteria which are cross-linguistically attested (Wälchli, 2005). It has been asserted that co-compounds in different languages have specific formal properties, which characterize them as a class of forms (Fabb, 2001; Wälchli, 2005). For example, Wälchli (2005) states that co-compounds in Erza Mordvin are characterized by parallel stress and parallel inflection, although there might be some co-compounds in that language which do not have these characteristics (Wälchli, 2005). On the other hand, these characteristics do not have to differentiate co-compounds from all other classes of forms of that language. For example, Fabb (2001) claims that co-compounds

can have special characteristics in a language as in Malayam where co-compounds are not affected by the gemination processes although other compounds undergo such processes

As for their formal properties, co-compounds do not have a uniform stress pattern, therefore, co-compounds in different languages can have different stress patterns and even co-compounds in the same languages can show a variety in their stress patterns. For example, each part in Erza Mordvin co-compounds has a word stress; however, word stress in Erza Mordvin is a little bit problematic because almost any syllable of a word can bear the word stress without any change in meaning (Wälchli, 2005). On the other hand, Modern Greek co-compounds behave like words in terms of their stress pattern because there is only one word stress (Ralli, 2009). Furthermore, Wälchli (2005) nominal co-compounds in Modern Georgian do not have a uniform characteristic because some bear single stress on the first part as in *dá-dzama* ‘sister-brother > siblings’, or on the second stem as in *ded-máma* ‘mother-father > parents, or double stress as in *t’ól-amxánagi* ‘age_mate-comrade > comrades of the same age’.

Moreover, co-compounds in different languages have different inflectional patterns. Inflection in Erza Mordvin co-compounds is not as free as in phrases because in most cases both parts should have exactly the same inflection. It has been reported that there is a strong tendency toward ‘inflectional harmony’ in Erza Mordvin co-compounds. For example, this tendency results in *t’et’a.t-ava.t* ‘father.PL-mother.PL > father and mother, parents’ where both parts are marked by the plural marker *-t/-t’* although normally they would be expected to be in unmarked nominative singular indefinite. Therefore, parallel inflection in Erza Mordvin is claimed to be one of the formal properties that characterize them as a class of forms (Wälchli, 2005:3). Another example comes from Modern Greek. Wälchli (2005:3) states that Modern Greek co-compounds as a whole do not have to bear the same gender or the ending as the second part; therefore, co-compounds can be considered as independent words and neither

the parts of the co-compounds nor the gender of the whole co-compounds can be predictable by a simple rule. Nominal co-compounds in Modern Georgian are another example provided by Wälchli (2005). He claims that nominal co-compounds in Modern Georgian have a word-like nature because they have a single inflection. This implies that syntax sees them as one unit rather than a combination of two different lexical items (Wälchli, 2005).

It has been observed that co-compounds have a tendency to be characterized by the absence of any marking in most languages where juxtaposition is used as a means of co-compound marking in the absence of any marker (Wälchli, 2005 p. 4). Wälchli (2005) provides the examples from Vietnamese and Sentani (a language of Irian Jaya) in which co-compounds are constructed by juxtaposition (e.g. Sentani *kaji-i'fa* 'big_women's_canoe-small_men's_canoe > canoe').

Wälchli (2005) also asserts that hyphenation in the orthography is claimed to prove the intermediate position of co-compounds in-between syntax and the lexicon. He provides the Erza Mordvin example in which co-compounds are joined by a hyphen in orthography such as *viŕ.ev - ukštor.ov* 'forest.LAT-maple.LAT' (p. 6). Another example for hyphenation in the orthography comes from Sentani language such as *do-mije* 'man-woman > human being'; however, there are also non-hyphenated co-compounds in Sentani such as *moni maj* 'hunger disaster > famine'. Wälchli (2005) argues that this inconsistency in Sentani blurs whether these structures represent morphological or syntactic patterns.

Finally, though restricted, discontinuity is another formal property attested in co-compounds (Wälchli, 2005:4). Hmong, a South Asian language, is given as an example for discontinuity in co-compounds in which there is either ACBC or CACB pattern. A and B are defined as the parts of the compound such as *muaj txiab muaj nkeeg* 'have illness have moaning > be ill' in Hmong, whereas C is the part which is repeated between A and B.

Wälchli (2005) argues that continuity is a characteristic in co-compounds, but not a necessary property of compounds.

To sum up, co-compounds in different languages are characterized by different formal properties. On the other hand, Wälchli (2005:4) attempts to find some generalization for co-compounds in all languages: i) co-compounds are word-like units in all languages with two (or sometimes three or four) lexical word slots, ii) co-compounds usually lack overt markers for coordination although there are some remnants of fossilized coordination markers, iii) co-compounds are tight coordination patterns, meaning that, there is little distance between the coordinance because they are often constructed by simple juxtaposition. Furthermore, since co-compounds have some properties of phrases, it is debated in many languages whether they are grammatical words.

2.3.2 The Semantic Properties of Co-Compounds

In this section, first natural coordination, which is a semantic characteristic of co-compounds, will be discussed. Then the semantic relationship between the parts as well as the semantic relationship between the parts and the whole will be discussed. In addition, a semantic classification of co-compounds will be provided.

2.3.2.1 Natural Coordination

It has been reported that the semantic properties of co-compounds, in contrast to their formal characteristics, can more easily be generalized cross-linguistically (Wälchli, 2005:5).

The following questions need to be answered in determining whether there is a co-compound expressed by Natural Coordination:

- i) are the parts semantically closely related concepts?
- ii) are they on the same hierarchical level?
- iii) is the whole meaning more general than the parts?

Natural coordination requires two or more parts which express semantically closely associated concepts on the same hierarchical level such as ‘brother and sister’, ‘eat and drink’, etc. This implies that the parts involved in the process of compounding do not have a subordinate relationship, because subordinate compounds display head-complement relationship. The head-complement relationship refers to the semantic relationship in structures like *taxi driver*, where the meaning of the whole compound is determined by one of the items. In *taxi driver*, *taxi* is the complement of the deverbal head *driver* (Scalise & Bisetto, 2011). In these structures, the meaning of the whole is more specific than the head. On the other hand, in co-compounds, the whole meaning is more general than the meaning of the parts.

2.3.2.2 Accidental Coordination

As opposed to Natural Coordination, Accidental Coordination is defined as coordination of items which are not expected to co-occur and which do not have a close semantic relationship such as ‘read’ and ‘swim’ are diametrically opposed to Natural Coordination. Wälchli (2005) argues that the difference between these two types of coordination differ in how the coordination relation between the parts hold. In natural coordination, the relation between the two constituents is inherent. In other words, there is no need to establish a inheritance relation between the two such as *mother* and *father*. However, in accidental coordination the relationship between the two constituents is not inherent. To put it differently, since these two items do not commonly occur together, the inheritance relation should be established such as *snake* and *man* (Wälchli, 2005).

Furthermore, Natural Coordination can reveal itself in different meronomic (part-whole) levels. In part-part levels, the coordinated parts are very closely related in meaning and they stand on the same taxonomic level. Moreover, the relationship can be in parts-whole level when there is a close semantic relationship between the meanings of the parts and the whole. As for whole level, the whole expresses a conceptual unit, which is a superordinate

rather than a basic level concept (Wälchli, 2005). In the following sections, a semantic classification of co-compounds will be presented.

2.3.3 A Semantic Classification of Co-Compounds

Co-compounds are classified semantically according to the semantic relationship between the parts and the whole. Wälchli (2005) divides different semantic types into two: basic vs. non-basic types. Additive, generalizing, collective and alternative and approximate co-compounds are claimed to be basic co-compounds, whereas synonymic, ornamental, imitative, figurative and scalar co-compounds are considered to be non-basic co-compounds. This distinction is based on the expression of natural coordination. Basic co-compounds express the properties of natural coordination better than non-basic types. The definitions of these different types are given in Table 1 and for each semantic type an example from a different language is presented.

Table 1: A semantic classification of co-compounds (adapted from Wälchli (2005:138))

Semantic Type	Meaning	Example
Additive co-compound	the meaning of the whole is the sum of the individual meanings of the parts	<i>Georgian</i> xel-p'exi 'hand-foot'
Generalizing co-compound	the meaning of the whole is a continuous version of the meaning of the parts	<i>Khalkha</i> ödör šönö' gīj 'day night.without > day and night'
Collective co-compound	the meaning of the whole is a general concept that include the meaning of the parts	<i>Chuvash</i> sēt-sū 'milk-butter > dairy products'
Synonymic co-compound	the meaning of the whole is equal to the meaning of the parts and also the meaning of the part is equal to each other	<i>Uzbek</i> qadr-qimmat 'value-dignity > dignity'
Ornamental co-compound	the meaning of the whole is derived from only one of the parts because the other part is antiquated and lost its meaning	<i>Erzá Mordvin</i> (epic) vel'e-śado 'village-hundred'
Imitative co-compound	the meaning of the whole is derived from one of the parts	<i>Khasi</i> (an <u>Austroasiatic language</u>)

	because the other part is “cranberry-word”(p. 147)	<i>Krpaat krpon</i> ‘pray IMI > worship’
Figurative co-compound	the meaning of the whole is a metaphorical version of the meaning of the parts	<i>Vietnamese</i> <i>giang hô</i> ‘river lake > adventurous’
Alternative co-compound	the meaning of the whole is derived from the meaning of either one part or another	<i>Erzá Mordvin</i> <i>vest’-kavkst’</i> ‘once-time > once or twice’
Approximate co-compound	the meaning of the whole is similar to the meaning of the either one part or the other	<i>White Hmong</i> (a <u>Hmong–Mien</u> language) <i>ob peb</i> ‘two three > some’
Scalar co-compound	the meaning of the whole is a general concept for the continuum the parts represent.	<i>Old Uyghur</i> <i>ulug.i kičig.i</i> ‘big.its little.its > size’

In this section, the formal and semantic properties of co-compounds are discussed. It has been shown that there are very few criteria in determining co-compounds cross-linguistically. One criterion that holds across languages is the requirement of natural coordination between the constituents and this requirement has been explained and exemplified in this section.

2.4 Conclusion

In this chapter, the properties of three structures, namely reduplication, compound and co-compounds have been described based on the literature. These concepts will be touched upon throughout this study since [VV] converbs are analyzed as reduplication, compound and co-compound in this thesis. In the next section, how the concepts detailed in this section are covered in the literature on Turkish is reviewed. Various studies on Turkish reduplications, Turkish compounds and Turkish co-compounds will be presented in order to give the reader a background in this subject.

CHAPTER 3

REDUPLICATIONS, COMPOUNDS AND CO-COMPOUNDS IN TURKISH

In the previous chapter, the literature on reduplications, compounds and co-compounds was reviewed. This chapter investigates how these concepts are addressed in the literature on Turkish linguistics because they are all relevant for Turkish [VV] converbs which are the focus of this study. The chapter is divided into three parts: Turkish reduplications, Turkish compounds and Turkish co-compounds. In Turkish reduplications, different types of Turkish reduplications and their formal properties and various characteristics will be discussed.

Analogously in Turkish compounds, different types of compounds and their formal properties as well as various characteristics will be discussed. In Turkish co-compounds, there is not much to discuss because of the scarcity of the literature; however, what has been said about Turkish co-compounds will be laid out.

3.1 Turkish Reduplications

Turkish is very rich in terms of reduplications (Ağakay, 1954; Hatiboğlu, 1971, 1981; Aksan, 1996; Gökdağ, 2007 inter alia). There are various ways to create reduplications (Lewis, 1967; Aksan, 1987; Demircan, 1987, 1988; Güler, 2003; Göksel & Kerslake, 2005 inter alia). Also reduplications can produce various lexical categories (Hatiboğlu, 1971, 1981; Aksan, 1996). In the following sections, various properties of reduplications will be discussed. First, these different types of reduplications (1-10) will be described with an emphasis on the relationship between the constituents, which can be phonological or semantic. Next, the lexical categories reduplications can produce will be covered; moreover, whether reduplication is a derivational or inflectional process will be investigated. Finally, common formal properties of reduplications and distinctive formal properties of reduplications will be considered.

3.1.1 Different Types of Reduplications

There are numerous studies which classify Turkish reduplications (Swift, 1963; Lewis, 1967; Hatiboğlu, 1971, 1981; Demircan, 1988; Güler, 2003; Göksel & Kerslake, 2005). Among these studies on Turkish reduplications, there is not much conformity on the usage of terms or on how to categorize reduplications. The list of reduplication types given below is not taken directly from a single study but is adapted from many different studies. Different types of reduplications are given below and examples are provided for each type in (1-10)⁸. The explanation on these different types will be presented in section 3.1.1. The aim of providing the list at the very beginning is to give the reader a taste of reduplications in Turkish.

3.1.1.1 Emphatic Reduplications

- (1) a. *sapsarı* “IMI + yellow > fully yellow”
 b. *bomboş* “IMI + empty > completely empty”
 (adapted from Demircan, 1987:25)

3.1.1.2 m-Reduplications

- (2) a. *sandalye mandalye* “chair + IMI > chairs and the like”
 b. *defter mefter* “notebook + IMI > notebooks and the like”
 (adapted from Hatiboğlu, 1981:21)
- c. *sarı marı* “yellow + IMI > yellow and the like”
 d. *git mit* “go.IMP + IMI.IMP > going and the like”
 e. *oku moku* “read.IMI + IMI.IMP > reading and the like”
 (adapted from Demircan, 1987:24-25)

3.1.1.3 Onomatopoeic

- (3) a. *fokur fokur* “the sound of boiling”

⁸ As mentioned before, the present study focuses on [VV] converbs which can be constructed by either *m*-reduplications (2)d-e or doubling (with identical (4) or non-identical constituents (6-8)). The three types of [VV] converbs analyzed in this study are marked concurrently. The non-identical constituents can be synonymous (6c), antonymous (7c) or semantically-related (8c). In chapter 4, [VV] converbs will be discussed in detail.

- b. *şapır şupur* “the sound of lips while eating (something” or kissing (someone)”
(Hatiboğlu, 1981:36)

3.1.1.4 Identical Doubling with Parallel Inflection⁹

- (4) a. *salkım salkım* “bunch + bunch > bunches of”
b. *renkli renkli* “colorful + colorful > very colorful”
c. *orada orada* “there + there > there”
d. *zaman zaman* “time+time > from time to time”
e. *bırak bırak* “leave.IMP leave.IMP > by leaving”
f. *salın-a salın-a* “swing-OPT swing-OPT > walking with a swing”
g. *dön-üp dön-üp* “turn-CNJ turn-CNJ > by turning back”
i. *gid-erken gid-erken* “go-CNJ go-CNJ > while going”
j. *koştı koştı* “run-PAST run-PAST > ran for a while”
k. *olmaz olmaz* “happen-NEG AOR happen-NEG AOR > (something) not happening is not accepted”
(Hatiboğlu, 1981:33-45)

3.1.1.5 Identical Doubling with Separate Inflection

- (5) a. *el-den el-e* “hand-ABL hand-DAT > from one person to another”
b. *baş-a baş* “head-DAT head > nearly at the same time”
c. *ol-du-m ol-ası* “become-PAST-1st S become-CNV > for as long as I can remember”
d. *ol-du ol-acak* “happen -PAST happen -FUT > it is about to happen”
e. *gör-üp gör-eceği* “see-CNJ see-CNV > of all the things that he/she will see”
f. *ye-r ye-mez* “as soon as he/she eats”
(Hatiboğlu, 1981:33-45)

3.1.1.6 Non-Identical Doubling with Synonymous Constituents

- (6) a. *çarşı pazar* “market + bazaar > market and bazaar”
b. *aç-ık seç-ik* “open-ADJ choose-ADJ > very clear”
c. *ez-il-e büz-ül-e* “crush-PASS-OPT shrink-PASS-OPT > by feeling embarrassed and shy”
(Hatiboğlu, 1981:33-45)

⁹ Note that those which do not bear any suffixes are also listed under the identical reduplications/doublings with parallel inflection because two constituents are not marked concurrently.

3.1.1.7 Non-Identical Doubling with Antonymous Constituents

- (7) a. *yer gök* “ground+sky > both ground and the sky”
b. *ileri geri* “forward + backward > both forth and back”
c. *otur-a kalk-a* “to sit to get up > to sit and to get up”
(Aksan, 1996:195-197)

3.1.1.8 Non-Identical Doubling with Semantically Related Constituents

- (8) a. *karı koca* “wife + husband > wife and husband”
b. *tel-li pul-lu* “string-ADJ + spangle-ADJ > shiny and decorated”
c. *vur kır* “to hit to break > to hit and to break”
(Demircan, 1988:239-240)

3.1.1.9 Interrupted Doubling

- (9) a. *gün-ler-ce ve gün-ler-ce* “day-PL-A and day-PL-A > for days and days”
b. *gül-dü de gül-dü* “laugh-PAST also laugh-PAST > he/she laughed and laughed”
c. *iş mi iş* “job QP job > some kind of a job”
d. *uslu mu uslu* “well-behaved QP well-behaved > very well-behaved”
e. *gid-er mi gid-er* “go-AOR QP go-AOR > he/she might go (he/she is capable of this)”
f. *ne adam ne adam* “what man what man > what a man (sarcastic)”
g. *üç aşağı bir yukarı* “three down one above > almost”
h. *bir deri bir kemik* “one skin one bone > extremely thin”
(Hatiboğlu, 1981:22-25)

3.1.1.10 Non-Local Doubling

- (10) a. Ali vazo-ya çiçek-ler-i koy-du Ali.
Ali vase-DAT flower-PL-ACC put-PAST Ali
“Ali put the flowers on the vase.”
b. Yazın köy-e gid-ecek-miş köy-e Ali.
summer village-DAT go-FUT-EV/PF village-DAT Ali
“Ali will apparently go to the village in summer.”
(Göksel et al, 2013:187, 195)

As shown in the examples above, there are many different types of reduplications in Turkish. In the next section, two different kinds of relationships between the constituents, namely phonological and semantic relationships, will be discussed.

3.1.2 Different Kinds Relationships Between the Constituents of Reduplications

The different types of reduplications given above can be thought as following different sets of restrictions in the choice of their constituents. There are phonological as well as semantic restrictions which can determine the co-occurrence of the constituents. In this section, phonological reduplications (i.e. reduplications that abide by phonological restrictions) and semantic reduplications (i.e. reduplications that abide by semantic restrictions) will be discussed respectively. These restrictions will be explained by referring to each type exemplified above (1-10).

3.1.2.1 Phonological Reduplications

The constituents of reduplications can be phonologically (almost) identical. These are generally divided into four groups: emphatic reduplications, *m*-reduplications, onomatopoeic reduplications and doubling (Swift, 1963; Demircan, 1987; Göksel & Kerslake, 2005 *inter alia*).

Emphatic reduplications

Emphatic reduplications emphasizes the degree of an adjective such as *kıpkırmızı* ‘IMI + red > very red’ and *ipince* ‘IMI + thin > very thin’ (Demircan, 1987, 1988; Göksel & Kerslake, 2005 *inter alia*). In these structures, the first constituent is a partial copy of the original. This process requires a consonant to come between the copy and the original. This consonant must be one of the set of consonants {p, m, r, s} and it is phonologically conditioned (Demircan, 1987; Güler, 2003).

M-reduplication

Among the types of reduplications with an onset change, *m*-reduplication is the most common (Lewis, 1967 p. 237). In *m*-reduplications, the sound [m] (voiced bilabial nasal stop) is placed as the onset (replacing the onset if there is any) of the second constituent as in *dergi mergi*

‘periodical + IMI > periodical and the like’ (Lewis, 1967 p. 237). Though rare, there are also similar types of reduplications, namely *p*-reduplication ([p]: voiceless bilabial stop]) such as *yırtık pırtık* ‘torn + IMI > very torn’ and *s*-reduplications ([s]: voiceless dental fricative) such as *abuk sabuk* ‘ridiculous + IMI > very ridiculous’ (Demircan, 1987; Hatiboğlu, 1971, 1981; Göksel & Kerslake, 2005).

Onomatopoeic reduplications

Onomatopoeic reduplications are based on onomatopoeic morphemes and sometimes the second constituent undergoes vocalic and/or consonantal modification (Swift, 1963; Aksan, 1996; Baturay, 2010 inter alia). Onomatopoeic morphemes are “reflections of sensations which can be perceived via the five senses, and not just those which are purely sound reflections” (Baturay, 2010 p.4). Examples for these kind of reduplications are *lüp lüp* ‘eating enthusiastically’, *takır tukur* ‘rattling’ and *çıtı pıtı* ‘dainty or mignon’. Onomatopoeic nouns are bound in their individual forms. In other words, constituents of onomatopoeic reduplications cannot stand alone (Hatiboğlu, 1971, 1981). However, not all researchers agree with this statement as discussed in Chapter 6 (Baturay, 2010).

Doubling

Doubling refers to “the simple repetition of a word” (Göksel & Kerslake, 2005 p. 92) such as *usul usul* ‘slowly and softly’. Doubling can be observed with constituents that are nouns (11)a adjectives (11)b, adverbs (11)c, and verbs (11)d.

- (11) a. *salkım salkım* üzüm-ler
bunch bunch grape-PL
“bunches of grapes”
- b. *kırmızı kırmızı* elma-lar
red red apple-PL
“very red apples”
- c. *şimdi şimdi* anlı-yor-um.
now now understand-PROG-1st S
“I just now started to understand (it).”

d. *Koş-tu koş-tu* yorul-du.
run-PAST run-PAST get tired-PAST
“He/she got tired because he/she ran a lot.”
(adapted from Hatiboğlu, 1981:29-33)

(12) a. *dere tepe* dolaş-mak
river hill wander around-INFL
“to wander around in a place that is very rural.”

b. *güçlü kuvvetli* delikanlı
strong vigorous young man
“very strong young man”

c. *Ora-da bura-da* konuş-ma!
there-LOC here-LOC speak-IMP NEG
“Do not speak (about such things) all around the town.”

d. *Sor-du soruş-tur-du*.
ask-PAST investigate-CAUS-PAST
“He/she asked all around (about it).”
(adapted from Hatiboğlu, 1981:29-34)

Some researchers have also called reduplications with non-identical constituents, such as the ones given in (12), “doubling” (Demircan, 1987, 1988; Güler, 2003; Baturay, 2010); however, this study calls reduplicative structures both with identical and non-identical constituents “reduplications” or “doublings” without assuming any difference between them.

It has been observed that the non-identical constituents within a reduplicative construction are not chosen at random. There are some semantic relations which determine which constituents can come together. These will be discussed in the next section, which explores the semantic relationship between the constituents in reduplications. Note that the phonological relationship between the constituents of reduplications can also be thought of as having identical semantic relationships (Hatiboğlu, 1981 p. 58). To put it differently, those which have the same phonological form have identical meanings, hence they are semantically synonymous.

3.1.2.2 Semantic Reduplications

If the constituents of a reduplication are not phonologically (almost) identical, then they must have semantic kinship (Hatiboğlu, 1981; Aksan, 1987; Demircan, 1988 inter alia). It has been noted that semantic kinship can take different forms: synonymy, antonymy or semantic relatedness (Demircan, 1988; Hatiboğlu, 1981; Aksan, 1996; Güler, 2003). These different relationships will be discussed respectively below.

Synonymous Reduplications

The constituents of reduplicative structures can have (almost) identical meanings¹⁰ (Demircan, 1988; Hatiboğlu, 1981; Aksan, 1996; Güler, 2003). To put it differently, they are synonymous.

Synonymous constituents can be attested in structures made with nominals as well as verbs. Some examples with nominals are *sorgu sual* ‘questioning + questioning > questioning’ and *ses seda* ‘sound + sound > sound’ (Hatiboğlu, 1981 p. 58). Reduplications made from synonymous verbs are not attested (Hatiboğlu, 1981). This is expected since, as Haig points out, Turkish does not borrow words as verbs (although it borrows foreign words as nouns and verbalizes them via suffixation or auxiliary verbs). Some examples for reduplications made from semantically almost identical verbs are *yan tutuş* ‘burn.IMP inflame.IMP > inflaming and burning’ and *it-e kak-a* ‘push-OPT shove-OPT > by pushing and shoving’ (Demircan 1988 p. 239-240).

Antonymous Reduplications

The constituents of reduplications can be antonymous (Hatiboğlu, 1981; Demircan, 1988; Aksan, 1996; Güler, 2003). Structures made with antonymous nominals and antonymous verbs are both attested in Turkish. Some examples of the former are *büyük küçük* ‘big + small > everything from big to small’ and *er geç* ‘soon + late > sooner or later’ (Hatiboğlu, 1981 p.

¹⁰ As mentioned in Chapter 2, in these cases at least one of the words is often borrowed from a foreign language.

59). Some examples of reduplications made from antonymous verbs are *gir çık* ‘enter.IMP exit.IMP > entering and exiting’ and *bat-a çık-a* ‘sink-OPT rise-OPT > by sinking and rising’ (Demircan 1988 p. 239-240).

Semantically-Related Reduplications

Lastly, the constituents of reduplicative structures can be semantically-related. Semantically-related nominals and semantically-related verbs both can generate reduplicative constructions. Some examples of structures made with semantically-related nominals are *ağrı sızı* ‘pain ache > pain’ and *mal mülk* ‘property estate > assets’. Some examples of reduplications made from verbs are *ağla- inle-* ‘cry.IMP moan.IMP > crying and moaning’ and *vur kır* ‘hit.IMP break.IMP > hitting (things) and breaking (them)’ (Demircan 1988 p. 239-240).

In this section, the constituents of reduplications were shown to follow either phonological or semantic restrictions. Even though the constructions of the various types of reduplications mentioned here (e.g. emphatic reduplications or antonymous reduplications) are different, they all can be used to produce various lexical categories. The lexical categories that can be generated via reduplication will be explained below.

3.1.3 Reduplications as Various Lexical Categories

Reduplications can be of various lexical categories such as noun, adjective, adverb and verb (Hatiboğlu, 1971, 1981; Güler, 2003; Göksel & Kerslake, 2005 inter alia). Note that in this study, the terms ‘noun’, ‘adjective’ and ‘adverb’ are used when it is very clear what the category of a lexical item is. Other times, when the lines between the categories are blurred, the term ‘nominal’ is used. The lines sometimes get blurred because in Turkish nouns, adjectives and adverbs appear to be at different points on the same continuum (Braun & Haig, 2000; Uygun, 2009). In this section, also the semantic entailment of reduplications will be considered.

3.1.3.1 As Nouns

Reduplications made from nouns can be used as nouns (Demircan, 1988). These nouns can be reduplicated via *m*-reduplications or non-identical doubling to produce nouns. Examples for *m*-reduplications as nouns are provided in (2) and examples for non-identical doublings as nouns are provided in (6-8)a.

3.1.3.2 As Adjectives and Adverbs

Other than nouns, adjectival and adverbial functions can be assumed by two nominals (Hatiboğlu, 1971, 1981). All of the types of reduplications given above can produce adjectives and adverbs. Hatiboğlu (1981) gives the examples *demet demet* ‘bouquets of’ and *güzel güzel* ‘very beautiful’. The nominal *demet* ‘bunch’ is a noun as in (13)d; however, *demet demet* ‘bouquets of’ is an adjective as in (13)a and it modifies the following noun *çiçek* ‘flower’. The examples in (13)b and (13)c show that the process of reduplication also contributes to the meaning of plurality because *demet demet* ‘bouquets of’ can only modify a pluralized noun (Lewis, 1967). Other than the clear-cut examples in (13), there are also examples where the lines are blurred as in (14). The nominal *güzel* ‘beautiful’ can be used as a noun in (14)a, an adjective in (14)b and an adverb in (14)c. In (14)d, the structure *güzel güzel* ‘beautifully’ is used in adverbial function and it modifies a verb, whereas in (14)e the structure *güzel güzel* ‘very beautiful’ is used in adjectival function and it modifies a noun. As mentioned before, the noun following *güzel güzel* ‘very beautiful’ has to be plural because this structure has a connotation of plurality; therefore, (14)f in which *güzel güzel* ‘very beautiful’ modifies a noun in singular form is ungrammatical (Lewis, 1967).

- (13) a. Bura-da *demet demet* çiçek-ler var.
here-LOC bouquet bouquet flower-PL
“There are many bouquets of flowers here.”

- b. ?*demet* çiçek¹¹
 bouquet flower
 Intended interpretation: “a bouquet of flower”
- c. **demet demet* çiçek
 bouquet bouquet flower
 Intended interpretation: “bouquet of flowers”
- d. Papatya-nın *demet*-i ne kadar?
 daisy-GEN bouquet-3rd S POSS how much
 “How much is a bouquet of daisy?”
- (14) a. Dün bir *güzel* gel-di.
 yesterday one beautiful come-PAST
 “Yesterday a beautiful (person) came.”
- b. *Güzel* bir kız sen-i sor-du.
 beautiful one girl you-ACC ask-PAST
 “A beautiful girl asked for you.”
- c. *Güzel* çalış-tı.
 beautiful work-PAST
 “He/she worked well.”
- d. *Güzel güzel* çalış-tı.
 beautiful beautiful work-PAST
 “He/she worked very well.”
- e. Bura-da *güzel güzel* kız-lar çalış-ıyor.
 here-LOC young young girl-PL work-PROG
 “There are very beautiful girls working here.”
- f. *Bura-da *güzel güzel* kız çalış-ıyor.
 here-LOC beautiful beautiful girl work-PROG
 Intended interpretation: “There is a very beautiful girl working here.”

3.1.3.3 As Only Adverbs

Adverbial functions can also be assumed by reduplications made from two verbs (Hatiboğlu, 1971, 1981). Both identical reduplications (4)e-k and (5)c-f and non-identical reduplications (6-8)c can produce adverbs from verbs and these reduplications do not modify nouns.

¹¹ The grammaticality of *demet çiçek* ‘a bouquet of flower’ in (13b) changes from speaker to speaker (see Arslan-Kechriotis). In addition, this structure becomes grammatical if the indefinite article *bir* ‘a’ is added to the structure such as *bir demet çiçek* ‘a bouquet of flower’.

Hatiboğlu points out that the verbs in reduplications can be either finite as in (15) or non-finite as in (16).

- (15) *Koş-tu-m koş-tu-m yor-ul-du-m.*
run-PAST-1st S run-PAST-1st S make tired-REFL-PAST-1st S
“I got tired because I ran a lot.”
(adapted from Hatiboğlu, 1981:48)
- (16) a. *Yürü yürü*
walk.IMP walk.IMP
“No matter how much one walks”
(taken Göksel, 2009:22)
- b. *Bak-a bak-a*
look-OPT look-OPT
“while looking (at something)”
(taken Göksel, 2009:22)
- c. *Sat-ıp sav-ıp gitmek*
sell-CNJ give away-CNJ go-INFL
“to leave after one sells and gives away (almost everything they own)”
(taken from Hatiboğlu, 1981:45)
- d. *Var-ır var-maz biz-i ara!*
arrive-AOR arrive-NEG AOR 1st PL PRO-ACC call-IMP 2nd S
“Call us the moment you arrive!”
(taken from Güler, 2003:90)
- e. *Gid-erken gid-erken yuvarlan-dı.*
go-CNV go-CNV fall down-PAST
“He/she fell down while he/she was going (there).”
(taken from Hatiboğlu, 1981:45)

A simple way of testing whether a Turkish verb is finite or non-finite is by looking at its inflections: if it has a TAM marker and a person marker, then it is a finite verb (Göksel & Kerslake, 2005). Examples for reduplications both with finite and non-finite verbs are provided below. Although only one example is given in (15), Güler (2003) states that reduplications can be made from all TAM markers. The example in (15) passes the test of finiteness since it bears a TAM marker (the past tense marker -DI) and a person marker (1st person singular marker) and forms a finite clause. On the other hand, the verbs in (16) do not have any person or TAM markers (even though some markers are identical to TAM markers

in form). These structures display suffixes such as converbial markers but no person markers. Analogous to reduplications with nouns, reduplications with verbs also have semantic entailments due to the process of reduplication (Güler, 2003). The semantic entailment of reduplicated verbs is a sense of continuity, which is an aspectual characteristic (Taylan, 2001 p.99). The reduplications in (16)a-c are in the focus of this study. They are referred to [VV] converbs in this study because they are converbs and are reduplicated. Of all the reduplications in (16), only these three are studied here because these three have parallel inflection and are highly productive. In the next chapter, their properties will be discussed in detail.

3.1.3.4 As Verbs

Finally, reduplications as verbs can be observed in Turkish (Hatiboğlu 1971, 1981; Demircan, 1988; Aksan, 1996; Güler, 2003). Identical doubling (17)a-b, non-identical doubling (17)c and *m*-reduplications (17)d can produce verbs from verbs. As exemplified by Güler (2003) in (17)a-b, reduplicated verbs can bear TAM markers and occupy the verbal position.

Reduplications made from verbs that function as verbs also denote aspectual meanings. In examples (17)a-b, the reduplications denote “proximity in time” (Güler, 2003 p. 91), which is an aspectual property (Takahashi, 2002).

- (17) a. O vazo *düş-tü düş-ecek*.
 that vase fall-PAST fall-FUT
 “‘That vase is about to fall down.”
- b. Su *kayna-dı kaynı-yor*.
 water boil-PAST boil-PROG
 “‘The water has almost boiled.”
 (taken from Güler, 2003 p. 90-91)
- c. *Yaz-dı çiz-di*.
 write-PAST draw-PAST
 “‘He/she wrote and draw (it).”
 (taken from Aksan, 1996p. 196)

- d. *Git mit de-di-yse de aldir-ma-di-m.*
 go.IMP go.IMP say-PAST-COND also care-not-PAST-1st S
 “Even though he/she said ‘go and stuff’ I did not pay any attention to (it).”
 (taken from Demircan, 1987 p. 25)

In this section, reduplications were shown to generate various lexical categories no matter what the lexical category of the constituents is. Also, meanings of plurality (in nominals) and aspect (e.g. continuity in verbs) were observed to be denoted by these structures. Interestingly, lexical category change is related to derivational processes as in (13)a, whereas plurality as in (14)e and aspect as in (17)a-b are related to inflectional processes. The next section discusses whether reduplication is a derivational process or inflectional process.

3.1.4 Reduplication as a Derivational Process vs. an Inflectional Process

In this section, derivational and inflectional properties of reduplication are explored more closely. Reduplication has both derivational and inflectional properties which places it on Haspelmath’s (2002) continuum that goes from one to another.

The derivational properties of reduplication are not always present¹²: in some cases reduplication creates word-category change (13)a and in some cases it does not (14)d (Hatiboğlu, 1971, 1981; Güler, 2003; Göksel & Kerslake, 2005 inter alia). In (13), the noun *demet* ‘bouquet’ becomes an adjective, whereas in (14) the lexical category of *güzel* ‘beautiful’ is not as clear (i.e it can behave like a noun, an adjective or an adverb), so *güzel güzel* ‘very beautiful’ behaving like an adjective or adverb is not a lexical change. There are also cases as in (4)e-i, 5(c-f) and (6-8)c where reduplications made up of verbs behave like an adverb. However, here what makes the reduplication an adverb is not the fact that it is composed of two verbs but the fact that these verbs bear converbial markers, which according to Göksel and Kerslake (2005) are markers that create adverbs from verbs .

¹² Note that derivation does not always create category change (Haspelmath, 2002).

The inflectional properties of reduplication surface as plurality and augmentation in nouns and as continuous aspect in verbs. In the previous section, it was established that reduplication can assign plurality. For example, (Güler, 2003:77) argues that the adjective *avuç avuç* ‘handful + handful > lavishly’ is constituted from *avuç* ‘handful’ and it denotes “excessive quantity”. Other than plurality, the process of reduplication can add an augmentative meaning to word (Koç, 1992; Aksan, 1996 inter alia). For example, in *şip-şirin* ‘IMI + cute > very cute’ the meaning of *şirin* is intensified to mean “very cute” (Güler, 2003 p. 73). As for verbs, the process of reduplication can assign continuous aspect as explained above. For example, *ağla-ya ağla-ya* ‘cry-OPT cry-OPT > while crying’ has the connotation of continuity (Güler, 2003 p. 84).

In this section, reduplication was shown to be capable of creating new items in various lexical categories from constituents of any lexical category. It was seen that not only can the process of reduplication change lexical category of words, but it can also add a meaning of plurality, or it can assign aspect. In other words, the process of reduplication both has derivational and inflectional characteristics (Güler, 2003). This is analogous to Haspelmath (2002), who argues that derivation and inflection are not two distinct categories but actually are two ends of a continuum. After establishing some characteristics of the process of reduplication in this section, the next section will explore the various formal properties of reduplications. As illustrated below, some formal properties of reduplications, such as inseparability and fixed word order are shared, whereas some formal properties, namely stress, are not.

3.1.5 Formal Properties of Reduplications

There are some formal properties of reduplication that differentiate reduplications from other structures such as repetitions (For more information on the differences of reduplications and repetitions refer to Chapter 2 section 2.1.3). In this section, these common formal properties

will be investigated: (i) the number of constituents is (almost always) two, (ii) the constituents are inseparable and (iii) the order of constituents is fixed.

3.1.5.1 The Constraint of (No More or No Less) Two Constituents

The occurrence of two stems in Turkish has been called “reduplication” (Demircan, 1987; Baturay, 2010), “doubling” (Göksel & Kerslake, 2005), “ikileme” ‘doubling’ (Hatiboğlu, 1971, 1981) and “ikizleme” ‘twinning’ (Cevat, 1945). These terms have the connotation of there being only two constituents. Although this is usually the case, reduplications with three constituents have been encountered (Hatiboğlu 1971, 1981; Güler, 2003) as in (18). Recall that structures (4)c and (4)d discussed in Chapter 1 can also be classified as reduplications with three constituents.¹³

- (18) a. zonk zonk zonklamak
 “to throb immensely”
 (taken from Hatiboğlu, 1981)
- b. ıslıl ıslıl ıslıdamak
 “to shine brightly”
 (taken from Güler, 2003)

In this section, the first formal property of reduplications, namely the constraint of two constituents, has been discussed. Next section will explore the second formal property of reduplications, namely the inseparability of the two constituents.

3.1.5.2 The Inseparability of the Two Constituents

Reduplications in Turkish are usually adjoined. On the other hand, some reduplicative structures in Turkish rarely allow for insertion of an item between the constituents as shown in (19).¹⁴

- (19) a. Adam *kurnaz* mı *kurnaz*
 man cunning QP cunning

¹³ The reduplications with three constituents (18) do not display the inseparability of their constituents. Note that Gil (2005) argues that inseparability is a criterion which differentiates between repetition and reduplication (see section 2.1.3).

¹⁴ Recall from Chapter 2 that the reduplicative nature of inseparable constructions is dubious for Gil (2005).

“The man is extremely sly.”
(taken from Göksel & Kerlake, 2005:92)

b. Kadın *gül-dü* de *gül-dü*.
woman laugh-PAST also laugh-PAST
“The woman laughed and laughed.”
(taken from Hatiboğlu, 1981:22)

c. Ali *yazın* {_F köy-e}¹⁵ gid-ecek-miş *yazın*.
Ali summer village-DAT go-FUT-EV/PF summer
“Ali will go TO THE VILLAGE in summer.”
(taken from Göksel et al. 2013:4)

It has been established that the constituents of reduplicative structures have a tendency to be inseparable. There is another formal criterion, namely the fixed order of the constituents, which will be discussed in the following section.

3.1.5.3 The Fixed Order of the Two Constituents

The order of constituents in reduplicative constructions are determined both by phonological and semantic restrictions. In other words, there is a fixed order (Ağakay, 1954; Hatiboğlu, 1971, 1973, 1981; Tuna, 1986; Çoraklı, 2001, 2005; Yastı, 2007 inter alia). As for phonological restrictions, the shortest member has to precede the other member. In other words, the member which has fewer syllables comes first in the reduplicative construction such as *bağ bahçe* ‘vineyard + garden’, *dal budak* ‘branch + knot’, or *bıkmak usanmak* ‘to be fed up + get bored’. On the other hand, if the syllable number is equal for the items, then the second constraint is at work: the member which starts with a vowel precedes the one which does not such as *ana baba* ‘mother + father’ or *eksik fazla* ‘incomplete + superfluous’ (Ağakay, 1954; Hatiboğlu, 1971, 1973, 1981; Tuna, 1986; Çoraklı, 2001, 2005 inter alia). In addition to these constraints, another restriction comes from the study on onomatopoeic reduplications (Baturay, 2010). Baturay (2010) shows that Turkish onomatopoeic reduplications such as *tak tuk* (*tuk tak) allow only for certain sequences such as [a]-[u] or

¹⁵ The non-local doubling phenomena in Turkish is accounted by prosodic constraints such as focus position (for more information see Göksel et al (2013).

[e]-[ü] (i.e. they have apophony). On the other hand, there is no other study testing whether other types of reduplications (i.e. not onomatopoeic reduplications) also abide by such restrictions.

There are also two semantic restrictions, which determine the order in reduplicative constructions. First of all, the first constituent has to be less in number than the next one, as in *az çok* ‘less + more’ or *kırk elli* ‘forty + fifty’. Secondly, if there is a temporal distinction between the constituents, the earlier one has to precede the latter one such as *bugün yarın* ‘today + tomorrow’, *dur otur* ‘stop + sit down’ and *yat-ıp kalk-mak* ‘lying down + to get up’ (Ağakay, 1954; Tuna, 1986).

In this section, the literature on Turkish reduplications has been presented. Different types of reduplications have been shown with numerous examples. Furthermore, common properties of reduplications have been demonstrated, which have been uncovered by various studies. The next section explores studies on Turkish compounding.

3.2 Turkish Compounds

Compounding is a highly productive process in Turkish (Dede, 1978; Göksel & Haznedar, 2007). The process of compounding can produce lexical items in all of the major categories in Turkish (Göksel & Haznedar, 2007; Göksel, 2009). Below different types of compounds are given. In the following sections, various properties of compounds are discussed. First, the possible lexical categories of compounds are discussed. Then, the possible semantic relationships between the constituents of Turkish compounds are investigated. Finally, the formal properties of compounds are explored respectively. These formal properties are about the number of constituents, the separability of the constituents, the headedness of the compounds and stress.

3.2.1 Different Types of Turkish Compounds

Based on Göksel & Haznedar (2007), Göksel (2009) provides a comprehensive list of compound types (21). She illustrates that compounding can generate words in lexical categories unexpected from the constituents (e.g. a noun and a verb can be put together to generate an adjective). The list, which shows the possible input and output categories of Turkish compounds, is given in (21).

- (21)
- | | | |
|------------------------|-------------------|--------------------------------|
| a. NN-si (category: N) | | |
| <i>hanım + el-i</i> | land+hand-LE | “honeysuckle” |
| <i>kahve + reng-i</i> | coffee+colour-LE | “brown” |
| <i>buz+dolab-ı</i> | ice+cupboard-LE | “refrigerator” |
| b. NN (category: N) | | |
| <i>dil+bilim</i> | tongue+science | ‘linguistics’ |
| <i>fırın+sütlaç</i> | oven+milk.pudding | ‘baked milk pudding’ |
| <i>kadın+efendi</i> | woman+master | ‘principal wife of the Sultan’ |
| c. NN (category: Adv) | | |
| <i>gece+gündüz</i> | night+day | ‘linguistics’ |
| <i>sabah+sabah</i> | morning+morning | ‘baked milk pudding’ |
| <i>kapı+kapı</i> | door+door | ‘principal wife of Sultan’ |
| d. AN (category: N) | | |
| <i>kaba+kulak</i> | rough+ear | ‘mumps’ |
| <i>son+bahar</i> | final+spring | ‘autumn’ |
| <i>topla-r+damar</i> | gather-AOR+vein | ‘vein’ |
| e. AN (category: A) | | |
| <i>aç+göz-lü</i> | hungry+eye-ADJ | ‘greedy’ |
| <i>pembe+yabak-lı</i> | pink+cheek-ADJ | ‘rosy cheeked’ |
| <i>beyaz+saç-lı</i> | white+hair-ADJ | ‘white haired’ |
| f. AN (category: Adv) | | |
| <i>kaba+taslak</i> | rough+sketch | ‘sketchily’ |
| g. AA (category: A) | | |
| <i>kara+kuru</i> | black+dry | ‘swarty and skinny’ |
| <i>doğru+düzgün</i> | correct+straight | ‘proper’ |
| <i>koyu+kırmızı</i> | dark+red | ‘dark red’ |
| h. AA (category: Adv) | | |
| <i>ağır+aksak</i> | slow+limping | ‘slowly and irregularly’ |

i. NumN (category: N)

<i>kırk+ikindi-ler</i>	forty+evening-PL	‘spring showers’
<i>beş+kardeş</i>	five+sibling	‘slap’
<i>üç+etek</i>	three+skirt	a type of women’s costume

j. NumA (category: Num)

<i>yedi+ver-en</i>	seven+produce-PRT	a type of rose
<i>altı+patla-r</i>	six+blow-AOR	‘gun’ (obs.)

k. NumNum (category: Num)

<i>on+iki</i>	ten+two	‘twelve’
<i>iki+yüz</i>	two+hundred	‘two hundred’
<i>yüz+iki</i>	hundred+two	‘one hundred and two’

l. NA (category: A)

<i>kan+kırmızı</i>	blood+red	‘blood red’
<i>süt+beyaz</i>	milk+white	‘chalk white’
<i>kabak+kafa(-lı)</i>	squash+head-ADJ	‘bald head’

m. NA (category: N)

<i>ağaç+kak-an</i>	tree+peck-PRT	‘woodpecker’
<i>kar+del-en</i>	snow+pierce-PRT	‘snowdrop’
<i>gün-e+bak-an</i>	day-DAT+look-PRT	‘sunflower’

n. NA-LE (category: A)

<i>çimen+yeşil-i</i>	grass+green-LE	‘leaf green’
<i>saman+sarı-sı</i>	hay+yellow-LE	‘a pale shade of yellow’
<i>çingene+pembe-si</i>	gypsy+pink-LE	‘a bright shade of pink’

o. NV (category: N)

<i>kül+bas-tı</i>	ash+set-PAST	‘lamb stew’
<i>al+bas-tı</i>	red+descend-PAST	‘puerperal fever’
<i>hacı+yat-ma-z</i>	pilgrim+lie.down-NEG-AOR	‘tumbler (toy)’

p. NV (category A)

<i>kül+yut-ma-z</i>	ash+swallow-NEG-AOR	‘ineffable’
<i>şıp+sev-di</i>	N _{bound stem} +love-PAST	‘quick to fall in love/susceptible’

q. N/AV (category: V)

<i>boş+ver-</i>	empty+give	‘disregard’
<i>göz+at-</i>	eye+throw	‘take a look at something’
<i>çene+çal-</i>	jaw+play	‘chat’
<i>poz+yap-</i>	pose+make	‘pretend’

r. VV (category: N)

<i>tut+kal</i>	hold+remain	‘glue’
<i>gel+git</i>	come+go	‘tide’
<i>kap-tı+kaç-tı</i>	grab-PAST+run-PAST	‘public car’

(taken from Göksel, 2009:216-218)

3.2.2 Lexical Categories of Compounds

The different types of compounds can assume different lexical categories and their constituents do not have to be in the same lexical category as the whole compound. These various categories mentioned above should be taken in with a grain of salt because the lines among the nominals are blurred (Braun & Haig, 2000, Uygun, 2009). Therefore, the types of compounds given above cannot be separated from each other sharply. For example, NN in (21)b and AN compounds in (21)d are not very different from each other since nouns can be used to modify other nouns (Göksel & Haznedar, 2007), as alluded in (22). Although this is the case, the types of compounds above are given with the conventional lexical categories and below these types are discussed with the typical uses in mind.

- (22) a. demir kapı
iron door
'iron door'
- b. ipek çorap
silk stocking
'silk stocking'
- c. altın yüzük
gold ring
'golden ring'
- (taken from Göksel & Haznedar, 2007:11-12)

3.2.2.1 As Nouns

Compound types that produce nouns are NN-sI (21)a, NN (21)b, AN (21)d, NumN (21)i, NumA (21)j, NA (21)m, NV (21)o and VV (21)r (Göksel, 2009). In other words, nouns can be produced by compounding many different lexical categories. In Turkish, the most studied type of compound is NN-sI¹⁶ compounds such as *hanımeli* 'woman + hand > honey

¹⁶ -(s)I(n) is 3rd person possessive suffix in Turkish; however, it is also used for marking compounds (Göksel & Haznedar, 2007; Kunduracı, 2013 inter alia). By following Göksel & Haznedar (2007), -(s)I(n) in NN-sI compounds is glossed as LE (i.e linking element which marks the structures as compound).

suckle’ (Dede, 1978; Yüксеker, 1987; Hayasi, 1996; Schroeder, 1999; van Schaaik, 2002; Göksel & Haznedar, 2007; Bağrıaçık & Ralli, 2011; Kunduracı, 2013 inter alia).

3.2.2.2 As Adjectives

Compound types that produce adjectives are AN (21)e, AA (21)g, NA (21)l, NA-LE (21)n and NV (21)p (Göksel, 2009). Unlike compounds that are nouns, compounds that are adjectives cannot be created by any two lexical items. Other than NV compounds, an adjective is mandatory for an adjectival compound.

3.2.2.3 As Adverbs

Compound types that produce adverbs are NN (21)c, AN (21)f and AA (21)h (Göksel, 2009). It could be argued that there exists another type of adverbial compound in Turkish (Göksel, 2009 p. 222). This other type of adverbial compound has been dubbed [VV] converbs in this study. Göksel (2009) points out that [VV] converbs have many properties of compounds. The examples of [VV] converbs Göksel (2009) provides are given in (23) and (24).

- | | | |
|------|------------------------|---|
| (23) | a. <i>bak-a bak-a</i> | look-OPT look-OPT
‘by/as a result of looking’ |
| | <i>gül-e gül-e</i> | laugh-OPT laugh-OPT
‘by/as a result of laughing’ |
| | <i>yaz-a yaz-a</i> | write-OPT write-OPT
‘by/as a result of writing’ |
| | b. <i>düş-e kalk-a</i> | fall-OPT get up-OPT
‘in an erratic manner’ |
| | <i>gül-e oyna-ya</i> | laugh-OPT dance-OPT
‘happily’ |
| | <i>oku-n-a oku-n-a</i> | read-PASS-OPT read-PASS-OPT
‘as a result of being read frequently’ |
| (24) | <i>yürü yürü</i> | walk + walk
‘however much one walks’ |
| | <i>söyle söyle</i> | say + say
‘however much one says [it]’ |
| | <i>çevir çevir</i> | turn + turn
‘however much one turns [it]’ |
- (taken from Göksel, 2009:222-223)

3.2.2.4 As Verbs

There is only a single compound type that produces verbs: N/AV (21)q (Göksel, 2009). However, this kind of compound does not possess many of the common properties Turkish compounds have, which are mentioned below. These distinctive qualities of N/AV compounds are that they can be individually modified and they can be separated by other lexical items. Göksel (2009) provides example (25) to illustrate these qualities. In this example, the first constituent of an N/AV compound is modified by a genitive phrase and the constituents are separated by “her iş-e” ‘every job-DAT’.

- (25) *El-in-i her iş-e at-ıyor.*
house-3rd S POSS-ACC every job-DAT throw-PROG
“He/she engages in all kinds of jobs.”
(taken from Göksel, 2009:230)

In this section, various categories compounds can assume were discussed. It was shown that the lexical category of the constituents and the whole compounds did not always match. This derivational function of compounding will be explored in the next section.

3.2.3 Derivational vs. Inflectional Functions

Compounding is considered to be a word formation process and hence a derivational function in Turkish (Göksel & Kerslake, 2005 inter alia). There is no study investigating whether compounding has any inflectional functions. Therefore, it can be concluded that compounding in Turkish is solely a derivational process. This new formed word (i.e. the compound) can be related to its constituents in various ways which are explored in the next section.

3.2.4 Different Kinds Semantic Relationships Between the Compound and Its Constituents

Recall that the constituents of compounds can have 4 different semantic relationships (Heine & Kuteva, 2009). First, the relationship between the constituents can be modifier, which

means that one constituent modifies the other. Therefore, in modifier compounds the meaning of the whole is a specific type of the modified constituent. A Turkish example for such compounds provided by (Göksel & Haznedar, 2007)¹⁷ given in (20)a, where *demir* ‘iron’ modifies *kapı* ‘door’ to mean a specific kind of door. Second, the relationship between the constituents can be additive, which means that the meaning of the constituents are added together to get the meaning of the whole. Turkish examples of such compounds provided by (Göksel & Haznedar, 2007)⁴ given in (26). In (26)a, the meaning of *gel git* ‘tide’ is composed of *gel* ‘coming’ and *git* ‘going’. Third, the relationship between the constituents is alternative, which means that the meaning of the whole cannot be inferred from either of the constituents. Turkish examples of such compounds provided by (Göksel & Haznedar, 2007) given in (27). In (27)a, the meaning of *başı bozuk* ‘subversive’ has nothing to do with *baş* ‘head’ or *bozuk* ‘destroyed’. Finally, the relationship between the constituents can be appositive, which means that the meaning of the whole is an intersection of the constituent sets. An example of such compounds provided by Kunduracı (2013) given in (28), where the meaning of *şair-yazar* ‘poet-author’ is both a *şair* ‘poet’ and *yazar* ‘author’ which is a specific kind of *şair* ‘poet’ and a specific kind of *yazar* ‘author’.

- (26) a. *gel git*
 come.IMP go.IMP
 “tide”
- b. *kap-tı kaç-tı*
 grab-PAST escape-PAST
 “public car”
 (taken from Göksel & Haznedar, 2007:5)
- (27) a. *baş-ı boz-uk*
 head-POSS destroy-A
 ‘subversive’, ‘anarchist’ (derogatory)
- b. *el-i maşa-lı*

¹⁷ Göksel & Haznedar (2007)’s classification for compounds is based on Bisetto & Scalise (2006); therefore, they use different terminology, namely attributive, coordinative and subordinative (for more information see Bisetto & Scalise (2006)).

hand-POSS thong-A
'authoritarian woman'
(taken from Göksel & Haznedar, 2007:6)

- (28) *şair-yazar*
poet author
“poet author”
(adapted from Kunduracı, 2013:10)

Even though Turkish compounds have different classes in terms of the relationship between the compound and its constituents, all of them possess some common formal properties. The most common formal properties of Turkish compounds are described below.

3.2.5 Formal Properties of Compounds

Turkish compounds have different types as exemplified in (21) and they differ on how they semantically relate to their constituents; however, formally speaking they behave similarly, which marks them as compounds in Turkish: (i) the number of constituents is (almost always) two, (ii) The constituents are inseparable and (iii) the order of constituents is fixed. This section also explores stress as a distinctive formal property among compounds.

3.2.5.1 The Constraint of Having (Almost) Always Two Constituents

All the types of compounds mentioned above in (21) have only two constituents. Note that this is analogous to reduplications, including [VV] converbs, since they also almost always have two constituents (see above section 3.1.5.1). However, there is another type of compounding in Turkish, which is phrasal compounding (Hayasi, 1996; van Schaaik, 2002; Göksel forthcoming; Kunduracı, 2013). The modifier in phrasal compounds is a phrasal unit and the structure is represented as XN-sI. The examples provided in (29)a-c is an example of phrasal compounds in which the first constituent is more than a word (Hayasi, 1996 p. 126). What is striking about these XN-sI constructions is that Turkish compounding “is more than a

uniform type, string-wise, morphologically and prosodically” (Göksel, forthcoming) because the phrase can be any kind of phrase as seen in (25).

- (29) a. “*Doğru mu?*” *soru-su*
 “*Is it right?*” question-Px
 ‘question (which reads) “Is it right?”’
- b. “*Şimdi seçim olursa hangi partiye oy verirsiniz?*” *araştırma-sı*
 ‘Which party will you give a vote to if there is an election now?’ survey-
 POSS
 “survey (asking) “which party ...?”’
 (taken from Hayasi, 1996:126)

Although there are phrasal compounds as in (29), compounds in Turkish have a general tendency to have at most two constituents. Another formal property attested in Turkish compounds, namely the inseparability of the two constituents, will be discussed in the next section.

3.2.5.2 The Inseparability of the Two Constituents

As mentioned before, compounds are word-like units; therefore, their constituents are inseparable (Bauer, 1998; Toman, 2003; Aronoff & Fudeman, 2005; Dressler, 2006; Scalise & Vogel, 2010; Corbett, 2010; Lieber & Štekauer, 2011 inter alia). Turkish nominal compounds generally confirm to this criterion; however, the so-called possessive NN-sI compounds “have phrase-like characteristics due to the variety and the syntactic autonomy of their components” (Hayasi, 1996 p. 128). As opposed to other types of compounds, components of possessive compounds can be separable (30); thus, the components are syntactically autonomous. For example, expressions other than words can become components in Turkish possessive compounds as in (29). Moreover, in some cases the constituents of possessive compounds in Turkish show syntactic autonomy. For example, they can be coordinated as in (30)a-b or other constituents (e.g. modifiers) may intercede between the parts of a possessive compound as in (30)c. Such examples indicate that Turkish nominal compounds are in fact phrase-like. Therefore, Hayasi (1996) argues for a continuum approach in which the properties of compounds and phrases are not easy to separate from each other.

- (30) a. portakal ve elma su-yu
orange and apple water-Poss
“orange juice and apple juice”
- b. portakal değil elma su-yu
orange not apple water-POSS
“not orange juice but apple juice”
- c. cumhur eski başkan-ı
republic old chief-Poss
“former president of republic”

Another type of compound, it can be separated is N/AV compounds as explained and illustrated in (25). However, it should be noted that the only Turkish compounds that do not abide by the inseparability property are these two types and the others are so strict in this regard that inseparability is thought of a defining quality of compounds. For example, Göksel (2009)’s suspicion of [VV] converbs as compounds is based on her observation that they are inseparable.

So far it has been established that compounds in Turkish have at most two constituents and these constituents are inseparable. Another issue which needs to be touched upon is headedness. In the next section, the issue of headedness in Turkish will be discussed.

3.2.5.3 The Headedness Issue

As for headedness, Turkish nominal compounds are claimed to be right-headed (Dede, 1978;

Göksel & Haznedar, 2007; Göksel, 2008). Headedness in the literature on Turkish

compounding is mostly used to refer to semantic head. Recall from Chapter 2 that the

semantic head determines the meaning of the whole compound (Scalise & Fabregas, 2010).

The headedness issue is somewhat related to the semantic relationship between compounds

and their constituents. Recall from Chapter 2 that compounds can be modifier, additive,

appositive or alternative (Heine & Kuteva, 2009). The examples in (31) have one semantic

head which stands on the right side. Kunduracı (2013) claims that the right hand constituent in

(31)a is the head because the -sı suffix (i.e. compound marker) attaches to it. (31)b is an

example of modifier compounds in which the head *biber* ‘pepper’ is modified by *yeşil*

‘green’. On the other hand, those in (32)¹⁸ do not have any semantic head; therefore, they do not have any head. The examples in (32) can be considered as examples of alternative compounds. In addition to these two types, semantically-double headed compounds also exist in Turkish where both heads equally contribute to the meaning of the whole as in (33). These two headed-compounds constitute additive compounds. An example for appositive compounds in Turkish is provided above in (28) *şair yazar* ‘poet author’.

- (31) a. *resim ders-i*
 picture + lesson-LE
 “painting lesson”
 b. *yeşil biber*
 green + pepper
 “green pepper”
 (taken from Göksel 2009:219)
- (32) a. *kuş baş-ı*
 bird head-LE
 “diced meat”
 b. *kızıl ay*
 red moon
 “(the) Red Crescent”
 (taken from Göksel 2009:219)
- (33) a. *gece gündüz*
 night day
 “continuously”
 b. *son bahar*
 final spring
 “autumn”
 (taken from Göksel 2009:217)

As shown in the examples above, compounds in Turkish can be either single-headed (31) or double-headed (33); however, in some cases there might be no head as in (32). In the following section, a discussion on stress in Turkish compounding will be presented.

¹⁸ Note that the so-called compounding marker -sI attaches to the second constituent in (32)a; therefore, the second constituent in (32)a can be considered as the formal head. Such examples conform to the fact that the notion of head is not ‘unitary’ as mentioned by Scalise & Fabregas (2010). For more information see Chapter 2.

3.2.5.4 Stress as a Distinctive Property Among Compounds

Turkish regular word stress assigns stress on the final syllable of a word regardless of how many affixes are attached to it (Kabak & Vogel, 2001; Inkelas & Orgun, 2003; Göksel & Kerslake, 2005; Güneş, 2009 inter alia) as shown in (34).

- (34)
- | | | |
|-----------------|-------------------------------------|-----------------------------|
| a. év | house | “house” |
| b. ev-lér | house-PL | “houses” |
| c. ev-ler-ín | house-PL-2 nd S POSS | “your houses” |
| d. ev-ler-in-dé | house-PL-2 nd S POSS-LOC | “(they are) in your houses” |
- (taken from Güneş 2009:3)

“Compound stress” has been argued to differ from word stress (Kabak & Vogel, 2001; Van Schaaijk, 2002; Orgun & Inkelas, 2003; Göksel & Kerslake, 2005; Göksel & Haznedar, 2007 inter alia). “Compound stress” is said to be on the stressable syllable of the left-most constituent in compounds as shown in (35).

- (35)
- | |
|---------------------|
| a. kabák çekirdeğ-i |
| pumpkin seed-LE |
| “pumpkin seed” |
| b. kurú kayısı |
| dry apricot |
| “dired appricots” |
| c. Ánkara keçi-si |
| Ankara pear-LE |
| “(type of) pear” |
- (taken from Göksel & Haznedar, 2007:4)

“Compound stress” applies to NN-sI and some other types of compounds; however, Güneş (2009) points out there are compounds in Turkish which do not have “compound stress” but have regular word stress. In other words, there are compounds in Turkish, which are stressed on the final syllable as shown in (36). The variety in compound stress in Turkish provides evidence for the fact that stress is not a reliable criterion for compounds in Turkish (see Kamali & İkizoğlu undated).

- (36) a. göz-ü pék
 eye-POSS sturdy
 “courageous” (lit. his/her eye (is) sturdy)
- b. er baş
 soldier head
 “noncommissioned officer”
- c. merkez kaç
 center escape
 “centrifugal”
 (adapted from Göksel & Haznedar, 2007: p. 4, 5)

In this section, it was established that many different types of compounds have similar properties that classify them as compounds even though they are constructed in different ways. Some of these ways are putting together two nouns with the linking elements -sI, putting together two verbs to create a lexical item that is not a verb among many others (21). Although they are all compounds, their different constructions lead to some differences within the compound class. These differences include the subjects of head and stress patterns. In the next section, a subtype of compounds, namely co-compounds in Turkish, will be discussed.

3.3 Turkish Co-Compounds

As discussed in Chapter 2, co-compounds constitute a subtype of compounds. Turkish co-compounds are not yet well known and there are only a handful of studies on them (Göksel & Haznedar, 2007; Göksel 2009). These few studies will be presented below by using the same format compounds were presented in the previous section. The aim is to underline what makes co-compounds different from other compounds and what makes them similar to the others. First, different types of co-compounds are given. Following this, the lexical categories these co-compounds can generate are given. Next, the derivational function of co-compounds is touched upon. Then, different semantic relationships that can hold between the co-compound and its constituents are explored. Finally, formal properties of co-compounds are explored.

3.3.1 Lexical categories of Turkish Co-Compounds

In the literature of Turkish co-compounds' having only three lexical categories are discussed.

These are given in (37-39).

- (37) Nominal co-compounds
 - a. *gelgit* 'come.IMP go.IMP > tide'
 - b. *kap-tı kaç-tı* 'grab-PAST escape-PAST > public car'
 - (taken from Göksel & Haznedar, 2007:5)
- (38) Adjectival co-compounds
 - a. *doğru düzgün* 'correct + straight > proper'
 - b. *kara kuru* 'black + dry > swarthy and skinny'
 - (taken from Göksel , 2009:217)
- (39) Adverbial co-compounds
 - a. *gece gündüz* 'night + day > continuously'
 - b. *sabah sabah* 'morning + morning > early in the morning'
 - (taken from Göksel , 2009:217)

As mentioned above the Turkish co-compounds mentioned in the literature are either nouns, adjectives or adverbs. There is no comprehensive study that discusses verbal co-compounds in Turkish. The nominal co-compounds (37) are made with two verbs, whereas the adjectival co-compounds (38) are made with two adjectives. On the other hand, the adverbial co-compounds (39) are made with two nouns.

3.3.2 Derivational vs. Inflectional Functions

Since co-compounds are a type of compounds, they also are a word formation process. In other words, they have a derivational function. The author has not come across any literature that says Turkish co-compounds have inflectional functions.

3.3.3 Different Kinds Semantic Relationships Between the Constituents of Co-Compounds

Co-compounds in Turkish are defined as compounds with “a formally symmetrical relationship between the two constituents” and neither constituent is the semantic head. (Göksel, 2009 p. 219). Since neither of the constituents can be the head, co-compounds

cannot be modifier compounds. The constituents of a co-compound are also described as being in coordination (Göksel & Haznedar, 2007: p. 5). Therefore, co-compounds cannot be appositive compounds. This leaves additive and alternative compounds. Either the meaning of a co-compound is derived from both of the meanings of the constituents (i.e. additive compounds) or from neither of the constituents (i.e. alternative compounds).

3.3.4 Formal Properties of Co-Compounds

Some formal properties of Turkish co-compounds are similar to other Turkish compounds such as the constraint of having two constituents, the inseparability of the two constituents and the undependableness of stress patterns. Just like almost all compounds, co-compounds have two constituents which are inseparable. Furthermore, co-compounds do not vary on the issue of headedness like other compounds do. Co-compounds “may lack a unique syntactic head” (Göksel, 2009 p. 219) such as *gece gündüz* ‘night +day > continuously’. As Göksel (2009) indicates, the term ‘headedness’ refers to the formal head in her article. Although co-compounds are claimed to be double-headed (Wälchli, 2005), literature on Turkish does not provide such an account. Just like compounds, there is not a single stress pattern among co-compounds. The examples given in (37) receive “word stress” (Güneş, 2009), whereas examples in (38) and (39) receive “compound stress”, which can be inferred from Göksel & Haznedar (2007).

In this section, the slim literature on Turkish co-compounds was reviewed. As it was explained within the frame of compounding, the need for more studies on Turkish co-compounds is apparent. This study aims to further the understanding of Turkish co-compounds by looking at a subset of those, namely [VV] converbs.

In this chapter, a survey of literature on Turkish reduplication, compounding and co-compound has been provided. Different types for each of these concepts were given; moreover, their formal properties were discussed in order to underline what makes them a

distinct class. In this study, a specific type of construction, namely [VV] converbs, are under investigation. Note that [VV] converbs have been mentioned under Turkish reduplications and Turkish compounds. This is because [VV] converbs are compounds created via reduplication. This study argues that they are also co-compounds. In the next chapter, [VV] converbs are described in detail.

CHAPTER 4

DATA AND METHODOLOGY

This study analyzes a particular type of Turkish [VV] converb which are constructions composed of two verbs that bear converbial markers which mark them as converbs. Converbs are “nonfinite verb form whose main function is to mark adverbial subordination” (Haspelmath, 1995 p. 3). [VV] converbs are composed of reduplicated verbs and may bear a variety of converbial markers. In this study, only [VV] converbs bearing three specific markers are focused on because these three are the only parallel markers that are productive and that can be embedded under a non-identical main verb. Other productive [VV] converbs bear distinct converb markers such as *gel-ir gel-mez* ‘come-AOR come-NEG AOR >as soon as he/she comes’. Examples for the [VV] converbs investigated in this study are given in (1-3).

- (1) a. “Berbat-tı bugün. *Ağla ağla* yor-ul-du-m.”
horrible-P.COP today cry.IMP cry.IMP tire-REFL-PAST-1st S
“It was a horrible day. I got tired of crying.”
(<http://www.heygirl.com.tr/forum/viewtopic.php?f=22&t=41955&start=10>)
b. “*Ağla zırla* zor-la tut-tu bura-da.”
cry.IMP blubber.IMP force-COM hold-PAST here-LOC
“He/she got him/her to stay against his/her will by crying and blubbering.”
(<http://e-psikoloji.com/forum/archive/index.php/t-2137.html>)
- (2) a. “Yol-da *ağla-ya ağla-ya* kendi ev-im-e git-ti-m.”
way-LOC cry-OPT cry-OPT own house-1st S POSS-DAT go-PAST-1st S
“I went to my own house while crying on the way.”
(https://www.facebook.com/note.php?note_id=482069245179181)
b. “...bebek-ler *ağla-ya inle-ye* dünya-yı diz-e getir-ecek.”
baby-PL cry-OPT moan-OPT world-ACC knee-DAT bring-FUT
“Babies are going to break the will of the world by crying and moaning.”
(<http://hafif.org/yazi/anneyim-ulan-ben/>)
- (3) a. “...*ağla-yıp ağla-yıp* 80-90 al-ıyor-lar.”
cry-CNJ cry-CNJ 80 90 take-PROG-3rd PL
“They get 80 or 90 (percent from tests) although they cry and cry (after each test)”

(<https://eksisozluk.com/sekiz-bebege-devegucutazihizi-icirmek--2520909>)

b. “*Gül-üp ağla-yıp izle-di-m.*”

laugh-CNJ cry-CNJ watch-PAST-1st S

“I watched (it) by laughing and crying.

([https://eksisozluk.com/ookami-kodomo-no-ame-to-yuki--](https://eksisozluk.com/ookami-kodomo-no-ame-to-yuki--3717358?nr=true&rf=okami%20kodomo%20no%20ame%20to%20yuki)

[3717358?nr=true&rf=okami%20kodomo%20no%20ame%20to%20yuki](https://eksisozluk.com/ookami-kodomo-no-ame-to-yuki--3717358?nr=true&rf=okami%20kodomo%20no%20ame%20to%20yuki))

Some characteristics of such [VV] converbs can be observed in these examples. For example, they constitute adverbial phrases that may take complements and/or adjuncts. Moreover, the tense they imply agrees with the verb of the main clause: in (1)b [VV] converb has the implication of past tense and in (3)a present tense. These examples show their adverbial properties, the different kinds of relationships their constituents can have and different converbial markers they bear. The [VV] converbs in (1) bear the imperative marker (see section 4.3.1), in (2) the optative marker (see section 4.3.2) and in (3) the conjunctive marker (see section 4.3.3). Note that no matter what kind of converbial markers they bear, the constituents of [VV] converbs can be identical (1-3)a or non-identical (1-3)b.

In this chapter, first the various relationships the constituents of a [VV] converb can hold will be explored. Secondly, formal properties shared among these three different types of [VV] converbs will be presented. These formal properties are the requirements that there should be only two constituents which have to be inseparable, in a fixed order. In addition, they display identical stress patterns. Third, distinctions among these three types of [VV] converbs will be discussed. Finally, data collection and results will be presented.

4.1 The Relationships Between the Constituents of [VV] Converbs

The constituents of [VV] converbs can be identical, almost identical or different. Below, each possible relationship between the constituents will be discussed respectively.

4.1.1 Identical Doubling

The constituents of [VV] converbs can be phonologically identical. A [VV] converb with phonologically identical constituents appears as if the same word has been doubled. The term for these types of [VV] converbs is identical doubling. Examples of such [VV] converbs are given in (4) bearing respectively imperative, optative and conjunctive markers.

- (4) a. “*Esne esne çene-m çatla-dı*”
yawn.IMP yawn.IMP jaw-1st S POSS fracture-PAST
“My jaw fractured from yawning.”
(taken from TS corpus)
- b. “*Abart-a abart-a yaz-mış-tır.*”
exaggerate-OPT exaggerate-OPT write-EVID-DIR??
“He/she must have written it in an exaggerated way.”
(taken from TS corpus)
- c. “*El-in-de-ki bardağ-ı sık-ıp sık-ıp kır-acak neredeyse.*”
hand-2nd S POSS-LOC-PRON glass-ACC squeeze-CNJ squeeze-CNJ break-
FUT almost
“He/she is squeezing the glass he/she is holding so much that he/she about break it.”
(taken from TS corpus)

Note that [VV] converbs can have their own complements as seen in (4)c. The [VV] converb *sık-ıp sık-ıp* ‘squeeze-CNJ squeeze-CNJ > squeezing’ takes a direct object which is *bardak* ‘glass’. In addition to identical doubling, another type of reduplication in this study is *m*-reduplication.

4.1.2 *m*-Reduplication

The constituents of [VV] converbs can be phonologically almost identical. The second constituent undergoes a slight phonological modification, which is placing [m] as the new onset (replacing the old one if there is any). In some rare cases, [s] or [p] sounds are used instead of [m]. Since [m] is the most common one, these structures are called *m*-reduplications. Examples of such reduplications are given in (5).

- (5) a. “*Koltuk-ta sevgili-si-yile sarıl marıl otur-uyor.*”

Couch-LOC lover-3rd S POSS-COM embrace.IMP IMI.IMP sit-PROG
 “He/she is sitting on the couch embracing his/her lover.”
 (<http://www.wattpad.com/50511076-yakışikli-züppe-bölüm-5-elbise>)

b. “*İkin-a sıkın-a* ilerli-yor.”
 grunt-OPT IMI-OPT advance-PROG
 “He/she is advancing with great effort.”
 (taken from TS corpus)

c. “*Süsle-n-ip püsle-n-ip* okul-a gel-ir-ler.”
 embellish-PASS-CNJ IMI-PASS-CNJ school-DAT come-AOR-3rd P
 “They come to school all dolled up.”
 (taken from TS corpus)

As shown in the examples (5), the second constituent of [VV] converbs which are *m*-reduplications are phonologically quite similar to the first one. On the other hand, there are other types of [VV] converbs which have completely different constituents. In the next section, [VV] converbs with non-identical items will be shown.

4.1.3 Non-Identical Doubling

The constituents of [VV] converbs can be non-identical. In other words, they are different. However, the constituents appear not to be chosen at random. There is usually some sort of a semantic relationship between them (see Chapter 5). This type of reduplication is called non-identical doubling and examples for [VV] converbs constructed by non-identical doubling are presented in (6).

- (6) a. “*Gez dolaş* yorul-du-m.”
 wander tour get tired-PAST-1st S
 “I got tired because I have been wandering around for hours “
 (https://www.facebook.com/permalink.php?id=220670214646525&story_fbid=496354120411465)
- b. “*Azal-t-a çoğal-t-a* şekil-len-dir-ebil-ir-siniz.”
 decrease-CAUS-OPT increase-CAUS-OPT form-VERB-CAUS-ABIL-
 AOR-2nd PL
 “You can shape (it) by adding more and taking some away ”
 (<http://www.isgfirm.com/threads/sohbet-yeri-g%C3%BCnl%C3%BCK-ar%C5%9Fiv.7616/page-246>)
- c. “*Sor-up sor-uş-tur-up* bin-di-k.”
 ask-CNJ question-CNJ get on-PAST-1st PL

“We got on (it) after we did our research.”
(<http://cadikazani-mervedinar.blogspot.com.tr/2012/11/ilk-gezi-villach.html>)

In this section, different types of [VV] converbs, namely identical doubling, *m*-reduplication and non-identical doubling have been illustrated. In the next section, formal properties of [VV] converbs will be discussed.

4.2 Formal Properties of [VV] Converbs

There are some common formal properties among [VV] converbs. In this section, these common formal properties will be investigated. These formal properties are: (i) there can only be two constituents in these structures, (ii) the constituents behave like a single unit, (iii) the order of the constituents is fixed and (iv) they have phrase-like stress patterns.

4.2.1 The Constraint of (No More or No Less) Two Constituents

[VV] converbs are (almost) always composed of two items and this is regardless of which converbial marker they bear. In other words, the existence of three constituents in these structures is not allowed. The examples given in (7) are the ungrammatical versions of the examples in (1) because these ones have three constituents.

- (7)
- a. **Ağla ağla ağla yor-ul-du-m.*”
horrible-PAST today cry.IMP cry.IMP tire-REFL-PAST-1st S
Intended interpretation: “I got tired of crying.”
 - b. **Ağla zırla zırla zor-la tut-tu bura-da.*”
cry.IMP blubber.IMP force-COM hold-PAST here-LOC
“He/she got him/her to stay against his/her will by crying and blubbering.”
 - c. **Yol-da ağla-ya ağla-ya ağla-ya kendi ev-im-e git-ti-m.*”
way-LOC cry-OPT cry-OPT own house-1st S POSS-DAT go-PAST-1st S
Intended interpretation: “I went to my own house while crying on the way.”
 - d. **Bebek-ler ağla-ya inle-ye inle-ye dünya-yı diz-e getir-ecek.*
baby-PL cry-OPT moan-OPT world-ACC knee-DAT bring-FUT
Intended interpretation: “Babies are going to break the will of the world by crying and moaning.”
 - e. **Ağla-yıp ağla-yıp ağla-yıp 80-90 al-ıyor-lar.*

cry-CNJ cry-CNJ 80 90 take-PROG-3rd PL

Intended interpretation: “They get 80 or 90 (percent from tests) although they cry and cry (after each test)”

f. **Gül-üp ağla-yıp ağla-yıp izle-di-m.*

laugh-CNJ cry-CNJ watch-PAST-1st S

Intended interpretation: “I watched (it) by laughing and crying.

In this section, it has been shown that [VV] converbs can only have two constituents. In the next section, another formal property, the inseparability of two constituents, will be demonstrated and related examples will be provided.

4.2.2 The Inseparability of the Two Constituents

Another common formal property attested in [VV] converbs is that the constituents cannot be separated by any item. To put it differently, the components in these structures have to be adjacent to each other. As indicated in (8)a, (8)c and (8)e, constituents must be inseparable, whereas examples in which the constituents are intervened by an item are not grammatical as in (8)b, (8)d and (8)f.

- (8) a. “*Değiş değiş giy-er-im adam-lar-ı.*”
change.IMP change.IMP wear-AOR-1st S man-PL-ACC
“I change guys (as often as I change t-shirts)”
(<http://www.bunugiyin.com/kulturlenin/o-paraya-uc-tane-alir-degis-degis-giyerim-adamlari/>)
- b. **Değiş ve değiş giy-er-im adam-lar-ı.*
change.IMP and change.IMP wear-AOR-1st S man-PL-ACC
Intended interpretation: “I change guys (as often as I change t-shirts)”
- c. “*Kızar-a bozar-a cevap ver-di-m.*”
blush-OPT ?-OPT answer give-PAST-1st S
“I answered in an embarrassed manner.”
(<http://www.wattpad.com/60092342-sıramdaki-taş-4-bölüm-söz>)
- d. **Kızar-a ver-di-m bozar-a cevap.*
blush-OPT give-PAST-1st S become red-OPT answer
Intended interpretation: “I answered in an embarrassed manner.”
- e. “*Ofla-yıp pufla-yıp merdiven-ler-i çık-tı-m.*”
huff-VERB-CNJ puff-VERB-CNJ stairs-PL-ACC go up-PAST-1st S
“I went up the stairs huffing and puffing.”
(<http://www.wattpad.com/58371519-gizli-iş-kasli-kollar>)

- f. **Ofla-yıp merdiven-ler-i pufla-yıp çık-tı-m.*
 huff-VERB-CNJ stairs-PL-ACC puff-VERB-CNJ go up-PAST-1st S
 Intended interpretation: “I went up the stairs huffing and puffing.”

As shown in these examples, [VV] converbs are units which do not allow their constituents to be separated. There is another formal property of [VV] converbs: the fixed order of constituents.

4.2.3 The Fixed Order of the Two Constituents

Another formal property of [VV] converbs is that there is a fixed order to their constituents when they are non-identical. That is to say, although [VV] converbs are productive, one cannot simply switch the order of the constituents in these structures. To illustrate, the following examples of [VV] converbs are ungrammatical: **çık bat* ‘rise.IMP sink.IMP’, **mişir-e pişir-e* ‘IMI-OPT cook-OPT’ and **kuşan-ıp giyin-ıp* ‘dress-CNJ put on-CNJ’ (cf. *bat çık* ‘rise.IMP sink.IMP > almost drowning, *pişir-e mişir-e* ‘cook-OPT IMI-OPT > cooking and the like’, *giyin-ıp kuşan-ıp* ‘put on-CNJ dress-CNJ > dressing up’).

Now that it has been demonstrated that [VV] converbs have some syntactic properties. There is one more formal property, their stress patterns, which need to be taken into consideration. In the next section, their stress pattern will be discussed.

4.2.4 Stress Patterns

The final formal property of [VV] converbs that mentioned is their stress patterns. Stress in [VV] converbs as in (9) fall into the last syllable of both constituents. Göksel & Haznedar (2007) claim that reduplications such as *yavaş yavaş* ‘slowly’ bear compound stress; however, [VV] converbs have two stressable syllables which make them appear phrase-like (for more information on stress patterns of phrases in Turkish see Kabak & Vogel, 2001).

- (9) a. “Yeter artık *anlât anlât* dil-im-de tüy bit-ti.”
 enough now tell.IMP tell.IMP tounge-1st S POSS-LOC finish-PAST

“Enough is enough, I am tired of telling (you/him/her) over and over again.”
(<http://www.warrockhit.com/forum/konu-yeter-artik-anlat-anlat-dilimde-tuy-bitti.html>)

b. “*Sürün-é mürün-é* bitir-se-ymiş-im şu okul-u.”
crawl-OPT IMI-OPT finish-COND-EV/PF-1st S that school-ACC
“I should have finished school even if it would have meant that I would be miserable.”
(http://leyya-craftmania.blogspot.com.tr/2009_06_01_archive.html)

c. “...onu *gizle-yıp saklayıp* san-a bu haksızlığ-ı yap-mak iste-mi-yor-um.”
3rd S PRO-ACC conceal-CNJ hide-CNJ 2nd S PRO-DAT this unfairness
make-INFL want-NEG-PROG-1st S
“I do not want to treat you unfairly by hiding it.”
(<http://yazdikdaneoldu.tumblr.com/page/66?route=%2Fpage%2F%3Apage>)

In this section, formal properties of [VV] converbs have been laid out. They do not only share formal properties but also share semantic properties. The semantic properties of [VV] converbs will be explained in Chapter 6. In the next section, each converbial marker will be handled individually and examined.

4.3 Converbial Markers

[VV] converbs in the focus of this study are divided into three groups, based on their converbial markers. From this point on, these [VV] converbs will be referred to [V.IMP V.IMP], [V-OPT V-OPT] and [V-CNJ V-CNJ] respectively. In this section, converbs bearing each marker will be discussed separately.

4.3.1 [V.IMP V.IMP] Converbs

The [V.IMP V.IMP] converbs are marked by 2nd person singular imperative marker. The 2nd person singular imperative marker in Turkish is “identical with the stem” (Lewis, 1967 p. 137). In other words, these verbs with the 2nd person singular imperative marker appear to be bare. Other than 2nd person singular imperative marker, only 3rd person singular/plural and 2nd person plural forms exist for imperative marker. The 3rd person singular imperative marker is *-sIn*, whereas 3rd person plural imperative marker is *-sInlar* (Göksel & Kerslake, 2005;

Ketrez, 2013 inter alia). The 2nd person plural imperative form is *-(y)In* (Lewis, 1967; Göksel & Kerslake, 2005; Kornfilt, 2013). The imperative marker also has a polite form which is *-(y)InIz* in Turkish (Lewis, 1967; Göksel & Kerslake, 2005; Ketrez, 2012; Kornfilt, 2013). The prototypical usage of Turkish imperative marker is in commands (Göksel & Kerslake, 2005; Kornfilt, 2013). However, the imperative marker has many other uses (for more information see Gürsu, 2009 and Göksel & Kabak, 2012). In the examples below, the imperative marker denotes continuity and perplexity respectively.

- (10) *Yaz yaz bitmiyor, dinle dinle sonu gelmiyor!*
 write.IMP write.IMP finish-NEG-PROG listen.IMP listen.IMP end-ACC
 come-NEG-PROG
 “It does not finish no matter one writes and no matter one listens.”
 (taken from Gürsu, 2009)
- (11) *Sen kalk tüm film-i izle sonra son-un-u kaçır. (İşte olay orada koptu.)*
 you get up.IMP whole film-ACC watch.IMP then end-3POSS.SGACC
 miss.IMP (That’s where all hell broke loose.)
 ‘[Would you believe it?!] S/he watched the whole film and then missed the
 ending! (That’s where all hell broke loose).’
 (Status statement at Twitter: <http://twitter.com/hyaman/status/19973439707>)
 (taken from Göksel & Kabak 2012:109)

Even though it has many other functions, since its major function is to give commands in this study it is dubbed the imperative marker. Note that when the term “imperative marker” is used, the study does not refer to its usage as a mood marker (i.e. for commands). The function of the imperative marker in [VV] converbs is to derive adverbs from verbs. This is apparent from the fact that [VV] converbs marked by imperative marker cannot take person markers. The best evidence for these markers’ not functioning as TAM markers is the fact that they do not receive person markers as in (12).¹⁹

- (12) a. *Otur otur bay-dı.*
 sit.IMP sit.IMP get bored-PAST
 “He/she got bored because of sitting (all day).”
- b. **Otur-sun otur-sun bay-dı.*

¹⁹ Note that the 2nd person singular imperative marker is {-Ø}; therefore, one may be inclined to say that [V.IMP V.IMP] converbs bear person marker. However, this argument can easily be refuted because of the fact that [V.IMP V.IMP] converbs are marked by 2nd person singular regardless of the person marker in the main verb.

sit.IMP sit.IMP get bored-PAST

Intended interpretation: “He/she got bored because of sitting (all day).”

c. *Otur otur* bay-dı-nız.

sit.IMP sit.IMP get bored-PAST

“You guys got bored because of sitting (all day).”

d. **Otur-un otur-un* bay-dı-nız.

sit.IMP sit.IMP get bored-PAST

Intended interpretation: “You guys got bored because of sitting (all day).”

e. **Otur otur*.

sit.IMP sit.IMP

Intended interpretation: “He/she sat all day long.”

In this section, the imperative marker used in [VV] converbs was shown not to function as a TAM marker. In [V.IMP V.IMP] converbs, imperative marker functions as converbial marker. The converbial use of the imperative marker is not surprising because it is associated with the optative marker (Ediskun, 1985; Ketrez, 2012) and optative marker in [VV] converbs has converbial function too. [V-OPT V-OPT] converbs will be discussed in the next section.

4.3.2 [V-OPT V-OPT] Converbs

[V-OPT V-OPT] converbs are marked by 3rd person singular optative marker which has the form of -(y)A. The optative marker -(y)A is mostly used in 1st person singular -(y)AyIm and plural form -(y)Allm in Turkish (Göksel & Kerslake, 2005 p. 78). Optative is “a finite verb form expressing the speaker’s (or, in questions, the hearer’s) will or desire” (Göksel & Kerslake, 2005 p. 475), somewhat analogous to the imperative marker. Also like the imperative marker, optative marker has another function, namely it turns verbs into adverbs. This function leads some researchers consider this marker a gerund²⁰ (Lewis, 1967; Ediskun, 1985; Underhill, 2000 inter alia). There is no need to argue for a different marker with the same form when it is more likely that the optative marker can also function as a converbial marker. Therefore, this study uses the name optative marker to refer to the converbial marker

²⁰ “Converbs are also known as *gerunds*, *adverbial participles*, etc.” (Bisang, 1994)

-(y)*A*. To be clear, this study is not saying that [V-OPT V-OPT] converbs bear markers that functions as TAM markers. This study is saying that the optative marker has also an alternative function, which is to derive adverbs from verbs. The examples (13) show that no matter who is the subject of the [VV] converbs, the converbial marker is always in the 3rd person singular form.

- (13) a. *Alış-tır-a alış-tır-a söyle-di-m.*
 get used to-CAUS-OPT get used to-CAUS-OPT tell-PAST-1stsS
 “I told him/her slowly and by getting him/her used to the idea.”
- b. **Alış-tır-a-yım alış-tır-a-yım söyle-di-m.*
 get used to-CAUS-OPT get used to-CAUS-OPT tell-PAST-1stS
 Intended interpretation: “I told him/her slowly and by getting him/her used to the idea.”
- c. *Alış-tır-a alış-tır-a söyle-di-n.*
 get used to-CAUS-OPT get used to-CAUS-OPT tell-PAST-2nd S
 “You told him/her slowly and by getting him/her used to the idea.”
- d. **Alış-tır-a-sın alış-tır-a-sın söyle-di-n.*
 get used to-CAUS-OPT get used to-CAUS-OPT tell-PAST-2nd S
 Intended interpretation: “You told him/her slowly and by getting him/her used to the idea.”
- e. **Alış-tır-a alış-tır-a*
 get used to-CAUS-OPT get used to-CAUS-OPT
 Intended interpretation: “I got him/her used to the idea.”

Another important point on the converbial function of the optative is that it is only productive in reduplicative constructions (Lewis, 1967; Sebüktekin, 1971; Ediskun, 1985; Çotuksöken, 1991; Underhill, 2000; Korkmaz, 2003; Bayraktar, 2004; Göksel & Kerslake, 2005). This seems not to have always been the case, since there are some frozen forms in which the optative suffix -(y)*A* can be used alone such as *oku-ya-dur* ‘go on reading’ (Korkmaz, 2003) or *hayrola* ‘what is happening?’ (Ketrez, 2012). In Modern Turkish, the converbial optative marker -(y)*A* needs to get attached to reduplicated verbs (Korkmaz, 2003); however, another converbial marker, namely the conjunctive marker -(y)*Ip*, can attach to only a single verb stem. The [V-CNJ V-CNJ] converbs will be discussed in the next section.

4.3.3 [V-CNJ V-CNJ] Converbs

[V-CNJ V-CNJ] converbs are marked by the conjunctive suffix *-(y)Ip*. Some researchers consider the conjunctive marker a subordinating suffix (Johanson, 1995; Göksel & Kerslake, 2005) and some researchers consider it a coordinator (Lewis, 1967; Slobin, 1995; Underhill, 2000; Gencan, 2001; Bayraktar, 2004; Fokkens et al, 2009; Kornfilt, 2013 inter alia). This might be due to some seemingly contradictory properties of *-(y)Ip*: (i) the verb marked by *-(y)Ip* has to be under the scope of the main verb (Lewis, 1967; Demir, 1994; Johanson, 1995; Gencan, 2000; Göksel & Kerslake, 2005; Fokkens et al, 2009; Kornfilt, 2013); (ii) though restricted, verbs conjuncted by *-(y)Ip* can have different subjects (Gencan, 1971; Bisang, 1994; Göksel & Kerslake, 2005). Furthermore, the converbial function of *-(y)Ip* has been attested in the literature on Turkish. In other words, some researchers argue that the conjunctive marker *-(y)Ip* can generate adverbial clauses modifying the main verb (Johanson, 1995; Göksel & Kerslake, 2005). Note that the studies cited above aim to understand the nature of *-(y)Ip*; however, they do not provide a detailed explanation for [V-CNJ V-CNJ] converbs where both constituents are marked by the conjunctive suffix *-(y)Ip* and no lexical item can separate them and they share the same complements and/or adjuncts.

In this section, converbial markers in the three types of [VV] converbs, which are investigated in this study, were elaborated on. Some background on each converbial marker, namely imperative, optative and conjunctive markers, was given. All these markers were shown to be alternate functions of markers that have other primary functions.

4.4 Methodology

The data used in this study has been collected from dictionaries, the TS corpus and various blogs on the internet. The dictionaries covered were TDK dictionary (2005) and Akyalçın (2007). The TS corpus is a Turkish corpus that has a wide range of potential uses and contains

over 490 million words. This corpus mostly includes written documents such as newspaper articles. Therefore, in order to cover more colloquial language usage in this study, various blogs and twitter were also searched. Most of the examples used in the study are either taken from the corpus or the internet as noted below each example. Other examples are used usually to scrutinize a specific property that have been created by the author but validated by a quick facebook survey. The unacceptability of the ungrammatical examples has been triple checked by looking through the corpus, by doing a search on them in the internet and by doing a quick facebook survey (around 35 people usually responded).

4.5 Data Report

The TS corpus was searched in order to find all the [VV] converbs used in the corpus. Once found, they were broken down by the type of relationship (phonological or semantic) between the constituents and by the type of converbial marker (imperative, optative or conjunctive). Below, first numbers and examples on the type of relationships and then numbers and examples on the type of converbial marker are presented.

4.5.1 [VV] Converbs with Identical Constituents

The popularity of identical reduplications among [VV] converbs is apparent when one looks at the [VV] converbs with frequencies higher than 100 in the TS corpus. Three out of the eight [VV] converbs with the imperative marker, six out of ten with the optative marker and 29 out of 35 with the conjunctive marker are identical reduplications. An example of the most frequent identical [VV] converbs for each converbial marker is provided in (14). Also, more creatively constructed [VV] converbs (i.e. rare [VV] converbs) are provided in (15).

- (14) a. *Bak bak* doy-a-ma-dı-m fotoğraf-a.
 look.IMP look.IMP be full-NEG ABIL –NEG-PAST-1st S photograph-DAT
 “I could not be satisfied no matter how much I looked at the photograph.”
 (taken from the TS corpus)

- b. Bush bu davet-e *sev-e sev-e* gel-ir-im yanıt-ı-n-ı ver-di.
 Bush this invitation-DAT love-OPT love-OPT come-AOR-1st S reply-3rd S
 POSS-ACC give-PAST
 “Bush replied I would love to come to this event”
 (taken from the TS corpus)
- c. O resim-de-ki kız-a *bak-ıp bak-ıp* şiir-ler yaz-mış.
 that picture-LOC-REL girl-DAT look at-CNJ look at-CNJ poem-PL write-
 EV/PF
 “He/she wrote poems inspired by the girl in the picture.”
 (taken from the TS corpus)
- (15) a. “*Kıskan kıskan* bir hal ol-du-m.”
 get jealous.IMP get jealous.IMP one situation become-PAST-1st S
 “I was beside myself out of jealousy.”
 (<http://www.vindictusturkiye.net/konu-item-4883.html?page=3>)
- b. “*Uydur-a uydur-a* anlat-ıyor.”
 make up-OPT make up-OPT tell-PROG
 “He/she tells (a story) by making it up.”
 (<https://twitter.com/onurgokmenksk/status/487750716191408128>)
- c. “Cihaz TV kanal-ı-n-ı *kara-r-t-ıp kara-r-t-ıp* göster-me-ye baş-la-dı.
 device TV channel-3rd S POSS-ACC blacken-CAUS-CNJ blacken-CAUS-
 CNJ show-NOM-DAT start-PAST
 “The device has started showing the TV channel blackened.”
 (<http://www.turkeyforum.com/satforum/showthread.php?t=665301&page=19>)

4.5.2 [VV] Converbs with Near Identical Constituents: *m*-reduplications

In the TS Corpus, there are not many instances of [VV] converbs constructed with *m*-reduplication. This is probably due to the fact that the corpus mostly consists of the written language, whereas [VV] converbs via *m*-reduplications are colloquial constructions. There are only examples of [V-OPT V-OPT] converbs and no other [VV] converbs with other converbial markers. Out of 648 different [V-OPT V-OPT] converbs, there were only eight created via *m*-reduplications. Two examples of this eight are provided below in (16). However, a wider search on the internet has shown that examples of [VV] converbs constructed by *m*-reduplication that bear other converbial markers are common (17).

- (16) a. Öd-üm *kop-a mop-a* uç-arak git-ti-m ben de Frankfurt-a.

choler-1st S POSS rip-OPT IMI-OPT fly-CNV go-PAST-1st S I also
Frankfurt-DAT
“I went to Frankfurt by air although I was afraid of flying.”
(taken from the TS corpus)

b. Türkiye ırgalan-a mırgılan-a bilinc-e var-ma yol-u-n-da.
Turkey shake-OPT IMI-OPT consciousness-DAT reach-NOM way-3rd S
POSS-LOC
“Turkey is on its way to becoming conscious since it is being shaken
continuously”
(taken from the TS corpus)

- (17) a. “Biraz konuş monuş ikna et.”
a little talk.IMP IMI.IMP persuasion do.IMP
“Persuade (him/her) by talking to (him/her).”
(<http://mobile.donanimhaber.com/showTopic.asp?m=62506243&p=4#62523277>)
- b. “Sallan mallan gid-er-im.”
waste time.IMP IMI.IMP go-AOR-1st S
“I will go by taking my time.”
(<https://tr-tr.facebook.com/hemsinyaylalarina/posts/286218344730390>)
- c. “Kaç-ıp maç-ıp gel-me-di-n.”
run away.CNJ IMI-CNJ come-NEG-PAST-2ND S
“You didn’t come (to me) by getting away (from where you were)”
(<http://forum.dizifilm.com/forum/showthread.php?t=63683&page=72>)
- d. “...o kurban-ı pişir-ip mişir-ip yi-yor-lar.”
that sacrificial animal-ACC cook-CNJ IMI-CNJ eat-PROG-3RD P
“They are eatin that sacrificial animal after having cooked it.”
(<https://eksisozluk.com/bardaga-buz-koymak--2591435>)

4.5.3 [VV] Converbs with Non-Identical Constituents

Among the [VV] converbs with frequencies higher than 100 in the TS corpus, there are nine [VV] converbs with non-identical constituents. One of these [VV] converbs bear the imperative marker, four bear the optative marker and four bear the conjunctive marker. These most frequently used [VV] converbs with non-identical markers are listed in (18).

- (18) a. *sarmaş dolaş* ‘wrap.IMP intertwine.IMP > while holding each other’
b. *bağır-a çağır-a* ‘yell-OPT yell-OPT > by yelling a lot’
bat-a çık-a ‘sink-OPT rise-OPT > continuously sinking and getting out’
düş-e kalk-a ‘fall down-OPT get up-OPT > with struggle’
utan-a sıkıl-a ‘get shy-OPT feel embarrassed-OPT > while feeling sky and embarrassed’
c. *dön-üp dolaş-ıp* ‘turn-CNJ wander around-CNJ > walking round and round’

evir-ip çevir-ip ‘alter-CNJ alter-CNJ > keep changing (something)’
yap-ip ed-ip ‘do-CNJ do-CNJ > by doing (something) and doing (it) over again’
yat-ip kalk-ip ‘go to bed-CNJ get up-CNJ > every day’

As previously mentioned in 4.1.3, there is usually some sort of a semantic relationship between the constituents in these kinds of [VV] converbs (see Chapter 5). The semantic relationships between the constituents of the most frequently used [VV] converbs can be grouped into three. In the first group, the meanings of the constituents are quite similar. Examples for the first group are presented in (19). In the second group, the meanings of the constituents are exact opposites. Examples for the second group which are composed of antonymous constituents are presented in (20). In the third group, the meanings of the constituents are semantically-related. Examples for the third group are presented in (21).

- (19) a. Adam evlen-me teklif-i ed-erken kadın *bağır-a çağır-a* ağlı-yor-du.
 man marry-NOM offer-ACC do-CNV woman shout-OPT summon-OPT cry-
 PROG-PAST
 “While the man was proposing marriage to the woman, she was crying like crazy.”
 (taken from the TS corpus)
- b. Başkaları-nın *yap-ip ed-ip* sorumsuzca geri-de bırak-tığ-ı şey-ler-i toparla-
 mak iste-mi-yor-um artık.
 everybody else-GEN do-CNJ do-CNJ irresponsibly back-LOC leave-SUB-3rd
 S POSS thing-PL-ACC pick up-INFL want-NEG-PROG-1st S anymore
 “I do not want to pick up the pieces of things others have used and left behind irresponsibly.”
 (taken from the TS corpus)
- c. Onlar hep aynı konu-lar-ı *evir-ip çevir-ip* işli-yor-lar.
 they always the same issue-PL-ACC alter-CNJ alter-CNJ handle
 “They always handle the same issues by altering them slightly.”
 (taken from the TS corpus)
- (20) a. Eleştirmen değil-di-k hiçbir-imiz ama *düş-e kalk-a* eleştiri yap-ma-yı öğren-
 miş-ti-k.
 critic not-PAST-1st PL no one-1st PL POSS but fall down-OPT get up-OPT
 critic make-NOM-ACC learn-EV/PF-PAST-1st PL
 “When we started out none of us were critics but we learnt to be (critics) by making mistakes and learning from them.”
 (taken from the TS corpus)
- b. Nehir-in kenar-ı-nda su-lar-a *bat-a çık-a* çok güzel bir şelale-ye ulaş-ıyor-uz.

River-GEN shore-3rd S POSS water-PL-DAT sink-OPT get out-OPT one waterfall-DAT reach-PROG

“We reach a beautiful waterfall by walking on the edge of a river almost falling into the water a lot.”

(taken from the TS corpus)

c. Türk-ler *yat-ıp kalk-ıp* Atatürk-e dua et-meli.

Turkish-PL-DAT lie down-CNJ get up-CNJ Atatürk-DAT pray-OBLG

“Turkish people should always be thankful to Atatürk.”

(taken from the TS corpus)

- (21) a. *Sarmaş dolaş* bin-iyor-lar araba-ya.
hug.IMP tour.IMP get on-PROG-3rd PL car-DAT
“They got on the car holding each other.”
(taken from the TS corpus)

b. Bir mafya baba-sın-ın *utan-a sıkıl-a* psikolog-a git-me-si-n-den bahsed-iyor-um.

a mafia father-3rd S POSS be ashamed-OPT be bored-OPT psychologist-3rd S POSS-ABL mention-PROG-1st S

“I am talking about a godfather who goes to the psychologist while feeling ashamed about doing so.”

(taken from the TS corpus)

c. İç politika-da Schröder *dön-üp dolaş-ıp* hep ekonomi-ye tak-ıl-dı.
internal affairs-LOC Schröder twist.CNJ turn.CNJ always economy-DAT obsess-PASS-PAST

“Schröder always goes back to the issue of economy when talking about domestic policy.”

(taken from the TS corpus)

4.5.4 The Converbial Markers Constituting [VV] Converbs

4.5.4.1 Converbial Imperative marker

In the TS Corpus, there are 5317 instances of [V.IMP V.IMP] converbs. This translates into 10,8 instances per million words. This makes [V.IMP V.IMP] converbs the least frequently used among [VV] converbs. There are only three [V.IMP V.IMP] converbs, which are used more than 100 times in the whole corpus. The percentage of [V.IMP V.IMP] converbs, which are only used once, is 13, 58%.

4.5.4.2 Converbial Optative marker

In the TS Corpus, there are 18281 instances of [V-OPT V-OPT] converbs. This translates into 37,2 instances per million words. This makes [V-OPT V-OPT] converbs the most frequently used among [VV] converbs. There are 35 [V-OPT V-OPT] converbs, which were used more than 100 times in the whole corpus. The percentage of [V-OPT V-OPT] converbs, which were only used once, was 3,70%. Since speakers were not much inclined to create [V-OPT V-OPT] converb constructions on the go (hence the low percentage of constructions with a frequency of 1), it can be concluded that [V-OPT V-OPT] converbs are more lexicalized than spontaneous constructions.

4.5.4.3 Converbial Conjunctive marker

In the TS Corpus, there are 8285 instances of [V-CNJ V-CNJ] converbs. This translates into 16,86 instances per million words. There are 10 [V-CNJ V-CNJ] converbs, which were used more than 100 times in the whole corpus. The percentage of [V-CNJ V-CNJ] converbs, which were only used once, was 16,44%. Since speakers felt free to create [V-CNJ V-CNJ] converb constructions on the go (hence the high percentage of constructions with a frequency of 1), it can be concluded that [V-CNJ V-CNJ] converbs are quite productive.

4.6 Conclusion

In this chapter, various qualities of the [VV] converbs were laid out. Moreover, the database research was presented. This shows the productivity and creativity of [VV] converbs in Turkish. In the next two chapters, these properties will be put against various theories and argumentations. In the next chapter, the [VV] converbs will be claimed to be reduplications, compounds and co-compounds. In Chapter 6, the syntactic structure of [VV] converbs will be discussed.

CHAPTER 5

THE INTERNAL STRUCTURE OF [VV] CONVERBS

This chapter is dedicated to the internal structure of [VV] converbs. As mentioned before, Turkish [VV] converbs are compounds, more specifically co-compounds, generated by the process of reduplication. To understand their internal structure, this chapter is divided into three parts. Firstly, their reduplicative status will be discussed following Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014). Secondly, the fact that [VV] converbs are compounds will be discussed considering the definition of compounds in the literature (Toman, 2003; Dressler, 2006; Fabb, 2011; Lieber & Štekauer, 2011 *inter alia*). Finally, the properties of [VV] converbs which make them co-compounds will be considered based on Wälchli (2005)'s model on co-compounds.

5.1 [VV] Converbs as Reduplications

In chapter 2, the ways to define reduplication were discussed (Marantz, 1982; Moravski, 1978; Kiyomi, 1995; *inter alia*). In this thesis, the definition provided by Inkelas (2005, 2008, 2014) and Inkelas & Zoll (2000, 2005) has been adopted. Of the models that were discussed in Chapter 2, their theory appears to be the one that covers the cross-linguistic data best. Recall from Chapter 2 that their theory is called as Morphological Doubling Theory (MDT). MDT defines reduplication as a construction with two morphemes which have identical morphosyntactic features and that are semantically related. In this section whether this definition of reduplication characterizes Turkish [VV] converbs will be discussed. Firstly, the daughters of Turkish [VV] converbs will be verified to have identical morphosyntactic features. Then, the semantic relationship between the daughters of Turkish [VV] converbs will be demonstrated.

The identical morphosyntactic features that characterize reduplications and that are relevant for [VV] converbs are valency (argument structure), case requirements, theta role assignments and parallel inflection since these structures are adverbials derived from verbs. The two verbs in [VV] converbs need to have the same number and kind of arguments (valency or argument structure), these arguments must be marked with identical cases and receive identical theta roles, and both verbs have to receive parallel suffixation (i.e. get the same converbial marker). Below each of these features are discussed separately.

5.1.1 Requirement 1: Identical Argument Structure

The verbs in Turkish can be intransitive (1-place predicates) transitive (2-place predicates) or ditransitive (3-place predicates). The daughters of [VV] converbs must both be the same types. In other words, the verbs in a converb cannot have different argument structures. [VV] converbs which are composed of identical verbs satisfy this requirement by default. However, those which are composed of non-identical verbs must follow this requirement. Below, grammatical and ungrammatical examples of [VV] converbs with non-identical daughters in regard to argument structure are provided and discussed.

Intransitive verbs are not as straightforward as the other categories because they are not a unified category like the others. They may be either unaccusative or unergative according to the thematic roles they assign to their arguments (Adger, 2002 p. 62). Examples (1)c and (2)c demonstrate grammatical sentences that have [VV] converbs each with two intransitive verbs. The verbs of the [VV] converb in (1)c are unaccusative intransitive verbs; therefore, their subjects have the roles of themes as seen in (1)a and (1)b. On the other hand, the verbs of the [VV] converb in (2)c are unergative intransitive verbs; therefore, their subjects have the role of agents as seen in (2)a and (2)b.

- (1) a. Adam öl-dü.
man-NOM die-PAST
“The man died.”

- b. Adam bayıl-dı.
man-NOM get up-PAST
“The man fainted.”
- c. “Valla ben *öl-e bayıl-a* sirkeli su içi-yor-um zor-muş baya iç-me-si.”
honestly 1st S PRO die-OPT faint-OPT vinegared water drink-PROG-1st S
difficult-EV/PF quite drink-NOM-3rd S POSS
“Tell you the truth, I drink water with vinegar with great difficulty, it turns out that it is very hard to drink.”
(<http://www.kadinlarkulubu.com/showthread.php?t=245012&page=567>)

- (2) a. Çocuk koş-tu.
child run-PAST
“The child ran.”
- b. Çocuk yürü-dü.
child walk-PAST
“The child walked.”
- c. “8 km’yi *koş-a yürü-ye* bit-ir-di çocuk-lar.”
eight kilometer-ACC run-OPT walk-OPT finish-CAUS-PAST child-PL
“Walking and running, the children finished the 8km.”
(<http://klubem.blogspot.com.tr/2012/10/sonbaharda-orman-i.html>)

The [VV] converbs in (1) and (2) are grammatical because they satisfy the requirement of having identical argument structures. To put it differently, the constituents of [VV] converbs in (2) and (3) are intransitive verbs. On the other hand, composing of intransitive verbs does not appear to be enough for [VV] converbs. Although both unaccusatives and unergatives are 1-place predicates (i.e. intransitives), the following example (3) shows that these two different types cannot combine within the same [VV] converb.

- (3) a. *Ali *öl-e koş-a* bit-ir-di yarış-ı.
Ali die-OPT run-OPT finish-CAUS-PAST race-ACC
Intended interpretation: “Ali finished the race running and dying at the same time.”
- b. *Ali *koş-a öl-e* bit-ir-di yarış-ı.
Ali run-OPT die-OPT finish-CAUS-PAST race-ACC
Intended interpretation: “Ali finished the race running and dying at the same time.”

However, there might be some exceptions to this claim which may stem from the gradient nature of unaccusative/unergative distinction (for more information see Nakipoğlu, 2002 and Acartürk, 2005). Examples (4) and (5) provided below are from websites but are not acceptable to the author of this thesis.

- (4) ?“Kendi güç-leri-yle *çalış-ıp büyü-yüp* hakim duruma gel-me-leri-n-i engel-le-me-miş.”
 himself power-3rd PL POSS-INSTR work-CNJ grow-CNJ expert condition
 come-NOM-3rd PL POSS-ACC obstacle-VERB-NEG-EV/PF
 Intended interpretation: “He did not hinder them from working hard by themselves and becoming experts.”
 (<http://merin535353.blogcu.com/mustafa-parlakla-roportaj/1345610>)
- (5) ? “*Yüz-e bat-a* çırpın-ıyor-lar-dı.”
 swim-OPT sink-OPT toss about-PROG-3rdPL-PAST
 Intended interpretation: “They were being tossed about while swimming.”
 (<https://twitter.com/sunnyncloudy/status/384347581201268736>)

Like intransitives, transitive verbs also have an obligation to occur within the same [VV] converb. The examples provided in (6)c and (7)c have [VV] converbs that are composed of transitive verbs (i.e. verbs which require two arguments). The fact that the verbs of the [VV] converbs in (6)c and (7)c have two arguments is illustrated with simple sentences in (6)a-b and (7)a-b.

- (6) a. Adam kitab-ı böl-dü.
 man book-ACC divide-PAST
 “The man divided up the book.”
- b. Adam kitab-ı parçala-dı.
 man book-ACC dismantle-PAST
 “The man destroyed the book.”
- c. “*Böl parçala* AB’ye uy!”
 divide.IMP dismantle.IMP EU-DAT conform.IMP
 “Do whatever you must including dividing and dismantling just so that you conform to the European Union’s will.”
 (<http://www.turksolu.com.tr/31/dogan31.htm>)
- (7) a. Adam kitap yaz-dı.

man book write-PAST
“The man wrote a book.”

b. Adam kitap çiz-di.
man book draw-PAST
“The man drew a book.”

c. “İnsan-lar-ın yüz-leri-n-e karşı söyle-ye-me-dik-ler-imiz-i *yaz-ıp çiz-ip* gid-iyor-uz.”
person-PL-GEN face-3rd PL POSS-DAT opposite say-POS-NEG-SUB-PL-1stPL POSS-ACC write-CNJ draw-CNJ go-PROG-1stPL
“We move on after writing down things that we cannot say to people’s faces”
(<http://gelmisbulundu-m.tumblr.com/post/66426549183/insanlar-n-yuzlerine-kars-soyleyemediklerimizi>)

As previously mentioned the verbs within a [VV] converb must have identical argument structures. Therefore, the two daughters of a [VV] converb cannot be an intransitive verb (2)a and a transitive verb (6)b in either possible order as shown in (8).

- (8) a. * *Koş-a parçala-ya* tarla-dan geç-ti.
run-OPT shred-OPT field-ABL pass-PAST
Intended interpretation “He/she passed through the field running and shredding (the crops).”
- b. * *Parçala-ya koş-a* tarla-dan geç-ti.
shred-OPT run-OPT field-ABL pass-PAST
Intended interpretation “He/she passed through the field running and shredding (the crops).”

The need for identical argument structure within [VV] converbs is also attested for ditransitive verbs. If one of the daughters of a [VV] converb is a ditransitive verb, the other must be a ditransitive verb too, as shown in (9)c. The case of the verbs in the [VV] converb (9)c being ditransitives is confirmed by (9)a and b, which demonstrate that they take three arguments.

- (9) a. Kadın bize koca-sın-ı anlat-tı.
woman we-DAT husband-3rd S POSS-ACC tell-PAST
“The woman told us about her husband.”
- b. Kadın bize koca-sın-ı tanı-tı.

woman we-DAT husband-POSS-ACC introduce-PAST

“The woman introduced us to her husband.”

- c. “Çocuk-lar-ımız-a bölge-miz-i *anlat-ıp tanıt-ıp* geçmiş gelenek görenek-ler-imiz-le bul-uş-tur-uyor-uz.”

child-PL-1st PL POSS-DAT region-1st PL-ACC tell-CNJ introduce-CNJ
past tradition custom-PL -1st PL POSS-INST find-RECIP-CAUS-PROG-1st PL

“We introduce our children to our region and talk about it in order to teach them our old traditions and customs.”

(<http://www.hamlegazetesi.com/kose-yazisi/36/bor-cucu-senlikleri.html>)

Just as an intransitive verb and a transitive verb cannot be the daughters within the same [VV] converb, a transitive and a ditransitive or an intransitive and a ditransitive cannot be the daughters of [VV] converbs either. The ungrammaticality of those is illustrated in (10) and (11) respectively. In (10), the hypothetical [VV] converb is composed of transitive verb (7)b and ditransitive verb (9)a, whereas in (11) the hypothetical [VV] converb is composed of intransitive verb (1)b and ditransitive verb (9)b.

- (10) a. *Çiz-e anlat-a öğretti bana geometri-yi.
draw-OPT explain-OPT teach-PAST I-DAT geometry-ACC
Intended interpretation: He taught me geometry by drawing figures and explaining them.
- b. *Anlat-a çiz-e öğretti bana geometri-yi.
explain-OPT draw-OPT teach-PAST I-DAT geometry-ACC
Intended interpretation: He taught me geometry by drawing figures and explaining them.
- (11) a. *Proje-yi bayıl-ıp tanıt-ıp herkes-i hayran bırak-tı.
project-ACC faint-CNJ present-CNJ meeting-ACC half leave-PAST
Intended interpretation: He/she presented the project with a passion and impressed everyone.”
- b. *Proje-yi tanıt-ıp bayıl-ıp herkes-i hayran bırak-tı.
project-ACC presentCNJ faint-CNJ meeting-ACC half leave-PAST
Intended meaning: He/she presented the project with a passion and impressed everyone.”

The unacceptability of the [VV] converbs whose daughters have different argument structures confirms that morphosyntactic features have a significant role in reduplications. On the other

hand, there are some examples of unacceptable [VV] converbs whose daughters have identical argument structures. In these cases the ungrammaticality is caused by another morphosyntactic feature failing to be identical: case requirements.

5.1.2 Requirement 2: Case-Matching

A verb's case requirement is designated in this thesis as the case a verb assigns to its argument. In Turkish, each verb comes with a specific case marker for its objects. This is relevant for [VV] converbs because both of the verbs in [VV] converbs must require the same case from their arguments. [VV] converbs which are composed of identical verbs satisfy this requirement by default. [VV] converbs which are composed of non-identical verbs may result in ungrammatical constructs if the verbs have different case marking requirements for their arguments. The examples in (12) and (13) demonstrate that [VV] converbs with non-identical verbs are grammatical when they require their daughters to be of the same case-marking type. The verbs of the converb in (12)c require their objects to be marked by the same case marker, namely accusative case as shown in (12)a and (12)b. The daughters of the converb seen in (13)c call for an oblique object marked by a dative case marker, as shown in (13)a and (13)b. Since these verbs in (12)a-b and (13)a-b assign the same case to their objects, the converb they form is acceptable.

- (12) a. Kadın, çocuğ-u sev-di.
 woman-NOM child-ACC love-PAST
 “The woman loved the child.”
- b. Kadın, çocuğ-u okşa-dı.
 woman-NOM child-ACC pat-PAST
 “The woman patted the child.”
- c. “...onu *sev-ip okşa-yıp* öyle ayrıl-mış-lar.”
 3rd S PRO-ACC love-CNJ pat-CNJ like leave-EV/PF-3rd PL
 “By patting her/him tenderly they left.”
 (<http://arsiv.sabah.com.tr/1997/06/24/r00.html>)

- (13) a. Kadın, çocuğ-a kız-dı.

woman-NOM child-DAT get angry-PAST
“The woman got angry at the child.”

b. Kadın çocuğ-a bağırdı.
woman-NOM child-DAT shout-PAST
“The woman shouted at the child.”

c. “Sonra kendim-e kız-a bağır-a yatağ-ım-a yat-ıyor-um.”
after myself-DAT get angry-OPT shout-OPT bed-1st S-DAT lie down-
PROG-1st s
“Then I lie down in my bed by getting angry and screaming myself.”
(http://forum.donanimhaber.com/m_23352220/mpage_0/tm.htm)

The unacceptability of the following examples (14) demonstrates that the verbs involved in [VV] converbs must have the same case requirements. The hypothetical [VV] converbs given in (14)c and (14)d result in ungrammaticality because although the two verbs of the [VV] converb are transitive, they mark their objects with different case markers respectively dative -(y)A and accusative -(y)I as indicated in (14)a-b.

- (14) a. Kadın adam-a kız-dı.
woman man-DAT get angry-PAST
“The woman got angry at the man.”
- b. Kadın adam-i sev-di.
woman man-ACC love-PAST
“The woman liked the man.”
- c. **Kız-ıp sev-ip yan-ım-da kal!*
get angry-CNJ love-CNJ side-1st S POSS-LOC stay-2nd S IMP
Intended interpretation: “Stay with me although you both love me and get angry at me!”
- d. **Sev-ip kız-ıp yan-ım-da kal!*
love-OPT get angry-OPT side-1st S POSS-LOC stay-2nd IMP
Intended interpretation: “Stay with me although you both love me and get angry at me!”

The unacceptability of the hypothetical [VV] converbs in (14)c and (14)d shows that the verbs involved in [VV] converbs not only have to share the same argument structure but their arguments also have to be marked by the same case marker. However, these two requirements

are not enough. Next section discusses another requirement of the verbs with a [VV] converb has to abide by.

5.1.3 Requirement 3: Theta-Role Matching

As established above, the two verbs of a [VV] converb must have identical argument structures and identical case-requirements. However, having these two morphosyntactic features is still not enough for [VV] converbs as shown in examples (15)a-d. Both of the verbs in the [VV] converbs of (15)c and (15)d are categorized under transitive verbs (Ketrez, 1999) and they assign accusative case to their objects. The problem stems from the fact that their subjects have different thematic roles: the subject of *gör-* ‘see’ is an experiencer, whereas the subject of *kır-* ‘break’ is an agent. Theta roles are defined as the semantic relationship between an argument and its verb (Carnie, 2007 p. 219). The difference between the experiencer and the agentive roles is that the agent is an initiator/doer of an action, whereas the experience is the feeler/perceiver of an event.

- (15) a. Ben vazo-yu gör-dü-m.
1st S PRO vaze-ACC see-PAST-1st S
“I saw the vase.”
- b. Ben vazo-yu kır-dı-m.
1st S PRO vaze-ACC break-PAST-1st S
“I broke the vase.”
- c. **Gör-e kır-a mahvet-ti odayı.*
see-OPT break-OPT ruin-PAST room-ACC
Intended interpretation : “He/she destroyed the room by knowingly breaking.”
- d. * *Kır-a gör-e mahvet-ti oda-yı.*
break-OPT see-OPT ruin-PAST room-ACC
Intended interpretation : “ “He/she destroyed the room by knowingly breaking.”

Since the semantic relationship between *gör-* ‘see’ and its subject and *kır-* ‘break’ and its subject is different, [VV] converbs constructed with these verbs are ungrammatical.

Therefore, this study claims that not only the verbs of a [VV] converb must have identical

argument structures and identical case-requirements but also their arguments must have identical theta roles. All these requirements provide further evidence for the status of these structures as being reduplications in Inkelas' (2005, 2008, 2014) and Inkelas & Zoll's (2000, 2005) terms. Even more evidence is found for their reduplicative status in the next section, where the obligatory identity of verbal inflections on the verbs of [VV] converbs is discussed.

5.1.4 Identical Inflection Markers

As discussed in Chapter 4, the daughters of [VV] converbs have to bear identical inflections. The constituents of [VV] converbs with identical verbs in (16, 18 & 20) and non-identical verbs in (17, 19 & 21) call for the same converbial marker, either the imperative, the optative or the conjunctive.

- (16) a. “Harika bir kitap-tı. *Oku oku* bırak-a-ma-dı-m.”
perfect one book-P.COP read.IMP read.IMP leave-POSS-NEG-PAST-1st S
“It was a perfect book. I could not stop (it) no matter how much I read (it)”
(<https://www.mobidik.com/e-kitap/343/whatsappteki-tanimadigim-kiz>)
- b. “Daha sonra *yalpala-ya yalpala-ya* oradan uzak-laş-ıyor.”
much later wobble-OPT wobble-OPT there-ABL far-VERB-PROG
“Then, he/she walks away wobbling.”
(<http://www.59saniye.com/arabanin-lastigini-patlatmak-isterken-lastigin-kafayi-gozu-dagitmasi/>)
- c. “Köpek-ler-i *elle-yip elle-yip* yan-ım-a gel-me valla dokun-ma-m!”
dog-PL-ACC touch-CNJ touch-CNJ side-POSS-DAT come-NEG honestly
touch-NEG-1stS
“Do not come near me after toching the dogs, and frankly if you do, I won’t touch you.”
(<http://www.heygirl.com.tr/forum/viewtopic.php?f=24&t=38223&start=370>)
- (17) a. “...*uydur kaydır* yemek hazırlı-yor-lar.”
make up.IMP slide.IMP dinner prepare-PROG-3rd PL
“They are preparing dinner carelessly.”
(<https://www.nurturia.com.tr/questions/36129ba3-1adb-4b5c-a0db-a26c00cc8dd2/1/4-yas-sosyallesme-destekleyici-oyunlar>)
- b. “...ufacık motor-da yolcu in-dir-e bin-dir-e yol-a devam ed-iyor-uz.”

small-DIM motor-LOC passanger get out-CAUS-OPT get on-CAUS-OPT
road-DAT continue do-PROG-1stPL

“In a small boat we continue our way while other passengers come and go.”

(<http://asyaguncesi.tumblr.com/post/73538559348/hos-geldin-ya-ucurtma-festivali-asya-gunceleri-ii>)

c. Bütün gün *uğraş-ıp didin-ip* 100 puan toplu-yor-um.”

whole day strive-CNJ moil-CNJ hundred point collect-PROG-1st S

“I work really hard all day to gain 100 points.”

(<http://forums.tr.leagueoflegends.com/board/showthread.php?t=9940>)

The [VV] converbs in the sentences above are composed of daughters with the same inflections. In the examples (16)a and (17)a the converbs are composed with the imperative marker {-Ø}, (16)b and (17)b are composed with optative suffix -(y)A, and (16)c and (17)c are composed with conjunctive suffix -(y)Ip.

The acceptable sentences (16) and (17) are provided again in (18) and (19). The [VV] converbs in (18) and (19) are not acceptable because they do not have identical inflections. The examples below test out every possible combination of the imperative suffix {-Ø}, the optative suffix -(y)A and the conjunctive suffix -(y)Ip but none of them produce grammatical outcomes.

- (18) a. **Oku oku-ya bırak-a-ma-dı-m.*
read.IMP read-OPT leave-POSS-NEG-PAST-1st S
Intended interpretation: “I could not stop (it) no matter how much I read (it)”
- b. **Daha sonra yalpala-ya yalpala* oradan uzak-laş-ıyor.
much later wobble-OPT wobble.IMP there-ABL far-VERB-PROG
Intended interpretation: “Then, he/she walks away wobbling.”
- c. **Köpek-ler-i elle-yip elle* yan-ım-a gel-me valla dokun-ma-m!
dog-PL-ACC touch-CNJ touch.IMP side-POSS-DAT come-NEG honestly touch-NEG-1stS
Intended interpretation: “Do not come near me after toching the dogs, and frankly if you do, I won’t touch you.”
- (19) a. **uydur kaydır-ıp* yemek hazırlı-yor-lar.
make up.IMP slide-CNJ dinner prepare-PROG-3rd PL
Intended interpretation: “They are preparing dinner carelessly.”
- b. **ufacık motor-da yolcu in-dir-e bin-dir-ip* yol-a devam ed-iyor-uz.

small-DIM motor-LOC passanger get out-CAUS-OPT get on-CAUS-CNJ
road-DAT continue do-PROG-1stPL
Intended interpretation: “In a small boat we continue our way while other
passengers come and go.”

- c. *Bütün gün uğraş-ıp didin-e 100 puan toplu-yor-um.
whole day strive-CNJ moil-OPT hundred point collect-PROG-1st S
Intended interpretation: “I work really hard all day to gain 100 points.”

Recall that reduplications were defined as two constituent constructions with its constituents’ having identical morphosyntactic features and with their being semantically related. Above Turkish [VV] converbs were demonstrated as having constituents with identical morphosyntactic features. In other words, the two daughters of [VV] converbs have identical types of argument structure, identical case requirements and identical converbial markers as illustrated above. Next, the relationship between the daughters of Turkish [VV] converbs is analyzed in terms of their semantic relationship to one another.

5.1.5 Different Categories of [VV] Converbs

Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) claim that the constituents of all reduplications have some sort of a semantic kinship. The types of semantic kinship, relevant for Turkish [VV] converbs can be grouped as semantically synonym and semantically identical. The semantic kinship between the constituents of [VV] converbs will be examined below.

5.1.5.1 Semantically Synonym

According to Inkelas (2014), synonym reduplication entails constructs with two roots, stems or words which are synonymous, antonymous or semantically related (p. 5). The examples of Turkish [VV] converbs whose constituents are synonymous, antonymous and semantically related are provided in (20-22). The [VV] converb in (20) is composed of verbs which are

considered near-synonyms, whereas in (21) it is composed of verbs which are antonyms. In addition, (22) provides an example of semantically-related verbs composing a [VV] converb.

- (20) Kamer Genç'i *it-e kak-a* uzak-laş-tır-dı-lar.
Kamer Genç-ACC push-OPT give a push-OPT far away-DER-CAUS-PAST-3rd PL
"They made Kamer Genç go away by force."
(<http://www.hurriyet.com.tr/gundem/19210506.asp>)
- (21) "...Bu yüzden *gel-ip gid-ip* dua ed-iyor-uz diye konuş-tu."
that reason come-CNJ go-CNJ pray do-PROG-1st PL saying talk-PAST
"He said that this is why we are forever grateful."
(<http://www.medyafaresi.com/haber/93551/yasam-21-aralik-icin-bos-mezarin-basina-gelip-dua-ediyorlar.html>)
- (22) "Wikipedia *dal-lan-dır-a budak-lan-dır-a* anla-t-mış."
wikipedia branch-VERB-CAUS-OPT snag-VERB-CAUS-OPT understand-CAUS-EVID
"Wikipedia has explained this in great detail."
(<http://www.motosiklet.net/forum/archive/index.php/t-53882.html>)

The [VV] converb in (20) is a product of verbs which share almost the same lexical meaning so they can be considered near-synonymous. In fact, there is no example of synonym reduplications composed of two synonymous Turkish verbs in Inkelas' terms. Inkelas defines a word's synonym as a borrowed word with the same meaning. For example, Turkish *kara* 'black' and *siyah* 'black' are such examples where the latter is borrowed from Persian. Turkish does not have any synonymous verbs according to this definition because Turkish does not borrow verbs from other languages directly to use as verbs, but what Turkish does is nominalizes the verbs it borrows and uses them with auxiliary verbs as mentioned by Haig. An example for this would be how *poke* has been borrowed into Turkish with the auxiliary verb as in *poke et-* 'to poke someone'. On the other hand, there are numerous examples of [VV] converbs which are composed of near-synonymous verbs in Turkish such as *ölç biç* 'calculate.IMP estimate.IMP > calculating thoroughly', *dövüş-e çekiş-e* 'fight-OPT quarrel-OPT > fighting heatedly', *gez-ip dolaş-ip* 'wander around-CNJ tour-CJN > wandering around and around' etc.

The [VV] converb structure in (21) is composed of two antonymous verbs, *gel-* ‘to come’ and *git-* ‘to go’. This type of structures are very common in Turkish such as *yat kalk* ‘lie down.IMP get up.IMP > all the time’, *bat-a çık-a* ‘sink-OPT get out-OPT > continuously sinking and rising’, *al-ip ver-ip* ‘take-CNJ give-CNJ > continuously taking and giving’.

Moreover, as seen in example (22) [VV] converbs in Turkish can be constructed by two verbs which have a close semantic relationship. Such examples are also commonly attested such as *yaz çiz* ‘write.IMP draw.IMP > writing thoroughly’, *gül-e oyna-ya* ‘smile-OPT play-OPT > happily’, *kır-ıp dök-üp* ‘break-CNJ pour-CNJ > destroying’.

5.1.5.2 Semantically Identical

Other than reduplications with semantically kin constituents, there are reduplications with semantically identical constituents. According to Inkelas & Zoll (2005) and Inkelas (2014), semantically identical reduplications can be achieved by two processes: total reduplication and echo-reduplication. Below each process is explained respectively.

As discussed in Chapter 2, total reduplications are constructions that include two of the same root, stem or word without any phonological modifications to either. These are abundant in Turkish as the examples of [VV] converbs were given in Chapter 4. Some examples of total reduplication are provided in (23-25). As seen in these examples the verb stem can be doubled regardless of its phonological size. In other words, both a phonologically short word such as *git-* ‘go’ (one syllable) and a long word such as *değiştir-* ‘change’ (three syllables).

- (23) “Yarım saatlik yol *git git* bitmiyor şekerim!”
 half an hour hour road go.IMP go.IMP finish-NEG-PROG sugar-POSS
 “No matter how much you go, this road, which should only take half an hour, does not end, sweetie!”
http://blog.milliyet.com.tr/Yarim_saatlik_yol_git_git_bitmiyor_sekerim_/Blog/?BlogNo=273084

- (24) “Gezi’den sonra kaç-tı, para için *koş-a koş-a* geri gel-di.”

Gezi-ABL after run away-PAST money for run-OPT run-OPT back come-PAST

“She disappeared after Gezi (protests) but then she came back running in order to make money.”

(<http://www.yeniakit.com.tr/haber/geziden-sonra-kacti-para-icin-kosa-kosa-geldi-22004.html>)

- (25) “Bun-un reng-i-n-i *değiş-tir-ip değiş-tir-ip* piyasa-ya sür-üyor-lar.”
this-GEN color-3rd S POSS-ACC change-CAUS-CNJ change-CAUS-CNJ
market-DAT spread-PROG-3rdPL
“They change its colors and put it on the market again and again.”
(<http://lalalandskyscraper.tumblr.com/post/43147389269/brkyrr-bununda-rengini-degistirip-degistirip>)

Another type of semantically identical reduplication in the case of Turkish [VV] converbs is ‘echo’-reduplication. ‘Echo’-reduplications are constructs in which a word is reduplicated with minimal phonological change (e.g. replacement of the onset). The examples of Turkish ‘echo’ reduplications as [VV] converbs are provided in (26-27). The designated prefix for ‘echo’-reduplication in Turkish is [m]; however, [p] can be used as prefixes for ‘echo’-reduplication even if it is rare.

- (26) a. “...*paylaş maylaş* takip-çi yap bana...”
share.IMP IMI.IMP pursuer make.IMP to me
“Make her/him a follower of mine by sharing or doing something alike!”
(<https://twitter.com/CikolataKI>)
- b. “...*delir-e melir-e* geç-iyor gün-ler...”
get crazy-OPT IMI-OPT pass-PROG day-PL
“Days are passing while I am going crazy.”
(<http://www.kadinlarkulubu.com/showthread.php?t=310440&page=143>)
- c. “Barış-ma-m ben öyle *öpüş-üp möpüş-üp*”
reconcile-NEG-AOR I such kiss-RECIP-CNJ IMI-RECIP-CNJ
“I will not reconcile with him/her by kissing and such”
(<http://forum.memurlar.net/konu/239489/8.sayfa>)
- (27) “*Süslen-ip püslen-ip* gez-e-me-m ben!”
smarten up-CNJ IMI-CNJ wander around-POSS-NEG-1st SING 1st SING PRO
“I do not get all made up to go gallivanting about”
(<http://ask.fm/HasretBilginn/answer/107653722105>)

In conclusion, the only way to form [VV] converbs is to use two semantically kin verbs with identical morphosyntactic features in line with Inkelas & Zoll's (2005) and Inkelas' (2005, 2008, 2014) reduplication definitions. Therefore, [VV] converbs are, in fact, reduplications. This conclusion is analogous to previous work mentioned in Chapter 3.1 such as (Ergin, 1971; Hatiboğlu, 1981 etc.).

5.2 [VV] Converbs as Compounds

Turkish [VV] converbs in the focus of this study are not ordinary reduplications as the previous literature has made them out to be. [VV] converbs distinguish themselves apart from the rest of the reduplications in Turkish. [VV] converbs not only satisfy the definition of reduplications set forth by Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014), but also [VV] converbs comply with strict adjacency, which is not a necessity for reduplications but a necessity for compounding. Sure enough strict adjacency is the most reliable criterion for compounding as discussed in Chapter 2 and Chapter 3. There are numerous criteria researchers have come up with that do not hold up against scrutiny such as phonological, orthographical, semantic and morphological. These were presented and refuted in Chapter 2. In this section, syntactical criteria will be brought up because it appears to be highly reliable. To sum up, [VV] converbs will be established in this section as compounds by considering each of these criteria, namely, inseparability, disinclination for the coordination of parts and the inability of the constituents being modified individually.

When phonological, orthographical, semantic and morphological criteria are disregarded for compounds, [VV] converbs constructed by reduplication meet all of the rest of the criteria for compounds, all of which are syntactic criteria. This is not such a novel proposition. In the literature researchers have noticed that [VV] converbs act like compounds (e.g. Göksel, 2009). Göksel (2009) has acknowledged that [VV] converbs as in (28) are structurally similar to compounds. She points out two similarities: i) the constituents in [VV]

converbs cannot be separated by any material as in (29) and ii) it is usually hard to iterate these structures more than once as in (30). In (29)a the constituent that is separating the verbs of the [VV] converb is their object, in (29)b a question particle and in (29)c the adverbial clitic *da* ‘also’.

- (28) a. *bak-a bak-a* ‘look-OPT look-OPT > by/as a result of looking’
 b. *düş-e kalk-a* ‘fall down-OPT get up-OPT > falling down and getting up’
 c. *söyle söyle* ‘say.IMP say.IMP > however much one says [it]’
- (29) a. **Çocuk vitrin-ler-e bak-a vitrin-ler-e bak-a yürü-dü.*
 child-NOM show window-PL-DAT look at-OPT show window-PL-DAT
 look at-OPT walk-PAST
 Intended interpretation: “The child walked by looking at show windows.”
- b. **Çocuk-lar düş-e mı kalk-a büyü-r?*
 child-PL fall down-OPT question particle get up-OPT grow up-AOR
 Intended interpretation: “Do children grow up by falling down and getting up?”
- c. **Yol yürü de yürü bit-me-di.*
 road walk.IMP also walk.IMP end-NEG-PAST
 Intended interpretation: “The road was unending.”
- (30) a. ?*Vitrin-ler-e bak-a bak-a bak-a bak-a yürü-dü.*
 show window-PL-DAT look at-OPT look at-OPT look at-OPT look at-
 OPT walk-PAST
 Intended interpretation: “The child walked by looking a lot at show windows.”
- b. ?*Çocuk-lar düş-e kalk-a düş-e kalk-a büyür.*
 child-PL fall down-OPT child-NOM get up-OPT grow up-AOR
 Intended interpretation: “Children grow up by falling down and getting up a lot.”
- c. ?*Yol yürü yürü yürü yürü bit-me-di.*
 way walk.IMP way walk.IMP end-NEG-PAST
 Intended interpretation: “The road was not ending ever.”

Although Göksel (2009) argues for the compoundhood of [VV] converbs; however, she does not bring that argument to conclusion since she claims that they are not ‘true’ compounds because of their stress properties. In the article, she indicates that reduplicated verbs such as *bak-a bak-a* and *düş-e kalk-a* (28)a and (28)b have compound stress whereas examples like *söyle söyle* (29)c have stress on both constituents. On the other hand, this thesis argues that stress as a diagnostic for compounding is not reliable because

of the reasons provided above. Instead, strict adjacency and coordination should be used to determine whether a structure is compound.

Göksel (2009) points out that the constituents in [VV] converbs cannot be separated by any material. This is called the ‘strict adjacency’ criterion of compounds in the literature as discussed in Chapter 2. Strict adjacency is encompassed under the inseparability criterion. Inseparability criterion claims that the constituents of a compound are inseparable; therefore, the parts are neither detachable from one and other (strict adjacency) nor modifiable individually. This criterion holds true for Turkish [VV] converbs. As seen in (31) and (32), Turkish [VV] converbs cannot be separated by any other constituent. In addition, these structures can only be modified as a whole, meaning that, an adverb/adverbial only cannot alter one of the verbs of a [VV] converb as in (34) and (35).

- (31) a. *Merdiven-ler-den [yukarı *in*] *çık* yorul-du-m.
stairs-PL-ABL up go down.IMP go up.IMP tire-PAST-1stS
Intended interpretation: I got tired going up and down the stairs
- b. *Merdiven-ler-den [aşağı *in*] *çık* yorul-du-m.
stairs-PL-ABL down go down.IMP go up.IMP tire-PAST-1stS
Intended interpretation: “I got tired going up and down the stairs.”
- (32) *Köy-ü [alev alev *yak-ıp*] *yık-ıp* geçtiler.
village-ACC flame flame burn-OPT demolish-OPT pass-PAST-3rdPL
Intended interpretation: “They burnt down the village and tore down the buildings while they were passing through.”

In (31)a the adverb *yukarı* ‘up’ modifies *çık*- ‘go up’ but it cannot modify *in*- ‘go down’ because they are semantically incompatible and in (31)b the adverb *aşağı* ‘down’ modifies *çık*- ‘go up’ but it cannot modify *in*- ‘go down’ because they are semantically incompatible. Since this adverb can only modify one of the verbs of a [VV] converb, examples in (31) are ungrammatical. The example in (32) is ungrammatical for the same reason, although this time the adverb modifies the first verb of the [VV] converb.

So far it was established that [VV] converbs meet the first syntactic criterion which is strict adjacency. The other syntactic criterion which has to be satisfied is disinclination for coordinating the parts which implies that the parts of [VV] converbs cannot be coordinated by any conjunctive (e.g. *ve* ‘and’) as in (33-35).²¹

- (33) a. **Dön ve gez dolaş İstanbul’u iki gün-de tanı-dı-k.*
 turn.IMP and tour.IMP wander around.IMP İstanbul-ACC know-PAST-1st PL
 Intended interpretation: “By traveling all around Istanbul, we got to know the city in two days.”
- b. *Dön dolaş İstanbul’u iki gün-de tanı-dı-k.*
 turn.IMP tour.IMP wander around.IMP İstanbul-ACC know-PAST-1st PL
 “By traveling all around Istanbul, we got to know the city in two days.”
- c. *Gez dolaş İstanbul’u iki gün-de tanı-dı-k.*
 tour.IMP wander around.IMP İstanbul-ACC know-PAST-1st PL
 “By traveling all around Istanbul, we got to know the city in two days.”
- (34) a. **Kıvrıl-a ve eğil-e bükül-e demir-ler şekil-len-dir-il-di.*
 curl-OPT and warp-OPT twirl-OPT iron-PL form-VERB-CAUS-PASS-PAST
 Intended interpretation: “Iron was given its shape by curling, warping and twirling.”
- b. *Kıvrıl-a bükül-e demir şekil-len-dir-il-di.*
 curl-OPT twirl-OPT iron-PL form-VERB-CAUS-PASS-PAST
 “Iron was given its shape by curling and twirling.”
- c. *Eğil-e bükül-e demir şekil-len-dir-il-di.*
 warp-OPT twirl-OPT iron-PL form-VERB-CAUS-PASS-PAST
 “Iron was given its shape by warping and twirling.”
- (35) a. **Çalış-ıp ve uğraş-ıp didin-ip müdür ol-du.*
 work-CNJ and struggle-CNJ toil-CNJ manager become-PAST
 Intended interpretation: “He became the manager by working, struggling and toiling.”
- b. *Çalış-ıp didin-ip müdür ol-du.*
 work-CNJ toil-CNJ manager become-PAST
 “He became the manager by working and toiling.”
- c. *Uğraş-ıp didin-ip müdür ol-du.*
 struggle-CNJ toil-CNJ manager become-PAST
 “He became the manager by struggling and toiling.”

²¹ Whether reduplications also show this disinclination is not attested in the literature as far as the author of this study knows.

As seen in the example (33)a, the [VV] converbs in (33)b and (33)c cannot be coordinated although their second constituents are identical. The criterion disinclination of coordination holds true for (34)a and (35)a as well. Note that [VV] converbs are capable of being coordinated but only as a whole. In other words, even though parts of [VV] converbs cannot be coordinated, [VV] converbs as a whole can be coordinated with other [VV] converbs or with other adverbs as seen in the examples in (36, 37a & 38) and (37)b respectively.

- (36) “*Oku oku çalış çalış bit-mi-yor.*”
 read.IMP read.IMP work.IMP work.IMP end-NEG-PROG
 “I read and study but my work is never done”
 (http://www.drtus.com/yeni/m/anasayfa.php?sayfa=forumlar&islem=konuoku&cat_id=1&forum_id=163&topic_id=66749)
- (37) a. “*Her gün gül-e oyna-ya ve koş-a koş-a okul-a gid-il-ir-di.*”
 every day laugh-OPT play-OPT and run-OPT run-OPT go-PASS-AOR-PAST
 “We used to go to school happily and in a hurry everyday.”
 (http://www.drtus.com/yeni/m/anasayfa.php?sayfa=forumlar&islem=konuoku&cat_id=1&forum_id=163&topic_id=66749)
- b. *Gül-e oyna-ya ve mutlu büyü-sün kız-ın!*
 laugh-OPT play-OPT and happily grow-3rdS girl-POSS
 “I hope your daughter grows up in a happy manner.”
 (<http://blogcuanne.com/2010/04/06/zeynep-ve-selenin-hikayesi-2/>)
- (38) Hem *ağla-yıp zırla-yıp* hem *bağır-ıp çağır-ıp* üst-e çık-ma-ya çalış-tı.
 both cry-CNJ blubber-CNJ and shout-CNJ call-CNJ above-DAT go up-NOM-DAT work-PAST
 “He/she tried to come on to by crying and yelling.”
 (https://twitter.com/aras_defne/statuses/484435578428354560)

To conclude, [VV] converbs in Turkish are not only reduplications but they are also compounds since they abide by the criteria of compounds. Therefore, it can be inferred that in Turkish, reduplication may be used as a process to create compounds. Other than [VV] converbs, there are [NN]_N reduplications that are also considered to be compounds. Examples of nominal reduplications considered to be compounds are given in (39)a-c (taken from Baturay, 2010) and (39)d-e (taken from Göksel, 2009).

- (39) a. *takır takır* > ‘rattling’
 b. *parıl parıl* > ‘shiningly’
 c. *çıtır çıtır* > ‘crispy’
 d. *sabah sabah* > ‘in the early morning’
 e. *kapı kapı* > ‘door to door’

On the other hand, it is important to point out that not all reduplications are compounds in Turkish. The examples in (40-46) indicate that there are other types of reduplications do not create compounds in Turkish. Examples (40) include syntactic iterations composed of verbs which allow other items to intervene its constituents. The conjunction *de* ‘also’ in (40)a, *bir ... bir* ‘a lot (lit. one)’ in (40)b and the adverb *çok* ‘a lot’ in (40)c can intervene between the daughters of the reduplication. Analogously, the non-local doubling examples in (41) allow for their constituents to be separated (see Göksel & Kabak, 2013 for more information on non-local doubling). On the other hand, the repeated structures in (42) are examples of syntactic iterations in which a whole sentence is doubled for the function of reassurance. Moreover, there are also nominal reduplications that are not compounds. Examples for this are provided in (39). In these examples the reduplications are demonstrated as separable proving that they are in fact not compounds.

- (40) a. “Parlak renk-ler-e *bak-tı* da *bak-tı*.”
 brilliant color-PL-DAT look at-PAST also look at-PAST
 “He kept looking at the bright colors.”
 (<http://annecafe.blogspot.com.tr/2010/02/askla-yasamak.html>)
- b. “Bir *çalış-tı-k* bir *çalış-tı-k* acayip yorul-du-k.”
 one work-PAST-1st PL one work-PAST-1st PL extremely get tired-PAST-1st PL
 “We got really tired because we worked so much.”
 (<http://www.emresururi.com/blogs/hande/?msg=5501>)
- c. “Çok *çalış-tı-m* çok *çalış-tı-m* artık kpss’den 78 gel-ince bırak-tı-m çalış-ma-yı da.”
 a lot study-PAST-1st S a lot study-PAST-1st S now KPSS (a national test) 78 come-CON leave-PAST-1st S study-NOM-ACC also
 “I stopped studying after I got 78 from KPSS (a nationwide test) even though I really studying hard for it.”
 (<http://forum.memurlar.net/konu/1249780/16.sayfa>)

- (41) a. *Ali köy-e gid-ecek Ali.*
 Ali village-DAT go-FUT Ali
 “Ali will go to the village.”
 (adapted from Göksel & Kabak, 2013: p. 3)
- b. *Semra-ya hediye-yi dün gönder-d-im hediye-yi.*
 Semra-DAT present-ACC yesterday send-PAST-1st S present-ACC
 “I sent the present to Semra YESTERDAY.”
 (taken from Göksel & Kabak, 2013:4)
- (42) a. “Ben-im ol-acak fıstık bin-eceğ-im üstü-n-e vur-acağ-ım kırbac-ı vur-acağ-ım kırbac-ı.”
 1st S PRO-GEN ride-FUT fıstık (name of a donkey) ride-FUT-1st S above-DAT beat-FUT-1st S whip-ACC beat-FUT-1st S whip-ACC
 “Fıstık is going to be mine. I am going to ride it, I am going to whip it, I am going to whip it.”
 (a line from Turkish movie *Sezercik Öksüzler*)
- b. “*Her şey güzel ol-acak, her şey güzel ol-acak.*”
 every thing beautiful become-FUT every thing beautiful become-FUT
 “Everything will be beautiful, everything will be difficult.”
 (turkfanfiction.net/arsiv/viewstory.php?action=printable&textsize=0&sid=1705&chapter=all)
- (43) a. “*Çalışkan mı çalışkan bir grubum var-dı.*”
 hard working QP hardworking one group-1st S existent-PAST
 “I had a hard-working study group.”
 (<http://www.drtus.com/yeni/modules.php?name=Forums&file=viewtopic&t=95274&start=75>)
- b. “*Bence güzel de güzel bir dizi.*”
 to me beautiful also beautiful a TV series
 “I also think that it is a great tv show.”
 (<http://www.dizideizlehd.com/ask-emek-ister-1-bolum-izle.html>)

In this section, [VV] converbs were to put to the test to see if they abide by the criteria of compounds and it has been observed that [VV] converbs upheld the syntactic criteria of compounds. Also, other examples of reduplications, which constitute compounds, were provided (42). Moreover, it has been established that not all reduplications constitute compounds (43-46). However, there are some reduplications that uphold the criteria of inseparability (strict adjacency and inability to modify parts) and resistance to coordination of

the parts. The Turkish [VV] converbs are these kind of reduplications i.e. the ones that uphold the criteria of compounds.

5.3 [VV] Converbs as Co-Compounds

In section 5.1, [VV] converbs in Turkish are analyzed as reduplications based on Inkelas' (2005, 2008, 2013) and Inkelas & Zoll's (2000, 2005) definition. The daughters of Turkish [VV] converbs have identical morphosyntactic features as well as close semantic relationship, thus, they have the properties of reduplications. In section 5.2, it has been claimed that [VV] converbs are compounds, whereas other verbal reduplications (e.g. syntactic iterations which are not [VV] converbs) are not. This fact illustrates that some reduplications in Turkish are compounds but not all reduplications are compounds by default. In this section, it will be demonstrated that any compound created by reduplication is a co-compound by definition. Therefore, Turkish [VV] converbs will be claimed to be co-compounds.

As mentioned in Chapter 2, co-compound is a term used for a subtype of compounds. Therefore, co-compounds inherit the properties of compounds such as strict adjacency. More specifically, co-compounds are both double headed compounds and additive compounds. In other words, co-compounds are compounds that have two formal heads and their semantic meaning encompasses both of its constituents. These two properties of co-compounds can be used as criteria for co-compounds.

Co-compounds, having two formal heads is supported by two pieces of evidence. First, according to Scalise and Fabregas (2010), only the formal head takes on the inflectional markers. Since both of the constituents in [VV] converbs are required to take the converbial markers, it can be assumed that these constructions have two formal heads. This requirement is illustrated in (44). Second, Kiparsky (2009) argues that constituents of single headed [VV] constructions do not have to have identical morphosyntactic features, whereas constituents of double headed [VV] constructions do. The fact that [VV] converbs have identical

morphosyntactic features requirement (as illustrated in section 5.1.1) provides evidence for their being double-headed.

- (44) a. **oku oku-ya* adam ol-du.
 read read-OPT man become-PAST
 Intended interpretation: “He became a proper man by reading a lot.”
- b. **oku-ya oku* adam ol-du.
 read-OPT read man become-PAST
 Intended interpretation: “He became a proper man by reading a lot.”
- c. **oku oku-yup* adam ol-du.
 read read-CNJ man become-PAST
 Intended interpretation: “He became a proper man by reading a lot.”
- d. **oku-yup oku* adam ol-du.
 read-CNJ read man become-PAST
 Intended interpretation: “He became a proper man by reading a lot.”

The semantic criteria for co-compounds have two dimensions: i) the semantic relationship between the parts and ii) the semantic relationship between the parts and the whole.

Regarding the first dimension, the parts in a co-compound have to exhibit Natural Coordination. As explained in Chapter 2, Natural Coordination is “coordination of items which are expected to co-occur” (Wälchli, 2005 p. 5). In other words, the constituents have to express semantically close relationships. Wälchli (2005) does not dwell on the kinds of semantic relationship between the constituents but he focuses on the semantic relationship between the parts and the whole (i.e the second dimension) which we go into below. Natural Coordination is reminiscent of the semantic requirement of reduplications. As mentioned in Chapter 2 and also in section 5.1, reduplications have two daughters which are semantically related (Inkelas, 2014). Inkelas & Zoll (2005) and Inkelas (2014) has gone a step further than just saying that they have to be semantically related and categorized the reduplications accordingly (e.g synonym reduplication). This overlap in the definition of reduplications and co-compounds provide the first piece of evidence for the status of [VV] converbs as reduplications and co-compounds.

The semantic relationship between the parts and the whole is the second dimension of the semantic criterion proposed for co-compounds. Following Wälchli (2005) and Arcodia et al. (2010), the meaning of the whole in co-compounds is expected to express a superordinate concept in relation to its parts. In other words, the whole refers to a more general concept than its parts. When verbs are reduplicated to form [VV] converbs, their meaning is intensified. In other words, [VV] converbs denote a meaning of continuity and/or repetitiveness (see Chapter 6). This new meaning is not based on the individual meanings of the verbs but is a result of being reduplications.

The second dimension of the semantic criterion of co-compounds has been explored further by Wälchli (2005) as discussed in Chapter 2. Wälchli (2005) divides co-compounds into ten major semantic types based on the semantic relationship between the parts and the whole: additive, generalizing, collective, synonymic, ornamental, imitative, figurative, alternative, approximate and scalar. In alternative and approximate co-compounds, the meaning of the whole is ‘one part or the other’ as in Mordvin co-compound *vest’-kavkst’* ‘once + twice > once or twice’. Examples of these kinds of co-compounds are not attested in Turkish. In the literature on Turkish, I have only come across double-headed constructions (which is a defining characteristic of co-compounds as discussed in Chapter 2) in which the meaning of the whole encompasses the meaning of the parts but she has not come across with any double-headed constructions in which the meaning of the part is one or another. Another category of co-compounds not attested in Turkish is scalar co-compounds. In scalar co-compounds, the meaning of the whole is designated as the categorical name for the abstract range the parts represent. By definition, these co-compounds have to be nouns because they are categorical names. Hence, there is no instance of scalar co-compounds among Turkish [VV] converbs, which are adverbs. Based on the classification of Wälchli (2005, p. 138),

examples for the semantic types of co-compounds relevant to Turkish [VV] converbs are given in Table 2.

Table 2: The various semantic types of [VV]_{ADV} co-compounds in Turkish (based on the classification of Wälchli (2005:138))

Semantic type	[V.IMP V.IMP] _{ADV}	[V-(y)A V-(y)A] _{ADV}	[V-(y)Ip V-(y)Ip] _{ADV}
Additive co-compound	<i>ye iç</i> 'eat.IMP drink.IMP > eating and drinking'	<i>ağla-ya inle-ye</i> 'cry-OPT moan- OPT > crying and moaning'	<i>sat-ıp sav-ıp</i> 'sell-CNJ dispose- CNJ > selling and disposing (stuff)'
Generalizing co-compound	<i>yat kalk</i> 'lie down.IMP get up.IMP > every day'	<i>in-e çık-a</i> 'go up-OPT go down-OPT > go up and down continuously'	<i>gid-ıp gel-ıp</i> 'go-CNJ come-CNJ > all the time'
Collective co-compound	<i>sil süpür</i> 'wipe.IMP sweep.IMP > cleaning'	<i>öksür-e tıksır-a</i> 'cough-OPT sneeze- OPT > being sick'	<i>kır-ıp dök-üp</i> 'break-CNJ spill- CNJ > destroying'
Synonymic co-compound	<i>gez dolaş</i> 'tour.IMP wander around.IMP > traveling'	<i>derle-ye topla-ya</i> 'compile-OPT collect-OPT > collecting'	<i>eğ-ıp bük-üp</i> 'bend-CNJ curve- CNJ > bending'
Ornamental co-compound	<i>çal çırp</i> 'steal.IMP beat.IMP > stealing'	<i>kızır-a bozar-a</i> 'blush-OPT become red-OPT > blushing'	<i>dal-lan-ıp budak-la- n-ıp</i> 'branch-VERB- PASS-CNJ snag- VERB-PASS-CNJ > in detail'
Imitative co-compound	<i>sızlan mızlan</i> 'moan.IMP IMI.IMP > moaning'	<i>üfle-ye püfle-ye</i> 'blow-OPT IMI- OPT > blowing'	<i>pişir-ıp mişir-ıp</i> 'cook-CNJ IMI-CNJ > cooking'
Figurative co-compound	<i>çek çevir</i> 'pull.IMP turn.IMP > managing'	<i>ayıl-a bayıl-a</i> 'get awake-OPT faint-OPT > liking very much'	<i>alla-yıp pulla-yıp</i> 'make red-CNJ put stamps-CNJ > making prettier'

- In additive co-compounds, the meaning of the whole encompasses both of the individual meanings of the parts. Examples of Turkish [VV] converbs which are additive co-compounds are *ye iç* 'eating and drinking', *ağlaya inleye* 'crying and moaning' and *satıp savıp* 'selling and disposing (stuff)' provided in Table 2. The [VV] converb *ye iç* 'eating and drinking' has the connotation of eating and drinking. In other words, the agent has both eaten food and has

drunk. Analogously, the converb [VV] *ağlaya inleye* ‘crying and moaning’ has the connotation of crying and moaning. In other words, the agent is both crying and moaning but other actions (e.g. blowing one’s nose) related to crying are not encompassed under this [VV] converb. Along the same lines, the [VV] converb *satıp savıp* ‘selling and disposing (stuff)’ has the connotation of selling and disposing of items. In other words, the agent sells items to other people and disposes of items but does not do related actions such as bargaining while selling or donating items to charity.

- In generalizing co-compounds, the meaning of the whole broadens the meanings of the parts in terms of continuity, spatiality or iterativeness. Examples of Turkish [VV] converbs which are generalizing co-compounds are *yat kalk* ‘everyday’, *ine çıka* ‘go up and down continuously’ and *gidip gelip* ‘all the time’ provided in Table 2. If *yat kalk* ‘everyday’ were an additive co-compound, it would mean ‘going to bed and getting up’. However, the [VV] converb *yat kalk* ‘everyday’ has a connotation of continuity which makes the meaning of the converb ‘everytime you go to bed and get up’ which translates into ‘every day’. Therefore, the meaning of *yat kalk* ‘everyday’ ends up being all the time. Analogously, the [VV] converb *ine çıka* ‘go up and down continuously’ does not have the meaning of ‘going down and then going up once’ but it has the meaning of going down and up continuously. Along the same lines, the [VV] converb *gidip gelip* ‘all the time’ does not have the meaning of going and coming only once’ but it has the meaning of ‘everytime a person goes somewhere and then comes back’ which translates into ‘all the time’. This is due to the fact that it has a connotation of repetitiveness (see Chapter 6).
- In collective co-compounds, the meaning of the whole is derived from the parts to mean a comprehensive concept. Examples of Turkish [VV] converbs which are collective co-compounds are *sil süpür* ‘cleaning’, *öksüre tıksıra* ‘being sick’ and *kırıp döküp* ‘destroying’ provided in Table 2. If the [VV] converb *sil süpür* ‘cleaning’ were an additive co-compound, it would mean only ‘wiping and sweeping’. However, it actually means the whole action of ‘cleaning’ which can include wiping, sweeping, scrubbing, washing and tidying. Analogously, the [VV] converb *öksüre tıksıra* ‘being sick’ does not mean only ‘coughing and sneezing’ but it means ‘being’ sick which can include coughing, sneezing, blowing one’s nose, snuffling and weezing. Along the same lines, the [VV] converb *kırıp döküp* ‘destroying’ does not mean only ‘breaking and spilling’ but it means the whole action of ‘destroying’ which can include breaking, spilling, throwing, pounding and craching.
- In synonymic co-compounds, the meanings of the parts have to be identical or almost identical. Moreover, the whole constituent needs to be identical or almost identical to the meaning of the parts. Examples of Turkish [VV] converbs which are synonymic co-compounds are *gez dolaş* ‘travelling’, *derleye toplaya* ‘collecting’ and *eğilip bükülüp* ‘bending’ provided in Table 2. Of the [VV] converb *gez dolaş* ‘travelling’, *gez-* ‘to tour’, *dolaş-* ‘to wander around’ and *gez dolaş* ‘travelling’ are synonymous. Analogously, of the [VV] converb *derleye toplaya* ‘collecting’, *derle-ye* ‘compile-OPT’, *topla-ya* ‘collect-OPT’ and *derleye toplaya* ‘collecting’ are synonymous. Along the

same lines, of the [VV] converb *eğilip bükülüp* ‘bending’, *eğil-ip* ‘bend-CNJ’, *bükül-üp* ‘curve-CNJ’ and *eğilip bükülüp* ‘bending’ are synonymous. Note that Wälchli (2005)’s usage of the term synonymous and Inkelas (2014)’s usage of the term synoynonymous are quite different. Wälchli (2005) uses the term synonymous to mean identical or almost identical semantic relationship between two words. On the other hand, Inkelas (2014) uses the term ‘synonymous’ to refer to two words that have the exact meaning that exist within a language because one of them is borrowed from another language. Other than the difference they define the term synonymous, there is another difference between Wälchli’s synonymous co-compounds and Inkelas’s synonym reduplications. This difference is that the former is concerned with the relationship between the parts and the whole, whereas the latter is concerned with the relationship between the parts.

- In ornamental co-compounds, the meaning of the whole is determined by only one of the parts because the other part has become antiquated. Examples of Turkish [VV] converbs which are ornamental co-compounds are *çal çırp* ‘stealing’, *kızara bozara* ‘blushing’ and *dallanıp budaklanıp* ‘in detail’. In these examples, the second part in the [VV] converbs, which are *çırp-*, *bozar-* and *budaklan-* respectively, do not contribute to the meaning of the whole.
- In imitative co-compounds, a collective meaning is attained by only one of the constituents because the other one has no meaning and is a near phonological imitation of the first. Examples of Turkish [VV] converbs which are imitative co-compounds are *sızlan mızlan* ‘moaning’, *üflele püflele* ‘blowing’ and *pişirip mişirip* ‘cooking’ provided in Table 2. In these examples, the second constituents, namely *mızlan*, *püflele* and *mişirip*, are imitations of the first constituent with a slight phonological modification; therefore, do not have meanings by themselves. Notice that these are similar to the echo-reduplications of Inkelas (2014). However, a point to make here is that Inkelas is only concerned with the fact that two identical constituents come together where one has slight phonological modification. On the other hand, Wälchli (2005)’s concern is the relationship between the parts and the whole which in this case refers to the fact that a word and its imitation come together to have a collective meaning.
- In figurative co-compounds, the meaning of the whole does not denote the literal meaning of the parts because the whole has a figurative meaning. Examples of Turkish [VV] converbs which are figurative co-compounds are *çek çevir* ‘managing’, *ayıla bayıla* ‘liking very much’ and *allayıp pullayıp* ‘making prettier’ provided in Table 2. The [VV] converb *çek çevir* ‘managing’ has nothing to do with pulling or turning but it means ‘managing.’ Analogously, the [VV] converb *ayıla bayıla* ‘liking very much’ has nothing to do with waking up or fainting but it means ‘liking very much’. Along the same lines, the [VV] converb *allayıp pullayıp* ‘making prettier’ has nothing to do with making something red or putting stamps on something but it means ‘making something prettier’. Note that these semantic types can overlap in most cases.

To sum up, since co-compounds constitute a sub-type of compounds, they have to follow the syntactic criteria of compounds; moreover, semantic criteria for co-compounds correspond to properties of reduplications. In other words, a structure that has the properties of compounds and reduplications are inadvertently co-compounds.

5.4 Conclusion

In this Chapter, Turkish [VV] converbs were established as reduplications according to the definition of (Inkelas & Zoll, 2000, 2005; Inkelas, 2005, 2008, 2014) for the following reasons: (i) the constituents have identical morphosyntactic features and (ii) the constituents are semantically-related. This is not a novel idea and has been attested in the literature (Ergin, 1971; Hatiboğlu, 1981 *inter alia*). What is new in this study is that [VV] converbs have been claimed to be compounds. This is due to the fact that they abide by the most reliable criteria of compounding. These criteria are strict adjacency, disinclination of coordination and inability of the constituents being modified individually. Finally, this study goes a step further and claims that [VV] converbs are co-compounds by definition because they are compounds created via reduplication. Co-compounds are defined by Wälchli (2005 p. 1) as “word-like units consisting of two or more parts which express Natural Coordination”. Note that compounds are ‘word-like units consisting of two or more parts’ and the constituents of reduplications are semantically-related. Therefore, since [VV] converbs are reduplications and compounds, they are also co-compounds.

CHAPTER 6

[VV] CONVERBS AS ADVERBIAL CLAUSES

In the previous chapter, [VV] converbs were shown to possess qualities of reduplications and exhibit co-compound characteristics. In the current chapter, the focus is on what aspect of language is responsible for generating compounds. In the literature, phonology, morphology and syntax have been proposed to be responsible for creating reduplications and/or compounds. In this chapter, each component will be considered and syntax will be shown to be the only component that explains various characteristics of [VV] converbs.

6.1 Phonological Approach to [VV] Converbs

As previously mentioned, according to Haugen & Kennard (2011)'s analysis structures like *gel-e gel-e* “come-OPT come-OPT > coming” would be different from *gel-e gid-e* “come-OPT go-OPT > coming and going” because the former would be claimed to be created in phonology. Although phonological doubling can account for reduplications with identical constituents such as *gele gele* “come-OPT come-OPT > coming”, it fails to explain reduplications with non-identical constituents such as *gel-e gid-e* “come-OPT go-OPT > coming and going”. Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) argue that the distinction between reduplications with identical and non-identical constituents is unnecessarily fabricated because they behave analogously. The present study claims that this argument also applies to Turkish [VV] converbs. As shown in Chapter 5, Turkish [VV] converbs with and without identical constituents all have the following characteristics:

- [VV] converbs are adverbs
- Both constituents of a [VV] converb take identical converbial suffixes
- The constituents of a [VV] converb are adjacent
- The constituents of a [VV] converb cannot be individually modified
- [VV] converbs can take complements/arguments

Therefore, it is counterintuitive to argue that a subdivision between [VV] converbs with identical and non-identical constituents is generated in phonology given that there is no difference between [VV] converbs with identical and non-identical constituents.

6.2 Morphological Approach to [VV] Converbs

[VV] converbs in Turkish can be explained by two different views: morphological doubling theory and lexicalist theory. Following Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014) it could be argued that [VV] converbs both with identical and non-identical constituents are produced by bringing together two items, which have identical morphosyntactic features. Even though this view limits overgeneralizations, it does not explain all Turkish [VV] verb data.

On the other hand, following Halle (1973), it could be argued that [VV] converbs are generated by three components. In the first component, there is a list of morphemes. In the second component, morphemes come together according to word formation rules. The last component, the Filter, either accepts or rejects outcomes of the second component in which morphemes come together according to word formation rules. This view can also explain most Turkish [VV] converbs and limit overgeneralization by requiring a filter rule that states only morphemes with identical morphosyntactic features can come together.

Both of these theories explain the construction of Turkish [VV] converbs almost sufficiently and do not allow overgeneralization. However, as discussed in Chapter 4, these [VV] converbs in Turkish can take complements and/or adjuncts in sentences, hence generate adverbial clauses. In (1) below, there is an example of a [VV] verb which can take its own argument.

- (1) a. Kadın, çocuğ-u sev-di.
 woman-NOM child-ACC love-PAST
 “The woman loved the child.”
 b. Kadın, çocuğ-u okşa-dı.

woman-NOM child-ACC pat-PAST
“The woman patted the child.”

c. Kadın, çocuk-tan ayrıl-dı.
woman-NOM child-ABL leave-PAST
“The woman left the child.”

d. *Kadın, çocuğ-u ayrıl-dı.
woman-NOM child-ACC leave-PAST
Intended meaning: “The woman left the child.”

e. “...onu *sev-ip okşa-yıp* öyle ayrıl-mış-lar.”
3rd S PRO-ACC love-CNJ pat-CNJ like leave-EV/PF-3rd PL
“By patting her/him tenderly they left.”
(<http://arsiv.sabah.com.tr/1997/06/24/r00.html>)

In this example, *onu* ‘him/her’ is the direct object of the [VV] converb *sevip okşayıp* ‘love-CNJ path-CNJ > patting tenderly’. It is not possible for *onu* ‘him/her’ to be an object of *ayrıl-* ‘to leave’ because as can be seen from (1)c and (1)d the object of *ayrıl-* ‘to leave’ cannot take accusative case. On the other hand as can be seen from (1)b and (1)c the object of *sev-* ‘to love’ and *okşa* ‘to pat’ take objects marked by the accusative case. As shown in example (1)e, [VV] converbs can have their own complements which is not associated with the main verb. Similarly, [VV] converbs may have their own adjuncts not associated with the main verb as in (2). Example (2)d the adverb *hızlıca* ‘quickly’ modifies the [VV] converb and not the main verb. The main verb *yorul-* ‘get tired’ cannot even be modified by the adverb *hızlıca* ‘quickly’ as seen in (2)c. On the other hand, the verbs of the [VV] converb in (2)d can both be modified by the adverb *hızlıca* ‘quickly’ as seen in (2)a and (2)b.

- (2) a. Hızlıca çık-tı-m.
Quickly go up-PAST-1st S
“I went up quickly.”
- b. Hızlıca in-di-m.
quickly go down-PAST-1^s S
“I went down quickly.”
- c. ?Hızlıca yorul-du-m.
quickly get tired-PAST-1st S
“? I got tired quickly.”

- d. Hızlıca in çık yorul-du-m.
quickly go down. IMP go up. IMP get tired-PAST-1st S
“I got tired because I was kept going up and down in a quick fashion.”

The examples in (2) show that [VV] converbs are visible to syntax. If they were generated before syntax, we would expect them to behave like simplex adverbs and not to take complements and/or adjuncts. Therefore, we can conclude that they are not created in morphology. Although morphology can account for their formation to some extent, it cannot account for their syntactic behavior.

6.3 Syntactic Approach to [VV] Converbs

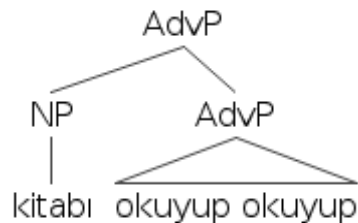
We established that these constructions cannot be formed before syntax. In this section, a phrase structure representation for [VV] converbs will be proposed. This structure will be an AdvP and will embed a VP. It will be an AdvP because [VV] converbs are adverbs. Moreover, these structures will include VPs not just Vs because as we stated above [VV] converbs can take complements and/or adjuncts. The phrase structure representation of this AdvP will be constructed bottom up and step-by-step so that all of its parts are accounted for.

6.3.1 Evidence for VP Layer

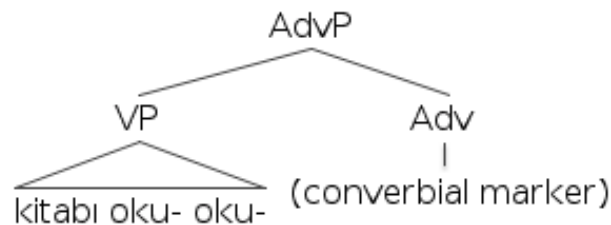
The fact that the verbs of [VV] converb constructions can take complements and/or adjuncts (as explained above with examples (1) and (2)) points to the need for a VP level. Without a VP-level, the only way for a [VV] converb to take a complement is by the adverb itself taking a complement as in (3). However, this representation is not acceptable because the object NP is only licensed in the complement position of the VP. Therefore, the only phrase structure representation that allows [VV] converbs to take complements is the one that has VP layer within the AdvP layer. A possible phrase structure representation that would allow such a case

is presented in (4). What is under the VP layer is discussed in the next section. Moreover, further evidence for the existence of the VP layer will be provided in section 5.3.3.

(3)



(4)



6.3.2 Evidence Against VP Coordination and AdvP Coordination

As previously stated, Turkish [VV] converbs have two daughters. In this section, how the relationship between the two daughters translates into phrase structure is investigated. At first glance, these [VV] converbs appear to be coordination structures. Before this assumption is tested, some details on coordination will be clarified.

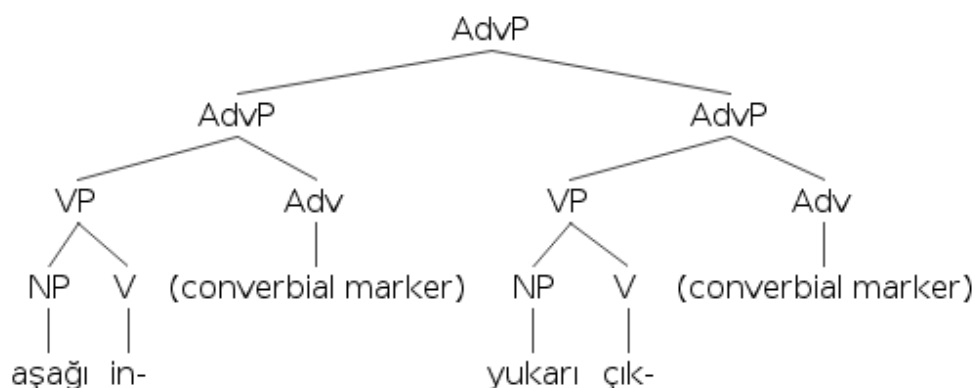
Within the coordination literature, there lies a conflict. Earlier studies argue for a flat structure with two or more coordinated phrases on the same hierarchical level (Ross, 1967; Jackendoff, 1977). In these flat structures, there are usually more than two branches connected to one node, namely one branch for each of the coordinated structures and a branch for the coordinator. On the other hand, later studies argue for a hierarchical structure with binary branching (Munn, 1993; Kayne, 1994; Johannessen, 1998). These hierarchical structures are analogous to other phrase structures. This idea of binary branching is a

fundamental property of various frameworks (Adger, 2003 p. 70 inter alia). In this thesis, the latter theories on coordination will be adopted.

Some possible phrase structure representations will be discussed. All these phrase structure representations attempt to explain how the two constituents of a [VV] converb structure come together. The first one is presented in (6). This one proposes that the verbs of a [VV] converb are adverbialized individually and then brought together. The representation in (6) is advantageous in that it indicates that two VPs are in the same hierarchical level. However, this structure allows for each verb to take its complement and/or adjunct (e.g. in (5)), which is not acceptable as demonstrated above when inseparability is discussed in Chapter 4 and Chapter 5.

- (5) *Aşağı *in-e* yukarı *çık-a* yorul-du-m.
below go down-OPT above go up-OPT get tired-PAST-1st S
Intended interpretation: “I got tired because of continuously going up and going down.”

(6)

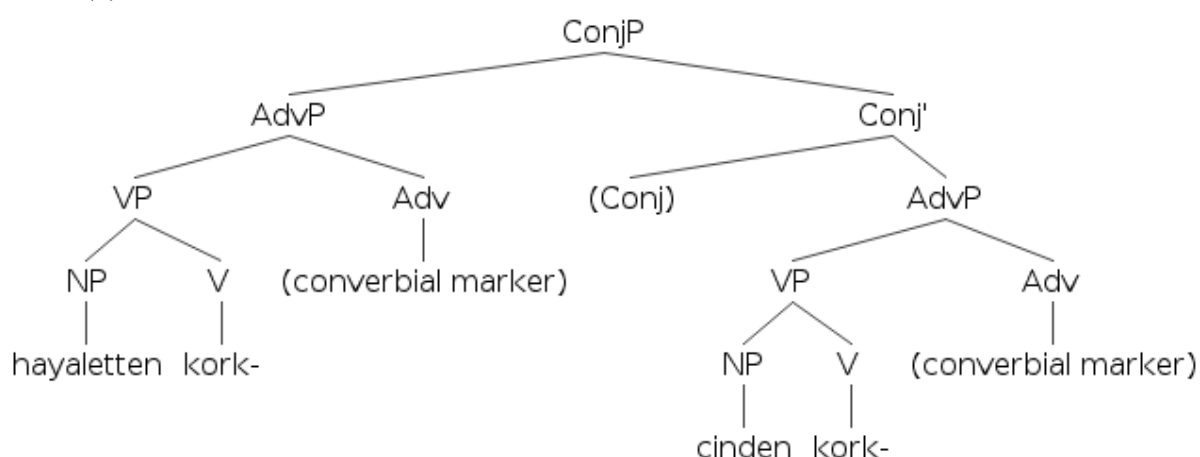


The structure in (6) is a flat one and so is reminiscent of the earlier theories mentioned above. When this structure is translated into a hierarchical one to follow later theories mentioned above, the resulting structure presented in (8) is found. This structure also proposes that the verbs of a [VV] converb are turned into adverbs individually and then brought together. In

this representation, the two constituents of the [VV] converbs are not on the same hierarchical level, which is not acceptable for co-compounds as was discussed in Chapter 2. The verbs in (8), just like the ones in (6) can also take their own complements and/or adjuncts. This is exemplified and shown to be ungrammatical in (7).

- (7) *Hayaletten korka cinden korka aklını kaçırdı.
ghost-ABL fear-OPT spirit-ABL fear-OPT mind-POSS-ACC escape-CAUS-PAST
Intended interpretation: “He/she lost his/her mind because of scaring ghosts and spirits.”

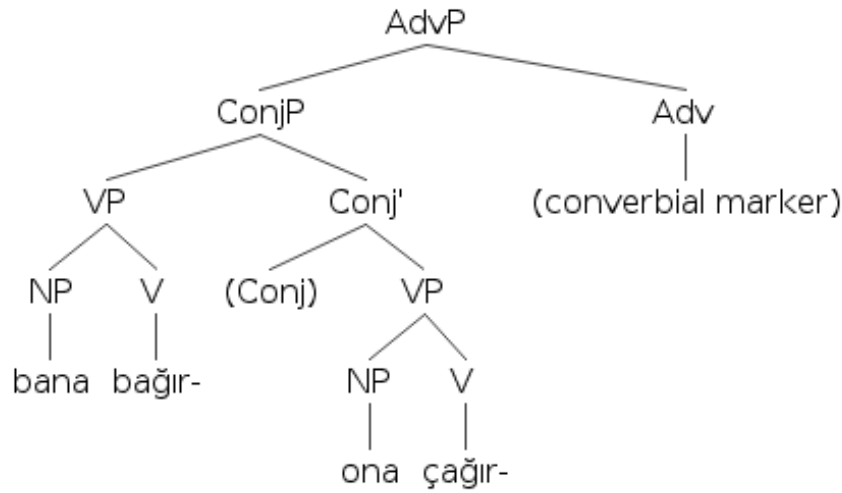
(8)



In the representations (6) and (8), what is coordinated is the adverbial phrases. Another way of thinking about [VV] converbs is that VPs can coordinate and then become an adverb. A representation, which proposes this, is presented in (10). The problem with this representation is as same as the ones mentioned above: it allows for each verb to have its own complement and/or adjunct as in (9). Moreover, this representation results in the two constituents of the [VV] converbs not being on the same hierarchical level, like (8).

- (9) *Ban-a *bağır* o-n-a *çağır* ses-i kısıldı.
I-DAT yell.IMP he/she-DAT voice-POSS dim-PASS-PAST
Intended interpretation: “His/her voice got hoarse from yelling at everybody.”

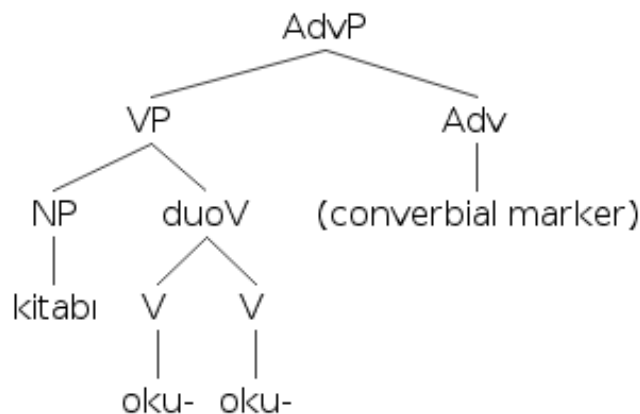
(10)



In all these coordinated representations, problems are evident. First of all, these representations allow for the verbs of a [VV] converb to have their own NP complements. Second of all, these structures assume a hierarchical relationship between the verbs, which would suggest [VV] converbs are single headed but as demonstrated in Chapter 5 this is not the case. Therefore, following Baker (1988, 2005)²² and Keanen (1987), this study suggests the representation in (11).

- (10) *Kitab-ı oku-yup oku-yup hayal-ler-e dal-dı.*
book-ACC read-CNJ read-CNJ dream-PL-DAT dive-PAST
“He/She read the book and started to dream.”

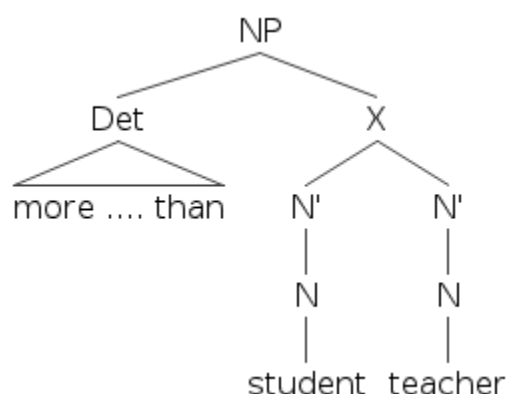
(11)



²² The representation suggested in this study inspired by Baker’s noun incorporation although this study does not argue for a head-movement. (For more information on noun incorporation claim by Baker, 1988, 2005).

Since these two verbs have integrated meanings and morphosyntactic characteristics, this study proposes the representation in (11). This representation captures the fact that these two verbs are on the same hierarchical level. Moreover, it explains why these two verbs must share complements and/or adjuncts. Note that this representation resembles the verb incorporated structures of Baker (2005). However, unlike Baker this study does not propose movement. This study assumes that this is a special kind of a verb head and that lexical items are inserted into these two verb positions to form a special kind of verb head. This proposal is inspired by Keanen's (1987) explanation for structures such as "more student than teacher". Keanen offers the representation in (12) for "more student than teacher" assuming that "more ... than" is a two-place determiner (i.e. it is a template stored in lexicon as a dyad).

(12)



Keanen (1987) considers these kinds of NPs as two-headed. Notice that in his representation the two heads are attached to "X" and not to a noun head. The reasoning behind this was to leave the name of this constituent (i.e. student teacher) open. These constituents do not behave like a whole word since other items can get in between. The representation in (11) is different from the one in (12) in terms of the name of the constituents: the former calling it V and the latter calling it X. This study has created the term duoV instead of X to underline the fact that [VV] converbs can take arguments. This study uses the term duoV tentatively in order to differentiate this head from the lower V heads. The claim that two verbs come together to

form a duoV head accounts for not only why [VV] converbs can only have shared arguments but also why both of the constituents are able to get converbial markers. Co-compounds in other languages can also get parallel marking. For example, both of the constituents of co-compounds in Mari receive the possessive marker (Wälchli, 2005 p. 50).

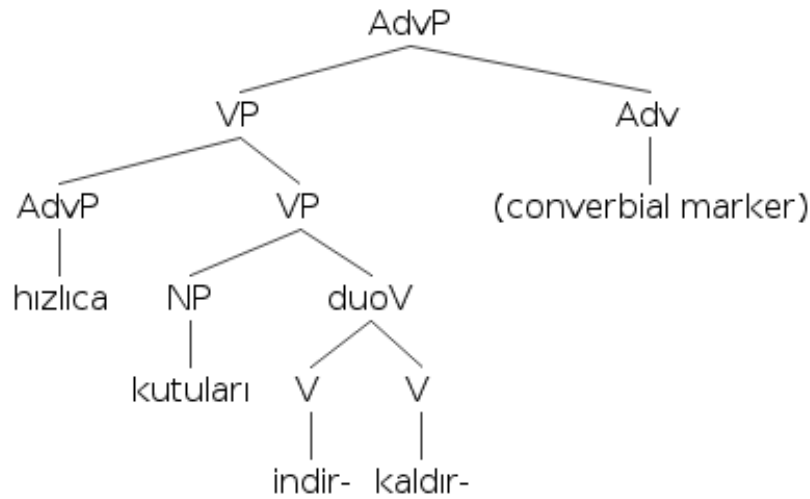
A consequence of representing [VV] converb structures as in (11) is claiming that the verbs of a [VV] converb have to be able to share complement/or adjuncts. This is only possible if these verbs have identical morphosyntactic features which is already claimed in this study. Therefore, representing them in this way not only explains their syntactic behavior but also disallows overgeneralizations. Next section strengthens the need for a VP layer and shows that the constituents of [VV] converbs can take manner adverbs.

6.3.4 Further Evidence for VP Layer

The existence of the VP projection is strengthened by the fact that verbs can take not only complements but also manner adverbs. Manner adverbs are significant because they get attached to VPs (Adger, 2003 p. 234); therefore, the existence of the VP layer is verified. Example (13) demonstrates that the verbs of a [VV] converb having a complement and manner adjunct. The phrase structure representation of the [VV] converb in (13) is presented in (14).

- (13) Hızlıca kutu-lar-ı *indir kaldır* bel-im kop-tu.
 quickly box-PL-ACC lower. IMP lift. IMP waist-1st S rip-PAST
 “I broke my back lifting and lowering the boxes in a very quick manner.”

(14)



After providing much evidence for the existence of a VP layer, in the next section what properties of [VV] converbs that a VP layer cannot account for (such as the ability to take a purpose clause) are discussed.

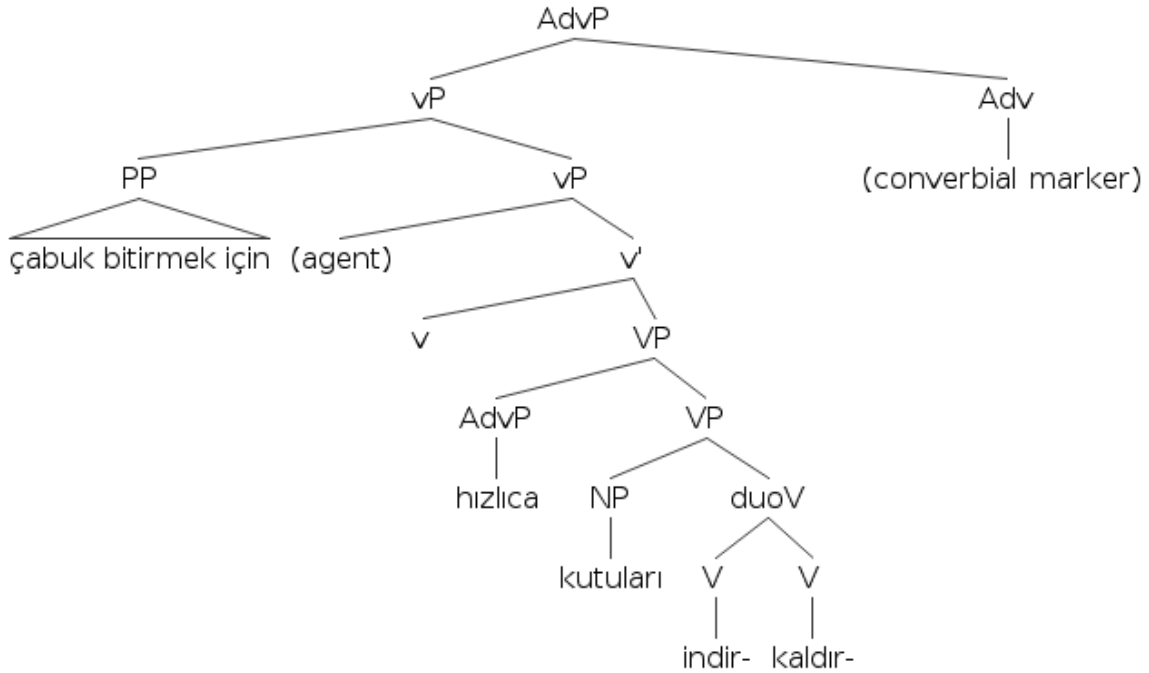
6.3.5 Evidence for *vP* Layer²³

The representation (14) needs to be improved because it does not explain the sentences such as the example (15). The phrase *çabuk bitirmek için* ‘in order to finish (it) quickly’ is a purpose clause and it is generated higher than the VP. In other words, as the purpose clause implies intentionality and agentivity, it goes under the *vP* node (Pylkkanen, 2008). Therefore, in order to represent the sentence in (15), there is a need to project a *vP* layer, which comes with a specifier position designated for NP bearing the agent role (Adger, 2003 p. 138), for the structure of [VV] converbs as shown in (16).

- (15) *Çabuk bit-ir-mek için hızlıca kutu-lar-ı indir kaldır bel-im ağrı-dı.*
quickly finish-CAUS-INF for quickly box-PL-ACC lower. IMP lift. IMP
waist-1st S pain-PAST
“I broke my back because I lifted and lowered the boxes in a quick manner in order to finish (the job) as soon as possible.”

²³ Here *vP* (little *v*) is used to encode information such as agent. This is the term used in Minimalist Program (Chomsky, 1995), although other terms can be used for the same purpose. For more information see (Adger, 2002; Hornstein et al, 2005 inter alia)

(16)

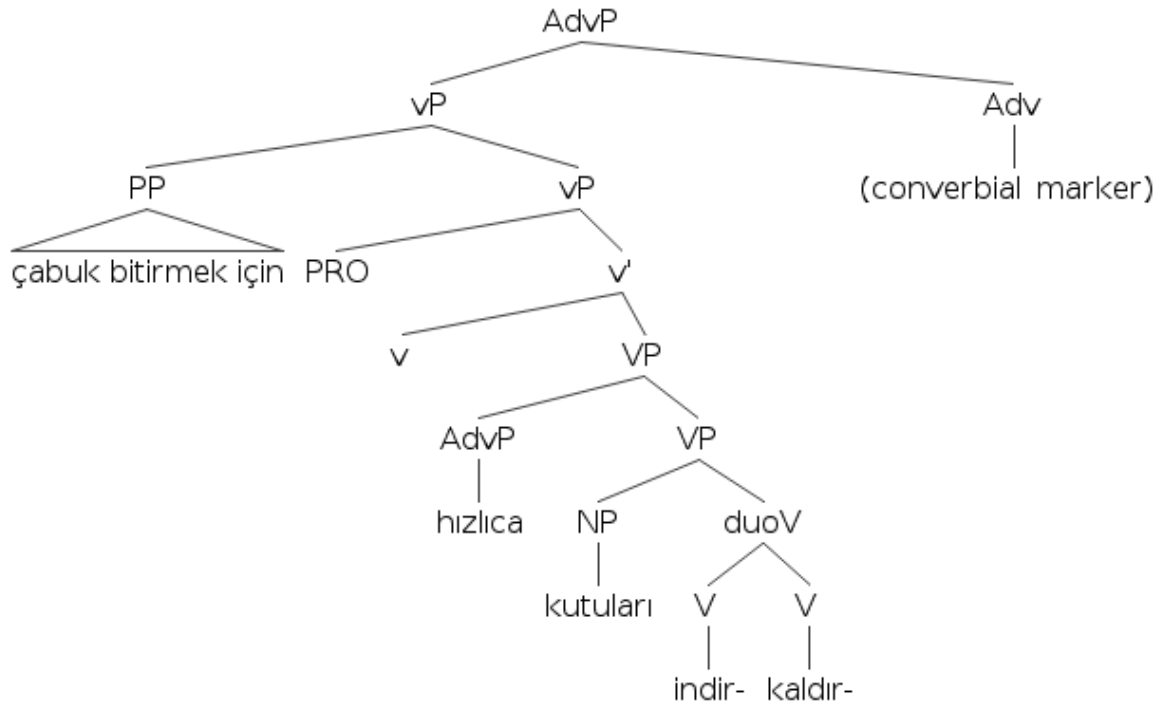


The revelation of a *vP* layer has a very specific consequence: as shown in (16), *vP* structures come with a specifier position designated for the agent role (Adger, 2003 p. 138). Examples below reveal that there is a requirement of covertness for the agent of the verbs in [VV] converbs. Examples in (17)a-b are not grammatical because in all sentences the verbs in [VV] converbs have overt agents. Notice that in (17)b instead of *Ayşe* repeated for a second time in a redundant way a pronoun is given that is co-indexed with *Ayşe*; however, it is still not grammatical. If redundancy is not an issue here, the only explanation for the ungrammaticality of the sentence is the overt presence of the agent of the verbs in [VV] converbs and the main verb.

- (17) a. **Ayşe kutu-lar-ı hızlıca indir-ip kaldır-ıp Ayşe yorul-du.*
Ayşe box-PL-ACC quickly lower-CNJ lift-CNJ Ayşe get tired-PAST
Intended meaning: “Ayşe got tired because of lowering and lifting the boxes quickly.”
- b. **Ayşe kutu-lar-ı hızlıca indir-ip kaldır-ıp o yoruldu.*
Ayşe box-PL-ACC quickly lower-CNJ lift-CNJ she get tired-PAST
Intended meaning: “Ayşe got tired because of lowering and lifting the boxes quickly.”

Since overt agents for the verbs in [VV] converbs cause ungrammaticality, this study proposes PRO as an agent for verbs in [VV] converbs. The notion of PRO adopted in this study is analogous to how PRO is utilized by Carnie (2007). In the representation (18), the phrase structure representation of [VV] converb (15) is developed further from (16). Instead of agent, now the structure has PRO. In this example, the PRO in (18) is coindexed with the agent of the main verb; however, there are cases in which the PRO is arbitrary (Carnie, 2007) (e.g. “Smoking is bad for you” or “*Vur vur* ölmüyor” ‘It doesn’t die no matter how much one hits it’).

(18)



6.3.6 Evidence Against a Layer Encoding Tense (TP Layer)

After it has been argued that verbs within a [VV] converb are integrated into a composite form, the existence of two higher phrase levels, namely VP and vP, has been established. Now the question is whether there is a TP which is a higher phrase level within the [VV] converbs.

A simple test to verify the existence of TP is to insert a time adjunct (Alexiadou, 2000 p. 69).

Some converbs as in (19) allow for a time adjunct, which suggest that they do in fact have a TP layer. In the example (19), *dün derste sıkılırken* “while getting bored at the class” is an adverb phrase and *-(A/I)rkAn* is a converbial marker (Göksel & Kerslake, 2005 p. 24,31).

Here, the presence of TP is indicated by the time adjunct, *dün* ‘yesterday’. On the other hand, recall from chapter 4 that [VV] converbs in the focus of this study cannot denote a different tense than the main verb. Moreover, they cannot be modified by time adjuncts as illustrated in (20)b. As shown in (20)b, [VV] converbs cannot have their own time adjuncts which indicates that they cannot have a TP layer in [VV] converb structures.

- (19) Dün ders-te *sıkıl-ırken* bugün eğlen-iyor.
Yesterday class-LOC get bored-CNV today have fun-PROG
“Although she/he was bored yesterday in the class, today she/he had fun.”
- (20) a. Dün ağırlık *kaldır-a kaldır-a* kol-lar-ı-n-da-ki hiss-i kaybet-ti.
yesterday weights lift-OPT lift-OPT arm-PL-3rd POSS-LOC-PRON feeling-ACC lose-PAST
“Yesterday his/her arms became numb because he lifted weights for a long time.”
- b. *Dün ağırlık *kaldır-a kaldır-a* bugün kol-lar-ı-n-da-ki hiss-i kaybet-ti.
yesterday weights lift-OPT lift-OPT today arm-PL-3rd POSS-LOC-PRON feeling-ACC lose-PAST
Intended interpretation: “Today his/her arms became numb because yesterday he lifted weights for a long time.”

6.3.7 Evidence for a Layer Encoding Aspect (AspP Layer)

Even though there is no TP level within [VV] converb structures, as it happens there is a higher level above *vP* and below *AdvP*. The evidence for *AspP* level comes from the semantic properties of [VV] converbs. Semantically speaking, [VV] converbs denote continuous aspect, no matter which converbial marker they have. Even though the different converbial markers have slightly different semantic entailments, all of them convey a concept of continuity as shown in (21). Continuity is related to “the temporal structure of situations”, and hence encompassed under aspect (Smith, 1997 p. 1).

- (21) a. “*Çalış çabala boş-a yor-ul-du-m.*”
 work.IMP struggle.IMP empty-DAT make tired-PASS-PAST-1st S
 “I got tired for no reason after working and struggling (with it).”
<http://www.dilforum.com/forum/archive/index.php/t-86441-p-9.html>)
- b. “*Çek-e mek-e aç-tı-lar kaput-un yaka-sı-n-ı.*”
 pull-OPT IMI-OPT open-PAST-3rd PL armor collar-3rd S POSS-ACC
 “They loosen the collar of the armor by pulling (on it and stuff).”
<http://www.insanokur.org/?p=768>)
- c. “*Yüz-üp yüz-üp kıyı-ya kadar gel-di-k.*”
 swim-CNJ swim-CNJ shore-DAT until come-PAST-1st PL
 “We swam for a while and reached the shore.”
<http://www.diyarinsesi.org/yazi/bu-bir-haykiristir-7173.htm>)

As shown in the examples (21), all types of [VV] converbs have a sense of continuity. On the other hand, there might be slight meaning differences between these three types. Although all [VV] converbs modify verbs, they do it in different ways. Below, each [VV] converb and its slightly different semantic entailment will be discussed separately. These semantic entailments are discussed here under common semantic properties because each semantic entailment does not correspond to only a single converbial marker. Even though each semantic entailment is associated with a certain converbial marker, same semantic entailment can be understood from different converbial markers.

The converbial imperative marker can modify the main verb in two ways: by providing a cause and providing a condition. The semantic entailment of [VV] converb is determined by the presence of negation marker on the main verb. If the main verb is not negated, then the [VV] converb provides a cause as in (22)a. The [VV] converb in (22)a expresses the reason behind the main event. However, if the main verb is negated, [VV] converbs provide a condition as in (22)b. In (22)b, the [VV] converb expresses a condition where the main event occurs even though the condition is satisfied. On the other hand, the [VV] converb in (22)c does not denote either. This one only denotes the manner of the action.

- (22) a. O-nun bu-nun derd-i-n-i *dinle dinle* sinir-im bozul-du.
 3rd S PRO this-GEN problem-3rd S POSS-ACC listen.IMP listen.IMP nerve-
 PL break-PAST

“I got messed up from listening to people’s problems.”

b. *Söyle söyle anla-mı-yor.*

say.IMP say.IMP understand-PROG

“He/she does not understand (it) no matter how much one says (it).”

c. *Abla-cığ-ım hemen koş koş gel-di-m.*

sister-DIM-1st POSS S at once run.IMP run.IMP come-PAST-1st S

“My dear sister, I came over at once.”

(<http://turkisheels.com/forum/viewtopic.php?t=656&p=1936>)

[V-OPT V-OPT] converbs determine the manner of the main event as in (23). In other words, it usually answers the question how the main event takes place. In (23)a, [V-OPT V-OPT] converb *getire götür-e* ‘bring-OPT take-OPT > continuously bringing (it) forth and back’ explains how the cave on the person’s shoulder happened and how the laptop got wore out. Note that [V-OPT V-OPT] converbs also have the sense of cause because the [VV] converb (23)a explains why the cave on the person’s shoulder happened and how the laptop got wore out. On the other hand, the verb (23)b does not express any cause meaning. Instead, it shows the manner of the activity. What is more, both examples in (22)b and (23) denote a sense of repetitiveness.

- (23) a. *Her gün laptop-um-u getir-e götür-e hem omuz-um-da bir göçük oluş-tu hem de bilgisayar-ım aşın-dı.*
every day laptop-1st S POSS-ACC bring-OPT take-OPT shoulder-1st S PRO-LOC one cave occur-PAST and also computer-1st S PRO wear out-PAST
“Because of carrying my computer every day, both a cave in my shoulder happened and my computer wore out.”

(<http://www.dilforum.com/forum/archive/index.php/t-20078.html>)

b. *Konuş-a konuş-a yürü-dü-k.*

talk-OPT talk-OPT walk-PAST-1st PL

“We walked by talking.”

(<http://www.kadinlarkulubu.com/forum/index.php?threads/bilmiyorum-bilmiyorum.639457/>)

[V-CNJ V-CNJ] converbs denote a sense of repetitiveness besides their continuity meaning. Examples (24) show that [V-CNJ V-CNJ] converbs mark that the action they denote occurs repeatedly. On the other hand, the [VV] converb (24)a has also a sense of cause because

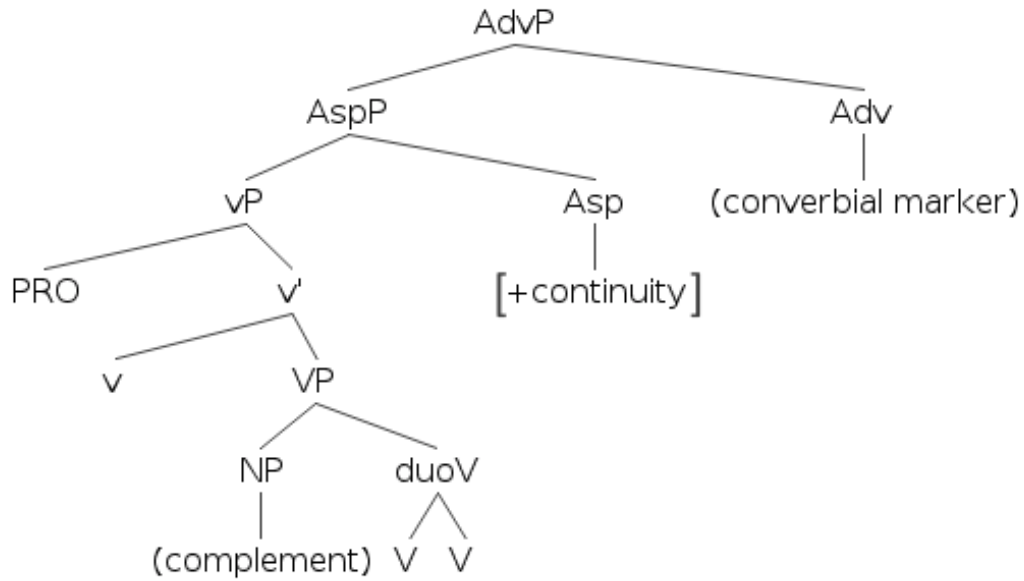
reaching the shore is a result of swimming, whereas (24)b functions as more like a manner adverb explaining how the onion must be eaten.

- (24) a. *Yüz-üp yüz-üp kıyı-ya kadar gel-di-k.*
swim-CNJ swim-CNJ shore-DAT until come-PAST-1st PL
“We swam for a while and reached the shore.”
(<http://www.diyarinsesi.org/yazi/bu-bir-haykiristir-7173.htm>)
- b. “*Soğan-ı da ısır-ıp ısır-ıp yi-yin.*”
onion-ACC also bite-CNJ bite-CNJ eat-IMP 2nd PL
“You should also eat onions by biting.”
(<http://www.kizlarsoruyor.com/diger/q928361-selamlar-bir-yurt-ogrencisi-olarak-sizlere-bir>)

Even though the three types of Turkish [VV] converbs have been associated and their properties have been presented in unison, there are slight meaning differences between these types. As shown in the examples above, all converbial markers can denote meanings other than continuity. Each converbial marker has specific meanings they are most associated with but these associations are not set in stone.

As discussed above, although the different converbial markers may result in different meanings, [VV] converbs all express continuity. That is to say all [VV] converbs refer to an action/process that has been or is going on for a long time. This shared aspectual meaning of all [VV] converbs investigated in this thesis necessitates an AspP projection above the *vP*. Under Asp head, this semantic information, which is continuity, is encoded as seen in (25). Recall that structures like [VV] converbs denote plurality and augmentation when composed of nouns and continuous aspect when composed of verbs. Therefore, it can be concluded that reduplication is responsible for the continuity meaning of [VV] converbs. The examples in (26) indicate that any reduplicated verbs have a sense of continuity. This explains why all [VV] converbs no matter what converbial marker they bear express continuity.

(25)



- (26) a. “*Aradı-k ara-dı-k ama bul-a-ma-dı-k.*”
 search-PAST-1st PL search-PAST-1st PL but find-NEG ABIL-NEG-PAST-1st PL.
 “We searched (it) for a long time but we still could not find (it)”
 (<http://www.itiraf.com/198884/Basliksiz/>)
- b. “*Günlerce yürü-müş yürü-müş.*”
 for days walk-EV/PF walk-EV/PF
 “He/she walked and walked for days.”
 (<http://turkotaku.wordpress.com/2011/01/24/monster-animesindeki-cocuk-hikayesi/>)

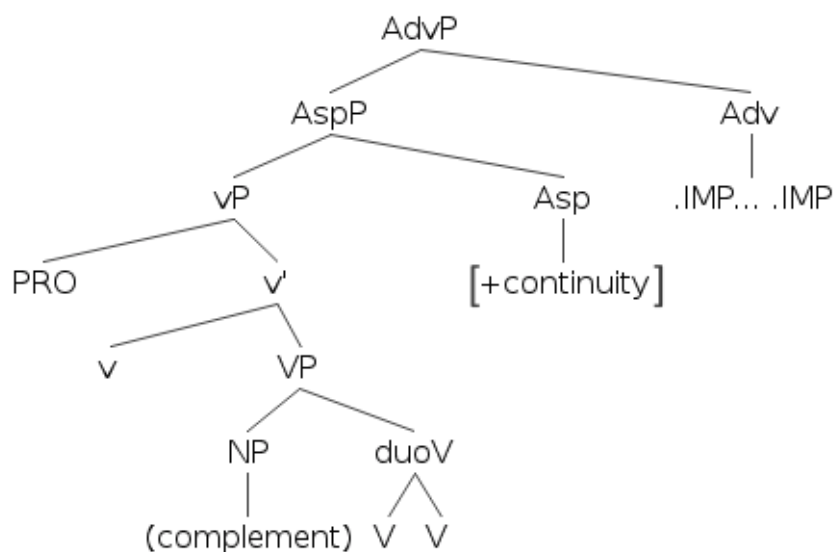
The examples in (26) demonstrate that the sense of continuity in [VV] converbs stems from their reduplicative status. Thus, it can be concluded that the meaning of continuity is not related to the converbial markers. In this section, the evidence for AspP level has been provided. It has been shown that the semantic entailment of [VV] converbs (i.e. the meaning of continuity) is coded under Asp head. In the next section, the evidence for AdvP level and explanation for parallel inflection will be provided.

6.3.8 Evidence for AdvP Layer and Explanation for Parallel Inflection

In this chapter, various layers from V to AspP have been established for the structures of [VV] converbs. For each layer a motivation has been provided. This study proposes that the

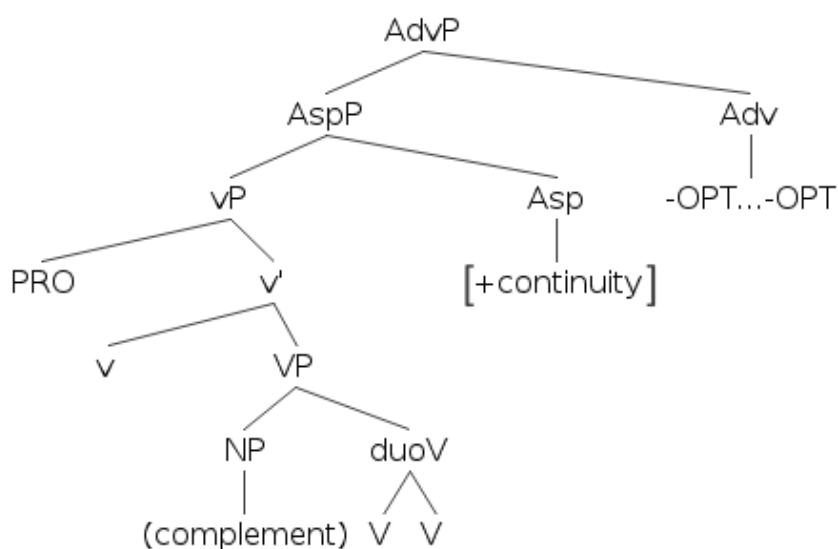
highest layer is AdvP (27), which subcategorizes for AspP. As stated in Chapter 4, Turkish [VV] constructions are converbs and they are therefore heads of adverbial phrases. In other words, as adverbial phrases, they modify the main verb of the sentence in which they are used. The issue here is what makes these [VV] structures adverbs. There are two possible claims that can be made here. One would claim that it is the reduplication that makes these structures adverbs. The other would claim it is the converbial markers that make these structures adverbs²⁴. As alluded above with the examples in (26), not all reduplicated verbs are adverbs. Therefore, the latter claim appears to be more plausible. This means that there needs to be a change made in the representation (25) suggested for [VV] converbs. This change is that the converbial markers need to be under the adverbial head as in (27)a-c.

(27) a.

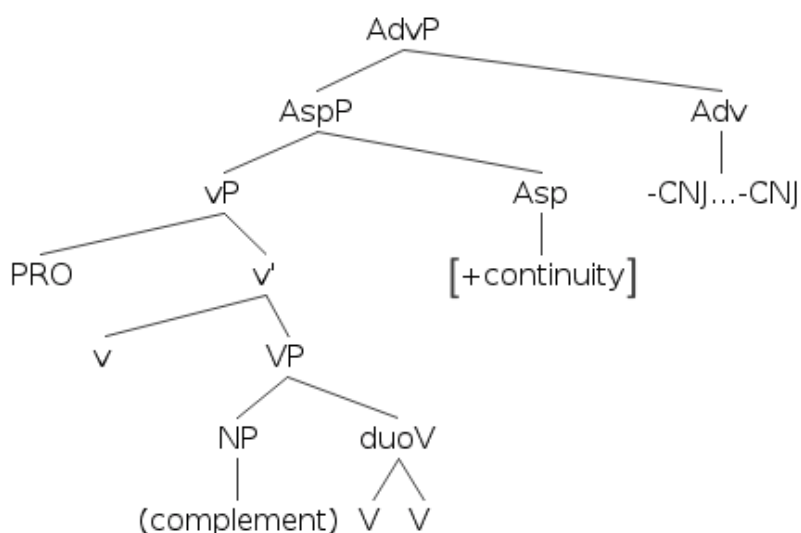


²⁴ Other than [VV] converbs, there are other verbal reduplications that display adverbial properties (e.g. *koş-tu-m koş-tu-m yetiş-e-me-di-m* ‘run-PAST-1st S run-PAST-1st S catch-NEG ABIL-NEG-PAST-1st S > I could not catch (it) however much I ran (after it)’). For more information on such structures see Erbaşı (forthcoming).

b.



c.



If one assumes the converbial verbs go under the adverbial head, one needs to clarify whether there is a single marker or a pair of markers. One possibility would be that there is only one converbial marker, namely IMP, OPT and CNJ, under the head in AdvP (25). The other possibility would be that there are pairs of converbial markers, namely IMP...IMP, OPT...OPT and CNJ...CNJ, under the head in AdvP as in (27a-c).

Both ways to account for [VV] converbs have some advantages as well as disadvantages. The representation in (25) assumes that the converbial marker under Adv head

percolates into the [VV] structure at the bottom layer; therefore, both verbs are marked by the same marker. On the other hand, this claim has some disadvantages because it assumes a long distance percolation process as well as refuting the ‘compound’ nature of the constructions. Also, it is hard to explain why both of the verbs get the converbial marker with this approach.

The second claim seems to be more plausible because assuming that there are two converbial markers under the Adv head it accounts for parallel inflection on the verbs. A template of two inflections is not unheard of in Turkish. There are structures like *gel-ir gel-mez* ‘come-AOR come-NEG AOR > the moment (he/she) comes’ or *dur-up dur-urken* ‘stop-CNJ stop-CNV > all of a sudden’, which require there to be two converbial markers under the adverb head. Thus, the [VV] converbs analyzed in this work fall under the same pattern. Another advantage of this claim is that two of the three markers on the focus of this study are not converbial markers individually as will be explained below. Therefore, the first claim cannot explain the reason when these markers are attached to non-reduplicated verbs, they do not generate adverbs. It can be argued that not these markers but the process of reduplication is what makes these [VV] converbs adverbs. Specifically, it could be argued that these markers had been attached to the verb before reduplication so there was no need for pairs of converbial markers under the adverbial head. However, as shown in (6) and (8), such a claim would allow for each verb to take its own arguments and is therefore void.

Below each converbial marker will be described separately to strengthen the claim that there are pairs of markers, namely IMP...IMP, OPT...OPT and CNJ...CNJ, under the head in AdvP.

6.3.8.1 The IMP...IMP Converbial Marker

Since the imperative marker is not overtly marked, some might claim that [V.IMP V.IMP] converbs do not actually bear any markers but in fact are bare. There is a big problem with this claim since Turkish verbs are bound (Bayırlı, 2012) and cannot surface in their bare form.

Then, the issue becomes whether reduplications bring two bound morphemes together and turn them into legitimate words. That onomatopoeic morphemes are bound in Turkish but can form words when reduplicated without the help of other morphemes might suggest that there might be some truth in this (e.g. **şakır* vs. *şakır şakır* ‘a sound of pattering’ or *şakır-da-* ‘to rattle’). However, this might not turn out to be the case. Baturay (2010) claims that the boundness of onomatopoeic morphemes is questionable since there are examples of their surfacing in bare form as in (28). Although Baturay is not sure whether these are wide-spread uses of onomatopoeic morphemes, a quick web search reveals that there are many such forms, provided in (29). Therefore, the claim that reduplications can make bound morphemes into surfacable words is not sound.

- (28) a. Bir *tık* öte-niz-de.
 one click beyond-2pl-LOC
 “Just with one click.”
- b. Kapı *tak* et-ti.
 door knock do-PAST
 “The door was slammed.”
- c. Kedi *miyav* yap-tı.
 cat meow make-PAST
 “The cat meowed.”
 (adapted from Baturay, 2010 p. 152)
- (29) a. *Haldur* bir şekil-de çek-ti-k diş-i.
 (sound of something happening loudly and/or abruptly) one form-LOC pull-
 PAST-1st PL tooth-ACC
 “We pulled out the tooth in a crude way.”
 (www.doktorumonline.net/mid/danismahatti/c/8/id/51094/APSELi_Disin_ceki_mi.htm)
- b. Kedi *pır* uç-u-ver-di.
 cat (sound of a bird flapping its wings) fly-CNV-give-PAST
 “The cat flew off suddenly.”
 (Turkish children’s song)
- c. Bu-nu *şırıl* ses-i takip ed-er.
 this-ACC (sound of water running) sound-3rd POSS follow-AOR
 “A sound of running water follows this.”
 (<http://co53.tr.gg/Sizden-Gelenler.htm>)

Above it was established that there is no evidence to suggest reduplications can turn bound morphemes into legitimate words. Therefore, there needs to be some kind of a marker on [V.IMP V.IMP] converbs. This marker can be IMP or ...IMP ...IMP as previously mentioned. A verb with the imperative marker cannot be the adverb of a main predicate as illustrated in (30). The ungrammaticality of the examples in (30)b and (30)d obliges one to conclude that what marks [VV] converbs cannot be a single imperative marker. Therefore, this current study argues for the existence of a pair of converbial imperative markers in Turkish.

- (30) a. “Şarkı *dinle dinle* baş-ım şiş-ti.”
 song listen.IMP listen.IMP head-1st S swell-PAST
 “I got an headache from listening a lot of songs.”
 (<https://mobile.twitter.com/Beyzaunal1900>)
- b. *Şarkı *dinle* baş-ım şiş-ti.
 song listen.IMP listen.IMP head-1st S swell-PAST
 Intended interpretation: “I got an headache from listening a lot of songs.”
- c. “Ara ara bul-a-ma-dı-m.”
 search.IMP search.IMP find-NEG ABIL-NEG-PAST-1st S
 “I could not find (it) eventhough I looked for (it) for a while.”
 (http://nediyor.com/tweet/melisalphan/melisalphan_410441694933311488/)
- d. *Ara bul-a-ma-dı-m.
 search.IMP search.IMP find-NEG ABIL-NEG-PAST-1st S
 Intended interpretation: “I could not find (it) eventhough I looked for (it) for a while.”

The recognition of a pair of converbial imperative markers raises the question why the result [V.IMP V.IMP] and not [V- V.IMP.IMP]. There are two different ways to answer this question. The one is that two converbial markers cannot attach to a single verb as can be observed from (31).

- (31) *Gel-eceğ-ince
 come-CNV-CNV
 Intended interpretation: “When he/she will come”

This is due to the fact that a converbial marker can only attach to a verb and once it is attached the word becomes an adverb and hence does not allow another converbial marker to attach. The other is that verbs cannot surface bound in Turkish and duoVerb structures can be claimed to allow for syntax to see within in certain cases. This claim would be similar to Baker et al's (2005) noun incorporation. Baker et al has claimed that [N V] structures allow for the noun to be able to take adjectives. Moreover, Keanen (1987) has proposed that two headed [N N] structures can be intervened by two place determiners (resulting in [Det N Det N]). Therefore, suggesting that a double headed verb structure is visible for syntax is in line with previous literature. Moreover, the need for such a selective visibility like the one proposed in this study is evident for co-compounds in other languages as well because of cases in Mari in which co-compounds each take possessive inflections but only the right-most one takes dative inflections. The duoVerb structure proposed here lets its constituents to bear parallel derivational morphemes but not let them take individual arguments in [VV] converbs. In short, the parallel inflection of [V.IMP V.IMP] happens because the structure allows for it and [V- V.IMP.IMP] is ungrammatical.

The notion that [V.IMP V.IMP] structures have nominal roles is attested in the literature. Güneş (2009) claims that the verbs in Turkish [VV]_N compounds (e.g. *çekyat* 'pull.IMP lie down.IMP > sofa'), which are nouns, bear the imperative marker. There are also examples of [V.IMP V.IMP] structures having the role of adjectives. This is very typical of Turkish, which as explained in Chapter 3 does not have distinct, clear-cut categories such as nouns, adjectives and adverbs (Braun & Haig, 2000; Uygun, 2009). Examples for [V.IMP V.IMP] structures possessing the role of different points on the nominal continuum are given in (32) and (33).

- (32) a. “*Doldur boşalt-a karşı zayıf düş-er.*”
 fill.IMP empty.IMP-DAT against weak fall-AOR
 “He/she is vulnerable against filling (it) up and emptyin (it) out (strategy)”

(https://trtr.facebook.com/permalink.php?story_fbid=320195724692221&id=199917936720001)

b. “ İlk yarı-nın *doldur-boşalt* oyun şekl-i-n-de geç-tiğ-i-n-i...”
first half-GEN fill.IMP empty.IMP game shape-3rd S POSS pass-SUB-3rd S
POSS-ACC

"the fact that the first half was spent playing fill-it-up-pour-it-out play..."
(<http://www.ozgurkocaeli.com.tr/haber/cubuklu-istediklerimizi-ikinci-yari-yapabildik-25017.html>)

c. “*Doldur boşalt* çalış-ıyor-lar.”
fill.IMP empty.IMP work-PROG-3rd PL
“They fill (them) up and empty (them) out”.
(www.hurriyet.com.tr/ekonomi/26842547.asp)

(33) a. “Askerlik *getir götür*-le tarla-lar arasında geç-iyor.”
military service bring.IMP take away.IMP-INST field-PL between pass-
PROG
“Our military service spent doing deliveries and spending time in the
fields.”
(<http://www.tabancatufek.com/forum2/showthread.php?pid=200144>)

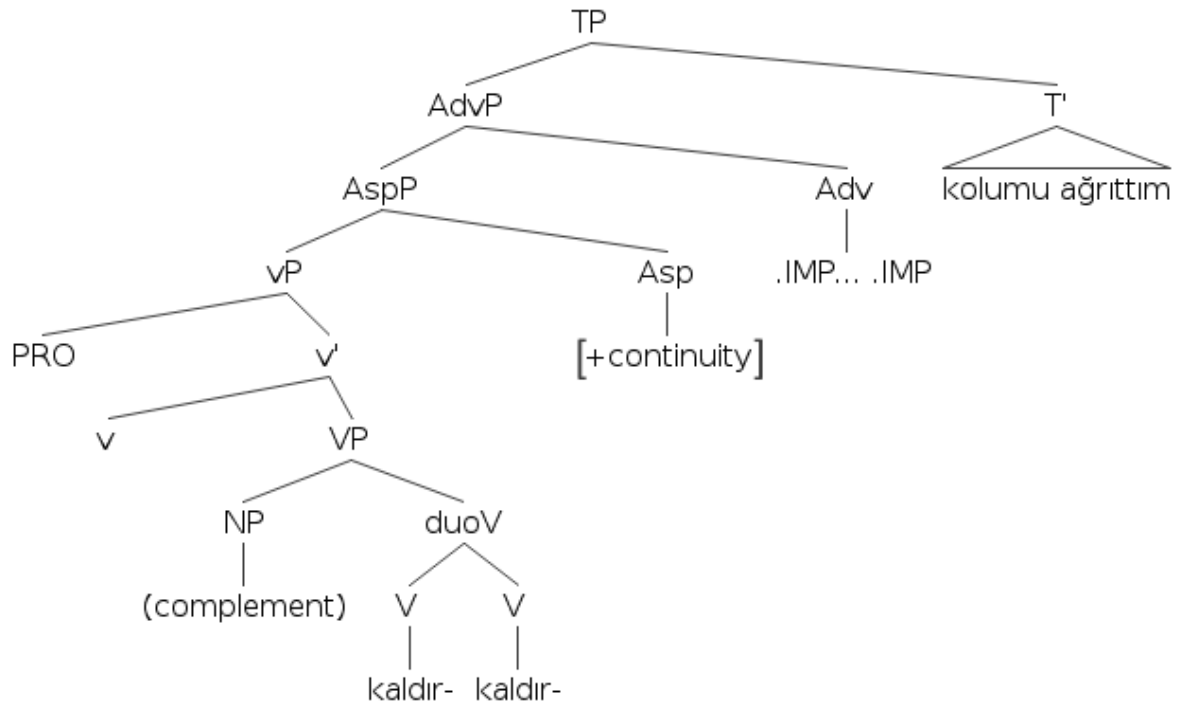
b. “*Getir götür* eleman ihtiyac-ınız yok mu?”
bring.IMP take away.IMP staff need-2nd PL not-existent QP
“Don’t you need an errand boy?”
(http://forum.80630.com/f1/t309087_p1215.html)

c. “...su isti-yor *getir götür* bıktı-m bardağ-ı.”
water want-PRO bring.IMP take away.IMP be fed up-PAST-1st S glass-ACC
“He/she wants water so often that I am sick of bringing it.”
(<https://www.facebook.com/314628198673136/posts/400073690128586>)

Above a comparison between [VV] converbs and [VV]_N structures were pointed out. There are also other [VV] structures that look identical to [VV] converbs but actually are structurally distinct. Here a structural comparison is given to underline the differences between them.

(34) *Kaldır kaldır* kolum-u ağrı-t-tı-m.
lift.IMP lift.IMP arm-ACC ache-CAUS-PAST-1st S
“I made my arms ache from lifting stuff up.”

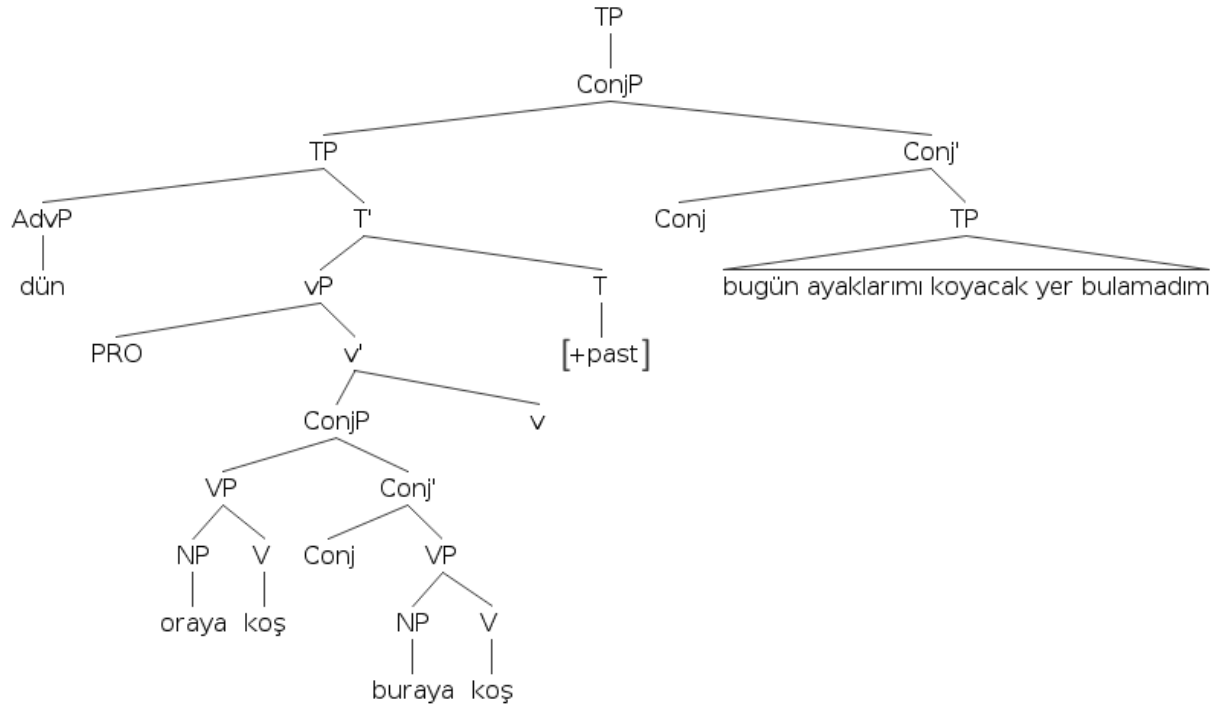
(35)



- (36) “Dün oraya *koş* buraya *koş* bugün ayak-lar-ım-ı koy-acak yer bul-a-ma-dım.”²⁵
 yesterday there run.IMP here run.IMP today foot-PL-1st S POSS-ACC put-
 SUB place find-NEG ABIL-NEG-PAST-1st S
 “Yesterday I ran around all day and today my feet hurt.”
 (Saniye Yıldız, the author’s mother)

²⁵ In the phrase structure representation of this clause, T of the coordinated clause was assumed to be [+past]. This assumption was due to the coordinated clause having a past reading. This assumption is tentative and there needs to be more research done on this subject.

(37)



The phrase structure representation of [VV] converb structure *kaldır kaldır* is given in (34) and the phrase structure representation of [VV] structure *koş koş* is given in (37) for a comparison. As established above, the representation in (35) cannot have a TP layer, whereas there needs to be a TP layer for the representation in (37) because the [VV] structure is modified by the time adjunct *dün* “yesterday”. Moreover, the representation in (37) requires there to be slots for each of the arguments of the [VV] structure.

Another reduplicated verb construction analogous to *koş koş* ‘run.IMP run.IMP’ is *yürü Allah yürü* ‘walk.IMP God walk.IMP’. The reduplicated construction *yürü Allah yürü* ‘walk.IMP God walk.IMP’ may resemble [VV] converbs in certain environments. For example, compare (38)a and (38)b. The reduplicated structure *yürü allah yürü* ‘walk.IMP God walk.IMP’ appears to provide evidence against the inseparability requirement of [VV] converbs. However, the fact that it can constitute a clause by itself (38)c whereas a converb cannot (38)d suggests that the phrase structure representation of reduplicated structure *yürü allah yürü* ‘walk.IMP God walk.IMP’ includes a TP layer and the imperative markers it bears

do not function as converbial markers but as TAM (tense-aspect-modality) markers. Therefore, this reduplicated structure is not a [VV] converb but is very similar to the reduplicated structure in (36). Additional evidence comes from the word *Allah*. In a phrase structure like (35), it would not have a place to fit in but in (37) *Allah* can go under Conj head.

- (38) a. *Yürü yürü* yoruldum.
 walk.IMP God walk.IMP tire-REFL-PAST-1st S
 “I got tired because I have been walking for a while.”
- b. *Yürü Allah yürü*, yoruldum.
 walk.IMP God walk.IMP tire-REFL-PAST-1st S
 “I got tired because I have been walking for a while.”
- c. *Yürü Allah yürü!*
 walk.IMP God walk.IMP
 “Oh my God! This walk is taking forever!”
- d. **Yürü Yürü*
 walk.IMP walk.IMP
 Intended interpretation: “How much one walks.”

In this section, the need for a pair of imperative markers instead of a single has been presented. Moreover, structures inherently similar and distinct from [VV] converbs were explored. In the next section, the converbial optative marker will be discussed.

6.3.8.2 The ...-OPT...-OPT Converbial Marker

Claiming that [V-OPT V-OPT] converbs bearing optative markers is not as controversial as claiming [V.IMP V.IMP] converbs bearing imperative markers. This is due to the fact that there is an unproductive function of the optative marker, which is converbial as in (35). However, this fact might cause some to argue against a pair of optative markers on [VV] converbs. This can be answered in two ways. One, structurally speaking, a pair of markers makes more sense (see a similar argument above for the imperative marker). Two, if one claims that there is a single optative marker that functions as a converbial marker, then one has to explain why unreduplicated verbs cannot productively bear this marker and become

adverbs. In fact, these frozen forms are considered as bound composite auxiliaries by some grammar books (Göksel & Kerslake, 2005, *inter alia*). In the structures like (39), the verb before the optative marker can vary but the verb after the optative marker cannot; therefore, the authors of these grammar books analyze these structures as composite auxiliary verb constructions. Moreover, not all verbs can be used in these frozen constructions in the first slot. It has been observed that *-(y)Adur* can only be used with motion verbs such as *koş-* ‘to run’, whereas *-(y)Akal-* can only be used with certain verbs such as *bak-* ‘to look at’ (Göksel & Kerslake, 2005 p. 141-142). Therefore, this study claims that there is a distinction between the single optative marker used for converbial function and the pair of optative markers used for converbial function.

- (39) a. *Oku-ya-dur-un!*
 read-OPT stop-2nd PL IMP
 “Keep on reading (it)!”
 (taken from Göksel & Kerslake, 2005 p. 75)
- b. *Şaş-a-kal-dı-m.*
 be astounded-OPT stay-PAST-1st S
 “I was astounded.”
 (taken from Göksel & Kerslake, 2005 p. 30)

In addition to the frozen converbial structures in (35), there are some similar constructions to [V-OPT V-OPT] converbs in Turkish. One may be inclined to say that the example in (40) is similar to [V-OPT V-OPT] converbs. On the other hand, in the constructions like (40), the identical verb stem is repeated three times; two times in the [V-OPT V-OPT] structure and once in the main verb. This [V-OPT V-OPT] structure in (40) is not in the adverbial function and does not answer how the main action is done. Moreover, these structures are similar to idioms in that no matter what verb is used the meaning is predetermined, which is ‘among all the choices, is this your decision?’ . Therefore, they are not regarded as [VV] converbs in this study.

- (40) *Bul-a bul-a Ahmet’i mi bul-du?*
 find-OPT find-OPT Ahmet-ACC QP find-PAST

“Among all other choices, did he/she find Ahmet?”

In this section, the existence of a pair of converbial markers under Adv head has been accounted for. Moreover, similar structures have been presented and they have been excluded from the [VV] converbs because of their structural differences. Next section analyzes [V-CNJ V-CNJ] converbs.

6.3.8.3 The ...-CNJ...-CNJ Converbial Marker

When one looks closely, the differences between the single conjunctive marker and the pair of converbial conjunctive markers are apparent. The single conjunctive marker is used to coordinate two clauses (41) and in some cases one clause modifies the other (45). On the other hand, the pair of converbial conjunctive markers can only be used to create a specific kind of adverbial clause. First, the non-modifying single conjunctive marker and the converbial conjunctive marker will be differentiated because when three independent clauses are coordinated with the single conjunctive marker they look like [VV] converbs. Then, the modifying single conjunctive marker and the converbial conjunctive marker will be differentiated in order to show they are structurally different.

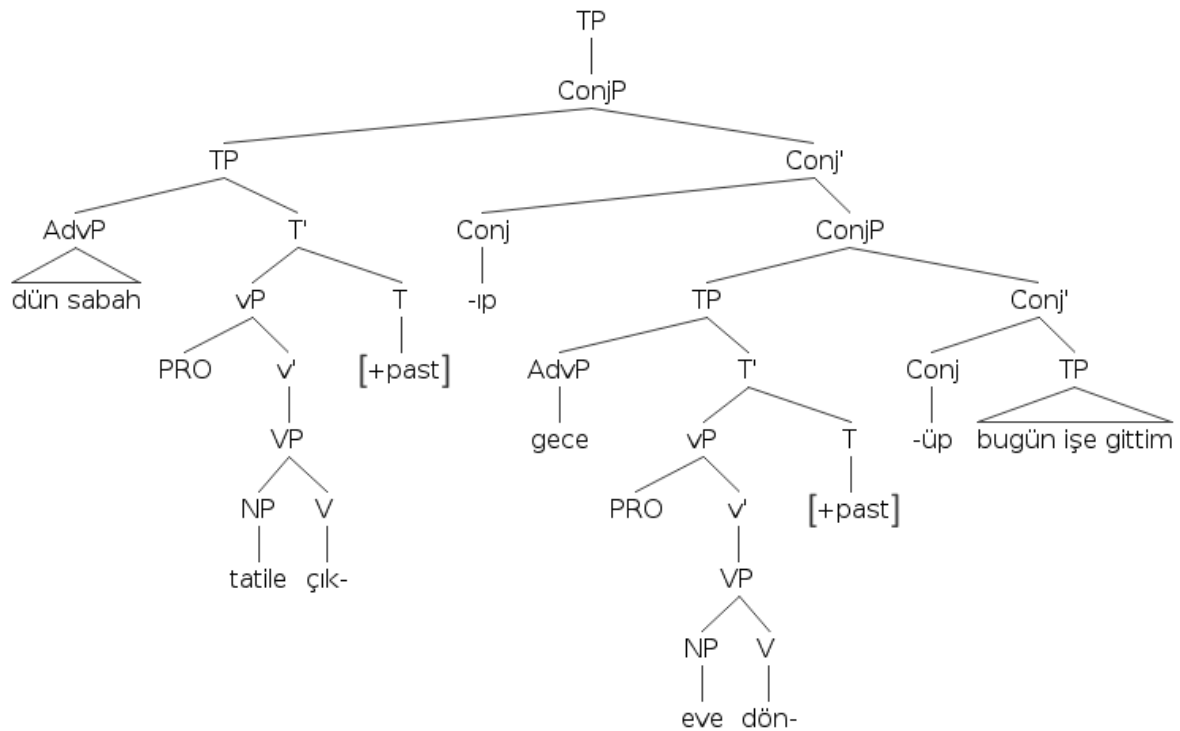
The non-modifying single conjunctive marker and the pair of converbial conjunctive markers have very different structural representations. The representation in (42)²⁶ requires there to be slots for the time adjunct and the complement for each verb of the *çıkıp dönüp* conjunctive structure. On the other hand, the verbs of the [VV] converb *giyinip kuşanıp* ‘dressing up’ cannot take time adjuncts and also can only take a shared argument as seen in the representation (44). Sometimes the coordinated clauses like the ones in (41)a do not have

²⁶ There is [+past] feature under the T heads for the clauses *dün sabah tatile çıkıp* and *gece eve dönüp*. Different TP projections are assumed for these clauses because they can take different time adjunct; however, the properties of *-(y)Ip* (i.e. verbs marked by *-(y)Ip* is under the scope of the main verb (Johanson, 1995)), there is no overt tense information. One may incline to think that Ø marking of the tense can be allomorph of the past tense here.

time adjuncts or individual complements. In these cases one needs to be extra careful not to assume that they are [VV] converbs.

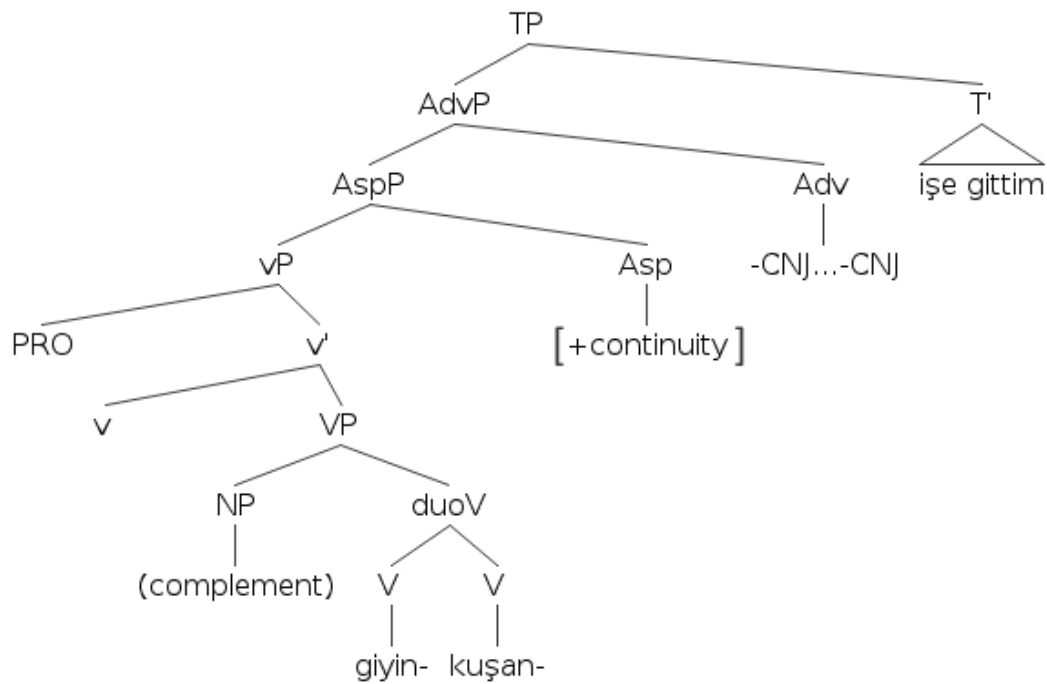
- (41) a. *Gel-ip dinlen-ip dışarı çık-tı.*
 come-CNJ rest-CNJ outside go out-PAST
 “He/she came, rested and went out.”
- b. *Dün sabah tatil-e çık-ıp, gece eve dön-üp, bugün işe gittim.*
 yesterday morning holiday-DAT go-CNJ night house-DAT return-CNJ
 today job-DAT go-PAST-1st S
 “Yesterday morning I went to vacation, I turned back at night and today I went to work.

(42)



- (43) *Giyin-ip kuşan-ıp iş-e git-ti-m.*
 put on-CNJ dress up-CNJ job-DAT go-PAST-1st S
 “I went to work after having dressed up.”

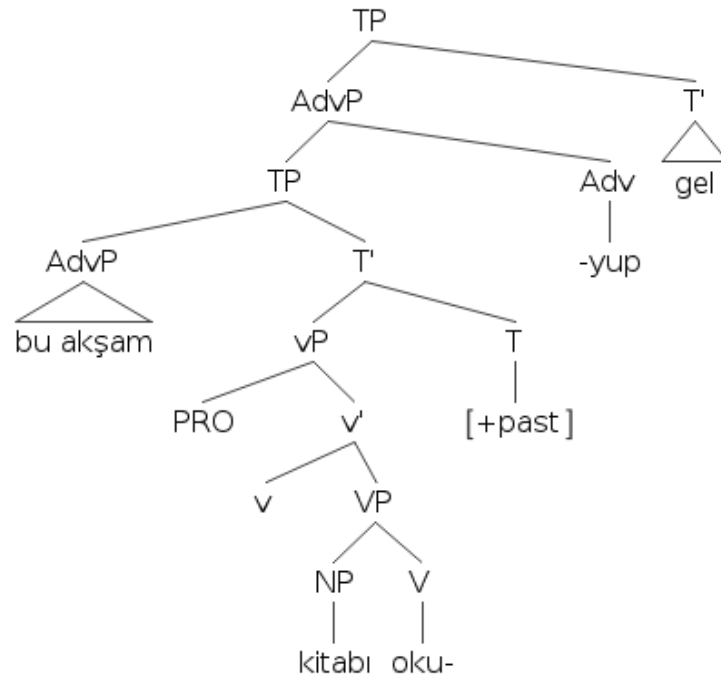
(44)



Structurally, the modifying single conjunctive marker looks like the non-modifying single conjunctive marker and not like the converbial conjunctive marker. The modifying single conjunctive marker also makes an adverbial clause analogous to the converbial conjunctive marker. However, there is no TP layer in the phrase structure representations of [VV] converbs as shown previously, whereas there must be a TP layer in the phrase structure representation of the adverbial clause made with the modifying single conjunctive marker. This is apparent by the fact that there can be time adverbs within these clauses as shown in (45).

- (45) [Bu akşam kitab-ı oku-yup] gel.
this night book-ACC read-CNJ come.IMP
“Come after you read the book tonight (and not some other time)”

(46)



In this section, the pair of converbial conjunctive markers was shown to be structurally different from the single conjunctive marker. Thus, a pair of converbial conjunctive markers under Adv head has been accounted for.

6.4 Conclusion

Phonological and morphological theories were shown to be inadequate for explaining various properties of [VV] converbs. Syntax on the other hand, explains the production of all [VV] converbs without over-generating. The internal structure of [VV] converbs have been discussed in detail. A phrase structure representation for them has been proposed. A new type of head (i.e. duoV) has been proposed in order to account for various qualities of [VV] converbs. Moreover, it has been established that the converbial markers are what makes the [VV] converbs adverbs and they go under the adverb head. Also, there being a pair of converbial markers was substantiated with numerous ways.

This syntactic explanation for the generation of [VV] converbs was based on the various properties they demonstrated in the data. Therefore, this explanation fits the data perfectly. On the other hand, it also fits the two models, namely of reduplications and co-compounds, used in this study. According to Inkelas & Zoll (2000, 2005)'s model on reduplication, the constituents must have identical morphosyntactic features. This is accounted for by the phrase structure representation proposed in this study since the constituents have to share their complements and adjuncts in this representation. According to Walchli (2005)'s model on co-compounds, the constituents must be on the same hierarchical level. This is accounted for by the duoV head since the duoV requires the constituents to be on the same hierarchical level.

CHAPTER 7

CONCLUSION AND DISCUSSION

7.1 The Summary of the Findings

In this study, three specific types of [VV] converbs in Turkish (i.e. ones marked with imperative, optative and conjunctive markers) have been examined. A corpus-based analysis reveals that [VV] converbs in Turkish are widely used and are productive.

This study has shown that these structures are co-compounds generated by the process of reduplication. In order to get to this conclusion, first [VV] converbs were established as reduplications. Following the definition of Inkelas & Zoll (2000, 2005) and Inkelas (2005, 2008, 2014), [VV] converbs were shown to possess the requirements of reduplications: (i) the constituents have identical argument structure, (ii) the constituents have identical case-matching properties, (iii) the constituents have identical thematic structures, (iv) the constituents have parallel inflection and (v) the constituents are semantically-related. Second, [VV] converbs were shown to have the reliable criteria of compounds: (i) the constituents are inseparable, (ii) the constituents cannot be coordinated and (iii) the constituents cannot be modified individually (Lieber & Štekauer, 2009). Third, [VV] converbs were classified as co-compounds due to the fact that they fit Wälchli (2005)'s description: the constituents are on the same hierarchical level (with relation to how much they contribute to the meaning of the whole).

Another issue raised in this study is related to the component of grammar in which [VV] converbs are generated. Phonology, morphology and syntax were evaluated one by one whether they can explain all the properties of [VV] converbs. Only syntax could account for all the properties of [VV] converbs because of the fact that [VV] converbs can take their own complements and/or adjuncts although they are adverbs. A single phrase structure

representation has been proposed for these three types of [VV] converbs. A new term, duoV, has been created for the compound verb which is still visible to syntax (i.e. two verbs of a [VV] converb can have a shared complement and/or adjunct).

Recall that one of the important observations with respect to the stress properties of [VV] converbs is that each daughter has phrasal stress. To put it differently, both constituents are stressed on the last syllable. Since [VV] converb structures were shown to be compounds, their peculiar stress patterns show that Turkish compounds have a variety of stress patterns and not just “compound stress” (Kabak & Vogel, 2001).

This study has two broader implications. One, by demonstrating [VV] converbs are compounds, this study has illustrated that process of reduplication in Turkish can produce compounds. This does not mean that every reduplication is a compound which has also been demonstrated. Two, any compound created by reduplication is a co-compound by default. This is due to semantic distinctions that classify co-compounds are a part of the requirements that define reduplications.

7.2 Limitations of the Study

Although this study is a preliminary work on Turkish [VV] converbs, there are some limitations of this study. The first limitation stems from the fact that the corpus used in the study was composed of written texts and not speech. It would be interesting to compare and contrast the usage of [VV] converbs in written and spoken language. However, a comprehensive corpus on spoken language does not exist for Turkish. This study has tried to compensate for the lack of spoken language data since [VV] converbs are very productive and mostly used in colloquial speech. In order to do that, websites where colloquial written texts are abundant such as twitter, facebook and blogs, were searched for specific examples. The second limitation stems from the fact that not all converbial markers have been analyzed and this study restricts itself to those with imperative, optative and conjunctive marker. This

restriction was due to reasons explained in the introduction; however, it still would be interesting to see whether all [VV] converbs behave similarly and possess identical properties. Finally, this study excludes [VV] constructions marked by TAM markers but which are used in adverbial functions (see Erbaşı, forthcoming). Even though these constructions are not converbs, they behave somewhat similarly; therefore, an in depth analysis of these structures would be interesting to compare with [VV] converbs.

7.3 Questions for Further Research

This thesis is the first comprehensive study on Turkish [VV] converbs; however, this study only analyzes three types of [VV] converbs. There is a need to look at other types of [VV] converbs which are marked by different converbial markers. Another important point that deserves more attention in the literature is on the compounding status of reduplications: Which reduplications make compounds? In addition, the literature on compounds which have a verbal elements such as [VV]_N, [NV]_V and [VN]_N have not been studied thoroughly. Such constructions require to be studied in detail. Also, the nominal properties of [VV] converbs have to be questioned. As illustrated with examples, some constructions that appear to be [VV] converbs have been used as adjectives and nouns. There needs to be a study investigating whether [VV] converbs can be used as adjectives or nouns or whether there are other word formation processes that create reduplicative compounds which are adjectives and/or nouns. Finally, it would be interesting to see the acquisition of [VV] converbs. The imperative marker and the optative markers surface with their tense-aspect-modality functions in children's language quite early (Ekmekçi, 1982). Therefore, it might be concluded that [VV] converbs with these markers will be acquired earlier than the ones with conjunctive marker. However, the imperative and the optative markers have more functions than the conjunctive marker. As Terziyan (2013) has found, children are more likely to use markers with fewer functions at early stages of language acquisition. This might mean that when

children start using [VV] converbs, they might initially prefer to use the ones with the conjunctive marker.

REFERENCES

- Acartürk, C. (2005). Gradient nature of unaccusative/unergative distinction in Turkish: An experimental investigation. Unpublished M. A Thesis: METU University.
- Adger, D. (2002). *Core syntax : a minimalist approach*. New York: Oxford University Press.
- Ağakay, M. A. (1954). Türkçe’de kelime koşmaları. *Türk Dili Araştırmaları Yıllığı-Belleten* 1954. Ankara: TDK yay. p. 97-104.
- Aikhenvald, A. (2010). *The Manambu Language of East Sepik, Papua New Guinea*. Oxford: Oxford University Press.
- Aksan, D. (1987). *Türkçenin Gücü*. Ankara: Türkiye İş Bankası Kültür Yayınları.
- Aksan, D. (1996). *Türkçe ’nin Sözcük Varlığı*. Ankara: Engin Yayınevi.
- Akyalçın, N. (2007). *Türkçede İkilemeler Sözlüğü: tanıklı*. Ankara: Anı Yayıncılık.
- Alexiadou, A. (2000). On the syntax of temporal adverbs and the nature of Spec, TP. *Rivista di linguistica* 12: 55-76.
- Allen, M. (1978). Morphological Investigations. Ph.D Dissertation, University of Connecticut.
- Ameka, F. (1999). The typology and semantics of complex nominal duplication in Ewe. *Anthropological Linguistics* 41:75-106.
- Arcodia, G. F., N. Grandi & B. Wälchli. (2010). Coordination in compounding. In Scalise, S. & I. Vogel (Eds.), *Cross-Disciplinary Issues in Compounding*. Amsterdam and Philadelphia: Benjamins, 177-198.
- Aronoff, M. & K. Fudeman. (2005). *What is morphology?*. Malden, MA : Blackwell Publications.
- Bağrıaçık, M. & A. Ralli. (2011). Bare N(ominal) N(ominal) Concatenations in Turkish: compounds or syntactic fallacies?. In N. Hathout & F. Montermini (eds) *Morphologie à Toulouse*. München: LINCOM.
- Baker, M. (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago: The University of Chicago Press.
- Baker, M. (1998). Comments on the Paper by Sadock. In Lapointe, S., D. Brentari, & P. Farrell (eds.), *Morphology and Its Relation to Phonology and Syntax*. Stanford: CSLI Publications. 188-212.
- Baker, M, R. Aronovich & L. A. Golluscio. (2005). Two types of syntactic noun incorporation: Noun incorporation in Mapudungun and its typological implications. *Language*, Vol. 81 p. 138-176.
- Baturay, S. (2010). Apophony in Turkish onomatopoeic reduplications. Unpublished M.A Thesis. Boğaziçi University.
- Bauer, L. (1983). *English Word-formation*. New York: Cambridge University Press.
- Bauer, L. (1983). Stress in compounds: a rejoinder. *English Studies* 64. p. 47-53.
- Bauer, L. (1988). *Introducing Linguistic Morphology*. Edinburgh: Edinburgh University Press.
- Bauer, L. (1998). Is there a class of neoclassical compounds, and if so is it productive? *Linguistics* 36 (3): 403-422.
- Bauer, L. (1998). When is a sequence of two nouns a compound in English? *English Language and Linguistics* 2: 65-86.
- Bauer, L. (2003). *Introducing Linguistic Morphology*. Edinburgh: Edinburgh University Press.
- Bauer, L. (2008). Dvandva. *Word Structure* 2 (1): 1-18.
- Bauer, L. (2011). Typology of Compounds. In Lieber, R. & P. Štekauer (Eds.), *The Oxford Handbook of Compounding*. New York: University Press.

- Bayırlı, İ. K. (2012). On suffixhood and verbalness: a Mirror Theoretic approach. Unpublished M.A Thesis. Boğaziçi University.
- Bayraktar, N. (2004). *Türkçede Fiilimsiler*. Ankara: Türk Dil Kurumu Yayınları.
- Bisang, W. (1994). Structural similarities of clause combining in Turkic, Mongolian, Manchu-Tungusic and Japanese-a typological alternative to the hypothesis of a genetic relationship. In L. Johanson (eds). *The Mainz Meeting Proceedings of the Seventh International Conference on Turkish Linguistics*. Harrassowitz Verlag-Wiesbaden p. 199-223.
- Borer, H. (2011). Afro-Asiatic, Semitic: Hebrew. In Lieber, R. & Štekauer, P. (Eds.), *The Oxford Handbook of Compounding*. Newyork: Oxford University Press.
- Braun, F., & Haig, G. (2000). The noun/adjective distinction in Turkish: An empirical approach. *Studies on Turkish and Turkic languages*, 85-92.
- Carnie, A. (2007). *Syntax: A generative Introduction*. Oxford; Malden, M. A: Blackwell Publishers.
- Cevat, A. E. (1945). *Türk dilbilgisi : Türkçenin bugünkü ve geçmişteki gelişimleri üzerine gramer denemesi*. İstanbul : Cumhuriyet matbaası.
- Childs, G. T. (2011). *A grammar of Mani*. Berlin: Walter de Gruyter.
- Chomsky, N. (1970). Remarks on Nominalization. In Jacobs, R. & P. Rosenbaum (eds.), *Readings in English Transformational Grammar*. Waltham: Blaisdell. 184-221.
- Corbett, G. G. (2010). Universals and Features. In Scalise, S., E. Magni & A. Bisetto (eds) *Universals of Language Today*. Dordrecht: Springer. p. 129-144.
- Çoraklı, Ş. (2001). Türkçe'nin yaratma gücü ikilemeler (I). *A.Ü. Türkiyat Araştırmaları Enstitüsü Dergisi* 17: 53-59.
- Çoraklı, Ş. (2005). Türkçenin yaratma gücü ikilemeler (II). *A.Ü. Türkiyat Araştırmaları Enstitüsü Dergisi* 27: 41-44.
- Çotuksöken, Y. (1991). *Türkçede Ekler-Kökler-Gövdeler*. İstanbul: Cem Yayınevi.
- Craig, M. 1980. Aroma morphology. *Kivung* 12:111-133.
- Dede, M. (1978). A Syntactic and Semantic Analysis of Turkish Nominal Compounds. Ph.D Dissertation, University of Michigan.
- Di Sciullo, A. & E. Williams. (1987). *On the definition of word*. Cambridge: MIT Press.
- Dixon, R. M. V & A.Y. Aikhenvald. (2002). *Word : a cross-linguistic typology*. New York : Cambridge University Press.
- Dressler, W. U. (2006). Compound Types. In Libben, G. and Jarema, G. (eds.) *The representation and processing of compound words*. Newyork: Oxford University Press.
- Ediskun, H. (1985). *Türk dilbilgisi: sesbilgisi, biçimbilgisi, cümlebilgisi*. İstanbul: Remzi Kitabevi.
- Ekmekçi, F. Ö. (1982). Acquisition of verbal inflections in Turkish. *METU Journal of Human Sciences*, 1(2), 227-241.
- Erbaşı, B. (forthcoming). The Inflected Doubled Verbs in Turkish. Boğaziçi University.
- Ergin, M. (1972). *Türk Dil Bilgisi*. İstanbul: İstanbul Üniversitesi Edebiyat Fakültesi Yayınları.
- Fabb, N. (2001). Compounding. In Spencer, A. & A. M. Zwicky (Eds.), *Handbook of Morphology*, Oxford: Blackwell.
- Fokkens, A., L. Poulson & E. M. Bender. (2009). Inflectional Morphology in Turkish VP Coordination. In Müller, S. (Eds.), *Proceedings of the HPSG09 Conference Georg-August-Universität Göttingen, Germany*. Germany: CSLI Publications. (<http://csli-publications.stanford.edu>, accessed on April, 2014)
- Giegerich, H. J. (1999). *Lexical Strata in English: Morphological Causes, Phonological Effects*. Cambridge: Cambridge University Press.

- Giegerich, H. J. (2004). Compound or phrase? English noun-plus-noun constructions and the stress criterion. *English Language and Linguistics* 8: 1-24.
- Giegerich, H. J. (2011). Compounding and Lexicalism. In Lieber, R. & P. Štekauer (Eds), *The Oxford Handbook of Compounding*. Oxford: Oxford University Press. 178-200.
- Gil, D. (2005). From repetition to reduplication in Riau Indonesian. In Bernhard Hurch (Eds.), *Studies on Reduplication*. Berlin: Mouton de Gruyter. p. 31-64.
- Gökdağ, B.A. (2007). Birleşik Kelime Olarak İkilemeler, Sayılar ve Birleşik Fiiller. In Develi, H. (Eds.), *Uluslararası Türk Dili ve Edebiyatı Kongresi: UTEK 2007, 27-28 Ağustos 2007*, 219-225.
- Göksel, A. & Kerslake, C. (2005). *Turkish: A Comprehensive Grammar*. London: Routledge.
- Göksel, A. & Haznedar, B. (2007). Remarks on Turkish compounds. (<http://componet.sslmit.unibo.it/download/remarks/TR.pdf>, accessed on June 2012)
- Göksel, A. (2009). Compounds in Turkish. *Lingue e Linguaggio*, Vol. 2; 213-236.
- Guevera, E. & S. Scalise. (2010). Searching for Universals in Compounding. In Scalise, S., E. Magni & A. Bisetto (Eds.), *Universals of Language Today*. Dordrecht: Springer. p. 101-128.
- Güler, S. (2003). A study on Turkish reduplications: some observations on form and fuction of reduplication. Unpublished M.A Thesis: Mersin University.
- Güneş, G. (2009). On the formation of [V+V] compounds in Turkish. In the *Proceedings of 2nd Mediterranean Graduate Students Meeting in Linguistics*. Mersin: Turkey.
- Gürsu, R. (2009). Kırım Tatarcasında ve Türkiye Türkçesinde Emir Kipinde Görülen Anlam ve İşlev Kaymaları. *IV. Uluslararası Büyük Türk Dili Kurultayı 26-28 Eylül 2009 Bildiri Kitabı*. Kırım-Ukrayna, 414-425.
- Haiman, J. (1980) *Hua: A Papuan Language of the Eastern Highlands of New Guinea*. *Studies in Language Companion Series* Vol. 5. John Benjamins.
- Hacken, T. (2000). Derivation and Compounding. In Booij, G.; C. Lehmann & J. Mugdan (Eds.), *Morphologie - Morphology: Ein Handbuch zur Flexion und Wortbildung - A Handbook on Inflection and Word Formation*. Berlin: Walter de Gruyter, 349-360.
- Halle, M. (1973). Prolegomena to a Theory of Word Formation. *Linguistic Inquiry* 4, p. 3-16.
- Haspelmath, M. (1995). The converb as a cross-linguistically valid category. In Haspelmath, M. & E. König (eds), *Converbs in Cross-linguistic perspective*. Berlin, New York: Mouton de Gruyter. (p. 1-56).
- Haspelmath, M. (2002). *Understanding Morphology*. London: Hodder Education.
- Hatiboğlu, V. (1972). *Türkçenin Sözdizimi*. Ankara: Türk Dil Kurumu Yayınları.
- Hatiboğlu, V. (1973). *Pekiştirme ve Kuralları*. Ankara: Türk Dil Kurumu Yayınları.
- Hatiboğlu, V. (1981). *Türkçenin Ekleri*. Ankara: Türk Dil Kurumu Yayınları.
- Haugen, J. D. & C. H. Kennard. (2011). Base-dependence in reduplication. *Morphology* (21): 1-29.
- Hayasi, T. (1996). The dual status of possessive compounds in modern Turkish. In Á. Berta, B. Brendemoen and C. Schönig (eds.) *Symbolae Turcologicae*, Vol. 6, 119-129. Stockholm.
- Heine, B. & T. Kuteva. (2009). The genesis of grammar: on combining nouns. In Botha, R. & H. de Swart (eds) *Language Evolution: The view from restricted review systems*. Netherlands: LOT. p. 139-178.
- Hornstein, N., J. Nunes & K. K. Grohmann. (2005). *Understanding Minimalism*. Newyork: Cambridge University Press.
- Hurch, B. (2005). Introduction. In Hurch, B. (Eds), *Studies on Reduplication*. Berlin: Mouton de Gruyter.
- Hyman, Larry M. (2009). The natural history of verb stem reduplication in Bantu. *Morphology* 19:177-206.

- Inkelas, S. (1998). The theoretical status of morphologically conditioned phonology: a case study from dominance. *Yearbook of Morphology 1997*: 121-155.
- Inkelas, S. & C. O. Orgun. (1998). Level (non)ordering in recursive morphology: evidence from Turkish. In Lapointe, S., D. Brentari & P. Farrell (eds.), *Morphology and its relation to phonology and syntax*. Stanford, CA: CSLI Publications, 360-392.
- Inkelas, S. (2005). Morphological doubling theory: evidence for morphological doubling in reduplication. In Bernhard Hurch (eds) *Studies on Reduplication*. Berlin: Mouton de Gruyter. p. 65-89.
- Inkelas, S & C. Zoll. (2000). Reduplication as Morphological doubling. *Manuscript, University of California, Berkeley and Massachusetts Institute of Technology*.
- Inkelas, S. & C. Zoll. (2005). *Reduplication: Doubling in morphology*. Newyork: Cambridge Univesity Press.
- Inkelas, S. (2008). "The Dual Theory of Reduplication". *Linguistics* 46: 351-402.
- Inkelas, S. (2014). Reduplication. To appear in Rochelle Lieber and Pavel Stekauer (eds.), *Oxford Handbook of Derivational Morphology*. Oxford University Press. Anticipated September 2014. Prepublication version. (<http://linguistics.berkeley.edu/~inkelas/Papers/2013HandbookOfDerivationInkelas.pdf> accessed on April, 2014)
- Jackendoff, R. (1975). Morphological and Semantic Regularities in the Lexicon. *Language* 51, p. 639-671.
- Jespersen, O. (1949). *A modern English grammar on historical principles*. Copenhagen : E. Munksgaard.
- Kabak, B. & Vogel, I. (2001). The phonological word and stress assignment in Turkish. *Phonology* 18:315-360.
- Kallergi, Charitini. (2009). Word Iteration in Modern *Greek* . [Presentation]. Workshop on The Grammar of Reiteration, 18-19 June 2009, Centre National de la Recherche Scientifique, Paris.
- Kamali, B. & D. İközöğlu (undated). Against compound stress in Turkish.
- Katamba, F. (1993). *Morphology*. New York, N.Y. : Palgrave Macmillan.
- Kayne, R. (1994). *The Antisymmetry of Syntax*. Cambridge, MA.: MIT Press.
- Keenan, E. L. (1987). Multiply-Headed Noun Phrases. *Linguistic Inquiry*, Vol. 18, No. 3 (Summer, 1987), p. 481-490
- Ketrez, N. (1999). Early verbs and the acquisition of Turkish argument structure. M.A Thesis. Bogazici University.
- Ketrez, N. (2012). *A Student Grammar of Turkish*. New York : Cambridge University Press.
- Key, Harold. (1965). Some semantic functions of reduplications in various languages. *Anthropological Linguistics* 7 (3), part 2, 88-101.
- Khan, S. (2006) Similarity Avoidance in East Bengali Fixed-Segment Reduplication. In *Proceedings of Western Conference on Linguistics 17*, 257 – 271.
- Kingdon, R. (1958). *The groundwork of English stress*. London: Longman.
- Kiparsky, P. (2009). Verbal co-compounds and sub-compounds in Modern Greek. *Proceedings of the Workshop in Greek Syntax and Semantics at MIT*, June 2007. *MIT working papers in Linguistics* 57.
- Kirchner, J. S. (2010). Minimal Reduplication. Unpublished PhD dissertation. University of California Santa Cruz.
- Kiyomi, S. (1995). A new approach to reduplication: A semantic study of noun and verb reduplication in the Malayo-Polynesian languages. *Linguistics* 33. 1145-1167
- Koç, N. (1992). *Açıklamalı Dilbilimleri Sözlüğü*. İstanbul: İnkılap Kitabevi.
- Korkmaz, Z. (2003). *Türkiye Türkçesi Grameri*. Ankara: Türk Dil Kurumu Yayınları.

- Kunduracı, A. (2013). Turkish Noun-Noun Compounds: A Process-Based Paradigmatic Account. PhD Dissertation. University of Calgary.
- Ladd, R. D. (1984). English compound stress. In Gibbon, D. & H. Richter (eds) *Intonation, Accent and Rhythm: Studies in Discourse Phonology*. Berlin/New York: Walter de Gruyter. p. 253-266.
(http://books.google.com.tr/books?hl=tr&lr=&id=N8nbHJr767YC&oi=fnd&pg=PA253&dq=english+compound+stress&ots=rL5nuiDgQN&sig=JXloj1nT804r4xVr4NYIdGls8rs&redir_esc=y#v=onepage&q=english%20compound%20stress&f=false accessed on March, 2013)
- Lakoff, G. & Johnson, M. (1980). *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lees, R. B. (1963). *The Grammar of English nominalizations*. Bloomington: Indiana University.
- Lewis, G. 1967. *Turkish Grammar*. Oxford: Oxford University Press.
- Lieber, R. (1992). *Deconstructing Morphology*. Chicago: University of Chicago Press.
- Lieber, R. (2004). *Morphology and lexical semantics*. Cambridge: Cambridge University Press.
- Lieber, R. & Scalise, B. (2007). The Lexical Integrity Hypothesis in a New Theoretical Universe. *2007 Università degli Studi di Bologna On-line Proceedings of the Mediterranean Morphology Meetings (MMM)*. (<http://mmm.lingue.unibo.it/>)
- Lieber, R. & Štekauer, P. (2011). Introduction: status and definition of compounding. In Lieber, R. and Štekauer, P. (Eds.), *The Oxford Handbook of Compounding*. New York: Oxford University Press.
- Marantz, A. (1982). Rereduplication. *Linguistic Inquiry* 13, pp. 435-482
- Marchand, H. (1960). *The categories and types of present-day English word-formation. A synchronic-diachronic approach*. Wiesbaden: Otto Harrassowitz.
- Mattes, V. (2006). One form – opposite meanings? Attenuative and intensive interpretation of full reduplication in Bikol. [oral presentation, International 43 Conference on Austronesian Linguistics 10, 2006, Puerto Princesa, The Philippines]. Paper available online at http://reduplication.uni-graz.at/texte/paper_ICAL.pdf.
- McCarthy, John and Alan Prince. (1986). *Prosodic Morphology*. Ms., UMass and Brandeis.
- McCarthy, John and Alan Prince. (1995). Faithfulness and reduplicative identity. In Beckman, J., L. Dickey & S. Urbanczyk (eds.), *University of Massachusetts Occasional Papers in Linguistics 18: Papers in Optimality Theory*. Amherst, MA: GLSA. 249-384.
- McCarthy, J., & Prince, A. (1999). Faithfulness and identity in prosodic morphology. In R. Kager, H. van der Hulst, & W. Zonneveld (Eds.), *The prosody-morphology interface*. Cambridge University Press.
- Moravcsik, E.A. (1978). Reduplicative constructions. In J. H. Greenberg et al (Eds.), *Universals of Human Language* Vol. 3 California: Stanford University Press, p. 297-334.
- Munn, A. B. (1993). *Topics in the Syntax and Semantics of Coordinate Structures*. PhD dissertation, University of Maryland.
- Nakipoğlu-Demiralp, M. (2002). Türkçe'de ayrık geçişsiz eylemlerin olay yapısal bir incelemesi. [An event structural investigation of the split intransitivity in Turkish]. *Dilbilim Araştırmaları*, 1-16.
- Naylor, Paz Buenaventura. (1986). On the semantics of reduplication. In *Focal I: Papers from the Fourth International Conference on Austronesian Linguistics*, P. Geraghty, L. Carrington, and S. A. Wurm (eds.), 175-185. Pacific Linguistics Series c (93). Canberra: Australian National University
- Nevins, A. & B. Vaux. (2003). "Metalinguistic, shmetalinguistic: the phonology of shm-reduplication". *Proceedings of CLS 39*.

- Nevins, A. I. (2005). Overwriting Does Not Optimize in Nonconcatenative Morphology. *Linguistic Inquiry* 36: 275–287.
- Newman, P. (2000). *The Hausa language: an encyclopedic reference grammar*. New Haven: Yale University Press.
- Niepokuj, Mary K. (1991). The historical development of reduplication, with special referenceto Indo-European. Ph.D. Dissertation., University of California, Berkeley.
- Olsen, S. (2000). Compounding and stress in English: A closer look at the interface between morphology and syntax. *Linguistische Berichte* 181: 55-69.
- Olsen, S. (2001). Copulative compounds: A closer look at the interface between morphology and syntax. *Yearbook of Moprhology 2000*. Dordrecht: Kluwer. p. 279-320.
- Olsen, S. (2004). Coordination in morphology and syntax: The case of copulative compounds. In Meulen, ter A. & Abraham, W. *The Composition of Meaning: From lexeme to discourse*. Amsterdam; Philedalpia: John Benjamins Co.
- Orgun, C. O. (1997). Cyclic and non-cyclic effects in a declarative grammar. *Yearbook of morphology 1997*: 179-218.
- Orgun, C. O. (1999). Sign-based morphology: a declarative theory of phonology-morphology interleaving. In Ben Hermans & Marc van Oostendorp (eds), *The derivational residue in phonological Optimality Theory*. Amsterdam: John Benjamins, 247-267.
- Orgun, C. & Inkelas, S. (2003). Turkish stress: a review. *Phonology* 20: 139-161.
- Özkan, M. (2004). Deyimleşmiş İkilemeler. *V. Uluslararası Türk Dili Kurultayı Bildirileri II 20-26 Eylül 2004*. Ankara: Türk Dil Kurumu Yayınları. p. 2289-2318.
- Özkan, B. (2011). *Türkiye Türkçesinde Belirteçlerle Fiillerin Birlikte Kullanılması ve Eş Dizimlilikleri –Derlem Tabanlı Bir Uygulama-*. Ankara: Türk Dil Kurumu Yayınları.
- Palmer, B. 2009. *Kokota grammar*. Oceanic Linguistics Special Publication no. 35. University of Hawai’i Press.
- Plag, I. (2003). *Word-formation in English*. New York : Cambridge University Press.
- Plag, I. (2006). The variability of compound stress in English: structural, semantic and analogical factors. *English Language and Linguistics* 10(1). 143-172.
(https://www.phil-fak.uni-duesseldorf.de/anglistik3/plag/publications_plag/, accessed on April 25th, 2014)
- Plag, I., G. Kunter & S. Lappe. (2007). Testing hypotheses about compound stress assignment in English: a corpus-based investigation. *Corpus Linguistics and Linguistic Theory* 3(2). 199-233. ([https://www.phil-fak.uni-duesseldorf.de/fileadmin/Redaktion/Institute/Anglistik/Anglistisches Institut/Dokumente/HPdataext/Ingo Plag/Publications/Testing hypotheses about compound stress_a ssgiment in English a corpus based investigation.pdf](https://www.phil-fak.uni-duesseldorf.de/fileadmin/Redaktion/Institute/Anglistik/Anglistisches_Institut/Dokumente/HPdataext/Ingo_Plag/Publications/Testing_hypotheses_about_compound_stress_assignment_in_English_a_corpus_based_investigation.pdf) , accedssed on April, 2014)
- Pylkkanen, L. (2008). *Introducing arguments*. Cambridge, MA: MIT Press.
- Raimy, E. (2000). *The phonology and morphology of reduplication*. Berlin and Newyork: Mouton de Gruyter.
- Ralli, A. (2008). Greek Deverbal Compounds with Bound Stems. *Southern Journal of Linguistics* 29 (1-2): 150-173
- Ralli, A. (2009). Modern Greek VV dvandva compounds: A linguistic innovation in the history of the Indo-European languages. *Word Structure* 2: 48-67.
- Regier, T. (1998). Reduplication and the arbitrariness of the sign. In *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society*, M. Gernbacher and S. Derry (eds.), 887-892. Mahwah, NJ: Lawrence Erlbaum Associates.
- Roach, P. (1983). *English Phonetics and Phonology: A practical course*. Cambridge: Cambridge University Press.
- Ross, J. R. (1967). *Constraints on Variables in Syntax*. Ph.D. Dissertation. Cambridge, MA.: MIT Press.

- Rubino, C. (2005). Reduplication: Form, function and distribution. In Bernhard Hurch (eds) *Studies on Reduplication*. Berlin: Mouton de Gruyter. Berlin: Mouton de Gruyter, 11-30.
- Rubino, C. (2013). Reduplication. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at <http://wals.info/chapter/27>, Accessed on 2014-07-07.)
- Sampson, R. (1980). Stress in English N+N phrases: A further complicating factor. *English Studies: A Journal of English Language and Literature* 3: 264-270.
- Scalise, S. (1992). Compounding in Italian. In Scalise, S. (eds) *The Morphology of Compounding*. Special Issue of *Rivista di Linguistica* 4 (1): 175-200.
- Scalise, S. & E. Guevara. (2005). The Lexicalist Approach to Word-Formation and the Notion of the Lexicon. *Studies in Natural Language and Linguistic Theory Volume 64*. p. 147-187.
- Scalise, S. & Fabregas, A. (2010). The head in compounding. In Scalise, S. & I. Vogel (eds.), *Cross-Disciplinary Issues in Compounding*. Amsterdam, Philadelphia : John Benjamins Pub. Co.
- Scalise, S. & Vogel, I. (2010). Why compounding?. In Scalise, S. and Vogel, I. (eds.) *Cross-Disciplinary Issues in Compounding*. Philadelphia: John Benjamins B. V.
- Scalise, S. & Bisetto, A. (2011). The classification of compounds. In Lieber, R. and Štekauer, P. (eds.) *The Oxford Handbook of Compounding*. New York: Oxford University Press.
- Schaaik, G. v. (2002). *The Noun in Turkish-Its Argument Structure and The Compounding in Straitjacket*. Harrassowitz Verlag-Weisbaden.
- Schroeder, C. (1999). *The Turkish Nominal Phrase in Spoken Discourse*. Wiesbaden: Harrassowitz.
- Sebüktekin, H. I. (1971). *Turkish-English Contrastive Analysis: Turkish Morphology & Corresponding English Structures*. The Hague: Mouton.
- Selkirk, E. O. (1982). *The syntax of words*. Cambridge: MIT Press.
- Sezer, E. (2001). Finite Inflection in Turkish. In E. E. Taylan (Eds), *The verb in Turkish*. Amsterdam: John Benjamins, 1-46.
- Singh, R. 1982. On some 'redundant compounds' in Modern Hindi. *Lingua* 56: 345-351.
- Smith, C. (1971). *The parameter of Aspect*. Dordrecht: Kluwer Academic Publishers.
- Spencer, A. & A. M. Zwicky. (2001). *The handbook of morphology*. Oxford: Blackwell.
- Spencer, A. (2003). Does English have productive compounding. In *Topics in Morphology. Selected papers from the 3rd mediterranean morphology meeting*, 329-341.
- Steriade, D. (1988). Reduplication and syllable transfer in Sanskrit and elsewhere. *Phonology*, 5, pp 73-155.
- Stolz, T., C. Stroh & A. Urdze. (2011). *Total Reduplication The Areal Linguistics of a Potential Universal*. *Studia typologica* 8. Berlin: Akademie Verlag.
- Swift, L. B. (1963). *A reference grammar of Modern Turkish*. Bloomington : Indiana University.
- Takashi, K. (2002). Temporal proximity: an organizing factor of four major aspects in Thai. *Linguistics* Vol. 2 (2002), 1-17.
- Taylan, E. E. (2001). On the relation between temporal/aspectual adverbs and the verb form in Turkish. In Taylan, E. E. (eds), *The verb in Turkish*. Amsterdam/Philadelphia: John Benjamins Publishing Company. (p. 97-128)
- Toman, J. (2003). Compounding. In William J. Frawley (ed.), *The international encyclopedia of linguistics*, 2nd edition. p. 349-352.

- Travis, Lisa. (2001). The Syntax of Reduplication, in Minjoo Kim and Uri Strauss, (eds.), *Proceedings of the North Eastern Linguistics Society Annual Meeting* (NELS 31), Amherst, MA: GLSA, p. 455-469.
- Travis, L. (2003). Reduplication feeding syntactic movement. In *Proceedings of the 2003 Canadian Linguistic Association annual conference* p. 236-247.
- Terziyan, T. (2013). *Acquisition of Modality in Turkish*. [M.A. Thesis, Boğaziçi University, Istanbul.]
- Tuna, O. N. (1986). Türkçenin Sayıca Eş Heceli İkilemelerinde Sıralama Kuralları ve Tabii Bir Ünsüz Dizisi. *Türk Dili Araştırmaları Yıllığı-Belleten*, 1982-1983, Ankara 1986, 163-228.
- Türkçe Sözlük. (2005). Ankara: Türk Dil Kurumu Yayınları.
- Urbanczyk, S. (2006). Reduplicative form and the root-affix asymmetry. *NLLT* 24:179-240
- Uygun, D. (2009). A split model for category specification: Lexical Categories in Turkish. PhD Dissertation: Boğaziçi University.
- Wälchli, B. (2005). *Co-compounds and natural coordination*. Oxford: Oxford University Press.
- Wilbur, R. (1973). *The phonology of reduplication*. Bloomington: Indiana University Linguistics Club Publications.
- Williams, E. (1981). Argument structure and morphology. *Linguistic Review* 1, 81-114.
- Wood, E. & A. Garrett. (2001). The semantics of Yurok intensive infixation. In Jeannie Castillo (ed.), *Proceedings from the Fourth Workshop on American Indigenous Languages*. UC Santa Barbara, Department of Linguistics. 112-126.
- Yastı, M. (2007). Türkçe deyimlerde geçen ikilemelerin ses ve şekil özellikleri. *Türkiyat Araştırmaları Dergisi* 21: 51-87.
- Yükseker, H. (1987). Turkish Nominal Compounds. In Avery, P. & H. Yüksek (Eds.), *Toronto Working Papers in Linguistics* 7. Department of Linguistics, University of Toronto. 83-102.

APPENDIX I

A

1. aç kapa
2. ağla ağla
3. ağla inle
4. ağla zırla
5. anlat anlat
6. as kes
7. atla zıpla
8. azalt azalt
9. azalt çoğalt

B

1. bağır bağır
2. bağır çağır
3. bas bas
4. bastır bastır
5. bat çık
6. batır çıkar
7. bekle bekle
8. bırak bırak
9. bul buluştur
10. büz büz

Ç

1. çal çırp
2. çalış çalış
3. çalış çabala
4. çalış didin
5. çek çek
6. çekiştir çekiştir
7. çiğne çiğne

D

1. dayan dayan
2. değiştir değiştir
3. dinle dinle
4. dövüş çekiş
5. dur dur
6. düş kalk
7. düşün taşın

E

1. eğlen eğlen
2. elle elle
3. ertele ertele
4. evir çevir
5. ez ez

G

1. gez gez
2. gez dolaş
3. gez toz
4. giyin kuşan
5. giyin soyun
6. gül gül

H

1. hapşır hapşır
2. hapşır tıksır
3. hopla zıpla

I

1. ıkm ıkm
2. ıkm sıkın

İ

1. iç sıç
2. iğren iğren
3. in çık
4. inle inle
5. itiş kakış
6. imzala imzala

K

1. kaldır kaldır
2. kes biç
3. kes kes
4. kokla kokla
5. koru kolla
6. koş koş
7. kurula kurula

O

1. okşa okşa
2. oku oku
3. osur osur
4. otur kalk
5. otur otur
6. oy oy
7. oyala moyala
8. oynat oynat

Ö

1. öğret öğret
2. öksür öksür

3. öksür tıksır
4. öl bayıl
5. ölç biç

S

1. sakla sakla
2. salla salla
3. seç seç
4. sil sil
5. sor sor
6. söyle söyle
7. sür sür
8. sür sürüşür

Ş

1. şişir şişir

T

2. tak çıkar
3. tak takıştır
4. taşı taşı

Ü

1. üfle üfle
2. üfle püfle
3. üşü üşü
4. üzül üzül

V

1. ver ver
2. ver veriştir
3. vur kır
4. vur vur

Y

1. yalvar yalvar
2. yalvar yakar
3. yat kalk
4. yat yat
5. yaz çiz
6. yaz yaz
7. ye iç
8. ye ye
9. yürü yürü

APPENDIX II

A

1. aç aça
2. aç aça
3. aç aça
4. ağla ağla
5. ağla ağla
6. ağla ağla
7. ağla ağla
8. ağla ağla
9. ağla ağla
10. ağla ağla
11. ağla ağla
12. ağla ağla
13. ağla ağla
14. ağla ağla
15. ağla ağla
16. ağla ağla
17. ağla ağla
18. ağla ağla
19. ağla ağla
20. ağla ağla
21. ağla ağla
22. ağla ağla
23. ağla ağla

B

1. bağ bağ
2. bağ bağ
3. bağ bağ
4. bağ bağ
5. bağ bağ
6. bağ bağ
7. bağ bağ
8. bağ bağ
9. bağ bağ
10. bağ bağ
11. bağ bağ
12. bağ bağ
13. bağ bağ
14. bağ bağ

Ç

1. çabal çabal
2. çala çala
3. çala çabal
4. çatla çatla
5. çeke çeke
6. çeke sürükleye

7. çekiş dövüş

8. çekiş oynaş

9. çiz çiz

D

1. dala dala
2. dala dala
3. dallana budaklana
4. damla damla
5. derle derle
6. derle derle
7. dinlene dinlene
8. diye diye
9. dolana dolana
10. dolaş dolaş
11. doya doya
12. dövüş çekiş
13. döne dolaş
14. döne döne
15. dura dura
16. duya duya
17. düş kaka
18. düş düş
19. düşün düşün
20. düşün taşına

E

1. eğil bükül
2. eğil eğil
3. ellele ellele
4. evelele gevelele
5. evire çevire
6. eze eze
7. ezile ezile
8. ezile büzül
9. eziş büzüş

G

1. geç geç
2. gele gele
3. gele gide
4. gere gere
5. geze dolaş
6. geze geze
7. geze toza
8. gide gide
9. gide gele
10. gire dala
11. giyine kuşana

12. göç göç

13. göre göre

14. görüş görüş

15. güle güle

16. güle eğlene

17. güle güle

18. güle oynaya

19. güle konuşa

20. güle söyleye

21. gülüş bağrış

22. gülüş çığış

23. gülüş gülüş

24. gülüş konuşa

25. gülüş oynaş

H

1. hapsıra hapsıra

2. hapsıra tıksıra

3. hoplaya hoplaya

4. hoplaya zıplaya

I

1. ıkına ıkına

2. ıkına sıkına

İ

1. içe sıça

2. iğrene iğrene

3. ine dala

4. inlele inlele

5. inlete inlete

6. istemeye istemeye

7. ite çeke

8. ite ite

9. ite kaka

10. itile itile

11. itile kakıla

12. itiş kakış

K

1. kaça kaça

2. kala kala

3. kaldıra kaldıra

4. kana kana

5. kasıla kasıla

6. katıla katıla

7. kese biç

8. kese kese

9. kırıla döküle

10. kırıta kırıta
11. kızara bozara
12. kızara kızara
13. kızarta kızarta
14. koklaşa koklaşa
15. kopara kopara
16. konuşa konuşa
17. korka korka
18. koruya kollaya
19. koruya koruya
20. koşa koşa
21. köpüre köpüre
22. kurula kurula

O

1. oflaya oflaya
2. oflaya puflaya
3. okuya okuya
4. ola ola
5. otura kalka
6. otura otura
7. oynaya oynaya

Ö

1. öğrenene öğrenene
2. öksüre öksüre
3. öksüre tıksıra
4. öle bayıla
5. öle öle
6. ölçe ölçe
7. ölçe biç
8. öpe koklaya
9. öpe öpe
10. öve öve
11. özene bezene
12. özene özene

S

1. sakına çekine

2. sakına sakına
3. salına salına
4. sallana sallana
5. seçe seçe
6. seke seke
7. seve seve
8. sevine sevine
9. sere serpe
10. sıkı sıkı
11. sıkıla sıkıla
12. sike sike
13. sile sile
14. sindire sindire
15. soka soka
16. sora sora
17. sora soruştura
18. soruştura soruştura
19. söylene söylene
20. söylemeye söylemeye
21. sürüye sürüye

Ş

1. şişire şişire

T

1. taka taka
2. tepe tepe
3. terleye terleye
4. titreye titreye

U

1. uça uça
2. uflaya puflaya
3. uğraşa uğraşa
4. utana çekine
5. utana sıkıla
6. utana utana
7. uydura kaydıra

8. uydura uydura

Ü

1. üfleye üfleye
2. üfleye püfleye
3. üşüye üşüye
4. üzüle üzüle

V

1. vara vara
2. vere vere
3. vura kıra
4. vura vura

Y

1. yaka yaka
2. yalvarta yakarta
3. yalvara yalvara
4. yana yakıla
5. yana yana
6. yapa yapa
7. yata kalka
8. yata yata
9. yaya yaya
10. yaza çiz
11. yaza yaza
12. yıka yıka
13. yıkaya yıkaya
14. yıkana yıkana
15. yiye iç
16. yiye yiye
17. yola yola
18. yuta yuta
19. yuvarlaya yuvarlaya
20. yuvarlana yuvarlana
21. yürüye yürüye
22. yüze yüze

APPENDIX III

A

1. açıp açıp
2. ağlayıp ağlayıp
3. ağlayıp inleyip
4. ağlayıp sızlayıp
5. ağlayıp sızlanıp
6. aka aka
7. aka koka
8. alıp alıp
9. alınıp gücenip
10. alıştırıp alıştırıp
11. arayıp arayıp
12. arayıp sorup
13. arayıp taratıp
14. asıp kesip
15. atıp tutup
16. ayılıp bayılıp
17. azıp azıp

B

1. bağırp bağırp
2. bağırp çağırıp
3. bakıp bakıp
4. basıp basıp
5. başlayıp başlayıp
6. bekleyip bekleyip
7. bıkıp usanıp
8. bırakıp bırakıp
9. bitip bitip
10. bayılıp bayılıp
11. bulup bulup
12. bulup buluşturup

Ç

1. çalıp çalıp
2. çalıp çırpıp
3. çalışıp çabalayıp
4. çalışıp çalışıp
5. çalışıp didinip
6. çekip çekip
7. çekip çevirip
8. çizip çizip
9. çözüp çözüp

D

1. dalıp dalıp
2. dallanıp
budaklanıp
3. darılıp darılıp

4. darılıp gücenip
5. değiştirep
değiştirep
6. derleyip toplayıp
7. doğurup doğurup
8. doğurup dokuyup
9. döğüşüp çekişip
10. dökülüp saçılıp
11. dönüp dolaşp
12. dönüp dönüp
13. durup durup
14. düşüp kalkıp
15. düşünüp düşünüp
16. düşünüp taşınıp

E

1. elleyip elleyip
2. erteleyip erteleyip
3. eskitip eskitip
4. eveleyip geveleyip
5. evirip çevirip
6. ezip ezip

G

1. gelip gelip
2. gelip gidip
3. gezip dolaşp
4. gezip gezip
5. gezip tozup
6. gidip gidip
7. gülüp gülüp
8. gülüp oynayp

H

1. hapsirip hapsirip
2. hoplayıp zıplayıp

I

1. ıkınıp sıkılıp
2. ısıtıp ısıtıp

İ

1. içip içip
2. inip çıkıp
3. itip kakıp

K

1. kaçıp kaçıp
2. kaldırıp kaldırıp
3. kalkıp kalkıp

4. katlayıp katlayıp
5. kesip biçip
6. kesip kesip
7. kırıp döküp
8. kıvırıp kıvırıp
9. kızıp kızıp
10. koklayıp koklayıp
11. konuşup konuşup
12. koparıp koparıp
13. kovup kovup
14. kudurup kudurup
15. küsüp barışp
16. küsüp küsüp

O

1. oflayıp oflayıp
2. oflayıp puflayıp
3. okuyup okuyup
4. okuyup öğrenip
5. okuyup üfleyip
6. oturup kalkıp
7. oturup oturup

Ö

1. öğrenip öğrenip
2. öğretip öğretip
3. öksürüp öksürüp
4. öksürüp tıksırıp
5. öpüp koklayıp
6. öpüp öpüp
7. ölüp bayılıp
8. ölüp ölüp
9. ölçüp biçip
10. ölçüp ölçüp
11. özenip bezenip

S

1. saklayıp saklayıp
2. sarıp sarmalayıp
3. sayıp sövüp
4. seçip seçip
5. sevip sayıp
6. sıkılıp sıkılıp
7. sırtıp sırtıp
8. silip süpürüp
9. silinip süprülüp
10. sokup sokup
11. sorup sorup
12. sorup soruşturup

13. soyunup dökünüp
14. söküp söküp
15. söyleyip söyleyip
16. sürüp sürüştürüp
17. süslenip püslenip

Ş

1. şaşıp şaşıp
2. şişip şişip
3. şişirip şişirip

T

1. takıp takıp
2. takıp takıştırıp
3. tiksiniş tiksiniş
4. toplayıp toplayıp

U

1. uflayıp puflayıp
2. uğasıp uğraşıp
3. uydurup kaydırıp
4. uydurup uydurup
5. uzanıp uzanıp
6. uzatıp uzatıp

Ü

1. üfleyip püfleyip
2. üşüyüp üşüyüp
3. üzölüp üzölüp

V

1. verip verip
2. vurup kırıp

3. vurup vurup

Y

1. yağlayıp ballayıp
2. yalvarıp yakarıp
3. yalvarıp yalvarıp
4. yatıp kalkıp
5. yazıp çizip
6. yazıp yazıp
7. yiyip içip
8. yıkayıp yıkayıp
9. yolup yolup