Expressions of Tense and Aspect in the Tunisian Varieties of Arabic: A Comparative Study of Jewish and Muslim Dialects

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Abstract

The aspectual and temporal value of the verb is one of the most discussed problems in Semitic linguistics. Nonetheless, in the field of North African Arabic dialectology this subject has not received its due attention, and compared to other Arabic dialects, it remains terra incognita. The present article explores strategies by which spoken varieties of Tunisian Arabic express tense and aspect. The core data examined in this study comes from an endangered dialect spoken by the Jews of Gabes (southern Tunisia). Comparative material includes an array of examples from both Jewish and Muslim varieties. I reconstruct the origin of the preverbal particles and auxiliaries in Tunisian Arabic, and argue that, in contradistinction to Moroccan Arabic, the ka- particle in Jewish Gabes does not originate in kān. I present evidence that the active participle in Jewish and Muslim varieties has divergent functional distribution, which suggests a Northwest Semitic substrate in Judeo-Arabic.

Keywords

Tunisia – aspect – Gabes – tense – participle – Judeo-Arabic
1 Introduction

There is a general scholarly consensus that the verb system of modern Arabic dialects incorporates both aspect and tense coding devices (Eisele 1990:193; Brustad 2000:203). Indeed, these two categories are inextricably linked, and both participate in expressing events. However, Brustad, after comparing data from several dialects, reaches the conclusion that it is aspect that prevails in the verb system of spoken Arabic, and she indicates that separate mechanisms are used to convey time (Brustad 2000:202). This might give the impression that all Arabic dialects code aspect and tense in an equal way. Not surprisingly, that is far from correct. The dialects in fact display immense differences in their verb syntax (use of participles, preverbal particles, auxiliary verbs) which, in turn, have a significant impact on the coding of the two categories in question. The aim of the present study is, therefore, to present a thorough investigation of the relationship between tense and aspect in Tunisian Arabic and of its wider contextualization in relation to other Arabic dialects. The lion’s share of the data used in this article comes from the Arabic dialect of the Jews of Gabes (henceforth JG) (southeastern Tunisia). Comparative material has been excerpted from Jewish Tunis (David Cohen 1964, 1975), Muslim Tunis (interview with an informant), ʿAulād Msallām (Simeone-Senelle 1985), the Bedouin dialect of Douz in Southern Tunisia (Ritt-Benmimoun 2011, 2014), and Jewish Tripoli (Yoda 2005). The introductory remarks comprise a short presentation of the verb system of JG, as well as discussion on the origin of the ka- preverbal particle. In the second part of the article, I demonstrate that the p-stem and the s-stem in JG are mostly aspectual, and their temporal value is imparted by external elements. Subsequently, I discuss the expressions of perfect in modern Tunisian dialects, where, as will be shown, there are salient

1 I would like to thank Dr. Ivri Bunis for commenting on earlier versions of this article and sharing his insightful observations with me.

2 It is worth noting that the debate on the nature of the verb system is not only limited to Arabic. The puzzling relationship between tense and aspect seems to be one of the most frequently discussed issues in the scholarship of Semitic languages, the best example being Biblical Hebrew.

3 The data for JG was collected during fieldwork in Israel between 2018 and 2019, which has been generously funded by the Arts and Humanities Research Council UK and Homerton College, Cambridge University. The total number of native speakers of JG participating in the research is nine. Out of four men and five women, eight have completed basic secondary education, while one of them has obtained a higher academic degree. My text corpus of JG represents the traditional oral culture of the informants, primarily folktales, religious narratives, and personal memoirs. For the purpose of grammatical clarification, some examples were elicited.
functional divergences between the Jewish and Muslim varieties. I provide an explanation of this phenomenon involving a Northwest Semitic substrate underlying the Jewish dialects. The final part of the article deals with the compound forms of the p-stem (qāʿd, qāʿ, kān, and ḥābb).

2 The Verb System of Jewish Gabes

The structure of the verb phrase in JG comprises the following primary elements: the verb itself, preverbal particles or auxiliary verbs, and negation particles. The inventory of the last two elements differs from dialect to dialect. This issue will be analyzed more closely in the section that follows.

The two basic forms of the verb in JG are called in the present study the suffix-stem (s-stem) (fʿal) and prefix-stem (p-stem) (yafʿal). Scholars of spoken Arabic have also been known to use the terms perfective and imperfective (e.g., Brustad 2000), the former occasionally being replaced by the term ‘perfect’ (Eisele 1990:174). This terminology in JG is not always accurate, especially in light of the distinction between lexical and formal (viewpoint) aspect, and the possible tense-related implication it might bear. Thus, in order to avoid any imprecisions, in what follows I will be using terminology based on the morphology. Moreover, the term ‘perfect’ in some studies designates a specific aspectual value coded formally by the active participle (Brustad 2000:142; Eisele 1990:173). As will be shown in the subsequent section, the active participle in JG has limited usage and fulfills a different function. As regards negation, JG has two basic patterns: (1) verbal negation: mā verb + š clitic, and (2) predicate negation expressed by the particle muš.

2.1 Distinction between Preverbal Particles and Auxiliaries

The emergence of preverbal particles in any language is closely related to its internal, diachronic processes of grammaticalization and morphological reduction (Stewart 1998:105). The category of preverbal particles in JG is interconnected with the role of auxiliary verbs and it is therefore sometimes difficult to unequivocally draw a distinction between them. Certain verbs are in the process of a gradual, functional split, serving on the one hand as fully-fledged, inflected verbal forms, and as frozen particles on the other. Their double nature seems to present some difficulties for the analysis of Arabic dialects. Harrell classifies under the category of ‘auxiliaries’ in Moroccan both those items lacking full conjugation and those with regular verbal forms (Harrell 1962:178). Contrary to this, Eisele, when investigating auxiliaries in Egyptian Arabic, sets out four features they display, one of them being obligatory subject
coreferentiality among members of the verb phrase (Eisele 1992:160). In the present article, following Eisele, a clear distinction between those two categories is made. Thus, lexical items lacking full conjugation will be classified as preverbal particles, while verbs coreferential with the subject will be grouped under the category of auxiliary.

2.2 The Origin of Preverbal Particles in JG

Four preverbal particles can be distinguished in JG. They stem from two separate verbal forms, i.e., qāʿəd and kān. The first particle is an uninflected form of the active participle (henceforth: AP) qāʿəd. As I shall argue, this form gave rise to a number of clitics, the most obvious being qāʿ which presumably emerged due to the loss of the final consonant, which might have taken place after it underwent devoicing to [t] and subsequent assimilation to the [t] conjugation prefix of the 2SG, 3FSG and 2PL.4 The two other particles are kān5 and kān. While the latter is no doubt a grammaticalized form of the 3MSG s-stem form of the verb ‘to be,’ the origin of the former is less certain. Two possible paths of development can be proposed. The particle could have emerged due to the loss of the final [n] sound of the form kān. Again, this could have been caused by assimilation to the conjugation morpheme n- of the 1SG/PL and extended analogically to all other positions. As will be shown later, this explanation does not hold water in light of the data. Alternatively, as I shall argue, it developed from the participle qāʿəd, representing the next stage in the development of the particle qāʿ.6

As reflected in emphasis spread, the sound [q] in JG is the weakest of the emphatic consonants. [q] could have, therefore, undergone de-emphaticization, turning into the unaspirated stop [k]. It also is worth noting that cross-dialectally, the fronting of [q] to the post-velar position (which also reflects its weakness as an emphatic) is one of the characteristic traits of sedentary dialects (Aguadé 2018:45). Below one can find the hierarchy of emphasis spread in

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4 The tendency of the preverbal particles to assimilate to the personal prefixes of the main verb has already been pointed out by Stewart, who gives an example of the Egyptian bi-clitic turning into mi- in the 1PL, i.e., minākul ‘we are eating,’ instead of *binākul (Stewart 1998:117).

5 In the transcription, an unaspirated stop is represented as [k], while its aspirated counterpart is [k].

6 A similar phenomenon of phonetic reduction of a preverbal element is attested in Neo-Aramaic dialects, where the bat particle in the construction bat-qatəl sometimes turns into t-. The parallelism is even more explicit considering that this particle likely originates in the MSG form of the active participle of the verb ‘to want.’
JG, where (3) indicates the strongest emphatic impact on the adjacent consonants and (0) the weakest:

\[
\begin{array}{cccc}
3 & 2 & 1 & 0 \\
/\ddbar/ & /\ddbar\ddbar/ & /\ddbar\ddbar\ddbar/ & /\ddbar\ddbar\ddbar\ddbar/ \\
\end{array}
\]

Similarly, the realization of [‘] in the dialect is much weaker than in other varieties of Arabic, especially the eastern ones. Instances of the elision of [‘] are also attested in neighboring Jewish Tripoli, where one occasionally finds the form ġa used as a truncated version of the genitive exponent ġ’a.7

When it comes to the vowel, since the particle always precedes a verbal form and does not constitute an independent entity with its own stress, one can expect length reduction from [ā] to short [a] in the stream of natural speech.8 Another explanation for the reduction of this vowel could be a degrammaticalization of the original verb form. As pointed out by Stewart, some clitics emerge due to the loss of a personal prefix, by which they become grammatically dependent items (Stewart 1998:118). In the form qa‘əd the long [ā] vowel is central for coding the grammatical function of the AP and therefore its reduction to a short [a] might be an expression of its syntactic dependence.

In the following paragraphs I shall present arguments in favor of reconstructing the origin of the particle ka-, used to denote progressive events, in the AP qa‘əd. The reconstruction is based on the following phonological processes leading to the emergence of the particle ka- in JG:

\[
\text{qa‘əd} \rightarrow \star \text{qa‘ət} \rightarrow \text{qā‘} \rightarrow \star \text{qa‘} \rightarrow \star \text{qa} \rightarrow \star \text{ka}
\]

The process described above involves a number of cross-linguistic phenomena involving language change that have been under investigation the past few decades (DeLancey 1997; Bybee 2003; Aarts 2004). Namely, as demonstrated above, the evolution of AP qa‘əd towards a progressivity marker was furnished by the subjunctive gradience of this form, which, in turn, has led to its reanalysis and subsequent grammaticalization.9 Moreover, the sequence of

7 Observation made on the basis of my own transcriptions of the recordings from Jewish Tripoli available on the website of the Mother Tongue Project: https://www.lashon.org/en/taxonomy/term/58.
8 Marcel Cohen distinguishes three stages in the formation of a clitic: 1) full word, 2) slightly reduced word, 3) considerably reduced word (e.g., the Levantine preverbal particle ‘ammāl > ‘a) (Cohen 1924:57–58).
9 As explained by Aarts, the subjunctive gradience designates different levels of membership within the same category (e.g., the adjective and its ability to occur in both attributive and...
synchronously attested forms: qāʿad > qāʿ > ka, demonstrates that the process underlying this change consists of a number of micro-changes, which represents gradualness. In other words, the case of the ka particle and its derivatives constitutes a point of intersection between the synchronic gradience and gradualness, which by its nature is diachronic (Traugott & Trousdale 2010:22). The coexistence of the full verb form alongside the auxiliary and clitics deriving from it in JG therefore offers a unique insight into the dynamics of language change.

2.3 The Particle ka- in Other Dialects

The occurrence of the progressive marker ka- is not limited to JG. In a comparative study of a vast variety of Arabic dialects (stretching from Morocco to Iraq) conducted by Agius & Harrak, it is argued that numerous dialects from different subgroups utilize morphological variants of this particle (Agius & Harrak 1987). Agius & Harrak argue the source of all such particles to be the modal participle qāʿid. Regarding Moroccan, however, Stewart calls their claim into question, arguing that the Moroccan particle ka- derives from the perfective form of the verb kān used in conditional clauses (Stewart 1998:104). Its development from marking conceptual dependency within conditional apodoses to denoting every type of the indicative mood seems to parallel the expansion of the particle b- in other dialects. Owens argues that marking evidentiality with b- was facilitated by its usage in sequences of verbs occurring in narratives. This stage of development is exemplified by Nigerian Arabic (Owens 2018:243). This argument has also been made by other scholars who agree that it was the modal use of the verb ‘to be’ in conditional clauses that gave rise to the particle ka- (Corriente 1977:140–141; Hanitsch 2019:256–258). As argued by Khan, a similar development is evidenced in some NENA dialects, where the construction

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10 The main argument against the AP qāʿid being the source of ka- in Moroccan Arabic is that in some dialects of the region the particle exhibits vocalic vestiges of the suffix conjugation of the verb ‘to be.’ Namely, in Andalusian Arabic there are prefixes kīn, kīt, and kīy; the Algerian dialect of Taher utilizes ka- for the third person, but ku- for the first, while in some Moroccan dialects one finds variants kan- and kīn- (Marcais 1956:152, Stewart 1998:112). Heath provides further support for this claim and argues that the source of the Moroccan ka- is the verb ‘to be’ (Heath 2002:211). Other scholars, in turn, have argued that the Ka- particle in Moroccan derives from kāʾin (Fischer & Jastrow 1980:75). Although Stewart’s reasoning is much more compelling, one cannot exclude the possibility that the emergence of the particle in question in Moroccan Arabic could have been furnished by the morphological merger of a few lexical items.
bət-qaṭal—originally used in the apodosis of conditional clauses—acquired new functions and started denoting discourse dependency and habitual events (Khan 2021). Khan explains this by means of construction grammar, whereby syntactic spread takes place due to a cognitive schematization of grammatical constructions.

The model argued by Stewart and others, which derives ka- in other dialects from the verb ƙān ‘to be,’ does not seem to be plausible in the case of the JG particle ƙa- denoting the progressive. Rather, JG ƙa- is more likely to originate in qāʾəd. In support of this, I present two arguments, one phonetic, and the other syntactic. Firstly, within JG, the [k] of the particle differs from the [k] in ƙān in terms of aspiration. While the [k] of the particle is unaspirated, the [k] in ƙān is conspicuously aspirated [kh]. The aspiration of [k] is a widespread phenomenon across Arabic dialects, resulting, in some of them (especially Bedouin dialects of the Gulf and northern Arabia), in further development to [č], e.g., in Baghdadi Arabic (Holes 1991:655).11 In JG ƙa-, the unaspirated allophone points towards the uvular origin of this consonant.

The second argument is the clear syntactic distinction between the use of ƙān and the ƙa- particle and other forms deriving from qāʾəd. Whereas ƙān indicates the past and together with a predicative form indicates habituality and occasionally fulfills contrastive function (cf. the following paragraph), the latter particles are functionally interchangeable and mark progressivity, albeit with different time references.12

2.4 Origin and Distribution of ƙān+p-Stem Construction

The function of ƙān in JG is relatively similar to that of Classical Arabic. According to Marmorstein, the auxiliary ƙāna in CA functions as a temporal adapter, which expresses anteriority of the predominantly aspectual predicate (2016:68). In addition, as pointed out by Nebes (1982), it denotes past tense, where the time reference cannot be retrieved from the context. JG utilizes both ƙān, a frozen form of the verb ‘to be,’ i.e., a preverbal particle, as well as a fully conjugated form, i.e., an auxiliary, from which the frozen form originates. Both mark past habitual events. This development could potentially be interpreted as the first stage of the cliticization of the verb ‘to be.’

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11 In some dialects, for example in the Arabic spoken on the south coast of Iran, the affrication of the fronted [k] takes place only in the environment of front vowels, e.g., samač ‘fish’ (Leitner et al. 2021:230). It is worth noting, however, that the affrication of both [k] and [g] is a feature of Bedouin type dialects and does not take place in the sedentary ones.

12 This issue will be further discussed in the analysis.
It appears, therefore, that in JG two separate developments led to the emergence of two distinct particles, i.e., \( ka \)-, from \( qāʿəd \) that marks a progressive event, and \( kān \) denoting past, predominantly habitual events. The distribution of these particles will be analyzed in greater detail below.

3 Aspect and Tense – Theoretical Remarks

The relationship between tense and aspect in some languages can be confusing, leading to imprecise conclusions.\(^\text{13}\) It is crucial, therefore, to draw clear distinctions between the two categories and precisely define their domains. In what follows I shall briefly present the terminology used in this article; I shall first define aspect and subsequently contrast it with tense.

3.1 Aspect

Aspect can be generally defined as the shape of the event expressed by the verb.\(^\text{14}\) It indicates the internal temporal constituency of the event, i.e., whether an event was punctual or durative (Comrie 1976:3). Various types of aspect are expressed by binary oppositions characterizing an event.\(^\text{15}\) A situation can be viewed as perfective, i.e., viewed as temporally bounded, or imperfective, i.e., expressing duration in time, without indicating whether it ended or not (Forsyth 1970:347). The distinction between those two categories also entails considering the way in which they are presented. Perfective thus presents the situation as a whole, while imperfective focuses on its phasal nature and is seen from within (Comrie 1976:16). Although no unequivocal definition of aspect exists, it could be tentatively assumed that cross-linguistically, the imperfective is associated with continual, habitual, and generic meaning, while the perfective has punctual, iterative, and resultative connotations (Binnick 1991:156). In addition, aspect can be divided into two subgroups, namely, formal and lexical aspect (Sasse 2002:203).

\(^{13}\) As pointed out by Comrie, there is a conceptual and terminological confusion of these terms in the scholarship of Romance languages (Comrie 1976:94). The weakness of the terminology has also been observed by Eisele (1991:76) in the study of Woidich (1975) on AP forms in Cairene Arabic.

\(^{14}\) For the history of the scholarship of aspect and the questions it poses see Binnick 1991:135–158.

\(^{15}\) As argued by Sasse, presently there is a scholarly consensus that the common denominator of various aspectual distinctions is the notion of ‘boundaries,’ i.e., the same event can be perceived as having endpoints, or as being temporally unbounded (2002:203).
Formal aspect is expressed by the morphology of the verb. In other words, it is the strategy by which the conjugation codes a situation as perfective or imperfective. As pointed out by Eisele (2011), Arabic verb morphology, in contrast to, for example, Slavic languages, is rather poorly equipped for aspect marking. Most of the information about the temporal specification of the situation is provided by external elements—preverbal particles, auxiliaries, and the context of the sentence. Formal aspect is sometimes also called ‘viewpoint aspect,’ as it expresses the way in which a speaker views the situation. Two main types of this formal aspect can be distinguished, i.e., perfective, which views an event from the outside, and imperfective, which depicts it from within.

In contrast to formal aspect, lexical aspect is not grammaticalized, but is expressed by the meaning of the verb itself. A synonymous term used in the literature is *aktionsart*, i.e., type of action (Comrie 1976:6; Eisele 1990:190; Forsyth 1970:20; Brustad 2000:165). It is therefore an inherent semantic feature of a verb. As one might expect, verbs can be divided into multiple semantic categories, which in turn interact in various ways with the formal aspect (Eisele 1990; Brustad 2000:168). A mere semantic classification of verbs is of little significance and does not provide any crucial information about a language. It is rather the interaction between those classes and the verb morphology that tells us how a language expresses aspect. In general terms, it can be assumed that the s-stem expresses completion, entry into a state, or onset of action, while the imperfective produces meanings related to habituality, progressivity, or state. Vendler distinguished among four classes of lexical aspect: states (like, desire, want, etc.), activity (run, walk, swim, etc.), achievement (lose, find, recognize, etc.), which expresses a punctual event, and accomplishment (build a house, write a novel, etc.), which indicates a process leading to a certain result (Vendler 1957). A more detailed classification based on lexical aspect and its relationship with the verb system in JG will be proposed below.

3.2 **Tense**

In contradistinction to aspect, tense situates an event on a timeline and in reference to some other time, usually the time of speaking (Comrie 1976:66, Bybee, Perkins, & Pagliuca 1994). It can be expressed in various ways, both lexically and by means of verbal morphology. Cross-linguistically, the most common distinction coded morphologically is that of past and non-past. As has already been mentioned, there is some disagreement about how verb morphology in Semitic languages relates to both aspect and tense. Within the field of Arabic linguistics, scholars generally agree that the Arabic verb expresses aspect rather than tense (Eisele 1990; Horesh 2011; Brustad 2000:203). If this is indeed the case, a question arises as to what extent Arabic verb morphology
provides information about tense? On this topic, in contrast to other topics in the syntax of spoken Arabic, several insightful studies exist (Cowell 1964:340; Eisele 1990; Horesh 2002). The results of these studies seem to converge and confirm that the only tense feature stable across various dialects is the past encoded by the s-stem. The p-stem, on the other hand, is much more complex, allows for a variety of preverbal elements, and has a tense value which is much more diverse. Very little is actually known yet, however, about the tense and aspect systems specific to North African dialects.

Another important term related to the notion of tense is time reference, one of the three elements in Reichenbach’s system for the temporal structure of verbs (1947). Reichenbach distinguished between three points on the timeline encoding tense: point of speech, point of event, and point of reference. The last of the three orients an event in relation to another point in time—which is usually another event. As has been established above, tense is usually coded by verb morphology. Time reference in turn refers to how tense locates a state of affairs in time and can be produced by both the sentence and the context. As one might expect, in light of the weakness of the Arabic tense system, time reference will be determined primarily by lexical strategies and discourse context (Brustad 2000:203). Two types of time reference can be distinguished: (1) absolute time reference, which presents the temporal dimension of a verb in relation to the time of speaking and (2) relative time reference, which defines the time of an event in relation to another event (Comrie 1976:ii; Reichenbach 1947). As pointed out by Brustad, and as the following analysis will prove, the Arabic tense system in the main clause is closely related to the speech time. On the other hand, the time reference of the dependent clause is determined by the main clause (Brustad 2000:204).

4 Analysis

In the following section, I analyze the aspectual and temporal functions of the verb system in JG. I will argue that the verb in this dialect, without any overt time expression, is mainly aspectual and its temporal dimension is either absent or secondary. I will apply a modified version of the model used by Simeone-Senelle (1985) in her study on systems of aspect and tense in Tunisian

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16 Even to this rule there are some exceptions. As demonstrated by Horesh (2011), in Palestinian Arabic some stative verbs in s-stem might have non-past reference.

17 The complexity of the p-stem and its dependence on the discourse has also been observed for Classical Arabic (Marmorstein 2016:239).
Arabic, one that was based on data provided by a female informant from Aʿulād Msallom (26 kilometers north of Sfax). Unfortunately, the religious identity of the informant is unknown. However, certain phonological features (such as the realization of [q] as [g]) point to a Muslim background. To the best of my knowledge, this is the only available study on aspect and tense in Tunisian Arabic, and therefore it deserves special attention. Simeone-Senelle claims that plain verb forms (i.e., those without temporal adverbial contours) are purely aspectual and do not encode any time reference. She distinguishes two principal forms, namely imperfective (fr. inaccompli), associated with unfinished, ongoing events, and perfective (accompli) which express completed, terminated actions. This binary opposition, in turn, has evolved in order to render the notion of concomitance, which is understood as the co-occurrence of an event with another state of affairs—speech time or another point of reference invoked in the utterance (Simeone-Senelle 1985:58). Thus, the concomitant form of the imperfective is the actual or relative present, while the concomitance of the perfective is expressed by the perfect, expressing a past event concomitant with the present (as opposed to a non-concomitant aorist in some languages, which does not have any additional time dimension).

The conclusions of the study in question and the verb forms provided by the informant substantially differ from the state of affairs in JG. As I shall argue, JG does not express perfect in the same way as Aʿulād Msallom, and the functional distribution of the AP is different. Moreover, the two dialects diverge in the way they express the future tense. Not included in Simeone-Senelle’s study are compound forms with auxiliary verbs (kān + p-stem), nor forms with preverbal particles. Since their occurrence in JG is significant and they play an important role in the relationship between tense and aspect, I shall include them in my model. The following analysis is organized according to the morphology of the verb forms attested in JG. The aspectual and temporal values of each of them will be explained.

5 Plain Forms

5.1 P-stem
This stem expresses incomplete and temporally unbounded events. The temporal value of the p-stem is undefined and strongly dependent on the context.

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18 I would like to express my gratitude to Prof. Marie-Claude Simeone-Senelle for sharing her article with me and providing me with some insightful comments on Tunisian Arabic.
It is compatible with the following lexical and viewpoint types of aspect. For lexical aspect, I adopt Vendler’s lexical aspect classes (as explained above).

6 Lexical Aspect Class

(1) State

\[ ləkbī́́ra  tˈárf  li  ma  ˈandáš  şəmm \]
\[ the-old  know.PFX.3FS  that  NEG  to-her-NEG.PRCL  poison \]

The old one knew she did not have any poison.

(2) activity

\[ qá́llu  la  nˈárə́f  u  la  žítni  u \]
\[ say.SFX.3SM  no  know.PFX.1SG-you  and  no  come.SFX.2SG-me  and  la  žáftə́k \]
\[ no  see.SFX.1SG-you \]

He told him: I do not know you, and you did not come to me and I have never seen you.

In both (1) and (2) the time reference is past.

(4) activity

\[ yəmšū́  ləlbhə́r  kul  nhar  şəbbā́t \]
\[ go.PFX.3PL  to-the-sea  every  day  Saturday \]

They go to the sea every Saturday.

The above example expresses a habitual present. However, an activity with future time reference can also be encoded by the p-stem. This includes both plain verbs (4), and, according to Simeone-Senelle’s terminology, concomitant forms, accompanied by a lexical ‘actualizer,’ i.e., an adverb indicating its future reference (5):

(5) activity

\[ ġúdwə́  nzhīblə́k  ᵁl-flū́š \]
\[ tomorrow  bring.PFX.1S-to.you  the-money \]

Tomorrow I will bring you money.
7 Viewpoint Aspect

(1) habitual
Both past and present habits can be expressed by means of this form:

(6) \( y\ddot{o}q\acute{a}d\dot{u} \ k\dot{u}l \ l\acute{i}l\acute{a} \ u \ y\ddot{\o}\dot{\s}s\acute{a}l\acute{\d}\acute{\u}\acute{u} \)
\( \text{sit.PFX.3PL} \ \text{every night} \ \text{and} \ \text{pray.PFX.3PL} \)
They would sit down every night and pray.

The above passage comes from a dialogue about the way the Jews of Gabes celebrated the Omer; the reference is therefore past. However, as the next passage demonstrates, it can also encode the present.

(11) progressive
(7) \( t\acute{o}\dot{\m}m\acute{a} \ \w\acute{a}\dot{h}\dot{a}\dot{d} \ y\ddot{x}\acute{\a}\acute{l}\acute{l} \ f\ddot{u}\dot{m}\acute{m}\acute{\u} \)
\( \text{there-is one open.PFX.3MS mouth.his} \)
\( \text{wa} \ y\ddot{\o}\dot{\s}\acute{\t}\acute{\o}\acute{n}\acute{\n}\acute{\n}a} \ \h\ddot{a}\dot{t}\dot{t} \ \d\acute{\i}\acute{l}-\d\acute{\l}\acute{\d} \ y\ddot{\o}\dot{\t}\acute{\d}\acute{\d}u \)
\( \text{and} \ \text{wait.PFX.3MS until the-dates fall.PFX.3PL} \)
\( \text{fif\ddot{u}\dot{m}\acute{m}\acute{\u} \}
\( \text{in.mouth.his} \)
There is a man, he opens his mouth and waits until the dates fall into his mouth.

As the above example demonstrates, p-stem expresses progressive events stretched over an interval, which are characterized by their homogenous character at every point within the interval.

In sum, it can be established that the p-stem does not have any fixed temporal value and its time reference is entirely dependent on the context. In terms of lexical aspect, the only category from Vendler’s model that has not been demonstrated in this stem is accomplishment.

7.1 \( \text{S-stem} \)
The principal role of this form is encoding complete events seen as a bounded whole. In the vast majority of cases, its time reference is past. The following temporal and aspectual features can be distinguished:
7.1.1 Lexical Aspect

(I) Activity

(8) hū́wa žra wa xda ʿaṣá u
he run.SFX.3MS and take.SFX.3MS stick and
ḍṛə́bbā dárha
hit.SFX.3MS.her back.her
He ran and took a stick and hit her on the back.

(II) Accomplishment

(9) šə́ddi šəḷṭān bántek azzgéra bnāt
master.my sultan daughter.your the-young build.SFX.3FS
al-qaṣar
the-castle
Your majesty, it is your youngest daughter who has built this castle.

(III) Achievement

(10) fáhmu tómma wáḥad húni
understand.SFX.3PL there.is one here
They realized that someone was here.

As demonstrated, in all the above examples the s-stem has a past time reference.

7.1.2 Viewpoint Aspect

The s-stem is compatible with lexemes implying iterative and perfect meaning:

(I) Iterative

(11) šállaf mónni flūš tláta marṟát
borrow.SFX.3MS from.me money three times
He borrowed money from me three times.

(II) Perfect

A major difference between JG and other Arabic dialects has to do with encoding the perfect. Whereas in many other dialects the perfect is encoded by the AP, it is encoded by the s-stem in JG.19 Thus, an immediate past that bears a relation to the present is expressed by s-stem:

19 In Arabic dialects outside of North Africa, the perfect meaning of the AP is a widespread phenomenon (Brustad 2000:182).
(12) \[\text{tuwa } \text{xraž} \]
\[\text{now } \text{exit}.SFX.3S\]
He has just gone out.

Similarly, the s-stem also expresses a resultative meaning:

(13) — ‘alāš ʿānti ʿātī? —tuwa kəmmált təndīf
\[\text{why } \text{you } \text{tire}.SFX.2FS \text{now } \text{finish}.SFX.1S \text{cleaning} \]
t’a ʿddār
\[\text{GEN } \text{the-house} \]
—Why are you tired?—I have just finished cleaning the house.

Such usage of the s-stem with perfect meaning as in JG (12-13) is in fact found in ʿAulād Msallam as well, especially with certain verbs of movement and perception (Simeone-Senelle 1985:71). However, in addition to those, there is a significant group of verbs in that dialect which express perfect through the fāʿil pattern, i.e., the historical AP. This includes verbs of perception, such as ‘to understand,’ ‘to hear,’ ‘to see,’ but also various telic and atelic verbs, such as ‘to buy,’ ‘to run,’ ‘to give birth.’ The following examples are taken from Simeone-Senelle (1985). In the subsequent section they will be contrasted with analogous examples from JG:

(14) fāhma ʿal-dars?
\[\text{understand}.AC.\text{PTCP}.FS \text{the-lesson} \]
Have you understood the lesson?

(15) bāni filla kebīra láken baʿida ʿal-bled
\[\text{build}.AC.\text{PTCP}.MS \text{villa big but far.away on-city} \]
He has built a big house, but it is far away from the city.

(16) he-r-rāžel šāri ʿaz-ẓmel
\[\text{this-the-man buy}.AC.\text{PTCP}.MS \text{the-camel} \]
This man has just bought a camel.

(17) ʿal-mrā wēlda
\[\text{the-woman give.birth}.AC.\text{PTCP}.FS \]
The woman has given birth.
As can be seen from the above examples, the ǧāʿil pattern in ʿAulād Msallām covers several types of perfect such as resultative (16) and recent past (17). 20 According to Simeone-Senelle, the distribution of the s-stem and ǧāʿil pattern is somewhat inconsistent and certain verbs appear in both forms with perfect meaning; however, the informant notes that ǧāʿil expresses a longer duration from the speaker’s point of view in the present (Simeone-Senelle 1985:72).

By contrast, JG never utilizes the AP to encode the perfect. Instead, to render the recent past, JG employs the s-stem with an adverbial ‘actualizer.’ A resultative meaning is inferred from the context. My informant rejected the forms from ʿAulād Msallām, and interpreted them as bearing a different meaning (the function of those forms will be discussed in detail in the section on the AP) and instead proposed the following:

(18) ǧāmt  ǧd-đärš?
understand.ŠFX.2MS the-lesson
Have you understood the lesson?

(19) bna filla kbíra áma baʿída män
build.ŠFX.3MS villa big but far.away from al-blád
the-city
He has built a big house, but it is far away from the city.

(20) hāk  ar-řāžel ŋuwa šra əž-žməl
that the-man now buy.ŠFX.3MS the-camel
This man has just bought a camel.

(21) al-mrá  wóldat
the-woman give.birth.AC.PTCP.FS
The woman just gave birth.

Due to the lack of sufficient comparative data, it is nearly impossible to draw any cross-dialectal conclusions regarding the coding of perfect in North African Arabic. The use of the AP to express a past event bearing relevance to time of speech is attested in Muslim Moroccan Arabic (Brustad 2000:183). By contrast, in Jewish Tripoli (Yoda 2005:308) I have found only one occurrence of the AP, which Yoda translates using the English present perfect:

20 For different types of perfect see Comrie 1976:56.
On the other hand, there are numerous instances of the resultative state which is expressed by the s-stem:

(23) aná xalčək u żič mən bʿid u
me aunt and come.SFX.1SG from far.away and
nḥəṃ ṣaṇak
want see.PFX.1SG.you
(... I am your aunt, I have come from afar, wanting to see you (...) (Yoda 2005:302)

Likewise, in the textual corpus of Jewish Tunis (David Cohen 1964), I have not found any example of the AP expressing perfect. However, there are numerous cases of the s-stem clearly used in perfect context. The following passage comes from a story about an alleged appearance of a comet in the sky. One of the characters, who has not seen the comet, asks a random person about the reason for the panic in the city. The person answers:

(24) mnih mà qās tšuf? əddənya màš
good NEG PVPT see.PFX.2MS the-world FUT
tufa baʾbūš ənnəžma xraž
finish.PFX.3FS tail the-star go.out.SFX.3SM
Mais tu ne vois donc pas? Cʼest la fin du monde, la queue de la comète est sortie. (David Cohen 1964:140)

The appearance of the comet bears clear relevance to the present of the dialogue. Nonetheless, instead of the AP xarəž, the s-stem is used. It seems, therefore, that Jewish Tunis expresses perfect in the same way as JG. On the other hand, similarly to what Brustad has found in Muslim Moroccan Arabic, the resultative function of the AP is well documented in the Bedouin dialect of Douz:

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21 Other usages of this form in Jewish Tunis will be mentioned in the section on the AP.
22 The example was provided by Prof. Ritt-Benmimoun in private correspondence with the author.
These data appear to indicate that within the Tunisian dialect group, and perhaps within the dialects of North Africa, there is a split between Jewish and Muslim dialects in the encoding of the perfect, with a strong preference among Jewish dialects to express that aspect with the s-stem.23

In what follows I propose an explanation for the lack of use of the AP with perfect meaning and the strong preference for the s-stem for the expression of perfect in JG.

7.2 **Active Participle fāʿil**

As presented above, in many Arabic dialects the fāʿil pattern, historically the active participle, bears the meaning of perfect. Scholars of Arabic highlight the resultative (Brustad 2000:183) and stative (Eisele 1990) nature of this form.24 In other words, it denotes a state with relevance to the speech time. In addition to this principal meaning, Brustad also notes that the AP of verbs of motion indicates a progressive action (2000:185).

In JG the AP does not have the meaning of perfect. It denotes events ongoing at the speech time. Its distribution is limited to a semantically heterogeneous group of verbs including verbs of motion, perception, and state. It is worth noting that the use of the AP is often optional, and the same meaning can be rendered by the construction qāʿad + p-stem. Listed below are some APS occurring in the textual corpus and in conversations with the informants:

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23 From a typological point of view, a parallel to the split between Muslim and Jewish dialects in the encoding of the perfect can be found within Argentinean Spanish which, among the modern varieties of South American Spanish, is considered to be highly idiosyncratic. Compared to other dialectal variants of Spanish, the use of the pretérito perfecto compuesto is extremely limited in the vast majority of regional varieties of Argentinean Spanish and simple past tense is used instead. However, in the variety known as norteño spoken in the province of Tucumán, in the northwestern part of the country, speakers use the pretérito perfecto compuesto regularly. In contrast to the Argentinean situation, in castellano, i.e., Spanish spoken in Spain, the pretérito perfecto compuesto is a widely used tense, with higher occurrence than the English perfect (for example, it is possible to combine it with time specification, which is ungrammatical in English). Therefore, the sentence: Carlos ha llegado in castellano and norteño would be rendered in Argentinean Spanish: Carlos llegó ‘Carlos has arrived.’ There is likely no unequivocal explanation for the discrepancy in the expression of the perfect between most varieties of Argentinean Spanish and the norteño dialect, and between Argentinean Spanish and castellano, but social and cultural separatism is one of the possible factors.

24 The term ‘stative’ is rather inaccurate considering the class of lexical aspect also designated ‘stative.’
It is worth noting that not every verb can form an AP. Moreover, the informant has pointed out that some of the forms on the list above are acceptable, but a p-stem form preceded by qāʿəd would sound more natural. Specifically, the APs māši, rāqəd, wāqəf, lābəš, and qāʿəd were considered the most acceptable whereas the APs šārəb and wākəl were deemed as sounding more natural in the qāʿəd + p-stem construction. The informant also rejected some forms occurring in Simeone-Senelle's study, namely: żārī ‘running,’ qābəl ‘accepting,’ wālda ‘giving birth,’ fāḥəm ‘understanding,’ indicating that they sounded unnatural.

It should be noted that the distribution of the AP expressing perfect in Muslim Tunis also seems to be restricted. It is not possible to express the perfect of recent past by means of the fāʿil pattern. Instead, ma-zált-ki25 + s-stem is used.26

(26) ma-zált-ki xuʁəʒ
       just go.out.SFX.3MS
He has just gone out.

(27) ma-zált-ki niʃəft ədḍəɾ
       just clean.SFX.1S the-house
I have just cleaned the house.

25 This construction is apparently a variant of ma-zal-ki appearing in Singer's grammar of Muslim Tunis (1984:651).
26 I am deeply indebted to Mr. Anis Mokni for providing the above examples and for sharing his insightful comments on Muslim Tunis.
An alternative construction for expressing a very recent event is *tawawīn* + *s*-stem:

(28) əlfilm  *tawawīn*  bdʾ

    the-film  now  start.SFX.3MS

    The film has just started.

In this usage, Muslim Tunis converges with *JG*, which utilizes *ṭūwa* + *s*-stem to express the perfect of recent past, but differs from *ʿAulād Msallam*, which applies the *fāʿil* scheme in this context (cf. example (3) above).

Nonetheless, Muslim Tunis utilizes the *AP* to express a resultative aspect, describing past events relevant for the speech time:

(29) šūftu  hadóka?  bānī  dār  kbīra

    see.SFX.2MS.him  that  build.AC.PTCP.MS  house  big

    Did you see that man? He has built a big house.

(30) —šbīha  ma  žītš?  —māhī

    what. in.her  NEG  come.SFX.3FS.NEG.PRCL  but her

    wělda  ždīda

    give.birth.AC.PTCP.FS  new.FS

    —Why did she not come?
    —She has given birth.

As noted, the use of the *AP* to express perfect occurs across the Muslim varieties of Arabic, as exemplified in three different dialects:

(31) hād-əl-ktāb  āna  qāržh

    this-the-book  I  read.AC.PTCP.MS.him

    Je l’ai lu, ce livre! (Moroccan, Caubet 1993:231)

(32) ḥaliyyan  mustārtuh

    as.of.now  chose.AC.PTCP.FS.him

    As of now, I have chosen him. (Syrian, Brustad 2000:189)

(33) Il-kahraba  wāšla?

    the-electricity  arrive.AC.PTCP.FS

    Has the electricity arrived? (Kuwaiti, Brustad 2000:189)
7.3 The Divergent Use of the Active Participle in Muslim and Jewish Varieties Suggesting a Northwest Semitic Substrate Underlying Jewish Varieties

As the previous sections have demonstrated, Jewish and Muslim dialects utilize the AP in different ways; in the former it conveys present, ongoing events and is employed with a limited number of verbal lexemes, whereas in the latter it is used generally to denote the resultative perfect. I have shown that this differing usage is not limited geographically but rather appears to be an isogloss distinguishing Judeo-Arabic from its Muslim counterparts in general. This phenomenon is, therefore, very likely rooted deeper in the cultural and historical development of the two communities, suggesting a different substrate underlying Judeo-Arabic. I would like to offer here a few possible explanations related to such a possibility, within the context of a multifactorial conditioning of language change.

Substrate is a term denoting the result of a language contact situation in which speakers of one language shift collectively to the use of another language, usually due to geopolitical changes (Saarikivi 2006:11). The receding language, however, leaves some traces in the adopted one, e.g., prosody, loan-words, or grammatical constructions, forming in this way a stratum, or ‘layer.’ In the case of North African Arabic, it is generally agreed that two main substrata exist, namely Late Latin and Berber, the former being spoken in the coastal cities, while the latter is used in the hinterland (Aguadé 2018:34).

A fundamental question in our case is what was the language of everyday communication of the first Jewish communities in North Africa, especially before they began speaking Arabic?27 There is, however, little to no documentation of their languages. Before the advent of Islam and the subsequent spread of Arabic as the language of everyday communication, Aramaic was widely used by Jewish communities throughout the Middle East, for example in Palestine and Mesopotamia (Gzella 2015:292, 381). Could it be tentatively assumed that the first communities in North Africa, as in other regions of the

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27 Although the sources on the first Jewish settlements in North Africa are very scant, it can be assumed that a Northwest Semitic language was imported to North Africa due to the resettlement of the Jewish population from Palestine. According to the treatise of Josephus Flavius, Against Apion 11, the beginning of Jewish presence in the area west of Egypt is related to the decision of King Ptolemy Lagi (328–285) to settle Jews from Palestine in the Libyan city of Cyrene, which he had conquered around the year 300 BC. Another wave of exiles from Palestine came to North Africa after the destruction of the Second Temple (Hirschberg 1974:24). As far as the linguistic environment of the North African Jewish communities is concerned, Sebag suggests that before the Roman conquest, the Jews living in the area corresponding to today’s Tunisia were using Punic (1991:22).
present-day Arab world, were also using varieties of Aramaic, a Northwest Semitic language, before they adopted Arabic? The distinct use of the AP in the Jewish varieties of Arabic vis-à-vis their Muslim counterparts appears to suggest this. Alternatively, the first Jewish settlements might have adopted Punic, another Northwest Semitic language spoken in North Africa in the first centuries of the first millennium, mainly in the cities (Hirschberg 1974:40). Both in the Aramaic that predates the spread of Islam (as exemplified by Jewish Palestinian Aramaic, Bunis 2018:209–210) and in Punic (Krahmalkov 2001:199–200), the syntax of the AP generally parallels that of modern Judeo-Arabic. Already in pre-Islamic Jewish Palestinian Aramaic and closely related dialects, it is integrated into the verb system and, by replacing the p-stem, encodes present and immediate future (Stevenson 1924:56, Gzella 2015:302, Bunis 2018:209–210). Moreover, this usage was retained in certain Aramaic dialects after the spread of Islam and Arabic. This retention is documented in a group of three dialects of modern Aramaic termed Western Neo-Aramaic, which are spoken in present-day Syria, in the Qalamun region, 50 kilometers northeast of Damascus. In these dialects, the historic AP has retained the function of expressing present and immediate future despite very extensive influence from surrounding Arabic dialects in which the AP, as in the Muslim dialects I reviewed above, codes perfect (Bunis 2020).

I have noted that in the modern Judeo-Arabic of Gabes, the AP is employed with a limited group of semantically heterogeneous verbs. However, the common denominator of those verbs is their prevalence in day-to-day usage. It could be argued that due to their high frequency, they preserve the Aramaic syntax, while less common verbs were more susceptible to assimilation into the Arabic verb system. With those common verbs, the AP remained cognitively associated with its earlier morphosyntactic function as in Aramaic, and it is for this reason that the AP never came to encode the perfect in this dialect. The primary function of the AP for the speakers switching from Aramaic to Arabic was present and immediate future, and therefore the Aramaic substrate prevented the reanalysis of this form as the perfect.

An additional argument which could point to an Aramaic substrate is perhaps provided by the vowel system of both languages. In North African Arabic, similarly to Aramaic, one observes the phenomenon of pretonic reduction, i.e., the reduction of a short vowel before the stress. In Aramaic, it is one of the features that distinguishes it from Hebrew, where the reverse process took place—namely pretonic lengthening (Blau 2010:123). All Arabic dialects, in comparison to the classical language, demonstrate some degree of reduction of the vowel inventory. Nonetheless, as pointed out by Marçais, the more one moves from east to west, the more the vowel reduction becomes conspicuous.
Indeed, the Maghrebi Arabic vocalic material is much poorer in comparison to any eastern dialect. Below one can find a short comparison between selected eastern and western dialects:

| Eastern          | Western          |
|------------------|------------------|
| kammalat         | kəmməlt          |
| Šan‘ānī           | ‘she finished’   |
| (Watson 1993:138)| Jewish Gabes    |
| xashim           | xšəm             |
| Gulf (Holes 1990:286)| Jewish Tripoli |
|                  | (Yoda 2005:345) |
| katab            | ktab             |
| Cairene          | ‘he wrote’       |
| (Eisele 1990:174)| Jewish Tunis    |
|                  | (David Cohen 1975:95) |
| thalaatha        | tláta            |
| Gulf             | ‘three’          |
| (Holes 1990:293)| Jewish Algiers (Marcel Cohen 1912:365) |

It is worth noting that the vowel elision is much more prevalent in sedentary North African dialects than in their Bedouin counterparts, where short vowels are retained under certain circumstances (cf. Ritt-Benmimoun 2011:25, Aguadé 2018:47). Some scholars explain the tendency to drop short vowels in open syllables as a Berber substrate (Diem 1979:55). This view, however, was called into question by Kossmann, who proposed two separate and independent developments in the two language groups (2013:173). If we accept this assumption, the question remains, what triggered the reductive tendency in sedentary Arabic in the first place? The striking similarity in this respect between Aramaic and Arabic might suggest language contact between them, and that the pretonic reduction in the latter was furnished by the Aramaic substrate. Nonetheless, language contact with Berber cannot be excluded and the loss of short vowels in open syllables could have been brought about by multiple factors.

The above paragraphs were aimed at presenting similarities between Jewish North African Arabic and Aramaic, especially Palestinian, and thereby to propose the existence of an Aramaic substrate in Maghrebi Arabic, especially the Jewish varieties. This proposal is by no means definite and requires a thorough historical investigation of the beginnings of the Jewish presence in North
Africa to further support the linguistic findings. Moreover, language change is often multifactorial, and thus Punic influence, in the case of the distribution of the AP, and vowel loss due to contact with Berber are additional, and no less likely, factors.

8 Compound Forms

\[qā'd, qā', ka + p-stem\]

The origin of these preverbal particles has been proposed in the section on the verb system in JG. Essentially, I argue that both \(qā'\) and \(ka\) derive from \(qā'd\), and that they reflect different stages within a process of cliticization. The \(qā'd\) particle is attested in both inflected (35) and uninflected (34) forms:

\[
\begin{align*}
\text{(34)} & \quad \text{wan} \quad mšīt \quad \text{wan} \quad hrábt \quad qā'd \\
& \quad \text{cry.PFX.3PL} \quad \text{flee.SFX.2MS} \quad \text{PVPT} \\
& \quad \text{yəbkí́} \quad \text{PVPT} \\
& \text{Where have you gone, where have you disappeared, they were weeping.}
\end{align*}
\]

\[
\begin{align*}
\text{(35)} & \quad hýya \quad qá'\text{da} \quad t'áyyat \\
& \quad \text{she AUX scream.PFX.3FS} \\
& \text{She is screaming.}
\end{align*}
\]

Example (34) demonstrates how the MSG form of the AP has become frozen. This form, in turn, undergoes further truncation, as outlined below:

\[
\begin{align*}
\text{(36)} & \quad \text{aná} \quad ī́tāwwa \quad qā' \quad nḥádďar \quad fi \quad mákla \\
& \quad \text{I now PVPT prepare.PFX.1S in food} \\
& \text{I am now preparing food.}
\end{align*}
\]

\[
\begin{align*}
\text{(37)} & \quad 'ašýa \quad abwulád \quad \text{ka} \quad yáklu \quad wa \\
& \quad \text{evening the-boys PVPT eat.PFX.3PL and} \\
& \quad \text{šáfu} \quad \text{żižmól} \quad ža \\
& \quad \text{see.SFX.3PL the-camel come.SFX.3MS} \\
& \text{In the evening the boys were eating and saw the camel coming.}
\end{align*}
\]

The principal function of this preverbal particle is to denote ongoing events stretched over an interval, and its time reference is strongly dependent on the context. Occasionally, it is also used with ingressive verbs indicating the start of
an event, or entry into a state. When the time reference is the present, and the speaker wants to highlight the continuous character of the event, it seems that the conjugated form is preferred. This assumption is confirmed by example (35) above and further examples from Jewish Tunis, which also include prefix forms of the root qʿd:28

(38) ḥı́nā bāb ʿoddār yóqʿəd mahlūl u qāʿdīn
now door the-house aux open and aux
yódaxlu ʿazẓirān wəlfāmɪlya kolla
enter.PFX.3PL the-guests and-the-family all
Maintenant, la porte de la maison reste ouverte, et les voisins et toute la famille ne cessent d’entrer.

(39) ənnāš ləkbāṛ yoqʿedu yəddū́yu
the-people the-big.PL aux chat.PFX.3PL
Les grandes personnes bavardent (David Cohen 1964:28)

On the other hand, qāʿ and ka tend to denote durative events without a prede-termined time reference. In Jewish Tripoli, qa denotes both past and present events, as well as protases in conditional clauses. This is indicated by the following examples:

(40) əlbənt ləkbira qalč qa
the-girl the-elder say.SFX.3FA PVPT
čədwi laxča qaltla
talk.PFX.3FS to-sister.her say.SFX.3FS-to.her
The elder sister said, while speaking to her sister, she said to her (…) (Yoda 2005:298)

(41) ṭṣugra dəwčək  li qa  čədwi fia?
certain.FS story.your that PVPT tell.PFX.2FS in.her
Is your story that you are telling certain? (Yoda 2005:300)

(42) u kif  čəraw ləqmə́žža qa  čğənni
and when see.PFX.2PL the-shirt PVPT sing.PFX.3FS
And when you see the shirt singing (…) (Yoda 2005:306)

28 I have not found any truncated forms of qāʿd in Jewish Tunis.
Therefore, it can tentatively be established that the inflected forms of the AP qāʿəd serve to denote strictly present events, while its truncated variations mark both past and present. However, the common denominator of all of them is to render ongoing, durative events.

\[ \textit{kān + p-stem} \]

As in the case of qāʿəd, I argue that kān undergoes a similar process of reduction. As has already been pointed out, both frozen and conjugated forms are present in JG. The function of both the auxiliary verb and the preverbal particle is to mark past habitual events, whose occurrence is circumstantial and irregular. In the following sentence, the fact that women were giving birth in tents is not necessarily true for all women, but rather kānu indicates a tendency, or a general trend:

\[
\text{(43)} \quad \text{qəbəl kānu nšā yûldu filgitún} \\
\text{before AUX women birth.PFX.3PL in-the-tent} \\
\text{Once women used to give birth in tents.}
\]

The auxiliary verb in the above example expresses a characteristic but not completely regular event. As regards the further development of this item, it would be tempting at first glance to think that kān gave rise to the preverbal particle ka-. As pointed out in the section on the distribution of the particle ka- in various dialects of Arabic, this indeed seems to be the case in Moroccan, where the ka- was expanded from conditional clauses to marking the indicative mood in general (Corriente 1977:140–141, Stewart 1998:104). The data explicitly indicates that this is not, however, a plausible explanation for JG. Firstly, the distribution of kān is noticeably different from that of ka-. In contrast to kān, there is no instance of ka- marking a habitual event or any other dependent state. On the other hand, the function of qāʿəd and ka- as markers of durative, ongoing events is identical. In addition, in the section on the preverbal particles in JG, I presented the phonological change explaining the origin of -ka in qāʿəd. Therefore, although the ka- particles that occur in Moroccan and Jewish Gabes Arabic are homonyms, they have notably different functions and origins.

\[ \textit{ḥābb + p-stem} \]

This construction is one of the ways of expressing the predictive future in JG. In natural, fast speech one can also find the variant ḥabb. It derives from the
AP of the volitive verb ḥābb ‘to want.’ It seems, however, that the original meaning of this form has been lost, and, in a similar fashion to qāʿad and kān, ḥābb is in the process of cliticization and a semantic shift from volitive to future marker. Its dependent character is also reflected in the Jewish Tunis construction ḥabb-iqul, translated literally by David Cohen (1964) as ‘ce qui veut dire,’ which means ‘in other words.’ Let us consider the following two examples:

(44) hūwa ḥābb yʿaráš m’a
he want.AC.PTCP.MS get.married.PFX.3MS with
bənt əṣṣəṭān
daughter the-sultan
He is going to get married to the sultan’s daughter.

(45) aná fibālí álli hūwa mūš ḥabb yárbaḥ
I in-mind-my that he NEG FUT win.PFX.3MS
I think he is not going to win.

While ḥābb in the former can still be interpreted as a volitive verb producing the meaning ‘he wants to get married,’ this is not the case in the latter. The expansion from a volitive verb to predictive future marker is also a feature of other Arabic dialects, e.g., the Kuwaiti future marker b- developed from the imperfective stem yabī ‘he wants’ (Brustad 2000:242; Owens 2018:206). Outside the Semitic context, there are numerous examples of this process, e.g., the Greek future marker θα presumably derives from θέλω meaning ‘I want’ (Pappas & Joseph 2002). Some Arabic dialects, on the other hand, utilize variants of the verb ‘to go’ to render future reference, i.e., Syrian raḥ.
and Egyptian *ha*—(Brustad 2000:242). The same strategy is employed in Jewish Tunis:

(46) **māš nədā́yu ‘la wāḥəd ulā́d**
\[
\text{FUT talk.PFX.1PL about one boy}
\]

Nous allons parler d’un garçon (...)(David Cohen 1964:28)

Nonetheless, in JG this construction is not the only way of expressing future, as the plain p-stem can also do so. The question that arises, therefore, is whether they are in fact free variants, or they encode different types of future. Based on the data and conversations with the informants, I argue that they convey different estimations regarding the probability of future events. Thus, while the p-stem expresses an event whose occurrence is highly probable, *ḥābb* seems to convey the speaker’s uncertainty. Let us compare the above examples, (44) and (45), with the following passages:

(47) **qalā́tu: ólli táḥkəm yəṣī r**
\[
tell.SFX.3FS-him what rule.PFX.2MS happen.PFX.3MS
\]

She told him: whatever you decide will happen.

(48) **aná yažiáni finnhā́r u fillīl nṣāwər**
\[
I come.PFX.3PL.me in-the-day and in-the night consult.PFX.1SG
\]

m’ak u lnā́hkma tšār bark mən
\[
\text{with.you and the-court happen.PFX.3SF only from}
\]

ġūdwa tomorrow

They will come to me in the daytime and at night I will consult with you and the court will only happen the day after, after I consult with you.

Example (47) is an excerpt from a dialogue between the sultan and his wife. In the dialogue, after he instructed her to leave the palace, she obediently promised him that she would do whatever he wishes. Since she is sure about the fulfillment of her promise, the form used by her is in p-stem. Similarly, example (48) is a statement of the sultan’s regarding his future relationship with his wife. Hence, both forms used by him are in p-stem, as the occurrence of the future events is certain.

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31 In Kuwaiti and Syrian dialects there are two future particles, *b*- and *raḥ*, which mark respectively epistemic and deontic future (Brustad 2000:241).
In sum, the two ways of expressing future in JG represent different types of future—namely the epistemic and the deontic. The ḥābb particle, which also functions as a volitive verb, indicates an intentional, low-probability mood, while events expressed by the p-stem are characterized by high probability, factual events. This distinction thus mirrors the two particles marking epistemic and deontic future in Syrian and Kuwaiti dialects. It is also worth noting that the functional expansion of ḥābb from volitive towards more modal usage is another manifestation of the subsective gradience, exemplified by the AP qāʿād. Aarts proposes the following scheme of the verbal gradient evolving towards modality: main verb > catenative > semi-auxiliary > modal idiom > marginal idiom > central modal (2007:100). Nonetheless, as argued by Traugott and Trousdale (2010:30), it is more common cross-linguistically that a verb form gradually acquires modality, without necessarily passing through all the stages of the aforementioned gradient. The direct reanalysis of the JG active participle ḥābb as a modality marker corroborates this assumption.

9 Conclusions

This article is concerned with the ways the verb system of JG, an endangered dialect of Judeo-Arabic, expresses tense and aspect. The central question is whether an isolated verb form has any temporal value or is mostly aspectual. As I have demonstrated over the course of the analysis, the verb in JG primarily encodes aspect and its tense reference is external, being expressed by different lexical means. The aspectual features of the s-stem encompass completeness and punctuality, and therefore its temporal value is past. I have also argued that the p-stem is timeless and strongly dependent on the context. In this respect my findings converge with the observations made by Marmorstein regarding the function of the yaf’alu pattern in Classical Arabic (2016:239).

Part of this article was devoted to the description of preverbal particles and auxiliaries. JG is unique both in its repertoire of preverbal particles and auxiliaries and in their origins. Firstly, I have attempted to establish the origin of the particle ka- by contrasting its functions with Moroccan Arabic. It is worth noting that the distribution of preverbal particles across the dialects of Arabic is uneven. Some dialects, such as Egyptian or Moroccan, have developed particles marking the indicative mood in general, while others, such as Eastern Libyan Arabic or some Algerian dialects, lack any indicative prefixes (Owens 2018:210). I have found the JG qāʿād, qāʿ, and ka particles to in fact be aspectual devices indicating durativity and progressivity, which fulfill an important role.
within the narrative framework. They were analyzed as representing different stages of grammaticalization. Similarly, it has been argued that kān, expressing past habituality, and hābb, used as a future marker, are undergoing the same process of reanalysis. The future marker hābb, to the best of my knowledge, is unique to the dialect of JG.

The present investigation was also concerned with different functions of the fāʿil pattern across several Tunisian dialects, in other North-African dialects, and in eastern Arabic dialects. I have shown that, in contrast to Muslim dialects, Jewish dialects do not utilize this form to express the perfect aspect. I suggest that under the influence of an Aramaic substrate, this form is associated rather with present states, whereas the perfect meaning is expressed by means of the s-stem with adverbs. However, a diachronic comparative study of more Muslim and Jewish varieties of Arabic is needed in order to further corroborate the initial findings of the study.

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