A Fresh Look at the Tense-aspect System of Turkish


Turkish is one of the best described languages of the world. One should therefore expect a large consensus with regards to the way Turkish grammar is described. However, once we compare different grammatical descriptions of Turkish, we find an astonishing variation of analyses. One domain whose description is particularly unsatisfactory is the tense-aspect system. The paper will show that forms like okuyor, okur, okuyacak, and okumuş are participles marked for aspect, but not for tense. Failure to recognize the zero-exponence of present tense has lead to the erroneous analysis of aspectual morphemes as tense markers. Comparison with the tense marking on non-verbal predicates shows however that present tense is neither marked on the noun/adjective/adverbial/participle, nor part of the meaning of the subject cross-reference markers. It is marked by the absence of the other member of the tense paradigm, past tense. In addition to an inadequate semantic description of the progressive aspect suffix -iyor, many grammars present a diachronically motivated form -(I)yor, which requires elaborate morphophonological rules to produce the synchronically correct verb forms. This segmentation should be revised by acknowledging the morphological inclusion of the original linking vowel into the suffix, which allows for a much more elegant description. Finally, the paper will draw attention to the cross-linguistic confusion caused by the term ‘aorist’ and advocates the term ‘dispositive aspect’ instead. In the same vein, ‘prospective aspect’ is a more adequate term for participles in -ecek than ‘future tense’. An interesting consequence of the present analysis is that Turkish has a simple past marked by a cumulative morpheme -ti which fills both the aspectual and the temporal slot of the verb form, but no simple present, as all present tense forms require overt aspectual marking. Tense is thus an inflectional category of the predicate, be it verbal or non-verbal, while aspect is an inflectional category of verbs. The paper is relevant for linguists interested in Turkish in general as well as readers interested in tense and aspect, and may contribute to improvements in Turkish language education by providing a more consistent account of the morphological structure of temporal and aspeclual forms and their use.

Keywords: Turkish, tense, aspect, evidentiality, morpheme
1. Introduction

There is no doubt that Turkish is one of the most important and therefore best described languages of the world. According to the Ethnologue, Turkish ranks 21st in terms of the number of speakers, out of a total given there as 6909 languages, which puts it in the top 0.3 per cent of languages. The high status of Turkish among linguists is not only due to its large number of speakers (and maybe the proximity of its linguistic area to Western Europe), but also to its typological status as an agglutinating language par excellence. Haspelmath (2000: 11-15) goes so far as to accuse linguistics of ‘Turkocentrism’, claiming that ‘linguists have unconsciously tended to define agglutination as ‘Turkish-like’’. He even attributes ‘the reason for the success of the agglutination/fusion distinction’ to the fact that ‘Latin and Turkish have been such prominent languages in Western linguistics over the last few hundred years’.

The relatively large number of Turkish-speakers, the important emigrant communities leading to language contact in the Western host societies, the importance of the Turkish tourism industry in recent decades, and last but not least, the popularity of the Turkish language among linguists, have lead to an abundance of teaching materials, dictionaries, phrasebooks, and learner’s grammars, far too many to be mentioned here.

As a consequence of the popularity of the language, many people, linguists as well as the general public, have come into contact with Turkish, in one form or another. One should therefore assume that Turkish grammar would be well-described, and what is more, that there should be a large consensus with regards to the way it is described. The agglutinative character should also facilitate the segmentation and labelling of its core grammatical morphemes. However, once we compare different grammatical descriptions of Turkish, we find an astonishing variation of analyses.

One domain whose description is particularly unsatisfactory is the tense-aspect system. The distinction between tense and aspect, the labelling of the markers involved in their expression, and in some cases even the segmentation, that is the identification of morpheme boundaries, is inconsistent. We will therefore have a fresh look at the available analytic and terminological choices, hoping that this paper will contribute to a more coherent analysis and a better understanding of this central area of Turkish grammar. I will be unable to do justice to everything that has been written on the topic; the number of publications is far too large. Instead, I will select a sample of representative linguistic descriptions – some short, some long, some recent, some older, some for linguists, others for learners – in order to illustrate the diversity of available descriptions. I will then point out inconsistencies, discuss terminological preferences, and, where useful, provide some cross-linguistic input. The discussion presupposes some familiarity with Turkish phonology, in particular vowel
harmony and consonant assimilation and the allomorphs resulting therefrom, as I will avoid abstract representations such as -(y)DI.

The paper is relevant for linguists interested in Turkish in general as well as those interested in tense and aspect systems. Moreover, it may contribute to improvements in Turkish language education by providing a more consistent account of the morphological structure of temporal and aspeectual forms and their use, hopefully providing answers to questions that may be raised by learners of Turkish.

2. Non-verbal Predicates

It seems that the best way to begin a discussion of the Turkish tense-aspect system is to look at the marking of non-verbal predicates, e.g. noun phrases, adjectives, and adverbial phrases in equational clauses. Such predicates have fewer inflectional possibilities, and consequently show us a core system of predicate marking reduced to its central markers.

The basic opposition is that between past and present tense marking. While the past is expressed by an overt marker -di or one of its allomorphs, present tense is signalled by ‘the absence of the past copular marker’ (Göksel & Kerslake 2005: 328). We will ignore the evidential/perfective marker -miş for the time being; it will be discussed in §7. The conditional marker -sa, while in the same morphological slot, is primarily a clause-linking suffix and therefore not relevant for our discussion. We thus obtain a paradigm of tense markers on non-verbal predicates with two core members, -di and -Ø(‘zero’).

Before we proceed, let us see a few examples of verbless clauses. Some of the examples are inspired by Göksel & Kerslake (2005: 120), but I have occasionally made some changes, such as adding or adapting the glosses.

(1) Bodrum-da-Ø-yım
   Bodrum-LOC-PRS-1SG
   ‘I’m in Bodrum’

(2) Bodrum-da-ydı-m
   Bodrum-LOC-PST-1SG
   ‘I was in Bodrum’

(3) hasta-Ø-sın
   sick-PRS-2SG
   ‘you are sick’
I will argue that the second member of the paradigm, zero, is a tense morpheme without phonological representation, in other words a signified without a signifier. Dixon (2009) lists criteria for distinguishing between ‘zero’ vs. ‘nothing’, such as:

(a) A zero morpheme is the realization of a term in a paradigmatic system. It produces an empty slot in the place where the system is realized.

(b) Zero is part of an obligatory system, in contrast to an optional system where lack of marking indicates that the system has not been applied.

(c) In an obligatory system, zero has contrastive value, just as do the other terms in the system, which have non-zero realization.

The examples seen so far are already sufficient to show that these criteria are met:

(a) The clause hasta-φ-sın ‘you are sick’ contrasts with hasta-ydî-n where the overt past tense morpheme -ydî fills the slot preceding subject cross-reference marking. The different allomorph -n for the latter is further evidence that tense marking by zero and overt past tense marking cannot be combined in the same slot; only one term can and has to be selected. Combinations with aspectual markers are possible (if the predicate is verbal), as these occupy a different slot; see §9 for an overview.

(b) Tense marking is obligatory, as zero-marking has a specific meaning; it is not the case that tense is left unspecified in (1), (3), and (4). The system of tense marking is obligatory in main clause predicates (but see §7 for neutralization of the tense opposition in certain evidential contexts).

(c) Zero marking has contrastive value, excluding past tense interpretation.

A relevant question is now whether the formally unmarked term of the tense opposition is more adequately labelled ‘present’ or ‘non-past’ (as in Göksel & Kerslake 2005: 326). The default interpretation of zero-marking is that of a ‘non-modalized utterance with non-recurrent present time reference’ (Göksel & Kerslake 2005: 120), and a sentence like (4) could not refer to future time, as when Necla has enrolled at a university to become a teacher, or when she likes teaching her little sister so much that her parents assume she’ll be a teacher. In such cases of future time reference, an aspectually marked predicate with the copula verb olmak has to be used. We can therefore conclude that ‘present
tense’ is a more precise label for the zero-marking in the tense paradigm than ‘non-past’; the latter label would unnecessarily leave open whether (4) had present or future time reference. As we have seen, it can only have present tense reference.

The initial -y of the subject cross-reference marker is often analyzed as a copula (e.g. Göksel & Kerslake 2005: 84) or as the verb ‘to be’ (Lewis 1967: 96). Etymologically, the suffix -ydi goes back to är-di ‘be-PST’ (Johanson 1994: 261), with subsequent reduction or even loss of the first syllable of the copula verb forms. From a purely synchronic perspective, however, there are several good reasons to consider the -y as part of phonologically and morphologically conditioned allomorphs:

(a) It does not appear after a consonant anyway, so that we would have to assume a zero-exponent of the copula in such cases.

(b) No -y appears in constructions like (4), so it has no independent existence, but is dependent on the presence of another morpheme, in other words, it only appears as part of other morphemes.

(c) It is generally not perceived or described as a copula in such verbal forms as in (5) (cf. Göksel & Kerslake 2005: 351; Ersen-Rasch 2004: 121), or even (6) (cf. Ersen-Rasch 2004: 125-126).

(d) It is not always in a suppletive relation with the copula ol-: While (7) is the infinitive of (1)-(2), the construction in (8), intended as the infinitive of (5)-(6), is ungrammatical.

(5) git-meli-yim
   go-OBLG-1SG
   ‘I must go’

(6) git-meli-ydi-m
   go-OBLG-PST-1SG
   ‘I should have gone’

(7) Bodrum-da ol-mak
    Bodrum-LOC be-INF
    ‘to be in Bodrum’

(8) *git-meli ol-mak
    go-OBLG be-INF
    ‘to have to go’

Aspect cannot be expressed on nominal predicates. The explicit copula verb ol-
is required as a host of aspectual suffixes, thereby transforming a verbless clause into a copula clause. This copula inflects like any lexical verb, and can indeed be used as a lexical verb, with meanings such as ‘exist’; ‘be possible’; ‘be successful’. This brings us to the next section, where we will look at some differences in the tense-marking of verbs, as compared to non-verbal predicates.

3. Tense on Verbal vs. Non-verbal Predicates

The marking of non-verbal predicates has shown that the tense system of Turkish is a paradigm with two terms, past and present. The tense marking of verbal predicates is not exactly parallel, as the allomorphs of the past tense marker differ after a vowel-final verb (9) vs. non-verb (10). Another important difference is that the verbal past tense marker can follow the negator suffix -ma (11), whereas the non-verbal past tense marker can only be attached to değil (12). For a discussion of the role of değil in the negation of verbal predicates, see §5.

(9)  anla-di-m
understand-PST-1SG
‘I understood’

(10) hasta-ydı-m
sick-PST-1SG
‘I was sick’

(11) anla-ma-di-m
understand-NEG-PST-1SG
‘I did not understand’

(12) hasta değil-di-m
sick-NEG-PST-1SG
‘I was not sick’

Finally, an interrogative enclitic will separate a non-verbal past tense marker from its host (13), but not a verbal past tense marker (14).

(13) Hasta=mu-ydı-n?
sick=INT-PST-2SG
‘Were you sick?’
In Bassarak & Jendraschek (2004: 1365) as well as in Göksel & Kerslake (2005: 77), this variation in the behaviour of the suffix(es) is explained by their belonging to different slots or positions in a template for predicate morphology. I will describe this point in more detail under the heading ‘versatile suffixes’ in §7. For now, it is sufficient to point out that the past tense marker of verbs – as of course the -Ø marking present tense – can be preceded by aspectual morphemes. This is the topic of §4.

4. Aspect on Verbal Predicates

4.1. Progressive Aspect

Progressive aspect is expressed by -iyor. (15) shows it in combination with past tense marking, (16) is the corresponding zero-marked present tense progressive.

(15) gid-iyor-du-n
    go-PROG-PST-2SG
    ‘you were going’

(16) gid-iyor-Ø-sun
    go-PROG-PRS-2SG
    ‘you are going’

This marker is called ‘imperfective’ in Göksel & Kerslake (2005: 332), which is then subdivided into ‘progressive’ and ‘habitual’. Despite this small difference in terminology resulting from the role attributed to habitual uses of the suffix, the analysis as an aspectual marker is the same as in this paper. However, the description of -iyor as a tense morpheme is quite common as well. It is then usually described as ‘present’ (Ersen-Rasch 2004: 138; Çakır 2009: 53), or one of several present ‘tenses’ (Lewis 1967: 108). An intermediate analysis can be found in Kornfilt (1997: 361), where the suffix is labelled ‘progressive/continuous’, but often glossed as ‘present progressive’, in some cases even when followed by a past tense morpheme, e.g. in yürü-yor-du ‘walk-Pr.Prog.-Past’ (Kornfilt’s orginal glossing, p. 466) or uyu-yor-du ‘sleep-Pr.Prog.-Past’ (p. 467).

It seems to me that the only plausible description is to recognize the zero-exponence of present tense, which is identical to the marking of non-verbal...
predicates as seen e.g. in (3). While the base in (3) is an adjective, the base in (16) is a participle, otherwise the constructions are identical and have a similar combining potential as we will see in later sections. This analysis leaves -iyor in the aspect slot and avoids terminological contradictions such as ‘present in the past’ (as in Çakır 2009: 67) or even ‘present past’ (Lewis 1967: 109).

Çakır (2009: 54) deserves credit for providing the synchronically correct segmentation of the progressive suffix. The initial vowel of -iyor is analyzed as part of the suffix rather than the verb stem. If the suffix-initial vowel clashes with a stem-final vowel, the former prevails, whereas the latter is deleted. Vowel harmony then assimilates the surviving vowel to the one in the preceding syllable. This is shown in (17) for the verb anla- ‘understand’.

(17) a. anla- (stem)
   b anla-iyor (suffixation of aspect marker)
   c. anl-iyor (deletion of stem-final vowel)
   d. anl-iyor (assimilation of suffix-initial vowel)

The same process applies when -iyor is preceded by the negator suffix -ma, so that anla-ma-iyor surfaces as anla-m-iyor. Most descriptions favour a diachronically motivated form -yor, as the suffix developed from the verb yormak ‘to go; walk’ (Lewis 1967: 108). This segmentation requires the allomorphs -yor for vowel-final stems, as illustrated by (18), vs. -iyor for consonant-final stems (19) as well as lengthy explanations as to why stem-final open vowels in open syllables are not conserved, as in (18), while open vowels in closed non-first syllables are not subject to change (20), a distinction otherwise irrelevant for processes of vowel harmony in Turkish. Second, to make things even more complicated, this analysis involves a distinction between stems ending in an open syllable containing an open vowel subject to change (18) and those ending in a closed vowel, which would be conserved, leading to the analysis exemplified by (21).

(18) *yıka-yor → yık-iyor
wash-PROG

(19) yık-iyor
demolish-PROG

(20) kapat-iyor
close-PROG

(21) oku-yor
read-PROG
This explanation seems unnecessarily complicated given the relatively straightforward synchronic facts and makes descriptions of this suffix rather idiosyncratic:

‘die Tatsache, dass auslautendes e oder a in der Schrift als i, ü, i oder u erscheint, gilt nur für das Präsens und für die vom Präsens abgeleiteten Formen’ (Ersen-Rasch 2004: 138) [the fact that final e or a appears as i, ü, i or u in writing applies only to the present tense and the forms derived from the present tense]

4.2. Dispositive Aspect

The next aspectual marker has been given various terms, ranging from aorist to present to dispositive. (22) and (23) show its exponent -er and how it combines with past and present tense.

(22) gid-er-di-n
    go-DISP-PST-2SG
    ‘you used to go’; ‘you would have gone’

(23) gid-er-Ø-sin
    go-DISP-PRS-2SG
    ‘you are going; you go’

For this marker, we find for example the label ‘dispositive’, described as a term in the category aspect (Bassarak & Jendraschek 2004). But for the same exponent, we also find the label ‘present’, a term in the category tense (Underhill 1976). The most common term however is ‘aorist’, described by some as a second present tense, contrasting with the ‘normal present’ (Çakır 2009: 55; Ersen-Rasch 2004: 140); a similar approach can be found in Lewis (1967: 115-122). The label ‘aorist’ is as controversial as it is common, since there is no clear understanding whether it should be counted as a tense or an aspect, and what is more, what the term ‘aorist’ means cross-linguistically. The Turkish aorist is described as expressing a ‘general present tense’ in Kornfilt (1997: 336) and Ersen-Rasch (2004: 140) but also as a marker of habitual aspect (Kornfilt 1997: 356). In Göksel & Kerslake (2005: 338), the aorist is mentioned under the heading ‘modality’ and described accordingly as a form that appears in ‘modalized utterances’.

Let us first have a look how the authors themselves justify the use of this term. Kornfilt (1997: 336) talks about the ‘so-called aorist’, signalling that she is just following a terminological tradition and that for her there is nothing inherent in the term that would make it particularly suitable for Turkish. Lewis (1967: 115) states that the term has been ‘borrowed from Greek grammar’, and
translates it as ‘unbounded’. The authors’ choice may be influenced by Turkish conventions, where the term geniş zaman ‘broad tense’ is used, and resort to aorist as a convenient translation of the Turkish term. On the negative side, one should mention that the ‘unbounded aspect’ of Turkish has little to do with the aorist in Greek. Comrie (1976: 126) notes that cross-linguistically the aorist is opposed to an imperfect, so the usual understanding of this term is that of a tense-aspect combination, namely a past tense with perfective aspect, or short, a past perfective. In more simple terms, aorist is equated with simple past (Comrie 1976: 114). Comrie (1976: 97) also explains why the aorist fluctuates between an analysis in terms of tense vs. aspect:

‘The fusion of morphological markers of aspect and other categories in such forms as the Aorist and Imperfect of the Indo-European languages, together with the restriction of this particular aspectual opposition, in most cases, to the past tense, may explain why forms which are differentiated aspectually, such as the Aorist and Imperfect, are traditionally referred to as tenses, rather than aspectual forms of the same tense.’

We have seen that the Turkish ‘aorist’ is also quite often described as a tense, the reason being what I mentioned in §4.1, namely the failure to recognize the zero-exponence of present tense, which leaves the marker as the only exponent of tense-aspect in the verb. The descriptive bias then favours an interpretation of the marker as tense, with no encoding of aspect, rather than aspect with no encoding of tense. However, in contrast to the Greek ‘simple past’, the Turkish aorist is described as a present tense. The term aorist also appears in Ancient Sanskrit grammar, where the ‘aorist tense is used to describe an event in the immediate past’ (Thomson & Slocum 2008). If the aorist is cross-linguistically a past perfective, one wonders how it came to be used for the Turkish forms, which are neither past nor perfective. The following description points out a secondary use of the Greek aorist.

‘The aorists are used to express an action as completed in past time, indefinite, or without reference to any other action; [...] They are, therefore, sometimes used to denote, indeterminately, what is commonly or always true [...] the aorists are commonly the tenses of narration [...] The aorist is listed as one of the nine tenses of Greek’ (Goodrich 1822: 50-52).

It is this second meaning, the common truth, which covers some of the uses of the Turkish forms. A typical example is in (24), taken from Göksel & Kerslake (2005: 339):

(24) Para mutluluk getir-me-z.
    money happiness bring-NEG-DISP(3SG)
A third use of the term ‘aorist’ is to denote an aspectless verb form, in other words a form that neutralizes the oppositions expressed by the terms of the aspectual paradigm. This is what we find in a work on Basque by King (2009: 459), who uses the term ‘aorist’ for a term of the category ‘aspect’, more precisely for those Basque participles unmarked for aspect, as used in combination with subjunctive auxiliaries in the formation of periphrastic predicates. In other words, they constitute the zero-marked option in the aspectual paradigm, albeit with a fairly restricted distribution. Zubiri & Zubiri (2000: 408) use the Basque terms *aspektugabe* ‘aspectless’ and *aditzoin* ‘verbal base’ for these forms.

Given the importance of the Greek and Sanskrit tradition for the use of the term ‘aorist’, its import into Turkish as a translation of *geniş zaman* is misguided and misleading. In other words, the term aorist is not justified from a cross-linguistic perspective and its use should be restricted to those languages where it fits the definition given by Comrie (1976: 114), namely that of a simple past or past perfective. I will now briefly summarize the different uses of the Turkish forms, which lead me to advocate the term ‘dispositive’ adopted from Bassarak & Jendraschek (2004: 1363).

First, the -er exponent can express generic statements, including generalized, habitual, repeated actions or events, as well as universal truths. Second, it expresses properties of the subject referent, such as actions for which the subject referent has a disposition, inherent qualities or behaviour, and long-term patterns of behaviour. Third, it is used for less actual, in other words more virtual situations, such as ability, and imaginable or possible events. Note that it is also used as a downgrader for politeness effect. And fourth, it expresses intentions, commitment or promise, indicating that the subject acts voluntarily in the future. It expresses that events are not envisaged as planned or predetermined.

The term ‘dispositive’ highlights the fact that by using this form we are usually focusing on a disposition of the subject referent. Ersen-Rasch (2004: 140-141) describes well how the dispositive contrasts with the progressive aspect. The latter focuses on the situation described by the verb, i.e. it highlights properties of the dynamic situation core, whereas the dispositive highlights properties of the subject referent. Lewis (1967: 117) accordingly translates *yap-ar-Ø-im* ‘do-DISP-PRS-1SG’ as ‘I am a doer’ and *yaz-ar-Ø-im* ‘write-DISP-PRS-1SG’ as ‘I am a writer (though I may not yet have put pen to paper)’. This emphasis on the subject referent takes the focus off the situation itself, thus creating a distance between the speech situation and the situation described, and explains the use of the dispositive for polite requests (the addressee is not directly asked to do something but only if they have the disposition to do something) and conditional main clauses as in (25) (taken from Ersen-Rasch 2004: 186).
The main clause can be paraphrased by ‘I had a disposition to travel’, which gives information about the subject referent, but does not correspond or lead to any actual travelling.

4.3. Prospective Aspect

The third aspect is the prospective. The prospective past is shown in (26), the prospective present in (27).

(26)  *gid-ecek-ti-n*  
  go-PROSP-PST-2SG  
  ‘you were going to go’

(27)  *gid-ecek-Ø-sin*  
  go-PROSP-PRS-2SG  
  ‘you will go’

For the *-ecek* exponent, we find the labels ‘prospective/future’, a term in the category aspect (Bassarak & Jendraschek 2004); ‘future’, a term in the category tense (Underhill 1976; Çakır 2009; Ersen-Rasch 2004; Kornfilt 1997; Lewis 1967); or ‘future’, this time as a marker of ‘relative tense’, contrasting with the category ‘absolute tense’, which in Turkish would have only the terms past and non-past (Göksel & Kerslake 2005: 326); see the discussion in §2.

Most authors follow a tradition to equate ‘future’ with the Turkish label *gelecek zaman* ‘time to come’, a label which almost unwittingly puts it in the category tense. Like the term ‘aorist’, the label ‘future tense’ is an inadequate adoption of a foreign term for Turkish facts. It is inadequate for Turkish because future time reference is typically expressed by the combination of prospective aspect with present tense. As a result of this misnomer, the past prospective is often called ‘future in the past’ (Ersen-Rasch 2004: 154; Çakır 2009: 68) or even ‘future past’ (Lewis 1967: 113), which could as well refer to a situation in the future from where one looks back, i.e. ‘a past in the future’. The juxtaposition of two tense labels is confusing, as it obscures the fact that the situation is only once anchored with respect to the speech situation (cf. Comrie 1985: 14). Whether the prospective part is eventuating in a future anchored in the past is indeed irrelevant, as the focus is on a moment in the past where the prerequisites for the event had been established so that it would have come about if things had taken their normal course. And it is indeed a common implicature
of the prospective past that the anticipated event did not unfold as intended. Example (28) illustrates this point well (from Ersen-Rasch 2004: 154).

(28) Dün əksam siz-e gel-ecek-ti-k, ama misafir gel-di.
yesterday evening 2PL-DAT come-PROSP-PST-1PL but guest come-PST(3SG)

‘Last night we were going (planning, intending) to visit you, but a guest came.’

This corresponds exactly to Comrie’s definition of prospective aspect (1976: 65), which presupposes ‘already present seeds of some future situation, which future situation might well be prevented from coming about by intervening factors’.

The Turkish (present) prospective is often contrasted with the (present) dispositive, as both can have future time reference. In contrast to the dispositive, the prospective entails a firm, definitive intention or prediction, presented as a matter of future fact, often indicating a pre-existing plan. The prospective thus refers to actions expected to happen, rather than just possible or intended events. As just seen, it seems that this meaning is slightly altered in combination with past tense. A secondary use of the prospective is in epistemic modality, where it expresses a strong assumption, as in (29), taken from Malkoç (2003: 155).

(29) Hakan şimdi ev-de ol-acak-Ø-Ø.
Hakan now house-LOC be-PROSP-PRS-3SG
‘Hakan should/must/will be at home now.’

4.4. Perfective Aspect

The exponent of perfective aspect is -miş. The past perfective in (30) is comparable to a plusquamperfect, whereas the present perfective in (31) has acquired evidential meanings.

(30) git-miş-ti-n
go-PFV-PST-2SG
‘you had gone’

(31) git-mişØ-sin
go-PFV-PRS-2SG
‘you (seem to) have gone’
The perfective is the mirror image of the prospective. While use of the prospective is based on already present seeds of some anticipated event, the meaning of the perfective is based on traces left from some previous event. From a purely aspectual perspective, (31) thus corresponds to ‘you are gone’, even though gitmişsin can more easily control a goal phrase than the English you are gone. The point I wish to make is that both clauses are present tense statements about the traces of the subject referent’s previous going, highlighting the result while backgrounding the event itself. The evidential meaning is an implicature of the present perfective, similar to the frustrative implicature of the past prospective. If I make no claim about your actual going, then how am I entitled to make a claim about your being gone? The answer lies in the traces, which can be someone else’s knowledge of your going (the reportative evidential) or the visible correlates of your being gone and the subsequent inference from your being gone to your having gone (the inferential evidential). The evidential implicature has only developed in the present perfective, because of the temporal dissonance between the event and its result. The traces relate to the present but the underlying event to the past. This dissonance is absent in the past perfective gitmiştin ‘you had gone’ or ‘you were gone’, where both the actual going and its consequences are located in the past.

Finally, discovering the traces of something does not necessarily imply that what caused the traces has ceased to be. In this situation, -miş refers to the perception of the traces while failing to perceive the event causing them, or expresses delayed cognitive assimilation of the underlying situation. This is the mirative evidential, illustrated in (32), taken from Aksu-Koç & Slobin (1986: 162).

    ‘Your daughter plays the piano really well.’

Note however that mirative use, unlike the reportative and inferential use, is not subsumable under perfective use, as -miş is not in the aspectual slot, already filled by the progressive marker -iyor in (32). In fact, it is in the tense slot; similar to -di, -miş can appear in the aspect or in the tense slot, and in some rare cases, in both. Nevertheless, there are important differences in the morphosyntactic behaviour of these two versatile suffixes. This point will be taken up in §7.

5. Periphrastic Negation

The behaviour of aspectually marked participles is in many ways similar to
that of predicative adjectives. In other words, the participles share verbal and adjectival properties. As a result, they can be negated in the same way as fully verbal forms (33), in the same way as predicative adjectives (34), or the two negations can be combined (35). Examples (33)-(34) are from Göksel & Kerkslake (2005: 314).

(33) Her yer-e taksi-yle git-m-iyor-Ø-um
    every place-DAT taxi-COM go-NEG-PROG-PRS-1SG
    ‘I don’t go everywhere by taxi’

(34) Her yer-e taksi-yle gid-iyor değil-Ø-im.
    every place-DAT taxi-COM go-PROG NEG-PRS-1SG
    ‘It’s not the case that I go everywhere by taxi.’

(35) Her yer-e taksi-yle git-m-iyor değil-Ø-im.
    every place-DAT taxi-COM go-NEG-PROG NEG-PRS-1SG
    ‘It is not the case that I don’t go everywhere by taxi.’
    ‘I DO go everywhere by taxi.’

Example (36) shows a periphrastically negated dispositive. Example (37) shows a periphrastically negated prospective participle with past tense overtly marked on the negator değil. This is another good indicator of the morphologically separate status of aspect and tense in Turkish. Finally, (38) shows a periphrastically negated perfective.

(36) Ne yap-ma-ya çalıș-tığı-ın-ı
    what do-INF-DAT work-NFUT.NR.POSS.3-ACC
    anla-r değil-Ø-im
    understand-DISP NEG-PRS-1SG
    ‘I don’t understand what s/he’s trying to do’ (Güner 2008)

(37) On-un razı ol-ma-diği-ı bir şey-i
    3SG-GEN agreeing be-NEG-NFUT.NR.POSS.3 one thing-ACC
    yap-acak değil-di-m.
    do-PROSP NEG-PST-1SG
    ‘I didn’t want to do anything s/he didn’t agree with.’
    ‘I wasn’t about/prepared to do anything s/he didn’t agree with.’

(38) Ben Rum-Ø-um ama daha Rum kesim-in-e
    1SG Greek-PRS-1SG but yet Greek part-POSS.3-DAT
An interesting consequence of the takeover of tense marking by the nегатор in (38) is the loss of evidential meaning of the perfective. This illustrates well that гitmемiшim and gitmis degilim are not synonymous. This has to do with the different scope of the verbal and non-verbal negators.

The marker -di is not part of that paradigm. The negated form in examples like (39) is finite, as person marking has to attach to the verb. Moreover, its distribution is more restricted, as the lexical verb has to be negated (Göksel & Kerslake 2005: 315), which is not required for the progressive, dispositive, prospective, and perfective participles.

(39)   Ol-an-lar-ı  gör-me-di-m  değil,
       be-SBJ.NR-PL-ACC see-NEG-PST-1SG  NEG

       ama  tam  hatrula-yam-iyor-Ø-um.
       but  complete  remember-NPOT-PROG-PRS-1SG

'It's not that I didn't see what went on;
it's just that I can't quite remember.'

6. Periphrastic Tense-aspect

We saw in §5 that aspect is marked on the participle, while tense can be hosted by other predicate components such as the non-verbal negator degil. Another potential host for tense marking is the verb olmak 'be', which can be used as an auxiliary in periphrastic inflection. We find once more the same set of aspectual values: progressive (40), dispositive (41), prospective (42), and perfective (43). As was the case with periphrastic negation, periphrastic perfectives with ol- have no evidential meaning. As olmak is a fully inflectable verb itself, it can itself host aspectual markers. Moreover, this construction yields aspectually marked infinitives such as gitmis olmak 'go-PFV be-INF' which corresponds to 'to have gone'.

(40)   Saat  altı-da  çalıs-iyor  ol-açağ-Ø-im.
       hour  six-LOC work-PROG  be-PROSP-PRS-1SG

'I shall be working at six o'clock.' (Göksel & Kerslake 2005: 367)
(41) *Son zaman-lar-da sık sık tiyatro-ya gid-er ol-du-k.*

last time-PL-LOC often often theatre-DAT go-DISP be-PST-1PL

‘Recently, we have started going to the theatre a lot.’

(Göksel & Kerslake 2005: 369)

(42) *Bir şey söyle-yecək ol-du-m,*

one thing say-PROSP be-PST-1SG

ama tam o an-da kapı çal-di-Ø.

but complete D3 moment-LOC door ring-PST-3SG

‘I was about to say something, but just at that moment the door (bell) rang.’ (Göksel & Kerslake 2005: 368)

(43) *O zaman-a kadar herkes git-miş ol-acak-Ø-Ø.*

D3 time-DAT until everyone go-PFV be-PROSP-PRS-3SG

‘Everyone will have gone by then.’ (Göksel & Kerslake 2005: 365)

In principle, even more complex constructions can occur, such as the present dispositive perfective perfective (sic!) in (44) taken from the website of an online shop, but in practice, only a few constellations are frequently used.

(44) *kötü koku kalıcı ol-arak git-miş ol-miş ol-ur-Ø-Ø*

bad smell permanent be-CVB go-PFV be-PFV be-DISP-PRS-3SG

‘the bad smell will have permanently disappeared’

7. Versatile Suffixes

The suffixes -miş and -di are versatile in the sense that they are not limited to one morphological slot. They can either appear in the aspectual slot or follow it. As for -miş, we have seen in §4.4 that the most striking semantic difference between the present perfective and a simple past in -di is that the former cannot express eyewitness accounts, being restricted to evidential meanings such as inferential and reportative. There are a few cases where -miş has a purely perfective meaning, such as the past perfective -miştı and the periphrastic tense-aspect constructions seen in §6. The most interesting aspect of -miş is that it is purely evidential when following a non-verb or an aspectually marked participle. In this case, -miş fills the tense slot, so that the present vs. past tense distinction is neutralized. Examples (45) and (46) are from Ersen-Rasch (2004: 158).

(45) *Derste uy-uyor-miş-um.*

class-LOC sleep-PROG-EVID-1SG
I allegedly sleep in class.’

(46) Dün bu saat-te bahçe-de otur-uyor-muş-sunuz.
yesterday D1 hour-LOC garden-LOC sit-PROG-EVID-2PL
‘Yesterday at the same time you were allegedly sitting in the garden.’

Example (45) has present time reference, -uyor-muş-um being the evidential counterpart of -uyor-Ø-um ‘PROG-PRS-1SG’. Example (46) in contrast has past time reference and is the evidential counterpart of the string -uyor-du-nuz ‘PROG-PST-2PL’. In these cases, the evidential meaning is no longer an implication from the original perfective meaning, but corresponds to the next step in semantic-grammatical change. The evidential meaning has superseded the perfective meaning, so that the form can refer to non-past situations. This is similar to epistemic non-future reference of future/prospective forms as seen in (29), where the epistemic meaning started as an implication about a present state subject to future verification, but subsequently the epistemic implication became conceptually independent from any future situation.

The perfective aspect and the evidential tense-substitute can be combined to an evidential perfective. Whereas the speaker remains neutral with regards to the truth of the reported situation when a present perfective is used, the evidential perfective ending -mişmiş expresses the speaker’s explicit non-endorsement of a non-witnessed situation. Example (47) is from Ersen-Rasch (2004: 159).

(47) Komşu-lar-a hakaret et-miş-miş-im.
neighbour-PL-DAT insult do-PFV-EVID-1SG
‘I have allegedly insulted the neighbours (but I think it’s not true).’

One interesting observation about the paradigm of aspectual markers is that -Ø is not a member. This entails that a present tense form must always be specified for aspect, so that *gid-Ø-im ‘go-PRS-1SG’ is not a possible form. The same is not true for past tense, where the form in (48) is both possible and common.

(48) git-ti-m
   go-PST-1SG
‘I went’

Göksel & Kerslake (2005: 77) put the past tense marker in the same slot as the aspectual markers -iyor, -er, and -ecek, but its distribution is actually quite different:

(a) It takes a different set of cross-reference markers, e.g. -n instead of -sin.
As a consequence, the interrogative enclitic =mi does not separate the cross-reference marker from the verbal base. This shows that a form like git-ti is not a participle in a paradigmatic relation with non-verbal predicates.

(b) It cannot be followed by -(y)miş.

(c) It does not allow periphrastic negation with değil.

(d) It does not combine with olmak to form periphrastic predicates.

(e) Compared to the past forms of the other aspects, the combination -diydi resulting from the versatility of the suffix is marginal.

We can conclude that -di is not part of the aspectual paradigm.

As pointed out in §3, the bare past tense marker is different from the marker following non-verbal predicates. If they were the same, we should obtain anla-Ø-ydi-m ‘understand-ASP-PST-1SG’ (where ASP stands for an unspecified and zero-marked aspectual term) instead of anladım. In fact, it makes perfect sense that a marker for non-verbal predicates cannot be attached to a bare verb stem. The formation of the aspectually marked participle ‘deverbalizes’ the verb form, so that it can become a host for a non-verbal predicate marker.

In summary, the aspectually unspecified -di is neither in the aspect, nor in the tense slot. It is therefore the only instance in the tense-aspect system of Turkish of a cumulative morpheme combining an aspectual value which, following Göksel & Kerslake (2005: 327), we may call ‘perfective’, and a tense value, past. In other words, if there is a form in Turkish where the term ‘aorist’ would be appropriate, it would be this one! This form is further remarkable for being the most synthetic and most ‘verbal’ in the whole tense-aspect system of Turkish, as it is not based on a nominalized participle.

Given the ability of -di to fill the aspect and the tense slot at once, we are now able to understand its peculiar distribution. On the one hand, it can occur without any of the aspectual markers, as it is a (tense-)aspect marker itself. On the other, it is largely incompatible with the non-verbal predicate morphology listed above under (a)-(e), because being a tense(-aspect) marker, it does not nominalize the verb form. The cumulative simple past suffix is therefore different both from the pure tense markers -Ø and -(y)di, and from the pure aspectual markers for progressive, dispositive, and prospective aspect.

8. Conflation of Tense-aspect Distinctions

Turkish has a reduced system in certain subordinate clauses, which conflates the non-future categories, but leaves the future/prospective category relatively
intact. As for the Turkish relative clause in (50), it neutralizes the opposition between present and past prospective; cf. Göksel & Kerslake (2005: 451) and the translation of example (52). The label 'prospective' therefore seems once again more adequate than 'future'.

Non-Future nominalization
(49) \textit{git-tiğ-in zaman}  
go-NFUT.NR-POSS.2SG time  
'when you go/went'

Prospective nominalization
(50) \textit{gid-eceğ-in zaman}  
go-PROSP.NR-POSS.2SG time  
'when you [will/were to] go'

This opens up the question whether (49) is more adequately labelled as 'non-future' or rather as 'non-prospective'. The problem is complicated by the fact that -tiğ- and -eceğ are not exactly parallel. The latter, the prospective marker, can appear on the lexical verb in a periphrastic predicate of a relative clause, and therefore in an aspectual slot. In contrast, the former is (a) limited to the head part of such a complex predicate, and (b) morphologically related to the past tense marker -ti. Example (51) shows the prospective participle form \textit{alaçak} combined with the verb form \textit{oldukları} constituting the nominalized predicate head of the relative clause.

(51) \textit{arkadaş-lar-in al-acak ol-duk-ları televizyon}  
friend-PL-GEN take-PROSP be-NFUT.NR-POSS.3PL television  
'the television that the friends are/were going to buy'  
(Göksel & Kerslake 2005: 454)

Having identified the marking of the first verb as prospective, the label 'non-prospective' for the marking on the predicate head would lead to a 'non-prospective prospective', a constellation that sounds even more awkward than 'future in the past'. I will therefore retain the label 'non-future'. According to Göksel & Kerslake (2005: 453), (51) is 'identical in meaning' to (52).

(52) \textit{arkadaş-lar-in al-acak-ları televizyon}  
friend-PL-GEN take-PROSP.NR-POSS.3PL television  
'the television that the friends are/were going to buy'  
(Göksel & Kerslake 2005: 454)

We ignore the question here whether and to what extent the two instances of
-acak in (51) vs. (52) differ in their degree of nominalization. The crucial point is that present tense has zero-exponence in main clause predicates but not in relative clause predicates, where past tense marking is pressed into service to act as a host for the possessive markers. As a consequence, the relation between aspectual and temporal markers, which we managed to disentangle for main clause predicates, becomes less transparent in relative clause predicates, where the most basic opposition is that between a prospective vs. non-future nominalization.

9. Conclusions

The following table lists the combinations of the four terms of the aspectual paradigm with the three terms of the tense paradigm, including the tense-neutralizing evidential marker.

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Past</th>
<th>Evidential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progressive</td>
<td>gid-iyor-Ø-sun</td>
<td>gid-iyor-du-n</td>
<td>gid-iyor-mu$\bar{\text{S}}$-sun</td>
</tr>
<tr>
<td>Dispositive</td>
<td>gid-er-Ø-sin</td>
<td>gid-er-di-n</td>
<td>gid-er-mu$\bar{\text{S}}$-sin</td>
</tr>
<tr>
<td>Prospective</td>
<td>gid-ecek-Ø-sin</td>
<td>gid-ecek-ti-n</td>
<td>gid-ecek-mu$\bar{\text{S}}$-sin</td>
</tr>
<tr>
<td>Perfective</td>
<td>git-mi$\bar{\text{S}}$-Ø-sin</td>
<td>git-mi$\bar{\text{S}}$-ti-n</td>
<td>git-mi$\bar{\text{S}}$-mi$\bar{\text{S}}$-sin</td>
</tr>
</tbody>
</table>

Note that gitmi$\bar{\text{S}}$ and gittin have the same tense, but slightly different aspectual values. The aspect suffix -mi$\bar{\text{S}}$ has anterior perfective meaning, referring to an event that had been completed by some point in the past. Anterior perfective is equivalent to ‘relative past’ as used in Göksel & Kerslake (2005: 328) or Comrie (1985: 59). The simple past gittin with the cumulative tense-aspect morpheme -ti is also perfective, but lacks the anteriority component and thus refers to ‘past events that are viewed as a completed whole’ (Göksel & Kerslake 2005: 327).

In certain important aspects, the Turkish tense-aspect system is comparable to that of English. The description of tense and aspect in English follows Carter & McCarthy (2006: 405-417).

(a) There are two tenses, present and past.
(b) Tense and aspect are combined in the verb phrase.
(c) A verb phrase can combine several aspects; in English, these are the perfect progressive forms, in Turkish we have the periphrastic inflections seen in §6.
(d) There is a simple past with no overt aspectual marking.
(e) Negation (in English only when the auxiliary is be) follows the pattern of predicative adjectives.

Some important differences are
(a) Turkish has no simple present.
(b) English has two aspects, progressive and perfect(ive), Turkish has two additional aspects, the prospective and the dispositive; the English going to construction is comparable to a prospective (cf. Comrie 1976: 64).
(c) English uses two auxiliaries, be and have, Turkish only uses forms equivalent to ‘to be’, i.e. either non-verbal predicate marking without any copula or the suppletive copula olmak.
(d) Unlike English, Turkish participles can be negated in the same way as finite verbs.

In summary, the most important parallel is the use of inflections based on participles. The participle is marked for aspect, whereas tense marking follows that of equational (be) or possessive (have) clauses. The differences between the two systems are rather superficial. The absence of an overt copula in most equational clauses in Turkish obscures the similarities, as it leads to superficially synthetic inflections in Turkish, whereas the English participles combine with overt copula verbs and are therefore more analytic. The following table lists English inflections with the corresponding Turkish forms. Participles are enclosed in brackets.

<table>
<thead>
<tr>
<th>Tense-aspect combinations in English and their Turkish counterparts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Progressive</strong></td>
</tr>
<tr>
<td>[gidiyor]um</td>
</tr>
<tr>
<td>I am [going]</td>
</tr>
<tr>
<td><strong>Prospective</strong></td>
</tr>
<tr>
<td>[gidece]kim</td>
</tr>
<tr>
<td>I am [going to go]</td>
</tr>
<tr>
<td><strong>Perfective</strong></td>
</tr>
<tr>
<td>[gitmiş]im</td>
</tr>
<tr>
<td>I have/am [gone]</td>
</tr>
<tr>
<td>gittim</td>
</tr>
</tbody>
</table>

Keep in mind that the comparison is only morphologically motivated, so the fact that gitmişim and I have gone do not have the exact same meaning is irrelevant for our contrastive approach. To make this point even clearer, let us compare predicative adjectives and participial inflection in both languages.
We can equate -Ø-um with 'I am', and okuyor with 'reading'. This shows that an analysis claiming that -um corresponds to 'I' and okuyor 'am going' (as wrongly suggested by the inadequate label 'present tense' for -iyor) is misleading, since we can further equate -dum with 'I was'. The form okuyordum is accordingly 'I was going'. Assuming a correspondence of okuyor with am going would lead to the nonsensical 'I was am going', which is indeed what the infamous 'present [in the] past' would look like.

10. Summary

The paper has shown that forms like okuyor, okur, okuyacak, and okumuş are participles without any intrinsic tense. Failure to recognize the zero-exponence of present tense has lead to the erroneous analysis of aspectual morphemes as tense markers which is still commonly found in Turkish grammars, not only in bilingual grammars, but also in the Turkish term simdiki zaman 'the time of now' for -iyor. Comparison with tense marking on non-verbal predicates shows however that present tense is neither marked on the noun/adjective/adverbial/participle, nor part of the meaning of the subject cross-reference markers. It is marked by the absence of the other member of the tense paradigm, past tense, in other words, an absent signifier, symbolized by Ø, signals a signified, glossed as 'PRS'. As a consequence, the participle okuyor is not marked for tense, in the same way as the adjective yorgun 'tired', the noun uzman 'expert', or the adverbial Bodrum’da 'in Bodrum', with which the participle would be in a paradigmatic relation, are not marked for tense. In Turkish, tense is an inflectional category of the predicate, be it verbal or non-verbal, while aspect is an inflec-
tional category of verbs.

In addition to an inadequate semantic description of -iyor, many grammars present a diachronically motivated form -(I)yor, which requires elaborate morphophonological rules and explanations to produce the synchronically correct forms. This segmentation should be revised by acknowledging the morphological inclusion of the original linking vowel into the suffix, which allows for a much more elegant description. Such metanalysis, the ‘movement of a morpheme boundary’, is a common diachronic process; cf. Trask & McColl Millar (2007: 132).

Finally, the paper has drawn attention to the cross-linguistic confusion caused by the term ‘aorist’ and advocates the term ‘dispositive aspect’ instead. In the same vein, ‘prospective aspect’ is a more adequate term for participles in -ecek than ‘future tense’. An interesting consequence of the present analysis is that Turkish has a simple past marked by a cumulative tense+aspect morpheme -ti, but no simple present, as present tense is expressed on predicates rather than verbs. Pure tense markers can therefore only attach to deverbalized participles.

**Interlinear morphemic glosses**

| 1  | speaker | LOC | locative |
| 2  | addressee | NEG | negator |
| 3  | 3rd person | NFUT | non-future |
| ACC | accusative | NPOT | impossibility |
| COM | comitative | NR | nominalizer |
| COND | conditional | OBLG | obligatory |
| CVB | converb | PFV | perfective |
| D1 | demonstrative of first deictic degree | PL | plural |
| D3 | demonstrative of third deictic degree | POSS | possessive |
| DAT | dative | PROG | progressive |
| DISP | dispositional | PROSP | prospective |
| EVID | evidential | PRS | present |
| GEN | genitive | PST | past |
| INF | infinitive | SBJ | subject |
| INT | interrogative | SG | singular |
References


