Inflectional morphology in the Turkish verbal domain: Allomorphy, hybridity and change[*]

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1 Introduction

- The realization of the agreement morpheme in the Turkish verbal domain depends on the preceding TAM morpheme: e.g., the k-paradigm surfaces after past tense -*DI* (1a), the z-paradigm after progressive -*Iyor* (1b).

(1) a. gel-**di-k**
         come-**PAST-1PL**
         'we came'

    b. gel-**iyor-uz**
        come-**PROG-1PL**
        'we are coming'

- Kornfilt (1996) has argued that TAM morphemes in z-paradigm verbs, such as -*Iyor* in (1b), are participial tenses that must be followed by a silent copula. In contrast, k-paradigm verbs such as (1a) contain simple tenses that do not require a copula.

- Yet another set of agreement morphemes, the reduced z-paradigm, has been documented more recently, following yet another set of TAM markers (2) (Erdem-Akşehirli, 2018; Göksel, 2010; Güneş, 2020, 2021):

(2) gel-**ece-z**
     come-**FUT-1PL**
     'we will come'

- Against the background of Kornfilt (1996), the question arises whether verbs like (2) contain a silent copula.

- To preview the findings, reduced z-paradigm verbs cannot be clearly classified either as simple or as participial. I will argue that this constitutes evidence that the syntactic distinction between simple and participial tenses is in the process of breaking down.

- Methodologically, the new data in the following were partly elicited in remote interviews with 20 native speakers and have partly been contributed by Turkish-speaking linguists.

2 The distribution of the three agreement paradigms

- The three classes of TAM and agreement morphemes have previously been reported by Güneş (2020, 2021) to be distributed as follows. We will not be concerned with the 3rd person morphemes.

(3) **TAM$_k$**
-*DI* – past (PAST)
-*sE* – conditional (COND)

(4) **Agr$_k$**

	Singular	Plural
First	-*m*	-*k*
Second	-*n*	-*nIz*
Third	$\emptyset$	-*lEr*

(5) **TAM$_z$**
-*Iyor* – progressive (PROG)
-*(y)EcEk* – future (FUT)
-*Er* – aorist (AOR)
-*mIş* – evidential (EVID)

(6) **Agr$_z$**

	Singular	Plural
First	-*(y)Im*	-*(y)Iz*
Second	-*sIn*	-*sInIz*
Third	$\emptyset$	-*lEr*

(7) **TAM$_{rz}$**
-*Iyo* – progressive (PROG)
-*(E)cE* – future (FUT)

(8) **Agr$_{rz}$**

	Singular	Plural
First	-*m*	-*z*
Second	-*n*	-*nIz*
Third	$\emptyset$	-*lEr*

- Note the similarities between Agr$_{rz}$ and Agr$_z$ and TAM$_{rz}$ and TAM$_z$, respectively, but also the partial syncretism between Agr$_{rz}$ and Agr$_k$ (9):

(9) Morphophonological similarities between the agreement paradigms

	Agr$_z$	Agr$_{rz}$	Agr$_k$
1SG	-*(y)Im*	-*m*	-*m*
2SG	-*sIn*	-*n*	-*n*
1PL	-*(y)Iz*	-*z*	-*k*
2PL	-*sInIz*	-*nIz*	-*nIz*

- According to my findings, the distribution of TAM and agreement morphemes is slightly more intricate:

  1. Agr$_k$ can follow TAM$_{rz}$ -*Iyo* (but not future TAM$_{rz}$ -*EcE*) in some varieties (10);

  2. Agr$_z$ can follow TAM$_{rz}$ (*modulo* independent confounds) (11a). The opposite, Agr$_{rz}$ following TAM$_z$, is not licensed (11b).

(10) %bul-uyo-k
find-PROG-1PL
root-**TAM$_{rz}$-Agr$_k$**
'we are finding'

(11) a. oyn-uyo-sunuz
play-PROG-2PL
root-**TAM$_{rz}$-Agr$_z$**
'you (pl.) are playing'

b. */??oyn-uyor-**nuz**
play-PROG-2PL
root-**TAM$_z$-Agr$_{k/rz}$**
'you (pl.) are playing'

- In summary, the following orderings are available:

(12) Licit combinations of TAM morphemes and agreement paradigms

	Agr_k	Agr_z	Agr_{rz}
TAM_k	A: ✓	B: *	C: *
TAM_z	D: *	E: ✓	F: *
TAM_{rz}	G: %	H: ✓	I: ✓

INTERIM SUMMARY

Besides the k-k, z-z and rz-rz orderings attested previously, Agr_k can follow progressive TAM_{rz} -Iyo in some varieties. Moreover, Agr_z can follow TAM_{rz} while Agr_{rz} cannot follow TAM_z. Accounting for this asymmetry is a major goal of the analysis.

3   Allomorphy and hybridity

- I argue that the three agreement paradigms are contextual allomorphs, and that the TAM_z/TAM_{rz} variants of the progressive and future morphemes (-$Iyor$/-Iyo, -$EcEk$/-EcE) are allomorphs in free variation.[1]

- The conditions on insertion of the three agreement paradigms are given in (13); a spell-out rule for 1PL is given in (14).

(13) a. Agr_k is inserted after a morpheme with PAST, COND or (in some dialects) PROG features and which ends on a vowel;
      b. Agr_z is inserted after a morpheme with PROG, FUT, AOR or EVID features;
      c. Agr_{rz} is inserted after a morpheme with PROG, FUT, AOR or EVID features and which ends on a vowel.

(14) a. 1PL → -k/{PAST, COND, (PROG)} and V_
      b. 1PL → -Iz/{PROG, FUT, AOR, EVID}
      c. 1PL → -z/{PROG, FUT, AOR, EVID} and V_

- Note that rules (14b) and (14c) are in free variation (15):

(15) a. oyn-**uyo-nuz**
          play-PROG-2PL
          root-**TAM$_{rz}$-Agr$_{rz}$**
          'you (pl.) are playing'
      b. oyn-**uyo-sunuz**
          play-PROG-2PL
          root-**TAM$_{rz}$-Agr$_z$**
          'you (pl.) are playing'

- The insertion rules capture the asymmetry between TAM_{rz}-Agr_z (16a) and TAM_z-Agr_{rz} (16b): only Agr_{rz} is sensitive to the phonological shape of the preceding TAM morpheme.

(16) a. oyn-**uyo-sunuz**
          play-PROG-2PL
          root-**TAM$_{rz}$-Agr$_z$**
          'you (pl.) are playing'
      b. */??oyn-**uyor-nuz**
          play-PROG-2PL
          root-**TAM$_z$-Agr$_{k/rz}$**
          'you (pl.) are playing'

- Again, Agr_{rz} morphemes turn out to be hybrids of the two other paradigms – not only in terms of their morphophonological shape, as seen in (9), but also in terms of selection (17):

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[1] Contrary to the intuition of many native speakers, TAM_{rz} and Agr_{rz} morphemes cannot in general be regarded as phonological variants of TAM_z/Agr_z. The case of -EcE is more complicated in that it might relate to the k-to-zero alternation.

(17)   Morphosyntactic (MS) and morphophonological (MP) selectional requirements of the three paradigms

	Agr_z	Agr_{rz}	Agr_k
MS	PROG, FUT, AOR, EVID	PROG, FUT, AOR, EVID	PAST, COND (PROG)
MP	/	open syllable	open syllable

- Equally, TAM_{rz} morphemes realize the same morphosyntactic features as TAM_z but also, like TAM_k morphemes, end on an open syllable.

INTERIM SUMMARY

Agr_k, Agr_z and Agr_{rz} are contextual allomorphs. Agr_{rz} and TAM_{rz} are hybrids of the other two sets of forms in terms of their morphophonological shape and in terms of selection.

4   Simple and participial tenses

- Kornfilt (1996) argues that TAM_z morphemes are participial tenses which need to be followed by a silent copula in order to be used in finite contexts (18a). TAM_k morphemes are simple tenses and do not require a copula (18b).

(18)   a.   gel-iyor $\emptyset$-uz   b.   gel-di-k
            come-PROG COP-1PL   come-PAST-2PL
            root-**TAM_z COP-Agr_z**   root-**TAM_k-Agr_k**
            'we are coming'   'we came'

- Kelepir (2001) has argued that participial tenses are merged in an aspectual head and thus still require a copula in T (19a), while simple tenses are directly merged in T (19b):

(19)   a.

   b.

- Evidence for this analysis comes from five domains.[2] I first present Kornfilt's original data and then apply the diagnostics to TAM_{rz}-Agr_{rz} verbs which are not discussed by Kornfilt.

4.1 TAM_k-Agr_k and TAM_z-Agr_z verbs

- First, participial but not simple tenses can combine with the negation marker -*değil* (20) :

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[2]I omit the evidence from suspended affixation due to additional complications.

(20)   a.   gid-**ecek değil**-im   b.   *git-**ti değil**-im
              go-**FUT NEG**-1SG   go-**PAST NEG**-1SG
              'I will not go'   'I did not go'   (Kornfilt, 1996:105)

- Second, participial but not simple tenses can combine with the epistemological copula -*DIr* (21):

(21)   a.   gid-**ecek-tir**   b.   *git-**ti-dir**
              go-**FUT-EPIST**   go-**PAST-EPIST**
              'she will definitely leave'   'she definitely left'   (Kornfilt, 1996:108)

- Third, participial but not simple tenses can be used as modifiers in the nominal domain (22), with the exception of the progressive (23):

(22)   a.   kitab-ı   oku-**yacak** kız   b.   *oku-**du**   kişi
              book-ACC read-**FUT**   girl   read-**PAST** person
              'a girl who will read the book'   'the person who has read'
                                                   (Kornfilt, 1996:112)

(23)   *oku-**yor**   kişi
        read-**PROG** person
        'the person who is reading'

- Fourth, the question marker -*mI* surfaces between participial TAM$_z$ tenses and the agreement marker (24) but word-finally in the case of simple tenses (25):

(24)   a.   gel-ecek-**mi**-siniz   (25)   a.   git-ti-niz-**mi**
              come-**FUT-Q**-2PL   go-PAST-2PL-**Q**
              'Will you (pl.) go?'   'Did you (pl.) go?'
       b.   ??/*gel-ecek-siniz-**mi**   b.   *git-ti-**mi**-niz
              come-**FUT**-2PL-**Q**   go-PAST-**Q**-2PL
              'Will you (pl.) go?'   'Did you (pl.) go?'   (Kornfilt, 1996:106)

- Fifth, in verbs with participial tenses, stress must be on the TAM morpheme (26), while in verbs with simple tenses, stress can also be word-final (27). Following up on Kornfilt (1996), Kabak and Vogel (2001) have argued that the copula is obligatorily prestressing, which naturally accounts for (26).

(26)   a.   gel-**ecék**-siniz   (27)   a.   gel-**dí**-niz
              come-**FUT**-2PL   come-PAST-2PL
              'you (pl.) will come'   'you (pl.) came'
       b.   *gel-ecek-**siníz**   b.   gel-di-**níz**

- The results of the five diagnostics are summarized in (28):

(28)   Properties of TAM$_k$ and TAM$_z$

	TAM$_k$	TAM$_z$
Can be followed by *değil*	no	yes
Can be followed by -*DIr*	no	yes
Can be used as a modifier	no	yes
Can be immediately followed by -*mI*	no	yes
Must bear stress when followed by Agr	no	yes

4.2　TAM$_{rz}$-Agr$_{rz}$ verbs

- We can now apply Kornfilt's diagnostics to TAM$_{rz}$-Agr$_{rz}$ verbs. I am drawing partly on results reported in Güneş (2020, 2021). First, progressive *-Iyo* but not future *-EcE* can combine with the negation marker *değil* (29):

(29)　　a.　gid-**iyo　değil**-im
　　　　　　go-**PROG　NEG**-1SG
　　　　　　'I am not going'

　　　　b.　*gid-**ece değil**-im
　　　　　　go-**FUT　NEG**-1SG
　　　　　　'I will not go'

- Second, similar results hold for the epistemological copula *-DIr* (but with some variation for *-EcE*) (30):

(30)　　a.　gid-**iyo-dur**
　　　　　　go-**PROG-EPIST**
　　　　　　'she is definitely leaving'

　　　　b.　%gid-**ece-dir**
　　　　　　go-**FUT-EPIST**
　　　　　　'she will definitely leave'

- Third, neither *-Iyo* nor *-EcE* can be used as modifiers in the nominal domain (note that for *-Iyo*, this is as expected) (31):

(31)　　a.　*oku-**yo**　kişi
　　　　　　read-**PROG** person
　　　　　　'the person who is reading'

　　　　b.　*kitab-ı　oku-**yaca** kız
　　　　　　book-ACC read-**FUT** girl
　　　　　　'the girl who will read the book'

- Fourth, both *-Iyo* and *-EcE* pattern with simple tenses with respect to the placement of the question marker *-mI* (32)–(33) (Güneş, 2020, 2021):

(32)　　a.　gel-iyo-nuz-**mu**
　　　　　　come-PROG-2PL-**Q**
　　　　　　'are you (pl.) coming?'
　　　　b.　*gel-iyo-**mu**-nuz

(33)　　a.　gel-ece-niz-**mi**
　　　　　　come-FUT-2PL-**Q**
　　　　　　'will you (pl.) come?'
　　　　b.　*gel-ece-**mi**-niz

- Fifth, both *-Iyo* and *-EcE* pattern with simple tenses with respect to stress assignment (34) (Güneş, 2020, 2021):

(34)　　a.　gel-**iyó**-nuz
　　　　　　come-PROG-2PL
　　　　　　'you (pl.) are coming'
　　　　b.　gel-iyo-**núz**

(35)　　a.　gel-**ecé**-niz
　　　　　　come-FUT-2PL
　　　　　　'you (pl.) will come'
　　　　b.　gel-ece-**níz**

- To summarize, the picture is mixed (36):

(36)　　Properties of TAM$_k$, TAM$_z$ and TAM$_{rz}$ (*-Iyo* and *-EcE*)

	TAM$_k$	TAM$_{rz}$: *-EcE*	TAM$_{rz}$: *-Iyo*	TAM$_z$
Can be followed by *değil*	no	no	yes	yes
Can be followed by *-DIr*	no	%	yes	yes
Can be used as a modifier	no	no	N/A	yes
Can be immediately followed by *-mI*	no	no	no	yes
Must bear stress when followed by Agr	no	no	no	yes

> ### Interim summary
>
> TAM_k-Agr_k and TAM_z-Agr_z verbs have a range of diverging properties, leading Kornfilt to posit an underlying syntactic difference. TAM_{rz}-Agr_{rz} verbs, however, have a mixed profile. This raises questions for the copula analysis as a whole.

5 A change in progress

- The results in (36) cannot simply be explained by the presence or absence of a silent copula.
- I argue that some diagnostics depend on the morphosyntactic features of the TAM morphemes, others on the morphophonological shape of the agreement morpheme:
  1. The diagnostics from *değil*, *-DIr* and modifiers are licensed by PROG, FUT, EVID and AOR features, regardless of the realization of agreement. Independent confounds apply for *-EcE*.
  2. The diagnostics from placement of *-mI* and stress are determined by the morphophonological shape of the agreement morpheme: Agr_k and Agr_{rz} pattern one way, Agr_z the other. The TAM morpheme does not affect these diagnostics, as evidenced by the fact that Agr_z still passes participial diagnostics when combining with TAM_{rz} (37)–(38):

(37) a. oyn-**uyó**-sunuz
   play-PROG-2PL
   root-**TAM_{rz}**-**Agr_z**
   'you (pl.) are playing'
 b. *oyn-uyo-**sunúz**

(38) a. oyn-uyo-**mu**-sunuz
   play-PROG-Q-2PL
   root-**TAM_{rz}**-Q-**Agr_z**
   'are you (pl.) playing?'
 b. ??/*oyn-uyo-sunuz-**mu**

- To account for these findings, I propose that the syntactic distinction between TAM_k-Agr_k and TAM_z-Agr_z forms, which is historically well-attested (e.g., Good and Yu, 2005), is breaking down and that the silent copula is being lost.
- As a result, the diverging properties of the two sets of forms are encoded in a more granular fashion, associated with the more concrete properties of TAM and agreement morphemes.

> ### Summary
>
> The syntactic difference between TAM_k-Agr_k and TAM_z-Agr_z verbs is in the process of being levelled and turning into a mere allomorphic difference in spell-out. The properties originally linked to the syntactic distinction have partly become associated with the morphosyntactic features of the TAM morphemes, partly with the morphophonological shape of the agreement morphemes. Agr_{rz} and TAM_{rz} morphemes have emerged as hybrids, patterning with the original simple tenses in some respects and the original participial tenses in others.

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