Arabic Verbal Morphology: Temporal and Aspectual Relations and Differences

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ABSTRACT: The paper addresses the issue of how the Arabic aspectuo-temporal system is to be properly construed, through verbal morphology. It provides a preliminary analysis of this system, studying the temporal and aspectual features of the two verbal forms, viz. the perfective and the imperfective (McCarthy, 1979). A tripartite construction of Arabic aspectuo-temporal system is defended; i.e., past, perfect and perfective (and their neutral analogues) are taken as the basic grammatical ingredients, building the system (cf. Kuryłowicz, 1973). To capture the latter, two analyses are proposed, viz. T/Asp-analysis and T-analysis. Both analyses are tenable, albeit the latter is preferred to the former owing to minimalist tenets (Chomsky, 2000, 2001).

KEYWORDS: Arabic, verbal morphology, temporality, aspectuality, T-analysis.

1. Introduction

In history, grammaticalization of temporality and aspectuality relations and dichotomies across languages can be uncovered owing to morpho-syntactic properties. In this respect, a number of categories contribute to locate time and express aspectual (and modal) relations in Arabic. The list includes verbs, adjectives, adverbs, negative and modal particles, etc. Any account, which would deal with the temporal system of Arabic, must preferably take this variety of categories into consideration, if not to be proved inadequate.

The literature has been dominated by an ancient-modern controversy over whether Arabic verbal inflection denotes tense or solely aspect. On the one hand, Arabic traditional grammarians deal with the Arabic binary opposition of verbal forms, dependent on (deictic) tense, which comprehends past and non-past. Arabic is viewed as a tense-based lan-

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1 The vagueness of the morphological expression of some temporal (or aspectual) categories in some languages, and its entire deficiency in others, tenseless and aspectless languages, entail that the scrutiny into temporal/aspectual variation is crucially morphological (or morpho-syntactic), and semantically temporal (or aspectual) cross-linguistic generalities are necessarily based on general syntax (Fassi Fehri, 2012).

2 This is, however, beyond the scope of the paper. See Fassi Fehri (1993), on an exhaustive examination of temporal, aspectual and modal categories in Arabic.

3 There has been a dispute over the semantic opposition between the two fundamental verbal forms, namely the perfect/perfective and the imperfect/imperfective, instantiated as kata-b-a/ya-ktub-u, respectively. These terms are more precisely labels of aspect. The perfect form can be referred to as past tense (ʔal-maaḏii). The imperfect can be referred to as present tense (ʔal-muḏaariʕ). The different use of terminology lies essentially in the intrinsic feature, denoted by the two verbal forms, tense or aspect. However, the terminological controversy with respect to morphological forms is trivial in the deficiency of meticulous semantic interrelations.

4 Non-past tense incorporates present and future.
guage (Siibawayhi, 8th century). On the other hand, the majority of western Semiticists and philologists claim that the verbal inflection expresses only aspect. Arabic is regarded as an aspect-based language (Caspari, 1848/1859; Reckendorf, 1895). This dispute has clouded a number of important issues and culminated in a difficulty to form a basis of the Arabic temporal system. The objective of the study is to overcome the tense/aspect conundrum, contingent upon the morphology of the verb. The paper is structured as follows. First, we examine the basic components of the Arabic aspectuo-temporal system. Then, we design core temporal architecture to cover the system.

2. The Arabic Aspectuo-Temporal System

In general, time can be considered within two distinct (though related) parameters, namely tense and aspect. To Reichenbach (1947), tense is treated as an array of time intervals, labeled as Speech Time (S), Reference Time (R), and Event Time (E), yielding two important time relations, i.e. the R to S and the E to R, indicating deictic and non-deictic time references, respectively. Arabic tenses have both deictic and non-deictic uses. The latter has been frequently misunderstood as aspectual by 'aspectualists' (Smith, 1991).

According to Comrie (1976), aspect encodes the manner the speaker views the internal temporal construction of a state of affairs. Basic to this characterization is the perfective/imperfective contrast. Whereas perfectivity pertains to the situation in its entirety, imperfectivity involves a plain reference to the internal temporal structure of a situation.

With respect to Arabic, verbal morphology grammaticalizes neither the past/non-past dichotomy nor the perfective/imperfective contrast. Paradoxically, the language has been classified as a tense-based language by traditional grammarians (Siibawayhi, 8th century; Aš-širbiinii, 1570) and as aspectual by Western Semiticists and comparatists (Caspari, 1848/1859; Reckendorf, 1895). Arabic deduces the two dissimilar sorts of relations from the same verbal morphology, as will be viewed.

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5 Following this line of thought, Aš-širbiinii (1570) claims that the distinction between the two verbal forms is contingent only on time (tense). Whereas the past expresses an occurrence and a passed time (maa dalla Salaa hada‘tin wa zamanin finqadda), the present expresses an occurrence and an unpassed time (maa dalla wa‘dhan Salaa hada‘tin wa zamanin lam yanqa‘d). This traditional Arabic grammarians’ view is held in several modern generative works. See, e.g., Benmamoun (2000).

6 The Semitic verbal system is viewed as lacking grammatical tense indications, classified it hereby as an ‘aspect language’. This classification of the Semitic temporal system has been initially attributable to the German philologists Caspari (1848/1859) (translated and revised by Wright (1858/1996)) and Reckendorf (1895). To Wright (ibid.), while the perfect form encodes a finished act, the imperfect form encodes an unfinished act. A Semitic perfect or imperfect is devoid of temporal relations of the speaker. Hence, tense is at best a peripheral function of the form. The one-valued aspect view of verbal inflection has been followed by several authors (see, e.g., Cohen (1989)).

7 In this model, the R to S ordering relation is referred to as ‘past’, ‘present’ and ‘future’. The E to R ordering relation is referred to as ‘anterior’, ‘simple’ and ‘posterior’.

8 This characterization can be comprehended in what Smith (ibid.) calls ‘viewpoint aspect’.
2.1 Basic Elements of the Arabic Aspectuo-Temporal System

To take a neutral position, as well as for ease of comprehension, the two basic forms, the past and the non-past, are respectively designated as the suffixal form (SF) and the prefixal form (PF), solely banking upon person placement. Following, though partly, Kurylowicz (1973), I argue that the SF and the PF act primarily as preterite/non-preterite (past/present), secondarily as anterior/non-anterior (perfect/imperfect), and tertiarily as perfective/imperfective. Therefore, the Arabic aspectuo-temporal system is fundamentally perceived as constructing in three grammatical ingredients, namely past, perfect and perfective (and their neutral analogues). Such a system is properly used to deal with sentences in various contexts.

2.1.1 Tense Dichotomies

In this section, we argue that the Arabic verbal inflection expresses a tense interpretation. A (slightly revised) Reichenbachian model of tenses is assumed, defined according to three time intervals, namely R, S, and E, as mentioned above. The interpretation of past/non-past and perfect/imperfect tenses deduces from relations between these times.

2.1.1.1 Past/Non-Past

In Arabic grammatical tradition (AGT), verbal inflection is construed as tensed (Sibawayhi, 8th century). The inflected verb associates the meaning of a verbal noun (masdar), representing a state of affairs, with that of a temporal adverb, positioning the state of affairs in time:

(1) katab-a d-dars-a ʔamsi (*ġadan)
write.PERF.3sg.mas the-lesson-ACC yesterday (tomorrow)
“He wrote the lesson yesterday.”

(2) a. ya-ktub-u d-dars-a l-ʔaan-a (*ʔamsi)
3.write.IMPERF the-lesson-ACC now (yesterday)
“He writes/is writing the lesson now.”

9 Kurylowicz (ibid.) argues that the Semitic verbal morphology encodes primarily tense, preterite/non-preterite (past/present). In Arabic (and Hebrew), aspect is dependent on anteriority, a tense concept. Aspect is “… a non-distinctive feature of tense-forms in every language. The present tense referring to the moment of speaking is by itself imperfective or linear, the pret.[erite] or the future are by themselves perfective or punctual” (p. 79). Kurylowicz, thus, rejects the grammaticalization of aspect as the core of the Semitic verbal morphology. He structures the aspectuo-temporal system around three interrelated ‘functions’. The primary function of the opposition is preterite/non-preterite, if relevant to the instant of speaking. The secondary function is anterior/simultaneous (perfectum/infectum), if connected to another tense. The tertiary function is perfective/imperfective. Nevertheless, even if such characterization is almost relevant to Arabic, Kurylowicz offers no grounds for it. His description remains thus shallow.

10 However, the PF denotes not only a present tense but also a future one, as will be recognized.

11 Perfect is assumed to encode anteriority, a sequentially before relation. Imperfect is viewed as expressing non-anteriority (simultaneity), a within relation. In this sense, perfect (or imperfect) is thus taken to encode tense, not aspect.

12 Following Wright (1858/1996), perfectivity (or imperfectivity) is taken to denote a finished (or unfinished) situation.
b. ya-ktub-u d-dars-a ġadan (*ʔamsi)

3.write.IMPERF the-lesson-ACC tomorrow (yesterday)

“He writes/is writing the lesson tomorrow.”

Whereas SF encodes a past tense (1), PF encodes both a present tense (2a) and a future one (2b), confirmed by their co-existence with a congruous deictic adverb. The temporal parameter is evidenced by traditional grammarians’ use of temporal adverbs (see, e.g., Siibawayhi, ibid.).

The temporal adverb criterion determines a binary inflectional system, based on tense specifications, i.e., a past tense (anteriority) and a non-past tense (non-anteriority). In this sense, anteriority is conceptually relevant to absolute tense. Both SF and PF are logically understood as expressing a particular sort of time reference, i.e., deictic.

Simple tenses can be defined as follows:

(3) simple past: \[ R < S \quad E = R \]
(4) simple present: \[ R = S \quad E = R \]
(5) simple future: \[ R > S \quad E = R \]

2.1.1.2 Perfect/Imperfect

In addition to the past/non-past dichotomy, Arabic verbal morphology denotes a perfect/imperfect (or anterior/non-anterior) distinction. Whereas SF is used synthetically to denote present perfect (4) in root clauses, it is used analytically to express past perfect (5) and future perfect (6), preceded normally by an overt copula auxiliary:

(4) katab-a d-dars-a qablu (*ġadan)
write.PERF.3sg.mas the-lesson-ACC before (tomorrow)

“He has written the lesson before.”

(5) kaan-a katab-a d-dars-a lamma ʔatay-naa
be.PERF.3sg.mas write.PERF.3sg.mas the-lesson-ACC when arrive.PERF.1pl

“He had written the lesson when we arrived.”

(6) sa-ya-kuun-u katab-a d-dars-a ġadan
fut.3.be.IMPERF write.PERF.3sg.mas the-lesson-ACC tomorrow

“He will have written the lesson tomorrow.”

13 To Wright (1858/1996), the SF, in this context, is identical to the Greek aorist, German imperfect, and English past.

14 Siibawayhi (ibid., Vol. I., p. 25), for instance, employs temporal adverbs like ʔamsi (yesterday) and ġadan (tomorrow), as semantic constraints, to evaluate the well-formedness of verbal sentences.

15 Notice that the tense morpheme is actually abstract in (1) and (2). See particularly Benmamoun (2000) and Aoun, Benmamoun, and Choueiri (2010), on different tests, corroborating the abstractness of the Arabic tense.

16 The present perfect, according to Wright (1858/1996), is equivalent to the Greek, German, and English perfect.
The perfect tenses can be defined as the following:

(7) present perfect: \[ R = S \quad E < R \]
    past perfect: \[ R < S \quad E < R \]
    future perfect: \[ R > S \quad E < R \]

The PF is interpreted as imperfect. It is usually used with an overt copula auxiliary:

(8) \text{kaan-a} \quad \text{ya-ktub-u} \quad \text{d-dars-a}
    be.PERF.3sg.mas \quad 3.write.IMPERF \quad \text{the-lesson-ACC}

“He was writing the lesson.”

(9) \text{ya-kuun-u} \quad \text{ya-ktub-u} \quad \text{d-dars-a} \quad \text{fii } \text{ś-śabaaḥ-i}
    3.be.IMPERF \quad 3.write.IMPERF \quad \text{the-lesson-ACC} \quad \text{in } \text{the-morning-GEN}

“He will be (is habitually) writing the lesson in the morning.”

The two instances show the analytic use of the Arabic imperfects. In (8), the PF is used with a past copula auxiliary (\text{kaana}). It is equivalent to the English past progressive. In (9), the PF is embedded under \text{yakuunu}, denoting either a future or habitual imperfect.

The above data illustrate that the SF and PF denote a non-deictic time reference. Anteriority is conceptually related to relative tense. Interestingly, a peculiar property of the Arabic temporal system is clearly observed. A temporally inflected verb acts either as a finite verb (past/non-past) or as a participle (perfect/imperfect).

### 2.1.2 Aspectual Contrast

The Arabic verbal inflection contains not only a tense content, but also an aspect content. In the first respect, past and perfect SF are associated with perfectivity. Arabic has solely one past/perfect synthetic form, being also perfective, as in (1) and (4). In analytic forms, the SF, embedded under an overt copula auxiliary, either in past or non-past form, is perfective, as in (5) and (6). Thus, perfectivity is correlated with a SF, be it past or perfect. On the other hand, non-past and imperfect PF are associated with imperfectivity. The synthetic PF, expressing a non-past tense (present or future), is normally imperfective (see (2a) and (2b)). In analytic forms, the PF, dominated by an overt copula auxiliary, being either past or non-past, is imperfective, as in (8) and (9). Imperfectivity is therefore correlated with a non-past or imperfect PF.

The above opposition shows that Arabic perfectivity is a property of a particular time reference (tense), in lieu of a grammaticalized morpheme, which discriminates the same tense. Nonetheless, perfectivity and imperfectivity can be independently expressed in verbal inflection, as in Slavic and Greek.

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17 Fassi Fehri (2012) claims that the PF, in analytic past imperfect, is typically imperfective, irrespective of the actional properties of the predicates.

18 Nonetheless, perfectivity and imperfectivity can be independently expressed in verbal inflection, as in Slavic and Greek.
perfective can be correlated with past or future and imperfective can be interacted with present or future. Consequently, Arabic aspect is controlled by tense, but not the reverse.\textsuperscript{19}

In Arabic, a uniform finite verbal form is used for past (or non-past) or perfect (or imperfect) to encode either S to R relation or R to E relation. Besides, perfectivity (or imperfectivity) interrelates intrinsically with past or perfect (or non-past/imperfect). Put simply, the dichotomies of past/non-past and perfect/imperfect are further elaborated, in that the verbal forms encode a perfective/imperfective contrast.\textsuperscript{20}

In sum, it is argued that the Arabic verbal inflection is necessarily understood as including both tense and aspect substance. In addition to past/non-past and perfect/imperfect dichotomies, which are temporal in character, verbal inflection encodes a perfective/imperfective contrast, which is aspectual in nature. Thus, neither the purely aspect view nor the one-valued tense view of Arabic verbal inflection can be adequate. Solely a two-fold description, based on tense and aspect, is practicable. Subsequently, we delve into basic temporal architecture, covering the system.

3. Tense/Aspect Projection in Arabic

This section looks into core temporal (or aspectual) categories, building the Arabic clause structure. The Arabic aspectuo-temporal system can be accounted for, depending on both T and Asp or only T:

3.1 T/Asp-Analysis of the Arabic Aspectuo-Temporal System

The salient fact, emerged from the previous discussion, is that the SF/PF dichotomousness encodes a blend of T and Asp, yet the latter is crucially dependent on the former. This determines that the system is essentially oriented from top (tense) to bottom (aspect). Accordingly, a T/Asp analysis of the Arabic aspectuo-temporal system can be adopted. Concerning simple tenses, they are taken to project only a single T, ordering S relative to R. In this context, T is normally considered as deictic (past, present, or future), as roughly structured:

\textsuperscript{19} Perfectivity and imperfectivity are intrinsic features of SF and PF respectively, rather than primary values, which define the opposition, as viewed by western Semiticists, regardless of the utilized labels, i.e., perfect/imperfect, perfective/imperfective, \textit{finished/unfinished} or \textit{accompli/inaccompli}.

\textsuperscript{20} See Fassi Fehri (ibid.), on a rather similar analysis, though used at a cross-linguistic level.
Complex tenses, however, require a bi-inflectional (bi-temporal) configuration. Recollect that Arabic shows an important quirky property with respect to its temporal system: a temporally inflected verb serves either as a finite verb or as a participle. Hence, finite morphology makes no difference between T1 and T2. The ambiguity arises from the nature of the temporal arguments that T orders, namely S to R or R to E. To differentiate between past/non-past and perfect/imperfect, we suggest a double T analysis for the latter. Perfect tenses are taken to project two Ts. Besides T1, T2 is needed to capture the ordering of R to S relation. T2 is usually regarded as non-deictic (anterior/non-anterior). Complex tenses are projected as the following:

(11) shows that complex tenses are doubly headed structures. While T1 hosts the upper auxiliary, T2 hosts the lower thematic verb. The periphrastic nature of past and future perfects substantiates this analysis.

3.2 T-Analysis of the Arabic Aspectuo-Temporal System

In Arabic, T bears a particular value, (non)past or (im)perfect, which dictates the (im) perfectivity value of Asp. Thus, as (im)perfectivity is inferred from a specific time re-

21 Here, we follow Giorgi and Pianesi (1997).
22 The S,R and R,E relations are lexicalized and instantiated as two tense projections in the clause structure.
23 The bi-inflectional analysis has been considerably assumed in literature. See, e.g., Fassi Fehri (1993).
ference, Asp turns to be redundant. Only T may suffice to project, rendering the system minimal, hence optimal. V may displace to T, depending on the latter’s ϕ-features. Whereas ‘rich’ T demands V-displacement, ‘poor’ T does not. Given the analysis, Arabic appears to be more of a ‘tense language’, in lieu of an ‘aspect language’. (12) and (13) illustrate, though roughly, simple tenses and complex tenses, respectively:

\[ (12) \]
\[
\begin{array}{c}
\text{T} \quad \text{[± Past]} \\
\text{v*/V}
\end{array}
\]

\[ (13) \]
\[
\begin{array}{c}
T_1 \quad \text{[± Past]} \\
T_2 \quad \text{[± Perf]} \\
\text{v*/V}
\end{array}
\]

The temporal system of Arabic is defined, contingent upon the functional category of T.24 A T-analysis is favored over a T/Asp-analysis due to foundational minimalist doctrines. A minimal structure is assumed thus far, evading much structure.

4. Conclusion

In this paper, I shed light on the Arabic aspectu-temporal system, banking on verbal morphology. The latter encodes both a tense (time reference) content and an aspect content. The SF/PF dichotomousness expresses a blend of T and Asp, though Asp depends crucially upon T, thereby rendering Asp trivial. Arabic is therefore characterized more as a T language rather than an Asp language, a view (somewhat) analogous with that of Arabic traditional grammarians, but differs fundamentally from the aspectual view, endorsed by a number of Western Semiticists and comparatists.

References


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24 T is a Core Functional Category (CFC) (Chomsky, 2000, 2001).


