Hybridity and change in Turkish inflectional morphology

(A.k.a., a mess involving clitics, suffixes and auxiliaries)

Guest lecture for *Turkic Syntax*, USC

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0 Preliminaries

- This is work in progress. Feedback of any sort is very welcome.
- There will be a lot of morphemes, and I've made the experience that the material can be difficult to keep track of. Please stop me whenever things get unclear.
- I am not necessarily committed to every theoretical assumption I will make in the following – there are a lot of moving parts.
- Some ways in which today's presentation relates to last week's discussions:
  - Words, clitics and affixes
  - Phases
  - TAM morphemes
  - Diachronic development

1 Introduction

- The theoretical big picture point of this paper concerns the interaction between synchronic and diachronic analyses. The synchronic state of the grammar can be (to a certain extent) random and arbitrary if the diachronic path leading to it is not.
- Our empirical domain is the Turkish left periphery, specifically TAM and agreement morphemes. The agreement morpheme surfaces in different paradigms depending on the preceding TAM morpheme. E.g., the past morpheme *-DI* must be followed by the *k*-paradigm (1a), and the progressive morpheme *-Iyor* by the *z*-paradigm (1b).

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

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

- Kornfilt (1996): the TAM morphemes preceding the *z*-paradigm such as *-Iyor* are participial tenses which are followed by a silent copula. No copula is needed for simple tenses such as *-DI*. This analysis accounts for various differences between the two classes of verbs (reviewed later in Section 4).
- Additionally, Erdem-Akşehirli (2018), Göksel (2010), and Güneş (2020, 2021) have documented another agreement paradigm, the reduced *z*-paradigm, following yet another set of TAM markers (2). I assume that the reduced *z*-paradigm is the more recent development.

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

- Our question for today: how should verbs like (2) be classified against the background of Kornfilt's work? Do they contain a silent copula?
- Preview: verbs containing the reduced *z*-paradigm cannot be classified as either. What is more, I will make the stronger point that they undermine the contrast between simple and participial tenses altogether. Rather, I argue that this distinction is in the process of breaking down.
- Methodologically, most of the new data reported in the following are based on interviews with about 20 native speakers of Turkish, carried out over zoom.

Roadmap

2 The distribution of the three agreement paradigms

- Here is the full overview over the three classes of TAM and agreement morphemes as reported by Güneş (2020, 2021): Agr_k (3), TAM_k (4), Agr_z (5), TAM_z (6), Agr_{rz}, TAM_{rz}.

(3) *k*-paradigm agreement morphemes

	Singular	**Plural**
First	-*m*	-*k*
Second	-*n*	-*nIz*
Third	∅	-*lEr*

(4) TAM morphemes preceding the *k*-paradigm
-*DI* – past (PAST)
-*sE* – conditional (COND)

(5) *z*-paradigm agreement morphemes

	Singular	**Plural**
First	-*(y)Im*	-*(y)Iz*
Second	-*sIn*	-*sInIz*
Third	∅	-*lEr*

(6) TAM morphemes preceding the *z*-paradigm
-*Iyor* – progressive (PROG)
-*(y)EcEk* – future (FUT)
-*Er* – aorist (AOR)
-*mIş* – evidential (EVID)

(7) Reduced *z*-paradigm agreement morphemes

	Singular	**Plural**
First	-*m*	-*z*
Second	-*n*	-*nIz*
Third	∅	-*lEr*

(8) TAM morphemes preceding the reduced *z*-paradigm
-*Iyo* – progressive (PROG)
-*(E)cE* – future (FUT)

- The 3rd person morphemes are trivial – we won't be concerned with them.
- Note the relations between Agr_{rz} and Agr_z and between TAM_{rz} and TAM_z, as well as between Agr_{rz} and Agr_k.
- My own findings on the distribution of TAM and Agr morphemes are a bit more complicated.

(9) Combinations of TAM and Agr

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

- Cells A, E and I: The combinations reported so far are, unsurprisingly, grammatical (10a)–(10c).

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

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

c. gel-**ece-z**
come-**FUT-1PL**
root-**TAM_{rz}-Agr_{rz}**
'we will come'

- Cells B and C: TAM_k cannot be followed by Agr_z or Agr_{rz} (11)–(12).

(11) a. *gel-di-siniz
come-PAST-2PL
root-**TAM_k-Agr_z**
'you (pl.) came'

b. *at-ar-sa-yım
throw-AOR-COND-1SG
root-TAM_z-**TAM_k-Agr_z**
'if I throw'

(12) a. *gel-di-z
come-PAST-1PL
root-**TAM_k-Agr_{rz}**
'we came'

b. *bırak-tı-ysa-z
leave-PAST-COND-1PL
root-TAM_k-**TAM_k-Agr_{rz}**
'if we left'

- Cell G: Progressive TAM_{rz} *-Iyo* but not future *-EcE* can be followed by Agr_k (13).

(13) a. %bul-uyo-k
find-PROG-1PL
root-**TAM_{rz}-Agr_k**
'we are finding'

b. *at-**aca-k**
throw-FUT-1PL
root-**TAM_{rz}-Agr_k**
'we will throw'

c. at-**acak-∅**
throw-FUT-**3SG**
root-**TAM_z**-Agr
's/he will throw'

- Cell H: TAM_{rz} can be followed by Agr_z. (Independent confounds apply.)

(14) oyn-uyo-sunuz
play-PROG-2PL
root-**TAM_{rz}-Agr_z**
'you (pl.) are playing'

- Cell D and F: TAM_z cannot be followed by Agr_k and Agr_{rz}. Sometimes these forms are arguably ruled out phonotactically (15):

(15) *bul-uyor-mu**ş-m**
find-PROG-EVID-1SG
root-TAM_z-**TAM_z-$Agr_{k/rz}$**
'we are apparently finding'

- However, speakers also reject forms which seem phonotactically fine (16):

(16) a. */??gid-iyor-**nuz**
go-PROG-2PL
root-**TAM_z-$Agr_{k/rz}$**
'you (pl.) are going'

b. */??bul-uyor-mu**ş-nuz**
find-PROG-EVID-2PL
root-**TAM_z-$Agr_{k/rz}$**
'you (pl.) are apparently finding'

- To the extent that speakers accept these forms at all, they perceive them as slurred and mispronounced. I assume that they are generated as phonetic reductions.

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. (But see Section 6.3 for some complications.)
- Why should we consider TAM_{rz} and Agr_{rz} morphemes independent lexical items instead of simply more casual pronunciations of TAM_z and Agr_z? Note that the *rz* forms would have to be phonetic reductions – they could not be derived by a regular phonological rule. A couple of problems:
  - As reported above, speakers perceive sequences of TAM_z and Agr_{rz}/Agr_k morphemes as slurred but do not have this intuition about *rz* forms in general.
  - On that note: what rules out TAM_z-Agr_{rz}? Why can Agr only reduce if TAM does as well?
  - Why does phonetic reduction of Agr_z consistently produce forms which are homophonous with Agr_k?
  - We will see later that TAM_z-Agr_z and TAM_{rz}-Agr_{rz} license a different ordering of the question marker *-mI* which is unexpected if their difference is merely phonetic.
- The conditions of insertion of the three agreement paradigms are given in (17); a spell-out rule for 1PL is given in (18). Note that rules (18b) and (18c) are in free variation (19).

(17)
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.

(18)
a. 1PL → *-k*/{PAST, COND, (PROG)} and V_
b. 1PL → *-Iz*/{PROG, FUT, AOR, EVID}
c. 1PL → *-z*/{PROG, FUT, AOR, EVID} and V_

(19)
a. oyn-**uyo-nuz**
play-PROG-2PL
root-$\textbf{TAM}_{\boldsymbol{rz}}$-$\textbf{Agr}_{\boldsymbol{rz}}$
'you (pl.) are playing'

b. oyn-**uyo-sunuz**
play-PROG-2PL
root-$\textbf{TAM}_{\boldsymbol{rz}}$-$\textbf{Agr}_{\boldsymbol{z}}$
'you (pl.) are playing'

- These insertion rules capture the asymmetry between TAM_{rz}-Agr_z (20a) and TAM_z-Agr_{rz} (20b): only Agr_{rz} is sensitive to the phonological shape of the preceding TAM morpheme.

(20)
a. oyn-uyo-sunuz
play-PROG-2PL
root-$\textbf{TAM}_{\boldsymbol{rz}}$-$\textbf{Agr}_{\boldsymbol{z}}$
'you (pl.) are playing'

b. */??bul-uyor-muş-**nuz**
find-PROG-EVID-2PL
root-$\textbf{TAM}_{\boldsymbol{z}}$-$\textbf{Agr}_{\boldsymbol{k/rz}}$
'you (pl.) are apparently finding'

- As a result, Agr_{rz} forms can be understood as hybrids of the two other paradigmns, both in terms of selection (21) and in terms of morphophonological shape (22).

(21) 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

(22) Morphophonological shape of 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*

- Agr_k and Agr_z have given rise to yet another hybrid which is attested in Cypriot Turkish (23), (24):

(23) a. Yap-ar-**ık** yahnili.
make-AOR-1PL stew
'We make it with the stew.'

b. Yak-acağ-**ık** sobayı.
light-FUT-1PL stove
'We will light the stove.'

(24) Realization of 1PL agreement in different paradigms

	Non-syllabic	Syllabic
Ends on *-k*	Agr_k: *-k*	Cypriot: *-Ik*
Ends on *-z*	Agr_{rz}: *-z*	Agr_z: *-Iz*

4 Simple, participial and hybrid tenses

4.1 The split between 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 (25a). TAM_k morphemes are simple tenses and do not require a copula (25b).

(25) a. gel-**ecek** ∅-siniz
come-**FUT COP**-2PL
root-**TAM_z COP**-Agr_z
'you (pl.) are coming'

b. gel-**di**-niz
come-**PAST**-2PL
root-**TAM_k**-Agr_k
'you (pl.) came'

- Kelepir (2001) has argued that simple tenses are merged in T but participial tenses in lower Asp, thus still requiring a copula in T.
- Evidence comes from five domains (in addition to suspended affixation – see section 6.2). First, participial but not simple tenses can combine with the negation marker *-değil* (26) :

(26) a. gid-**ecek değil**-im
go-**FUT NEG**-1SG
'I will not go'

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

- Second, participial but not simple tenses can combine with the epistemological copula *-DIr* (27):

(27) a. gid-**ecek-tir**
go-**FUT-EPIST**
'she will definitely leave'

b. *git-**ti-dir**
go-**PAST-EPIST**
'she definitely left' (Kornfilt, 1996:108)

- Third, participial but not simple tenses can be used as modifiers in the nominal domain (28), with exception of the progressive (29):

(28) a. kitab-ı oku-**yacak** kız
book-ACC read-**FUT** girl
'a girl who will read the book'

b. *oku-**du** kişi
read-**PAST** person
'the person who has read'
(Kornfilt, 1996:112)

(29) *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 (30) but word-finally in the case of simple tenses (31):

(30) a. gel-ecek-**mi**-siniz
come-FUT-**Q**-2PL
'Will you (pl.) go?'
b. ??/*gel-ecek-siniz-**mi**
come-FUT-2PL-**Q**
'Will you (pl.) go?'

(31) a. git-ti-niz-**mi**
go-PAST-2PL-**Q**
'Did you (pl.) go?'
b. *git-ti-**mi**-niz
go-PAST-**Q**-2PL
'Did you (pl.) go?' (Kornfilt, 1996:106)

- Fifth, in verbs with participial tenses, stress must be on the TAM morpheme (32), while in verbs with simple tenses, stress also be word-final (33). Following up on Kornfilt (1996), Kabak and Vogel (2001) have argued that the copula is obligatorily pre-stressing, which naturally accounts for (32).

(32) a. gel-**ecék**-siniz
come-FUT-2PL
'you (pl.) will come'
b. *gel-ecek-**siníz**

(33) a. gel-**dí**-niz
come-PAST-2PL
'you (pl.) came'
b. gel-di-**níz**

- The results of the five diagnostics are summarized in (34):

(34) 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 Mixed behavior of TAM_{rz}-Agr_{rz} verbs

- Let's run Kornfilt's diagnostics for 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* (35):

(35) 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, the same holds for the epistemological copula *-DIr* (but with some variation for *-EcE*) (36):

(36) 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) (37):

(37) 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* (38)–(39) (Güneş, 2020, 2021):

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

(39) 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 (40) (Güneş, 2020, 2021):

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

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

- To summarize, the picture is mixed (42):

(42) 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

4.3 A diachronic turn

- Bottom line so far: TAM_{rz} morphemes cannot be classified as either simple or participial tenses.
- This also affects Kornfilt's analysis more broadly, since the properties picked out by her diagnostics cannot simply be conditioned by the presence of a copula.

- Proposal: the distinction between simple and participial tenses is diachronically real but is disappearing over time. Among the factors driving this development are:
  - Increasing cohesion between morphemes over time;
  - Analogical levelling.
- TAM_{rz} and Agr_{rz} morphemes have evolved as hybrids of the *k* and the *z* forms, inheriting properties from either. It is shaped by two influences:
  - Shortening of *z*;
  - Analogy to *k*.

4.4 Accounting for the diagnostics

- If the properties diagnosed by Kornfilt are not conditioned by an underlying copula, how are they encoded instead? I argue that the diagnostics fall into two classes:
  - Diagnostics sensitive to the morphosyntactic features of the TAM marker (*değil*, *-DIr*, modifiers)
  - Diagnostics sensitive to the morphophonological shape of the agreement morpheme (*-mI*, stress)
- First, *değil*, *-DIr*, modifiers are licensed by progressive, future, aorist and evidential features, correctly predicting that *rz* forms (largely) pattern with *z* forms. There are two exceptions:
  - Progressive features don't license a modifier use;
  - Future TAM_{rz} *-EcE* fails these diagnostics because it cannot appear word-finally (43), perhaps due to reasons discussed in Section 6.3.

(43) a. *gel-**ece**-∅
come-**FUT**-3SG
root-**TAM_{rz}**-Agr
's/he will come'

b. gel-**iyo**-∅
come-**PROG**-3SG
root-**TAM_{rz}**-Agr
's/he is coming'

c. gel-**ecek**-∅
come-**FUT**-3SG
root-**TAM_{z}**-Agr
's/he will come'

- Secondly, stress and placement of *-mI* depend on the agreement morpheme, not on the TAM morpheme: the behavior of Agr_z does not change if we combine it with TAM_{rz} instead (44)–(45).

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

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

- As for the placement of *-mI*, mismatches between underlying syntax and overt morpheme ordering are well-known (see, e.g., Manova and Aronoff, 2010; Rice, 2011 for an overview) and can be handled, e.g., by morphological templates (Stump, 2006) or bigram ordering constraints (Ryan, 2010).
- As for prosody, exceptional stress in Turkish is widely argued to require some kind of lexical prespecification (e.g., Inkelas, 1994; Inkelas and Orgun, 2003; Kabak and Vogel, 2001; Özçelik, 2014; Özyıldız, 2015, but see Newell, 2008). I argue that Agr_z morphemes are lexically specified as prestressing.
- In short, under my analysis, Kornfilt's diagnostics are encoded in contemporary grammars in a way that is trivial, redundant and ugly. I do not consider this a problem. The grammar is motivated diachronically and does not pose any undue strain on speakers' memory. I do not think that a more complex analysis is warranted.

4.5 The transition from the copula grammar to the allomorphy grammar

- Could we maintain the separation between simple and participial tenses and simply add something to the grammar about the behavior of TAM_{rz} and Agr_{rz} morphemes?
- Note that in order to correctly derive (46) (without a copula), Agr_z must be lexically specified as prestressing. However, this lexical specification now also derives (47). In general, our added *rz* grammar will inevitably spill over to *k* and *z* forms as well; the two grammars cannot be separate.

(46) a. gel-**iyó**-sunuz
come-PROG-2PL
root-**TAM$_{rz}$**-Agr$_z$
'you (pl.) are coming'
b. *gel-iyo-**sunúz**

(47) a. gel-**iyór**-sunuz
come-PROG-2PL
root-**TAM$_{z}$**-Agr$_z$
'you (pl.) are coming'
b. *gel-iyor-**sunúz**

- Nevertheless, the copula grammar and the allomorphy grammar almost certainly coexist in at least some speakers, but in a more complex way.
- Let's adopt a framework in which speakers form representations at multiple levels of abstraction, e.g.:
  - Progressive TAM must be followed by a silent copula;
  - Progressive TAM can be followed (overtly) by *değil*.
- I propose that evidence for the higher-level generalizations is diminishing but that evidence for the lower-level facts is still robust. Hence, speakers increasingly rely on the latter.
- What is interesting about TAM_{rz}-Agr_{rz} forms is that they are no longer compatible with the copula hypothesis.
- I don't think that the copula grammar has been neatly replaced by the allomorphy grammar; rather, speakers are transitioning from one to the other.

5 Conclusion

- The syntactic distinction between TAM_k-Agr_k and TAM_z-Agr_z forms is disappearing over time. Speakers are abandoning this higher-level generalization and instead rely on more concrete, item-specific knowledge.
- Agr_{rz} and TAM_{rz} morphemes have emerged as hybrids of the other two sets of forms and have inherited properties from both.
- Synchronic analyses are not independent from diachronic analyses. The current state of the grammar can be random if the path leading to it is not.

6 Optional add-ons

6.1 Variable affix ordering

- In verbs with two or more TAM morphemes, agreement can variably surface after any TAM or even after several of them at the same time (48) (Good and Yu, 1999, 2005; Güneş, 2020, 2021).

(48) a. gel-sey-di-**k**
come-COND-PAST-**1PL**
root-**TAM-TAM-Agr**
'we would have come' Final agreement
b. gel-se-**k**-ti
come-COND-**1PL**-PAST
root-**TAM-Agr-TAM** Medial agreement

c. gel-se-**k**-ti-**k**
come-COND-**1PL**-PAST-**1PL**
root-**TAM-Agr-TAM-Agr** Double agreement

- It has been argued previously that this variation is restricted in that Agr_z morphemes can only surface word-finally (49), which would be further evidence for a syntactic contrast between the different verb types. Other systematic restrictions have not been reported.

(49) *gel-ecek-siniz-di
come-FUT-2PL-PAST
root-**TAM$_z$-Agr$_z$-TAM$_k$**
'you (pl.) will have come'

- I spent a lot of time trying to confirm this effect with native speakers. I did not find any evidence for it, not even on a gradient/probabilistic level.
- Final agreement is categorically acceptable, as is 3PL medial agreement. In all other cases, judgments show rampant variation both within and between subjects with no discernible pattern.
- I'd be interested in building a constraint-based model that accounts for the variable and gradient judgments (perhaps along the lines of Ryan, 2010) but this would require large-scale data. There are a bunch of methodological problems with this.

6.2 Suspended affixation

- In suspended affixation, a single affix scopes over multiple conjuncts. Kornfilt (1996) reports that suspended affixation is licensed with participial but not with simple tenses (50):

(50) a. oku-**yacak** ve anla-**yacak-sın**
read-**FUT** and understand-**FUT-2SG**
'you (sg.) will read and understand'

b. *oku-**du** ve anla-**dı-n**
read-**PAST** and understand-**PAST-2SG**
'you (sg.) read and understood'
(Kornfilt, 1996:110)

- Some of my informants showed the same pattern, others accepted suspended affixation with TAM_k-Agr_k across the board, and others only with 2PL Agr_k *-nIz* (the only syllabic morpheme in the paradigm).
- For TAM_{rz}-Agr_{rz} verbs, suspended affixation was accepted with progressive *-Iyo* but rejected with future *-EcE*, again arguably due to word-finality (51). The same contrast holds if not only an agreement morpheme but a longer string is suspended (52) (see Kabak, 2007).

(51) a. gid-**iyo** ve gör-**üyo**-z
come-**PROG** and see-**PROG**-1PL
'we are coming and seeing'

b. */?gel-**ece** ve gid-**ece**-niz
come-**FUT** and leave-**FUT**-2PL
'you (pl.) will come and leave'

(52) a. koş-**uyo** ve oyn-**uyo**-muş-sun
run-**PROG** and play-**PROG**-EVID-2SG
'you (sg.) are apparently running and playing'

b. */?gel-**ece** ve gid-**ece**-se-m
come-**FUT** and leave-**FUT**-COND-1SG
'if I will come and leave'

- Note also that *z* and *rz* can be mixed for the purposes of suspended affixation.

(53) a. gid-**iyo** ve gel-**iyor**-um
go-**PROG** and come-**PROG**-1SG
root-**TAM$_{rz}$** CONJ root-**TAM$_z$**-Agr_z
'I am going and coming'

b. gid-**ecek** ve gel-**ece**-m
go-**FUT** and come-**FUT**-1SG
root-**TAM$_z$** CONJ root-**TAM$_{rz}$**-Agr_{rz}
'I will go and come'

- In short: the patterns are complicated, further research is needed, preferably from a quantitative perspective.

6.3 The future marker -*EcE*

- The TAM_{rz} morpheme -*EcE* might be regarded as the results of the TAM_{z} morpheme *EcEk* having undergone a regular phonological process, i.e., the k-to-zero alternation (e.g., Denwood, 2002; Ünal-Logacev et al., 2019; Zimmer and Orgun, 1999). This alternation deletes or softens word-final /k/ in certain contexts ('soft *g*').
- Such an analysis might also account for the inability of -*EcE* to surface word-finally.
- However, the choice between -*EcE* and -*EcEk* has morphological consequences (selection of Agr_{rz}, ordering of -*mI*), which is unexpected if morphology must precede phonology.
- Possible solutions:
  - Not require morphology to precede phonology.
  - -*EcE* emerged diachronically as the output of a phonological rule but is in the process of being lexicalized.

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