

THE PHONOLOGICAL BEHAVIOUR OF FINAL CONSONANT CLUSTERS IN BAGHDADI ARABIC

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Abstract :

The present paper throws light on the field of Phonotactics in which the treatment of final consonant clusters of Baghdadi Arabic (BA) is investigated, Consonant Cluster refers to a sequence of two or three consonant sounds in a single word. The purpose of this study is to investigate the patterns of final consonant clusters in BA. A full description of final consonant cluster in BA is presented in this study by providing a list of the permissible consonant clusters, their phonological distribution and the phonological processes that they may undertake especially across word boundaries.

1- Introduction :

All spoken Arabic varieties are linguistically related to Standard Arabic (SA). Yet the Linguistic relatedness between spoken Arabic and SA is "flexible and changeable" (Kaye, 1972). Despite this relatedness, there exists the distance between SA and spoken Arabic as manifested in the differences in the lexicon Phonology & Syntax and Morphology. Alkalsi (2006 - 14) adds that the differences between Modern Standard Arabic (MSA) and Colloquial Arabic are "basically phonological and morphological, whereas the differences between dialects are in pronunciation & everyday expressions and idiomatic phrases".

Watson (2002) argues that SA is the member of the Semitic language family. It is taught in the school of all Arab countries and "used in official contexts, in courts and newspapers" (Chentir, Guerti and Hirst, 2008). Albazi (2006 :22) proclaims that "Iraqi Arabic is the spoken language of everyday activities at home at work, on the street and on social occasions". Habash

(2010) adds that "it is not standardized, although there is a rich popular dialect culture of folktales, songs, movies and TV shows".

Iraqi Arabic includes three dialects within the Country: Central (Baghdadi), Southern (Basrawi) and northern (Maslawi). (Al-Jibouri, 2004; Abu Haidar, 2006 and Alkalsi, 2006). This study examined BA which is one of the best known Iraqi dialects since it is spoken in the capital city of Iraq. Abu Haidar (2006) states that Baghdad, the capital and the seat of the government and financial operations is situated on the river in the center of Iraq. BA is the dialect spoken by Iraqis who live in Baghdad and the areas near to it (Alkalsi, 2006. 15 & Albuarabi 2018. 1377).

BA is the most widely used and understood dialect throughout Iraq & It is characterized by its simplicity and clarity of speech and its tendency to amplify sounds, such as /o/ sound, as in /mino/ "who" and /jino/ "What" (Albuarabi, *ibid*). This particular dialect was chosen because Baghdadi native speakers can easily pronounce and master classical Arabic Phonotactics due to the relative closeness of their dialect to classical Arabic.

Alkalsi (2006:21) and Al-Bazi (2006:23) state that Iraqi dialect has three long vowels compared to the standard one, and three consonants more than MSA. These additional consonants are: the voiced g, the voiceless ch and the voiceless p which cannot be found in MSA. For example, /faug/ "over" and /qabr/ "grave" in MSA are pronounced as /fo:g/ and /gabr/ respectively in BA. The author, following Albuarabi (2018), assumes that BA uses /g/ as a diaphone to /q/ in mostly all the words of the language without any change of meaning.

The second consonant ch resembles the English voiceless affricate sound /tʃ/ and can be found in loanwords, as in /iftʃif/ "scoop" and /tʃakutʃ/ "hammer"; or as an allophone for /k/ sound in words like /tʃib/ "big", or /tʃaan/ "he was". Albuarabi (2018. 1378) argues that /tʃ/ sound restricts itself to the Southern Baghdadi dialect though it is widely used by all Baghdadi speakers. The voiceless and aspirated stop /p/ is the third consonant that can be found in Iraqi Arabic & more specifically in loanwords such as /paʃa/ "a kind of food with cooked skull of sheep", and /parda/ "curtain".

The internal structure of the syllable in SA and BA also differs. As for classical Arabic, no initial consonant cluster is allowed and there is no single syllable that starts with a vowel; whereas BA allows initial consonant clusters freely as in /kta:b/ "book", /bzi:m/ "buckles", /tbu:l/ "drugs" and /njajeer/ "carpenters" (Catford, 1988; Chentir, Guerti & Hirst, 2009).

Based on the position of the epenthesis that splits CCC, Arabic dialects were classified as CV dialects, VC dialects and C dialects. Several studies investigated Arabic syllabification patterns like (Watson, 2002), Chentir & Guerti and Hirst (2009) and Abushihab (2009). They assume that C dialects maintain the CCC cluster, VC dialects insert a vowel to the left of the unsyllabified consonant and CV dialects insert a vowel to the right of the unsyllabified consonant. Kiparsky (2003) assumes that Iraqi dialect belongs to the VC group.

Cafford (1988 & 267) Crystal (2003: 77) and Reetz and Jongman (2009:40) define consonant cluster as "any sequence of adjacent consonants occurring initially or finally in a syllable". Languages differ in the consonant cluster they will allow & the position in which they will allow them and the types of syllable structure that they admit. Not only is the number of consonants that can occur initially and finally in syllables always subject to limitations imposed by the phonological structure of the language, the particular sequences of consonants that can

occur in clusters is always limited (Catford ,ibid: 208). Baghdadi consonant sounds are tabulated in figure – 1 below :

Figure-1 Baghdadi Arabic consonants

	bilabial	Labio - dental	dental	alveolar	Post- alveolar	palatal	Post palatal	Velar	pharyngeal	Laryngeal
stops	b p			t,d ṭ , d			k	g/q	ħ ḥ	ʔ h
fricatives		f	Ø ð	s, ṣ ḏ z	ʃ	x	χ			
A fricatives			ʃ		ɖʒ					
Trill					r					
Lateral					l					
Nasal	m				n	y				
Approximant	w									

Methodology :

The purpose of this paper is two-fold : to provide a list of the permissible final consonant clusters in BA and to present a handout of the most important phonological processes that consonant clusters are subject to. Data Collection Started in 2017 and repeatedly updated and shifted until March 2020 . Asystematic search was made for consonant clusters in A Dictionary of Iraqi Arabic (1967) and A Dictionary of Iraqi Arabic :Arabic English, English Arabic Lexicon (2003). A self - observation technique was used by the researcher as a native speaker of the language. Then the data was fully investigated and analyzed to meet the requirements of the purpose of this paper

3-Discussion And Results : This section will discuss final consonant cluster in BA Final three consonant clusters are not very common in BA (see Figure 2) except in loanwords like /diktatur / ‘tyrant’ and /matwr / motor(Salman2020: 107 -109).

Two consonant clusters are not that common However, there are certain clusters that occur in final position. This may be due to the fact that Iraqi Arabic breaks up two consonant clusters Word-Finally as in ʔism - ʔlsm ‘name’ (Salman B,2002:1405).

What follows is a presentation of the occurrence and internal composition of final clusters based on the information tabulated in Figure-1.

Figure-2. Final Clusters

C2 \ C1	b	p	t	d	ṭ	ḍ	k	g	q	ħ	ḥ	ʔ	h	f	ø	ð	s	ṣ	ḏ	z	ʃ	x	χ	ch	j	r	l	m	n	w	y	
b			*	*	*		*			*	*				*		*			*	*	*										
p																																

Final consonant Clusters are most common with /b/,/g/,/k/, /d/,/t/, / t/, /ʕ/,/h/,/h̄/ respectively. It is noteworthy to mention that the laryngeal stop /ʔ/ can never occur word - finally in clusters .Moreover , there are no final clusters with /d/ as the first element in the cluster.The voiced bilabial /b/ is the most frequently -occurring consonant in final clusters as it cancombine with up to 16 consonants to form different root clusters as in , /xurbt/ ‘she fainted’/ xubz/ ‘bread’,/lib/ ‘clothes’, /labx/ ,/splash) and /nabd/’pulse’.Taking gemination & doubling the consonant, into consideration 161 can frequently occur in BA in words like /habb/‘to like’, /sabb/’to curse’ and /sabb/ to pour’.

The voiced pharyngeal /h̄/ is the second consonant in frequency in BA as it can combine with up to 11 consonants as in /sah̄b/‘generator’, /wah̄f/ ‘beast’ ,/fah̄s/ ‘checkup’,/ lahn/ ‘tune’ and /yah̄l / “solve”.

Third in frequency is the pharyngeal stop /ʕ/ which can combine with 8 consonants to form two consonant clusters as in /ʕb/ruʕb/’horror’,/ʕb/,/siʕd/ ‘went up’,/ʕs/ /fuʕs/ ‘smashed’ , /ʕt/ /naʕt/’she mourned’ , /ʕg/ /liʕg/ ‘licked’ /ʕf/ /naʕf/ ‘coffin’ and rarely /ʕl/ /naʕl/ /’sandal’ . The laryngeal stop /h/ is as frequent as the emphatic alveolar stop /t̄/ . The former can occur in combinations like /nahb/to ‘looting’ ,/lahf /,to finish , /nahj/ ‘approach’ , /fihm/ ‘understanding’ , /mahr, ‘dowry’ and /jah/ ‘ignorance’. The latter consonant can be combined with /b/ /rutb/’dates’ , /f/ /litf/ ‘stole,’ /m/ /latm/ ‘hitting the face , /r/ /fatr/ ,broke fasting’ , /x / /lutx / ‘stains’ and /h̄/ /nath / ‘hit by head.Salman (2020 b: 1413) assumes that the emphatic consonant /t̄/ can be geminated in words like /xatt̄/ ‘line’ and /bat̄ t̄/ ‘geeze’ ; resulting in final clusters of two consonants.

/d/ is an alveolar stop consonant and it can be clustered with /g/ as in /wadg/ 'heavy rain’ , /m/ /nadm/ ‘regret’, /h/ /lidr/ ‘bite’ , /r/ /badr/ ‘moon’ and /h̄/ /madh̄/‘to praise’. The stop consonants /t /, /k/and /g/ are the less frequent in occurrence. The alveolar stop /t/ can occur in two-consonant cluster words if it is combined with /k/,/f/,/h/, and /r/ respectively. Illustrative examples are: /hitk/’bruised’ /nitf/ ‘plucked, /fith/ ‘opening’ and’ /iftr/’ hanged about ‘.The cluster /tr/ occurs in loanwords like /matr/ ‘meter’ (Salman 2020 b : 89).

The voiceless post-palatal /k/ can occur in combinations like /rukb / ‘riding’,/nikz/’to pock’,/intiks/ ‘relapsed 'and /wakt/ ‘time’. The voiced velar /g/, on the other hand, can occur in combinations like /fags/’to hatch’, /fugr/ ‘ominous’ /wikʕ/ ‘felt down’, and /rigs /’hedanced’ . In BA, /g/ can never combine with /n/, /l/ and /d/.

3-2 fricative clusters:

BA has 10 fricative consonants /f,s, ʃ,x ,ʒ,z,d,s,θ and ð/ . These fricative consonants occur less frequently Word- finally than plosive consonants. Moreover, rare final consonant cluster are found with /θ/ as the first element in BA,as in /yaxθθr / ‘to curdle’, where /θ/ is geminated and the final shape of the Word results in a three-consonant cluster combination.

/f/ is a labio-dental fricative consonant. It is the most frequent fricative consonant in final clusters as it can combine with up to 13 consonants to form stem clusters.These consonants are /t,d,t̄,s,ʃ,r,ð,ʕ,g,n,x/,to SS. rat ,as in /zift / \’tar’, /nafr / ‘one person’ , /naqf/‘engraving /naf/ ’self’ and /naft/ ‘oil’. The alveolar fricative consonant /s/ can combine with /K/ /yamsk/ ‘to

catch', /ʃ/ /yistʃ/ 'to memorize', /j/ /nasj/ 'to weave', /f/ /xasf/ 'eclipse', /m/ /rasm/ 'drawing', /n/ /ʕusn/ 'branch', /r/ /ʕusr/ 'distress', /s/ /as/ 'bows', /ʕ/ /lasʕ/ 'to bit' and /x/ /mas x/ 'monster.

The post alveolar /ʃ/, the palatal /x/ and the post palatal /ʕ/ are of the same frequency as each can combine with up to 10 consonants. /ʃ/ for example can combine with /b/ /ʕuʃb/ 'grass', /t/ /ʕiʃt/ 'long live' and /raʃh/ 'cold'. /x/ can be found in combinations like /xm/ /faxm/ 'great', /xt/ /ʔuxt/ 'sister', /xr/ /naxr/ 'tognow' and /x1/ /lbuxl/ 'stinginess. The consonants /z, s, r, d, s, m, l and t/ can be the second consonant in clusters with /ʕ/, as in /luʕz/ 'riddle', /buʕd/ 'hatred', /balʕm/ 'phlegm' and /maʕs/ 'colic'.

In BA, /z/ is an alveolar fricative consonant. It can occur only with /b, m, n, r and g/ respectively, as in /hizb/ 'party', /rizm/ 'packing', /wazn/ 'weight', /bazz/ 'lineage', and /rizq/ 'wealth'. The dental /d/ is as frequent as the alveolar /s/, in occurrence. The former can combine only with /n/ /hudn/ 'lap', /m/ /ʕadm/ 'bone', /ʕ/ /maʕʕ/ 'chewing', /ʕ/ /radʕ/ 'sucking', and the latter can combine only with /b, t, f and ʕ/ as in /nasb/ 'to deceive', /lyetnasb/ 'eaves dropping', /wasf/ 'description' and /nusʕ/ 'clearness'. The latter consonant can also be geminated resulting in words of two-consonant cluster as in /fuss/ 'lobe', /ʕass/ 'to choke' and /gass/ 'to cut'.

The alveolar /ð/ is the least frequent fricative. It can combine only with /n, ʕ and f/ as in /ʔiðn/ 'permission', /laðʕ/ 'sharp' and /ħ a ð f/ 'omission'.

3-3 Affricate Clusters :

BA has two affricate sounds, /tʃ/ and /dʒ/. The former mostly occur in loanwords (See section-1-) as in /ʔukleet/ 'a kind of sweet'. It rarely occurs in final two consonant cluster's as in /fatʃ/ 'jaw', where it is geminated, and in three consonant clusters as in /retʃeʃ/ 'soft'. /j/ on the contrary can combine with different consonants to form different final word clusters. /j/ can be the first element in combination with /d, z, m, r, l and h/ respectively. Illustrative examples are as follows: /wajd/ 'passions', /hijz/ 'distrains', /rajm/ 'to throwstones', /fajr/ 'dawn', /rijil/ 'legs' and /wigh/ 'face'.

3-4 Sonorant Clusters:

3-4-1 Trill cluster:

/r/ is a post-alveolar trill consonant in BA. It is the most frequent consonant in occurrence in final clusters as it can combine with up to 18 consonants. These consonants are /b, k, f, s, ʃ, m, x, y, d, ʕ, d, q, z, s, j, n, h and w/. The following are some illustrative examples: /ħarb/ 'war', /farʃ/ 'furniture', /faxr/ 'honor', /qurs/ 'disk' and /marn/ 'flexible'.

3-4-2 Lateral Clusters :

The lateral post alveolar consonant /l/ is also frequent in BA. It can combine with following consonants to form final two consonant clusters /b, d, t, q, k, ʕ, s, ʕ, m, h, f, j and t/. Some illustrative examples are: /ji/d/ 'skin', /si/m/ 'peace', /milt/ 'I swayed', /ʕalj/ 'snow', /salf/ 'loan'.

3-4-3 Nasal Clusters :

Nasal consonants are very frequent in final consonant clusters in BA. In this dialect, /m/ is bi/abia/ and /n/ is post-alveolar. /m/ can combine with /t, ,s,r,x,h,t,k,s,f,l,ʃ,y, and ʕ/. (See Figure-2-). The following are some illustrative examples : /ʕ umr/ 'life time, /lamh/ 'jiffy' , /haml/ 'pregnancy', and /hams/b/l whispering'. The post- alveolar nasal /n/ can occur in combination with /ð/ anb/'sin', /d/ /rand/ 'name of a girl ,/t/ /bint/ 'daughter, /hink/ 'palate' /z/ /kanz/ 'treasure', /j//banj/' banesthesia', /f// ʕunf/ 'violence, /s/ /jins/ 'race' ,/h/ /manh/ "grantings and /ʕ//sunʕ/,making .

3-4.4 Approximant Clusters :

BA has two approximant consonants which rely occur in final clusters a These are the bilabial /w/ and the palatal /y/.The researcher realized that /w/ and / can occur in words like /mawt / 'death' /saut/ 'voice' , /meyz/'table' and /meyt/ 'one- hundred', respectively. Combinations of y t / d ,ø and s/ are also found the proper names of boys like /Zayd/, /Layø/ and / Kays/.

4-Phonological Phenomenon:

Two phonological phenomena are realized by the author when dealing with final consonant clusters. These are epenthesis and reduction. Salman (2020b :140 4) defines epenthesis as a 'phonological process which refers to the insertion of a sound segment ; thereby changing its syllable structure".

Epenthesis mainly occurs across word boundaries so the combination / c-cc/ undergoes a change when the vowel /i/is inserted between the original two element Clusters as in /ʃant, hnaa/ /ʃan/ ihnaal. ' She was here Where the first word ends with the cluster /nt/ and followed by a cluster starting with that here. The insertion of /i/here is assumed to be for ease of speech.

Reduction on the contrary refers to the omission of a consonant as in the final cluster /nt/ reduced to /n/ in /ʃbint/ makkw/ /ʃbin maakw/' there in no dill' and the final cluster /nd/which is reduced to /d/ in /ʕndʔummi/ /ʕdummi/'with my mother . This is Also probable to make the speech more fluent by BA speakers.

5-Conclusions :

This study presented a full description of the permissible and frequent combinations of final consonant clusters in BA The most frequent consonant clusters in final position are the sonorants /r/ ,/m/ and/n/. The second most frequent clusters are stops. The clusters involving fricatives in B H are less frequent ./b/ is the most frequent consonant in occurrence among stop consonants g Whereas /f/ /s/ and /ʃ/ are the most frequent among fricative consonants .The researcher finds out that there are the phonological processes that can be found in final two consonant clusters namely, epenthesis and reduction There two phonological processes can occur across word boundaries.

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