

Case and Mood Endings: The Definite Article in Arabic: An Application of Abstract Phonology

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Abstract. This paper is about the inflectional system in Arabic. It is an attempt to tackle two main queries. First, is *sukuun* indeed the jussive ending? And if not, what really is the jussive ending in Arabic? Secondly, an (overtly untidy behavior) is noticed in regard to surface manifestation of inflectional endings in this language. This is exhibited in two different aspects. First, the *sukuun* which is supposedly the jussive marker is utilized to fulfill another function, namely (*waqf*), pausal form. This in fact implies a dual function for this ending. Secondly, the systematic parallelism of inflectional endings in nouns and verbs is distorted, which we aspire to remedy if at all possible. Indeed it is.

An independent but related phenomenon in Arabic grammar is brought under discussion, namely the formulation of the definite article. A vowel harmony process occurs where endings immediately precede an identified noun. This process determines the salient features of the vowel of the definite article. This very phonological interaction between the two is utilized to hypothesize the nature of the jussive marker and ultimately to preserve the missing systematic parallelism of the network.

Abstract phonology is the approach adopted.

I.O. Case and Mood Endings

It is very well known to Arabists that Arabic⁽¹⁾ is a fully inflected language. By inflected, I am referring to the various morphological affixes that are attached to the end (or beginning) of a word to modify its meaning.

(1) "Arabic" here is a cover term for all the standard manifestatins of the language.

The primary interest of this paper will be the case and mood endings in Arabic.

It has traditionally been recognized that there are three lexical classes (parts of speech) in Arabic. These are:⁽²⁾

- 1) a. Nouns
- b. Verbs
- c. Particles

The particle will not be of concern here.

Three case endings are attached to the noun:

- 2) a. The nominative /u/
- b. The accusative /a/
- c. The genitive /i/

The verb, on the other hand, has three mood endings:

- 3) a. The indicative /u/
- b. The subjunctive /a/
- c. The jussive /Ø/ (*sukuun*)

The noun may be inflected with /u/i/a/ and /i/ but not with /Ø/. This is ruled out by reserving this for a mood, namely the jussive. The endings, however, may optionally be deleted in the pausal form (*waqf*). Different case endings are exemplified below:

4. i. *ʔalkitaabu mufiidun*
The book + nom. useful + nom. + indef.
the book is useful
- ii. *qaraʔ tu lkitaaba*
Read + I the + book + acc.
I read the book.
- iii. *qaraʔ tu lkitaaba*
Read + I the + book + acc.
I read in the book.

Note that the endings may optionally be deleted if one stops at the noun at the end of the sentence.

The verb⁽³⁾ can never be affixed with the /i/. This is ruled out by the fact that /i/ is the genitive marker which, being a case suffix, is reserved for the noun.

(2) Other parts of speech such as adjectives, adverbs, etc., are included in the Noun class.

(3) The verb throughout means the imperfective (*mudāriʕ*). The perfective and the imperative are (*mabni*) uninflected.

There are some particles (*adawat*) that trigger or require (select in Brame's 1978 sense) certain moods affecting the verb to be inflected with the respective endings. Examples of such particles are:

5. *lam* "not" for the past (the jussive marker / *l* /
lan "not" for the future, ?an "infinitival to" (the subjunctive marker /*a*/).
 The following examples illustrate the effect of these particles:
6. i. *yaqra u lwaladu lkitaaba*
 he + reads + ind. the + boy + nom. the + book + acc.

The boy (is)_i read $\left\{ \begin{array}{l} s \\ \text{ing}_i \end{array} \right\}$ the book.

- ii. — an *yaqraa* *lwaladu* *lkitaaba*
 to he+read+sub the+boy+nom the+book+acc
 — the boy to read — the book
- iii. *lam yaqra^l(4)* *lwaladu* *lkitaaba*
 not+past he+read+juss. the+boy+nom. the+boy+acc
 The boy did not read the book.

The first phenomenon that catches the eye in the inflectional system in Arabic is the interesting parallelism between the case endings of the noun and the mood endings of the verb.

The inflectional system in Arabic is as the following charts show:

7) A. The Noun:

<u>Case</u>	<u>Ending</u>
nominative	u
accusative	a
genitive	i

B. The Verb:

<u>Mood</u>	<u>Ending</u>
indicative	u
subjunctive	a
jussive	∅

From the charts in 7A and B we deduce the following facts:

- (4) This would usually be transcribed as follows:
lam yaqra -i- lwaladu lkitaaba.
 but see the discussion below.

- 8) 1. The noun and the verb⁽⁵⁾ are commonly inflected with /u/ and /a/ for the nominative, accusative cases and the indicative subjunctive accusative moods respectively.
2. Only the noun is inflected with /i/ for the genitive case.
3. Only the verb is inflected with /Ø/ for the jussive mood.
4. The noun and the verb may optionally lose their inflectional endings.
5. The only difference between the noun and the verb in the respect is that the noun, but not the verb takes the /i/ ending.

The discussion so far leads to two problems: These are:

- 9) A. The analyst aspires to find a complete parallelism in the inflectional system. It is no coincidence that the noun and the verb share the first two endings as the following comparative chart shows. The problem with (10) below is that the systematic network of the inflectional endings is destroyed by the /i/ /Ø/ correspondence instead of the expected /i/ only.
- B. One inflectional ending (or rather the lack of it) i.e., the /Ø/ is implemented to fulfil two distinct functions. These are either the jussive mood or the pause marker. This is an unnecessary overlap that Arabic could easily do without. In fact the student of Arabic would, judging from its richness, expect two distinct endings for these two functions. The /Ø/ is in fact not an ending at all. It is the result of the optional deletion of endings.
- 10) The following comparative chart shows the gaps in the Arabic inflectional system:

<u>Ending</u>	<u>Noun</u> <u>Case</u>	<u>Verb</u> <u>Mood</u>
/u/	Nominative	Indicative
/a/	Accusative	Subjunctive
/i/	Genitive	—
/Ø/	—	Jussive

(5) Recall that we are concerned with the imperfective here. The imperfective is termed (mudāri ع) by the Arab grammarians. It is very interesting to consider the reason why it is termed so. (mudāri ع) is the adjectival form of the verb (dāra ع a) which literally means (to be similar to). The traditional grammarians mean that this particular category of the Arabic verb parallels the noun in respect to its inflection (i ع rāb). This, in fact, is very important for the forthcoming discussion.

/∅/ stands for the loss of an ending as a result of pausal deletion process (pausal form).

Up to this point one may pose the following questions:

11) a. Since /∅/ is not an inflectional ending in Arabic, then what is the jussive ending?

b. How can the systematic parallelism of the inflectional endings in Arabic be preserved?

These two questions may be answered in the light of the following discussion.

II.O. The Definite Article and Vowel Harmony

The definite article in Arabic raises a rather interesting controversy which entailed an enriched debate in traditional grammar books. A number of hypotheses were put forth to tackle the morphophonological form of the definite article in Arabic.

Abdu summarizes the debate about the definite article in Arabic as follows:

- 12) a. To Alkhalil it is /ʔal/
 b. To Sibawaih it is //
 c. To Ibin Malik it is /al/ or //
 d. To Al-mubarrid it /ʔ/
 e. To Wright it is /hal/

Abdu⁽⁶⁾ agrees with Sibawaih that the definite article in Arabic is //. He on the other hand, presents strong counter arguments against some of the other hypotheses.⁽⁷⁾ Sibawaih's hypothesis, however, suffers some shortcomings. For example, how can we account for the fact that /a/ and no other vowel is used in /al/ at the beginning of speech? The following examples suffice to illustrate that.

- 13) a. ʔalwalad
 the boy

داوود عبده، أبحاث في اللغة العربية (بيروت: مكتبة لبنان، ١٩٧٣م)، ص ص ٥٤-٥٦. (6)

عبده، أبحاث، ص ص ٥٢-٥٦. (7)

- b. ʔarrajul⁽⁸⁾
the man

Secondly, the analyst will face a problem as to the glottal stop /ʔ/ which shows up in 13a and b. How is this inserted and why is it this particular sound, i.e., /ʔ/? It is easier to delete a sound than to insert one. This is coupled with the fact that we have to insert another sound, that is the /a/. Notice that the two sounds are always inserted together in the same environment. Consider the following example where the two sounds are absent.

14)	qara ʔtu	lkitaaba	lmufiid (a)
	read + I	the + book + acc	the + useful (acc)
	I read the useful book		

This is a peculiarity of Arabic that is not attested (to my knowledge) in any other human language!⁽⁹⁾

III. 1. The Definite Article and Abstractness

If the definite article in Arabic is not any of the hypothesized forms (12 above), then what is it? I will try to present another analysis in the following:

I think that the most plausible hypothesis is that advanced by Alkhaliil, namely that the definite article in Arabic is /ʔal/. My hypothesis, however, does not coincide with Alkhaliil's in that the vowel in the middle is unidentified. The definite article in Arabic according to this new look /ʔv/, where /v/ stands for a vowel whose phonetic distinctive features are variables.⁽¹⁰⁾

Before advancing any arguments to support this hypothesis, I would like to address Abdu's two arguments against Alkhaliil's analysis. If these two arguments are shown to hold no water, one may proceed to present the new proposal.

The first question Abdu raises has to do with the vowel /a/. This is automatically taken care of by substituting /v/ for /a/. In other words, the mere fact that /a/ per se is no longer a part of the definite article invalidates this question.

(8) [l] is assimilated to following coronal sounds. This is known as (al aššamsiyyah) or the non-l definite article.

(9) انظر: عبده، أبحاث، ص ص ٥٧-٥٨ .

(10) The phrase "distinctive features" is used in the Chomsky-Halle's 1978 sense.

The second question Abdu raises has to do with /ʔ/. His main point is that /ʔ/ drops in context form only in /ʔ al/ and hence /ʔ / is not to be posited as part of the definite article in Arabic.

There are two important facts in this regard. First Ibn Jinni noticed this a long time ago. Ibn Jinni⁽¹¹⁾ justifies the deletion of /ʔ/ in /ʔal/ along the lines of the theory of assimilation. He suggests that it is deleted because /ʔ/ is one of the most difficult sounds, and that it is a part of a commonly used item (the definite article). Native speakers, consequently take the liberty to delete it.

Secondly, this is no way is the only instance where /ʔ/ is dropped. Abdu himself, as a matter of fact, cites other examples⁽¹²⁾ of /ʔ/ deletion environments.

We may propose /ʔv/ to be the definite article in Arabic. A number of arguments may be advanced to support this proposal. First this, as Alkhalil advocates, coincides with the morphological system of Arabic. Examples of /cvc/ forms are common enough to suggest a norm.

Examples like the following suffice to illustrate this.

- 15) hal ----- ?
 is ----- ?
 man ----- ?
 who ----- ?
 kam ----- ?
 How much -----?
 ʔan ----- ?
 to ----- ?
 etc ----- ?

Secondly, it is easier to delete a sound solely on phonological grounds. There are no phonological principles according to which /ʔ/ may be inserted in this environment. Deleting a sound for the purpose of simplifying connected speech, on the other hand, is a universally attested phenomenon.

From the discussion above, I am proposing that the definite article in Arabic is /ʔv/.

(11) أبو الفتح عثمان بن جني، الخصائص، تحقيق محمد علي النجار، ط ٢ (القاهرة: دار الكتب المصرية، ١٩١٣م)، ص ص ٦٥-٦٦.

(12) عبده، أبحاث، ص ص ١٨-١٩.

A rule that predicts the features of the unidentified /v/ is needed. Such a rule may be formulated as follows:

16) Vowel Harmony (in Connected Speech)

V ----- [α F] / [α^V _F] (#) # ----- C

This rule in effect says that a vowel acquires some features of another preceding vowel in a certain environment. The variable α stands for the changing features. Examples that illustrate the effect of this rule follow: (notice that a rule dropping /ʔ/ in connected speech is assumed)

- 17) a. ʔalkitaabu u ljadiid
 the + book + nom the + new + nom
 the new book.
- b. mina alkitaabi iljadiid
 from the + book - gen. the + new + gen.
 from the new book
- c. qarʔtu ulkitaaba aljadiid
 read + I the + book - acc the + new + acc
 I read the new book.

A subsequent rule is needed to truncate the resulting long vowel with the following results.⁽¹³⁾

- 17)' a. a. alkitaabu ljadiid
 b. mina lkitaabi ljadiid
 c. qara tu lkitaaba ljadiid

IV. Case and Mood Endings Revisited

Reconsidering the examples discussed in II and III above, we notice that the occurrence of vowel harmony that involves the definite article /ʔvl/ is always

(13) This rule is proved to be a part of Arabic grammar.

Independent motivation for this rule is as follows:

i. arattu < araad + tu
 want + I want + I

compare this to:

ii. araadat < araad + at
 want + she want + she

Obviously, this rule applies in the context c-cc, which is exactly what it is needed for in the / vl/ case.

between nouns. Nouns as examples (4) show, exhibit the nominative, accusative and genitive cases. These are /u/, /a/ and /i/ respectively. The interesting question to raise here is: what about mood endings? Most particularly, we would like to know what happens to the /v/ of /ʔvI/ after a verb that is in the jussive mood. The answer for these queries should provide a satisfactory answer for question (11a) above. In other words, the /v/ of /ʔvI/ in this case should reflect the nature of the vowel of the jussive ending in Arabic. Consider the following: (notice that we are assuming the application of the three rules involved)

- 18). a. yaqraʔu lwaladu
 he+reads+ind. the+boy+nom
 The boy reads
- b. ʔan yaqraʔa lwaladu
 to he+reads+subj. the+boy+nom
 The boy to read.

But

- c. lam yaqraʔi lwaladu
 not+past he+reads+jus. the+boy+nom
 The boy did not read

In (18c) one should expect (18c') below:

- 18) c'. *lam yaqraʔ lwaladu
 not+past he+read+∅ the+boy+nom

The ungrammaticality of 18c' is due to the loss of *i*. What is this *i*? Traditionally, this vowel is said to be inserted to break the tri-consonantal cluster resulting from dropping /a/ (or not inserting it depending on what shape is assumed for the definite article). Notice, however, that 18a and b pose no problem since the mood endings prevent the situation all together. Here, a clear loss of generalization is inevitable. /u/ and /a/ are mood endings but /i/ is an epenthetic vowel.⁽¹⁴⁾

Another important point that bears on the issue here is the fact that /i/ in situations like 18c is morphological in nature. We know that from the fact that it is main-

(14) This, of course, is most difficult for analyses that assume /ʔaI/, /aI/ or /haI/ (see 12 in the text) because the question then will be if the epenthetic vowel is needed why is [a] dropped to begin with?

tained by a process that supersedes a verified phonological process of Arabic.⁽¹⁵⁾ It has been established that Arabic prefers /a/ over /i/ in the contiguity of gutturals (pharyngeals).⁽¹⁶⁾ One would expect /a/ rather than /i/ to be used to break the triconsonantal clusters in the following examples:

- 19) a. lam yanjaḥi lwaladu
 not+past he+pass+juss. the+boy+nom
 The boy did not pass
- b. lam yanfaʿi lkitaabu
 not+past it(m)+benefit+juss the+book+nom
 The book was not beneficial
- c. lam naqraʿi lkitaaba
 not+past we+read+juss the+book+acc.

This vowel clearly reflects idiosyncratic properties of a morphologically oriented segment, namely a morpheme. If the “insertion” of /i/ were phonologically needed, the phonological constraint (language tendency) would have prevailed. /i/ in 19 would consequently have been /a/. /i/ is indeed the jussive ending in Arabic.

Finally, an external evidence from Arabic poetry provides additional support as to the psychological reality of the /i/ jussive ending in the language.⁽¹⁷⁾ The examination of Arabic metrics gives us another indication that /i/ is actually the jussive marker. Arab prosodists scan verses according to a certain succession that goes as follows:

- 20) a. Moving consonants
 b. Quiescents

A moving consonant is a consonant followed by a vowel. A quiescent is a consonant which is not followed by a vowel.

(15) The assumption here is that all the morphological rules precede all the phonological rules (see Benhallam forthcoming).

(16) A. Benhallam “MIT phonology and Arabic,” unpublished manuscript. (n.d2) University of Florida Gainesville; A. Al-Sweel, “The Verb in Najdi Arabic: a Morphological Study”, unpublished MA thesis, University of Washington, Seattle, 1981.

(17) C. Kenstowicz and M. Kisseberth. *The Phonological Theory* (New York: Academic Press, 1979), pp. 139-78.

There is a finite number of combinations of these two units. A particular succession of moving consonants and quiescents would be a particular meter.⁽¹⁸⁾ /i/ as a jussive marker is taken by Arab poets with the preceding consonant (i.e., final of the verb is jussive mood) to constitute a moving consonant. This fact reflects the poet's competence that /i/ is indeed the jussive marker. Examples that illustrate this case are numerous.⁽¹⁹⁾

This discussion so far suffices to provide an answer for question 11a. Question 11b is also automatically answered. The parallelism is restored as we will see soon.

V. Desired Consequences

The analysis proposed in the foregoing pages is, in fact, not without its desired consequences. First of all it restores the systematicity of the inflectional ending network. Chart (10) is reproduced below for convenience.

10')		Noun	Verb
	<u>Ending</u>	<u>Case</u>	<u>Mood</u>
	/u/	Nominative	Indicative
	/a/	Accusative	Subjunctive
	/i/	Genitive	-----
	/∅/	-----	Jussive

/∅/ stands for the loss of an ending as a result of pausal optional deletion process (pausal form). Chart (10) is replaced by chart (21) below as a direct consequence of the suggested analysis:

21)		Noun	Verb
	<u>Ending</u>	<u>Case</u>	<u>Mood</u>
	/u/	Nominative	Indicative

(18) Linguists distinguish two broad categories of evidence: corpus-internal evidence and corpus-external evidence (see Kenstowicz and Kisseberth, pp. 139-78). As for using poetry as an external evidence Kenst and Kisseberth (p. 159) say "linguists sometimes argue that the ways in which the sounds of a language are used in poetry provide insights into the phonological structure of a language." M. Guerssel, "Constraints on Phonological Rules," *Linguistic Analysis* 5. No. 3 (1977), 267-305; W. Wright, *A Grammar of the Arabic Language* (Cambridge: Cambridge Univ. Press, 1859, 1977 edition), pp. 332-35.

(19) Wright, pp. 358-65.

/a/	Accusative	Subjunctive
/i/	Genitive	Jussive
/∅/	----	----

/∅/ stands for the loss of an ending as a result of pausal optional deletion process (pausal form).

Comparing chart (10) with chart (21) we notice that chart (21) represents the inflectional endings in Arabic with the following facts:

- 22) a. Less in number, i.e., economy in language lexical inventory. More importantly, however, is the systematicity of the network.
- b. The dual ambiguous function of /∅/ is eliminated.
- c. The whole concept of /∅/ in the sense of (10) is completely scrapped.
- d. The loss of generalization noticed in regard to the function of /u/, /a/ and /i/ is remedied.

The analysis set forth above simplifies a number of processes in Arabic grammar. One such process is stress assignment in Arabic. Brame⁽²⁰⁾ proposes a stress shift rule to handle verbs with jussive endings. This stress shift rule seems to be an *ad hoc* rule needed only with this ending. Verbs in the jussive mood may be handled the same way other cases and moods are treated, and hence the loss of generalization exhibited by the fact that the rule dropping case endings precede stress assignment and rule dropping mood endings follows stress assignment is automatically done without. I will not go in greater detail on this particular point. An interested reader may consult Brame's review article of Abdu's book cited in the references below.

A final note in regard of claiming /i/ to be the jussive marker in Arabic, is to touch on a possible, and in fact a plausible, counter evidence. That is the fact that only /i/ drops in context form while /a/ and /u/ do not. This, in fact, stems from the nature of /i/ itself rather than its function in the morphophonological system of Arabic. Arab grammarians noticed long ago that /i/ seems to be "more sensitive and weaker" than other Arabic vowels. /i/ is undeniably less noticed in comparison with other vowels, a fact that may be understood only along the same lines of the traditional rationalization of /i/'s weakness. By way of contrast, on the other hand, one wonders why /i/ but not /a/ or /u/, is always preferred to epenthesize almost whenever the need for such a vowel arises. In fact, traditional grammar took note of that also.

(20) M. Brame, "Stress and Arabic Phonology," *Foundations of Language*, 7 (1971), 556-91.

Old Arab grammarians used to call the /i/ (*almatiyya*) “the easy going she-camel.” The easiness and availability of /i/ is manifested today in the extensive use modern dialects of Arabic make of it. Egyptian Arabic is the clearest living example of such a use. /i/ on the other hand is by no means the only ending that is deleted. Hasan in his “Annahu alwaafi” cites examples from an old Arabic dialect where /a/ and /u/ are deleted also.⁽²¹⁾

At any rate, the analyst may assume that Modern Standard Arabic has taken the jussive marker from a dialect (or even a protolanguage) where all these endings are equally deleted, while the other two endings are taken from another dialect which retains the endings. In fact, this assumption is remotely suggested by the chaotic and untidy behavior of /i/ as a jussive ending.⁽²²⁾

(21) عباس حسن، النحو الوافي (القاهرة: دار المعارف، ١٩٧٥م)، ص ص ١٠١-١٠٧.

(22) Saying that modern Arabic has adopted some linguistic elements that disagree with its characteristics today is not a strange as it may sound at first.

(عبده، أبحاث، ص ص ٥٩-٦٠)

علامات الإعراب وأداة التعريف في العربية: دراسة تطبيقية لنظرية علم الأصوات التجريدي

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ملخص البحث. يناقش هذا البحث علامات الإعراب في اللغة العربية، وهو محاولة لإعادة النظر في نظام العلامات الإعرابية. ويتم ذلك عن طريق الإجابة عن تساؤلين رئيسيين: أولاً هل السكون هو علامة الجزم في العربية؟ وإذا لم يكن الأمر كذلك فما هي علامة الجزم إذن؟ ثانياً: يلاحظ الباحث أن هناك خللاً في نظام علامات الإعراب على السطح ويتمثل ذلك على وجهين. الأول أن السكون وهي يفترض أن تكون علامة إعرابية، تؤدي وظيفة نحوية أخرى وهي السكت، مما يؤدي إلى ازدواجية في وظيفتها. والثاني أن الاتساق بين علامات الإعراب في الأفعال والأسماء مبتور على نحو يمكن تفاديه.

ويناقش البحث أيضاً ظاهرة نحوية أخرى هي وإن كانت مستقلة إلا أنها تتداخل مع قضية نظام العلامات الإعرابية ألا وهي ظاهرة أداة التعريف وتركيبها الصوتي.

عندما تقع أداة التعريف بعد إحدى علامات الإعراب يحدث تناغم للصوائت تتحدد بموجبه طبيعة الصائت الذي يدخل في تركيب أداة التعريف في العربية.

يحاول هذا البحث، باستخدام التداخل الصوتي بين علامات الإعراب وأداة التعريف، تقديم فرضية يمكن التنبؤ بها بالسّات المميّزة لعلامة الجزم في العربية وبالتالي إعادة الاتساق المطلوب إلى نظام العلامات الإعرابية.

يتم البحث في إطار نظرية علم الأصوات التجريدي.