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Tat, D.; Kornfilt, J.

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Haplogy within M-Words and P-Words: Revisiting the Stuttering Prohibition in Turkish

Deniz Tat & Jaklin Kornfilt

Leiden University & Syracuse University

d.tat@hum.leidenuniv.nl | kornfilt@syr.edu

1. Introduction

Languages exhibit various kinds of reduplication, but, at the same time, they also have strategies to avoid it. It is therefore necessary to distinguish accidental doubling of morphemes from reduplication (see Radford, 1977: 43; Nevins, 2010: 86). Accordingly, in Turkish, a case of morpheme iteration, or haplogy, exists although the language frequently uses reduplication for word formation and focus, among other things. Consider the following example in (1) where the NN compound marker in (a) cannot co-occur with the possessive marker in (b):

- (1) a. *masa lamba-sı*
desk lamp-CM
'desk lamp'
- b. *bizim masa lamba-(*sı)-mız*
our desk lamp-CM-1PL.POSS
'our desk lamp'

The compound marker in NN compounds has been analyzed in various ways by linguists, whose analyses can be roughly grouped in two categories: (i) as a derivational morpheme (e.g. Göksel, 2009; Göksel and Haznedar, 2007; Kharytonova, 2011; van Schaaik, 2002), (ii) and as a 3rd person possessive agreement marker (Dede, 1978; Kornfilt, 1984, 1986; Tat, 2013; Yüксеker, 1987). The former group claims that *-sı* is a compound marker since it simply behaves as such, marking that a NN combination is a lexical unit. These researchers generally rely on the lexicalization of such compounds which abound in Turkish lexical inventory, and claim that the

similarity of the compound structure in (1a) to a possessive phrase is purely a coincidence (van Schaaik, 2002: 67) or due to some historical change whereby a marker from an inflectional paradigm has become a derivational element capable of forming new words (e.g. Göksel, 2009). (Kharytonova differs in this sense since she claims that the compound marker is a nominalizing head in the syntax that selects a complex Root within the framework of Distributed Morphology (DM) (Halle and Marantz, 1993) and hence does not make a lexicalist claim.)

The latter group of researchers claim that the NN compound is underlyingly similar to a possessive phrase, where the first element is in a specifier position of a nominal category, which triggers a nominal agreement. In this case, the first part of the NN compound is a third person by default, hence the third person possessive agreement appears on the second part. The relevant counterpart to (1a) is provided in (2), where the possessor bears the genitive case:

- (2) *masa-nin* *lamba-sı*
 desk-GEN lamp-CM
 ‘the desk’s lamp’

There are a number of reasons to believe that the latter group of linguists are on the right track, the strongest claim coming from the self-evident example in (1b) illustrating that the compound marker cannot occur with a possessive agreement marker (Kornfilt, 1986). Another reason is the well-known relative order of the plural and the compound marker, such that the former has to precede the latter, showing that the compound marker is outside the domain of word formation:

- (3) *masa* *lamba-lar-ı*
 desk lamp-PL-CM
 ‘desk lamps’

Furthermore, independent evidence from acquisition studies (Ketrez, in press) also shows that the so-called compound marker does not emerge until the child acquires the

possessive inflectional paradigm despite the relative frequent use of nominal compounds bearing this marker in child-directed speech. We therefore assume in the rest of this paper that the so-called compound marker is indeed part of an inflectional category that belongs to the possessive agreement paradigm.

If the compound marker and other possessive markers are not allowed to be in adjacent positions, then this is a fitting example of what has been called ‘haplology,’ a property of languages that omits repetition of elements within words or phrases. Kornfilt (1986) makes this same observation and calls the haplology that operates on examples like (1b) "the Stuttering Prohibition" (SP). In this paper, we revisit the SP and claim that the so-called compound marker is deleted before Vocabulary Insertion, whereby terminals receive phonological form. We distinguish between two types of haplology following Nevins (2010): one that operates on M(orphosyntactic)-words, or complex terminal heads (Embick and Noyer, 2001), and one that operates on P(honological)-words, or Vocabulary Items in the sense of DM. In doing so, we assume a separationist model of morphology as in Halle and Marantz (1993) and Arregi and Nevins (2008).

Although the Turkish compound marker and its relation to the possessive phrase have been extensively studied in the literature, we believe some of the questions still require a convincing answer: where in the derivation are the compound marker and the possessive marker inserted? If they compete for exponence, what happens to the compound marker? Is it impoverished or obliterated? And why is the doubling of some other morphemes, such as the causative and the passive markers, allowed in Turkish while the compound/possessive markers clearly do not allow this? We show that such questions are easily answered once we assume an architecture of grammar where derivations involve the components syntax > morphology >

phonology in this particular order, as in Distributed Morphology (DM) (Halle and Marantz, 1993, 1994), where syntactic terminals can undergo morphological operations before they receive phonological form.

The paper is organized as follows: In section 2, we provide a short summary of the literature on the SP. In section 3, we extend the SP condition to morphemes other than the compound marker and claim that the domain for the SP condition is the M-Word. In section 4, we claim that what appears to be counter-examples to this condition (the iteration of the causative and passive) are in fact subject to haplology restrictions only at the P-Word stage, where terminals receive their phonological form. Section 5 concludes this paper.

2. Background

Kornfilt (1986) shows that Turkish possessive agreement cannot co-occur with the compound marker, as we have seen in example (1b). She therefore claims that what appears to be a compound marker is in fact the 3rd person possessive marker. She addresses this observation as well as some others, and proposes the “Stuttering Prohibition” in Turkish, which states that morphemes of the same type in Turkish cannot co-occur. Phonological similarity or dissimilarity are irrelevant.

Accordingly, Kornfilt (2009) shows in more recent work that the SP explains the differences between Turkish relative clauses, which can be possessed, and Kazakh, Kyrgyz and Uyghur relatives, which cannot. In Turkish, subject agreement and possessive agreement are located on different heads and thus are not adjacent; in the second group of languages, these agreement suffixes are located on the same head and are adjacent. We will return to these examples in section 3.

Haig (2002) claims that not only morphological, but also phonological similarity triggers SP effects. Arguments come from well-formed sequences of causative and passive morphemes, such that when iterated, neither realises the same allomorph consecutively. Consider the following examples:

- (4) *öl-dür-t*
 die-CAUS-CAUS
 ‘cause to kill, have killed’
- (5) *(bu odada) döv-ül-ün-ür¹*
 (in this room) hit-PASS-PASS-AOR
 ‘it is hit (by human agent) (in this room)’ (Özkaragöz 1986: 77)

(4) shows that the causative has (at least) two allomorphs. As we shall see, which of the potential allomorphs of the causative in the second position is well-formed depends entirely on the phonological shape of the first. The same can be said for the example in (5). For speakers who accept such unaccusative passives, the passive allomorph in the second position has to be *-In* since it is required that this particular allomorph is inserted whenever the verb ends with /l/. In both instances, the system does not allow the iteration of the same allomorph:

- (4') **öl-dür-dür*
- (5') **döv-ül-ül*

So, how are these examples different from the example we discussed with respect to the SP (1b)? First of all, (4) and (5) appear to be counter-examples to the SP at first glance since they involve the doubling of the causative or of the passive morpheme that results in a grammatical sequence. The SP does not specify the type of morphemes that are subject to it; in other words, that, for example, the causative is of a derivational category is therefore not relevant to the SP

¹ Not all native speakers of Turkish accept examples of this type, and, more generally, unaccusative passives. However, the important point for our study is the fact that, even for permissive speakers who do accept such passives, the sequence of identical allomorphs of the passive, such as in (5'), is ill-formed.

and is thus not a reliable explanation to account for the acceptability of sequences involving causative morphemes.

Second, while the repair strategy for examples like (1b) is to delete one of the (not necessarily phonologically identical) morphemes, the repair strategy for (4) and (5) is to insert two different allomorphs that realize the same type of head, the causative in (4) and the passive in (5). Deleting either one of the morphemes is never an option. And avoiding phonological similarity is not relevant to the SP in the first place. These reasons lead us to the question why the system treats these two types of morpheme iteration differently.

In the next section, we argue that the morpheme doubling restrictions in (1b) and the ones in (4') and (5') are subject to conditions that apply at different stages in the derivation, namely at a morphosyntactic level that precedes Vocabulary Insertion and at Vocabulary Insertion proper, respectively, when terminals receive phonological form, following the typology of haplological dissimilation proposed by Nevins (2010). As we shall see, these two types of haplology not only differ in what stage they operate on in the derivation, but also in the repair strategies that are available in the language.

3. Haplology at the M-Word stage

There are at least three cases of accidental iteration of person markers in Turkic, which are all exemplified below:

- | | | | | |
|-----|---|-------------------------------|---|---------|
| (6) | * <i>benim</i>
my
Intended: ‘my flower garden’ | <i>çiçek</i>
flower | <i>bahçe-si-m</i>
garden-CM-1.SG.POSS | TURKISH |
| (7) | * <i>benim</i>
my
Intended: ‘my and his/her garden’ | <i>ve onun</i>
and his/her | <i>bahçe-m-si</i>
GARDEN-1.SG.POSS-3.SG.POSS | TURKISH |

John was enjoying reading the book are just fine due to the presence of a PRO and possibly due to the richer syntactic structure, such as a CP between the two *-ing* forms, which therefore belong to two separate complete, unreduced syntactic domains. Mostly, repair strategies of haplology at this level are pre-emptive, such that syntax avoids repetition of phrases by syntactic operations like movement and preposition insertion before Spell-out.

At initial prosodic phrasing, where the output of syntax is mapped onto prosodic phrases, accidental iteration of certain terminals is also attested. Nevins (2010) treats these as a separate class of haplology since they are prosodically-sensitive and thus acceptability can vary due to pauses. This type of haplology does not refer to individual features, but instead is triggered in cases of total identity. One of the examples he provides for this class of haplology is the ban on iteration of the Mandarin Chinese word *le*, which can be used as a perfect marker or as a discourse marker describing a “currently relevant state” (CRS) (Nevins, 2010: 95). Both *les* are prosodically weak (toneless), and therefore cannot co-occur within the same prosodic phrase under strict adjacency. (9) is acceptable since the two *les* are not in the same prosodic phrase. The repair strategy when they do appear in adjacent positions within the same prosodic phrase, as in (10), is to phrase the two together.

(9) *Wo he le san bei kafei le*
 I drank PERF three cups coffee CRS
 ‘I drank three cups of coffee’

(10) *Bing dou hua le (*le)*
 Ice all melted PERF/CRS
 ‘The ice all melted’

(Yip, 1998, cited in Nevins, 2010, ex. 31, 32)

As for haplology that operates at the M-Word level, it can be said that it applies to complex terminal heads before they are phonologically realized. Therefore, they are crucially phonologically-insensitive. They typically refer to individual features within the same M-Word,

and consequently, repair strategies involve modification of the features themselves, such as through impoverishment or fusion. For instance, in the following Spanish example, *se* in the clitic cluster is inserted instead of the dative *le(s)* under the adjacency of two [-participant] morphemes within the same M-Word. This results, as Nevins (2007, 2010) claims, from the impoverishment of 3rd person features on the dative morpheme when it co-occurs with other 3rd person features, i.e. the accusative morpheme.

- (11) *El libro, se lo dí a ella.*
 the book CL.IMP CL.ACC.3SG.M I.gave to her
 ‘I gave the book to her.’

(Nevins, 2007, cited in Nevins, 2010, ex. 41)

Finally, haplology operating at Vocabulary Insertion is, as expected, sensitive to phonology and operates under adjacency of two Vocabulary Items. Nevins (2010: 105) exemplifies this with the interaction between the plural and the possessive in English: when the plural *-s* in English and the possessive *-s* co-occur, the latter is realized with the allomorph \emptyset , thus *cats’* in *cats’ feet* is realized as [kæts] and not *[kætsɪz]. Here the repair strategy is the choice of the zero allomorph or of zero-insertion when two affixes are adjacent. Other strategies may involve complete ineffability. For example, Turkish *m-* reduplication, which results in a meaning “and things like that” when it targets nouns, replaces the onset of the target with [m] (12-13). When the onset of the target noun is already [m], then the resulting undesired doubling of the noun is completely accidental and unacceptable (14). There is no repair strategy other than complete avoidance of such accidental iteration.

- (12) *anahtar manahtar* ‘key(s) and things like that’

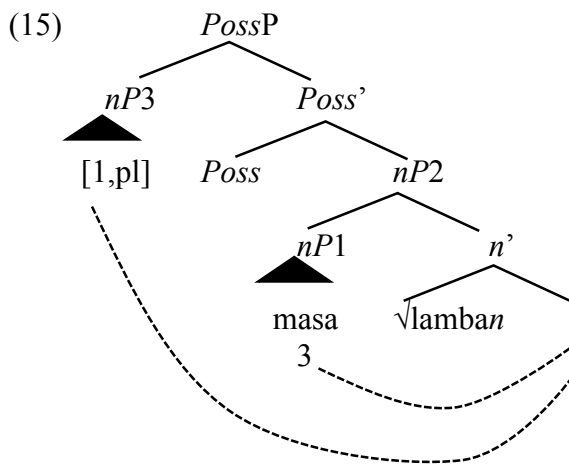
- (13) *sandalye mandalye* ‘chair(s) and things like that’

- (14) **merdiven merdiven* ‘stairs and things like that’

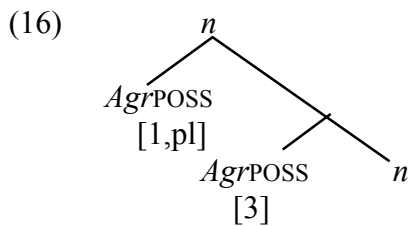
3.2. Haplology where the possessee is a NN compound

The SP is a fitting example of haplology at the M-Word level: (i) it is concerned with the realization of two sets of independent agreement features on the same head noun; and (ii) crucially, the phonological shape of these morphemes are not relevant since the haplological rule applies before Vocabulary Insertion.

Let us now assume that the possessive phrase in (1b) is represented as follows, where the uninterpretable person and number features of the head noun of the compound must be valued, in this case twice, by the features of both nP1 and nP3.



The terminal head of nP2 is thus a complex one, where more than one agreement features are hosted and thus not allowed at the morphosyntactic level:



Let us also consider the possessive paradigm in Turkish:

(17)

	-plural	plural
1	<i>benim lambam</i> 'my lamp'	<i>bizim lambamız</i> 'our lamp'
2	<i>senin lamban</i> 'your lamp'	<i>sizin lambanız</i> 'your (pl) lamp'
3	<i>onun lambası</i> 'his/her/its lamp'	<i>onların lambası</i> 'their lamp'

It appears that Turkish has two separate positions of exponence for person and number, although traditionally these are analyzed as single morphemes. We can thus formulate the person and number rule for Turkish possessives as follows:

- (18) Person: [1] ↔ *-(I)m*
 [2] ↔ *-(I)n*
 Elsewhere ↔ *-(s)I*
- (19) Number: [Part, Pl] ↔ *-Iz*
 Elsewhere ↔ \emptyset

As can be seen in (18) and (19), person morphemes are specified for participants [1,2] only, while anything that is not a participant is realized as *-(s)I*. The same can be said for number; plural is realized only when participant features are involved. Anything that is not a participant is realized as \emptyset^2 .

What happens when a possessee is the locus of agreement which is linked to two possessors as in (15)? Two scenarios can be thought of: (i) The agreement features of both possessors are fused; (ii) The agreement feature of one of the possessors is deleted. Given the rules in (18) and (19), all possible feature combinations are given in (20), where the possessee is

² In cases where the 3rd person plural possessors are pro-dropped, we have a different picture: this time, the plural is realized as *-IAr*, e.g. *masa-lar-ı* 'their table' (which is in addition also ambiguous between 'his/her/its tables' and 'their tables'). What is crucial is that in the case of 3rd person plural, the number feature is never realized as *-Iz*.

an NN compound. Since (20a) and (20b) are ungrammatical, the scenario in (i) can be ruled out. Note that the coalescence of the features of the possessor and the features of the non-head noun in the compound represents the sum of these features, where plurality is epiphenomenal from the presence of two person features; we will return to such representation of number shortly.

- (20)
- | | | | | |
|----|----------------|-------------|------------------|------------------|
| a. | <i>*benim</i> | <i>masa</i> | <i>lamba-mız</i> | 1sg+3=1pl ↔ -mIz |
| b. | <i>*senin</i> | <i>masa</i> | <i>lamba-nız</i> | 2sg+3=2pl ↔ -nIz |
| c. | <i>onun</i> | <i>masa</i> | <i>lamba-sı</i> | 3+3=3pl ↔ -sI |
| d. | <i>bizim</i> | <i>masa</i> | <i>lamba-mız</i> | 1pl+3=1pl ↔ -mIz |
| e. | <i>sizin</i> | <i>masa</i> | <i>lamba-nız</i> | 2pl+3=2pl ↔ -nIz |
| f. | <i>onların</i> | <i>masa</i> | <i>lamba-sı</i> | 3pl+3=3pl ↔ -sI |

This leaves us with scenario (ii), such that the agreement feature of the lower trigger for agreement in (15) must be deleted. The deletion rule can be formulated as follows:

- (21) -Participant → Ø / [_____ +/-Participant]

The repair strategy in (21) therefore results in a form that obeys the SP. Note that the rule specifically targets -Participants although in Turkish this only includes 3rd person.

3.3. Haplology where the possessor is a coordinate phrase

Let us now return to the examples where the possessor is a coordinate structure. A discussion of such examples is motivated at this point in our exposition, since they also involve more than one set of features that need to be valued on the possessee. Consider the following examples:

- (22)
- | | | | | | |
|----|-------------------------------|--------------|-----------|--------------|--------------------|
| a. | <i>Bu</i> | <i>senin</i> | <i>ve</i> | <i>benim</i> | <i>ara-m-da</i> |
| | this | your | and | my | space-1SG.POSS-LOC |
| | 'This is between you and me.' | | | | |
| b. | <i>*Bu</i> | <i>senin</i> | <i>ve</i> | <i>benim</i> | <i>ara-n-da</i> |
| | this | your | and | my | space-2SG.POSS-LOC |

- c. **Bu* *senin* *ve* *benim* *ara-n-im-da*
 this your and my space-2SG.POSS-1SG.POSS-LOC

Agreement expresses the most local relationship, namely between the second conjunct of the possessor phrase and the possessee, as in (22a). (This is true regardless of the feature specifications since such last conjunct agreement is allowed with all persons in the most local position with respect to the exponent of agreement). Accordingly, (22b) is ungrammatical because it violates the locality condition. On the other hand, the realization of 1st and 2nd persons individually as in (22c) is also ungrammatical since a sequence of two consecutive agreement markers violates the SP.

Turkish also exhibits another strategy for agreement when two possessors are present, which is realizing the sum of the features of first and second conjuncts, as exemplified in (23a). In this example, the sum of those features is realized as 1st person plural since the sum of 1st and 2nd singulars is 1st plural rather than 2nd plural due to the higher status of [1] in a person hierarchy than [2] (see Harley and Ritter, 2002). This latter situation is shown in (23b). Further, we know from examples (23c) and (23d) that it is indeed featural markedness rather than locality that determines the sum of the features; in the well-formed (23c), it is the conjunct which is non-local to the location of the exponent of agreement which determines the person value in the sum of the features; the override with respect to locality is determined by the person hierarchy just mentioned. In (23d), where the hierarchy is overridden by locality, we get an ill-formed result. The coalescence of the person features of first and second conjuncts is the result of a post-syntactic operation, Fusion, that repairs the output of syntactic operations.

- (23) a. *Bu* *senin* *ve* *benim* *ara-mız-da*
 this your and my space-1PL.POSS-LOC
- b. **Bu* *senin* *ve* *benim* *ara-nız-da*
 this your and my space-2PL.POSS-LOC

- c. *Bu benim ve sizin ara-mız-da*
 this my and your space-1PL.POSS-LOC
- d. **Bu benim ve sizin ara-nız-da*
 this my and your space-2PL.POSS-LOC

What we see in (23a/c) is an example of portmanteau morphology: when a host appears to express two agreement relationships, it is possible in some languages that the featural specification of this element may be the sum of the two sets of features. Gluckman (2016) claims that portmanteau morphology can be explained if we dispense with number features, such as singular, plural, dual, etc. in agreement systems and instead replace them with a single feature INDIVIDUAL (IND). He proposes that number morphology is decompositional, such that each discrete element is represented by this feature IND. In other words, plural agreement is made up of at least two IND features (in languages with no dual or paucal, etc). For example, the plural persons in English can be represented as follows:

$$(24) \quad [\text{IND IND}] \rightarrow \text{plural}$$

Following Gluckman (2016) (as well as Harley and Ritter's (2002) feature geometry that Gluckman also adopts), we can represent the portmanteau morphology in (23a) and (23c) as follows. (Note that PART (participant) represents the feature that refers to 1st and 2nd person in the discourse; its dependent feature SPEAKER (SPKR) refers to 1st person only.) The formulation requires the use of 1st person plural in Turkish, which does not distinguish between dual and plural.

$$(25) \quad \begin{pmatrix} \text{IND} \\ \text{PART} \end{pmatrix} + \begin{pmatrix} \text{IND} \\ \text{PART} \\ \text{SPKR} \end{pmatrix} = \begin{pmatrix} \text{IND IND} \\ \text{PART PART} \\ \text{SPKR} \end{pmatrix}$$

What we have seen thus far is that in cases where the possessor is a coordinate construction, Turkish allows two strategies: (i) agreement with the most local conjunct regardless

of its feature specifications (partial agreement), and (ii) agreement with the sum of the features of both conjuncts, irrespective of locality, but due to a person hierarchy (full agreement). How is it possible that both are allowed within the same language? We claim that the agreement phenomenon in Turkish is realized in two steps: a syntactic step where interpretable person and number features of a possessor or of a subject are checked against their uninterpretable counterparts in the possessed host of agreement, which thus results in full agreement, and a morphological step where these features are morphologically realized after spell-out before they receive a phonological form. Since in the latter case the syntactic output is already realized, the linearly most local possessor's features are realized at Vocabulary Insertion. Partial agreement, thus, indirectly complies with the SP.

The same can be said for full agreement through portmanteaux, though for different reasons. If portmanteau is obtained by syntactic operations (i.e. percolation of features within the coordinate structure), then we can say that the repair strategy of fusion is in fact pre-emptive: the coalescence of features happens in syntax, though, of course, they get realized post-syntactically. To sum up, the SP is respected, or better put avoided, one way or another.

3.4. Haplology where a non-subject relative clause is the possessee

Finally, let us return to the Uyghur examples where non-subject relative clauses cannot be possessed as we have already seen in (8). In Turkic languages, embedded clauses are typically nominalized, and are thus subject to the nominal/possessive agreement paradigm. As observed by Kornfilt (2009), while the nominal agreement is realized on the predicate in some of these languages (e.g. Turkish), it is realized on the relative head in others (e.g. Uyghur) as illustrated by the following examples. The 3rd person agreement in the Turkish example surfaces on the

verb, while it surfaces on the construction's clause-external head in Uyghur when the subject is genitive (a) and it does not surface at all if it is nominative (b):

- (26) *Ali'nin öl-dür-düg-ü öküz* TURKISH
 Ali-GEN die-CAUS -FN-3 ox
 'the ox which Ali killed'
- (27) a. *Äli-niñ öl-tür-gän kali-si* UYGHUR
 Ali-GEN die-CAUS-P ox-3.SG
 'the ox which Ali killed'
- b. *Äli öl-tür-gän kali*
 Ali-NOM die-CAUS-P ox
 'the ox which Ali killed' (Kornfilt, 2009: 381)

When these relative clause constructions are possessed, the Turkish version is completely fine as in (28). As for Uyghur, it is ungrammatical for the example in (27a) with nominal agreement while it is grammatical for the example in (27b) where there is no nominal agreement.

The relevant examples are in (29a), repeated from (8), and in (29b), respectively:

- (28) *Ali-nin öl-dür-düg-ü öküz-üm*
 Ali-gen die-CAUS-FN-3SG ox-1.SG
 'My ox which Ali killed' (Konfilt, 2009: 387)
- (29) a. **Ali-niñ öl-tür-gän (min-iñ) kali-si-m* UYGHUR
 Ali- GEN die-CAUS-P 1-GEN ox-3SG-1SG
 Intended: 'My ox which Ali killed.' (Kornfilt, 2009: 380)
- b. *Ali öl-tür-gän (min-iñ) kala-m*
 Ali-NOM die-CAUS-P 1-GEN ox-1SG
 'My ox which Ali killed.' (Kornfilt, 2009: 382)

Kornfilt (2009) explains the differences between Turkish non-subject relatives that can be possessed and Uyghur (as well as Kazakh, Kyrgyz and Sakha) non-subject relatives that cannot be possessed by appealing to the SP. That the Uyghur possessed non-subject relative clause in (29b) is well-formed strengthens her claim since the non-subject relatives in Uyghur can in fact be possessed, provided that the relativized object does not already bear an agreement marker

when it functions as the construction's clause-external head. There is no repair strategy in these languages to overcome the SP, such as impoverishment or coalescence. For example, (29a) does not improve when the 3rd person agreement marker is deleted as would be analogous to possessive structures with compound possessives in Turkish:

- (30) **Ali-niŋ öl-tür-gän (min-iŋ) kala-m* UYGHUR
 Ali- GEN die-CAUS-P 1-GEN ox-1SG
 Intended: 'My ox which Ali killed.' (Kornfilt, 2009: 382)

We have thus far seen three types of accidental repetition of agreement morphology in Turkic: (i) possessive constructions where the possessee is an NN compound bearing the so-called compound marker, (ii) possessive constructions where the possessor is a coordinated structure, and (iii) possessive constructions where the possessee is a non-subject relative. We have seen that in all these cases the SP must be respected, although these instances differ with respect to the repair strategies. While (i) type constructions are repaired and thus made available by an impoverishment rule, (ii) type constructions are repaired by either portmanteau agreement or a post-syntactic agreement that respects linear locality. Finally, (iii) type constructions are completely unavailable. This latter observation entails that haplogy that needs to be respected at the M-Word level cannot always be repaired by manipulating features, and it thus has the power to determine the availability or unavailability of certain constructions in a given language. Based on what we have thus seen, we can reformulate the SP as follows:

- (31) THE STUTTERING PROHIBITION
 Morphemes of the same category cannot co-occur within the domain of M-Words in Turkic.

In the next section, we return to the iteration of the causative and the passive, which appear to be counter-examples to the SP at first glance and show that they are indeed not subject to the SP.

4. Haplology at Vocabulary Insertion

In section 2, we have seen that the causative and the passive in Turkish can be iterated, a phenomenon which appears to counter-exemplify the rule provided in (31). In this section, we discuss both the causative and the passive in Turkish, and show that their iteration is not subject to restrictions that hold at the M-Word stage, but rather at Vocabulary Insertion, where each member of the so-called iterated morpheme sequence realizes two different types of terminals in the first place. As Nevins (2010) predicts, repair strategies of iteration at this stage are phonologically-sensitive, which is exactly the case with the Turkish causative and the passive as we shall see below.

There are five VIs that realize the causative morpheme in Turkish: *-Ir*, *-Ar*, *-It*, *-t*, and *-dIr*. Their distribution, as Key (2013) analyzes in much detail, can be predicted by the category of what the causative morpheme selects for (an acategorical Root or a vP) as well as the phonology of the selected item. (Traditionally, the causative allomorphs have been discussed only referring to the latter.) The distribution of the first three of these, namely, *-Ir*, *-Ar* and *-It* are highly specified; they select for a set of listed Roots in the lexicon and must be memorized. Note that Roots in Turkish are typically monosyllabic.

- (32) a. *-Ar* ↔ v_{CAUS} / [{√çık, √kop} ___] e.g. *çıkır* ‘take out’
b. *-It* ↔ v_{CAUS} / [{√kork, √ak, √sark, √ürk} ___] e.g. *korkut* ‘scare’
c. *-Ir* ↔ v_{CAUS} / [{√piş, √bat, √kaç, √bit ...} ___] e.g. *pişir* ‘cook’

The remaining two causatives are rather productive. *-t* is inserted after polysyllabic stems ending with a vowel or a liquid. Key (2013: 52) claims that the polysyllabic nature of these stems is epiphenomenal to the fact that they are vPs, rather than Roots. In other words, the polysyllabicity of these stems results from the fact that they minimally constitute a Root and a

extra intermediaries in the sentence do not need to be licensed by a causative event. To illustrate, let us consider the following example:

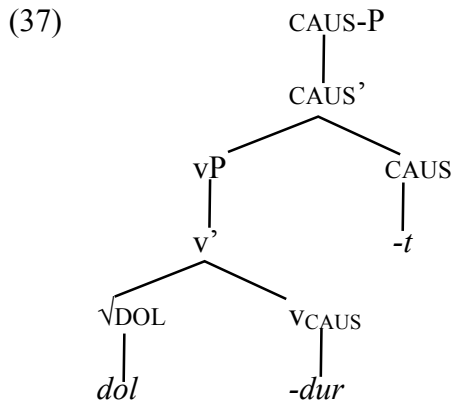
- (35) *Kartuş-u Ali-ye (Veli vasıta-sı-yla) dol-dur-t(tur)-du-m.*
cartridge-ACC Ali-DAT Veli by.means.of fill-CAUS-CAUS-(CAUS-)PST-1SG
'I got the cartridge filled by Ali with the help of Veli.'

In (35), the sentence is grammatical even in the absence of the last causative marker and the presence of the intermediary *Veli*. Similarly, it is grammatical in the absence of the intermediary and the presence of the last causative marker. Key (2013) claims that the extra causative marker in sentences like the one above is the result of focus reduplication to mark the coercive reading and the permissive reading of the causative. In (35), the first causative morpheme is the inner causative (or a verbalizing head with a CAUS flavor, see Folli & Harley 2007). The second causative is the outer causative, or the head of the CausP in Key's model (2013). Following Key (2013), we assume that the (accidental) iteration of the causative cannot include more than two causatives and anything beyond that is in fact reduplication. And since we already established in section 1 that reduplication is not accidental and thus falls outside the scope of this paper, we will exclude iteration of more than two causative markers in our analysis.

This leaves us with the iteration of maximally two causative morphemes. Some examples are listed in (36):

- (36) a. *dol-dur-t* 'cause to fill'
b. *ak-ıt-tır* 'cause to make flow'
c. *ye-dir-t* 'cause to make eat'
d. *öl-dür-t* 'cause to kill'

Following Key (2013), let us assume the following representation for (36a):



In (37), the Root is selected by a verbalizing v with a causative flavor, which is then selected by CAUS, the head of the external causative event, resulting in the stacking of two heads that are realized by the same VIs. What is accidental here is the fact that the same VIs realize these two different (but semantically comparable) heads. Furthermore, their realization is phonologically-sensitive. In cases where the first causative VI is *-dir* as in (36a, c and d), the second causative is realized as *-t*. This is because the first causative VI ends with a liquid. Similarly, if the first causative is *-it* or *-t*, the second position is realized as *-dir*. This is because the Elsewhere form is needed. It is therefore guaranteed that phonological similarity of the inner causative and the outer causative is always avoided:

- (38)
- a. **dol-dur-dur*
 - b. **ak-it-it*
 - c. **ye-dir-dir*
 - d. **öl-dür-dür*

What we see in (38) is a good example of haplology at Vocabulary Insertion, which is typically phonologically-sensitive. The repair strategy is thus selecting an appropriate allomorph. What we see in (36) is therefore not a violation of the SP, which requires a reference to M-

Words before the terminals receive any phonological form, while we have a different type of haplology here that operates at a later stage in the derivation, and which we call P-Word for ease of comparison. Consequently, we can claim that causative iteration does not constitute counter-examples to the SP.

As for passive iteration, our argumentation is parallel to the one we have presented for the causative. As stated in section 2, Turkish allows passive iteration as exemplified in (5), repeated here in (39) with an additional example in (40):

(39) *(bu odada) döv-ül-ün-ür*
 (in this room) hit-PASS-PASS-AOR
 ‘it is hit (by human agent) (in this room)’

(40) *Harp-te vur-ul-un-ur*
 war-LOC shoot-PASS-PASS-AOR
 ‘One is shot (by one) in the war.’

(Özkaragöz 1986: 77)

Such examples are acceptable only under certain circumstances. For instance, Özkaragöz (1986) states that they are typically used with the aorist tense. Even then, they are only marginally acceptable by some speakers (cf. footnote 1). Either way, they do warrant an explanation with respect to the iteration of a morpheme that appears to be of the same type and is thus potentially a counter-example to the SP.

The passive marker in Turkish has three allomorphs: *-n*, *-In* and *-Il*. Their distribution can be expressed entirely in phonological terms:

- (41) a. *-n* ↔ v_{INCH} / [[+vowel]___] e.g. *oku-n* ‘be read’
 b. *-I* ↔ v_{INCH} / [[+lateral]___] e.g. *çal-in* ‘be stolen’
 c. *-Il* ↔ v_{INCH} / Elsewhere e.g. *yaz-ıl* ‘be written’

When two passive markers are stacked in Turkish, this always results in an impersonal passive reading as already exemplified in (39) and (40). Accordingly, analogous to Key's (2013) model of outer causatives, Legate and Akkuş (2017) propose that double-passive constructions in Turkish are a combination of a (true) passive and an impersonal passive, i.e. two distinct constructions which just happen to be expressed by the same morphology. In their proposal, this impersonal projects an ImpersP above VoiceP and hosts a null impersonal human pronoun.

Similar to causative iteration, passive iteration also avoids phonological identity of the passive Vocabulary Items given the rules in (41). Therefore, examples like the ones listed in (42) are ruled out by the competition and blocking of similar passive allomorphs.

- (42) a. **oku-n-un*
 b. **çal-in-in*
 c. **yaz-ıl-ıl*

Passive iteration does not constitute a counter-example to the SP either. This is because conditions that constrain the iteration of passive allomorphs also apply at the P-Word stage, in a fashion similar to causative iteration. And if Legate and Akkuş (2017) are right, such that the true passive and the impersonal are not of the same category, then passive-iteration is not relevant for the SP in the first place. Similar to causative iteration, it is not the stacking of the passive morphemes that causes haplological effects, but rather the phonology of the VIs that realize these terminals. Turkish avoids phonological identity through realizing different allomorphs of the passive.

We have seen that causative and passive iteration do not constitute counter-examples to the SP since both are phonologically-sensitive and featurally-insensitive, suggesting that the haplological rule operates at Vocabulary Insertion rather than in a component that precedes it.

Furthermore, it is likely that the outer causative is not of the same category as the inner causative, while the impersonal is not of the same category as the true passive. If these claims are correct, then causative and passive iteration are not relevant to the SP since the SP fundamentally requires the iterated items to be of the same type.

We have seen in section 3 that the iteration of an agreement marker is entirely accidental: when a terminal head *X* hosts two elements of the same type, Turkish avoids the repetition of these markers by deleting one of the morphemes (or features through impoverishment) or by fusing the featural specifications into a single exponence. In the case of causative and passive iteration, what can be called accidental is the fact that two different categories are realized by the same VIs given the limited number of VIs realizing *f*-morphemes (functional terminals as opposed to *l*-morphemes or Roots, see Harley and Noyer, 1999). Morpheme iteration at the M-Word stage and Vocabulary Item repetition at the P-Word stage thus appear to share only one property, namely that their nature is completely accidental.

5. Conclusion

In this paper, we revisited the Stuttering Prohibition of Kornfilt (1986) and revised it as follows:

- (43) THE STUTTERING PROHIBITION
Morphemes of the same category cannot co-occur within the domain of M-Words in Turkic.

Following Nevins (2010), we have shown that haplology at the M-Word stage and haplology at the P-Word stage are fundamentally different. While the former is concerned with morphemes and their features, the other is concerned with Vocabulary Items and their phonology. Accordingly, the repair strategies refer to features in the former and allomorphs in

the latter. Distinguishing between these two types of haplology helped us rule out causative and passive iteration as counter-examples to the SP since they are subject to haplological repairs at the P-Word stage.

This paper demonstrates that realizational theories of morphology, such as DM (Halle and Marantz, 1993, 1994; Harley and Noyer, 1999), which assume an architecture of grammar that distinguishes between syntactic terminals, or M-Words, and their corresponding VIs that receive a phonological shape rather late in the derivation, make the best predictions about the ban on various types of iteration.

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