

The overabundance of the perfect and the restriction of evidentiality in Standard Azerbaijani: A diachronic study of *-(y)İb* and *-mİş*

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Abstract. This article investigates the historical development and reorganization of variation in the individual cells of the Standard Azerbaijani perfect paradigms, a phenomenon known as overabundance (Thornton 2011, 2012). Unlike many previous examples of overabundance in the literature, the variation of the present perfect in Standard Azerbaijani applies to all the relevant verb lexemes in the language and shows no indication of developing verb classes. Rather, the present study argues that, (i) while there is an ongoing reorganization of this variation, it is along lines of specialization for paradigmatic oppositions in person marking, and (ii) this reorganization is attributable to analogical extension on the basis of structural asymmetries in the person-marking of the evidential paradigm. Differentiation by Person (Dmitriyev 1927, Əfəndiyeva 2005) is an inherent structural property of the Azerbaijani verb paradigm, manifested by analogical change. The synchronic asymmetries in the perfect paradigms are best explained as the result frequency-sensitive changes, i.e., lower frequency categories (but not lexemes) correlate with the persistence of variation.

Keywords. Azerbaijani; overabundance; perfect; morphosyntactic variation; paradigmatic reorganization; low frequency

1. Introduction. Like most Turkic languages, Azerbaijani (Western Oghuz) tends to be characterized by regular agglutinative morphology, i.e., juxtaposing synthetic mappings of form to meaning, with numerous bound forms in a word, and with each morpheme having few and phonologically predictable allomorphs (Johanson 1998a). The perfect aspect in the diachrony and synchrony of Azerbaijani is a non-predictable violation of this otherwise characteristic transparency of form and meaning. Most traditional descriptions of Azerbaijani identify two synonymous perfect suffixes, *-(y)İb*¹ and *-mİş*, and claim that *-(y)İb* can mark second or third persons, freely varying with *-mİş* (Şirəliyev and Sevortyan 1971: 125, Hüseynzadə 2007: 151, Fəxrəddinqızı 2010: 73-74). The focus of this article is on the competition between the rival perfect suffixes *-mİş* and *-(y)İb* in Standard Azerbaijani. Both *-mİş* and *-(y)İb* each have their own predictable sets of allomorphs, largely due to vowel harmony. For example, *-mİş* occurs with a high front vowel /i/ when the stem ends in a front unrounded vowel, as in *getmİşəm* ‘I have gone’, *əməzdirmİşəm*

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¹ I employ Standard Azerbaijani Latin orthography throughout this paper. The orthography tends to correspond to IPA equivalents in broad transcription, except *j* = /ʒ/, *ş* = /ʃ/, *ç* = /tʃ/, *c* = /dʒ/, *k* = /c~k/, *g* = /ɟ/, *q* = /g/ (often spirantized as [x] in codas), *ğ* = /ɣ/, *y* = /j/, *ə* = /æ/, *ö* = /œ/, *ü* = /y/, *ı* = /u/. Vowel and consonant harmony spreads from stems to suffixes. Following turkological convention, archiphonemes which undergo harmony are written with capital letters: *I* (unifies /i/, /y/, /u/, and /u/), *A* (unifies /æ/ and /a/) and *Q* (unifies /c/ and /g/).

‘I have suckled’; with a front high rounded vowel /y/ when the stem ends in a front rounded vowel, e.g. *söndürmü(ş)sən*² ‘you have extinguished’, *hürkmüşük* ‘we have been startled’, etc.³ Table 1 shows the typical paradigm for the perfect forms, demonstrated with the verbs *al-* ‘take’ and *get-* ‘go’.

| | <i>al-</i> ‘take’ | <i>get-</i> ‘go’ |
|-----|---------------------------------|-----------------------------------|
| 1SG | <i>almışam</i> | <i>getmişəm</i> |
| 2SG | <i>almı(ş)sən~alıbsən</i> | <i>getmi(ş)sən~gedibsən</i> |
| 3SG | <i>almışdır~alıb(dır)</i> | <i>getmişdir~gedib(dır)</i> |
| 1P | <i>almışığ</i> | <i>getmişik</i> |
| 2P | <i>almı(ş)sınız~alıbsınız</i> | <i>getmi(ş)siniz~gedibsınız</i> |
| 3P | <i>almışdırlar~alıb(dır)lar</i> | <i>getmişdirlər~gedib(dır)lər</i> |

Table 1: Perfect paradigms for the verbs *al-* ‘take’ and *get-* ‘go’

While the existence of competing morphologically complex forms is not characteristic of Turkic inflection generally, it is perhaps not uncommon across languages. Rival forms of this sort have often been referred to as doublets (see e.g. Kroch 1994, Fehringer 2004), exemplified in English by past tense pairs such as *dived/dove* and *leaped/leapt*, among others (Haber 1976). The phenomenon—when linguists have cared to address it—has sometimes been referred to as doubletism (Lečić 2017). Thornton (2011, 2012) has observed that some languages, such as Latin and Italian, sometimes allow for more than two competing forms for certain cells in inflectional paradigms. Traditional ‘doublets’ are therefore instances of a more general sort of morphological variation called OVERABUNDANCE, which Thornton defines as the existence of two more forms (referred to as CELL-MATES) for the realization of a single cell in a paradigm.

The present paper is the first detailed study of the overabundance of the perfect in Standard Azerbaijani. By Standard Azerbaijani (henceforth just Azerbaijani), I mean the standard language written and spoken in the Republic of Azerbaijan. Non-standard varieties are spoken throughout the republic, as well as in Iran, Georgia, Russia (Daghestan), Eastern Turkey, and Iraq. Descriptions of the competing forms present perfect forms like *getmi(ş)sən/ gedibsən* ‘you have gone’ have typically described them as just-so synonymous inflections, typically without further comment, except to note that *-(y)İb* does not mark the first person. One popular proposal for the frequent appearance of doublets—i.e. cell-mates—comes from Kroch (1994), who suggests dialect mixing as the cause. He takes as evidence the English past tense doublets.

- (1) a. *dived~dove*
- b. *sneaked~snuck*
- c. **welk~walked*

² Depending on the speaker’s idiolect, the *ş* /ʃ/ in *-mİş* may be deleted/assimilated when followed by either the second person singular *-sən*, the second person plural *-sınız*, or the conditional suffix *-sA*. While such deletion does seem to have been a phonetically motivated process of sibilant hapology at some point in the language, it appears that—for those speakers who do allow for hapology here—the process is not necessarily phonetic or even phonological, since it only happens with *-mİş*. Consider the forms from one speaker, e.g. *yaz-mı-sən* ‘you have written’, but *soruş-sən* ask-COND.2SG ‘if you ask’ (but not **soru-san*); *günəş-sən* sun-COP.2SG ‘you are (a/the) sun’ (but not **günə-sən*). For many speakers, the exceptional hapology in 2nd-person *-mİş* is optional, and so may be considered yet another form of overabundance. Pursuing this analysis is beyond the scope of the present paper.

³ /u/ when the stem ends in a back unrounded vowel, e.g. *qalmışdır*, etc. *-(y)İb* shows the exact same patterns, e.g. *gedibsən* ‘you have gone’, *söndürübsən* ‘you have extinguished’, with the additional caveat that *-(y)İb* predictably occurs with a glide when following a vowel, e.g. *oxuyubdur* ‘(s)he has read’, cf. *oxumuşdur* ‘(s)he has read’.

- (2) a. The tailor fitted(/*?fit) the suit to my frame.
 b. When I was young, this suit fit(/*fitted) me.

The strong (irregular) forms in (1) were likely borrowed into the Old English dialect of London from the Scandinavianized Northern England (Taylor 1994). While the overabundance in the past tense shown in (1a,b) exists for many English speakers today, the past tense of *walk* in (1c) has been regularized. Kroch (1994: 7) argues that the average lifespan of such doublets is about 300 years based on the OED, but that “this figure is, of course, misleadingly long, since it reflects citations in any dialect and takes no account of conscious or unconscious archaism.” On this view, overabundance is inherently unstable, sustained only by dialect mixing and anachronisms. The doublets in (2) persist in Modern English because they convey a distinction in transitivity. This differentiation gives these forms a ‘niche’ in different verb classes, which allows them to avoid direct competition, which had been proposed to lead to blocking, and eventually to lexical extinction (Aronoff and Lindsay 2015). The forms in (1a,b) are similarly expected to disappear through disuse, or to come to be differentiated as in (2).

Unlike most previous examples of overabundance discussed in the literature, the situation in Azerbaijani is not a property of individual lexemes or groups of lexemes, e.g. declension or conjugation classes à la English (see above), Latin (Thornton 2011), Italian (*ibid.*, Cappellaro 2018), or Croatian (Lečić 2017). The variation of the present perfect in Azerbaijani applies to all the relevant verb lexemes in the language and shows no indication of developing verb classes. As we will see, Azerbaijani rather exhibits what Bonami and Stump (2016: 16-17) call **SYSTEMATIC OVERABUNDANCE** in that each verb in the language has several sets of forms in the present perfect. The synchronic facts of the present perfect are discussed in §2. The focus of the present paper is nonetheless on diachronic development of the distribution of the relevant suffixes. More evidence for the absence of lexeme classes in the synchronic distribution of perfect markers is given in Zaslansky (2019). Unlike the English past tense examples, the Azerbaijani perfect cell-mates did not arise due to dialect mixing. That is not to say that the dialectal basis of the standard language is monolithic; as Şirəliyev (1958) has demonstrated, the standard variety contains features primarily from the dialects of Şirvan and Bakı-Şamaxı, but also from other dialects. However, the synchronic overabundance of the present perfect is not obviously traceable to dialect mixing: I discuss the historical development in §3. I then discuss the composite inflection known as the evidential of the perfect in §4, providing the motivation for a diachronic investigation. I argue that lower frequency categories preserve variation better than higher frequency categories. To test this, I have constructed additional historical corpora from the texts of representative writers from the Standard Azerbaijani literary tradition. I also incorporate the Sketch Engine Turkic Web corpus of Azerbaijani (Baisa and Suchomel 2015), a large (~115,000,000 tokens) text corpus of Azerbaijani government and news websites, as well as some blogs and other .az domain websites. I discuss the corpus in §5, and present the results in §6 before concluding in §7.

2. The perfect and the restriction of evidentiality in Azerbaijani. The data in this section reflect the acceptability judgements of 14 native speakers of Azerbaijani, elicited in Baku. All participants were educated in Azerbaijani. Their judgements represent the spoken standard of the literary (=standard) language. I carried out elicitations in August-September 2014, July 2017, as well as over Skype between September and October 2017. In order to properly set the stage for our description of the Azerbaijani perfect markers, let us begin with two important observations:

- (i) Just as in other Oghuz languages—prototypically Turkish—verbs marked by *-mİş* in Azerbaijani are reported to carry both temporal (perfect) or evidential (indirective, meaning

‘evidently,’ ‘apparently,’ ‘reportedly,’ etc.) readings (Hüseynzadə 2007: 169; among many others). However, such verbs in Azerbaijani may be ambiguous between the temporal and evidential readings, tending strongly towards a strictly temporal perfect reading rather than an evidential reading, unlike e.g. Turkish. Evidentiality is thus the weaker reading.

(ii) Unlike *-miş*, the *-(y)ib* perfect marker has no secondary reading. It is always unambiguously temporal.

While the default assumption following Johanson (1998b, 2002: 147, and elsewhere) has been that the secondary nature of the evidential reading for verbs marked by *-miş* is due to Persian influence, I propose the hypothesis (which is not necessarily mutually exclusive with Johanson’s) that there also reasons internal to the Azerbaijani verb paradigm for the weaker evidential readings of *-miş*. Namely, I propose that person marking asymmetries in the present perfect paradigm created a morphologically marked distinction between the perfect and evidential senses of *-miş*, which is not marked in other persons. Hypothetically, this facilitated a retreat of evidentiality in the first and second persons. Our focus is therefore on person-marking.

2.1. THE PUZZLE OF PERSON MARKING IN THE AZERBAIJANI PERFECT. As shown above in Table 1, the first person suffix *-Am* cannot co-occur with the *-(y)ib* perfect. The judgements in (3) reflect the traditional descriptions of asymmetrical person marking of suffixes *-miş* and *-(y)ib*: the two suffixes can be used to paraphrase each other, except in the first person.

- (3) a. *Könül hər gün dolma ye-miş-dir / ye-yib(-dir).*
Könül every day dolma.ACC eat-PRF.MIŞ-3SG / eat-PRF.IB-3SG
 ‘Könül has eaten dolma every day.’
 b. *Mən hər gün dolma ye-miş-əm / *ye-yib-əm.*
Könül every day dolma.ACC eat-PRF.MIŞ-1SG / eat-PRF.IB-1SG
 ‘I have eaten dolma every day.’

While most traditional descriptions only report that *-(y)ib* is restricted to the second and third persons, many of my younger consultants gave degraded judgements even for the second person forms, as in (4).

- (4) a. *Sən hər gün dolma ye-mi(ş)-sən / ?ye-yib-sən.*
2SG every day dolma.ACC eat-PRF.MIŞ-2SG / eat-PRF.IB-2SG
 ‘You have eaten dolma every day.’
 b. *Siz hər gün dolma ye-mi(ş)-siniz / ?ye-yib-siniz.*
2P every day dolma.ACC eat-PRF.MIŞ-2P / eat-PRF.IB-2P
 ‘You guys have eaten dolma every day.’

Speakers still generally accept the *-(y)ib* forms in (4), but note that they probably would not use them at home. We will later see that the uncertain judgement of (4) mirrors the decreasing frequency of 2nd person forms marked by *-(y)ib* in texts over time.

Only the third person singular suffix *-dır* is reported to be optional, in contrast to the first and second persons. The exact nature of this optionality has not been clear in previous reports. Consider the following proposals regarding the distribution of the third person marker. Table 2 shows a present perfect paradigm adapted from the description given in Şirəliyev & Severtjan, who claim that *-dır* is always optional in the third person singular and plural of the perfect. On

this view, that *-dlr* is a straightforward marker of the third person⁴, separable from the third person plural marker *-lAr*.

| | Singular | Plural |
|---|-----------------------------------|---|
| 1 | <i>yaz-mış-am</i> | <i>yaz-mış-ıq</i> |
| 2 | <i>yaz-mi(ş)-san~yaz-ıb-san</i> | <i>yaz-mi(ş)-sınız~yaz-ıb-sınız</i> |
| 3 | <i>yaz-mış(-dlr)~yaz-ıb(-dlr)</i> | <i>yaz-mış(-dlr)-lar~yaz-ıb(-dlr)-lar</i> |

Table 2: Present perfect paradigm of *yaz-* ‘write’ (Şirəliyev and Sevortjan 1971: 125)

Table 3, on the other hand, shows a paradigm adapted from Öztöpcü, who shows the same verb, but indicates that the *-dlr* suffix does not occur in the plural, and does not co-occur with *-(y)Ib*.

| | Singular | Plural |
|---|---------------------------------|-------------------------------------|
| 1 | <i>yaz-mış-am</i> | <i>yaz-mış-ıq</i> |
| 2 | <i>yaz-mi(ş)-san~yaz-ıb-san</i> | <i>yaz-mi(ş)-sınız~yaz-ıb-sınız</i> |
| 3 | <i>yaz-mış-dır~yaz-ıb</i> | <i>yaz-mış-lar~yaz-ıb-lar</i> |

Table 3: Present perfect paradigm of *yaz-* ‘write’ (Öztöpcü 2003: 331)

On this view, *-dlr* is a marker of the third person singular perfect in its *-mİş* form, while the third person singular in its *-(y)Ib* form is zero-marked. *-lAr* is then is still a marker of the third person plural. Finally, Table 4 reflects Əfəndiyeva’s description of the facts.

| | Singular | Plural |
|---|---------------------------------|---|
| 1 | <i>yaz-mış-am</i> | <i>yaz-mış-ıq</i> |
| 2 | <i>yaz-mi(ş)-san~yaz-ıb-san</i> | <i>yaz-mi(ş)-sınız~yaz-ıb-sınız</i> |
| 3 | <i>yaz-mış-dır~yaz-ıb(-dlr)</i> | <i>yaz-mış-dır-lar~yaz-ıb(-dlr)-lar</i> |

Table 4: Present perfect paradigm of *yaz-* ‘write’ (based on Əfəndiyeva 2005)

On this view, *-dlr* is an optional marker of the third person singular and is separable from the plural marker *-lAr* (as in Table 2), but it is not optional in the marking the third person perfect in its *-mİş* forms. The three descriptions of third person marking given above present conflicting views of the facts. It is not possible for all of them to be correct. The descriptions either reflect different varieties (regional dialects, ethnolects, sociolects, idiolects) of Azerbaijani, or they reflect a confusion of the facts. Consider briefly that descriptions all agree that *-dlr* displays a similar sort of variation elsewhere in the language, as seen in Table 5.

| | Present | Aorist | Future/Prospective | Necessitative | Optative |
|-----|-------------------|-------------------|-------------------------|---------------------------|------------------|
| 3SG | <i>yaz-ır</i> | <i>yaz-ar</i> | <i>yaz-acaq(-dlr)</i> | <i>yaz-malı(-dlr)</i> | <i>yaz-a</i> |
| 3P | <i>yaz-ır-lar</i> | <i>yaz-ar-lar</i> | <i>yaz-ar(-dlr)-lar</i> | <i>yaz-malı(-dlr)-lar</i> | <i>yaz-a-lar</i> |

Table 5: Various partial paradigms of *yaz-* ‘write’

All descriptions agree that *-dlr* is an optional marker of the third person in the future/prospective and in the necessitative, and not, for example, in the present (e.g. *yazır* ‘(s)he is writing’ but **yazırdır*), the aorist (e.g. *yazar* ‘(s)he would write’ but **yazardır*), or optative (e.g. *yaza* ‘that (s)he write’ but **yazadır*). The cause for the proliferation of conflicting descriptions cannot be

⁴ The reviewer asks whether the Azerbaijani *-dlr* suffix has semantics similar to the cognate Turkish *-DlR*. Azerbaijani *-dlr* differs from Turkish *-DlR* to the extent that the latter specifically expresses “factive categorical assertions” or “nonfactive predications in belief statements based on general well-assimilated knowledge” (Aksu-Koç, Ögel-Balaban, & Alp 2009: 15); Azerbaijani *-dlr* may also mark nonfactive predications not based on well-assimilated knowledge and does not contrast with zero-marking on nominal predicates. Also unlike Azerbaijani *-dlr*, Turkish *-DlR* necessarily expresses a presumptive reading when combined with *-mİş* (Johanson 2000: 76)

due to a simple failure to characterize optionality, since previous authors have all agreed that *-dlr* is optional in other paradigms. The paradigms given in Tables 3 and 4 even have *-dlr* as an obligatory marker in some cells. This would run contrary to the other patterns seen in Table 5, where *-dlr* is either optional or *cannot mark* the verb. I propose that the reason for this proliferation lies in a failure to properly characterize the relationship between the perfect and the evidential in Azerbaijani as distinct but related categories.

2.2. PERFECT *-mİş* AND EVIDENTIAL *=(i)mİş*. Johanson (2000: 80) analyzes the evidential form as an enclitic copular evidential particle *=(i)mİş*, which has harmonizing and non-harmonizing variants, the former being formally identical to the perfect suffix *-mİş*. According to Johanson, the evidential *=(i)mİş* also differs from the perfect *-mİş* in that the former does not carry pitch accent. This would seem to suggest that it is distinguishable from the perfect *-mİş* in principle. These observations do not seem to be true in a straightforward way when there is only one *mİş* on a verb stem, though it is the case that *-mİş* carries stress rather than *=(i)mİş* when both occur, as we will later see. (5) shows an example of potentially ambiguous *-mİş/=(i)mİş*.

- (5) The evidential *=(i)mİş* in Azerbaijani (Şirəliyev & Severtjan: 127; Kazımov 2010: 244).
- a. yaz.**mİş**-am
write.MİŞ-1SG
SENSE 1 (default sense): ‘I have written.’
SENSE 2 (alternative): ‘I wrote/write/have written, apparently (they say, evidently).’
 - b. yaxşı=**ymİş**(*-dir) / yaxşı=**imİş**(*-dir)
good=EVD / good=EVD
OK ‘This is/was/has been good, apparently (they say, evidently).’
*‘This has been good.’

While *-mİş* is possibly (for some speakers, at least) ambiguous when attached to a verb stem as in (5a), it is never ambiguous when attached to adjectives.

A careful evaluation of the morphological evidence seems to suggest that the third person suffix that *-dlr* displays split behavior. As seen in (5b), *-dlr* is categorically ungrammatical when an adjectival stem is marked by the evidential. The judgements in (6) mirror the pattern seen in (5), which suggests that the distribution of *-dlr* in Table 4 is correct.

- (6) Evidential *=(i)mİş* vs. perfect *-mİş~(y)İb*
- a. %oxu.**mİş**
read.MİŞ
INTENDED 1: ‘(s/he) has read.’ (=perfect) ✓
INTENDED 2: ‘I read (pst.)/read (prs.)/have read, apparently.’ (=evidential) ✓
 - b. oxu.**mİş**-dur
read.MİŞ-3SG
INTENDED 1: perfect ✓
INTENDED 2: evidential ✗
 - c. oxu-**yİb**
read-İB
INTENDED 1: perfect ✓
INTENDED 2: evidential ✗
 - d. oxu-**yİb**-dur
read-İB-3SG

INTENDED 1: perfect ✓
 INTENDED 2: evidential ✕

Verb+*=(i)mİş* constructions in the third person—without *-dİr*, like (6a)—are not acceptable for all speakers; especially bad for those who perceive it as being ‘Turkish’. But for those who do accept it, it uniquely has a stronger evidential reading (as well as a perfect reading, much like Turkish, cf. Izvorski 1997), something *not* found in the other third person perfects (6b-d). Note that this is only a property of the third person. This confirms Johanson’s observation that the Azerbaijani system tends towards pure perfect readings, unlike Turkish. As Johanson (1971: 64, 2000: 80) has pointed out, *=(i)mİş* is temporally indifferent across Turkic languages, where as *-mİş* tends to have a temporal sense.

Even if *-mİş* as an exponent of the perfect is distinguishable from the evidential *=(i)mİş*, we have not yet considered the meaning(s) of *-mİş* relative to *-(y)İb*. The Turkish cognate suffix *-mİş* is also sometimes described as a perfect suffix, but as Bowler and Ozkan (2018) have argued that Turkish *-mİş* does not actually contribute English-type perfect readings.

2.3. A DIAGNOSTIC FOR THE TEMPORALITY OF THE AZERBAIJANI PERFECTS. It has been observed that the English present perfect imposes a ‘lifetime effect’, such that the individuals in the utterance must be alive at utterance time (Leech 1969; Chomsky 1972: 111-3; Anderson 1973). Bowler and Ozkan (2018: 2, 5) report that the same effect does not apply to Turkish *-mİş*.

(7) Lifetime effects in English and Turkish (Bowler and Ozkan 2018)

a. **English**

Context: Einstein is dead, but you have just seen his signature in the physics department guestbook at Princeton.
 ??Einstein has visited Princeton.

b. **Turkish *-mİş***

Context: Einstein is dead, but you have just seen his signature in the physics department guestbook at Princeton.
 Einstein Princeton-1 ziyaret et-miş
 Einstein Princeton-ACC visit do-MİŞ
 ‘(I have indirect evidence that) Einstein visited Princeton.’

Lifetime effects hold in English, but not in Turkish. Just as in (5), the Azerbaijani perfect exponents *-mİş* and *-(y)İb* pattern together in (8). In this case, the facts support the traditional analyses, which treat both suffixes as synonymous markers of perfect aspect.

(8) Lifetime effects in Azerbaijani

Context: Charlie Chaplin is dead, but you have just read that he had been in Japan in 1932.

- | | | | | |
|----|----------|-------------|---------|--------------------|
| a. | %Çaplin | Yaponiya-nı | ziyarət | et- miş |
| | Chaplin | Japan-ACC | visit | do-MİŞ |
| b. | ?#Çaplin | Yaponiya-nı | ziyarət | et- miş-dir |
| | Chaplin | Japan-ACC | visit | do-MİŞ-3SG |
| c. | ?#Çaplin | Yaponiya-nı | ziyarət | ed- ib |
| | Chaplin | Japan-ACC | visit | do-MİŞ-3SG |
| d. | ?#Çaplin | Yaponiya-nı | ziyarət | ed- ib-dir |
| | Chaplin | Japan-ACC | visit | do-MİŞ-3SG |
- ‘Chaplin has visited Japan.’

(8b-d) are infelicitous for the majority of my consultants, though they were accepted by four of my consultants. (8a) was highly unacceptable for most consultants, with the exception a couple people who noted that—just as in (6)—this form is sometimes acceptable only due to the influence of Turkish. We might consider the general unacceptability of (8) to be the result of a violation of the implicature that the individuals in the utterance exist, similar to the stronger implicature in English, but not similar to Turkish. Those speakers who do accept (8a) do not necessarily accept (8b-d). This is why the present perfect—unlike the other TAM paradigms in Table 5—is exceptionally obligatorily marked by *-dIr* when it is realized by *-mİş*, but not when it is realized by *-(y)İb*.

We are now in a better position to describe the asymmetrical distribution of perfect aspect cell-mates along the category of person in Azerbaijani:

First person (singular and plural): *-mİş*

Second person (singular and plural): *-mİş~(y)İb*

Third person (singular and plural): *-mİşdIr~(y)İb~(y)İbdIr*

Unlike the other persons, the third person singular and plural share a segmentable suffix in the realization of their person exponence in the perfect. Also unlike other persons, this suffix is optional with *-(y)İb*, but obligatory with *-mİş*. Zero marked third person *-mİş* forms do exist for some speakers, but they always necessarily carry evidential readings, rather than perfect readings. By contrast, the first and second persons in the present perfect do not have any reliable strategy to signal a difference in evidential vs. perfect readings of *-mİş*, and they default to temporal readings in verbs. I have suggested that this asymmetry might have facilitated the restricted distribution of evidentiality by allowing for ambiguity in the first and second persons, but not in the third person. What about *-(y)İb*? Perhaps this suffix never developed a full paradigm for all persons. After all, it has been in competition with *-mİş* so there is no functional need for a full paradigm. A closer look at historical materials provides evidence against this hypothesis.

3. The genesis of overabundance in the Azerbaijani present perfect. There is a rather well-established grammaticalization pathway which led to existence of competing forms in the perfect paradigm. I assume, following Doerfer (1977), that modern Azerbaijani is a continuation of the Seljuk language used in Anatolia prior to the 15th century, which then diverged into Old Ottoman and what we may call Old Azerbaijani. The suffix *-(y)İb~dIr* was also present in Ottoman and can be traced to the periphrastic construction **X-b tur-ur* in both Ottoman and Azerbaijani. The third person copular suffix *-dIr* comes from the lexical verb *tur-* ‘stand’, which was originally used to periphrastically express the perfect with a converbial construction. The semantic change from changed ‘stand’ > ‘dwell’ > ‘be’ (Johanson 2000) likely coincided with the phonological reduction of *durur* to *-dur*, which had become voice-initial and then became a third person suffix with regular vowel harmony on analogy with other person suffixes (Mansuroğlu 1953: 349). The *X-b* is a verb stem plus the non-finite converb suffix *-(I)b*. The grammaticalization of *-(y)İb* as separable exponent of the perfect in its own right in Azerbaijani can be dated to the 15th century (Tanrıverdi 2017: 301). Both the converb suffix *-(y)İb* (homophonous and cognate with the perfect marker) and the lexical verb *dur-* ‘stand’ exist in the modern language, but their combined use as a perfect is non-standard, and will not be considered here. *-mİş* is of older origin, and may have expanded from perfect to indirective readings once the *-DI* past tense ceased to mark the witnessed/non-witnessed distinction in (Proto-)Oghuz (Tenishev 2002: 194).

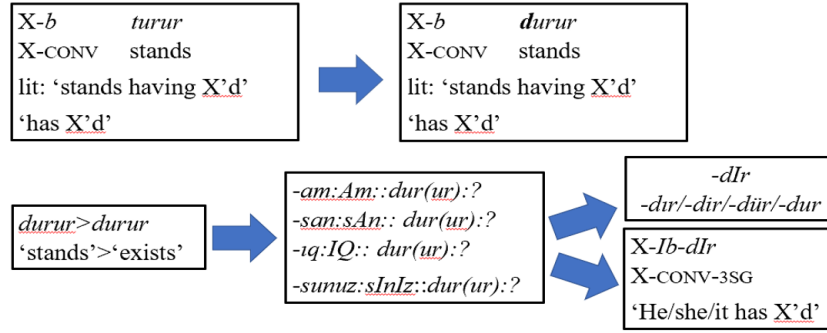


Figure 1. The grammaticalization of $-(y)Ib-dIr > -(y)Ib$ and $-dIr$.

Given the observations that (i) $-(y)Ib$ does not take first person forms; (ii) the second person forms are less acceptable for some speakers; and (iii) the use of $-(y)Ib$ as a perfect suffix was historically grammaticalized from a construction involving *durur*, which itself grammaticalized as a way to mark the third person, perhaps $-(y)Ib$ never developed a full paradigm for all persons, as suggested at the end of the previous section. But consider (9).

- (9) First person $-(y)Ib$ (Füzuli's Bəngü Badə, XVI cent.)

نه گناه ائيلهديم كي خوار اولوبام؟

Nə günah elə-ydim ki, xar ol-**ub**-am?
 What sin do-PST.1SG that, shame be-PRF-1SG
 'What sin have I committed, that I have brought shame upon myself?'

Füzuli is a towering figure in the early Azerbaijani literary canon. First person $-(y)Ib$ forms are found in his writings, but more generally also in the writing of other authors before the 17th century. Moreover, Kazımov (2010) reports that $-(y)Ib$ can be marked for first and second persons, specifically in the 'evidential of the perfect' forms, to which we now turn our attention.

4. The evidential of the perfect. So far I have only considered the present perfect. One complication in the morphology is seen in the evidential of the perfect, as seen in (10).

- (10) The evidential of the perfect (Əfəndiyeva 2005: 49)

...sonra yad-ım-a düş-dü ki, bu əsər-lər
 ...then memory-1SG.POSS-DAT fall-PST-GEN that, DEM work-P
 haqqında haradasa oxu-**muş**=**muş**-am.
 about somewhere read-PRF=EVD-1SG
 '...then I remembered that I **had evidently** read about these works somewhere.'

Əfəndiyeva points out that it is the inner suffix which is the perfect and identifies the outer suffix as $=(i)mIş$. The evidential of the $-mIş$ perfect has two possible suffix orders (ibid.: 241). One ordering is adjacent, as seen in Table 6. In the non-adjacent ordering in Table 7, the $-mIş$ perfect is separated from $=(i)mIş$ by the person and number markers.

| | Singular | Plural |
|---|--|--|
| 1 | yaz mış muşam~yaz mış imişəm | yaz mış muşıq~yaz mış imişik |
| 2 | yaz mış mu(ş)san~yaz mış imi(ş)sən | yaz mış mu(ş)sınız~yaz mış imi(ş)siniz |
| 3 | yaz mış muş~yaz mış imiş | yaz mış muşlar~yaz mış imişlər |

Table 6: Adjacent ordering of the evidential of the of $-mIş$ perfect of yaz- 'write' (Pitch accent added)

| | Singular | Plural |
|---|---|---|
| 1 | yaz mışam ~yaz mışam imiş | yaz mışığı ~yaz mışığı imiş |
| 2 | yaz mı(ş)san ~yaz mı(ş)san imiş | yaz mı(ş)sınız ~yaz mı(ş)sınız imiş |
| 3 | yaz mışmı ~yaz mış imiş (same as table 6) | yaz mışlarmı ~yaz mışlar imiş |

Table 7: Non-adjacent ordering of the evidential of the of *-mı* perfect of *yaz-* ‘write’ (Pitch accent added)

Notably, the third person forms here are marked by *-dlr*. As we have already seen, the third person suffix *-dlr* has strictly temporal, non-evidential readings. The evidential of the perfect reportedly has a strongly evidential reading, which explains why it is never marked by *-dlr*. The harmonizing and non-harmonizing variants of the adjacent and non-adjacent orderings shown in Tables 6 and 7 are all synonymous with each other and with the evidential of the *-(y)lb* perfect, seen in Table 8. Unlike present perfect *-(y)lb* perfect forms, the first person is permissible in the evidential of the perfect (ibid.: 242).

| | Singular | Plural |
|---|--|--|
| 1 | yaz ıbmı ~yaz ıbmı imiş | yaz ıbmı ~yaz ıbmı imiş |
| 2 | yaz ıbmı(ş)san ~yaz ıbmı(ş)san | yaz ıbmı(ş)sınız ~yaz ıbmı(ş)sınız |
| 3 | yaz ıbmı ~yaz ıbmı imiş | yaz ıbmı ~yaz ıbmı imiş |

Table 8: The evidential of the *-(y)lb* perfect of *yaz-* ‘write’ (Pitch accent added)

The six cell-mates of the evidential of the perfect are a striking example of overabundance across all persons. To say ‘I have apparently written’, one could say any of *yazmışmı* / *yazmış imiş* / *yazmışam* / *yazmış imiş* / *yazıbmı* / *yazıbmı imiş*. That is not to say that all these forms are universally used. Davis (2019 [this volume]) reports that his consultant does not accept the adjacent *-mı(i)mı* forms in Table 6, but does accept the forms in Table 8, including the first person forms. In order to account for this, Davis proposes an OT-theoretic constraint on adjacent identical morphemes. Şirəliyev (2008: 270) notes that the forms in Table 6 are more common in the Western dialects of dialects Karabakh, Qazakh, and Ağdam. An adjacency constraint of some sort seems reasonable for those dialects which do not conform to Table 6. That being said, it is not clear what would allow speakers to choose between the forms in Table 7 and Table 8; my consultants accept all forms in Tables 6-8, and these forms are sometimes listed in standard grammars. How can we account for the facts of first person marking in this section and in the previous section? I suggest a diachronic explanation. Paradigmatic pressures (e.g. the West Oghuz Differentiation by Person) of the sort described in §2 can account for the ongoing changes in person marking in the perfect, but the asymmetrical distribution is the result of relative category frequency effects. Thornton (2012) has suggested that overabundance in paradigms is better preserved in low frequency cells than in high-frequency cells. Cappellaro (2018) reports similar findings. In order to test the relevance of frequency in explaining the synchronic asymmetries in person marking in the perfect aspect, I constructed a small diachronic corpus of literary Azerbaijani.

5. The corpus. The earliest Azerbaijani texts are sometimes dated to the 13th or 14th centuries (Şirəliyev 1956), though different authors have proposed earlier or later dates. Many of these earlier texts are identifiable as Old Anatolian Turkish, the common ancestor of modern Azerbaijani and Ottoman Turkish. I have thus chosen to include only texts from the 15th century onwards, since by this period both *-mı* and *-(y)lb* are identifiable as distinct exponents of the perfect aspect (Tanrıverdi 2017: 301). The corpus is a work in progress. At the moment, only machine-readable texts transliterated in the Latin script have been included. I have only included

works which are identifiable as a part of the Azerbaijani canon, that is, they come from authors who are commonly identified as Azerbaijani authors in the Republic of Azerbaijan. The included authors are listed in Table 9.

| Author | Dates active or alive | Works | Token count |
|--|-----------------------|--|-------------|
| Kişvəri | 1490-1502 | His collected works. | 27852 |
| Xətai (خطائی) | 1487-1524 | I include 300+ of his Ghazals, 10 quatrains, two commands given as Shah, and 1 decree. | 25158 |
| Füzuli (فضولی) | 1494-1556 | I include his full Turkic Divan, his 40 riddles, 2 poems not included in the Divan, his Şikayətnama, his prose letters, and the entirety of his epic <i>Leyla and Majnun</i> . | 82974 |
| Molla Pənah Vaqif (ملاپناه واقف) | 1717-1797 | His collected works. | 25427 |
| Axundzadə (Axundov) | 1812-1878 | I include 1 novellette, 5 plays, and 14 poems. | 45914 |
| Seyid Əzim Şirvani | 1835-1888 | His collected works. | 125463 |

Table 9: Authors in the historical corpus.

The main source of synchronic data is drawn from Sketch Engine’s TurkicWeb corpus of Azerbaijani, a large (~115,000,000 tokens) text corpus of Azerbaijani government and news websites, as well as some blogs and other .az domain websites (Baisa and Vít 2015).

6. The reorganization of person marking in the perfect and evidential systems.

6.1. PRECAUTIONARY REMARKS. We have already established that the evidential, when it attaches directly to the verb stem, is not distinguished from the present perfect in the first and second persons, but that it is distinguished in the third person. It would be impossible to say whether or not the situation was the same in earlier periods of literary Azerbaijani without more in-depth analysis: the corpora in the present study are untagged. There is some reasonable evidence that verb stems with a single *-mİş* tended to have perfect rather than evidential readings in the first and second persons. For example, most of the instances of Old Anatolian *-mİş* reported by Turan (1996) seem to be markers of the perfect, and the situation in Ottoman was similar to modern Azerbaijani (Dmitriyev 1927). I therefore make the (possibly anachronistic) assumption that the relevant tokens of *-mİş* behave in previous periods much like they do in the modern language: instances of present perfect *-mİş* mark the perfect in the first and second persons, but may mark

evidentiality in the third person without being marked by *-dlr*, or when attached to adjectives or nouns, or co-occurring with other exponents of tense, aspect, or mood in a verbal stem.

6.2. COMPETITION BY PERSON. Let us begin by looking at the first person. From a metachronic perspective, perhaps we were right to say that *-(y)lb* never truly took off in the first person, as seen in Figure 2.

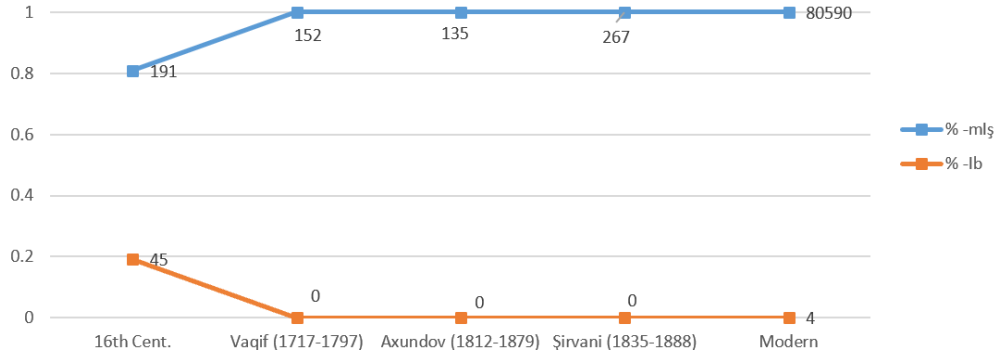


Figure 2. *-(y)lb* vs. *-mlş* in the first person (excluding *=(i)mlşAm* and *=(i)mlşIQ*)

The results in Figure 2 show that in the first person *-mlş* was always the dominant marker, and so perhaps it was right to say that *-(y)lb* never truly took off in the first person. This is not true for all persons. Let us now look at the second and third persons, in Figures 3 and 4 respectively.

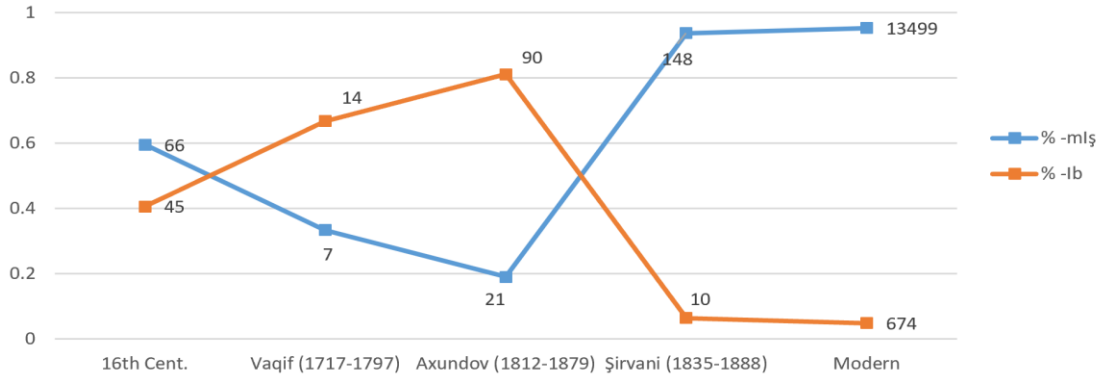


Figure 3. *-(y)lb* vs. *-mlş* in the second person (excluding *=(i)ml(ş)sAn* and *=(i)ml(ş)InIz*)

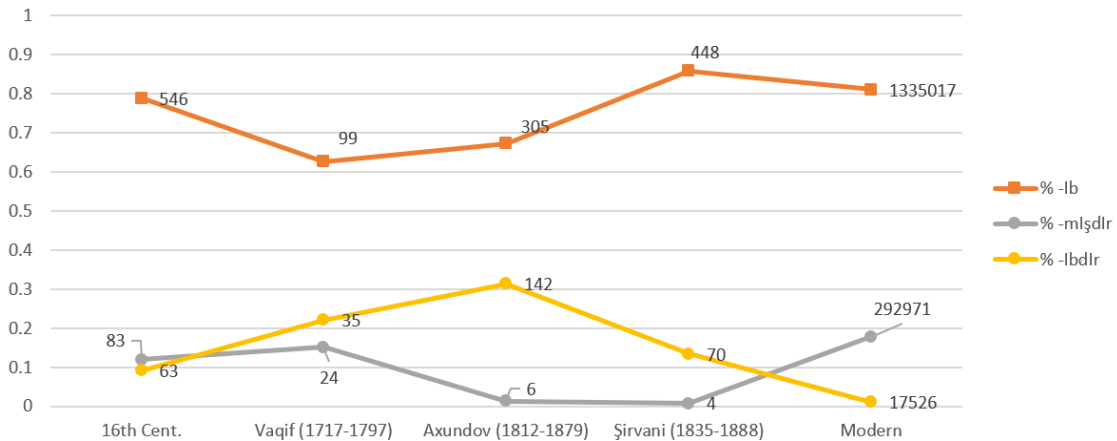


Figure 4. *-mlşdlr* vs. *-lb* vs. *-(y)lbdlr* in the third person

In the second person the distribution of *-(y)Ib* and *-mİş* (relative to the size of the corpus) appears to closer to a 1:1 ratio, but *-mİş* can be clearly seen as the emerging ‘victor’ in the modern corpus. The picture in the third person is more complex. Figure 4 shows the competition of the perfect markers *-mİşdlr*, *-(y)Ib*, and *-(y)Ibdlr* in the third person; the relative frequencies exclude *=(i)mİş* by only including *-dlr*-marked forms of *-mİş*. Since zero-marked *-(y)Ib* is homophonous with the nonfinite converb form, I have only included clause-final verbs (i.e. followed directly by punctuation; this includes commas, since converbs do not appear to be followed by commas in the corpora) for all three suffixes. *-(y)Ib* is far more frequent in the third person than either of the other possible cell-mates, but not necessarily at the expense of *-mİşdlr*. This seems to reflect an ongoing specialization of both *-mİşdlr* and *-(y)Ib* for the third person.

6.3. RELATIVE FREQUENCY BY GRAMMATICAL CATEGORY. Why was *-(y)Ib* lost so quickly in the first person? Thornton (2012) has shown that more frequent lexemes tend to lose variation faster than less frequent lexemes. Here I extend this hypothesis to categories of person marking. Table 10 shows the relative normalized frequencies (per million tokens) for the three categories of person in singular and plural, measured by proxy via inflected tokens of pronouns.

| Author | Kişvəri | Xətai | Füzuli | Molla Pənah Vaqif | Axundov | Modern corpus |
|--------------------------|------------------|----------------|-----------------|-------------------|-----------------|----------------|
| (Period Alive) | ? | (1487-1524) | (1494-1556) | (1717-1797) | (1812-1878) | Modern |
| (Period Active) | (1490-1502) | ~1509-1524 | (1506-1556) | 1750s onwards | (1837-1878) | Modern |
| 1:2:3 SG ratio (rounded) | 105:51:14 | 35:9:46 | 71:55:46 | 63:58:47 | 71:51:60 | 10:3:35 |
| 1:2:3 P ratio (rounded) | 2:1:0 | 2:1:1 | 6:0:1 | 14:5:2 | 23:18:6 | 5:20:8 |

Table 10: Relative normalized frequencies (per million tokens) for various inflected pronouns.

Table 10 shows that in the relevant texts, first person is more frequent than the other person categories, whereas second person is only occasionally more frequent than third person. This is likely an effect of genre to some extent, though it would be in line with our expectations about frequency. An alternative suggestion is that first person is more *salient*: less salient categories may also preserve overabundance better than more salient categories (Cappellaro 2018). Intuitively, first person is more salient than other persons, though I leave this to further investigation. Table 11 shows the normalized frequencies for the forms of the evidential of the perfect.

| Author | Kişvəri | Xətai | Füzuli | Vaqif | Axundov | Şirvani | Modern corpus |
|------------------|---------|-------|--------|-------|---------|---------|---------------|
| <i>mİş-X=mİş</i> | 0 | 0 | 9.39 | 0 | 102.07 | 6.12 | 0.4 |
| <i>mİş=mİş-X</i> | 0 | 0 | 0 | 0 | 6 | 0 | 0.06 |
| <i>Ib-X=mİş</i> | 0 | 0 | 0 | 0 | 17.01 | 24.49 | 3.12 |
| <i>Ib=mİş-X</i> | 26.94 | 0 | 0 | 0 | 0 | 6.12 | 30.33 |

Table 11: Normalized frequencies (per million tokens) for the evidential of the perfect

It goes without saying that these forms are relatively rare, even in the contemporary (modern) corpus. This is predicted, if lower frequency forms really do tend to preserve overabundance.

7. Conclusion. Recent work on the diachrony of overabundance has shown that competing inflections are stable across centuries, though rival forms may occasionally become lexically specified (Thornton 2012). The present study has investigated the overabundance of the perfect in Azerbaijani. This variation is stable; where the forms are differentiated, they are differentiated by person. I hypothesize that this characteristic organizational pattern is responsible both for the apparent restricted distribution of the evidential in the first and second persons, and for the apparent ongoing specialization of *-mİş* for the second person and *-(y)Ib* for the third person (cf. Dmitriyev 1927 on Ottoman). Although relatively untagged corpora limit the current investigation, more rigorous studies should reveal the degree to which the paradigmatic organization of person is a ‘niche’ for competing inflections.

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