

An Attempt at Outlining the Major Features of Compositional Aspect in Modern Turkish

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In Turkology, the aspectual status of verb forms is understudied, as are, especially, the compositional means of realizing aspect distinctions. Difficulties arise from specificities of the Turkish language such as its agglutinative nature, lack of articles, the relatively free word order. The verb has a complex paradigm whereby certain forms have tense meanings, some aspectual but the root morpheme itself is neutral vis-à-vis aspect. This paper employs Verkuyl's two aspect schemata – perfective and imperfective, as an analytical tool, and when these schemata and the compositional aspect theory in general are applied to Turkish, many intriguing questions arise, for example: how does the preterit realize the perfective-imperfective contrast? How is aspect expressed in both the past domain and outside it? How will accusative forms, that are definite, be realized in subjects, indirect objects and adverbial nominals from the point of view of the compositional aspect theory? The paper is a broad initial attempt for preliminary answers to these and similar complex issues. The main generalizations are that the compositional realization of aspect in Modern Turkish is located at the sentence-level and that it takes place predominantly through the definite-indefinite contrast in direct objects, through case values and word order patterns according to the functional sentence perspective, as well as through various other means that are subject to future in-depth research.

Keywords: *Modern Turkish; Turkish aspect; compositional aspect; perfectivity-imperfectivity contrast*

Introduction

This paper offers an analysis of Modern Turkish from the point of view of theories of aspect dealing in compositional aspect terms with perfectivity-imperfectivity, the major aspectological contrast. Perfectivity is temporal boundedness of the situation encoded (the concept of “situation” is explained below, in Section 5) plus a reached telos; imperfectivity is temporal non-boundedness, with or without a telos. The aim of the work is to offer a general picture of Turkish aspect through the compositional aspect theory as found in works by the finder of compositional aspect Henk Verkuyl, earlier by Zeno Vendler (before the discovery of compositional aspect), later by other researchers, e.g.: Kabakčiev (1984, 2000, 2019), Bulatović (2013, 2020, 2022), Dimitrova (2021). Compositional aspect is represented by Verkuyl's major achievement, the construction of his two aspect semantico-syntactic schemata, a perfective and an imperfective one. The theory of compositional aspect has been developed mainly on English language material, and there is a consensus among aspectologists,

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including Verkuyl and the followers of his theory, that English is a good metalanguage for cross-language descriptions of aspect, despite the fact that English is not a verbal-aspect language. The theoretical frameworks employed here point to the understanding that languages are classified into two major types: verbal-aspect languages and compositional-aspect languages (Kabakčiev 2000: 3–6), a thesis phrased at that time as “languages with verbal aspect” vs “languages with non-verbal aspect”. It was first endorsed by Abraham and Leiss (2012: 326) and Bulatović (2013). Verbal-aspect languages realize the perfective-imperfective contrast through verbs, usually as lexical entries, while compositional-aspect languages realize the contrast at the level of the sentence. Facing a situation in which Turkish, a compositional-aspect language, is severely understudied in compositional aspect terms, it appears necessary here to, first, outline the literature on compositional aspect, mainly based on English data, and then to analyze this data in the form of sentences. Turkish sentences are then analyzed – extracted from the literature or the Internet, or constructed following the tenets of the compositional aspect theory. The verb referent in them interacts with quantified and non-quantified situation participants, according to the models employed and dealing with the interplay between values located in NP referents, on the one hand, and the verb in the sentence, on the other.

Turkish data are introduced, gradually, on the basis of the description of compositional aspect in English, and these data are also sporadically explored in terms of some Bulgarian-Turkish and Turkish-Bulgarian translations of sentences exemplifying the perfectivity-imperfectivity contrast.¹ This is done because Bulgarian, unlike English, is a verbal-aspect language and almost every Bulgarian verb is either perfective or imperfective, whereby the major aspectual contrast is immediately discerned. However, Bulgarian-Turkish and Turkish-Bulgarian translations are useful not for one reason only, but at least for two. First, as already pointed out, verbs are either perfective or imperfective. Indeed, there are biaspectual verbs in Bulgarian, not marked for aspect, i.e., aspectually ambivalent. However, as these verbs are roughly one tenth of the whole verbal lexicon, they can safely be ignored in a general analysis. Second, despite the fact that the tense-aspect-modality systems of Turkish and Bulgarian are different in many respects, there are certain important grammemes related to aspect (directly or indirectly) common for the two languages. Among these are the witnessed versus non-witnessed past verb forms – systematically present in both languages.

A key terminological clarification. When referring to past situations, the Turkish language uses two major types of verb forms: *-DI* (witnessed) and *-mİş* (non-witnessed). In the Turkish grammatical tradition, *-DI* are variously called, *belirli geçmiş zaman* ‘definite past tense’, *bilinen geçmiş zaman* ‘known past tense’, *görülen geçmiş zaman* ‘seen past tense’, *di’li geçmiş zaman* ‘past tense with *-di*’, and *-mİş* are called *belirsiz geçmiş zaman* ‘indefinite past tense’, *öğrenilen geçmiş zaman* ‘heard/learned past tense’, *duyulan geçmiş zaman* ‘heard past tense’, *mİş’li geçmiş zaman* ‘past tense with *-mİş*’. However, this paper will not discuss the status of verb forms as witnessed or non-witnessed, because it is focused on their aspectual features – or lack of such features. For this reason, *-DI* and *-mİş* verb forms are here referred to

¹I rely on my capacity as native speaker simultaneously of Bulgarian, a verbal-aspect language, and Turkish, a compositional-aspect language.

together as *preterits*. The term “preterit” is used in the linguistic literature to describe verb forms that denote past situations, realized prior to the moment of speech, without characterizing them in terms of aspect or modality features.

The paper explores Turkish aspect from the point of view of modern research in aspectology, with three major works taking a prominent place: Verkuyl (1972, 1993, 2022). But when Verkuyl’s two aspect schemata, perfective and imperfective (explained below), are applied to Turkish, a large number of difficult questions arise. For example, in compositional aspect theory the realization of the values of definiteness/indefiniteness and quantification/non-quantification are extremely important. In Turkish, there are accusative forms which realize the meaning of definiteness and hence quantification in direct objects – which also means boundedness in terms of the compositional aspect theory. But, given that these forms are found in direct objects only, how is the contrast effectuated in subjects, indirect objects, adverbial nominals? A very good study into this sphere of Turkish grammar is an article by Rocchi (2016) who offers a fairly exhaustive description of the possibilities for explicating the definiteness value in Turkish – and in any future enterprise aimed at explaining the devices for explicating NP boundedness in Turkish, this article should certainly serve as a starting point.

For the purpose just described, a preliminary outline of compositional aspect in Turkish, and apart from Bulgarian sentences (with aspect in verbs), English and Turkish sentences will be analyzed in which the verb referent interacts with quantified (definite or indefinite) and non-quantified situation-participant NPs, the latter marked through the so-called zero article or a bare NP – according to several theoretical frameworks (Verkuyl 1972, 1993, 2022, Kabakčiev 1984, 2000, 2019, Bulatović 2013, 2020, 2022, Dimitrova 2021), Dimitrova and Kabakčiev 2021). The overall analysis is designed to offer a general outline of the way compositional aspect is realized in Modern Turkish.

Aspect is instantiated across languages through two archetypes: verbal aspect – grammatical, as in the Slavic languages, including Bulgarian; compositional aspect – complex semantico-syntactic, sporadically dependent on pragmatic discourse elements, as in English and Turkish. The aim of the work is to offer a general picture of Turkish aspect through the compositional aspect theory as found in works by the finder of compositional aspect Henk Verkuyl, earlier by Zeno Vendler (before the discovery of compositional aspect), later by other researchers, e.g.: Kabakčiev (1984, 2000, 2019), Bulatović (2013, 2020, 2022), Dimitrova (2021). This paper employs Verkuyl’s two aspect schemata – perfective and imperfective, as an analytical tool. When these schemata and the compositional aspect theory in general are applied to Turkish, many intriguing questions arise, for example: how does the preterit realize the perfective-imperfective contrast? How is aspect expressed in both the past domain and outside it? How will accusative forms, that are definite, be realized in subjects, indirect objects and adverbial nominals from the point of view of the compositional aspect theory? The purpose of this paper is to answer these and similar complex questions. The main generalizations are that the compositional realization of aspect in Modern Turkish is located at the sentence-level and that it takes place predominantly through the definite-indefinite contrast in direct objects, through case values and word order patterns according to the functional sentence

perspective, as well as through various other means that are subject to future in-depth research.

Methodology

The approach to aspect here is not the traditional grammatical one, inductive, exploring formal language devices such as grammatical structures – especially verbal morphology, but is *deductive*. Very well represented in Dimitrova (2021), this deductive approach posits the necessity for universal features widely found across natural languages to be formulated first, and then for a search for their realization across languages to be initiated. In this case, the language in focus is Turkish, and it is to be checked for the presence in it of devices to effectuate the universal perfectivity-imperfectivity contrast. The prospective result is not only unknown at this stage, it cannot even be predicted, for a particular reason. The literature on aspect in Modern Turkish is divided in two in the treatment of “the aspect issue”. Roughly speaking, half of the publications uphold the thesis that the Turkish preterite forms *-DI* and *-mİş* are capable of expressing perfective situations. The other half of the publications maintain precisely the opposite: preterite verb forms are unmarked for perfectivity or imperfectivity, they are aspectually ambivalent.

An Analysis of the Mainstream Literature on Turkish Aspect

As is common knowledge, linguists’ interest towards aspectuality in many languages, including Turkish, grew through the decades of the development of modern linguistics as a result of knowledge mainly accumulated in studies on Slavic languages, partly Germanic. The descriptions were motivated not only by the need to study how aspectuality is expressed but also by the fact that they were made together with other grammatical and semantic phenomena. In Turkology, the problems of the systemic and structural organization of aspecto-temporal forms and their historical development have been the object of study by many researchers, representing different linguistic trends (Kononov 1939, 1956, 1980a, 1980b, 1983; Lyubimov 1949, 1970, 1971, 1977; Mansuroğlu 1953; Dmitriev 1962; Nigmatov 1970; Dilaçar 1974; Lewis 1975; Grunina 1975, 1976a, 1976b; Ivanov 1977; Kuznetsov 1980, 1982, 1983; Guzev 1982; Slobin and Aksu 1982; Ediskun 1985; Ergin 1993; Uzun 1998; Gencan 2001; Kerslake 2001; Koç 2001; Hengirmen 2002; Arslan 2006; Shcheka 2007; Karadoğan 2009; Aydemir 2010; Benzer 2008, 2012). Aspectologists also distinguish between *aspect* and *Aktionsart*, whereby *aspect* denotes the nature of the situation in the speaker’s perception (see Maslov 1962, Comrie 1978) and *Aktionsart* – which covers numerous ways in which a situation can be denoted. Aspectuality is represented together by *aspect* and *Aktionsart*.

In Turkish, typological diversity boils down mainly to the aspecto-temporal forms of verbs. Aspect is signified by some members of the temporal and aspecto-temporal paradigms and not by others, whereby the nature of the situation can be demonstrated in Vendlerian (Vendler 1957) terms. Conversely, *Aktionsart* meanings

can be seen in the use of verb composites, biverbal syntagmas effectuating various meanings. Many Aktionsart meanings, such as semelfactivity, intensity, phase, completion, etc. (see Mihaylov 1962: 87) are realized analytically by verb attributes such as adverbials, participles, auxiliary verbs, composite and analytical forms. Clearly, with such a diversity of approaches, a consensus can hardly be found concerning the status of aspectual or aspecto-temporal devices for the realization of aspect in Turkish. Also, it is worth noting that modern Turkologic theory is characterized by an unstable terminological system in which a satisfactory methodology for describing the phenomena in question is hard to find.

Traditional Accounts of Aspect in Turkish: Perfective and Imperfective Situations

As is common knowledge, verbs in English and Turkish *are not* perfective and imperfective as they are in verbal-aspect languages (like Slavic, Georgian, Greek). Verbs in Turkish are neutral vis-à-vis aspect and, depending on the context of use, they explicate either a perfective or an imperfective value. Let us compare some Turkish examples of isolated lexical verb entries against Bulgarian ones. Bulgarian is a verbal-aspect language with perfective and imperfective verbs, and in the huge majority of cases a single Turkish verb has two separate Bulgarian correspondences:

vermek ‘give’ > Bg. *dam*_{PFV} vs *davam*_{IMPFV}²
düşmek ‘fall’ > Bg. *padna*_{PFV} vs *padam*_{IMPFV}
anlamak ‘understand’ > Bg. *razbera*_{PFV} vs *razbiram*_{IMPFV}

If Turkish verbs, like English verbs, are lexically unmarked for perfectivity and imperfectivity, a major question to ask is: how will these two basic aspectological notions be realized in Turkish? It becomes preliminarily clear that the two aspects will be realized not by the verbs themselves, as in the Slavic languages, but by the way verbs are used in sentences and contexts, and this means in terms of the compositional aspect theory.

A traditional account of Turkish aspect is offered in Kornfilt (1997), who based her description on Comrie’s (1978) understanding of aspect – a classical one, traditional (not compositional). Comrie describes perfectivity as a way of viewing the totality of a situation without reference to its internal temporal constituency. Perfective aspect “looks at the situation from outside, without necessarily distinguishing any of the internal structure of the situation”; verbal forms with this meaning are perfective, and if a language has special verbal forms to indicate such meaning, it has perfective aspect (Comrie 1978: 3–4). Unfortunately, Comrie does not provide an answer to the question whether Turkish has perfective verb forms.

Following this kind of understanding, perfectivity in Turkish ought to be realized most clearly in the past – as the major domain of communication between people – through verbal suffixes marked morphologically. In Turkish these are the *-DI* and *-miş* forms, preterits. Conversely, imperfectivity in Turkish is realized through various special markers: *-(I)yor*, *-mAktA* and *-(A/I)r*, the past copular marker *-(y)DI*, plus

²PFV = perfective, IMPFV = imperfective.

some other. Similarly, the forms *-mİştİ* and *-DIydİ* combine elements of perfectivity and imperfectivity, expressing the state ensuing upon the completion of an event (Kononov 1941: 269, Arovina and Surova 1971: 123, Göksel and Kerslake 2005: 288). This understanding is illustrated by examples such as (1):

- (1) a. Köprüden iki kişi geçti [PFV SENTENCE]
 Bridge_{ABL} two person CROSSPRETERIT
 ‘Two people walked the bridge’
- b. Yıllarca her gün o köprüden çok kez
 Year_{PL-ADV} every day that bridge_{ABL} many time
 geçtim [IMPFV SENTENCE, habitual subtype]
 CROSSPRETERIT
 ‘I crossed that bridge many times every day for years’
- c. Köprüden iki kişi geçerdİ [IMPFV SENTENCE, habitual subtype]
 Bridge_{ABL} two person CROSSAORIST PRETERIT³
 ‘Two people walked on the bridge’
- d. Köprüden iki kişi geçiyordu [IMPFV SENTENCE, progressive subtype]
 Bridge_{ABL} two person CROSSPRETERIT PROGR
 ‘People were walking on the bridge’

According to such accounts, traditional ones, not compositional, the sentences in (1) represent examples of explicating perfectivity (1a), imperfectivity in its habitual version (1b), (1c), and imperfectivity in its progressivity version (1d). Indeed, many grammarians claim that forms like those in (1a) express completed situations (sometimes called actions) by themselves, see Kononov (1941: 269), Dmitriev (1960: 48), Arovina and Surova (1971: 123), Baskakov (1983: 88). The semantics of perfectivity and imperfectivity is very frequently discussed in Russian-language grammars of Turkish or generally in Slavic-Turkic contrastive studies, because Slavic languages have perfective verb forms and it is logical to think that perfectivity should have systematic expression in Turkish too.

Some verb forms in Turkish may, indeed, appear as if they have perfective meaning – only or mainly, something that has been maintained by some Turkologists (Kononov 1941: 269, Dmitriev 1960: 48, Dudina 2005: 93, Genish 2008: 26). My position is that Turkish does not have true perfective aspect. In other words, Turkish *does not have* verb forms consistently and exclusively effectuating perfectivity – as this is observed in Slavic languages. Turkish verb forms that could be thought as coming closest to perfectivity are the preterits *-DI* and *-mİş*, but *these certainly do not express perfectivity*. In my conception, *-DI* and *-mİş* forms are aspectually unmarked and *only allow* the signalling of perfectivity, which is realized compositionally at the sentence level.

For the realization of perfective and imperfective aspect values in Turkish, the thesis here is that the subject, the verb and the syntactic objects in the sentence exercise the most decisive impact, and the impact of the verb is less strong. This is

³In Turkish grammar the term aorist is used with a quirky meaning which has nothing to do with the way this Greek notion is used in Greek, in Romance and Slavic languages (Jendraschek 2011, Kanik 2015).

in line with the general theory of compositional aspect as represented in many works (by Verkuyl, Kabakčiev, Bulatović, Dimitrova, etc.). Consider the sentences (2a,b), effectuating imperfectivity, against (2c,d), effectuating perfectivity:

- (2) a. Bu köpek her gün denizin ortasına gitti/gitmiş [IMPFV SENTENCE]
 This dog_{NOM} every day seagen middle of swim around_{PRETERIT}
 ‘This dog went to the middle of the sea every day’
- b. Her hafta yoga yaptık/yapmışız, pratiğimizi paylaştık/paylaşmışız
 [IMPFV SENTENCE]
 Every week yoga do_{PRETERIT} practise_{ACC} share_{PRETERIT}
 ‘We did yoga every week and shared our practice’
- c. Arkadaşlarımla Rammstein konserine gittik [PFV SENTENCE]
 Friends_{DAT} Rammstein concert_{DAT} go_{PRETERIT}
 ‘We went to a Rammstein concert with my friends’
- d. Başbakan meclise bisiklet ile gitmiş [PFV SENTENCE]
 Prime minister_{NOM} parliament_{DAT} bicycle with go_{PRETERIT}
 ‘The prime minister went to the parliament by bicycle’

Other researchers, using different approaches and terminology, pay attention to the fact that *-DI* forms also express what these authors usually call unfinished actions (non-completed situations in the present terminology).⁴ According to Koschmieder, the “aspectual pair” *okudum, okuyordum* ‘I read, I was reading’ has no formal indicator signifying perfectivity, and calls this form “category zero” (Koschmieder 1962: 393). Sadık addresses issues related to aspect in Bulgarian and Turkish, pointing out that Turkish *-DI* forms – which according to some traditional interpretations express perfectivity, can also effectuate incomplete situations when used with time adverbials such as *her gün* ‘every day’, *her akşam* ‘every evening’, *her hafta* ‘every week’, *hep* ‘always’ and *sürekli* ‘continually’ (Sadık 2017: 233).

What is Compositional Aspect?

This paper deals with the effectuation of aspect in Turkish in compositional terms, which means at the level of the sentence – though, of course, aspect itself is the perfective-imperfective contrast as found in a most representative manner in the Slavic languages, in verbs. The discovery of the phenomenon of compositional aspect on data from Dutch and English in 1971 by Henk Verkuyl, a Dutch linguist and logician, led to the development of the theory of compositional aspect – by both the finder of the phenomenon (Verkuyl 1993, 2022) and other authors. Compositional aspect was initially called “compositional nature of the aspects” by Verkuyl himself

⁴Traditional aspectological studies, especially Slavic ones, make systematic use of the term “action”, as in, e.g., “imperfective action”. This is a drastic misnomer! Innumerable situations, e.g., “love/hate somebody”, “mean something”, “contain something” can in no way be regarded as “actions”. To refer to aspectological values universally, Vendler’s (1957) classification is used here with its four classes: states, activities (imperfective situations, non-bounded), accomplishments, achievements (perfective situations, bounded). Note that, apart from being bounded, accomplishments and achievements are also brought to a telos, a natural end, pragmatically identifiable.

but later started to be known simply as “compositional aspect”, a term proposed by researchers subscribing to the theory and sophisticating it.⁵ Compositional aspect gradually started to be applied also to languages different from the initially studied Dutch and English: Finnish, Greek, Albanian, Bulgarian, Georgian, Ukrainian (Heinämäki 1974/1978, Dowty 1979, Carlson 1981, Krifka 1989, 1998, Kabakčiev 2000, 2019, 2023, Bulatović 2013, 2020, 2022, Filip 2000, 2017, Vounchev 2007, Abrashi 2016, Dimitrova 2021, Dimitrova and Kabakčiev 2021, Shabashvili and Kabakčiev 2021, Bakardzhieva-Morikang and Kabakčiev 2024). A certain model of compositional aspect, known as the “incremental-theme approach” was used on Turkish data by Aksan (2003, 2006, 2007), partly by Kayadelen and Yücel (Aksan et al. 2010). The incremental-theme approach is popular in aspectology but, because of its analysis of aspect in the VP domain only, it has been criticized (Kabakčiev 2019) for sidestepping the sentence-level nature of aspect as envisioned in Verkuyl’s schemata.

A key role for analyzing aspect through the compositional aspect theory is played by different elements of the sentence. This allows the complex study of the encoding of perfective-imperfective situations to be subjected to formalization, i.e., to be represented by certain mechanisms and frameworks. The approach here is based on the fundamental understanding of the systemic nature of the language phenomena studied and its validity on Turkish data proves the universality of compositional aspect. By describing the roles of the different parts of the sentence in Modern Turkish, their potential to express perfective and imperfective situations is revealed, as will be shown in further detail below.

Verkuyl’s Two Aspect Schemata

Verkuyl description of the way aspect, the universal perfective-imperfective contrast, is realized in Dutch, Verkuyl’s mother tongue, and also in English, is represented in his schemata. The two schemata, perfective and imperfective, respectively, are realized in such sentences (in different languages) in which the verb is aspectually unmarked, i.e., aspectually ambivalent. This is natural because the schemata represent compositional aspect, not verbal aspect, and compositional and verbal aspect are different phenomena, although they are closely related and mirror images of each other (Kabakčiev 2000: 158–161). It is important to understand that sentences belonging to either of the two Verkuylian schemata carry perfectivity-imperfectivity not as permanent values – given once and for ever, but are assigned the two values by default, as primary and prototypical (Kabakčiev 2019: 205).

Verkuyl’s Perfective Schema

Verkuyl’s perfective schema, valid at the sentence level, contains up to three situation-participant NPs (verb arguments in Verkuyl’s terminology) and a verb. All the three (at most) situation-participant NPs are, first, quantified, denoting what Verkuyl calls “specified quantity of X”. Second, the verb is telic, or, in Verkuyl’s terminology it signifies +ADD TO, defined as “movement to bring about change”

⁵The first aspectologist to use the term compositional aspect seems to be Friedrich (1974: 37).

(Verkuyl 1993: 17–18). The perfective schema has no “leak” – which means it contains no dequantified NP and no atelic verb (see below). Also, the perfective schema is said to be characterized by the so-called plus principle, i.e., all sentence elements have plus-values, viz., “+specified quantity of X” (temporal boundedness) in NPs, and a “+ADD TO value” (telicity) in the verb element. Sentences matching Verkuyl’s perfective schema are (1a), (2a) above, they conform to the plus principle, while the imperfective sentences invariably contain a so-called leak, i.e., a “-specified quantity of X” NP component or a verb with a “-ADD TO value” (atelicity).

Note that in his publications Verkuyl used many perfective and imperfective sentences with two or three situation-participant NPs (verb arguments) but these sentences are not part of any identical or near-identical patterns. For this reason, although his examples adequately cover the differences between the two schemata, the regularities revealed by Verkuyl are not easy to grasp, due to the dissimilarity of the sentences. Consider the following two sets of sentences forming an identical or near-identical pattern, with *two* situation-participant NPs (employed in Kabakčiev 2019: 206):

- (3) a. The tourist visited a castle [PFV SENTENCE]
 b. The tourist visited castles_{SLEAK} [IMPFV SENTENCE]
 c. Tourists_{SLEAK} visited a castle [IMPFV SENTENCE]
 d. Tourists_{SLEAK} visited castles_{SLEAK} [IMPFV SENTENCE]
 e. The tourist knew_{SLEAK} a castle [IMPFV SENTENCE]

Sentences with three situation-participant NPs forming identical or near-identical patterns were launched for the first time in Kabakčiev (2020: 119). Sentence patterns with three situation-participant NPs in Greek are also used by Dimitrova and Kabakčiev (2021: 193), who labeled them “rare, difficult to encounter and/or construct” and hence linguistically valuable. Here are their English correspondences:

- (4) a. The valet parked our car in the nearby parking lot [PFV SENTENCE]
 b. The valet parked cars_{SLEAK} in the nearby parking lot [IMPFV SENTENCE]
 c. The valet parked our car in nearby parking lots_{SLEAK} [IMPFV SENTENCE]
 d. Valets_{SLEAK} parked our car in the nearby parking lot [IMPFV SENTENCE]

Note that in the sets of sentences (3) with two situation-participant NPs, a single dequantified NP is sufficient for a perfective sentence (3a) to be turned into an imperfective one, cf. (3b,c,d). The same is valid for the sentences in (4) with three situation-participant NPs. A single de-quantified NP is capable of coercing the perfective sentence (4a) into imperfectivity – as seen in (4b,c,d). The Turkish translation equivalents of these sentences are analyzed below, in 6.4.

Verkuyl’s Imperfective Schema

Verkuyl’s imperfective schema represents a logical continuation of the perfective one. A sentence corresponding to the perfective schema with three (or less) quantified NPs and a telic verb is “relegated” to the imperfective schema in two major ways:

if one NP, or more than one, loses its quantified status and becomes de-quantified (non-quantified/unquantified), the newly-formed sentence is imperfective. The sentences (3b,c,d) and (4b,c,d) above contain a non-quantified NP each, hence they are relegated to the imperfective schema. The second way to “relegate” a sentence to the imperfective schema is when a non-telic verb is used instead of a telic one. Sentence (3e) contains the non-telic verb *knew* instead of the telic one *visited*; the use of *knew* represents a leak. For more on Verkuylian leaks, see Verkuyl (2022: 123–127), Kabakčiev (2023: 249–251).

A Specific Case of Applying Compositional Aspect to Turkish Language Data

Studies on Turkish from a compositional aspect point of view are rare (Aksan 2007, Benzer 2008: 133–134). In one of these, Aksan (2007: 35–36) argues that “telicity, which describes terminativity or quantization of internal temporal contour of an event, is determined at the verb phrase level”. But this statement does not make much sense – because, although aspect distinctions are indeed observable also at the VP level, one of the major tenets of compositional aspect is sidestepped, namely, that the realization of the perfectivity-imperfectivity contrast takes place at the sentence level, not at the VP level. This was pointed out by the finder of compositional aspect long ago (Verkuyl 1999, p. vii) and is crystal-clear in his schemata. While perfectivity and imperfectivity *can* be realized at the VP-level in sentences with quantified subjects, as, e.g., *Peter ate the apples* vs *Peter ate apples* in which the quantified-dequantified contrast in the object NP realizes perfectivity vis-a-vis imperfectivity, *the final effectuation of aspect* takes place at the sentence-level. This can easily be seen in examples such as *Ants ate the apples*, an imperfective sentence due to the non-quantified subject-NP *ants* vs the perfective sentence *Peter ate the apples* with the quantified NPs *Peter* and *the apples*. The referents of *Peter* and *the apples* map their temporal boundedness onto the verb referent (Kabakčiev 2019: 217). Conversely, the referent of the NP *ants* in sentences like *Ants ate the apples* maps its non-boundedness and iterativity (ant after ant, after ant) onto the otherwise perfective phrase *ate the apples* and force the sentence into imperfectivity, a non-bounded (iterative) situation.

Thus, having established the quantification status of NPs in sentences with two and three situation-participant NPs and the necessity to have a telic verb for perfectivity to obtain, we come to the heart of the matter concerning the realization of compositional aspect in Turkish. Aspect effectuation in a sentence depends on whether it contains quantified situation-participant NPs and a telic verb – and hence a sentence will explicate perfectivity, matching Verkuyl’s perfective schema. Otherwise it will have one or more leaks and will explicate imperfectivity, matching Verkuyl’s imperfective schema.

A General Outline of Compositional Aspect in Turkish

The category of time is regarded here as an important element with which aspect is signaled through the interaction of the verb with the NP components in a

sentence.⁶ From the point of view of compositional aspect, the manner of signifying perfective and imperfective situations has to do with aspectuality, which is not so much related to the temporal localization of situations but mostly to the generalized temporal structure and the way this structure is interpreted by the speaker. Aspectuality in Turkish and in most Turkic languages is related to the category of aspect, represented by a well-developed system of synthetic and analytical forms. The category of aspect is intertwined with the grammatical categories of the verb, most of all with the category of tense, whereby semantic nuances of the manner in which the situation is realized are signified. The tense paradigm is obtained from the word forms of the separate grammemes, and each word form realizes a specific aspecto-temporal meaning. The signification of the semantic nuances of aspectuality takes place morphologically, imperfectivity is realized through special forms, some of which (-*I*)*yor*, -*mAktA*, -(*A/T*)*r*, -(*y*)*DI*, as already established above, realize aspectual meanings to a higher degree in comparison with others, but the preterit forms -*DI* and -*mIş* are aspectually ambivalent.

Verbal and Compositional Aspect in English in Comparison with Turkish

Until recently, up to the 1980s, in the grammatical tradition of English past indefinite/simple tense verb forms such as *played*, *went* were labeled aspectually unmarked (Quirk et al. 1985: pp. 189), forms such as *was/were playing* were labeled “progressive aspect”, *has/have played* were labeled “perfective aspect”. Large-scale investigations on aspect in many languages (Dahl 1985, Bybee et al. 1994) definitively demonstrated that while English past indefinite/simple tense verb forms are indeed aspectually unmarked and progressive forms are aspectual (being representatives of imperfectivity), verb forms of the type *has/have played* do not represent aspect at all. They must not be labeled perfective aspect, because perfectivity is a completely different phenomenon, truly aspectual. Some recent large English grammars (e.g., Huddleston and Pullum 2002, pp. 124–125) recognize the presence of perfectivity and imperfectivity in English but offer no explanation of how perfectivity is realized.

Turkish grammars follow a similar pattern, with many grammarians and linguists supporting the view that -*DI* and -*mIş* forms are aspectually neutral (like the past indefinite/simple forms in English) – but again no explanation is offered on how perfectivity is realized in the Turkish language. As will be shown below, it is realized according to a compositional mechanism, which is a very complex and intriguing one.⁷

⁶Adverbials also take part in aspect composition but the issue is skipped due to the space restrictions.

⁷A brand-new paper (Rizou et al. 2024) dealing with aspect in Greek, Russian, Turkish – and even English and German in addition, fails to offer any new insight into the aspect domain and provides a fully traditional account of it, as if aspect is realized not compositionally but only and solely by certain verb forms in all these languages.

Verkuyl's Schemata Applied to Turkish Data

It can easily be seen when using Verkuyl's schemata that the aspect of a Turkish sentence will depend on a combination of factors in the NPs and the verb, i.e., on certain semantic values in these sentence components, but also on certain other values and combinations of values. Recall the English sentences (1) and (2) above. They show that an extremely important factor for the explication of either of the two aspectual values, perfectivity and imperfectivity, is the English article system with its three articles: definite, indefinite, zero. Within Verkuyl's schemata, the general rule, broadly explained, is that perfectivity is realized by a definite or an indefinite article, while the realization of imperfectivity rests on the use of the zero article, which is also called "bare NP".⁸ This is because both the definite and the indefinite article encode an entity conceived of by the hearer as a bounded one, and the boundedness can also be interpreted temporally (Kabakčiev 2000, Chapter 5). Conversely, the zero article/bare NP encodes an entity conceived of as non-bounded, including temporally. What does all this mean?

Let us analyze sentence (3a) again. It contains a telic verb, capable of explicating a reached telos when combined with appropriate NPs – that are quantified. In Verkuyl's model of aspect, the quantified NPs, explicating "specified quantity", and the telic verb, explicating a "+ADD TO" value, represent Verkuyl's so-called "aspect algebra". It yields perfectivity when all the sentence components have plus-values and imperfectivity when there is a leak or more than one leak (a dequantified NP or a non-telic verb). Kabakčiev's model of compositional aspect is a little different. It interprets NPs such as *the tourist* and *a castle* in sentences such as (3a) not as material objects but as temporal entities whose extension in time coincides with the extension in time of the verb referent. The referents of the NPs *the tourist* and *a castle* simultaneously map their temporal boundedness, encoded by an article (definite or indefinite) or some other determiner or quantifier, onto the referent of the verb *visited*, forcing it into perfectivity, i.e. temporal boundedness plus a reached telos. The reached telos itself arises as a result of the use of a telic verb (Kabakčiev 2019; 2023). Bulatović's (2020; 2022) model is similar but more akin to Verkuyl's, because Bulatović does not interpret NP referents as necessarily temporal.

Impact of the Turkish Syntactic Object for Realizing Perfectivity-Imperfectivity

On the basis of observations made as far back as in the 1950s about the way phrases or sentences in English function, aspect may depend on whether a verb is used or not with a syntactic object and, depending on the type of object, the situation can be perfective or imperfective (Vendler 1957). The syntactic object can be direct (Turkish *nesne, düz tümleş*), hence in the accusative or nominative case⁹, or indirect (*dolaysız nesne/dolaylı tümleş*), whereby it can be marked with another case, save

⁸Both terms, "zero article" and "bare NP", are infelicitous (Kabakčiev 2023: 252). But it must be remembered that, with the lack of better terms, they explicate "absence of quantification" in NPs, a key value for the conceptualization of aspect.

⁹A nominative marker in Turkish is any NP lacking a case marker. This nominative case marker is a zero morpheme, in contrast with the accusative case marker.

nominative and accusative. Transitive verbs can have a direct object and are marked for the accusative *-(y)l, -(y)i, -(y)u, -(y)üs*.

- (5) a. Öğrenci cüzdanı buldu¹⁰ [PFV SENTENCE]
 Student_{NOM} wallet_{ACC} find_{PRETERIT}
 ‘The student found the wallet’
 b. Öğrenci cüzdan buldu [IMPFV SENTENCE]
 Student_{NOM} wallet_{NOM} find_{PRETERIT}
 ‘The student found walet/wallets’

According to Turkish traditional grammars, nouns take an accusative case suffix when they are definite (5a), where the noun *saat cüzdan* ‘wallet’, accompanied by the accusative case suffix [-i], indicates that it is a specific entity known to both speaker and hearer. But, without the accusative case suffix, the noun would lose its specificity or definiteness, cf. (5b), see Rocchi (2016). These are the reasons why (5a) is a perfective sentence, and (5b) imperfective.

Full range of the affected object is realized by an accusative marker and it also occurs in synonymous verbs like *gezmek* ‘walk, stroll’ and *dolaşmak* ‘walk, stroll’, governed by both the accusative (6c,d) and the locative (6a,b), and the sentences contain three NPs, expanded with an indirect object¹¹. Consider the sentences:

- (6) a. Çocuklar bahçede gezdi [IMPFV SENTENCE]
 Child_{NOM-PL} garden_{LOC} walk around_{PRETERIT}
 ‘The children/children walked around the garden’
 b. Ebeveynler çocukları bahçede gezdirdiler [IMPFV SENTENCE]
 Parent_{NOM-PI} child_{ACC} garden_{LOC} walk around_{PRETERIT}
 ‘The parents/parents walked the children in the garden’
 c. Çocuklar bahçeyi gezdi [PFV SENTENCE]
 Child_{NOM-PL} garden_{ACC} walk around_{PRETERIT}
 ‘The children/children walked all over the garden’
 d. Ebeveynler çocuklara bahçeyi gezdirdiler [PFV SENTENCE]
 Parent_{NOM-PI} child_{PL-DAT} garden_{ACC} walk around_{PRETERIT}
 ‘The parents/parents showed the garden to the children’

In traditional-grammar terms, the use of the locative case as in (6a), triggers the meaning ‘walk somewhere’ (Scheka 2007: 106), while the accusative in (6c) denotes full range of the object affected. Hence, in terms of the theory of compositional aspect, sentence (6a) explicates imperfectivity, while (6c) explicates perfectivity. Perfectivity arises as a result of the definiteness, grammatically marked, on the object NP in (6c), signifying “specified quantity”. Recall, however, that in Verkuyl’s perfective schema quantification is also needed for subject NPs. And if sentence (5c) is perfective, how is quantification explicated in the subject NP here? It appears to be triggered in a

¹⁰These examples are partially constructed after Tura’s sentence pattern (Tura 1973: 135).

¹¹The sentences (5a,c) are Scheka’s examples, while (5b,d) are partially constructed after Scheka’s sentence pattern (Scheka 2007: 106).

complex way, see 6.4 below (The subject in the compositional explication of aspect in Turkish).

This phenomenon is similar to the difference in English between the imperfective sentence (7a) and the perfective (7b):

- (7) a. The children walked in the garden [IMPFV SENTENCE]
b. The children walked into the garden [PFV SENTENCE]

Also, it is identical to the difference between the two situations in (8a) – imperfective, and in (8b) – perfective (Shcheka 2007: 106):

- (8) a. Turistler kasabada dolaştı [IMPFV SENTENCE]
Tourist_{PL} town_{LOC} go around_{PRETERIT}
'Tourists/The tourists wandered around the town'
b. Turistler kasabayı dolaştı [PFV SENTENCE]
Tourist_{PL} town_{ACC} go around_{PRETERIT}
'The tourists/Tourists walked through the town'

The translation below into Bulgarian, see (9), of the Turkish sentences (8) is more adequate than the Turkish-English translation, thanks to the extensive availability in a Slavic language of imperfective and perfective verbs:

- (9) a. Turisti obhozhdaha_{IMPVF} grada [IMPFV SENTENCE]
'Tourists walked around the town'
b. Turistite/Turisti obhodih_{PFVAORIST} grada [PFV SENTENCE]
'The tourists/Tourists walked the whole town'

In (9a), imperfectivity is marked by the imperfective imperfect form *obhozhdaha*; (9b) is perfective, perfectivity is marked by the perfective aorist form *obhodih*.

The Subject in the Compositional Explication of Aspect in Turkish

Consider now the pair of Turkish sentences (10a,b) with a non-quantified subject NP (10a) vs quantified (10b) – which reveal an extremely important regularity related to the effectuation of compositional aspect in Turkish. As already explained and shown above, when the perfective-imperfective alternation is realized in Turkish through a direct-object NP – which can be morphologically marked as definite and hence quantified, or indefinite and hence often non-quantified, see (6c,d) and (8b) above, the subject NP in Turkish has no such alternation available. Therefore, given that the Turkish language is defective (as it were) in the subject NP in terms of Verkuyl's aspect schemata, there must be some other means in the language system to explicate definiteness and hence quantification in the subject NP referent, and indefiniteness and hence de-quantification – for perfective aspect to be triggered in the former case, and imperfective in the latter. Sentences (10a,b) demonstrate how this happens – as one possible solution:

- (10) a. Kasım ayında Türkiye'yi en çok Bulgar turist [IMPFV SENTENCE]
 November_{NOM} month_{LOC} Turkey_{ACC} most very Bulgarian tourist
 ziyaret etti
 visit doPRETERIT
 ‘Bulgarian tourists visited Turkey mostly in November’
- b. Kasım ayında 1000 Bulgar turist Türkiye'yi ziyaret
 November_{NOM}. month_{LOC} 1000 Bulgarian tourist Turkey_{ACC} visit
 etti [PFV SENTENCE]
 doPRETERIT
 ‘1000 Bulgarian tourists visited Turkey in November’

As is well known from the general linguistic theory – usually older publications rather than recent (Krámský 1972; Firbas 1987, Rocchi 2016, Altsultan 2021) on the contrast between definiteness and indefiniteness, which may include the quantification-dequantification contrast – depending on the type of noun used, on the one hand, and functional sentence perspective, on the other, the definite-indefinite and the quantification-dequantification distinction can systematically be realized *through word order*. In Slavic linguistics the former is common knowledge. A major rule is that in languages with no articles such as Czech sentences with an SVO word order like *Žena napsala dopis* (lit. ‘Woman wrote letter’) mean ‘The woman wrote a letter’, while sentences with an OVS word order like *Dopis napsala žena* (lit. ‘Letter wrote woman’) mean ‘The letter was written by a woman’. Or, in other words, a bare NP, i.e., an NP with no article or some other determiner, quantifier, etc., is interpreted as definite in initial position and as indefinite and hence often dequantified (e.g., when plural or non-countable) in final position. Even without a current opportunity for a special study into this problem, it can safely be maintained that the $AtOAmSV$ word order in (10a) vs the $AtSOAmV$ effectuate the covert indefiniteness and dequantification of *Bulgar turist* ‘Bulgarian tourists’ vis-à-vis the quantification, overt, of *1000 Bulgar turist* in (10b).

Finally, observe that in the Bulgarian correspondences of the Turkish sentences (11a) and (11b), no change of word order is necessary, although Bulgarian is a Slavic language. Word order remains standard in both cases, SVOA. The subject NP referent in (11a) is de-quantified (non-quantified) through the zero article, and in (11b) it is quantified through the quantifier *1000*.

- (11) a. Balgarski turisti poseshtavaha_{IMPFV} Turtsiya nay-veche prez noemvri [IMPFV SENTENCE]
 ‘Bulgarian tourists visited Turkey mostly in November’
- b. 1000 balgarski turisti posetih_{PFVAORIST} Turtsiya prez noemvri [PFV SENTENCE]
 ‘1000 Bulgarian tourists visited Turkey in November’

Word Order and Compositional Aspect in Turkish

Turkish can briefly be characterized as “a verb-final agglutinative language (exclusively suffixing) with postpositions, a regular case-marking system and a modifier-head construction” (Erguvanlı 1984: 5). Unlike in English (or Bulgarian),

there is no definite article in Turkish. Definiteness is conveyed through different factors including word order, stress, the use of an indefinite determiner and case marking, tense and modality (Dede 1986). Turkish has a flexible word order and definiteness is an important pragmatic factor pre-determining word order. Consider the following sentences (Tura 1973: 102–103):

- (12) a. Çocuk yerde yatıyordu
 Child ground_{LOC} lie_{PRETERIT} _{PROGR}
 ‘The child was lying on the ground’
 b. Yerde çocuk yatıyordu
 Ground_{LOC}. child lie_{PRETERIT} _{PROGR}
 ‘A child was lying on the ground’

As can be seen in the example (12a), the noun *çocuk*, the English equivalent of which is an NP with a definite article, *the child*, is used at the beginning of the sentence purposefully to create the image of a ‘known’ child in the mind of hearer/reader. If the same noun were put just before the verb of the sentence, the meaning created by it would be ‘an unknown child’, as in (12b), where the indirect object *yerde* ‘on the ground’ precedes the subject *çocuk* ‘child’. Thus, (12b), having the OSV word order, is marked. It is in contrast to (12a), which has the unmarked SOV word order. Clearly, theme-rheme organization can be altered via word order change. Erguvanlı (1984: 12–17) discusses extensively the different word order possibilities for NPs that are definite and/or indefinite. But no account is made of the possibilities for NPs to take a certain sentence position when they are quantified, i.e., accompanied by a definite or an indefinite article, and non-quantified, i.e., accompanied by a bare NP (without an article *the* or *a* and with no other quantifier).

In connection with the interplay between nominal determination values and aspect, let us analyze again some English language data. Listed in (13) below are four English sentences, constructed (Kabakčiev 2023: 44), showing the realization of perfectivity-imperfectivity through the mechanism of quantification and non-quantification of situation-participant NP referents and the mapping of temporal values between referents of verbs and NPs. Each sentence contains a single simple past verb form and all portray real-world circumstances: living in the speaker’s neighborhood are a kid (child) and a cat; the cat is regularly fed by the kid and by other kids. There are other kids and cats in the neighborhood too, and different kids feed different cats. The first sentence is perfective, belonging to Verkuyl’s perfective schema with two quantified NPs, the other three are imperfective, belonging to Verkuyl’s imperfective schema due to the presence of a leak/leaks:¹²

- (13) a. The kid fed the cat [PFV SENTENCE]
 b. The kid fed cats_{SLEAK} [IMPFV SENTENCE]
 c. Kids_{SLEAK} fed the cat [IMPFV SENTENCE]
 d. Kids_{SLEAK} fed cats_{SLEAK} [IMPFV SENTENCE]

¹²Despite belonging to Verkuyl’s imperfective schema, (1c) can also explicate perfectivity as a non-default reading if *kids* is interpreted as containing a “silent” *some* (see Bulatović 2020; 2022). On non-default readings of sentences in Verkuyl’s schemata, see Kabakčiev (2023: 263).

The difference between *feed a cat* and *feed cats* in (13a)–(13b) is aspectual and easy to recognize. In (13c) the subject NP referent *kids* explicates non-boundedness but aspectologists fail to envisage it in temporal terms and interpret it as a purely spatial object, plural (see the failure explained in Kabakčiev 2019). They do this in a severely one-sided manner, viewing the group of children as standing in the same place simultaneously to feed the cat. For providing a satisfactory interpretation of (13c), the referent of *kids* must be interpreted as a non-bounded series of temporal instantiations of kids feeding the cat. Not simultaneously, but **one after the other in time** – whether individually or in groups. Following this conceptualization of the subject NP-referent *kids* in (13c) as **non-bounded instantiations in time of entities** – i.e., temporal entities (that could otherwise also be thought of as physical), the non-bounded recurrence of *kids* is mapped onto the referent of *fed*, triggering non-bounded iterativity in it, hence imperfectivity. However, this process, hidden to the native speaker, does not stop here; the non-bounded iterativity, mapped by *kids* onto *fed*, is then transferred farther forward onto the object-NP *the cat* – which, despite its singularity (grammatically realized), is now forced into plurality and non-bounded recurrence (Kabakčiev 2019 205–210).

Let us now analyze sentences (14), the Turkish equivalents of (13), to see how the aspectual mechanism in (13) would apply to them:

- (14) a. Çocuk kedi besledi [PFV SENTENCE]
 Kid_{NOM} cat_{ACC} feed_{PRETERIT}
 ‘The kid fed the cat’
- b. Çocuk kedi besledi [IMPFV SENTENCE]
 Kid_{NOM} cat_{NOM} feed_{PRETERIT}
 ‘The kid fed cat/cats’
- c. Kedi çocuk beslediler [IMPFV SENTENCE]
 Cat_{ACC} kids_{SPL} feed_{PRETERIT}
 ‘Kids fed the cat’
- d. Çocuklar kedi beslediler [IMPFV SENTENCE]
 Kids_{SPL} cat_{NOM} feed_{PRETERIT}
 ‘Kids fed cat/cats’

Analyzing this sentence pattern in its Turkish translation correspondences, the effectuation of aspect reveals a much more complicated picture. While aspect in English (13) is realized uniformly through the definite-article/zero-article interplay and word order plays no role, different techniques are employed in Turkish, among which word order is of supreme importance. In (14a) the accusative of *kedi* ‘cat’ renders the direct object definite and quantified as in English *the cat*, and the initial sentence position of *çocuk* ‘kid’, otherwise unmarked for definiteness-indefiniteness, becomes recognizable as definite for the hearer – just like *žena* ‘the woman’ is recognizable as definite for the hearer in Czech *Žena napsala dopis* (lit. ‘Woman wrote letter’), in contrast to *žena* ‘a woman’ in *Dopis napsala žena* ‘The letter was written by a woman’. Interestingly, the position of the preterit verb form *besledi* ‘fed’ remains the same (sentence-final) throughout. However, in order for *kedi* ‘cat’ in (14b) to be recognized as non-quantified, non-bounded and equal to English *cats*,

it is stripped of the accusative marker, acquires a special form unspecified for number (ambivalent between singular and plural) and *is not moved to initial position* – where it might perhaps be recognized as definite (i.e., as if with a definite article). There is a general tendency in cross-language terms for agents to take initial sentence position and for patients (affected entities) to take a following position. In this vein, interesting and especially indicative in (14c) is that the component with an agent status *çocuklar* ‘kids’ has taken a position after a component with a patient status marked for definiteness (through the accusative) *kediyi* ‘the cat’. This guarantees the recognition of *çocuklar* ‘kid’ as unquantified, hence non-bounded in temporal terms, on the time axis: the cat was fed by kids, where *kids* is interpreted in the sense of “kid after kid” (as in “ant after ant” in *Ants ate the apple*). Also, in order for *kediyi* ‘the cat’ to be firmly recognized as definite, it is moved to the initial position. Finally, in (14d) *çocuklar* ‘kids’ in initial position is recognized as unquantified and hence non-bounded because of the special nominal form *vedi* ‘cat/cats’, ambivalent between singular and plural and hence ruling out the recognition by the hearer of *vedi* ‘cat/cats’ as quantified and hence bounded. Also worth noting in this analysis of (14) is that the grammatical markers on the NPs do not function independently but acquire the relevant values in terms of the given word order and the interaction between them.

The sentences in (3) above with two situation-participant NPs in each would follow the same rules for recognizing the relevant NPs as quantified and non-quantified. Here are the translation equivalents:

- (15) a. Turist kaleyi ziyaret etti [PFV SENTENCE]
 Tourist_{NOM} castle_{ACC} visit dOPRETERIT
 ‘The tourist visited the castle’
- b. Turist kale ziyaret etti [IMPFV SENTENCE]
 Tourist_{NOM} castlenom visit dOPRETERIT
 ‘The tourist visited castles’
- c. Kaleyi turistler ziyaret etti [IMPFV SENTENCE]
 Castle_{ACC} tourist_{PL} visit dOPRETERIT
 ‘Tourists visited the castle’
- d. Turistler kale ziyaret ettiler [IMPFV SENTENCE]
 Tourist_{PL} castlenom visit dOPRETERIT
 ‘Tourists visited castles’

It can easily be seen that the grammatical morphological devices and the word order techniques employed in (15) for the effectuation of aspectual distinctions are the same as in the previous examples, which supports the conjecture that these devices and techniques will be identical or similar in other sentence patterns. Of course, further research in this domain is necessary.

The fact that the major features of compositional aspect in Modern Turkish have been described here rather systematically for the first time also shows that, unfortunately and for unclear reasons, compositional aspect still remains unnoticed or grossly misunderstood in aspectology, despite its discovery more than five decades ago.

After establishing beyond any doubt that Turkish sentences with two situation-participant NPs and a preterit verb form ambivalent vis-à-vis aspect perfectly effectuate the perfective-imperfective contrast, it is now worth checking out whether the Turkish translation equivalents of the English sentences (4) above, featuring three situation-participant NPs, would also effectuate the contrast. Each of the English sentences with one leak (a de-quantified NP) changes the aspect of the initial perfective sentence, making it imperfective. Here are the translation equivalents: (16a) is a perfective sentence, (16b,c,d) are imperfective sentences:

- (16) a. Vale, arabamızı yakındaki otoparka park etti [PFV SENTENCE]
 Valet_{NOM} car_{ACC} nearby_{LOC DEF} parking_{DAT} park dOPRETERIT
 ‘The valet parked our car in the nearby parking lot’
- b. Vale, yakındaki otoparka araba park etti [IMPFV SENTENCE]
 Valet_{NOM} nearby_{LOC DEF} parking_{DAT} car park dOPRETERIT
 ‘The valet parked car/cars in the nearby parking lot’
- c. Vale, arabamızı yakın otoparklara park etti [IMPFV SENTENCE]
 Valet_{NOM} car_{ACC} nearby parking_{PL DAT} park dOPRETERIT
 ‘The valet parked our car in nearby parking lots’
- d. Arabamızı yakındaki otoparka valeler park etti [IMPFV SENTENCE]
 Car_{ACC} nearby_{LOC DEF} parking_{DAT} valet_{PL} park dOPRETERIT
 ‘Valets parked our car in the nearby parking lot’

Someone who saw the one-off parking of the car in (4a) above can easily say this in Turkish too by using sentence (16a). The situation is perfective. If the services of the valet in (4b) are to be described, sentence (16b) in Turkish is a perfect correspondence. It is an imperfective situation, indefinitely iterative, due to the non-boundedness of the referent of the object-NP. Note that the phrases *park the car* in English and *arabamızı park etti* in Turkish are perfective in isolation. And if the car is regularly parked in nearby parking lots, sentence (15c) will be used, with the situation in it imperfective, indefinitely iterative, due to the non-boundedness of the (referent of the) subject-NP *yakın otoparklara* ‘nearby parking lots’. Finally, if the car is parked every time by different valets, (15d) will be used.

The essence of aspect is “an all-pervading and perpetual process of mapping temporal features between elements of the sentence, especially between referents of verbs and of nominals that are participants in situations” – whatever and whichever natural language is at issue (Kabakčiev 2019: 212). The analysis above, although concise and novel for Turkish linguistics, corroborates the understanding that the phenomenon of compositional aspect is a universal sentence-level mechanism in which values of nominal entities, including temporal ones, exercise a key and indispensable function in the explication of aspect. After establishing the impact of the major sentence-level mechanisms for effectuating aspect in a special language such as Turkish, the significance of compositional aspect for linguistic theory thus rises even higher.

Conclusion

The overall analysis aimed to offer a general scheme of how the compositional aspect is realized in modern Turkish by seeking the answer to the following questions:

How does the preterit realize the perfective-imperfective contrast? The analysis of the Turkish data undertaken here proves that the systematic description by a large part of the world's aspectological community of compositional aspect as belonging to the VP-level is a very serious mistake that needs to be overcome. Compositional aspect is a sentence-level phenomenon. Explained through real-world or constructed examples, language reality reveals that compositional aspect is the major way in which aspect is realized in languages like Turkish, and what is extremely important is that perfectivity in such languages can only be effectuated *in compositional-aspect terms*, when the verb in the sentence is not marked for aspect (it can otherwise be marked for imperfective aspect), for the obvious reason that the verb lexicon of such languages (today's Germanic, Romance languages, etc.) is devoid of perfective verbs. Perfectivity entirely relies on the compositional explication of aspect, effectuated as an extremely complex interplay between nominal and verbal elements in the sentence (and/or clause/context) – in which adverbs also take part in multitudinous ways.

How is aspect expressed in both the past domain and outside it? The analysis confirmed the preliminary expectation that Turkish is a compositional-aspect language with aspectually ambivalent *-DI* and *-mİş* past tense verb forms, i.e. with no perfective verbs, and different from verbal-aspect languages such as Bulgarian. The compositional realization of aspect in Turkish is located at the sentence level and is mainly effectuated, *inter alia*, by: the morphological definite-indefinite contrast in direct objects, hence boundedness-nonboundedness; case contrasts in other sentence components; word order patterns realizing the boundedness-nonboundedness contrast through the mechanisms of functional sentence perspective.

How will accusative forms, that are definite, be realized in subjects, indirect objects and adverbial nominals from the point of view of the compositional aspect theory? In terms of the theory of compositional aspect, perfectivity arises as a result of the definiteness, grammatically marked, on the object NP, signifying “specified quantity”. Recall, however, that in Verkuyl's perfective schema quantification is also needed for subject NPs.

When the perfective-imperfective alternation is realized in Turkish through a direct-object NP (as already explained and shown above) – which can be morphologically marked as definite and hence quantified, or indefinite and hence often non-quantified, the subject NP in Turkish has no such alternation available. Therefore, given that the Turkish language is defective (as it were) in the subject NP in terms of Verkuyl's aspect schemata, there must be some other means in the language system to explicate definiteness and hence quantification in the subject NP referent, and indefiniteness and hence de-quantification – for perfective aspect to be triggered in the former case, and imperfective in the latter. *Word order* is one possible solution: on the contrast between definiteness and indefiniteness, which may include the quantification-dequantification contrast – depending on the type of noun used, on the one hand,

and functional sentence perspective, on the other, the definite-indefinite and the quantification-dequantification distinction can systematically be realized *through word order*. Or, in other words, a bare NP, i.e., an NP with no article or some other determiner, quantifier, etc., is interpreted as definite in initial position and as indefinite and hence often dequantified (e.g., when plural or non-countable) in final position. Turkish can briefly be characterized as “a verb-final agglutinative language (exclusively suffixing) with postpositions, a regular case-marking system and a modifier-head construction” (Erguvanlı 1984: 5). Unlike in English (or Bulgarian), there is no definite article in Turkish. Definiteness is conveyed through different factors including word order, stress, the use of an indefinite determiner and case marking, tense and modality (Dede 1986).

Studying the principles of compositional aspect in Turkish can serve as the basis of future research into the complex and extremely intriguing Turkish tense-aspect-modality system and – for a better understanding of many other complex universal language phenomena.

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References

- Abraham W, Leiss E (2012) The case differential: syntagmatic versus paradigmatic case – its status in synchrony and diachrony. *Transactions of the Philological Society* 110(3), 316–341.
- Abrashi T (2016) Lidhja ndërmjet kundërvënies aspektore aorist/imperfekt, organizimit të diskutit dhe nyjave [Connection between the aorist/imperfect aspectual opposition, discourse organization and articles]. *Albanian Studies in America, Section of Linguistics and Literature Scholarly Conference 2015*, Prishtina 2016, 207–234.
- Aksan Y (2003) Kılınış ulamına yaklaşımlar ve Türkçe’de kılınış [Approaches to Aktionsart and Aktionsart in Turkish]. A. Kiran et al. (eds.) *Günümüz Dilbilim Çalışmaları [Contemporary Studies in Linguistics]*, 68–81. İstanbul: Multilingual.
- Aksan Y (2006) Scalar semantic representation of aspectually variable verbs in Turkish. S. Yağcıoğlu and A. Cem-Değer (Eds.) *Studies in Turkish Linguistics, ICTL 2004*, 93–106. İzmir: Dokuz Eylül Publication.
- Aksan Y (2007) Bare and accusative marked direct objects in aspectual composition of Turkish. *Dil ve Edebiyat Dergisi [Journal of Linguistics and Literature]* 4:2, 35–67.
- Aksan et al. (2010) Aksan Y, Kayadelen T and Yücel Ö *Olay anlambilimi açısından Türkçe durum eylemleri üzerine kimi gözlemler [Event semantics and some properties of state verbs in Turkish]*. XXIIIth National Linguistics Conference, 251–269. Gazimağusa.
- Altsultan M (2021) A case study of definiteness and indefiniteness in the Russian language. *International Scientific Journal Grail of Science* (5), 174–179.

- Arovina P, Surova V (1971) *Uchebnik turetskogo yazyka* [Turkish language textbook]. Moscow: MO SSSR.
- Arslan C (2006) "Perfect" in Turkish. In *Turkic Languages*. Wiesbaden: Harrassowitz Verlag, vol. 10, 246–270.
- Aydemir İ (2010) *Türkçede Zaman ve Görünüş Sistemleri* [Tense and aspect systems in Turkish]. Ankara: Grafiker Yayınları.
- Bakardzhieva-Morikang S, Kabakçiev K (2024) Ukrainian biaspectuality: an instantiation of compositional aspect in a verbal-aspect language. In *East European Journal of Psycholinguistics* 11(1), 21–46.
- Baskakov A (1983) *Teoreticheskaya grammatika turetskogo yazyka* [A theoretical grammar of Turkish]. Moscow: Military Institute.
- Benzer A (2008) *Fiilde Zaman, Görünüş, Kip ve Kiplik*. İstanbul: Marmara Üniversitesi. Yayınlanmamış doktora tezi [Tense, aspect, mood and modality in Turkish]. İstanbul: Marmara University. Published dissertation.
- Benzer A (2012) *Türkçede Zaman, Görünüş ve Kiplik* [Tense, aspect and modality in Turkish]. İstanbul: Kabalcı Yayınlar.
- Bulatović V (2013) Modern theories of aspect and Serbian EL2 learners. In *Belgrade English Language and Literature Studies* 5(1), 65–79.
- Bulatović V (2020) Thinking for speaking in the right aspect – on whether Modern English grammars can do more. In *Spanish Journal of Applied Linguistics* 33(2), 384–415. <https://doi.org/10.1075/resla.18007.bul>
- Bulatović V (2022) Aspect semantics and ESL article use. In *International Review of Applied Linguistics in Language* 60(2), 491–521. <https://doi.org/10.1515/iral-2019-0016>
- Bybee et al. (1994). Bybee J, Perkins R, Pagliuca W. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World*. Chicago: The University of Chicago Press.
- Carlson L (1981) Aspect and quantification. In P. Tedeschi, A. Zaenen (eds.). *Aspect and quantification. Syntax and semantics*. Vol. 14. Tense and Aspect. New York: Academic Press., 31–64
- Comrie B (1978) *Aspect*. Cambridge: CUP.
- Dahl Ö (1985) *Tense and Aspect Systems*. New York: Basil Blackwell.
- Dede M (1986) Definiteness and referentiality in Turkish verbal sentences. In *D. I. Slobin and K. Zimmer (eds.), Studies in Turkish linguistics*, 147–163. John Benjamins.
- Dilaçar A (1974) Türk Fiilinde "Kılmış"la "Görünüş" ve Dilbilgisi Kitaplarımız [Aktionsart and Aspect in Turkish Verbs and Our Grammar Books]. In *Türk Dili Araştırmaları Yıllığı-Belleten* [Yearbook of Turkic Studies-Belleten] 1973–74, 159–171.
- Dimitrova D, Kabakçiev K (2021) Compositional and verbal aspect in Greek: the aorist-imperfect distinction and the article-aspect interplay. In *Athens Journal of Philology* 8(3), 181–206. <https://doi.org/10.30958/ajp.8-3-2>
- Dimitrova D (2021) Aspect coercion in Greek aorist and perfect verb forms. In *Studies in Greek Linguistics* 41. Thessaloniki: Institute of Modern Greek Studies, 45–53.
- Dmitriev N (1960) *Turetskiy yazyk* [Turkish language]. Moscow: Eastern Literature Publishing House.
- Dmitriev N (1962) *K voprosu o znacheniy osmanskoj glaol'noy formy na -mİş* [On the meanings of the Ottoman verb form in mİş]. Moscow: Naouka, 92–154.
- Dowty D (1979) *Word meaning and Montague grammar: the semantics of verbs and times in generative semantics and in Montague's PTQ*. Dordrecht: Reidel.
- Dudina L (2005) *Turetskiy yazyk. Prakticeskiy kurs* [Turkish Language. Practical Course]. Moscow: KomKniga.
- Ediskun H (1985) *Türk Dilbilgisi* [Turkish grammar]. İstanbul: Remzi Kitabevi.
- Ergin M (1993) *Türk Dilbilgisi* [Turkish grammar]. İstanbul: Bayrak.

- Erguvanlı E (1984) *The function of word order in Turkish grammar*. Berkeley/Los Angeles/London. University of California Press.
- Filip H (2000) Nominal and verbal semantic structure – analogies and interactions. In *Language Sciences* 23: 453–501.
- Filip H (2017) The semantics of perfectivity. In *Italian Journal of Linguistics* 29(1): 167–200.
- Firbas J (1987) On some basic issues of the theory of functional sentence perspective. In *Brno Studies in English* 17(1), 51–59.
- Friedrich P (1974) On aspect theory and Homeric aspect. In *International Journal of American Linguistics*. Memoirs 28 and 29. 40(4): Part 2, 1–44.
- Gencan N (2001) *Dilbilgisi [Grammar]*. Ankara: Ayrac.
- Genish E (2008) *Grammatika turetskogo yazyka [Turkish grammar]*. Vol. 2 Moscow: LKI
- Grunina E (1975) Ob izuchenii semanticheskoy struktury vremennyh form indikativa [On the study of the semantic structure of the tense form of the indicative]. In *Soviet Turkology*. Baku: ANAzSSR, No 4, 82–94.
- Grunina E (1976a) K istorii semanticheskogo razvitiya perfekta *-miş* [On the history of the semantic development of the *-miş* perfect]. In *Soviet Turkology*. Baku: AN AzSSR, No 1, 12–21.
- Grunina E (1976b) Rol' glagolov *-e* and *-tur* v slozhenii sovremennyh analiticheskikh form indikativa v tyurkish yazykah yugozapadnoy gruppy [The role of *-e* and *-tur* verbs in the composition of modern analytical forms of the indicative in Turkic languages of the South-Western group]. In *Soviet Turkology*. Baku: ANAzSSR, No 3, 10–19.
- Guzev V (1982) Paradigma glagol'nyh finitnyh form kak morfologicheskaya kategoriya [The paradigm of verbal finite forms as a morphological category]. In *Soviet Turkology*. Baku: ANAzSSR, No 4, 67–77.
- Göksel A, Kerslake C (2005) *Turkish: A Comprehensive Grammar*. Routledge Taylor and Francis Group, London and New York.
- Heinämäki O (1974/1978) *Semantics of English Temporal Connectives*. Indiana University Linguistics Club
- Hengirmen M (2002) *Türkçe Dilbilgisi [Turkish Grammar]*. Ankara: Engin.
- Huddleston R, Pullum GK (2002) *The Cambridge Grammar of the English Language*. Cambridge: CUP.
- Ivanov S (1977) *Kurs turetskoy grammatiki. Ch. 2. Grammaticheskie kategorii glagola [A course in Turkish grammar Part 2. Grammatical categories of the verb]*. Leningrad: LGU.
- Jendraschek G (2011) A Fresh look at the tense-aspect system of Turkish. In *Language Research* 47.2, 245–270.
- Kabakčiev K (1984) The article and the aorist/imperfect distinction in Bulgarian: an analysis based on cross-language 'aspect' parallelisms. In *Linguistics* 22: 643–672.
- Kabakčiev K (2000) *Aspect in English: a "common-sense" view of the interplay between verbal and nominal referents*. Dordrecht: Kluwer. <https://doi.org/10.1007/978-94-015-9355-7>
- Kabakčiev K (2019) On the history of compositional aspect: vicissitudes, issues, prospects. In *Athens Journal of Philology* 6(3), 201–224. <https://doi.org/10.30958/ajp.6-3-4>
- Kabakčiev K (2020) Two major manifestations of compositional aspect in Bulgarian. *Studia Philologica Universitatis Velikotarnovensis* 39(1), 115–125.
- Kabakčiev K (2021a) Compositional disambiguation of biaspectuality in languages with verbal aspect: on Russian and Bulgarian data. In *Atiner's Conference Paper Series*, No LNG2021-2723, 1–23.
- Kabakčiev K (2021b) Mapping Temporal Features between Nominals and Verbs in English and the Article-Aspect Interplay Diachronically. In *Belgrade English Language and Literature Studies* 13(1), 29–57. <https://doi.org/10.18485/bells.2021.13.2>

- Kabakčiev K (2023) On conceptualization and misconceptualization of compositional aspect in Bulgarian publications. In *Contrastive Linguistics* 48(1–2), 42–54.
- Kanık M (2015) The Turkish aorist and progressive: Present tense, future tense, or what? In *Journal of Language and Linguistic Studies*, 11(1), 103–115.
- Karadoğan A (2009) *Türkiye Türkçesinde kalmış [Aktionsart in Turkish]*. Ankara: Divan Kitap.
- Kerslake C (2001) Does Turkish Prefer Events to States? In *Turkic Languages*. Wiesbaden: Harrassowitz Verlag, vol. 5, 44–56.
- Koç N (2001) *Yeni Dilbilgisi [New Grammar]*. İstanbul: İnkılâp.
- Kononov A (1939) Turetskaya glagol'naya forma na *-mİş* [The Turkish verb form in *-mİş*]. In *Uchenye zapiski LGU. Seriya filologicheskikh nauk* [Scientific notes of LGU. Philology Science Series]. Leningrad: LGU, No 20(1), 34–39.
- Kononov A (1941) *Grammatika sovremennogo turetskogo literaturnogo yazyka [Grammar of the Modern Turkish literary language]*. Moscow-Leningrad: AN SSSR.
- Kononov A (1956) *Grammatika sovremennogo turetskogo literaturnogo yazyka [Grammar of the Modern Turkish literary language]*. Moscow-Leningrad: AN SSSR.
- Kononov A (1980a) Zametki po morfologii turetskogo yazyka (I) [Notes on Turkish morphology]. In *Soviet Turkology*. Baku: ANAzSSR, No 2, 14–27.
- Kononov A (1980b) Zametki po morfologii turetskogo yazyka (II) [Notes on Turkish morphology]. In *Soviet Turkology*. Baku: ANAzSSR, No 3, 3–14.
- Kononov A (1983) Eshche raz o genezise tyurkskogo aorista [The genesis of Turkish aorist revisited]. In *Soviet Turkology*. Baku: ANAzSSR, No 1, 3–18.
- Kornfilt J (1997) *Turkish*. Routledge.
- Koshmieder E (1962) Turetskiy glagol i slavyanskiy glagol'nyy vid [Turkish verb and Slavic aspect]. *Voprosy glagol'nogo vida* [Issues of verbal aspect]. Moscow, 1962, 382–294.
- Krámský J (1972) *The Article and the Concept of Definiteness in Language*. The Hague/Paris. Mouton
- Krifka M (1989) Nominal reference, temporal constitution and quantification in event semantics. In *R Bartsch (Eds.), Semantics and Contextual Expressions*. Dordrecht: Foris, 75–115.
- Krifka M (1998) The origins of telicity. In *S Rothstein (Eds.), Events and Grammar*. Dordrecht: Kluwer, 197–235.
- Kuznetsov P (1980) Genezis tyurkskogo aorista [Genesis of the Turkic aorist]. In *Soviet Turkology*. Baku: ANAzSSR, No 6, 32–36.
- Kuznetsov P (1982) Sistema funktsional'nyh form glagola v sovremennom turetskom yazyke [The system of functional forms of the verb in Modern Turkish]. In *Soviet Turkology*. Baku: ANAzSSR, No 1, 3–21.
- Kuznetsov P (1983) Semantika i rekonstruktsiya tyurkskogo deeprichastiya na $-(^{\circ})b, -(^{\circ})p, -(j)^{\circ}p-$ [The semantics and reconstruction of Turkish action participles in $-(^{\circ})b, -(^{\circ})p, -(j)^{\circ}p-$]. In *Soviet Turkology*. Baku: ANAzSSR, No 1, 53–64.
- Lewis G (1975) *Turkish Grammar*. Oxford: Calendon Press.
- Lyubimov K (1949) *Obrazovanie, znachenie i upotreblenie vremen v turetskom yazyke [Formation, meaning and use of Turkish tenses]*. Dissertation Abstract. Moscow. 23
- Lyubimov K (1970) Sistema grammaticheskikh vremen v sovremennom turetskom yazyke [The system of grammatical tenses in Modern Turkish]. In *Soviet Turkology*. Baku: ANAzSSR, No 2, 44–63.
- Lyubimov K (1971) Sem' znacheniy turetskoy slovoformy *yazmİş* [Seven meanings of the Turkish word form *yazmİş*]. *Soviet Turkology*. Baku: ANAzSSR, No 6, 50–55.
- Lyubimov K (1977) Sistema deeprichastiy v sovremennom turetskom yazyke [The system of action participles in Modern Turkish]. In *Soviet Turkology*. Baku: ANAzSSR, No 4, 36–49.

- Mansuroğlu M (1953) Türkçe’de *-miş* Ekinin Fonksiyonları. [Functions of the *-miş* suffix in Turkish]. In *60 Doğum Yılı Münasebetiyle Fuad Köprülü Armağanı* [Fuad Köprülü gift on the occasion of his 60th birth anniversary]. İstanbul, 345–350.
- Maslov et al. (1962) Voprosy glagol’nogo vida v sovremennom zarubezhnom yazykoznanii [Problems of verbal aspect in modern foreign linguistics]. *Voprosy glagol’nogo vida*. Moscow.
- Mihaylov M (1962) Perifrasticheskie formy turetskogo glagola [Periphrastic forms of the Turkish verb]. In *Voprosy yazykoznaniiya*. Moscow: Academy of Sciences Publishing House, 87–90.
- Nigmatov H (1970) Sootnesenie kategoriy vremeni i nakloneniya v tyurskom glagole [Correlation of the categories of tenses and moods in the Turkish verb]. In *Soviet Turkology*. Baku: ANAzSSR, No 5, 51–62.
- Quirk et al. (1985) Quirk R, Greenbaum S, Leech G, Svartvik J. *A Comprehensive Grammar of the English Language*. London/New York: Longman.
- Rizou et al. (2024). Vasiliki R., Martynova, M., Özsoy, O., Szucsich, L., Alexiadou A., Gagarina, N. Grammatical aspect in heritage and monolingual Greek, Russian and Turkish. *Register Aspects of Language in Situation (REALIS)*. 3(3), pp. 1–43, doi=<https://doi.org/10.18452/29345>
- Rocchi L (2016) Definiteness vs. indefiniteness in the Turkish language. *International Journal of Translation* 18, 185–205.
- Sadık H (2017) Bulgarca ve Türkçede Görünüş [Aspect in Bulgarian and Turkish languages]. In *International Journal of Language Academy Volume 5/3 Summer*, 222–234.
- Shabashvili G, Kabakçiev K (2021) Verbal aspect vis-à-vis compositional: a typological case study of Georgian, against Russian and English data. In *Studies in Greek Linguistics* 42. Thessaloniki: 375–384.
- Scheka Y (2007) *Prakticheskaya grammatika turetskogo yazyka* [Practical grammar of the Turkish language]. Moscow: Vostok-Zapad.
- Slobin D, Aksu A (1982) Tense, aspect and modality in the use of the Turkish evidential. Hopper P. J. (Ed.). In *Tense and aspect: Between semantics and pragmatics*. Amsterdam, Philadelphia: John Benjamins, 185–200.
- Tura S (1973) *A Study on the Articles in English and their Counterparts in Turkish*. PhD Thesis, University of Michigan.
- Uzun N (1998) Türkçede görünüş/kip/zaman üçlüsü [Aspect/mood/tense trio in Turkish]. In *Dil Dergisi* [Language Journal] (68)
- Vendler Z (1957) Verbs and times. *The Philosophical Review* 66: 143–160.
- Verkuyl H (1972) *On the Compositional Nature of the Aspects*. 1971. Dordrecht: Reidel.
- Verkuyl H (1993) *A Theory of Aspectuality. The Interaction between Temporal and Atemporal Structure*. Cambridge: CUP.
- Verkuyl H (1999) *Aspectual Issues: studies on time and quantity*. Chicago: University of Chicago Press.
- Verkuyl H (2022) *The Compositional Nature of Tense, Mood and Aspect*. Cambridge: CUP.
- Vounchev B (2007) *Aspektialnite harakteristiki v novogratskiya ezik – sredstva za izrazyavane i semantika* [Aspectual characteristics in Modern Greek – expression devices and semantics]. Sofia: Sofia University Press.

