Hybridity and change in Turkish inflectional morphology

Eva Neu, UMass Amherst, eneu@umass.edu*

October 6, 2025

Abstract

The agreement morpheme in the Turkish verbal domain surfaces in different paradigms depending on the preceding TAM marker. Kornfilt (1996) has proposed that this difference in spell-out signals a deeper syntactic difference, in that *z*-paradigm but not *k*-paradigm agreement morphemes are preceded by a silent copula. The present study is concerned with yet another, more recently documented paradigm attested in colloquial speech. Its key empirical finding is that these new forms are hybrids that share properties with both the *k*- and the *z*-paradigm. Its main theoretical claim is that this finding also affects our understanding of the older two sets of forms. Accordingly, the paper develops a novel allomorphy analysis of the three agreement paradigms. The allomorphy grammar proposed here and Kornfilt's copula grammar can coexist within a single speaker, and the former might have developed diachronically out of the latter.

Keywords: Agreement, morphology, Turkish, copula, diachronic change

1 Introduction

This paper is concerned with TAM (tense/aspect/mood) and agreement morphology in the Turkish verbal domain. Subject-verb agreement in Turkish is traditionally reported to surface in two different paradigms, known as the *k*- and the *z*-paradigm. Each of the two paradigms is licensed after a different set of TAM morphemes. By way of example, the past tense morpheme *-DI* is followed by the *k*-paradigm (1a), whereas the progressive morpheme *-Iyor* requires the *z*-paradigm (1b). The names of the paradigms are based on the consonant ending the first person plural form.[1]

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

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

In an influential paper, Kornfilt (1996) has proposed that these two classes of verbal complexes differ from each other in their underlying syntax. According to this analysis, forms with agreement morphemes from the *z*-paradigm as in (1b) contain a silent copula between the TAM and the agreement morpheme, whereas forms with the *k*-paradigm as in (1a) do not. This is because, Kornfilt argues, the TAM morphemes which precede the *z*-paradigm, such as the progressive morpheme *-Iyor* in (1b), are participial tenses that require a copula in order to be used as a finite verb, in contrast to simple tenses like the past morpheme *-DI* in (1a). As we will see later, this analysis correctly predicts a range of diverging properties of the two sets of forms.

In addition to the *k*- and *z*-paradigms, Erdem-Akşehirli (2018), Göksel (2010), and Güneş (2020, 2021) have recently documented a third agreement paradigm, referred to as the reduced *z*-paradigm, following yet another set of TAM markers. An example is given in (2):

*Thanks to Faruk Akkuş, Kyle Johnson, Kristine Yu, Travis Major, Joe Pater, Brian Dillon, Özge Bakay, Utku Türk, Duygu Demiray, audiences at NELS 55, Tu+ 9, Travis Major's USC Turkic syntax seminar and the UMass Syntax Workshop, and two anonymous editors. Special thanks to my research assistant Betülay Aras and my Turkish informants. This work was supported by a UMass faculty start-up grant to Faruk Akkuş.

[1] Examples follow the Leipzig glossing conventions with the following additions: AOR = aorist, EPIST = epistemological copula, EVID = evidential.

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

The reduced *z*-paradigm is colloquial, often considered substandard and largely limited to spoken language. Thus, while it has only been documented in the 21st century, nothing precludes that it dates further back. Nonetheless, it is almost certainly a more recent development than the *k*- and the *z*-paradigm, which are already attested in Ottoman Turkish (Redhouse, 1884) and whose origins have been traced back to Old Turkic (Adamović, 1985; Johanson, 2021).

This paper begins by developing an allomorphy analysis of these three agreement paradigms based in part on novel evidence about their licit distributions, arguing that agreement morphemes from different paradigms differ morphophonologically but not syntactically. This contrasts with earlier approaches to Turkish agreement morphology such as Bobaljik (2000), Good and Yu (2005), and Güneş (2020, 2021) and, most influentially, Kornfilt (1996), all of which have posited a distinct syntax for the different paradigms. A key upshot of the allomorphy analysis will be that we can understand the reduced *z*-paradigm as a hybrid that shares properties with both the *k*- and the *z*-paradigm, not only in terms of its morphophonological shape but also in terms of its distribution.

I then engage with Kornfilt's (1996) work which, crucially, did not address the status of the reduced *z*-paradigm. I apply the diagnostics used by Kornfilt to detect the silent copula to the novel reduced *z*-forms and show that the latter have mixed properties, patterning with simple tenses with respect to some diagnostics and with participial tenses with respect to others. This hybrid profile cannot be accounted for if those diagnostics are wholly determined by the presence or absence of a copula. Instead, I provide an alternative account according to which the diagnostics are sensitive to the specific morphosyntactic and morphophonological features of the TAM and agreement morphemes involved. Crucially, I thus argue that the novel evidence from the reduced *z*-paradigm affects our analysis of the older two paradigms as well, even though the properties of the latter have not changed.

However, none of this warrants abandoning Kornfilt's copula grammar altogether, which might still coexist side-by-side with the allomorphy grammar within a single speaker. I show that these two grammars would overlap, in that some verbal forms can be derived by either. The paper ends with a tentative diachronic account of why two such overlapping grammars would arise. Historically, *k*- and *z*- paradigm forms indeed used to have a very different underlying structure, which has shaped their distinctive profiles. However, I argue that this syntactic difference is in the process of being leveled and that the contrasting properties of the two paradigms are being reanalyzed, resulting in the allomorphy analysis developed earlier. Additionally, the reduced *z*-paradigm has emerged as a hybrid of the other two sets of forms. Both processes follow well-established diachronic trends and are in line with similar developments across Turkic as a whole.

Overall, this paper contributes to previous research on two fronts. First, it adds to our understanding of the morphosyntax of the Turkish TAM and agreement domain (Fenger, 2020; Kelepir, 2001; Kornfilt, 1996) by exploring in detail the properties of colloquial, substandard and understudied forms, continuing a line of research initiated by Güneş (2020, 2021). Secondly, it touches on issues surrounding language variation and change, particularly in the domain of agreement (see also Adger, 2006; Adger and Smith, 2010), and the question of what it means for speakers to possess multiple grammars or different grammatical analyses for a single surface form (e.g., Embick, 2007; Kroch, 1989, 1994, 2001, 2005; Nevins and Parrott, 2010, among others).

I make only minimal commitments with respect to the theoretical framework in which the argument is couched. The allomorphy analysis in Section 3 is formalized within the theory of Distributed Morphology (DM; Halle and Marantz, 1993, 1994), largely in the interest of ensuring continuity with, and allowing for comparison with, the work of Güneş (2021) discussed later in this section. More generally, I assume a notion of suppletive allomorphy that is distinct from phonology and that can be sensitive to both the morphosyntactic and the morphophonological properties of the inner morpheme. I follow the assumption made within DM, as well as other frameworks, that morphological operations such as allomorphy precede phonological operations. Furthermore, the term paradigm, as I will use it in this paper, should be understood as a purely descriptive tool, leaving open the question whether the paradigm classes as such have cognitive reality. Lastly, I do not adopt the distinction between clitics and affixes as a theoretical primitive. It has been widely argued that

neither clitic- nor affix-hood, prosodically understood, signal a distinct, unified syntax (Akkuş et al., 2025; Bermúdez-Otero and Payne, 2011; Embick and Noyer, 1999; Halpern, 1998) and that the distinction between the two is gradual, serving as a useful descriptive heuristic rather than as an analytical tool (Aikhenvald, 2002; Haspelmath, 2011); hence, I will avoid framing the analysis in these terms.

On a methodological note, the new data reported in this paper are based on consultation of a wide range of native speakers. Part of the evidence was collected in in-depth interviews with 21 informants that I conducted over the course of two months with the help of a Turkish-speaking research assistant. All examples in those interviews were presented orally. To overcome the prescriptive pressure against colloquial forms, we asked speakers whether a given form sounded natural, whether they would produce it themselves and whether they could imagine others using it, rather than whether it was grammatical. Sometimes, speakers volunteered alternative forms. The research assistant and myself kept separate records of both judgments and forms volunteered by informants; in the rare cases where we disagreed, I confirmed the data point by going back to the recording of the interview. Not all speakers were presented the same items and not in the same order. The examples discussed in this paper were interspersed with others, not reported here, and we took frequent breaks to avoid satiation. Two speakers indiscriminately accepted all examples they were presented as well as a small set of clearly ungrammatical sanity check items that we had prepared for such cases. Their data were thus discarded. The informants were selected so as to cover a wide variety of ages, socioeconomic backgrounds and regional dialects; all grew up in Turkey and all but four of them still lived there by the time of the interview. Further demographic information can be found in the appendix. Some other data points were collected later and equally confirmed and reconfirmed by several speakers, and yet others come from examples sourced from videos and forums online. At some points, judgments show inter-speaker variation, which I report wherever applicable.

I will proceed as follows. Section 2 introduces the three agreement paradigms and their distributions, partly drawing on new empirical findings. Section 3 develops an allomorphy analysis of the three paradigms and argues that the reduced *z*-paradigm should be considered a hybrid of the other two sets of forms. In Section 4, I then address Kornfilt's (1996) proposal that verbs with agreement morphemes from the *k*- and from the *z*-paradigm differ in their syntactic properties. I show that this analysis is called into question by the mixed behavior of the reduced *z*-paradigm and propose an alternative account of the diagnostics. Section 5 argues that the copula and the allomorphy grammar might coexist within a single speaker and sketches out how this state of affairs might have arisen diachronically. Section 6 concludes.

2 The distribution of the three agreement paradigms

The three agreement paradigms in the Turkish verbal domain are summarized below in (4), (6) and (8). In previous work, each paradigm has been argued to follow a distinct set of TAM markers, summarized in (3), (5) and (7) (Güneş, 2020, 2021, but see footnote 6).[2] In the remainder of this paper, we will exclusively be concerned with the local agreement markers, leaving aside null third singular marking and third plural *-lAr*. The terms for the three paradigms – Agr_k, Agr_z and Agr_{rz} – should be understood to refer to local morphemes only.

(3) TAM_k (preceding the *k*-paradigm)

-DI – past (PST)
-sA – conditional (COND)

(4) Agr_k (*k*-paradigm)

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

[2]The denotation of TAM morphemes is more complex than the glossing below suggests; in particular, their denotation can depend on their position (Sezer, 2001). For the purposes of this paper, the broad glossing adopted here should suffice.

(5) TAM_z (preceding the z-paradigm)

-*Iyor* – progressive (PROG)
-*(y)AcAk* – future (FUT)
-*Ar* – aorist (AOR)
-*mIş* – evidential (EVID)

(6) Agr_z (z-paradigm)[3]

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

(7) TAM_{rz} (preceding the reduced z-paradigm)

-*Iyo* – progressive (PROG)
-*(A)cA* – future (FUT)

(8) Agr_{rz} (reduced z-paradigm)

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

Taking a closer look at the three paradigms, note that Agr_{rz} (8) is syncretic with Agr_k (4) in all person/number combinations other than 1PL, but also near-identical to Agr_z except for being one or two segments short (e.g., 2PL -*sInIz*/-*nIz*). Analogously, the TAM markers selected by the reduced z-paradigm (7) bear the same morphosyntactic features as a subset of those selected by the full z-paradigm (5) but are missing the final coda (PROG *Iyor*/-*Iyo*, FUT -*AcAk*/-*(A)cA*). Note that the latter can also surface in the even further reduced form -*cA*. The following discussion will largely be restricted to -*AcA*, but I am not aware of any systematic differences between the two variants.

According to the new data I collected, the distribution of agreement paradigms is somewhat more intricate than reported previously. Table (9) gives an overview of the findings. Each cell indicates the acceptability of a certain class of TAM morphemes, listed on the y-axis, followed by a certain class of agreement suffixes, listed on the x-axis. For instance, cell A indicates the acceptability of a TAM_k marker followed by an Agr_k suffix.

(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: ✓

The diagonal cells A, E and I correspond to morpheme combinations reported to be grammatical by Güneş (2020, 2021), as summarized above in (4)–(7). This was, unsurprisingly, confirmed by my informants: TAM_k can be followed by Agr_k (cell A) (10a), TAM_z by Agr_z (cell E) (10b) and TAM_{rz} by Agr_{rz} (cell I) (10c):

(10) a. gel-**di-k**
come-**PST-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'

Equally expectedly, sequences of TAM_k-Agr_z (cell B) (11) and TAM_k-Agr_{rz} (cell C) (12) were rejected:

(11) a. *gel-di-siniz
come-PST-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'

[3]The glide at the onset of the first person agreement morphemes of the z-paradigms surfaces only after a vowel; see, e.g., footnote 6, example (ib).

(12) a. *gel-di-z
come-PST-1PL
root-**TAM$_k$-Agr$_{rz}$**
'we came'

b. *bırak-tı-ysa-z
leave-PST-COND-1PL
root-TAM$_k$-**TAM$_k$-Agr$_{rz}$**
'if we left'

While for both morpheme combinations, a few speakers hypothesized that some such examples might be licensed in other dialects, those were isolated instances marked by a low degree of confidence. Nobody reported these forms to be grammatical as part of their own variety. The remaining cells G, H, D and F require a slightly longer discussion, and I now address each of them in turn.

First, combinations of TAM$_{rz}$ and Agr$_k$ (cell G) can only be tested using 1PL items since Agr$_k$ and Agr$_{rz}$ are syncretic in other person/number combinations. The 1PL Agr$_k$ morpheme *-k* is clearly accepted by many speakers after TAM$_{rz}$ *-Iyo* (13a); these forms are consistently reported to be dialectal. My informants associated them with the Black Sea region, an anonymous reviewer with Central Anatolia. Agr$_k$ is rejected, however, after TAM$_{rz}$ *-AcA* (13b). This might be due to the fact that the resulting form is homophonous with the third person singular (13c), in which the final velar is parsed as part of the full TAM$_z$ morpheme *-AcAk*, while Agr is null.

(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'

Next, TAM$_{rz}$ followed by Agr$_z$ (cell H) is possible – contrary to what has been reported by Güneş (2020, 2021) –, as seen in example (14), which was universally accepted by informants:

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

However, two independently motivated confounds apply. First, TAM$_{rz}$-Agr$_z$ forms such as (15a) are consistently rejected due to an interference effect from the similar form (15b) which contains the TAM$_z$ morpheme *-Iyor* as opposed to TAM$_{rz}$ *-Iyo*:

(15) a. *bul-uyo-**y**um
find-PROG-1SG
root-**TAM$_{rz}$**-Agr$_z$
'I am finding'

b. bul-uyo**r**-um
find-PROG-1SG
root-**TAM$_z$**-Agr$_z$
'I am finding'

The first person Agr$_z$ markers *-(y)Im* and *-(y)Iz* start with a palatal glide when surfacing after vowels to avoid a hiatus. In (15a), this glide between *-Iyo* and *-Im* is located in the same position as the final tap in *-Iyor* in (15b); the relevant segments are boldfaced in (15). In Turkish first language acquisition, alveolar taps are among the latest phonemes to be acquired and to stabilize. In earlier stages of development, they are frequently replaced by glides, a process known as liquid deviation (see Topbaş and Yavaş, 2006 for an overview). As a result, all speakers I consulted very consistently perceived forms like (15a) as a child's mispronunciation of (15b) and rejected them on these grounds.

The second confound concerns the TAM$_{rz}$ marker *-AcA*. For forms containing *-AcA* followed by Agr$_z$, some speakers only accept such forms if the second vowel of the TAM morpheme is long (16):

(16) a. gid-ec**ē**-sin
go-FUT-2SG
root-**TAM$_{rz}$-Agr$_z$**
'you (sg.) will go'

b. %gid-ec**ĕ**-sin

I discuss these restrictions on vowel length more in detail in Section 3, but for now it suffices to note that the variation is not limited to TAM_{rz}-Agr_z contexts but equally affects TAM_{rz}-Agr_{rz} forms. For instance, example (17) is accepted by some speakers only with a long vowel:

(17) a. at-ac**ā**-nız
throw-FUT-2PL
root-**TAM_{rz}-Agr_{rz}**
'you (pl.) will throw'
b. %at-ac**ă**-nız

In short, to the extent that forms such as (16b) are rejected because of the length of the vowel, this is due to reasons that are orthogonal to the paradigm of the agreement morpheme. Overall, TAM_{rz}-Agr_z forms are thus licensed as long as interfering factors are controlled for.

Finally, the two remaining cells correspond to TAM_z followed by Agr_k (cell D) or Agr_{rz} (cell F). Both morpheme combinations are not licensed. The relevant examples are partly ruled out phonotactically; however, this alone does not account for the data. To begin with, note that Agr_k and Agr_{rz} morphemes in all person/number combinations except 2PL *-nIz* are not syllabic but consist of a single obstruent (18)–(19):

(18) Agr_k

	Singular	Plural
First	***-m***	***-k***
Second	***-n***	*-nIz*

(19) Agr_{rz}

	Singular	Plural
First	***-m***	***-z***
Second	***-n***	*-nIz*

The TAM_z morphemes in (20), however, end on a consonant (but see footnote 6):

(20) TAM_z
*-Iyo**r*** – progressive (PROG)
*-(y)AcA**k*** – future (FUT)
*-A**r*** – aorist (AOR)
*-mI**ş*** – evidential (EVID)

As a result, appending non-2PL Agr_k and Agr_{rz} markers to a TAM_z morpheme results in codas that might simply be phonotactically illicit in Turkish. For instance, the forms in (21) are clearly blocked due to sonority sequencing, with an obstruent being followed by a nasal:

(21) a. *gel-ece**k-m**
come-FUT-1SG
root-TAM_z-$\text{Agr}_{k/rz}$
'I will come'
b. *gel-ece**k-n**
come-PROG-2SG
root-TAM_z-$\text{Agr}_{k/rz}$
'you (sg.) will come'

However, many combinations of TAM_z and Agr_k/Agr_{rz} morphemes result in consonant sequences that are attested elsewhere in Turkish and hence not plausibly blocked on phonotactic grounds. The complex coda *rz* is not uncommon; examples include *tarz* (style), *farz* (obligation) and *ırz* (shame/pride). The complex coda *rm* occurs in many frequent loanwords such as *form*, *norm* and *alarm*, which are pronounced without any epenthesizing. Nonetheless, the examples in (22) are rejected.

(22) a. *gel-iyo**r-z**
come-PROG-1PL
root-TAM_z-Agr_{rz}
'we are coming'
b. *gel-iyo**r-m**
come-PROG-1SG

root-TAM$_z$-Agr$_{k/rz}$
'I am coming'

Most importantly, the second plural Agr$_k$/Agr$_{rz}$ morpheme *-nIz*, being syllabic, does not result in a complex coda when appended to a consonant-final TAM$_z$ morpheme. The sequences *k.n*, *r.n* and *ş.n* – where the first segment is syllabified as a coda – are amply attested. Examples include *ik.na* (compel), *tek.ne* (boat), *mık.na.tıs* (magnet); *tor.na* (lathe), *kar.ne* (gradebook), *al.ter.na.tif* (alternative); *viş.ne* (cherry), *çeş.ni* (spice), *kiş.ne.mek* (to neigh). Nonetheless, *-nIz* is consistently perceived as heavily degraded following TAM$_z$ (23):

(23) a. */??gel-ece**k-n**iz
come-FUT-2PL
root-TAM$_z$-Agr$_{k/rz}$
'you (pl.) will come
b. */??gid-iyo**r-n**uz
go-PROG-2PL
root-TAM$_z$-Agr$_{k/rz}$
'you (pl.) are going'
c. */??bul-uyor-mu**ş-n**uz
find-PROG-EVID-2PL
root-TAM$_z$-Agr$_{k/rz}$
'you (pl.) are apparently finding'

No informant accepted examples such as (23) without reservation. A small subset found them very marginal, reporting that they could perhaps surface in slurred speech. Most speakers in fact had difficulties perceiving these forms correctly, mishearing the Agr$_{k/rz}$ affix *-nIz* either as Agr$_z$ *-sInIz* or as an intermediate, partially reduced form, *-InIz*. The latter suffix was accepted relatively robustly after TAM$_z$ *-mIş* (24a) but only marginally and only by some speakers following other TAM$_z$ morphemes (24b). In both contexts, *-InIz* was still judged more acceptable than the fully reduced form, Agr$_{rz}$ *-nIz*.

(24) a. %bul-uyor-muş-**unuz**
find-PROG-EVID-2PL
root-TAM$_z$-**Agr**
'you (pl.) are apparently finding'

b. */??bul-uyor-**unuz**
find-PROG-2PL
rot-TAM$_z$-**Agr**
'you (pl.) are finding'

After *-mIş*, informants also reported the partially reduced 2SG form *-In* (cf. Agr$_z$ *-sIn*, Agr$_{k/rz}$ *-n*) (25a), again perceived as strongly degraded following other TAM$_z$ morphemes (25b):

(25) a. %bul-uyor-muş-**un**
find-PROG-EVID-2SG
'you (sg.) are apparently finding'

b. *ok-ur-**un**
read-AOR-2S
'you (sg.) read'

Overall, sequences of TAM$_z$ and Agr$_k$/Agr$_{rz}$ morphemes are never considered clearly well-formed, even if not ruled out on phonotactic grounds. I argue that what speakers do accept reluctantly is an acoustic reduction of TAM$_z$-Agr$_z$, which is perceived only with difficulty, judged only marginally acceptable and attributed to fast and careless speech. This reduction is gradient, giving rise to the intermediate forms *-In*/*-InIz*, and also appears to be sensitive to phonological factors, in that the sibilant at the beginning of the second person agreement morphemes *-sIn*/*-sInIz* is more likely to be reduced after the sibilant at the end of the TAM morpheme *-mIş*. Morphotactically, combinations of TAM$_z$ and Agr$_k$/Agr$_{rz}$ are not allowed.

In sum, the new findings on the distribution of the three agreement paradigms differ from what has previously been reported by Güneş (2020, 2021) in two ways. First, Agr$_k$ morphemes can follow the progressive TAM$_{rz}$ morpheme *-Iyo* in some dialects. Secondly, Agr$_z$ can follow TAM$_{rz}$ while the opposite – Agr$_{rz}$ following TAM$_z$ – is not licensed. Capturing this asymmetry will be a crucial desideratum for the analysis, to which we turn now.

3 Allomorphy and hybridity

For convenience, the three Turkish agreement paradigms are again summarized below in (26)–(28):

(26) Agr_k

	Singular	Plural
First	*-m*	*-k*
Second	*-n*	*-nIz*

(27) Agr_z

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

(28) Agr_{rz}

	Singular	Plural
First	*-m*	*-z*
Second	*-n*	*-nIz*

The TAM morphemes with their morphosyntactic features and their morphophonological realization are again listed in (29):

(29)
a. PST: *-DI*
b. COND: *-sA*
c. PROG: *-Iyor*/*-Iyo*
d. FUT: *-AcAk*/*-AcA*
e. AOR: *-Ar*
f. EVID: *-mIş*

I propose to analyze the three agreement paradigms as contextual allomorphs,[4] and the morphophonological variants of the progressive (29c) and the future (29d) morphemes as allomorphs in free variation. However, as foreshadowed in the introduction of this paper, I will argue later that speakers might possess multiple grammars, of which the allomorphy grammar is only one.

Before diving into the details of the analysis, we need to address a very different view on the paradigms presented above, viz., that TAM_{rz} and Agr_{rz} morphemes are merely phonological or phonetic variants of TAM_z and Agr_z morphemes. Given that the former are always identical to the latter except for being one or two segments short, such an analysis is arguably the null hypothesis, and it is a common intuition among native speakers. However, I argue that this view does not hold up and that TAM_{rz} and Agr_{rz} indeed constitute independent lexical items, as also assumed by Güneş (2020, 2021).[5]

To begin with, note that Agr_{rz} and TAM_{rz} morphemes cannot be generated from Agr_z and TAM_z morphemes on the level of phonology – with a potential exception discussed further below –; for instance, no regular rule of Turkish deletes the string *-sI* at the beginning of a morpheme to derive 2PL Agr_{rz} *-nIz* from 2PL Agr_z *-sInIz*. If anything, Agr_{rz} and TAM_{rz} would thus have to be regarded as acoustic reductions generated on the level of phonetics, but acoustic reduction is too unconstrained a process to derive their restricted distribution. In particular, such an analysis would not explain why Agr_{rz} cannot surface after TAM_z, especially given that the opposite – TAM_z-Agr_{rz} – is possible. Moreover, as described in the previous section, some speakers do accept TAM_z-Agr_{rz} sequences hesitantly by articulating the intuition that they might surface in slurred speech, and I argue that these are true instances of acoustic reduction. However, this is not how speakers respond to Agr_{rz} and TAM_{rz} morphemes in their licit environments, which are perceived as perfectly natural. What is more, acoustic reduction could derive a wide range of strings, but speakers consistently both produce and accept precisely those forms which are syncretic with Agr_k in three out of four forms, which would remain an odd coincidence. Finally, we will see later in Section 4 that TAM_z-Agr_z and

[4] I use the term 'allomorph' as formalized in Distributed Morphology to describe different spell-outs associated with a single morpheme and stored in the lexicon. This contrasts with variations in spell-out that are the result of regular phonological rules in a language (e.g., devoicing, assimilation, etc.).

[5] Similar questions are widely discussed in the literature on clitics, with, e.g., Zwicky (1977) arguing that some clitics – 'simple clitics' – are the result of phonological/phonetic reduction but others – 'special clitics' – independent allomorphs. Spencer (1991) suggests that special clitics can evolve via a reanalysis of simple clitics; such a process might also have applied in Turkish.

TAM_{rz}-Agr_{rz} forms differ with respect to the placement of the question marker *mI*. This is again incompatible with the idea that one set of forms is derived from the other via a late-stage phonetic process of acoustic reduction.

While on the whole, Agr_{rz} and TAM_{rz} morphemes must thus be analyzed as independently stored items, the case is less clear for the future TAM_{rz} morpheme *-AcA*, corresponding to TAM_{z} *-AcAk*. Turkish has a regular phonological rule known as the k-to-zero alternation that deletes morpheme-final [k] under certain circumstances (e.g., Denwood, 2002; Ünal-Logacev et al., 2019; Zimmer and Orgun, 1999). The output of this alternation is commonly referred to as *soft 'g'* and transcribed orthographically as *ğ*. This suggests that *-AcA* might simply be the output of the future TAM_{z} morpheme *-AcAk* undergoing the regular k-to-zero alternation. Support for this view comes from the fact that, as briefly mentioned earlier, speakers sometimes only accept forms with *-AcA* if its second vowel is long, and one of the ways in which soft 'g' is realized in certain environments is as a lengthening of the preceding vowel.

Issues for this view arise on several fronts. First, the vowel length variation is, to the extent that I could document it, not categorically predicted by the phonological environment but varies both between speakers and between items. Second, as mentioned earlier, the future morpheme can also surface in the even further reduced variant *-cA* which, again, is not derivable by a regular phonological rule. The idea that *-AcA* is a regular phonological variant but *-cA* a suppletive allomorph is an odd one. Third, recall that *-AcA* but not *-AcAk* can precede Agr_{rz} morphemes – which are allomorphs, not phonological variants –, and we will see later that the two also induce a different ordering of the question marker *mI*. If morphology, i.e., allomorphy selection and morpheme ordering, precedes phonology, as assumed in DM and other frameworks, it is not clear how *-AcA* could be a phonological variant of *-AcAk*. The tentative solution to this dilemma that I will adopt in the following is that *-AcA* diachronically evolved from the soft-g'ed variant of *-AcAk* but is now in the process of developing into an independent morpheme. While it might be possible to develop an alternative account of *-AcA*, I do not foresee that it would change the broader analysis proposed in this paper.

To return to the proposal at hand, I argue that the three agreement paradigms are contextual allomorphs of an Agr head bearing person and number features. I remain agnostic as to whether syntactically, Agr projects or is merged as a dissociated morpheme (Embick, 1997). Which paradigm surfaces is determined as in (30):

(30) a. Agr_{k} is inserted after a morpheme with PST, 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.

In a DM framework, these conditions on insertion can be formalized using spell-out rules, as demonstrated in (31) for the 1PL morpheme:[6]

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

[6] Agr_{z} morphemes are licensed in two additional contexts. First, they surface on verb-less nominal (ia) and adjectival (ib) predicates:

(i) a. öğretmen-im
teacher-1SG
root-**Agr$_z$**
'I am a teacher'

b. hasta-yım
sick-1SG
root-**Agr$_z$**
'I am sick'

Verb-less predicates in Turkish are commonly taken to contain a silent copular *v* between root and Agr (e.g., Kornfilt, 1996). Hence, *v* could simply be added to the list of morphosyntactic features licensing the insertion of Agr_{z}. Alternatively, if one posits an equally silent $\text{T}_{[\text{PRES}]}$ head between *v* and Agr, Agr_{z} could be licensed after a PRES feature. Since our focus here is on the verbal domain, I leave these matters aside. Secondly, the universal modal *-mElI* (as well as the rare and increasingly fossilized optative *-(y)E*) are equally followed by Agr_{z}; again, these morphosyntactic features can be added to the list. Note that although *-mElI* and *-(y)E* are vowel-final, they cannot be followed by Agr_{rz}: both the universal and optative are almost exclusively confined to written languages, making it implausible that they should occur with the reduced *z*-paradigm which is colloquial and almost exclusively encountered in spoken language.

Note that although the spell-out rule (31c) is more specific than (31b), the former does not overrule the latter. In contexts which meet the conditions specified by both rules, either Agr_z or Agr_{rz} can surface (32):

(32) a. oyn-**uyo-nuz**
play-PROG-2PL
root-$\mathbf{TAM_{rz}}$-$\mathbf{Agr_{rz}}$
'you (pl.) are playing'

b. oyn-**uyo-sunuz**
play-PROG-2PL
root-$\mathbf{TAM_{rz}}$-$\mathbf{Agr_{z}}$
'you (pl.) are playing'

Thus, (31b) and (31c) are not in competition but in free variation.

A key aspect of the conditions on insertion summarized in (30) is that all three paradigms impose morphosyntactic restrictions on the TAM morpheme which can precede them, but only Agr_k and Agr_{rz} also impose morphophonological restrictions by requiring the preceding morpheme to end on a vowel. Agr_k can surface after PST *-DI*, COND *-sA* and in some varieties after PROG *-Iyo* but, crucially, not after PROG *-Iyor*. Since *-Iyo* and *-Iyor* are identical morphosyntactically, the licit environment for Agr_k must be specified morphophonologically, with the latter obligatorily following a morpheme ending on a vowel. Equally, Agr_{rz} can follow the progressive and future TAM morphemes only if the latter end on a vowel (*-Iyo* but not *-Iyor*, *-AcA* but not *-AcAk*). Agr_z, on the other hand, can surface after any progressive, future, aorist or evidential morpheme regardless of the morphophonological shape of the latter. This derives the asymmetry observed in Section 2: Agr_z can surface after TAM_{rz} (33a) since it is indifferent to the morphophonological form of the preceding affix; in contrast, Agr_{rz} cannot surface after TAM_z (33b) since it can only follow a morpheme ending on a vowel.

(33) a. oyn-uyo-sunuz
play-PROG-2PL
root-$\mathbf{TAM_{rz}}$-$\mathbf{Agr_{z}}$
'you (pl.) are playing'

b. */??gel-ecek-niz
come-FUT-2PL
root-$\mathbf{TAM_{z}}$-$\mathbf{Agr_{rz}}$
'you (pl.) will come'

A question that the reader might raise at this point is why (30c) lists AOR and EVID among the features that can precede Agr_{rz} although Agr_{rz} can only follow progressive *-Iyo* and future *-AcA*. Since Agr_{rz} must follow a vowel, and AOR and EVID have no realization ending on a vowel, including the latter in (30c) is vacuous and does not change the empirical predictions made. What it does achieve is highlight the symmetry between Agr_{rz} and Agr_z, with both paradigms selecting for the same set of morphosyntactic features. At the same time, Agr_{rz} selects for the same morphophonological features as Agr_k in that both must follow a morpheme ending on a vowel. Table (34) summarizes the morphosyntactic (MS) and morphophonological (MP) selectional requirements of the three agreement paradigms; the circled cells signal shared properties.

(34) 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	PST, COND (PROG)
MP	/	open syllable	open syllable

Recall from the previous section that Agr_{rz} also shares properties with both other paradigms in terms of its morphophonological shape, being syncretic with Agr_k in three out of four person/number combinations but also being near-identical to Agr_z except for lacking some segments. This picture is summarized in (35); identical cells are circled in solid, similar cells in dashed lines.

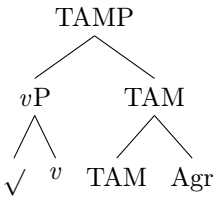
(35) Morphophonological shape of the agreement paradigms

	Agr_z	Agr_{rz}	Agr_k
1SG	*-(y)Im*	*-m*	*-m*
2SG	*-sIn*	*-n*	*-n*
1PL	*-(y)Iz*	*-z*	*-k*
2PL	*-sInIz*	*-nIz*	*-nIz*

Overall, I argue that Agr_{rz} can be understood as a hybrid of Agr_k and Agr_z, combining properties of both other sets of forms both in terms of morphophonological shape and in terms of selection. By the same token, TAM_{rz} morphemes constitute hybrids of TAM_k and TAM_z, realizing the same features as the latter but, like the former, ending on a vowel. The hybrid status of the reduced *z*-forms will play a crucial role in the argument going forward.

Before concluding this section, I briefly address a competing analysis of the three agreement paradigms proposed by Güneş (2021) which, unlike the allomorphy analysis developed here, posits a syntactic difference between the three agreement paradigms. I first summarize Güneş's proposal, simplifying it considerably,[7] and then discuss some challenges it faces. Following Embick (1997), Güneş treats the agreement morpheme as a dissociated morpheme that is inserted before spell-out but after syntax proper and thus has no semantic effects (36). In a similar vein to the allomorphy analysis developed in the present paper, Güneş argues that Agr_k and Agr_{rz} morphemes spell out person and number features on Agr in the context of certain TAM features. By way of example, (37) gives the Vocabulary Insertion rules for the 1PL Agr_k and Agr_{rz} morphemes *-k* and *-z*.

(36)



(37) a. $[+\text{PL}, +1, -2] \leftrightarrow$ *-k*/{+PST, +COND}_
b. $[+\text{PL}, +1, -2] \leftrightarrow$ *-z*/{+FUT, +PROG}_

(Güneş, 2021:165)

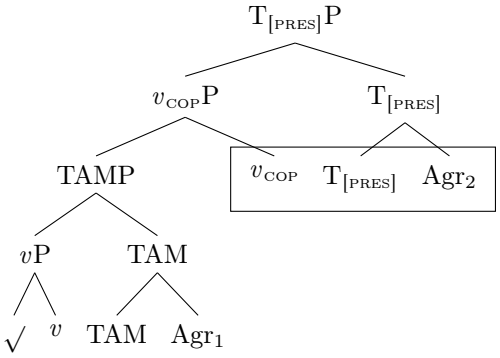
On the other hand, Güneş proposes that Agr_z morphemes spell out a larger syntactic structure consisting of v_{COP}, $\text{T}_{[\text{PRES}]}$ and Agr, corresponding to the bracketed structure in (38). By way of example, the Vocabulary Insertion rule for the 1PL Agr_z morpheme *-Iz* is given in (39).

[7] A major motivation behind Güneş's analysis that I cannot discuss in more detail here is to account for certain data from variable affix ordering. Turkish verbs can be followed by more than one TAM morpheme, in which case any of them (ia)–(ib) or even all of them simultaneously (ic) can be followed by agreement, without any systematic semantic differences:

(i) a. gel-ece-di-**k**
come-FUT-PST-**1PL**
'we will have come'
b. gel-ece-**z**-di
come-FUT-**1PL**-PST
c. gel-ece-**z**-di-**k**
come-FUT-**1PL**-PST-**1PL**

Güneş (2020, 2021) argues that unlike Agr_k and Agr_{rz}, Agr_z can only surface word-finally (see also Good and Yu, 1999, 2005). In extensive work with informants, I could not replicate this claim. Medial and double agreement forms such as (ib) and (ic) are subject to rampant inter- and intra-speaker variation but are not affected by the paradigm of the agreement morpheme in any systematic way. These data clearly require further research; for the purposes of this paper, I must leave them aside. For different takes on the structure of multi-TAM forms see, e.g., Fenger (2020) for Turkish, Gribanova (2020) for Uzbek, Kodner (2024) and Major et al. (2023) for Uyghur.

(38)



(39) $[v_{\text{COP}}, \text{T}_{[\text{PRES}]}, +\text{PL}, +1, -2] \leftrightarrow$ *-Iz*

(Güneş, 2021:165)

So far, the proposal would make two false predictions. First, in (38), it should be possible for both Agr_1 and the structure consisting of v_{COP}, $\text{T}_{[\text{PRES}]}$ and Agr_2 to be spelled out simultaneously. Thus, we would expect forms such as (40) to be licensed, in which the TAM morpheme *-DI* is followed by the Agr_k morpheme *-nIz* – realizing the Agr head directly adjoining to TAM *-DI* – and with an additional v_{COP}-$\text{T}_{[\text{PRES}]}$-Agr sequence built on top which is spelled out as Agr_z:

(40) *gel-di-**niz-siniz**
come-PST-2PL-2PL
root-TAM_k-**Agr_k-Agr_z**
'you (pl.) came'

This is contrary to fact: it is never possible for two agreement morphemes to surface adjacent to each other. Therefore, Güneş appeals to a constraint blocking the realization of two consecutive morphemes with the same featural content (see Kornfilt, 1986; Richards, 2001). Since spell-out is assumed to proceed bottom-up, only the inner agreement morpheme – *-nIz* in (40) – will be realized; Agr_z cannot surface.

Secondly, the Vocabulary Insertion rules for Agr_{rz} in (37b), repeated below as (41), make reference exclusively to morphosyntactic, not to (morpho-)phonological features:

(41) $[+\text{PL}, +1, -2] \leftrightarrow$ *-z*/$\{+\text{FUT}, +\text{PROG}\}$_

As a result, it is currently wrongly predicted that Agr_{rz} should be able to follow the TAM_z morphemes *-Iyor* (PROG) and *-AcAk* (FUT), despite the fact that, as shown earlier, not all of these clusters are ruled out phonotactically (42):

(42) a. *gel-**ecek-z**
come-PROG-1PL
root-**TAM_z-Agr_{rz}**
'we are coming'

b. *gel-**iyor-z**
come-PROG-1PL
root-**TAM_z-Agr_{rz}**
'we will come'

To rule out (42), Güneş argues that person/number features other than 3PL are always realized as null when following a consonant, as exemplified in (43) for 1PL:

(43) $[+\text{PL}, +1, -2] \leftrightarrow \emptyset/\text{C}\_$ (Güneş, 2021:165)

This blocks Agr_{rz} from surfacing after the TAM_z morphemes *-Iyor* and *-AcAk* as in (42). Instead, in these contexts, agreement will be realized as Agr_z.

Overall, the gist of Güneş's proposal is that Agr_z does not itself have any conditions on insertion, as can be verified in (39). Rather, it is simply the default that kicks in when no other agreement morpheme can surface. After TAM_k and TAM_{rz}, agreement can be realized as Agr_k and Agr_{rz}, respectively. Agr_z cannot be added on top due to the constraint against two adjacent morphemes with the same featural content. After TAM_z, on the other hand, neither Agr_k nor Agr_{rz} can surface, leading to agreement being instead realized as Agr_z. It is precisely this default status of Agr_z which leads to problems for the analysis. As established

in Section 2, for all of my informants, Agr_z morphemes are able to follow TAM_{rz} morphemes as in (44) as long as independent confounds are controlled for:

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

Under Güneş's account, however, progressive *-Iyo* would need to be followed by Agr_{rz} *-nIz*, thereby blocking the Agr_z morpheme *-sInIz* from surfacing. To derive forms such as (44), one would have to loosen the restriction that if two agreement morpheme would surface adjacent to each other, only the lower one is spelled out. It would need to also be possible for only the higher agreement morpheme, *-sInIz* in (44), to be realized. However, once this is permitted, nothing prevents Agr_z from surfacing after TAM_k either, which thus predicts ungrammatical forms such as (45) to be licensed:

(45) *gel-**di-siniz**
come-PST-2PL
root-**TAM_k-Agr_z**
'you (pl.) came'

In a nutshell, this problem stems from the fact that Güneş assumes Agr_z to be the default agreement morpheme insensitive to the preceding TAM morpheme. However, Agr_z can surface after progressive and future TAM_{rz} morphemes, but not after past and conditional TAM_k morphemes. It is not clear how this tension could be resolved.

To recapitulate, Güneş's (2021) analysis which posits a syntactic distinction between Agr_k/Agr_{rz} and Agr_z does not capture the full set of data, which the pure allomorphy analysis proposed here can account for. In the next section we turn to Kornfilt's (1996) work which equally, albeit in a different way than Güneş's, argues that the different agreement paradigms come with deeper syntactic differences.

4 Simple, participial and hybrid tenses

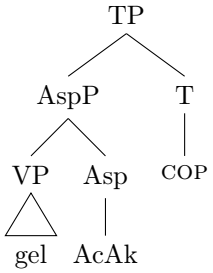
Against the background of the allomorphy analysis developed above, this section revisits Kornfilt's (1996) work on Turkish TAM and agreement morphology. Kornfilt argues that TAM_z morphemes – progressive *-Iyor*, future *-AcAk*, aorist *-Ar* and evidential *-mIş* – are participial tenses which must be followed by a silent copula in order to appear in finite contexts. Agr_z morphemes inflect this copula, cliticizing onto the TAM_z morpheme (46a) (see also Bobaljik, 2000; Good and Yu, 1999, 2005; Kabak, 2007 for the claim that Agr_z morphemes are clitics). In contrast, TAM_k morphemes – past *-DI* and conditional *-sA* – are simple tenses which are directly inflected by Agr_k (46b). TAM_{rz} and Agr_{rz} morphemes are not addressed by Kornfilt.

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

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

As an implementation of Kornfilt's analysis, Kelepir (2001) has argued that simple tenses correspond to T(ense) whereas participial tenses realize a lower Asp(ect) head, as sketched out in (47). To build a complete verbal domain, the latter must be supplemented by a copula in T.

(47) a.



b.

In short, under this view, there are genuine syntactic differences between TAM_k-Agr_k and TAM_z-Agr_z forms, in that the latter are underlyingly more complex by virtue of containing a hidden copula between TAM and Agr. This view contrasts with the present approach, which assumes that both forms are straightforward sequences of TAM and agreement morphemes.

In Section 4.1, I present six diagnostics that Kornfilt relies on to diagnose the presence of the silent copula. Besides reporting Kornfilt's original data, I also apply the diagnostics to TAM_{rz}-Agr_{rz} forms – not discussed by Kornfilt –, relying partly on data reported by Güneş (2021). We will see that TAM_{rz} forms do not clearly pattern either with simple or with participial tenses. In Section 4.2, I thus argue that the six diagnostics cannot be determined by the presence or absence of a silent copula. Instead, some of them are conditioned by the morphosyntactic features of the TAM head, some by the morphophonological features of the agreement morpheme.

4.1 Diagnostics

4.1.1 The negation marker *değil*

First, participial but not simple tenses can combine with the negation marker *değil* (48). The morpheme *değil* is used as a negation marker on non-verbal, i.e., nominal or adjectival complements. The diagnostic hence provides evidence, Kornfilt argues, that the constituent *gidecek* in (48a) is a non-finite, participial form.

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

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

As for TAM_{rz} forms, my informants accepted *değil* after participial *-Iyo* but not after future *-AcA* (49):

(49) 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'

For the purposes of this diagnostic, *-Iyo* hence patterns with participial, *-AcA* with simple tenses.

4.1.2 The epistemological copula *-DIr*

Secondly, participial but not simple tenses can combine with the epistemological copula *-DIr* (50). Assuming that the copula can only combine with non-finite constituents, the outcome of this diagnostic is as expected under Kornfilt's analysis.

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

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

All speakers I consulted accepted the epistemological copula *-DIr* after progressive TAM_{rz} *-Iyo* but only some after future TAM_{rz} *-AcA* (51); in the latter case, those forms were reported to be dialectal and substandard, and to only be licensed if the second vowel of *-AcA* is long.

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

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

Again, *-Iyo* patterns with participial tenses, while the status of *-AcA* is less clear.

4.1.3 Participial modifiers

Third, unlike TAM_k forms, TAM_z forms can be used as modifiers in the nominal domain (52), as correctly predicted by their analysis as participial in nature.

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

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

An exception to this generalization is the progressive TAM_z morpheme *-Iyor*, which cannot be used as a participial modifier (53):

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

Turning to TAM_{rz} forms, neither progressive *-Iyo* nor future *-AcA* can be used as modifiers in the nominal domain (54). Since this diagnostic fails for the TAM_z *-Iyor* as well, the ungrammaticality of (54a) comes as little surprise.

(54) 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'

In short, *-AcA* again patterns with simple tenses; *-Iyo* might fail to pass this diagnostic for independent reasons.

4.1.4 Suspended affixation

The fourth piece of evidence comes from suspended affixation, in which a single affix scopes over multiple members of a conjunction. Kornfilt argues that TAM_z (55a) but not TAM_k (55b) morphemes allow for the following morpheme to be suspended since participles form independent words which can stand on their own as a bare first conjunct (see also Atmaca, 2021; Kabak, 2007; Serova, 2019). Note that judgments in (55a) are as originally reported by Kornfilt.

(55) 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-**PST** and understand-**PST-2SG**
'you (sg.) read and understood'
(Kornfilt, 1996:110)

Speakers' intuitions on suspended affixation are notoriously unstable, and the contrast reported by Kornfilt was only partially confirmed by my informants. Some rejected suspended affixation with TAM_k morphemes, others accepted it wholesale, while yet others found such examples felicitous only for 2PL Agr *-nIz*. The latter is notably the only Agr_k morpheme which is syllabic and can be prestressing, suggesting that prosodic factors might play a role in the licensing of suspended affixation. I did not find a single speaker who rejected suspended affixation with TAM_z morphemes, unless on prescriptive grounds.

As for TAM_{rz} morphemes, my informants consistently accepted suspended affixation with *-Iyo* (56a). However, an anonymous reviewer perceived these forms as dialectal and only accepts suspended affixation

with Agr_z morphemes in these cases. For *-AcA*, judgments were more mixed, with most speakers finding these forms degraded or at least heavily dialectal (56b):

(56) 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'

The same results hold if the suspended string contains not only an agreement morpheme but other material as well (57) (see Kabak, 2007):

(57) 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 TAM_z and TAM_{rz} morphemes can be mixed for the purposes of suspended affixation (58):

(58) a. gid-**iyo** ve gel-**iyor**-um
go-**PROG** and come-**PROG**-1SG
root-$\textbf{TAM}_{\boldsymbol{rz}}$ CONJ root-$\textbf{TAM}_{\boldsymbol{z}}$-$\text{Agr}_z$
'I am going and coming'

b. gid-**ecek** ve gel-**ece**-m
go-**FUT** and come-**FUT**-1SG
root-$\textbf{TAM}_{\boldsymbol{z}}$ CONJ root-$\textbf{TAM}_{\boldsymbol{rz}}$-$\text{Agr}_{rz}$
'I will go and come'

Overall, to the extent that the contrast originally reported by Kornfilt is supported by speakers' judgments, *-Iyo* patterns again with participial, *-AcA* with simple tenses. However, the data suggest that the acceptability of suspended affixation is conditioned by a variety of factors, including the syllabicity of the suspended affix, and is subject to gradience and variation. I cannot discuss suspended affixation in more detail; for the purposes of this paper, I will treat the outcome of this diagnostic with caution.

4.1.5 The polar question marker *mI*

Fifth, the polar question marker *mI* surfaces between TAM_z and Agr_z (59) but after TAM_k-Agr_k (60). Kornfilt analyzes *mI* as a clitic and argues that it can intervene between another clitic and its host, as in (59), but not between two affixes or an affix and a root, as in (60). Note that my speakers report (59b) to still be more acceptable than (60b).

(59) 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?'

(60) a. git-ti-niz **mi**
go-PST-2PL **Q**
'Did you (pl.) go?'

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

For TAM_{rz} forms, Güneş (2021) reports that the question marker *mI* must follow Agr_{rz} both with progressive *-Iyo* and with future *-AcA* (61)–(62):

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

b. *gel-iyo **mu**-nuz

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

b. *gel-ece **mi**-niz

Both TAM_{rz} markers thus pattern with simple tenses for the purposes of this diagnostic.

4.1.6 Stress

Finally, TAM_k-Agr_k and TAM_z-Agr_z forms differ prosodically. Stress in Turkish is by default word-final but certain morphemes, known as prestressing, force stress to be realized on the syllable preceding them. Agr_z morphemes are obligatorily prestressing (63).[8] On the other hand, Agr_k morphemes can be prestressing if they are syllabic – that is, in the 2PL – but do not have to be (64):[9]

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

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

Since the effect of prestressing morphemes is to enforce stress on a syllable they are not a part of, Agr_k unsurprisingly has no effect on stress in other person/number combinations in which it is not syllabic but realized as a mere coda (65):

(65) a. gel-**dí**-m
come-PST-1SG
'I came'

b. gel-**dí**-n
come-PST-2SG
'you (sg.) came'

c. gel-**dí**-k
come-PST-1PL
'we came'

Kornfilt (1996) argues that these data are as expected if in (63), stress is regularly assigned to the right edge of the participle, which the copula then cliticizes onto. In a similar vein, Kabak and Vogel (2001) have provided evidence that the copula is a prestressing morpheme in Turkish, regardless of whether or not it is realized overtly. In short, if Agr_z morphemes are obligatorily preceded by a copula, it is not necessary for them to be listed as prestressing themselves; rather, the prosodic facts fall out from the presence of the copula alone. For instance, what enforces stress on *-AcÁk* in (63) would then not be the Agr_z morpheme *-sInIz* itself but the silent copula preceding it.

As for the prosodic properties of the reduced z-paradigm, Güneş (2021) reports that like Agr_k and unlike Agr_z, Agr_{rz} is only optionally prestressing (66):

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

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

This would mean that TAM_{rz} forms pattern with simple tenses for the purposes of this diagnostic. However, we again find variation: an anonymous reviewer points out that they only accept examples (66a) and (67a), not (66b) and (67b), thereby treating TAM_{rz}-Agr_{rz} forms on a par with TAM_z-Agr_z forms. We will return to this.

4.1.7 Summary

To conclude, the results of the six diagnostics are summarized in (68). I here gloss over some additional variation, which I address in Section 5.

[8] The progressive TAM morpheme *-Iyor* can alternatively be exceptionally stressed on the first syllable, in which case prestressing morphemes further to the right do not have any effect (Kabak and Vogel, 2001; Özçelik, 2014).

[9] An anonymous reviewer reports that for them and several speakers they consulted, Agr_k *-nIz* cannot be prestressing, contra Güneş. Since our focus here is on the contrast between Agr_k and Agr_z, which is maintained either way, I do not pursue this additional variation further.

(68) Properties of TAM_k, TAM_z and TAM_{rz} (*-Iyo* and *-AcA*)

	TAM_k	TAM_{rz}: *-AcA*	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 participial modifier	no	no	N/A	yes
Allows for suspended affixation	no	no	yes	yes
Can be immediately followed by *mI*	no	no	no	yes
Must bear stress when followed by Agr	no	no	no	yes

On the one hand side, we see a clear categorical difference between TAM_k and TAM_z forms, lending support to Kornfilt's claim that the two sets of forms differ in their underlying syntax in that only the latter contain a silent copula. On the other hand, forms with the TAM_{rz} morphemes *-Iyo* and *-AcA* display mixed properties, patterning partly with one, partly with the other two sets of forms. The task of the next section is to make sense of these findings.

4.2 Analysis

To recapitulate, earlier in this paper I have developed an allomorphy analysis according to which the three paradigms differ only superficially in their spell-out. In contrast, Kornfilt's (1996) analysis posits a deeper syntactic difference between TAM_k and TAM_z forms – simple and participial tenses – in that the latter but not the former must be followed by a silent copula. In the previous section, we have seen several pieces of evidence for the latter proposal, but also that TAM_{rz} forms cannot clearly be classified according to this syntactic split. Crucially, the table in (68) raises questions not only for the analysis of TAM_{rz} forms, but for the simple/participial distinction more broadly. What the data indicate is that the diagnostics cannot be determined exclusively by the presence or absence of a copula. If they were, *-AcA* and *-Iyo* should, at least individually, behave consistently with respect to all diagnostics, contrary to fact.

In the following, I argue that a subset of the diagnostics is determined by the morphosyntactic features of the TAM head, the remainder by the morphophonological shape of the agreement morpheme. In doing so, I assume the data as summarized in (68). As highlighted earlier, this is a simplification, and in Section 5 I address some additional variation that is not accounted for by the following analysis. Overall, the case I make is that what conditions the six diagnostics is almost certainly more complicated and variable, but that it cannot be a single underlying split between simple and participial tenses.

4.2.1 TAM-sensitive diagnostics

I propose that the first four of Kornfilt's diagnostics – *değil*, *-DIr*, participial modifiers and suspended affixation – are licensed in the presence of progressive, future, evidential or aorist TAM features, with the exception that progressive morphemes cannot be used in participial modifiers. Which form the agreement morpheme takes, on the other hand, does not affect the diagnostics. In fact, no agreement morpheme has to be used in these contexts at all: non-finite participial modifiers never surface with agreement, and in the case of *değil* and *-DIr*, the diagnostics hold up for null 3SG agreement.

This analysis predicts that with respect to these diagnostics, future and progressive TAM_{rz} morphemes should pattern with future and progressive TAM_z morphemes, respectively, with which they are featurally identical. For the progressive TAM_{rz} morpheme *-Iyo*, this prediction is straightforwardly borne out. The future TAM_{rz} morpheme *-AcA*, however, does not pass the relevant diagnostics, at least not for all speakers, unlike future *-AcAk*. I argue that this mismatch is due to an independent confound. Note that *-AcA* cannot appear word-finally with null 3SG agreement, unlike both progressive TAM_{rz} *-Iyo* and future TAM_z *-AcAk* (69), a constraint which might be related to the k-to-zero alternation as discussed in Section 3:

(69) 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'

Crucially, in the context of *-değil*, *-DIr* (a prestressing morpheme), participial modifiers and suspended affixation, *-AcA* would have to surface at the edge of a prosodic word, which (69a) demonstrates is blocked for reasons unrelated to the diagnostics themselves. Whatever the precise nature of the relevant constraint, it is arguably responsible for the fact that *-AcA* behaves differently from *-AcAk* with respect to *değil*, *-DIr* and participial modifiers. Once this is accounted for, the claim that these diagnostics are determined exclusively by the morphosyntactic features of the TAM morpheme holds up.

The question remains how exactly these three properties are encoded grammatically. I see two possible accounts. Going back to Kelepir's (2001) take on Kornfilt's work, it remains possible to locate progressive, future, aorist and evidential morphemes in a lower aspectual head that licenses the relevant diagnostics, provided that we no longer commit to the idea that higher T has to be filled by a silent element that conditions *mI* ordering and stress assignment in any systematic way. Note that on purely semantic grounds, associating TAM$_z$ features with aspect and TAM$_k$ features with tense is by no means obvious. Sezer (2001), who sharply argues against positing different category heads for different TAM morphemes, points out that the future TAM$_z$ morpheme *-AcAk* is a typical example of a tense, while the conditional TAM$_k$ morpheme *-sA* is best analyzed as a mood. While it is possible for complex verbal forms to contain multiple TAM heads, their possible combinations do not offer direct support for a tense/aspect distinction either: a verb can, for instance, be followed by two TAM$_k$ or two TAM$_z$ morphemes.

An alternative, simpler account of the first three diagnostics would be to condition the diagnostics more directly on the morphosyntactic features of a categorically identical TAM head. To exemplify the two different approaches, an element such as *değil* might either select an AspP complement, or a TAMP complement bearing progressive, future, aorist or evidential features. Empirically, it is not clear that the two accounts make different predictions; theoretically, not much is gained in terms of parsimony either way. In short, while it might seem desirable for progressive, future, aorist and evidential TAM morphemes to form a syntactically defined natural class, contrasting with past and conditional, there is no independent reason to classify the former as aspects, the latter as tenses. We will briefly revisit this question in Section 5.

4.2.2 Agr-sensitive diagnostics

We now turn to the last two of Kornfilt's diagnostics, stress assignment and ordering of the question marker *mI*. With respect to both, TAM$_{rz}$ forms pattern with TAM$_k$ forms for most speakers, indicating that unlike the diagnostics discussed above, stress and *mI* ordering are not simply determined by the morphosyntactic features of the TAM head. I argue that instead, these diagnostics are sensitive to the paradigm of the agreement morpheme, regardless of the preceding TAM morpheme: Agr$_z$ morphemes are obligatorily prestressing and cannot be followed by *mI*, whereas the opposite holds for the Agr$_k$ and Agr$_z$ paradigms. This is clearly evidenced by the fact that forms with Agr$_z$ morphemes still pass as 'participial' for stress (70) and *mI* placement (71) even if they contain a TAM$_{rz}$ instead of a TAM$_z$ morpheme:

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

b. *oyn-uyo-**sunúz**

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

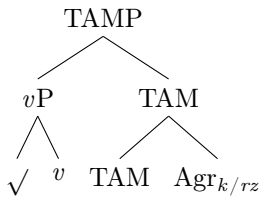
b. ??/*oyn-uyo-sunuz-**mu**

Thus, stress assignment and *mI* placement are insensitive to whether the form contains a TAM$_z$ or TAM$_{rz}$ morpheme but are determined by the agreement paradigm. More in particular, the diagnostics are sensitive to overt morphophonological shape rather than underlying morphosyntactic features, distinguishing between morphemes from different paradigms bearing the same person/number features but treating the syncretic forms from the Agr$_k$ and Agr$_z$ paradigms on a par.

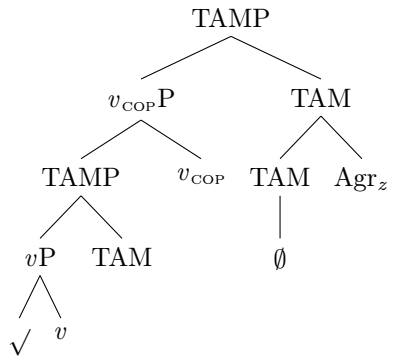
I argue that the different prosodic properties of the three agreement paradigms are encoded lexically. As briefly outlined above, in addition to regular word-final stress, Turkish has a variety of exceptional stress patterns, including obligatorily prestressing morphemes. Previous work on Turkish prosody has widely maintained that prestressing morphemes must be specified as such in the input, with different implementations of this view having been developed across different theoretical frameworks (Inkelas, 1994; Inkelas and Orgun, 2003; Kabak and Vogel, 2001; Özçelik, 2014; Özyıldız, 2015; van der Hulst and van de Weijer, 1991; see also Inkelas, 2018; Tyler, 2019; Zec, 2005 for a general defense of prosodic prespecification in the lexicon). Against this background, I propose that Agr_z morphemes are lexically specified as obligatorily prestressing, unlike Agr_k and Agr_{rz} morphemes. I do not take a stance on the more concrete details of the analysis, and I also have nothing to say about the variable prestressing behavior of 2PL $\text{Agr}_k/\text{Agr}_{rz}$ *-nIz* reported by Güneş (2021). As for the question marker *mI*, I assume that it subcategorizes for a prosodic word bearing word-final stress (e.g., Bickel et al., 2007; Inkelas, 2018), thus surfacing before Agr_z but after $\text{Agr}_k/\text{Agr}_{rz}$ morphemes. Again, this view lends itself to different implementations, the choice between which I leave open. Overall, under the analysis proposed here, Agr_z morphemes and *mI* are associated in the lexicon with some minimal prosodic information in a way that is consistent with a wide range of theoretical approaches.

It is worth briefly considering whether the prosodic data could alternatively be derived from the underlying syntax. Recall that default stress in Turkish is word-final, which is commonly taken to indicate that stress falls on the right edge of a prosodic word which might or might not coincide with the right edge of a syntactic word. In previous work, Fenger (2020), Güneş (2021), and Newell (2008) have all, in different ways, appealed to the idea that stress is assigned to the edge of *v*P, either by analyzing *v*P as a phase that directly maps onto a prosodic word receiving word-final stress or by constraining head movement in such a way that it stops at the *v*P boundary, with the resulting complex head being mapped onto a prosodic word. For the sake of argument, let us consider a simplified version of Güneş (2021), addressed in Section 3. Suppose that Agr_k and Agr_{rz} forms spell out the simple structure in (72) whereas Agr_z forms realize the more complex structure in (73) containing an additional, semantically vacuous TAM head and a copular *v*. There are arguably multiple ways in which a prosodic difference between the two structures could now be derived.

(72)



(73)



In a sense, the v_{COP} in (73) is nothing other than our silent copula in a different guise. However, unlike in Kornfilt's original analysis, v_{COP} is no longer conditioned on a particular kind of TAM head and is not meant – and not able – to account for the diagnostics discussed in the previous section (*değil*, *-DIr*, participial modifiers and suspended affixation). Neither does it offer us a more principled treatment of the placement of *mI*. The sole motivation behind positing a more complex structure for Agr_z forms along the lines of (73) is to handle the stress placement. Note also that whether Turkish exceptional stress on the whole can be derived from the underlying syntax is controversial in the first place: Özçelik (2014) has argued that the full set of prestressing morphemes is too heterogeneous to lend itself to any systematic syntactic treatment, pointing out that, for instance, the phase-based account in Newell (2008) only deals with a very limited subset. Overall, as concluded in Section 4.2.1 concerning a potential tense/aspect distinction between TAM_k and $\text{TAM}_z/\text{TAM}_{rz}$ morphemes, a syntactic analysis of the prosodic data is possible, but it is not clear that there is independent support for it.

5 From a copula grammar to an allomorphy grammar

So far, this paper has developed an allomorphy analysis of the three agreement paradigms in the Turkish verbal domain. Comparing this analysis to Kornfilt's (1996) proposal that TAM_k-Agr_k and TAM_z-Agr_z forms differ in their underlying syntax, I have shown that the former but not the latter analysis can account for the mixed behavior of the novel TAM_{rz}-Agr_{rz} forms. However, we now need to revisit a question foreshadowed earlier, namely, whether this means that the copula grammar should be rejected altogether. In this section, I argue that it should not. The two grammars almost certainly coexist, but their relationship is a complicated one in that some data can be accounted for by either grammar. In the second part of this section, I then suggest that this state of affairs can plausibly be accounted for from a diachronic angle.

Let us begin by considering the possibility that the original copula grammar encoding a syntactic distinction between simple and participial tenses has remained intact in contemporary Turkish and is simply supplemented by an appendix that specifies the properties of TAM_{rz} and Agr_{rz} morphemes. The problem with this divide-and-conquer strategy is that the two parts cannot be kept separate. For instance, I have pointed out that in example (74) which combines a TAM_{rz} with an Agr_z morpheme, stress cannot be final:

(74) a. gel-**iyó**-sunuz
come-PROG-2PL
root-$\mathbf{TAM_{rz}}$-Agr_z
'you (pl.) are coming'
b. *gel-iyo-**sunúz**

The prestressing cannot be attributed to a silent copula obligatorily following the progressive TAM_{rz} morpheme *-Iyo* since prestressing is not obligatory if *-Iyo* is followed by Agr_{rz}. Hence, the appendix of the divide-and-conquer grammar would have to list Agr_z morphemes as prestressing. However, such an appendix can now also be used to correctly derive (75), which features a TAM_z and an Agr_z morpheme. In this example, the prestressing could either be attributed to a silent copula following TAM_z *-Iyor* or to the prestressing behavior of Agr_z morphemes as listed in the appendix.

(75) a. gel-**iyór**-sunuz
come-PROG-2PL
root-$\mathbf{TAM_z}$-Agr_z
'you (pl.) are coming'
b. *gel-iyor-**sunúz**

The upshot of this is that the analysis of the older TAM_k-Agr_k and TAM_z-Agr_z forms does not remain unaffected by the novel TAM_{rz}-Agr_{rz} verbs. It is not possible to simply maintain the copula grammar and tack on an appendix.

Thus, the copula analysis still correctly accounts for the two older paradigms, and nothing prevents it from still being part of speakers' grammars. However, the behavior of the reduced *z*-paradigm can only be accounted for by the allomorphy analysis, and the latter will spread to the older two forms as well. For a speaker who has both grammars, TAM_z-Agr_z forms will thus be structurally ambiguous. In the remainder of this section, I discuss why such a state of affairs would arise. To this end, I outline the historical development of the *k*- and *z*-paradigms and show how the reduced *z*-paradigm fits into this picture. The diachronic explanation I offer for the coexistence of the copula grammar and allomorphy grammar is tentative; however, it is driven by well-established principles of language change such as grammaticalization and analogy.

I begin by sketching out the historical development of TAM_k-Agr_k and TAM_z-Agr_z forms, respectively. Agr_z morphemes are known to have started out as independent pronouns (Adamović, 1985; Johanson, 2021, see also Good and Yu, 2005). In Old Turkic, while generally an SV language, local pronominal subjects followed the predicate but could additionally surface in preverbal position for the sake of emphasis (76a). It is believed that the first instance of the pronoun received stress whereas the second was unstressed. By the 13^{th} century, the postverbal pronoun had reduced to a mere clitic-like element (76b), already highly similar to contemporary Agr_z morphemes such as 2SG *-sIn*. I sidestep the development of third person forms, which is not relevant for our purposes.

(76) a. (sen) bay **sen**
you.SG rich you.SG
'you.SG are rich'

b. (sen) bay-**sïn**
you.SG rich-2SG
'you.SG are rich' (Adamović, 1985:27)

While the origins of Agr_k morphemes are more controversial, Adamović (1985) and Johanson (2021) both support the hypothesis that they have evolved from a possessive marker attached to a nominalized verb stem (77a), later reanalzyed as a past tense suffix and an agreement marker (77b).

(77) a. qïl-**d-um**
do-NMLZ-POSS.1SG
lit.: 'my action of doing exists'

b. qïl-**du-m**
do-PST-1SG (Adamović, 1985:184)

Unlike Agr_z morphemes, Agr_k morphemes thus never corresponded to an independent word at any stage of Turkish. Overall, while the historical development of Turkish does not directly confirm the presence of a silent copula in 'participial' tenses, it does align with Kornfilt's intuition that Agr_z morphemes are more loosely integrated with the verb than Agr_k markers: while they have lost their status as independent words, they have retained some partial independence from the verb, accordingly being analyzed by Kornfilt as clitics.

Against this historical background, I suggest that the analytic-to-synthetic journey of TAM_z-Agr_z form is continuing. It is a common fate of functional morphemes to turn, in traditional terminology, from words into clitics and then further into affixes, that is, from free into increasingly bound forms (e.g., Haspelmath, 2011, 2018; Heine, 2017). To give an example from a similar development in Romance, with the decline of the original Latin synthetic future (78a), the future tense was expressed by an analytic construction (78b) consisting of an infinitive and an independent auxiliary verb. The latter was then reduced to a clitic-like element (78c) and eventually developed into a suffix of the verb in modern French (78d).

(78) a. canta-bi-t
sing-FUT-3SG
b. canta-re habe-t
sing-INF have-3SG
c. canta-re ha
d. chant-er-a
sing-FUT-3SG (Haspelmath, 2018:5)

Like the late-Latin-early-French future, Turkish TAM_z-Agr_z forms have gradually lost some internal syntactic complexity over time.

If this development is continuing in contemporary Turkish, then Agr_z markers would have evolved into simple agreement suffixes. As a result, the distinction between TAM_k-Agr_k and TAM_z-Agr_z forms is leveled, and the two sets of forms now realize the same underlying syntactic structure. In short, we would arrive at the allomorphy analysis proposed earlier. This account allows us to make sense of the data discussed in this paper so far. The distinct properties of TAM_k-Agr_k and TAM_z-Agr_z forms that were diagnosed by Kornfilt are historically motivated, rooted in the fact that the two classes of forms indeed used to have a very different syntactic profile. However, an analysis that assumes that this syntactic split persists – as does the copula analysis – cannot account for the mixed behavior of TAM_{rz}-Agr_{rz} forms, which would need to fall on one side of the split and thus pattern uniformly with respect to the diagnostics. Instead, I have proposed that the diagnostics have become partly associated with the morphosyntactic features of the TAM head, partly with the morphophonological shape of the agreement morpheme. Thus, the different properties of the different classes of forms are no longer indicative of an underlying syntactic difference, which is disappearing, but encoded in a lower-level fashion.

If the six diagnostics were originally linked to an underlying syntactic split but were then reanalyzed, we might expect that this reanalysis takes slightly different forms for different speakers. This appears to be borne out. Above, I have sketched out an analysis according to which four of the diagnostics are sensitive to the morphosyntactic features of the TAM morpheme and the remaining two to the morphophonological features of the agreement morpheme; however, I have also reported some additional variation not in line with this pattern. Suspended affixation, for instance, was accepted by many speakers with TAM_z-Agr_z as well as

with TAM_{rz}-Agr_{rz} forms, by others only with TAM_{z}-Agr_{z} forms, and by yet others even with TAM_{k}-Agr_{k} forms. Similarly, for stress assignment, Güneş (2021) has documented that TAM_{rz}-Agr_{rz} forms pattern with TAM_{k}-Agr_{k} forms, but other speakers disagree. What I take this additional variation to indicate is that the six diagnostics discussed above are sensitive to somewhat different properties across speakers. For some, for instance, the acceptability of suspended affixation might depend on prosodic on top of morphosyntactic factors.

The claim that the distinction between simple and participial tenses is being leveled is more broadly in line with the emergence of hybrid TAM_{rz} and Agr_{rz} morphemes. I propose that their development is driven by two factors. First, while we have seen that TAM_{rz} and Agr_{rz} morphemes cannot be derived via an online process of acoustic reduction, I do assume that they have diachronically evolved as shortenings of TAM_{z} and Agr_{z} morphemes, in line with the trend for highly frequent lexical items to become shorter over time (Haspelmath, 2021). Secondly, I suggest that the development of Agr_{rz} has been shaped by analogical pressure to Agr_{k} morphemes with which they are partly syncretic (for analogy as a driver of historical change, see, e.g., Kiparsky, 2012; Kodner, 2023; Lahiri, 2000; Lightfoot, 1979). Agr_{rz} morphemes are the result of reducing Agr_{z} morphemes up to the point where they are identical, if possible, to Agr_{k} markers that speakers already have in the lexicon; they are, in a sense, the best of both worlds.

TAM_{rz} and Agr_{rz} morphemes fit into a broader tendency across Turkic as a whole to combine, conflate and contaminate the two paradigms. In all Turkic languages, a distinction between Agr_{z} and Agr_{k} morphemes – of pronominal and of possessive origin, respectively – can originally be found. Johanson (2021) points out that in some, Agr_{k} markers have started to surface after TAM morphemes that originally took Agr_{z}, e.g., after aspectual and modal bases in Yakut and Dolgan. We saw another instance of this pattern with Agr_{k} surfacing after progressive TAM_{rz} *-Iyo* in some varieties of Turkish. Moreover, other hybrids between the two older agreement paradigms are attested. In Cypriot Turkish, 1PL agreement can also be realized as *-Ik* after TAM_{z} (79):[10]

(79) 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.'

While Agr_{rz} ends on the same consonants as Agr_{z} but has the same syllabic shape as Agr_{k}, the reverse situation holds for the variant *-Ik*: the latter ends on the same consonants as Agr_{k} but has the same syllabic shape as Agr_{z}, as summarized in (80).

(80) 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*

Thus, *-Ik* is yet another cross-over variant of Agr_{k} and Agr_{z}. Similar forms are attested in Azeri and some Iran-Turkic varieties, while in Chulym, the distinction between Agr_{z} and Agr_{k} seems to have collapsed altogether (Johanson, 2021). Overall, there is broad evidence from Turkic as a whole that speakers have started to mix and match the properties of the two paradigms, suggesting that the once-categorical difference between them is vanishing.

This transition from the copula grammar to the allomorphy grammar would hardly take place in one fell swoop, but rather result in a situation in which the two grammars coexist. As I have argued just now, this does not mean that each remains confined in its own domain, one being responsible for TAM_{k}-Agr_{k} and TAM_{z}-Agr_{z} forms, others for TAM_{rz}-Agr_{rz} forms. Rather, the two analyses derive competing structural descriptions of the same surface strings. In the absence of TAM_{rz}-Agr_{rz} forms, the transition from the

[10] Examples in (79) are sourced from a food documentary available at https://www.youtube.com/watch?v=xM1FVlSfh5w&ab_channel=NoluyoYa%C2%BF

copula grammar to the allomorphy grammar is a purely covert reanalysis that generates the same set of data: TAM_k-Agr_k and TAM_z-Agr_z forms are perfectly compatible with either. The change from one to the other is, in the sense of Andersen (1973), an abductive innovation, the result of speakers inferring a novel grammar from the same input data (see also Kodner, 2023; Lightfoot, 1979).

Against this background, there is no reason to declare the copula analysis extinct. Some Turkish speakers lack TAM_{rz} and Agr_{rz} morphemes altogether, and nothing rules out that they have still retained a copula grammar, nor that they have fully transitioned to an allomorphy grammar. What is more, even speakers who do have TAM_{rz} and Agr_{rz} morphemes in their repertoire might still at times parse or produce TAM_k-Agr_k and TAM_z-Agr_z forms with a copular syntax. All that the emergence of the hybrid forms signals is that the copula grammar can no longer be the only game in town.

Before concluding, I would like to briefly revisit the two alternative analyses discussed in the previous section, namely, whether TAM_z and TAM_{rz} morphemes could still realize an aspectual head (which no longer has to be followed by a silent copula) and whether Agr_z morphemes could still be preceded by a vP boundary roughly corresponding to a prestressing silent copula (which no longer has to sit on top of an aspectual projection). I have argued that there is no independent evidence for either proposal but empirically, nothing rules them out either. The broader picture I have sketched out in this section is one in which speakers entertain competing hypotheses about the data they are exposed to, and it is entirely possible that those alternative syntactic analyses are also part of their hypothesis space. These grammars would occupy a middle point in the transition from the copula analysis to the allomorphy analysis, with the original syntactic distinction slowly becoming undone.

6 Conclusion

To summarize, this paper has been concerned with the three agreement paradigms surfacing in the Turkish verbal domain, with a focus on the nonstandard reduced z-paradigm. I have followed Güneş (2020, 2021) in arguing that this novel paradigm is not merely a casual pronunciation of the z-paradigm, and I have proposed that it ought to be understood as a hybrid of the two older paradigms, both in terms of its morphophonological shape and in terms of its distribution. In addition, we have seen that TAM_{rz}-Agr_{rz} forms show mixed behavior with respect to a variety of diagnostics that clearly distinguish between TAM_k-Agr_k and TAM_z-Agr_z forms.

This result does not fall out if those diagnostics are sensitive to a single syntactic split between simple and participial tenses, as argued by Kornfilt (1996). Therefore, I have developed an alternative allomorphy analysis according to which the three agreement paradigms differ more superficially in their spell-out. In this way, the novel evidence from the reduced z-paradigm thus also affects our understanding of the k- and z-paradigms, even though their properties have not changed. I have also sketched out how the six diagnostics can be analyzed as being sensitive to the more specific morphosyntactic and morphophonological properties of the TAM and agreement morphemes.

I have then considered the relation between the allomorphy grammar developed here and the copula grammar proposed by Kornfilt (1996). The key significance of the novel hybrid forms is that they cannot be generated under the copula hypothesis, indicating that the latter must have been supplemented by something else, but not necessarily that it has vanished altogether. While the two grammars might thus very well coexist within a single speaker, I have also shown that they cannot be kept neatly separate, but that some data can be accounted for by either. Finally, I have suggested that such a coexistence of two grammars can be made sense of from a diachronic angle. TAM_z-Agr_z forms have evolved through a process of grammaticalization which, if it continues, would do away with the syntactic difference to TAM_k-Agr_k forms, in line with the allomorphy grammar. The development of hybrid forms between the two paradigms is part of the same trend, and broader developments across Turkic as a whole show the same pattern.

For the future, one aspect of the data of which I have given an only cursory account concerns phonology. In particular, more work is needed on the factors conditioning stress assignment in the Turkish verbal domain, but also on the relation between the TAM_{rz} morpheme *-AcA* and the productive k-to-zero alternation. Another area for further research is suspended affixation: not only does it remain a contentious phenomenon from a theoretical point of view, but speakers' judgments on such constructions are also notoriously nuanced and variable. Documenting these intuitions more in detail, perhaps experimentally, would be a valuable

project for future study. Overall, what I hope to have achieved in this paper, by working with a wide range of speakers from different demographic groups and by paying special attention to colloquial and dialectal forms, is to demonstrate that the Turkish verbal domain shows more complexity, variation and flux than previously assumed.

References

Adamović, M. (1985). *Konjugationsgeschichte der türkischen Sprache*. Brill. https://doi.org/10.1163/9789004646377

Adger, D. (2006). Combinatorial variability. *Journal of Linguistics*, *42*, 503–530. https://doi.org/10.1017/s002222670600418x

Adger, D., & Smith, J. (2010). Variation in agreement: A lexical feature-based approach. *Lingua*, *120*, 1109–1134. https://doi.org/10.1016/j.lingua.2008.05.007

Aikhenvald, A. Y. (2002). Typological parameters for the study of clitics, with special reference to Tariana. In R. M. W. Dixon & A. Y. Aikhenvald (Eds.), *Word: A cross-linguistic typology* (pp. 42–78). Cambridge UP. https://doi.org/10.1017/cbo9780511486241.003

Akkuş, F., Embick, D., & Salih, M. (2025). *Case and the syntax of argument indexation: Sorani Kurdish and beyond*. Oxford UP.

Andersen, H. (1973). Abductive and deductive change. *Language*, *40*, 765–793. https://doi.org/10.2307/412063

Atmaca, F. (2021). Suspended affixation needs no morphological word: The suffix -(y)Ip. *Proceedings of the Workshop on Turkic and Languages in Contact with Turkic*, *6*, 5035–5035. https://doi.org/10.3765/ptu.v6i1.5035

Bermúdez-Otero, R., & Payne, J. (2011). There are no special clitics. In A. Galani, G. Hicks, & G. Tsoulas (Eds.), *Morphology and its interfaces*. John Benjamins.

Bickel, B., Banjade, G., Gaenszle, M., Lieven, E., Paudyal, N. P., Rai, I. P., Rai, M., Rai, N. K., & Stoll, S. (2007). Free prefix ordering in Chintang. *Language*, *83*, 43–73. https://doi.org/10.1353/lan.2007.0002

Bobaljik, J. D. (2000). The ins and outs of contextual allomorphy. *University of Maryland Working Papers in Linguistics*, *10*, 35–71.

Denwood, A. (2002). K-∅: Morpho-phonology in Turkish. *SOAS Working Papers in Linguistics and Phonetics*, *12*, 89–98.

Embick, D. (1997). *Voice and the interfaces of syntax* [Doctoral dissertation, University of Pennsylvania].

Embick, D. (2007). Variation and morphosyntactic theory: Competition fractionated. *Language and Linguistics Compass*, *2*, 59–78. https://doi.org/10.1111/j.1749-818x.2007.00038.x

Embick, D., & Noyer, R. (1999). Locality in post-syntactic operations. *MIT Working Papers in Linguistics*, *34*, 265–317.

Erdem-Akşehirli, M. (2018). *Non-canonical morphological patterns in Turkish: Evidence from person-number markers* [Master's thesis, Boğaziçi University].

Fenger, P. (2020). *Words within words: The internal syntax of verbs* [Doctoral dissertation, University of Connecticut].

Göksel, A. (2010). Focus in words with truth values. *Iberia*, *2*, 89–12.

Good, J., & Yu, A. (1999). Affix-placement variation in Turkish. *Annual Meeting of the Berkeley Linguistics Society*, *25*, 63–74. https://doi.org/10.3765/bls.v25i2.1209

Good, J., & Yu, A. (2005). Morphosyntax of two Turkish subject pronominal paradigms. In L. Heggie & F. Ordóñez (Eds.), *Clitic and affix combinations: Theoretical perspectives* (pp. 315–341). John Benjamins. https://doi.org/10.1075/la.74.13goo

Gribanova, V. (2020). Predicate formation and verb-stranding ellipsis in Uzbek. *Glossa: a journal of general linguistics*, *5*. https://doi.org/10.5334/gjgl.1042

Güneş, G. (2020). Variability in the realization of agreement in Turkish: A morphotactic account. In A. Gürer, D. Uygun Gökmen, & B. Öztürk Başaran (Eds.), *Morphological complexity within and across boundaries: Essays in honour of Aslı Göksel* (pp. 236–261). John Benjamins. https://doi.org/10.1075/slcs.215.09gun

Güneş, G. (2021). Morphosyntax and phonology of agreement in Turkish. *Syntax*, *24*, 143–190. https://doi.org/10.1111/synt.12210

Halle, M., & Marantz, A. (1993). Distributed Morphology and the pieces of inflection. In K. Hale & S. J. Keyser (Eds.), *The view from building 20* (pp. 111–176). MIT Press.

Halle, M., & Marantz, A. (1994). Some key features of Distributed Morphology. In *MIT working papers in linguistics* (pp. 275–288).

Halpern, A. L. (1998). Clitics. In A. Spencer & A. M. Zwicky (Eds.), *The handbook of morphology* (pp. 101–122). Blackwell.

Haspelmath, M. (2011). The gradual coalescence into "words" in grammaticalization. In B. Heine & H. Narroq (Eds.), *The Oxford handbook of grammaticalization* (pp. 342–355). Oxford UP. https://doi.org/10.1093/oxfordhb/9780199586783.013.0027

Haspelmath, M. (2018). Revisiting the anasynthetic spiral. In *Grammaticalization from a typological perspective* (pp. 97–115). Oxford UP. https://doi.org/10.1093/oso/9780198795841.003.0006

Haspelmath, M. (2021). Explaining grammatical coding asymmetries: Form-frequency correspondences and predictability. *Journal of Linguistics*, *57*, 605–633.

Heine, B. (2017). Grammaticalization. In B. D. Joseph & R. D. Janda (Eds.), *The handbook of historical linguistics* (pp. 573–601). Wiley.

Inkelas, S. (1994). Exceptional stress-attracting suffixes in Turkish. In *Proceedings of a workshop on prosodic morphology*. Mouton de Gruyter.

Inkelas, S. (2018). *Prosodic constituency in the lexicon*. Routledge. https://doi.org/10.4324/9780429455209

Inkelas, S., & Orgun, C. O. (2003). Turkish stress: A review. *Phonology*, *20*, 139–161. https://doi.org/10.1017/s0952675703004482

Johanson, L. (2021). *Turkic*. Cambridge UP. https://doi.org/10.1017/9781139016704

Kabak, B. (2007). Turkish suspended affixation. *Linguistics*, *45*, 311–347. https://doi.org/10.1515/LING.2007.010

Kabak, B., & Vogel, I. (2001). The phonological word and stress assignment in Turkish. *Phonology*, *18*, 315–360. https://doi.org/10.1017\S0952675701004201

Kelepir, M. (2001). *Topics in Turkish syntax: Clausal structure and scope* [Doctoral dissertation, MIT].

Kiparsky, P. (2012). *Explanation in phonology*. Walter de Gruyter. https://doi.org/10.1515/9783111666242

Kodner, J. (2024). *A phase-based approach to Uyghur morphosyntax* [Handout from talk given at Tu+].

Kodner, J. (2023). *Laissez-faire* analogical change. *Journal of Historical Syntax*, *7*, 1–46.

Kornfilt, J. (1986). The Stuttering Prohibition and morpheme deletion in Turkish. In A. A. Koç & E. Taylan (Eds.), *Proceedings of the Turkish linguistics conference* (pp. 59–83). Boğaziçi University Publications.

Kornfilt, J. (1996). On copular clitic forms in Turkish. In A. Alexiadou, N. Fuhrhop, P. Law, & S. Löhken (Eds.), *ZAS papers in Linguistics* (pp. 96–114, Vol. 6).

Kroch, A. S. (1989). Reflexes of grammar in patterns of language change. *Language Variation and Change*, *1*, 199–244. https://doi.org/10.1017/s0954394500000168

Kroch, A. S. (1994). Morphosyntactic variation. In K. Beals (Ed.), *Papers from the 30th regional meeting of the Chicago Linguistics Society: Parasession on variation and linguistic theory*.

Kroch, A. S. (2001). Syntactic change. In M. Baltin & C. Collins (Eds.), *The handbook of contemporary syntactic theory* (pp. 698–729). Wiley. https://doi.org/10.1002/9780470756416.ch22

Kroch, A. S. (2005). *Modeling language change and language acquisition* [Ms., University of Pennsylvania].

Lahiri, A. (Ed.). (2000). *Analogy, levelling, markedness*. Mouton de Gruyter. https://doi.org/10.1515/9783110899917

Lightfoot, D. W. (1979). *Principles of diachronic syntax*. Cambridge UP.

Major, T., Mayer, C., & Eziz, G. (2023). Disentangling words, clitics, and suffixes in Uyghur. *Languages*, *8*, 203. https://doi.org/10.3390/languages8030203

Nevins, A., & Parrott, J. K. (2010). Variable rules meet Impoverishment theory: Patterns of agreement leveling in English varieties. *Lingua*, *120*, 1135–1159. https://doi.org/10.1016/j.lingua.2008.05.008

Newell, H. (2008). *Aspects of the morphology and phonology of phases* [Doctoral dissertation, McGill University].

Özçelik, Ö. (2014). Prosodic faithfulness to foot edges: The case of Turkish stress. *Phonology*, *31*, 229–269. https://doi.org/10.1017/s0952675714000128

Özyıldız, D. (2015). A parallel OT analysis of exceptional stress in Turkish [Handout from talk given at PhoNE].

Redhouse, J. W. (1884). *A simplified grammar of the Ottoman-Turkish language*. Trubner & Co.

Richards, N. (2001). A distinctness condition on linearization. In K. Megerdoomian & L. A. Bar-el (Eds.), *Proceedings of the 20th West Coast Conference on Formal Linguistics* (pp. 470–483). Cascadilla Press.

Serova, K. (2019). Head movement, suspended affixation, and the Turkish clausal spine. In *Proceedings of the workshop on Turkic and languages in contact with Turkic* (pp. 89–103, Vol. 4). https://doi.org/10.3765/ptu.v4i1.4584

Sezer, E. (2001). Finite inflection in Turkish. In E. E. Taylan (Ed.), *The verb in Turkish* (pp. 1–45). John Benjamins. https://doi.org/10.1075/la.44.02sez

Spencer, A. (1991). *Morphological theory*. Blackwell.

Topbaş, S., & Yavaş, M. (2006). Phonological acquisition and disorders in Turkish. In H. Zhu & B. Dodd (Eds.), *Phonological development and disorders: A multilingual perspective* (pp. 233–261). Multilingual Matters. https://doi.org/10.2307/jj.27939668.14

Tyler, M. (2019). Simplifying MatchWord: Evidence from English functional categories. *Glossa: a journal of general linguistics*, *4*. https://doi.org/10.5334/gjgl.631

Ünal-Logacev, Ö., Żygis, M., & Fuchs, S. (2019). Phonetics and phonology of soft 'g' in Turkish. *Journal of the International Phonetic Association*, *49*, 183–206. https://doi.org/10.1017/s0025100317000317

van der Hulst, H., & van de Weijer, J. (1991). Topics in Turkish phonology. In H. Boeschoten & L. Verhoeven (Eds.), *Turkish linguistics today* (pp. 11–59). Brill. https://doi.org/10.1163/9789004653474_004

Zec, D. (2005). Prosodic differences among function words. *Phonology*, *22*, 77–112. https://doi.org/10.1017/s0952675705000448

Zimmer, K., & Orgun, O. (1999). Turkish. *Handbook of the International Phonetic Association*, 154–156.

Zwicky, A. M. (1977). *On clitics*. IULC.

7 Appendix: Demographic information

7.1 Geographic background

Bitlis, Istanbul, USA
Bursa, Istanbul, USA
Denizli, Ankara, Istanbul, USA
Çorum, Istanbul
Erzurum
Erzurum, Istanbul
Hopa, Istanbul
Istanbul (5x)
Istanbul, Çanakkale
Istanbul, Trabzon, Balıkesir, Bursa
Mersin, Istanbul
Rize, Samsun, Istanbul
Sivas, Bolu, Erzurum, Erzincan, Giresun, Istanbul
Tokat, Istanbul
Trabzon, Istanbul, USA

Table 1: Current and previous places of residence
(at least 3 consecutive years, ordered chronologically)

7.2 Occupations

Housewife (2x)
Babysitter
Driver
Social media manager
Freelance content creator
Nurse
Building constructor
Financial specialist
Publisher
Publisher/writer
Student
Student/activist
Student/journalist
Graduate student (3x)
Professor (2x)

Table 2: Current (or, if retired, previous) occupation

7.3 Languages

Albanian, Macedonian
Arabic, Zazaki
Georgian
Laz
None (15x)

Table 3: Native languages other than Turkish