Hamzat al wasel: The Potentiality and the Problems in Arabic Syllable Structure

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همزة الوصل : الإمكانات و المشكلات في البنية المقطعية العربية

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الملخص :

يستهدف هذا البحث دراسة البنية المقطعية في العربية, والإمكانات التي تضع البنية العربية في طور لا يشاركها فيه كثير من اللغات الأخرى. و ربما كان عدّ همزة الوصل حركةً أحد الأبواب التي فتحت المجال لإمكانات جديدة للبنية المقطعية في العربية, إذ أوضحت نتائج الدراسة أن دائرة الإمكانات قد توسعت لتشمل عددا من المقاطع غير المذكورة, بعضها يمثل فرضية, واحتمالية واردا حدوثها. ونستنتج من ذلك أن البنى المقطعية في العربية قد تزايدت مما استدعى وضعها في صيغة $(v)(c)cv(v)(c)^2$ حسابية واحدة تجمع البنى المقطعية فتسهل دراستها, وهي على النحو الاتي: .

الكلمات المفتاحية : همزة الوصل , العربية , البنية المقطعية , إمكانات

Abstract :

This paper tries to study the traditional syllable types that are posited by the earlier Arab scholars side by side, makes an attempt to answer the question: "Are there any other syllable types in Arabic other than these types?" The aim of this paper is to identify the potentiality of the Arabic syllable structures, which are sanctioned by the language and which arise because of the influence of hamzat al wasel. The researcher first identifies hamzat al wasel as a vowel and then goes on to posit seven possible syllable types more in Arabic. These new types are considered a long with the existing ones. Ultimately, they are all collapsed into a mathematically single rule as follows: $(v)(c)cv(v)(c)^2$. This rule has the advantage of making child language acquisition easy and natural.

KEYWORDS: hamzat al wasel, Arabic , syllable structure, potentiality

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0. Introduction

Human beings use syllables to arrange the stream of speech into rhythmic beats; weak and strong. The reason to do this is to facilitate easy speech production and perception. A native speaker of any language will have no difficulty in dividing words into syllables (Roach, 1991:67). This is true also for the Arab native speakers who are able to identify the syllables a word may have without any difficulty. But languages differ in the types of syllables they allow. The potentiality of being permissible or not depends upon the phonotactic constraints that license the possible sound sequences in a language. Sloat et al (1978: 82) point that "some of these differences stem from the language specific restrictions placed upon the structure of the onset and the coda".

This paper tries to identify the potentiality of the Arabic syllable structures, which are sanctioned by the language because of the influence of hamzat al wasel. The objectives are:

i)   to re-consider the role played by hamzat al wasel as a vowel ;

ii)   to posit some new syllable types ; and

iii)   to collapse all the available syllable types to form a new canonical formula that will cover all the syllable types in Arabic.

1. Traditional syllable types in Arabic

In identifying the permissible syllable structure in Arabic, the Arab scholars have stated that there are six types of syllable structures existing in Arabic (C.f. Hellal 1988, Anis. 1999). These syllable types are as follows:

        i)   **cv:**

                sa   "will"

		wa	"and"
		ka.ta.ba	"he wrote"
ii)	**cvv:**		
		maa	"what"
		laa	"no"
		kaa.na	"he was"
		qaa.nuu.ni	"legal"
		qaa.ta.luu	"they fought"
iii)	**cvc:**		
		qum	"stand up"
		bay.tun	"a house"
		kaa.ti.bun	"a writer.ms,sg "

The first three are the most common syllable types in range and occurrence. They in fact can occur anywhere in a word, even in a word up to ten syllable patterns .(cf. Steitiya 2004).

Although the remaining types are not as common as the first three, they do occur in Arabic.these are as follows:

iv)	**cvcc:**		
		buu.rikt	you (ms.) blessed
		du.wayb.ba.tun	tiny animal
		?ilm	science
		Bakr	a proper noun
v)	**cvvc**		
		Ďaal.liin	astry
		daab.ba.tun	an animal
		mu.Ďaad.da	the opposite
vi)	**cvvcc**		
		ħaass	special
		ʕaamm	general

The occurrence of cvvc in initial position is rare and is restricted to certain words such as **Ďaal.liin, daab.ba tun**. In contrast, cvcc never occurs initially; rather it is used most frequently in the final position. (Issam abo salim 1997: 395). It occurs in final position

as in **buu.rikt**. Like cvvc, cvcc can be seen in mid position as in **mu.Ďaad.da** and **du.wayb.ba.tun** respectively. cvcc type occurs in isolation as well (Al ani 1970: 87) in words as 'ilm, bakr, etc.

This syllable type is the least common type in Arabic. It is used n pause ans is restricted in distribution as well as the length of words.

In accordance, the canonical formula of the above syllable types in Arabic can be expressed as follows: **C V (V) (C) ².** (Abu salim 1997)

2. A Critical review of the traditional syllable types

When we consider the traditional syllable types, we observe the following:

i) The syllables always begin with c;

ii) No syllables begin with v;

iii) There are no consonant clusters in Arabic.

To begin with, as noticed above, c constitutes an obligatory element in the initial position in all the six types of syllable structures, because of this the earlier Arab scholars legislated that an onset is absolutely essential for a syllable in Arabic. In this respect Spencer (1996: 81) observes, "… an onset is an obligatory constituent of syllable. This is true, for instance, for MSA".

Secondly, it is noticed above that no syllable begins with v. Fleich (n.d: 42) agrees with this fact by saying that an Arabic syllable structure never begins with a vowel but with a consonant.

Finally, Arabic never allows any consonant cluster at all. This fact is confirmed by Catford (1988: 208) "Arabic admits no consonant cluster". This is according to the earlier Arab scholars.

However, the Arab scholars' belief that no Arabic syllable begins with a v is hard for the researcher to believe. It will be argued in section (4) that there are Arabic syllables which begin with v.

Before we move to section (4), a short account of the so-called hamzat alwasel will be discussed in detail in section (3). In addition,

an adequate attention will be paid to the role played by it in syllable formation in Arabic.

3. The role of hamzat al wasel.

To understand what hamzat al wasel is, consider the following examples:

1)

1. * staĥ.riJ   " get something out"
2. *nka.sar   " (it) was broken"
3. *Ďrib   " hit (root)"
4. *n☐ ɖır   →   "look at"

Arabic grammar does not tolerate such examples; thus, they are ungrammatical because they begin with two cs. Cc in initial position of a word are not allowed in Arabic. The ungrammatical counterparts are the following examples:

2)

1. ☐staĥ.riJ   →   ,is.☐taĥ.rij
2. ☐nka.sar   →   ,in.☐ka.sa.ra
3. ☐ ☐Ďrib   →   ,iĎ.☐ ☐rib
4. n☐ ɖır   →   ,un.dur

The forms (1-4) in (2) above show epenthesis of cv at the beginning of the words. It is (, + i) in (1-3) and (, + u) as in (4). These are the acceptable patterns in Arabic rather than the ones in (1).

In brief, what is added in the last four examples (cf. 2), to prevent an illicit consonant cluster in initial position of the word, is a (c) nsonant + a (v) owel). The c is invariably a glottal stop, and the v is either u or i. This can be expressed by the following rule:

Rule (1): hamzat alwasel = C {i / u}

Hamzat alwasel= a consonant (invariably a glottal stop) and a vowel (either i or u) before word initial cc.

This epenthesis of cv is hamzat alwasel according to the Old Arab Grammarians (henceforth: OAGs). The OAGs found it not easy for the Arabic native speakers to produce a word with two consonants in succession, so they inserted this cv to facilitate articulatory transition.

In their analysis of the inserted cv, the OAGs, paid much attention to the c, i.e., the glottal stop. , neglecting in this respect the v.

However, for a proper understanding of hamzat alwasel let us consider some root forms in Arabic:

3)
   a)   K.t.b
        n.đ.r
   b)   s.m.ʿ
        ∫.r.b

4)
        ĥ.t.b.r
        m.t.h.n
        b.t.s.m

5)
        s.t.ĥ.r.j
        s.t.q.b.l

The above examples(3, 4, and 5) are some of the Arabic skeletons formed with Cs only. Vs are an operation of affixation on these skeletons. Given the facts as they are what is the physical realization of the affix in question? To derive the imperative form of the above examples, for instance, an affixation process operates. Hamzat alwasel is noticeable in case of ccc, cccc, ccccc. Lets examine these step by step:

6)
   a)   K.t.b   uk.tub
        n.đ.r   un.đur
   b)   s.m.?   is.ma?
        ∫.r.b   i∫.rab

7)
        ĥ.t.b.r   iĥ.ta.bir
        m.t.h.n   im.ta.hin
        b.t.s.m   ib.ta.sim

8)
        s.t.ĥ.r.j   is.taĥ.rij
        s.t.q.b.l   is.taq.bal.

The words in 6-8 above are some of the imperative root forms in Arabic. What happens in them is that, all these roots begin with a vowel each. This initial vowel which is either i or u is assumed to be presented in the affix and gets inserted into the word initial position through a process of affixation. This, however, tends to violate another traditional constraint in Arabic. The constraint runs as follows:

"No word should begin with a vowel in Arabic".

In order to overcome this constraint a glottal stop is inserted. The insertion of the glottal stop before the vowel is necessary according to the TAGs. Hence, we can safely conclude that hamzat alwasel is nothing but an epenthesis of the glottal stop as it is shown in the context given in (2). It is, however, commonly observed that in spoken Arabic this inserted glottal stop is rarely pronounced. It is deleted in normal speech. This observation is adequately borne out by the following facts: firstly, the normal speech of a lot of native speakers was carefully observed. In addition, a lot of words involving the glottal stop insertion were presented to them. It was observed that they pronounced them without the glottal stop. Nevertheless, they all begin pronouncing the words with the initial vowel. The observation also holds true in the production of normal connected speech by them. Secondly, the roots in (6-8) are neither unnatural nor unacceptable to Arabic native speakers. Hence, in the light of the facts above, it can be said that in normal speech the glottal stop never manifests. It is omitted in Arabic. And what is left behind is the inserted v. Assuming that this is happening here, before word initial cc, we can conclude by saying that hamzat alwasel is nothing but a v insertion. This observation can be expressed in the form of a revised rule as follows: Rule (2):

The revised hamzat al wasel = insert v before word initial cc

Hence, the revised hamzat alwasel has its effect on the word initial cc. Consider:

9)

       □nđur   un.□ đur

       k□ tub   uk.□ tub

s☐ maʿ   is.☐ ma?
ʃ☐ rab   iʃ.☐ rab
 ☐ Ďrib   iĎ.☐ ☐rib
 ☐ bta.sim   ib.☐ ta.sim
☐staĥ.riJ   is.☐taĥ.riJ

The examples in (9) show that v has two proper phonological functions which are as follows:

i)   It takes part in syllable formation, (re-syllabification process).

When v is added it results in the division of one syllable into two syllables. "Ďrib" ,for instance, becomes iĎ.rib . This leads to the second point;

ii)   As a result of re-syllabification, an extra syllable is created. The stressed syllable which earlier constitutes the first syllable becomes the second syllable when v is added.

The revised hamzat alwasel is accepted as the basis of the analysis of the rest of this paper. It predicts that Arabic words can begin with v in speech in certain contexts as in the examples below:
10)

ud.rus   study
ib.ħaө   search
il.bas   wear

Additionally, there are other linguists who tend to support this prediction. Spencer (1996: 81), for instance, observes, "there are words in Arabic which behave phonologically as though they begin with a vowel " in certain contexts.

To sum up, although hamzat al wasel is identified as cv insertion, the c gets deleted in speech. As a result of this deletion hamzat al wasel turns to be a case of v insertion in Arabic in certain specific contexts.

The reconsideration of hamzat alwasel as a vowel will help us discover the other syllable types in this language. These will be discussed threadbare in section (4).
                                .

4) Other potential syllable types in Arabic

That Arabic syllable structure may permit other than the above-mentioned syllable types shows the potentiality Arabic syllable structure may exhibit. Belowin tabe (1) is a list of the potential syllable types in Arabic that are stated by some Arab scholars showing the influence of hamzat alwasel as a vowel:

	Syllable type	The word	The gloss	Stated by:
1	Vc -vc-	al is.ma? a'an.tum	The Listen Is it you? ("ms" pl.)	Hassan, (1970). Steitiya, (2003) Al-antaaki, (1972)
2	Vcc	Ism	A name	Steitiya, (2003)
3	Vv	ii.ti ii.thar	Bring it One's own	Steitiya, (2003) Busabaa (2004)
4	Vvc	Iit	Bring it(with a pause)	Busabaa (2004)
5	-v-	a'.a.naa	Is it me?	Al-antaaki, (1972)
6	Vcc	-!	-	Busabaa (2004)
7	Vvcc	-!	-	Busabaa (2004)

What the above table shows is that:

Although there is no attestation of the form vvc, and vvcc in Arabic, by pattern congruity, we may classify them as possible syllable types in the language. Since Arabic permits vv, vc, vcc, in congruent, vvc and vvcc are then potential syllable types. However, it

is purely accidental that their potentiality as types in the Arabic syllable structures has not been exemplified yet.

5) Evaluation of the study

This paper investigates the existing syllable types in Arabic including the potential ones that are posited by the reconsideration of hamzat alwasel as a vowel. The findings show that there are seven more syllable types that are added to the six mentioned by earlier scholars. Thus, the set of the syllable types in Arabic is composed of the following fusion:

1- **i) cv   cvc   cvv   cvvc   cvcc   cvvcc;**
2- i) v   vc   vcc   vccv ; and
  ii) vv   vvc   vvcc .

The first set of the syllable types are recognized as the traditional ones that are posited by the earlier Arab scholars considering the onset as an obligatory part in the Arabic syllable stracture, whereas the second set including (i) and (ii) are the potential syllable types posited showing the possibility that Arabic structure may allow because of the re-consideration of hamzat alwasel as a vowel.

This requires another formula to account for syllable types other than the first one. That the canonical formula of Arabic syllable structure should be stated as follows:

(V) (C) CV (V) (C) ²

6) Conclusion

The reconsideration of hamzat alwasel as a vowel has contributed to the Arabic grammar as follows: as Arabic attests a large number of syllable types, the Arab learners of English are predicted to have little difficulty with English syllables. Hence, Arabic is likely to affect a positive language transfer on English when the Arab learners learn English. Moreover, the non-native learners of Arabic will find the syllable structures elaborated here helpful while learning Arabic properly. It, too, contributes to the phonological theory in the since

that the paper is the maiden attempt to group all the syllable types altogether expressing them in a mathematically a single rule:
(V) (C) CV (V) (C)².

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