مجلة جامعة تشرين للدراسات والبحوث العلمية – سلسلة الآداب والعلوم الإنسانية المجلد (18) العدد (11) 1996
Tishreen University Journal for Studies and Scientific Research – Arts and Humanities Series Vol. (18) No (11) 1996

Lexical and Phrasal Syncope in Arabic

Dr. Omar Irshid Shedifat*

❐ ABSTRACT ❐

This paper discusses one of the major rules in Bedouin Jordanian Arabic. The rule that I will be concentrating on is syncope. First, I will deal with the nature of this rule at the lexical level. Then I will deal with the nature of syncope at the Phrasal level. This paper aims at adding something new to the model of lexical phonology given by Mohanan.

* Al-Bayt University, Jordan.

مجلة جامعة تشرين للدراسات والبحوث العلمية – سلسلة الآداب والعلوم الإنسانية المجلد (18) العدد (11) 1996
Tishreen University Journal for Studies and Scientific Research – Arts and Humanities Series Vol. (18) No (11) 1996

كيفية تحول الأصوات في المفردات والعبارات العربية

الدكتور عمر شديفات*

❐ الملخّص ❐

تقوم هذه الدراسة بشرح أحد القوانين الرئيسة في اللهجة البدوية الأردنية. وتبدأ بشرح طبيعة هذا القانون على مستوى الكلمات ثم تنتقل إلى طبيعة هذا التفاوت على مستوى العبارات. وتهدف هذه الدراسة إلى إضافة شيء جديد إلى نظرية الصرف الجديدة التي قدمها موهانن عام 1982.

* جامعة آل البيت – الأردن.

Introduction:

Within the recently developed model of lexical phonology proposed by Kiparsky (1982) and Mohanan (1982), phonological rules can apply in two different components of the grammar. First, they may apply inside the lexicon through the course of word formation. Second, phonological rules may apply postlexically to the word as it is suited in a phrase as the output of the syntactic component. Rules in these two different parts of the grammar are supposed to play different roles. The lexical rules are cyclic, structure preserving and may be sensitive to the properties of individual words. Postlexical rules are supposed to apply across the board. They may introduce new structures and segments not found in the basic inventory of segments, and finally, they are supposed to be blind to the internal structure of individual words and as a result, should not have lexical exceptions.

In this paper I will discuss one of the major rules to be found in the phonology of Bedouin Jordanian Arabic (BJA), a dialect of some 200.000 speakers located in north eastern Jordan. Data for the study derive from the speech of fifteen students in mu'tah University. The rule that I will be concentrating on here is syncope First, I will deal with the nature of this rule in BJA at the lexical level, then I will introduce the main core syllable - building rules of BJA, and the (resyllabification) process that resyllabifies the final consonant of a word ending in VC with the following word if the second word begins with a vowel. Finally, I will deal with the nature of syncope at the phrasal level. This study is designed to add something new to the model of lexical phonology.

Lexical Syncope:

Like virtually all other modern Arabic dialects . BJA has a rule syncopating Sort-high vowelsin open syllables. In B3A this rule operates on both the lexical and phrasal levels . In this section however, I will limit myself to its application e the lexical Level. < An exarrinaFion of ~he full paradigm 0 r the measure I Verb simi9 to the shape GiCC when suffixes begin with a Xowel and CiCi: else where as shown below.

simi9	'he heard'
Sim9at	'she heard'
Sim9u	'they (m.) heard'
Sim9an	'they (f.) heard'
Simi9t	'you (m. sg.) heard'
simi9tí	'you (f.sg)heard'
simi9tu	'you (m.pl.)heard'
simi9tan	'you (f.pl.) heard'
simi9t	'I heard'
simi9na	'we heard'

In order to acount for the full paradigm *of* the Measure I verb simi9,we assume that the CiCC shape arises From CiCiC by syncope which can be stated in the following way :

(2)

$$\begin{bmatrix} +\text{syll.} \\ +\text{high} \\ -\text{long} \end{bmatrix} \rightarrow \varnothing \,/\, CV$$

Alternately, one may suggest that the correct underlying for the paradigm given in (i) is CiCC, and we may propose an epenthesis rule which inserts a high vowel, namely i, between the last two consonants of the word or between the first and second consonants when we have a three - consonant cluster in the middle of a word . This rule can be expressed in the Following way:

(3) ∅ ------ i / c _____c [/c]
however, if we accept the formulation of the epenthesis rule given in (3),we (have to apply) this rule only to verbs because if we apply it to nouns like the ones given in(4)below, we will get unacceptable forms:

(4)

Verbs	Closs	Nouns	Closs
Silim	'to save'	Silm	'peace'
9ilim	"to know"	9ilim	'science'
Hilim	"to dream-'	Hilm	'dream'

From these examples, one can see that if we were to claim that CiCC is the underlying form for verbs as well as nouns, then we would have to restrict the epenthesis rule to verbs in order to derivation of—nouns that have the shape CiCC. With the syncope rule given in (Z)no restriction of grammatical categories is needed.

Syncope is a general rule since it applies o many grammatical contexts. Basically, when a stem ends in sequences like / -iC/or/uC/ the vowel is deleted when a vowel -initial suffix is added. The suffix that can be added to stems which end in /-iC/or/-uC/ can be either a subject or an object marker in verbs or a possessive, dual or plural marker in nouns, as in the following examples:

(5) verbs

a. wallim	'prepare (mas. Sg. Imperative)'
Wallm-i	'prepare (fem. Sg. Imperative)'
Wallm-u	'prepare (mas. pL. imperative)'
Wallm-an	'prepare (fem. pL. imperative)'

verbs

b. tixtim	'she stamps'
Tixtm-i	'you (fem. Sg.) stamp'
Tixtm-an	'you (fem. PL) stamp'
yixtim	'he stamps'
yixtm-u	'They (masc.) stamp'
Yixtm-an	'They (fem). Stamp'

(6) Nouns

zulum	'men'
zulum-ak	'your (mas. Sg.) men'
Zulm-un	'his men'

(6) Nouns

b. mtarjim	'translator'
Mtrajm-uh	'his translator'
Mtarjim-i	'my translator'
c. mtarjim	'translator'
Mtarjm-een	'two translators'
Mtarjm-iin	'translators'
Mtarjim-ah	'translator (fem)'

(7) adjective stems:

a-saarim	'strong (mas. Sg.)'
Saarm-a	'strong (fem. Sg.)'
b-saadig	'honest (mas. Sg.)'
Saadg-a	'honest (fem. Sg.)'
Saadg-iin	'honest (mas. PL)'
Saadg-aat	'honest 9fem. PL)'

(8) Active Participle:

šaayil	'carrying (mas. Sg.)'
šaayliin	'carrying 9mas. PL.)'
šaayl-a	'carrying (fem. Sg.)'
šaayl-aat	'carrying 9fem. PL.)'

One can notice in all the data above that high vowels are deleted in open syllables.

Before going any further, I should mention that in the paradigm of simi9 given in (1), the syncope rule does not affect the initial syllable in cases like simi9na, in contrast to Palestinian Arabic (PA) where the rule does apply and we end up with forms as smi9na, 'we heard' and gbblna 'we accepted'. Another dialect in which this rule applies to initial we end up with forms such as šribna- 'we drank' nzilna 'we descended'). Syllables in Lebane4se Arabic (LA), and generally speaking, in BJA syncope only apply within morpheme boundaries in a so-called derived environment. With the derived environment condition on the syncope rule in BJA, it will correct-fail to apply to the first syllable in a form like simi9na since the following CV=mi is contained in the same morpheme. To illustrate this point look at the derivation of simí9na and šríbna below:

9)

BJA	LA	
simi9-na	širib-na	
simi9	širib	syncope
_____	_____	cycle I
simi9-na	širib-na	cycle II
_____	šrib-na	syncope

The derivation above show that we should apply syncope in BJA (to derived environment) in order to get simi9 A but this condition on the syncope rule does not work for PL and LA, since the rule applies between morphemes.

From the point Of view of Kiparskys model of lexical phonology, lexical rules are by their very nature limited to derived environments while post lexical rules may apply- within as well as between morphemes. The' BJA pattern of syncope is consistent with Xiparsky's model while the Palestinian and Lebanese data apparently is not. This may suggest either that the lexical phonology model is incorrect, since it does not account for the syncope processes in PA and LA or alternatively that there are really two processes of syncope in Arabic - one across boundaries as in the BJA a lexical application, and another postlexical application within words as shown in PA and LA.

Syncope in BJA also affects affixes in addition to stems. I will mention two cases here. First, feminine nouns in construct are marked by the affix /-it/ when we add a suffix that begins with a consonant to a feminine noun that has the suffix /-it/ the /i/ of the suffix /-it/ will not be deleted by syncope and it will show up on the phonetic surface; but when we add a suffix that begins with a vowel to a noun that has the suffix, /-it/, the /i/ of the suffix /-it/ will be deleted by syncope. To illustrate this point; look at the following:

(10)

máktaba	'library'
maktabít-na	'our library'
maktábt-u	'his library'
maktabít-ha	'her library'
maktábt-ak	'your (m.) library'
máktabit jaam9ah	'university library'
maktabt aljaam9ah	'the university's library'

The other case of an affix affected by syncope is the prefixes of verbal subjects in the imperfect such as the Jrd masculine prefix /yi/ and the 3rd feminine prefix /ti-/.
The /--i/ of these prefixes is deleted when they are prefixed to stems that begin with a single consonant as the following examples show :

11)

yi - ktib	'he writes'
ti - ktib	'she writes'
y - 9allim	'he teaches'
t - 9allim	'she teaches'
y - haasib	'he accounts'
t – haasib	'she accounts'

Once again, syncope is permitted here since it arises within morpheme boundaries.

Syllable building rules:

It is well known that many aspects of Arabic phonology can be understood as the implementation of certain limited patterns of syllabification. In this study I will follow Steriade (1982) and Harris (1983) in the view that syllables are constructed by simple rules that assign elements of the skeletal tier to onset and rime categories. These rules are ordered among themselves and may be ordered with other phonological rules of grammar. Following Kenstowicz (1984), I will assume that in Arabic CV and CVC are core syllable types constructed in the lexical phonology, while CVCC syllables are a marginal syllable type that arises in the postlexical phrasal phonology. I also will assume that BJA has the syllable building rifles stated in (12) below. These rules create core syllables.

12) a. V ------- V (V → R) b. C--------C (C → O) / ------v

c. V C --------V C (V → R; V → R)

The first rule in (12) assigns a vowel to rime position, the second assigns a Rrevocalic consonant to onset position, and the final rule assigns a postvocalic consonant position .Following Kenstowicz (1984) let us assume that these rules are universal and have the order stated in (12) above.

In order to account for a. noun like Silm, I will assume that : BJA has another syllable rule which permits an additional consonant to be assigned to the rime position so long as it has less sonority than the preceding consonant. This rule can be called the coda association rule and it can be formulated in the following way:

13) C1 (C1 → R) C2 ⟶ C1 (C1 → R) - - - C2

condition: IFC2 is less sonorous than C1.

To see how these syllable building rules works let us look at the derivation of silm in (14) below. The core syllable building rules given in (12) will assign the following structures to slim:

14) Silm (R) (12a)

Silm (OR) (12b)

Silm (OR) (12c)

At this stage of the derivation, the coda rule (13) may attach the /m/ in silo to the rime since /m/ is less sonorous than the preceding Liquid /L / , essentially completing the derivation of silm and we will end up With the form given in (15) below.

15)

The core syllable building rules mentioned above apply at the lexical level . To see this, look at the derivation of sim9at (< simi9at). The core syllable building rules will assign the syllabification representation given in (16) below.

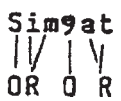
16)

At this stage of the derivation the rule Of syncope will apply and we will end up with the representation given in (17) below.

17)

In order, to get, the right syllabification for sim9at, we have to apply the core syllable building rules again. If we apply these rules, we will end up with the right syllabification given in (18) below:

18)

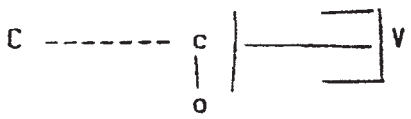


Another way of getting the right syllabification - for sim9at is assuming that syllabification - process at the lexical level. This process with resyllabify the onest of the syncopated syllable to the rime of the preceding syllable. The resyllabification process with word boundaries will be discussed in the following section.

Resyllabification:

One or the characteristic features of BJA as well as most other modern Arabic dialects is the resyllabification of consonants within word boundaries. A given phrase such as /harag alwalad/ is syllabified as /ha. ra. gal. wa.lad/ meaning 'he burned the boy'. That is to say, the final consonant of the first word is pronounced as an onset to the following vowel se shall assume that

19)



To exemplify the contexts of this rule, we wok at the following example:

(20)	a .	ḍarab alwalad	ḍa. ra. bal. wa.lad
			'he hit the boy'
	b.	saḥab albaaṣ	sa. ḥa. bal. . baaṣ
			'he pulled the bus '
	c.	xadam almarah	xa.da.mal.ma. rah
			'he served the woman '

Phrasal syncope:

I have shown that BJA has a rule syncopating short high vowels in open syllables and this rule operates on the lexical level . In this _ section , however, I will limit myself to its application on the 'phrasal-level. One of the important effects of the resyllabification rule given in (19) above is that it opens the final syllable of words ending in Vc. If the vowel is short and high then it syncopates by presumably the same rule which operates in the lexical phonology.

Phrasal 'syncope in BJA applies in a wide variety of grammatical contexts as can be seen below:-

21) Noun + Adjective

a.	aL - mtarjim - aL - giṣiir	aLm. tarj.maL.gi.ṣiir
		'the short translator'
b.	aL-m9allim al-jidiid	alm. 9all. mal.ji.diid.
		'the new teacher'

22) Noun + Noun

a) m9allim - midrsah	m9all.mal.mid.ri.sah
	'The school teacher'
b) kaatib al-ktaab	kaat.balk.taab.
	'The book's writer'

23) Verb + Noun

a) širib al-mayyah	šir.bal. may. yah
	'he drank the water'
b) simi9 al-walad	sim.9al-wa. lad.
	'he heard the boy'

24) Noun + complementizer

a) saalim 9irif innu	saa.lim.9ir.fin.nu
	'saalim knew that '
b) saalim fihim innu	saa.lim.fih.min .nu

25) Subject + verb

a) al-m9allim insarag	alm.9all.min.sa.rag.
	'The teacher was stolen'
b) al-mikaatib inhrigat	al.mi.kaat.binh.ri.gat
	'The offices were burned'

26) Direct object + indirect object

a) i9ta al-mtarjim al-ktaab	i9.talm.tarj.malk.taab
	He 'gave the translator the book
b) i9ta al-mtarjim ar-raatib	19.talm.tarj.mar. raa. tib.

It appears from the examples given in (21-26) that phrasal syncope in BJA operates outside the canonical government configuration rather freely. For example, it applies between noun and a following adjective as well as between verb and noun. Phrasal syncope in BJA is unlike Sudanese Arabic (Hamid 1984) because in BJA it applies between a subject and a following verb as well as betNeen the first and second complements in a double object construction. In these two context the phrasal rule is blocked in

Sudanese Arabic (in contrast to BJA; cf. 25 and 26) as the following examples show:

27) Subject + verb

a) al-makaatib imbanat	al.ma.kaa . ti.bim.ba nat
	'The offices were built '
b) al-kalib-akal	al.ka li.ba.kal
	'The dog ate'

28) verb + Noun + Noun

19ta al-kalib al-9adum	19.tal.ka.li.bal.ʔ9a.dum
	'He gave the dog the bone '

Phrasal syncope in BJA is also not blocked by the presence of a trace as the following example shows:

29) Wayy walad fahad y9allim al-ktaabah? wayy. wa.lad.fa.ha. di. 9all malk taa. Bah 'which boy is fahad teaching the writing?

This kind of syntatic structure has an S-structure in which there is a trace between the verb and the second object as the representation in (30) below show:

30) wayy walad i fahad y9,allim /e_i/ alktaabah.

There is, however, at least one grammatical context in BJA in which phrasal syncope is blocked-the so-called construct configuration or Idaafa construction. It is well known that these constructions are used to show possession of one noun by another as well as other 'adnominal relations. In the construction the head noun cannot be modified by a -preceding article nor followed immediately by an adjective. To illustrate this, we have al-m9allim 'the teacher', but if we want to express the phrase 'the teacher of the boy', m9allim which is the head noun, may not be marked by a definite article, so we say.

31) m9allim al-walad	m9all.mal.wa.lad
but not:	
32) * al-m9allim al-walad	alm.9all.mal. wa.lad

Secondly, Arabic is a strong head-initial language, so complements to lexical categories follow the head. Thus an adjective follows the noun t modifies, e.g.,

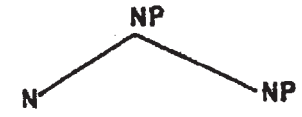
33) a. al-jariida at-twiila	al.ji.rii.dat.ti.wii.la
	'the long newspaper'
b. al-walad al-gişirr	al.wa.la. dal.gi.ṣiir
	'the short boy '

Now, when the head of a construct construction is modified by an adjective, the adjective may not follow immediately after the head noun; instead, it must appear after the complement of the head noun. Thus, to say, 'Fariid's long paper' and ' the man's short boy':

34) jariidit fariid at-tiwiila	ja.rii.dit.fa.rii.dat.ṭi.wil]
walad al-zlima al-gişiir	wa.la.dazz.li.mal.gi.siir

We assume that the head of a construct construction is limited to a lexical category and hence, will have the structure below:

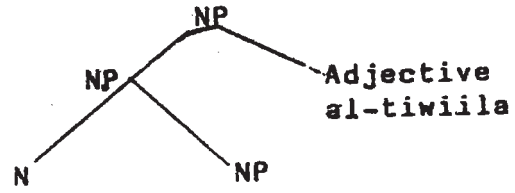
35)



jariidit fariid

We assume also that when an adjective modifies the head of a construct construction it appears adjoined at the end of the construction as in (36)below:

36)



jariidit fariid

With this much as a background, consider the following fact. we have a sequence /noun + noun + adjective/ and the adjective modifies the second noun syncope may apply between the noun -and adjective, but if the adjective modifies the head noun of the construction, then no syncope is possible between the second noun and the following adjective. To illustrate this point, look at the following examples:

37) a. ktaab al-m9allim aṯ-ṭiwiil

ktaa balm.9all.mat.ti.wiil .

'the book of the tall teaher'

b. mart al-mtarjim al-jidiid

mar.talm.tarj.mal.ji.diid

'the wife of the new translator'

38) a. jariidit al -m9allim aṯ-ṭiwiila

ja.riid.talm.9al.li.maṭ.ṭi.wii.la

'the long newspaper of the teacher'

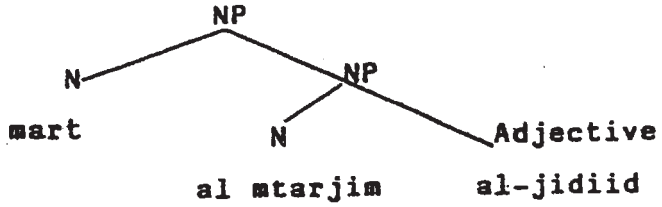
b. mart al-mtarjim al-jidiida

mar.talm.tar.ji.dii.da

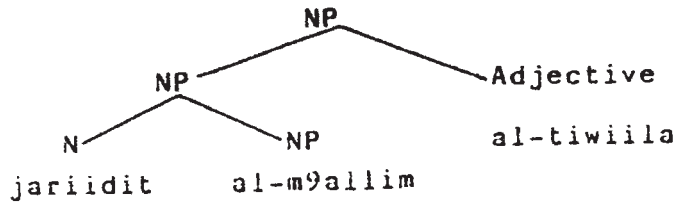
'the new wife of the translator'

Note here that in examples (a) and (b) of (38), the adjectives are marked by the feminine suffix /-a/ in agreement with the head nouns /jariida / and / Sara/, respectively, while in examp' Yes (a) and (b) of (37), the adjectives appear in the unmarked singular' masculine in agreement with the head nouns /m9alilm/ and /mtarjim/, respectively. According to our earlier remarks, the phrases given in (37) and (38) will have the structure given in (39) and (40), respectively:

39)



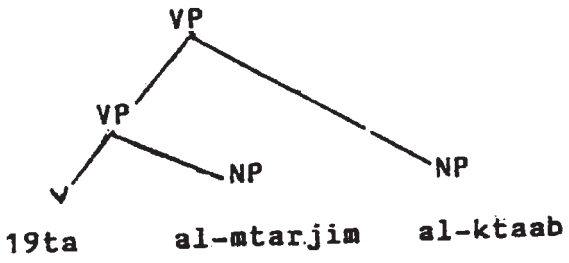
40)



Now, given these structures in (39) and (40) above, we can account for the lack of syncope in (40) by imposing a left-branch condition on the syncope rule (cf. elements 1978)

According to the left-branch condition, syncope may apply between- X] [Y Just in caused X is on the left branch of the first Constituent that-dominates both X and Y. This condition is satisfied by' the tree in (39) "above since both /al-mtarjim/ and /al-jidiid/ are immediately dominated by the same node.. But in the case of (40) , the left -branch condition is not satisfied since /m9allim/is not-on the left branch of the first node to dominate it and the adjective /al-tiwiil/. Note that in order for the left-branch to work properly, the double object construction (cf:26) may not have the tree structure of (41)below:

41)



Conclusion:

In this paper I have shown that BJA has-a rule syncopating. short high vowels in open syllables. The pattern of syncope in BJA is consistent with Kiparsky's model on the lexical level, while the Palestinian and the Lebanese data is not. Because of this difference , I have suggested that either the lexical phonology model is incorrect, .or alternatively that there are two processes of syncope in Arabic one – that crosses-boundries as in BJA, in a lexical application, and another-post lexical application within words as in PA and LA.

The second part of this paper dealt with the nature of the phrasal syncope and the contexts of this rule in BJA. It has been shown that phrasal syncope ion BJA operates outside the canonical government Configuration rather-freely.However I have shown that the phrasal syncope rule is blocked in the idaafa construction.

On the other hand , if we have a sequence /noun + noun +Adjective/ and the adjective modifies the head noun of the construction, then no syncope is possible between the second noun and the following adjective . Finally I have accounted for the lack of 9 syncope in the previous case by imposing a left -branch condition on the phrasal syncope. However, I noticed that is order for the left -branch condition to work properly , the double object construction may not have the tree structure given in (41) above.

Bibliography

1) Anderson, S.1984. *The Organization of Phonology* Newyork: Academic press.
2) Brame, M. 1974 "The cycle in phonology: stress in Palestinian, Maltese and Spanish". Linguistic inquiry 5.1 : 39-60.
3) Clements G. and Keyser 1981. "A three - tiered theory of the syllable ."Unpublished paper, Harverd University.
4) _____ 1983. *CV phonology*. Cambridge, Mass: MIT press.
5) Hamid, A. 1984. Descriptive Analysis of Colloquial Sudanese Arabic Phonology Ph.D. dissertation, University of Illinois, Urbana.
6)Harris, J. W. 1983 .Syllable Structure and Stems in Spanish: A-Non-Linear Analysis . Cambridge : MIT press.
7) Irshied 0.1984. The phonology of Arabic . Bani Hassan Abedouin; Jordanian Arabic. Ph.D . dissertation, university of Ilinois.
8) _____ Verbal Measures and McCarthy's theory (forth coming
9) _____ and Kenstowicz. (19843"some phonological rules of Bani - Hassan Arabic : a Bedouin dialect." Studies in the Linguistic Sciences 14.1.- 109-149.
10) kenstowicz. M. (19842"3yllable Structure in Modern Arabic Dialect"; unpublished paper. University of Ilinois
11) Kiparsky P- (1982)" From cyclic phonology to lexical phonology ." In the Structure of M onological Representations , edited by H. van Hutst and N. Smith, I,131-176 . Dordreh: Foris Publications.
12) Mohanan , K 198Z. Lexical Phonology Ph. D dissertation, MIT. Cambridge Press.
13) Steriade, D. 1982. Greek Prosodic and the Nature of Syllabification. Ph. D. dissertation, MIT Cambridge, Mass.