

SOME OBSERVATIONS ON PERSON & NUMBER MORPHEMES IN TURKISH

Sinan ÇAKIR*

Abstract: The person and number morphemes in personal pronouns and nominal/verbal agreement affixes in Turkish are claimed to form portmanteau morphs in the current literature. That is to say, in several analyses, these morphemes are not represented by different affixes or zero morphs; rather, single morphs stand for both of them. For instance, the personal pronoun o(n) is “the third person singular pronoun”. Similarly, the bound morpheme /-(I)m/ is referred to be “the first person singular suffix” (Lewis, 1967; Underhill, 1976; Korkmaz, 1992; van Schaaik, 1996; Kornfilt, 1997; Göksel & Kerslake, 2011; Çiçekler, 2016; Çakır, 2022, e.g.). This analysis, however, leads to double number marking in some cases, which is rather problematic. For instance, when the plural suffix /-lAr/ is added to the third-person singular pronoun o(n), these morphs indicate both singularity and plurality. For this reason, the present study asserts that person and number morphemes do not always form portmanteau morphs in Turkish. Rather, in some cases, the person morphemes are phonologically realized while the number morphemes are added to them in the form of zero morphs. As a matter of fact, Turkish makes use of three different strategies while marking person and number: (1) forming a portmanteau morph, (2) using a zero morph and (3) suffixation. The study demonstrates how and when these strategies are applied in Turkish. The analysis presented here solves the problem of double number marking in personal pronouns and nominal/verbal agreement markers.

Keywords: Turkish; morphology; person & number suffixes; zero morph; portmanteau morph.

Türkçedeki Kişi & Sayı Biçimbirimleri Üzerine Bazı Gözlemler

Öz: Mevcut alanyazında, Türkçedeki kişi adlarında ve adsl / eylemsi uyum eklerinde var olan kişi ve sayı biçimbirimlerinin portmanto biçimcik oluşturduğu savlanmaktadır. Bir başka deyişle, bahsi geçen bu biçimbirimler farklı eklerle ya da sıfır biçimcikler ile değil, her ikisini de temsil eden tek bir biçimcik ile temsil edilmektedir. Örneğin kişi adlı o(n) alanyazında “üçüncü tekil kişi adlı” olarak tanımlanmaktadır. Benzer şekilde, bağımlı bir biçimbirim olan /-(I)m/ “birinci tekil kişi eki” olarak adlandırılmaktadır (Lewis 1967; Underhill 1976; Korkmaz 1992; van Schaaik, 1996; Kornfilt 1997; Göksel & Kerslake 2011; Çiçekler 2016; Çakır 2022, v.b.). Bu çözümleme bazı durumlarda sayı bilgisinin iki defa kodlanmasına sebep olmaktadır ki bu durum oldukça sorunludur. Örneğin, çoğul eki olan /-lAr/ üçüncü tekil kişi adına eklendiğinde, iki biçimcğin birlikteliği hem tekilliği hem de çoğulluğu işaretlemektedir. Daha açık bir ifadeyle, {o(n)} ve {lAr}biçimbirimlerinin birleşimi ancak ve ancak “üçüncü tekil çoğul kişi adlı” şeklinde nitelenebilir ki bu durum çelişkiye sebebiyet vermektedir. Bu sebeple, mevcut çalışma kişi ve sayı biçimbirimlerinin

* Assoc. Prof. Dr., Necmettin Erbakan University, Department of Linguistics, sinancakir@erbakan.edu.tr, ORCID: 0000-0002-7741-3706

her durumda portmanto biçimcik oluşturmadıklarını savunmaktadır. Bundan ziyade, bazı durumlarda kişi biçimbirimlerinin sesbilimsel olarak gerçekleştiğini iddia ederken, sayı biçimbirimlerinin sonradan sıfır biçimcik şeklinde eklendiğini savlamaktadır. Nitekim Türkçe kişiyi ve sayıyı işaretlerken 3 farklı yol kullanmaktadır: (1) portmanto biçimcik oluşturma, (2) sıfır biçimcik ekleme ve (3) sonek kullanma. Çalışma içerisinde bu yolların ne zaman ve nasıl kullanıldıkları betimlenmektedir. Sunulan çözümlene kişi adlarında ve adıl / eylemsi uyum yapılarında ortaya çıkan sayı bilgisinin iki kez işaretlenmesi sorununa çözüm üretmektedir.

Anahtar Sözcükler: Türkçe, biçimbilim, kişi & sayı ekleri, sıfır biçimcik, portmanto biçimcik.

Introduction

Broadly speaking, morphology is the sub-field of linguistics that deals with the inner structure of words. It separates the linguistic expressions into smaller, meaningful units. In this regard, morphemes form the basic research object of this sub-field, which are defined as the smallest meaningful units of words. They are considered to be abstract entities in human mind that constitute the base for any real life usages; namely, the morphs. The morphemes are classified as free or bound. While the bound morphemes are in need of other morphemes to function in words, the free ones can stand alone independently. For instance, the nominal, adjectival or prepositional root morphemes such as {car}, {old}, or {over} are free, while the affixes and the verb roots such as {-ing} or {go} are bound.

1. Basic terms

In this part, the basic terms that form the main focus of the present study are defined and discussed.

1.1. The zero morph

In some cases, the morphemes are not phonologically realized. That is to say, although they carry some semantic load, they are not represented by auditory phonemes. These morphs are traditionally represented by /-Ø/. They exist for grammatical purposes and they are a type of bound morphemes, which are often in complementary distribution with other affixes. For instance; plurality in English is sometimes represented by the zero morph rather than the /-s/ suffix: *cats, dogs* versus *fish* and *sheep*, respectively. The morphs forming these words are demonstrated as follows:

- (1) cat /-s/
 dog /-s/
 fish /-Ø/
 sheep /-Ø/

In Turkish, the zero morph is encountered in several structures. The nominative case on the subjects can be given as an example:

- (2) Biz -Ø kitab -ı oku du k.
 We -NOM book-ACC read -PAST -1PL
 “We read a book”

In (2), the subject is marked with the nominative case, which is realized in the form of a zero morph.

1.2. The portmanteau morph

The portmanteau morph is a single morph that stands for more than one morpheme. In other words, two or more morphemes are realized through the use of a single morph.

The crucial point here is that the morph should not represent any of the target morphemes in full sense, but it should be the combination of them. The past forms of several irregular verbs in English illustrate the use of the portmanteau morph:

- (3) a. went: {go} + {PAST}
 b. ate: {eat} + {PAST}

In Turkish there are also some cases where the portmanteau morph is encountered. One of such cases is the use of the /-k/ suffix that represents both first person and plurality:

- (4) a. Gel di n iz
 gel -PAST -2.p -PL
 “You came.”
 b. Gel di k
 gel -PAST -1.p + PL
 “We came.”

In (4a), the person and number morphemes are represented by different suffixes whereas a portmanteau morph that stands for both of these morphemes is used in (4b).

To sum up so far, along with affixation, the use of zero morphs and the portmanteau morphs are two other strategies applied while representing bound morphemes. These three strategies will be further touched upon while analyzing the person and number morphemes in detail. Before moving ahead, however, it is necessary to provide some basic information about the person and number morphemes that form the main focus of the present paper.

1.3. Person and number morphemes

Universally, there are three grammatical persons: (1) the person who is speaking, (2) the person who is being spoken to, and (3) the person who is being spoken about. They correspond to first, second and third person, respectively. Considering the fact that they have all singular and plural forms, there exist six forms in person-number paradigm, all of which are considered to be portmanteau morphs in English that represent person and number along with gender and case:

Person	Nominative	Accusative	Genitive
First singular	I	me	my
Second singular	you	you	your
Third singular	he / she / it	him / her/ it	his/her/its
First plural	we	us	our
Second plural	you	you	your
Third plural	they	them	their

Table 1. *The personal pronouns in English*

The person & number marking is also observed in nominal and verbal agreement. For instance, the verbs agree with their subjects with regard to person and number as in “I am; you are; he is”. It should be noted here that the morphs *am*, *is* or *are* portmanteau morphs that represent person and number along with the verb root {be} and Tense, Aspect / Mood markers.

Hence, it is safe to conclude that English frequently uses portmanteau morphs to represent person and number morphemes.

2. The problem

In Turkish, the person and number morphemes that form the personal pronouns are also claimed to be portmanteau morphs. That is to say, in several analyses, these morphemes are not represented by different affixes or zero morphs; rather, single morphs stand for both of them. For instance, the personal pronoun *o(n)* is referred to be “the third person singular pronoun”. Similarly, the bound morpheme */(I)m/* is referred to be “the first person singular suffix” in the literature (Lewis, 1967; Underhill, 1976; Korkmaz, 1992; van Schaaik, 1996; Kornfilt, 1997; Göksel & Kerslake, 2011; Çiçekler, 2016; Çakır, 2022, e.g.). To start with the personal pronouns, the current consensus on their full paradigm in Turkish is presented in Table 2:

Person	Singular	Plural
First	bAn	biz
Second	sAn	siz
Third	o(n)	o(n) + lAr

Table 2. *The personal pronouns in Turkish*

This analysis, however, involves a vital problem in the case of the third person. Unarguably, the */(I)Ar/* suffix indicates plurality. Hence, when it is added to the third person singular pronoun *o(n)*, these two morphs indicate both singularity and plurality. More precisely, the combination of the morphemes $\{o(n) + \{lAr\}$ can only be interpreted as “third person singular plural”, which causes contradiction.

As a matter of fact, a similar problem is discussed by Uzun (2004) in a related context. As he indicates, if nouns such as *kitap* ‘book’ or *masa* ‘table’ originally represent singularity, the addition of the */(I)Ar/* suffix to these words causes a vital problem. That is, the words *kitaplar* ‘books’ or *masalar* ‘tables’ indicate both singularity and plurality, which results in conflict (p. 124). As he further states, there are several languages in which singularity is coded through the use of a suffix. For instance, in Breton:

- (5) a. Gvez ‘trees’
 b. Gvez-en ‘a tree’

He maintains that singularity is not an original part of the nominals, but it is added later on them (p. 119). With regard to person & number marking in nominal and verbal agreement, similar problems arise, as well. To start with the nominal agreement cases, the person & number morphemes in the possessive constructions are considered to be individual suffixes in majority of the current literature. In other words, in the analyses of several scholars (Kornfilt, 1997, p. 161; Uzun, 2004, p. 140; Göksel & Kerslake, 2011, p. 42; Yıldız, 2010, p. 58; Boz, 2015, p. 30; Demir & diğ., 2017, p. 4; Alibekiroğlu, 2019, p. 172; Güneş, 2021, p. 145; Dolunay, 2023, p. 280 e.g.), the plural forms in these cases are considered to be single suffixes rather than the combination of two. */(I)mIz/*, for instance, is asserted to be a single suffix indicating the first person plural, rather than the combination of $\{-(I)m\}$ and $\{-Iz\}$. Table 3 displays the distribution of person & number morphemes in these studies:

Person	Singular	Plural
First	(I)m	(I)mIz
Second	(I)n	(I)nIz
Third	(s)I(n)	lArI

Table 3. *Person & number morphemes in nominal agreement in Turkish*

This analysis, however, is not consistent with the basic nature of the morphemes. That is to say, since a suffix is a type of a morpheme, it should exhibit the basic characteristics of a morpheme, which is the smallest meaningful unit that cannot be separated any further. Yet, without a doubt, the expression /-(I)mIz/ can be divided into smaller meaningful units. It is unarguable that {-I)m} and {-Iz} are separate morphemes in Turkish carrying different semantic loads. Support for this claim comes from Kunduracı (2015). As she indicates, it is typologically necessary to treat {-I)m} and {-Iz} morphemes individually (p. 46). Hence, the suffixes in such cases should be analyzed separately, as given in Table 4:

Person	Singular	Plural
First	(I)m	(I)m+Iz
Second	(I)n	(I)n+Iz
Third	(s)I(n)	lAr+ (s)I(n)

Table 4. *The renewed version for the target morphemes in nominal agreement*

The distribution given in Table 4 contains a serious problem, as well. As a matter of fact, the problem in Table 4 is similar to the one in Table 2. If /-(I)m/ is a portmanteau morph that represent both first person and singularity, the addition of the /-Iz/ suffix to it results in “first person singular plural” interpretation, which causes a contradiction. Similar cases observed in the second and third persons. The addition of the /-Iz/ or /-lAr/ suffixes in these cases result in conflicts too.

With regard to verbal agreement, similar problems arise, as well. In Table 4, the current representation of person & number morphemes within 4 verbal paradigms in Turkish is presented (adapted from Keleşir, 2001):

Person	Paradigm1	Paradigm 2	Paradigm 3	Paradigm 4
First singular	-(y)Im	-m	-(y)Im	---
Second singular	-sIn	-n	-sIn	-∅
Third singular	-∅	-∅	-∅	-sIn
First plural	-(y)Iz	-k	-(l)Im	---
Second plural	-sInIz	-nız	-sInIz	- (y)In(Iz)
Third plural	-∅lAr	-∅lAr	-∅lAr	- sInlAr

Table 5. *Person & number morphemes in verbal agreement paradigms in Turkish*

In Paradigm 1, the person & number suffix(es) follow the Tense, Aspect and Mood (TAM, hereafter) markers /-(y)AcAK/, /-Iyor/, /-mİş/, /-Ir/, /-mAktA/ or /-mAIl/. In this paradigm, the afore-mentioned problem is noticeable in the second and the third person usages. To illustrate, the /-sIn/ suffix is claimed to indicate both second person and singularity. When the plural marker /-Iz/ is added to this morph, the combination of the suffixes indicates both singularity and plurality: /-sIn+Iz/.

In Paradigm 2, the TAM markers /-DI/ or /-sA/ precede the person & number suffix(es). As for Paradigm 3 and 4, the subjunctive / optative mood marker and the imperative mood marker precede the target suffix(es), respectively. The problem mentioned above is encountered in almost all¹ cases of the second and the third persons in these paradigms, as well.

In brief, the current analyses of person & number suffixes in all cases (personal pronouns, nominal agreement and verbal agreement) contain the problem of double (both singular and plural) number marking.

3. The proposal

The present paper proposes that the afore-mentioned problem stems from the misanalyses on singularity. When the person markers are considered to be inherently singular, the addition of the plural suffixes to them becomes problematic. That is to say, the assertion that the person morphemes and the singular morpheme form portmanteau morphs in Turkish is the source of the conflict. The solution for this problem is that the number is added to the person morphemes as a zero morph in such cases. What this assertion indicates is that the personal pronouns such as *bAn* cannot be referred to be the first person singular pronoun; but, just as the first person pronoun. Singularity, on the other hand, is added on it later as a zero morph. This analysis solves the conflict of double number marking. As a matter of fact, Turkish uses three different strategies to indicate number: (1) using a zero morph, (2) using a portmanteau morph and (3) suffixation. In Table 5, the personal pronouns in Turkish are re-analyzed in accordance with this proposal:

	Person		Singularity
First	bAn	+	-∅
Second	sAn	+	-∅
Third	o(n)	+	-∅
	Person		Plurality
First	bAn	+	-Iz = biz (port. morph)
Second	sAn	+	-Iz = siz (port. morph)
Third	o(n)	+	-IAr

Table 6. *The re-analysis of the person & number morphemes in personal pronouns*

As Table 6 indicates, singularity is added to the person morphemes as a zero morph. That is to say, the morphs *bAn*, *sAn* or *o(n)* are not portmanteau morphs that involve

¹ The only exception is the -(y)In(Iz) marker in Paradigm 4. Since the singular form of the second person does not have an imperative form, the problem focused on here is not observed in this case.

number. For this reason, the morphs such as *bAn* should be referred as the first person rather than the first person singular. Plurality, on the other hand, is added to person morphemes in two different ways. While the person and number morphemes form portmanteau morphs in the second and the third persons, it is added as a suffix in the third person.

The paradigm proposed here does not face any problems with regard to double number marking. Along with the personal pronouns, it can also be applied to nominal and verbal agreement cases. To start with the nominal agreement, the distribution of the person & number morphemes is proposed to be as follows:

	Person		Singularity
First	-(I)m	+	-∅
Second	-(I)n	+	-∅
Third	-(s)I(n)	+	-∅
	Person		Plurality
First	-(I)m	+	-Iz
Second	-(I)n	+	-Iz
Third	-(s)I(n)	+	-IAr

Table 7. *The re-analysis of the person & number morphemes in nominal agreement*

It is proposed here that the suffixes such as */(-I)m/*, */(-I)n/* or */(-s)I(n)/* only contain information about the person, not the number. Therefore, they cannot be cited as the first, the second or the third person singular suffixes. The singularity is obtained through the attachment of a separate morpheme which is realized as a zero morph. As for plurality, it is also added as a separate morpheme; yet, not in the form of a zero morph, but as phonologically full affixes. The */-Iz/* suffix is added to the first and the second persons while the */-IAr/* suffix is added to the third person. This analysis is also in line with the current solution for the problem of double number marking.

The person and number morphemes in the verbal agreement domains display similar traits, as well. Since there are four paradigms in this regard, it is necessary to examine them separately. Table 8 displays the distribution of the person & number morphemes in the first paradigm:

	Person		Singularity
First	-(y)Im	+	-∅
Second	-sIn	+	-∅
Third	-∅	+	-∅
	Person		Plurality
First	-∅	+	-(y)Iz
Second	-sIn	+	-Iz
Third	-∅	+	-IAr

Table 8. *The re-analysis of the target morphemes in verbal paradigm 1*

As Table 8 demonstrates, either a zero morph or a suffix is added to person morphemes to indicate number. The distribution presented here disallows double number marking in any case. Nevertheless, the addition of the plurality to the first person should be analyzed with caution. The plural suffix /-(y)Iz/ is not added to the phonologically realized allomorph of the first person morpheme, but to a zero allomorph. That is to say, the first person morpheme appears to have a zero allomorph along with the phonologically realized one. Since it has not got any zero morphs in other cases, this observation is something unexpected, and it requires further attention. A diachronic analysis, for instance, may explain how the suffix is replaced by a zero morph or why the zero morph is not used in other cases. The present paper, however, leaves this issue for further research, since it aims to present synchronic distribution of the person & number morphemes within paradigms rather than providing a diachronic analysis.

In the second paradigm, the person & number morphemes follow the TAM markers /-DI/ or /-sA/. Table 9 displays the distribution of the morphemes in this regard:

Person			Singularity
First	-m	+	-∅
Second	-n	+	-∅
Third	-∅	+	-∅
Person			Plurality
First	-m	+	-Iz = k (port. morph)
Second	-n	+	-Iz
Third	-∅	+	-lAr

Table 9. *The re-analysis of the target morphemes in verbal paradigm 2*

In this paradigm, all three strategies in representing bound morphemes are used. First of all, singularity is added as a zero morph. Therefore, the morphs /-m/ or /-n/ only codes person, not the number. The third person in this respect diverges from the others in that both person and number are added as zero morphs. The plurality, on the other hand, is coded through either a portmanteau morph or suffixes. More precisely, while it forms a portmanteau morph with the first person morpheme, it is added as suffixes to the second and third persons. None of these cases, however, involves the double number marking that the present paper focuses on.

In the third paradigm, the person and number morphemes follow the subjunctive / optative mood marker /-(y)A/. The target morphemes are displayed in Table 10:

Person			Singularity
First	-(y)Im	+	-∅
Second	-sIn	+	-∅
Third	-∅	+	-∅
Person			Plurality
First	-(y)Im	+	-Iz = -(l)Im (port. morph)
Second	-sIn	+	-Iz
Third	-∅	+	-lAr

Table 10. *The re-analysis of the target morphemes in verbal paradigm 3*

The distribution of the person and number morphemes in this paradigm is similar to the one in Paradigm 2. The zero morphs, the portmanteau morph and the suffixes have similar usages to the ones used in the verbal paradigm 2. The differences observed between these paradigms are just the morphs representing the first & second person and the portmanteau morph formed through the combination of the first person and the number morphemes. None of the cases in this respect contain double plural marking, either.

In the final verbal paradigm, the person and number morphemes follow the imperative mood morpheme. Table 11 demonstrates their distribution:

	Person		Singularity
First	-	+	-
Second	-∅	+	-∅
Third	-sIn	+	-∅
	Person		Plurality
First	-	+	-
Second	-∅	+	-(y)In
Third	-sIn	+	-lAr

Table 11. *The re-analysis of the target morphemes in verbal paradigm 4*

Compared to the other paradigms, the distribution of the person and number morphemes is rather divergent in this group. The reason for this situation is the nature of the imperative mood. Since one cannot order himself or herself, the first person does not exist in the paradigm. As for the second person, it is represented by a zero morph on which singularity is added as another zero morph while plurality is added as a suffix. Lastly, singularity is presented as a zero morph on the third person morpheme while plurality is coded through the use of a suffix. The double number marking is not observed in any of these combinations, either.

Conclusion

In Generative Framework, person, number and gender trio are tackled within the Checking Theory and they are traditionally called “phi features”. The nominals are assumed to enter the derivation with their phi features already valued while such features are unvalued on v and T heads. In other words, the nominals have got interpretable person, number and gender features, which check the uninterpretable phi-features of the local heads and delete them from the derivation. Before the derivation is sent to LF, all uninterpretable features, including the uninterpretable phi features, must be eliminated from the derivation. Otherwise, the derivation crashes and yields ungrammaticality.

The lexemes and the morphemes whose all uninterpretable features are valued must be morphologically realized before the derivation reaches at the PF. That is, the abstract forms in the derivation should turn into words and morphs in a level between spell-out and PF. In this regard, the person, number and gender information that are taken from the lexicon in the form of abstract morphemes are transformed into morphs: units which are ready for articulation. This process is realized in three ways: (1) formulation of a portmanteau morph, (2) addition of a zero morph or (3) suffixation.

When the related literature on Turkish is reviewed, it is observed that the personal pronouns such as *bAn* is often referred to be “the first person singular pronoun”, or the nominal agreement affixes such as *-(I)m* is cited to be “the first person singular suffix” (Lewis, 1967; Underhill, 1976; Korkmaz, 1992; van Schaaik, 1996; Kornfilt, 1997; Göksel & Kerslake, 2011; Çiçekler, 2016; Çakır, 2022, e.g.). It means that person and number morphemes are considered to form portmanteau morphs in the current literature. This analysis, however, leads to double number marking in some cases, which involves vital problems. Hence, the present study asserts that person and number morphemes do not always form portmanteau morphs in Turkish. Rather, in some cases, the person morphemes are phonologically realized while the number morphemes are added on them in the form of zero morphs. As a matter of fact, Turkish makes use of all three strategies while marking person and number. This analysis solves the problem of double number marking in personal pronouns and nominal / verbal agreement markers.

References

- Alibekiroğlu, S. (2019). Türkiye Türkçesinde ikili biçimbirimler. *Türük Uluslararası Dil, Edebiyat ve Halkbilimi Araştırmaları Dergisi*, 7 (17), 163-176.
- Boz, E. (2015). *Türkiye Türkçesi biçimsel ve anlamsal işlevli biçimbilgisi*. Ankara: Gazi Kitabevi.
- Çakır, S. (2022). *The locality conditions on syntactic displacement*. Anı Yayıncılık.
- Demir, N., Aslan Demir, S., Yılmaz, E., Erdem, M. & Yılmaz, E. (2017). *Türkçe biçim bilgisi*. Eskişehir: Anadolu Üniversitesi Yayınları.
- Dolunay, S. K. (2023). Türkçenin biçimbilimine ilişkin temel kavramlar. G. Arı & O. İpek (Ed.), In *Dil eğitiminin temel kavramları* (pp. 261-311). Ankara: İksad Yay.
- Çiçekler, A. N. (2016). Eski Anadolu Türkçesindeki eksiz yapılan ilgi ve belirtme durumları sıfır biçimbirim teorisyle açıklanabilir mi? *Uluslararası Sosyal Bilimler Dergisi*, 24, 163-176.
- Göksel, A. & Kerslake, C. (2011). *Turkish: An essential grammar*. London: Routledge.
- Güneş, G. (2021). Morphosyntax and phonology of agreement in Turkish. *Syntax*, 24 (2), 143-190.
- Keleşir, M. (2001). Topics in Turkish syntax: Clausal structure and syntax. [Unpublished Ph. D Dissertation] Massachusetts Institute of Technology.
- Korkmaz, Z. (1992). *Gramer terimleri sözlüğü*. Ankara: TDK Yayınları.
- Kornfilt, J. (1997). *Turkish*. London: Routledge.
- Kunduracı, A. (2015). Türkçede aitlik ulamı ve biçimsel ifadesi. *Dilbilim Araştırmaları Dergisi*, 1, 43-62.
- Lewis, G. (1967). *Turkish grammar*. Oxford: Oxford University Press.
- Underhill, R. (1976). *Turkish grammar*. Massachusetts: MIT Press.
- Uzun, N. E. (2004). *Dilbilgisinin temel kavramları*. Ankara: Kebiçeç Yayınları.
- van Schaaik, G. (1996). *Studies in Turkish Grammar*. Turcologica, 28. Harrassowitz Verlag.
- Yıldız, İ. (2010). Sözlü dildeki bağımlı ardılların kullanım sıklığı. [Unpublished M.A. thesis] Dokuz Eylül Üniversitesi.