

Derivational Suffixes in Turkish:
A Comparative Analysis of -*lA*, -*dA*, and -*sA*

1. Introduction

Nominals and verbs are considered as the major lexical categories in Turkish in most grammar books (Banguoğlu 1986; Ergin 1993, among others). Uygun (2009) argues that there is no lexically specified category as “verb” in the lexicon for Turkish and she further claims that “verbs are formed of root expressions and functional predicate heads such as DO, CAUSE, BECOME, and GET” (p. 226) following Distributed Morphology (Marantz 1997). The use of recently borrowed words such as “delete” and “google” provides evidence for this claim. The verb “delete” in English requires an auxiliary verb or a specific suffix to be able to occur as a verb in Turkish: *dilit et-* or *dilit-le* (Uygun 2009, 167). We observe a similar pattern in the use of onomatopoeic words as verbs in Turkish such as “*puf*” (the puff sound) and “*şır*” (the sound of water). These onomatopoeic words require specific suffixes to occur as lexical items: *puf-la* and *şır-il-da*. As can be seen, there is not a uniformed way of deriving verbs from onomatopoeic words. In this study, I aim to investigate any potential constraints on the occurrence of these suffixes which derive verbs from nonverbals and their combinatoriality with other suffixes. I am going to focus mainly on the onomatopoeic words which are bound and can occur only by means of a reduplication or suffixation process (Baturay 2010, 151). Afterwards, I am going to expand my analysis to investigate this derivation process in nominals to see if the lexical category of the stem has any effect on the suffixation process. For this purpose, I am going to analyze the occurrence of the suffix -*sA* and compare its properties with the suffix -*lA*. Throughout this study, I obtain my data from the study by Nakipoğlu and Üntak (2006), Turkish National Corpus¹, and the TDK Turkish Dictionary². I conduct my study based on the data from “Standard Turkish” and exclude any dialectal variations of verbs occurring with the mentioned suffixes even though they sound familiar.

2. Previous Studies in Literature

Since I am going to deal with suffixes and their occurrences in certain environments, I would like to present the prominent approaches on this topic. In the literature, there has been an ongoing debate about the constraints on the combinatoriality of the affixes. The first approach is the level-ordering of affixes (Siegel 1974, among others) based on the nonoccurrence of the certain pairs of affixes such as “*-ness-ic” and “*-er-ian” in English. This approach claims that combinatorial restrictions can be explained via the different levels of affixes and these levels have impact on the possible occurrences. However, the dual behavior of some suffixes has been presented as a counterexample to this approach as well as the deficiency of the model in pointing out some existing restrictions. For example, this approach suggests that the word “un-gramma-tic-al-ity” should be ruled out since the Level1 suffix “-ity” should occur

¹ <http://www.tnc.org.tr/index.php/tr/>

² http://www.tdk.gov.tr/index.php?option=com_gts&view=gts

after the attachment of the Level2 prefix “un-” to satisfy the categorical selectional restrictions; however, this word exists in English. Moreover, Fabb (1988) finds that 43 suffixes can be used only in 50 combinations while the level ordering model allows 459 out of 1849 possible combinations. In other words, this approach cannot rule out each non-existing combination.

This level-ordering approach is also ruled out for Turkish as presented in the study by Inkelas and Orgun (1998). They argue that the level ordering approach is not compatible with an agglutinative language such as Turkish since any fixed non-recursive ordering is inappropriate for this language. They deal with this issue in terms of phonological properties of affixes and they claim that the level ordering theory does not hold for Turkish in which morphological constructions are associated with different cophologies in different orders.

The second approach develops as a reaction to the level-ordering and it is about selectional restrictions on combinatoriality related to the morphological, syntactic, semantic, or phonological nature of the suffixes and bases (Fabb, 1988; Plag 1999, among others). Fabb (1988) argues that the selectional restrictions in the affixation process are due to the affix itself (affix-driven selectional restriction) (p.532) while Plag (1999) claims that these restrictions are primarily due to the properties of the base (base-driven selectional restrictions) (p.80).

The third approach considers selectional restrictions and processing constraints. It is known that when a derived word has a higher frequency than its base, then the role of each constituents such as root and affixes becomes less important (Bybee, 1985; Hay 2002, among others). Therefore, we can claim that the selectional restrictions and processing constraints should go hand in hand and we should not ignore this cognitive fact. Considering these approaches, I will try to interpret the Turkish data throughout this study. I will try to find out which approach can explain the available data in the best way.

3. Suffixes that Derive Verbs from Nominals

The suffixes employed to derive verbs from nonverbal units in Turkish are quantitatively fewer than the other derivational suffixes (Korkmaz 2003, 109). There are 18 derivational suffixes in Turkish which derive verbs from nominals as presented below with their frequency rates (Uzun et al. 1992, 129):

Table 1:

Suffixes Used in the Derivation of Denominal Verbs and Their Frequency ³								
1.	-lA	840	7.	-lAndIr	13	13.	-At	2
2.	-lAş	518	8.	-lAştIr	13	14.	-It	2
3.	-lAn	277	9.	-kIr	12	15.	-sI	2
4.	-dA	76	10.	-Ir	4	16.	-Aş	1
5.	-sA	38	11.	-lAt	3	17.	-IrgA	1
6.	-(A/I)r	20	12.	-sIn	3	18.	-rA	1

³ The number and frequency rates of these suffixes shows variation in other studies (i.e. Ergin 2003; Korkmaz 2003; Nakipoğlu 2006). Since this variation does not affect the general outline of this study, I am not going to present each available data.

These suffixes attach to the nominal roots, rather than nominal stems, in most of the cases (Korkmaz 2003, 109). Ergin (1993) indicates that these suffixes only convert the nominals into verbs which carry “be” and “do” meaning and they do not play any important role in the new meaning of the denominal verb (p.179). However, as Korkmaz (2003) and Özkul (2016) show, the suffixes also play important role in the meaning of the derived verbs as well as the root/stem nominals. Korkmaz mentions the meaning differences between the derived verbs which share the exactly same root/stem nominals as in “*durak-la*” (to pause for a while) and “*durak-sa*” (to hesitate) and consider this fact as evidence which shows that suffixes have different properties in terms of their functions and uses (p.110). Moreover, Özkul (2016) demonstrates the polysemous nature of the suffix *-la* by showing the variation in the argument and event structures of the verbs derived with this suffix. She further claims that the reason of this variation is that the derivational suffix *-la* is a functional head and its position within the structure determines the meaning of the derived verb. This clear evidence for the crucial role of the suffixes in the meaning construction will form a basis for my argumentation within this study. Now, I am going to analyze some of these suffixes with respect to their possible semantic interpretations, their potential occurrence and their interaction with other suffixes as a next step.

3. 1. Deriving Verbs from Onomatopoeic Roots/Stems

As can be seen in the *Table 1*, the suffix *-la* is one of the most productive derivational suffixes in Turkish (Uzun et al. 1992; Ergin 1993; Korkmaz 2003; Nakipoğlu et al. 2006, among others) and it is used to derive verbs from nominals such as *göz-le* (eye+suffix: to observe), *şişman-la* (fat+suffix: to put on weight) or onomatopoeic words such as *of-la* (to huff). This enormously productive suffix can attach to any nominal roots or stems and can derive transitive and intransitive verbs (Korkmaz 2003, 116). When attached to the onomatopoeic roots, it derives intransitive verbs such as “*hav-la*” (to bark), “*fir-la*” (to hurl oneself), “*çın-la*” (to tinkle).

Moreover, the data presented by Nakipoğlu and Üntak (2006) shows that derivational suffix *-da* also derives verbs from onomatopoeic words. As in the case of the suffix *-la*, the output of the derivation is an intransitive verb. However, this suffix cannot immediately follow the onomatopoeic root; rather, it requires “extenders” as claimed by Ido (1999) and Mutlu (2016). In her study, Mutlu (2016) argues that a root undergoes a set of morphological operations until it is lexicalized and these operations comes with a slot in a template, following the Position Class Theory by Inkelas (1993). For example, the onomatopoeic root “*fos*” (the sound of breath) requires the suffix *-Ir/-Il* as an extender to receive the suffix *-da* as in “*fos-ur-da*” (to breathe noisily). Zülfikar (1995), on the other hand, considers the suffix *-Ir/Il* as a tool to derive a “secondary onomatopoeic root” which cannot occur on its own since it is also a bound form (p.126). At this point, I would like to take a different stance on this issue. I argue that the function of the suffix *-Ir/Il* has been underestimated due to its label, “the extender”. Throughout this analysis, I have realized that suffixes *-la* and *-da* are in complementary distribution; the suffix *-da*

occurs only with “the secondary onomatopoeic roots”⁴ while the suffix *-IA* occurs elsewhere⁵. As mentioned before, both suffixes derive intransitive verbs. Therefore, I suggest that the suffix *-dA* is an allomorph of the suffix *-IA*. When we analyze two derivations with the same onomatopoeic root; however, we observe a meaning difference between these two derived verbs as in the examples of “*hur-la*” (to snarl) and “*hur-ıl-da*” (to purr). I further claim that the meaning difference is not due to the choice of the verbalizing suffix but due to the so-called “extender” suffix *-Ir/Il* which expresses the continuity of the given sound. As a first step, I assume that the onomatopoeic root can either receive the suffix *-IA* and becomes a verb or it can receive the suffix *-Ir/Il* at the first place to have the meaning provided by the suffix and afterwards it receives the verbalizing suffix *-IA* which becomes *-dA* due to the phonological requirements.

An interesting point is that we observe a different suffix which derives verbs from onomatopoeic roots: the suffix *-Ir*. Ergin (1993), Korkmaz (2003), and Nakipoğlu and Üntak (2006)⁶ mention the derived verbs such as “*aks-ır*” (to sneeze), “*an-ır*” (to hee-haw), and “*çağ-ır*” (to shout to). Moreover, they present another suffix with the same function: the suffix *-kIr*⁷. We can see this suffix as in “*ba-ğır*” (to shout), “*hay-kır*” (to shout out), and “*süm-kür*” (to blow one’s nose). However, Zülfikar (1995) presents a unified classification of these denominal verbs (p.110-112). He claims that the verbs such as “*aksır*” (to sneeze), “*tıksır*” (to sneeze while the mouth shut), “*öksür*” (to cough) were used to occur as “*as-kır*”, “*tıs-kır*”, and “*ös-kür*”; however, they somehow underwent a metathesis process (p.113) which caused to the relocation of the internal sounds. When we analyze other verbs listed among the derivations with *-Ir* suffix, we realize that they also have the suffix *-kIr* in them historically. For example, the verb “*an-ır*” was “*an-gır*” and it has changed over time. Therefore, following Zülfikar (1995), I disagree with the idea that there is a separate verbalizing suffix *-Ir*. However, there is not enough source to enlighten the situation of the verbs “*üf-ür*”, “*hapş-ır*”, and “*os-ur*”. Should we keep the claim that there is an additional suffix *-Ir* which verbalize the onomatopoeic roots? Or is it reasonable attempt to look for the remnants of the suffix *-kIr* in these verbs? I believe when we approach to this issue with the consideration of any possible historical change, many issues may become more apprehensible.

Moreover, I question whether such a historical approach leads us to any explanation regarding the origin of the suffix *-Ir/Il*. I must accept that the resemblance of *-kIr* and *-Ir/Il*, which extends the meaning of the onomatopoeic root, had excited me since I thought there could be any relation between these two. Indeed, Zülfikar (1995) provides an explanation for this question. As mentioned above, the current form “*an-ır*” was used to be “*an-gır*”. Zülfikar (1995) argues that the plosive sound ‘k’ in the suffix *-kIr* has dissolved and become a part of the stem over time. He further argues that it is possible that this suffix

⁴ Nakipoğlu et al. (2006) state that there are also *-dA* verbs such as *iste-*, *bağda-*, and *sapta-*. Within the scope of this study, I am not going to focus on these forms.

⁵ It does not mean that the suffix *-IA* occurs in each position; there are some positions in which we do not observe this suffix.

⁶ See Table 2 in Appendix

⁷ See Table 3 in Appendix for the data presented by Nakipoğlu and Üntak (2006)

has lost its function which enables it to derive verbs from onomatopoeic words; therefore, it requires another derivational suffix following itself. The evidence comes from the example “*angır-da/angıl-da*” (p.103) which carry both derivational suffixes on it. It looks like there has been a transition process for this lexical word. Moreover, this examples and explanations show that my assumption above is not trivial. However, more supporting data is required for the sake of the study. A further question related to this issue can be about the nature of ‘g’ and ‘b’ sounds whose function is to extend the root as in “*güm-b-ür-de*” (to rumble) according to Mutlu (2016). I suggest that these units may also be the remnant of the suffix *-kIr*. A more detailed analysis on this issue will be useful to understand these units.

The suffix *-Ir/Il* becomes more interesting when we focus on the suffixes immediately following it. It is followed by the derivational suffix *-dA*, not by *-lA*. This can be explained in the light of templatic structure as Ido (1999) and Mutlu (2016); however, I argue that the reason for this occurrence is phonologically conditioned. It is well-known phenomenon that ‘l’ sound undergoes fortition and becomes ‘d’ due to a dissimilation process. Another derivational suffix *-tI* can derive nominals from onomatopoeic secondary roots as in “*uğ-ul-tu*” (the wuther) and “*par-ıl-tı*” (the glitter) but it never follows the primary roots. The template still handles this issue perfectly; however, when we review the corpus, we realize that this suffix occurs only with the stems whose final sound is ‘r’, ‘l’, or ‘n’. It shows that a suffix can choose the base to which it will attach by looking its phonological features, as indicated by Fabb (1988), without requiring a template. However, this selectional restriction cannot rule out all ungrammatical forms since there are primary roots such as “*gür*” but no “**gür-tü*”. Following Fabb (1988), I argue that the suffix *-tI* posits all kind of selectional restrictions it has (such as phonological, semantic, morphological, etc.) to find a proper base for itself.

Another important question raises when we observe the cases in which both suffixes cannot occur with the same onomatopoeic root as in the examples of “**fok-la*” and “*fok-ur-da*” (to boil noisily) or “*of-la*” (to huff) and “**of-ur-da*”. These examples can be accidental gaps in the lexicon. Further, the internal semantics of the onomatopoeic roots can be related to these occurrences. Since I do not have sufficient information on the semantics of the available onomatopoeic roots, I will leave this issue for the further studies. For a next step, I am going to investigate other occurrences of the suffix *-lA*.

3. 2. Other Occurrences of *-lA*

After trying to understand the nature of the onomatopoeic words, I am going to analyze *-lA* occurring with the non-onomatopoeic words; thus, we will see whether there are any differences between these onomatopoeic words and the others. As mentioned before, the suffix *-lA* is the most productive derivational suffix which derives verbs from nominals. Therefore, it is not surprising to see this suffix with any kind of word such as “*bıçak-la*” (knife+suffix: to stab) and “*yine-le*” (again+suffix: to repeat). The data shows that the suffix *-lA* does not make a distinction between the root/stem to which it attaches.

An interesting case draws our attention when we look at the possibility of the suffix *-IA* to attach a deverbal stem which includes the suffix *-I/AkIA* (see *Table 4* in the Appendix). In Standard Turkish, the suffixes *-Ik* and *-Ak* are productive tools to derive “free” nominals from verbs (Korkmaz 2003, 85) such as “*kaç-ik*” (to escape+suffix: crazy) and “*sok-ak*” (to tuck in+suffix: street). However, when we observe the data presented in *Table 4*, we realize that *-I/Ak* suffix derives bound forms in most of the examples in a similar way we observe for the suffix *-Ir/Il* discussed above. The verbs, for example, “*sür-ük-le*” (to lead+suffix+IA: to drag) and “*uyu-k-la*”⁸ (to sleep+suffix+IA: to snooze) include “bound forms” such as “*sürük*” and “*uyuk*” which cannot occur on their own in Standard Turkish. Moreover, if the result of the derivation with the suffix *-I/Ak* is a lexicalized word as in the example “*bin-ek*” (to ride+suffix: thing to ride), we do not observe any further suffixation process with the suffix *-IA*.

Korkmaz (2003) mentions that the suffix *-I/Ak* expresses that the action is being done constantly or from time to time when it occurs with the suffix *-IA*. In other words, this combination gives a different meaning to the root verb. Then, is *-I/AkIA* another suffix rather than being the combination of the suffixes *-I/Ak* and *-IA*? Since there is no example of a free form derived with *-I/Ak* suffix and then receive the suffix *-IA*, we cannot argue for any possibilities. Moreover, since it is implausible to think that a free form becomes a bound form due to a derivational process, I will follow the study by Nakipoğlu et al. (2006) which considers *-I/AkIA* as a compound suffix. Still, this approach is not also problem-free since there are examples such as “*aç-ık-la*” (to open+suffix+suffix: to explain) and “*savsa-k-la*” (to omit+suffix+suffix: to procrastinate) which clearly shows the step-by-step combinatoriality. Since there is not sufficient explanation for this issue, we can analyze the suffix *-sA* which also occur with a bound morpheme *-Im* to understand the nature of these kind of “compound suffixes” better.

3. 3. On suffix *-sA*

As mentioned above, I am going to analyze the suffix *-sA* which can also cooccur with the suffix *-Im* to understand the properties of the compound suffixes. For example, “*az-ım-sa*” (few+suffix+sA: to underestimate) and “*kaç-ım-sa*” (to escape+suffix+sa: to pretext not to do the tasks) show that this suffix can attach to any unit whose root is nominal and verbal. The suffix *-Im*sA expresses the likeness and the acceptance and it is not productive (see *Table 5* in the Appendix). However, the suffix *-Im* is a highly productive tool to derive nominals from verbs such as “*tat-ım*” (to taste+suffix: the taste) and “*al-ım*” (to buy+suffix: the purchase) in Standard Turkish. When we analyze the occurrences of this suffix with the suffix *-sA* in the *Table 5*, we can claim that this suffix mostly behaves in a similar way to the suffix *-(I/A)k* since they have the potential to constitute a bound form when they attached to a unit⁹. This similarity between the suffixes *-Im* and *-(I/A)k* also leads us to compare *-sA* to *-IA* in the same environments. Interestingly, only two stems “*öz-üm*” and “*ayr-ım*” in the *Table 5* can occur with *-IA*.

⁸ In his work *Türk Dilinin Etimolojisi Sözlüğü*, Eyüboğlu (1995) indicates that “*uyumak*” (to sleep) is “*udıklamak*” (in a similar form to “*uyuklamak*”) in Uyghur Turkish.

⁹ The exceptions of this generalization are “*ayrım*” and “*duyum*”.

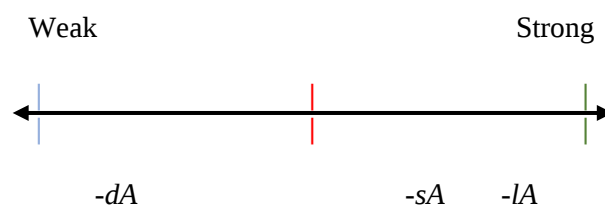
The meaning difference in these examples as in “*ayr-ım-la*” (to make a distinction) and “*ayr-ım-sa*” (to distinguish) also show that the suffixes *-la* and *-sa* carry different meanings and feed the base with this meaning. Therefore, we can claim that these two suffixes are completely different from each other.

Ergin (1993) points out that the suffix *-ImSA* functions as a suffix which derives a verb from a verb in the derivation of “*gül-ümse*” (to smile+suffix: to smile softly) and he further claims that this structure is abnormal. Therefore, he suggests that the suffix *-m* attaches to the verb “*gül*” to derive a noun, afterwards, the suffix “*-sA*” attaches to the nominal unit to derive a new verb. Even though such an analysis would be in the line with my very first assumption, I cannot argue this issue since I cannot understand why he claims the one step derivation is abnormal in this case. Moreover, the data presented by Nakipoğlu et al. (2006) also includes other examples like “*gül-üm-se*”. Therefore, I prefer to continue following the view of compound suffix for *-(I/A)klA* and *-ImSA*.

4. Discussion

Within the scope of the study, my first aim is to find out whether each suffix occurs with a specific type of a base. Throughout the analysis, we observe that each suffix behaves in different ways. For example, we observe that *-dA* occur only with onomatopoeic words only if the onomatopoeic root carries the suffix *-Ir/Il*. We never see the suffix *-sA* with onomatopoeic words but we observe that this suffix can occur “non-onomatopoeic” words from different lexical categories. It can immediately follow the root or it can occur with the suffix *-Im*. The productive suffix *-lA*, on the other hand, seems to be intersection of these suffixes; it can occur with onomatopoeic roots/stems as well as non-onomatopoeic roots/stems from any lexical categories except for verbs. This observation is in line with Lieber’s assumption (2004) that the more productive a suffix is, the more it is available for paradigmatic extension (p. 96).

In sum, we observe that these suffixes show variation in terms of their ability to attach any root/stem. Therefore, I argue that there might be a “strength” scale of suffixes with respect to their ability to occur with different lexical and semantic categories as represented below¹⁰:



In this study, I observe the ability of these suffixes to receive any further suffixes. I claim that their behavior on this issue also fits to the scale above. The suffix *-dA* shows the poorest performance with respect to the variety of suffixes that can follow it since most of the examples can only receive causative voice suffix as well as few occurrence of the suffix *-k* which derives noun from verb as in “*ıſ-il-da-k*”

¹⁰ A scientific statistical study is required on this issue.

(projector). The suffix *-sA* can be followed by any voice suffixes except for reciprocal in most cases. The suffix *-lA* can receive any voice markers in most cases as well as the agentive derivational suffix which derives noun from verbs as in “*hatır-la-t-ıci*” (the reminder). These findings show the affix strength effects combinatoriality with not only different kind of bases but also different types of suffixes.

Following the analysis by Melissaropoulou and Ralli (2010) and Distributed Morphology (Marantz, 1997), I claim that suffixes functions as head (Uygun 2009; Özkul 2016, among others) which has selectional restrictions inherently. Therefore, I argue that suffixes are lexical entries in the lexicon and they percolate their selectional restrictions to the base to which they attach. To be consistent with this analysis, I consider the suffixes *-ImSA* and *-(I/A)klA* as compound suffixes which attach to their base at one step. However, I do not accept that there are *-ImSA* and *-(I/A)klA* by nature. As shown in the study by Manova and Brzoza (2015), the mental lexicon can store morphemes, words, constructions, rules, and “combinations of affixes”. Manova et al. (2015) also mentions that [affix+affix] exist as “autonomous structures” in the mental lexicon. Further, they claim that if a suffix *x* tends to combine with only a suffix *y* of a major lexical category, then *x-y* combinations are “unique pieces of the structure and speakers should know them by heart” as in our case of *-ImSA* and *-(I/A)klA*. Therefore, I claim that the selectional restrictions keeps on playing an important role within these combinations of suffixes and it depends on the strength of the affixes while the parsing mechanism shapes the whole picture.

5. Conclusion

As Lieber (2004) clarifies, only morphological explanation is not enough to understand what happens in the background of this systems, we need to know the semantic background (p.4) What is more terrifying is that, as Manova et al. (2015) mention in their work, there are eight different approaches to investigate the information used in the affix-ordering. These are phonological, morphological, syntactic, semantic, statistical, psycholinguistic, cognitive, and templatic approaches. It is reasonable to accept that we cannot find an ultimate answer for our questions without combining some of these approaches. It is clear that an experimental study should be conducted on this issue to understand the nature of the affixes and their combinatoriality.

References

- Banguoğlu, T. (1986). *Türkçenin Grameri*. Ankara: Türk Dil Kurumu Yayınları.
- Baturay, S. (2010). Apophony In Turkish Onomatopoeic Reduplications. MA Thesis. Boğaziçi University, Istanbul.
- Bybee, J. (1985). *Morphology: A Study of the Relation Between Meaning and Form*. Amsterdam: John Benjamins.
- Ergin, M. (1993). *Türk Dil Bilgisi*. İstanbul: Bayrak.
- Fabb, N. (1988). English suffixation is constrained only by selectional restrictions. *Natural Language & Linguistic Theory*, 6. pp: 527-539.
- Hay, J. (2002). From speech perception to morphology: Affix ordering revisited. *Language*, 78.
- Ido, S. (1999). Turkish Mimetic Word-formation. *Asian-African Studies*, 8. pp: 67-73.
- Inkelas, S., and Orgun, C. (1998). Level (Non)Ordering in Recursive Morphology: Evidence from Turkish. In Lapointe, S. (Eds.). *Morphology and Its Relation to Phonology and Syntax*. California: CLS Publication. pp: 360-392.
- Korkmaz, Z. (2003). *Türkiye Türkçesi Grameri: Şekil Bilgisi*. Ankara: TDK Yayınları.
- Lieber, R. (2004). *Morphology and Lexical Semantics*. Cambridge: Cambridge University Press.
- Manova, S., and Brzoza, B. (2015). Suffix Combinability and the Organization of the Mental Lexicon. *10th Mediterranean Morphology Meeting*. Haifa, Israel, Sept. 7-10.
- Marantz, A. (1997). No escape from syntax: don't try morphological analysis in the privacy of your own lexicon In A. Dimitriadis et al. (Eds.) *University of Pennsylvania Working Papers in Linguistics*, 4. Philadelphia: University of Pennsylvania Department of Linguistics. pp: 201-225.
- Melissaropoulou, D. & Ralli, A. (2010). Greek derivational structures: restrictions and constraints. *Morphology*, 20. pp:343-357.
- Mutlu, F. (2016). Iconic Templates in Turkish. Unpublished Manuscript. Istanbul: Boğaziçi University.
- Nakipoğlu, M. and Üntak, A. (2006) Türkçede Eylem Sayısı ve Biçimbirimsel Özelliklerine göre Eylem Sınıfları. *Dilbilim Araştırmaları*. pp: 129-164.
- Özkul, A. (2016). Türkçede -la Eki ile Türemiş Eylemlerin Olay ve Temel Öge Yapısı. *XXIX. Ulusal Dilbilim Kurultayı Bildirileri*. Kocaeli Üniversitesi Vakfı Yayınları. pp: 29-36.
- Plag, I. (1999). *Morphological productivity: Structural constraints in English derivation*. Berlin/New York: Mouton de Gruyter.
- Siegel, D. (1974). *Topics in English morphology*. Cambridge, MA: MIT Press.
- Uygun, D. (2009). A Split Model for Category Specification: Lexical Categories in Turkish. PhD Thesis. Boğaziçi University, Istanbul.
- Uzun, N., Uzun L., Aksan, Y., Aksan, M. (1992). *Türkiye Türkçesinin Türeme Ekleri: Bir Döküm Denetlemesi*. Ankara.
- Zülfikar, H. (1995). *Türkçede Ses Yansımali Kelimeler*. Ankara: TDK Yayınları.

Appendix

Table 2:

Onomatopoeic Verbs Derived with -Ir Suffix		
aksır	hapşır	tıksır
anır	osur	tükür
böğür	öğür	üfür
çağır	öksür	

(Nakipoğlu and Üntak, 2006)

Table 3:

Onomatopoeic verbs derived with the suffix -kIr		
bağır	haykır	püfkür
çemkir	hıçkır	püskür
çımkir	höykür	sümkür
fişkır	kışkır	töskür
geğir	pavkır	

(Nakipoğlu and Üntak, 2006)

Table 4:

Verbs with -I/AklA Suffix		
açıkla	itekle	sürükle
ayıkla	gıdıkla	tartakla
didikle	pinekle	tutukla
durakla	savsakla	uçukla
dürtükle	sayıkla	uyukla

(Nakipoğlu and Üntak, 2006)

Table 5:

-sA immediately after -Im ¹¹		
Noun	Adjective	Verb/?
ben-im-se	az-ım-sa	an-ım-sa
güç-üm-se	çok-um-sa	ayır-ım-sa
öz-üm-se	kötü-m-se	duy-um-sa
yok-um-sa		gül-üm-se
		kaç-ım-sa
		küçü-m-se
		söy-le-m-se
		sayr-ım-sa

(Nakipoğlu and Üntak, 2006)

Table 6:

-sA immediately after lexical root/stem ¹²		
Noun	Adjective	Verb/?
duraksa	ağırsa	aksa
evse	aşağısa	gerekse
kanıtsa	büyükse	kapsa
kutsa	çirkinse	ökse
susa	çoksa	savsa
tavsa	hafifse	
önemse	ıraksa	
yelse	kanıksa	
tekese	küçükse	
uğursa	uzaksa	
örnekse	üstünse	
umursa	yakınsa	
yurtsa		

(Nakipoğlu and Üntak, 2006)

¹¹ The data is obtained from Nakipoğlu et al. (2006); however, the classification belongs to me.

¹² The data is obtained from Nakipoğlu et al. (2006); however, the classification belongs to me.