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An Optimal Theoretic-Based Analysis of Consonant Clusters in Quranic Arabic



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Abstract

This study analyses consonant clusters in Quranic Arabic (QA). It also investigates the phonological phenomenon affecting the syllable structure in the QA. QA avoid clustering consonants in a single syllable. Based on Optimality Theory (OT), Prince and Smolensky (1993) provide an account to prevent consonant clusters. In this study, it is argued that the syllable pattern CVCC is the only pattern reflecting consonant cluster in QA. However, this pattern is manifested by the interaction of two factors: (i) the short vowel omission and (ii) the resyllabification of a new syllable pattern. Accordingly, this study hypothesises that the syllable pattern CVCC is not basic in QA, since the consonants left after the omission of shorts vowels are joined to the preceding syllable which has an already made coda. As a result, a complex coda is made at the end of the syllable to which the consonants left are attached forming a new non-basic syllable pattern CVCC. Besides, this pattern occurs in final position only. Other patterns such as CV, CVV and CVVC do not violate the rules of OT. With the processes of inserting, omitting, modifying of certain vowels and a glottal stop, these pattern prevent consonant cluster.

الملخص

تحلل هذه الدراسة مجموعات صوتية متناسقة في اللغة العربية القرآنية. كما أنها تحقق في الظواهر الصوتية التي تؤثر على البنية المقطعية في عربية القرآن الكريم. إذ أن عربية القرآن الكريم تحول دون تجمع الحروف الساكنة في مقطع صوتي واحد. واستناداً إلى نظرية المثلى، يقدم برنس وسمولنسكي (١٩٩٣) تحليلاً لمنع التجمعات تلك الساكنة. وقد أثبتت هذه الدراسة إن المقطع الصوتي CVCC هو المقطع الوحيد الذي تتجلى فيه المجموعة الساكنة في العربية القرآنية. ولذلك فإن نشوء المقطع المذكور أعلاه يعزى إلى التقاء عاملين مشتركين بالتفاعل: (١) حذف الحرف الصوتي القصير و (٢) إعادة تصنيف مقطع صوتي جديد. وعليه، افترضت هذه الدراسة أن المقطع CVCC غير أساسي في العربية القرآنية، نظراً لأن الحروف الساكنة التي تم تركت بعد حذف أحرف العلة القصيرة تنضم إلى المقطع السابق الذي يحتوي على مقطع صوتي ختامي مسبق. ونتيجة لذلك، يتم نشوء مقطع صوت ختامي مركب في نهاية المقطع الذي يتم إرفاق الحروف الساكنة المتروكة إليه، وبذلك يتشكل مقطع صوتي جديد غير أساسي ألا وهو CVCC. إلى جانب ذلك، فإن المقطع هذا لا يظهر إلا بمحل ختامي على غير ما تكون عليه المقاطع الصوتية الأساسية الأخرى مثل CV، CVVC و CVVC والتي لا تنتهك قواعد النظرية المثلى أثناء إلحاق أو حذف أو تعديل بعض حروف العلة ومحطة الفقع.

1. Introduction

Arabic is the language of the Holy Quran. Actually, there is no difference between the Standard Arabic (SA hence) and the Quranic Arabic (QA hence), except one phonological process in which QA involves adding a central vowel to the end of the syllable that ends with such consonants as /q, t, b, j, d/. However, this process is existed in QA only whose system prohibits consonant clusters within the structure of a syllable. Therefore, the current study aims at investigating this process in terms of Optimality Theory (OT hence) which has been proposed by Prince and Smolensky (1993). OT provides a detailed analysis of the phonological phenomena affecting the syllable structure of QA including the occurrence of certain segments in some syllables and the constraints imposed on the structure of those syllables.

However, the current study includes six sections. The first section is introductory, while the second section reviews the systems of vowels and consonants, patterns of syllable structure and the rules of stress in QA. This section discusses these Quranic topics in detail. Section three deals with the phonological phenomena affecting syllable structure in QA. It includes three phonological phenomena which are: prothesis, apocope and paragoge. Section four collects some data in order to be analysed grounding on OT. The data selected are listed on the basis of the phonological phenomena discussed in section three. Section five introduces a profound analyses of the data listed in section three. It also provides some observations important to the study. Section six is devoted to the main concluding remarks which have been arrived at throughout this study.

2. Quranic Arabic: Theoretical Review

This section sheds some light on the systems of vowels and consonants in QA. It consists of four sections which are dealt with as follows:

2.1 The Vowel System in Quranic Arabic

Brame (1970:18) writes that the vowel system of Arabic is composed of three basic pairs of vowels: (i) in the first pair, there are two low front vowels: /a/ and /aa/, (ii) in the second pair, there are two high front vowels: /i/ and /ii/ and (iii) in the third pair, there are two high back vowels: /u/ and /uu/.

2.2 The Consonant System in Quranic Arabic

Based on Abu-Mansour (1994:76), the consonant inventory of QA can be shown in the following table as follows:

3

- b) "When a phrase contains only one heavy or super-heavy syllable, the heavy or the super-heavy syllable receives the primary stress, and the rest of the syllables receive no stress".

"kitaab'	CV-CVVC'	a book"
"ʔulaa'ʔika	CV-CVV'-CV-CV	those"
"yuʔal'limahu teaches it"	CV-CVC'CV-CV-CV	he

- c) "When a phrase contains two or more heavy syllables, the heavy syllable nearest to the end of the phrase receives the primary stress and the one closest to the beginning of the phrase receives the secondary stress".

"yu'jaadiluu'kum argue with you"	CV-'CVV-CV-CVV'-CVC	they
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3. Phonological Phenomena Affecting Syllable Structure Quranic Arabic

There are three basic phonological phenomena affecting syllable structure in QA:

3.1 Prothesis

Yule (2010:232) states that prothesis involves the addition of a sound to the beginning of a word. Trask (1996:91) maintains that the words begin with a complex onset allow the addition of a short vowel preceded by a glottal stop to stratify McCarthy's (2007:10) generalization "a word may not begin with a consonant cluster".

It is to be noted that there are certain verbs and nouns in QA begin with a sequence of consonants. As a result, a short vowel preceded by a glottal stop should be added to the beginning of such nouns and verbs. Consider the following:

Input	Output	Gloss
mraʔah woman'	ʔimraah	'a
θnayn ntilaaq 'departure'	ʔiθnayn ʔintilaaq	'tow'

The inputs above include sequences which do not lead to acceptable outputs in QA such as *CCV and CCVCC. However, the imperative verb in Arabic consists of three consonants. This means that the root of the Arabic imperative verb begins with a complex coda. Again, a short vowel preceded by a glottal stop should be added to the beginning of such verbs. Having done that, the complex onset will be broken in order to resyllabify the imperative verb into two syllables. Consider the following:

Input	Output	Gloss
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Ktub	?aktub	'write'
qra?	?iqra?	'read'
drib	?idrib	'hit'

Making nouns definite in Arabic involves adding the definite article /l/. This article consist of one segment only. As a result, any noun in Arabic is expected to begin with a consonant cluster, since any noun can receive the definite article /l/. This satisfies Trask's (1996:91) generalization: "words may not begin with a vowel". In this case, a short vowel preceded by a glottal stop should be added to the beginning of each noun to make it definite. Compare Definite (1) with Definite (2) in the following:

Indefinite	Gloss	Definite ₍₁₎
Definite ₍₂₎		
qalam	'a pen'	*lqalam
?alqalam		
yad	'a hand'	*lyad
?alyad		
kahil	'an ankle'	*lkahil
?alkahil		

3. 2 Apocope

Apocope, as McCarthy (2002:21), is the process of omitting a segment from the end of a word. It is to be noted that in QA only short vowel are omitted. Apocope is not applicable to long vowels even when occur at the end of a word.

However, omitting a short vowel from the end of a word will increase the number of consonants, because the consonants left will be attached to the preceding syllables. As a result, a complex consonant cluster is made if the preceding syllable has an already made coda, but the consonants attached will themselves be a coda in the preceding syllable if the latter is an open syllable which has no coda. Consider the following:

Input	Output
Gloss	
fii lku tu bi	fil ku tub 'in
the books'	
fii lnah ri	fil nahr 'in
the river'	
bi lqa la mi	bil qa lam
'with the pen'	

3. 3 Paragoge

The addition of a segment to the end of a word is called paragoge. According to Trask (1996:100), paragoge is divided into three types in QA:

3. 3. 1 Noonation Paragoge

Qamhawi (1969:98) mentions that noonation "in Arabic is indicated by doubling the diacritic that represents the short vowel preceding the /n/". Noonation is subject to certain phonological phenomena. Consider the following:

"yax lu qu kum fii bu tuu ni ʔum ma haa ti kum xal qan mi baʃ di xalq"⁽¹⁾

A closer look at the verse above states that only indefinite nouns have noonation. Besides, noonation always disappears whenever there is a pause after the noun carrying noonation. This tells that the number of syllables of the nouns with noonation is more than the number of the syllable of the nouns without noonation. Compare:

"... ʔum ma haa ti kum xal qan mi baʃ di xalqin fii ɗu lu maa tin ʔa laaθ"⁽²⁾.

In first verse, the noun 'xalq' first appears as 'xal qan' CVC CVC in connected speech, while it appears in the second verse as 'xalq' CVCC, because of the pause that violates noonation. In the second verse both of the two 'xalqs' appear as CVC CVC and CVC CVC, because there has been no pause.

3. 3. 2 'h' Paragoge

Paragogic 'h' is applied to nouns, pronouns and verbs and it differs from case to case.

Input	Output
Gloss	
a) dʃu	ʔud ʃuh
'invite'	
b) qi	qih
'preserve'	
c) hi saa bi ya	hi saa bi yah
'my account'	
d) bi ma	bi mah
'with what'	

In (a), it is evident that the addition of 'h' changes the position of the short vowel. So, the short vowel will not be omitted. As a result, new syllable will be made from the last consonant, the short vowel and the new paragogic 'h'.

Since "a word must consist of more than one segment", an 'h' must be added in (b) to maintain its minimality. However, the omission of the short vowel at the end of the word will leave the word with 'q' only. Besides, Arabic has no syllabic consonant. So, the final vowel must not

be omitted. As a result, this short vowel with the newly added 'h' will form a new syllable in which the short vowel is the nucleus.

In (c), an 'h' must be added in order to keep the Arabic clitic. This clitic together with the paragogic 'h' will create a new syllable representing the pattern CVC.

In (d), a syllable is made after adding 'h' to avoid omitting the short vowel at the end of the word. This short vowel and the paragogic 'h' are combined together in order to form a closed syllable pattern which is CVC.

3.3.3 The Qalqalah

The third phonological phenomenon is 'qalqalah'. Qalqalah refers to the process of inserting a glottal stop and a central vowel. McCarthy and Prince (1994:333) state that there are five sounds of qalqalah: /q, t, b, j, d/. These sounds are all [-sonorant]. They are divided into two classes: two of them /q, t/ are [+guttural], whereas the other three /b, j, d/ are [+voiced]. Gadoua (1999:70) maintains that qalqalah sounds are "expected to undergo simplification in phrase-final position by the loss of voicing. However, such loss does not occur. Instead, a central vowel followed by a glottal stop is added to the end of the phrase that ends with one of these sounds in the input".

Input	Output	Gloss
la hab	la ha bəʔ	'flame'
ma sad	ma sa dəʔ	'palm-
leaf fiber'		
lbu ruuj	ʔal bu ruu jəʔ	
'constellations'		

4. Data Collection

The data selected are arranged according to the phonological phenomena discussed in section three. Each Quranic verse is transcribed phonetically and numbered for the purposes of analysis. Besides, each authentic QA text is foot noted in order to clarify its interpretation into English, to provide a fully documented data and to cut short the difficulty of looking for these verses in the Holy Quran.

- 1) "ja ʕa la fii haa zaw jay ni ʔnay ni"⁽³⁾. ʔix ti laaq
- 2) "qra bis mi ra bi ka..."⁽⁴⁾. ʔiq raʔ
- 3) "ʔin haa ʔaa ʔil laa xti laaq"⁽⁵⁾.
- 4) "ktub la naa fii haa ʔi hi ddun yaa ʕa sa na tan"⁽⁶⁾. ʔuk tub, ʔad dun yaa
- 5) "wa qaa la ti mra ʔa tu fir ʕaw na qur ra tu ʕay nin lii wa la ka"⁽⁷⁾. ʔim ra ʔa tu
- 6) "wa qad naz za la ʕa lay kum fil ki taab"⁽⁸⁾. fii ʔal ki taa bi
- 7) "fa ʔal qii hi fil yamm"⁽⁹⁾. fii ʔal yam mi

- 8) "hi nun mi nad dahr"⁽¹⁰⁾. mi nad dah ri
9) "yax lu qu kum fii bu tuu ni ʔum ma haa ti kum xal qan mim baʕ di
xal qin fii ʔu lu maa tin ʔa laaʔ"⁽¹¹⁾. xal qan, xal qin, ʔu lu maa tin
10) "haa ʔu muq ra ʔuu ki taa bi yah"⁽¹²⁾. ki taa bi yah
11) "wa ma ʔad raa ka maa hi yah"⁽¹³⁾. maa hi yah
12) "ʕam ma ya ta saa ʔa luun"⁽¹⁴⁾. ʕam mah
13) "bi rab bil fa la qəʔ"⁽¹⁵⁾. ʔal fa la qəʔ
14) "naa ran ʔaa ta la ha bəʔ"⁽¹⁶⁾. la ha bəʔ
15) "hab lun mim ma sa dəʔ"⁽¹⁷⁾. ma sa dəʔ

5. Data Analysis and Observations

This section provides an OT-based analysis. It also introduces certain observations based on the facts discussed in the preceding sections.

To begin with, phrases (1 – 5) state that prothesis is resulted by the addition of a short vowel preceded by a glottal stop. The glottal stop and the short vowel are added to nouns and verbs which have consonant clusters at the beginning. Each underlined phrase indicates a new resyllabification output with a consonant cluster that is initially positioned. At the end of each phrase above, there is a new resyllabified output form of the original input form underlined in the verses.

However, phrases (6 – 8) show how the process of apocope is led to due to the omission of short vowels at the end of phrases. In addition, each underlined phrase indicates a new resyllabified output form of the original input forms ending with a short vowel. As a result, this process can cause consonant cluster which can be seen clearly in the verses selected above.

As for paragoge, it is instantiated by the phrases (9 – 15). However, the addition of paragoge /n/ to the end of nouns in connected speech creates the syllable pattern CVC CVC, which then leads to the process of 'noonation' as shown in verse (9) above. Phrases (10 – 12) show that the addition of /h/ to the end of nouns, pronouns and verbs creates a new syllable in which the short vowel is the nucleus and /h/ is the coda. This final /h/ together with the preceding short vowel and consonant make the syllable pattern CVC. As a result, 'haa' as-sakt' phenomenon is resulted. In English, there is no exact counterpart for this phenomenon; rather it might be explained as /h/ of silence. Regarding 'qalqalah', phrases (13 – 15) show that it is formed under the existence of the sounds / q, t, b, j, d/. This phenomenon is led to by adding a central short vowel followed by a glottal stop to the end of certain words.

Having analysed the phonological phenomena affecting the syllable structure in QA, it is necessary now to analytically sum up the theoretic section in this study. However, the discussions presented in all the

preceding sections can be accounted for in the following important observations:

- 1) All the patterns of the syllable structure in QA include onsets, since all of them begin with a consonant.
- 2) The patterns CVC, CVV and CVVC can occur in initial, medial and final position, while the pattern CV cannot occur in isolation or finally, since it ends with a short vowel that is omitted in final position.
- 3) The patterns of the syllable structure in QA are divided into two classes:
 - a) Open syllable patterns: CV and CVV. These two patterns have no codas, since the end with vowels.
 - b) Closed syllable patterns: CVC, CVVC and CVCC. These three patterns have codas, because they all end with consonants.

In view of the available observations, QA avoid clustering consonants in a single syllable. Omitting short vowels will cause serious consonant clusters, because the consonants left will be attached either to the preceding or the following syllables. However, there are certain phonological phenomena which avoid omitting vowels such as 'noonation'. When the phonological phenomena fail to protect those vowels, a consonant cluster will be caused as in the case of the CVCC pattern. Such consequence is resulted due to the following constraints:

- 1) The constraint which prevents the paragoge of /n/ at the end of the word.
- 2) The constraint which omits the short vowel at the end of the word.

The conclusion drawn from the above constraints tells that the pattern CVCC is not basic in QA. It is resulted from the combination of two factors. To account for this conclusion, a bisyllabic inputs are presented as follows:

Inputs	Short Vowel Omission ₍₁₎	Resyllabification ₍₂₎
Gloss		
xal'qu 'creation'	xal'q	xalq
nah'ru 'a river'	nah'r	nahr
baħ'ru 'a sea'	baħ'r	baħr

A closer look reveals that the short vowel is omitted when each one of the words above appears at the end of a phrase. Since the consonants left have no nucleus, they must be attached to the preceding syllables forming the pattern CVCC.

6. Conclusion

The study has discussed the consonant cluster regarding the syllable structure in QA. In this study, data from the Holy Quran have been provided in order to be analysed within the framework of Prince and Smolensky's (1993) OT. Based on OT, the analysis states that OT offers an important system of constraints regulating the occurrences of syllables in phrases. Besides, the analysis of the data has been accounted for on the basis of the phonological phenomena affecting syllable structure in QA. As a result, the analysis proves that QA prohibits consonant clusters in a single syllable, a case where most of the phonological rules of QA cope up with the restrictions imposed by OT. However, it has also been found out in this study that syllable pattern CVCC is not basic in QA; rather it is resulted under the influence of the interaction of certain factors: (i) the restriction prohibiting the occurrence of /n/ at the end of the word and (ii) the restriction omitting short vowels when in final position of the word. Finally, the conclusion arrived at regarding this pattern is that it occurs in final position only, the only pattern that violates the rules of OT in QA and it has been considered as a non-basic pattern in QA.

الهوامش

- (1) ﴿يَخْلُقْكُمْ فِي بُطُونِ أُمَّهَاتِكُمْ خَلَقًا مِّنْ بَعْدِ خَلْقٍ﴾ Az-Zumar: (6). Al-Hilâlî and Khân (1419:619) interpret this verse as: "He creates you in the wombs of your mothers: creation after creation".
- (2) ﴿يَخْلُقْكُمْ فِي بُطُونِ أُمَّهَاتِكُمْ خَلَقًا مِّنْ بَعْدِ خَلْقٍ فِي ظُلُمَاتٍ ثَلَاثٍ﴾ Az-Zumar: (6). Al-Hilâlî and Khân (1419:619) explain this verse as: "He creates you in your mothers' wombs: creation after creation in three veils of darkness".
- (3) ﴿جَعَلَ فِيهَا زَوْجَيْنِ اثْنَيْنِ﴾ Ar-Ra'd: (3). Al-Hilâlî and Khân (1419:320) explain the verse as: "He made Zawjain Ithnain (two in pairs – may mean two kinds or it may mean: of two varieties)".
- (4) ﴿اقْرَأْ بِاسْمِ رَبِّكَ﴾ Al-'Alaq: (1). "Read! In the Name of your Lord" (Al-Hilâlî and Khân, 1419:842).
- (5) ﴿إِنْ هَٰذَا إِلَّا أَعْمَالُ﴾ Sad: (7). "This is nothing but invention" (Al-Hilâlî and Khân, 1419:609).
- (6) ﴿وَأَكْتُبْ لَنَا فِي هَٰذِهِ الدُّنْيَا حَسَنَةً وَفِي الْآخِرَةِ﴾ Al-A'raf: (156). Al-Hilâlî and Khân (1419:222) state that this verse means "And ordain for us good in this world, and the Hereafter".
- (7) ﴿وَقَالَتِ امْرَأَتُ فِرْعَوْنَ قُرْتُ عَيْنٍ لِّي وَلَكَ﴾ Al-Qasas: (9). Al-Hilâlî and Khân (1419:517) interpret this verse as: "And the wife of Fir'aun (Pharaoh) said: a comfort for the eye for me and for you".
- (8) ﴿وَقَدْ نَزَّلَ عَلَيْكُمْ فِي الْكِتَابِ﴾ An-Nisâ': (140). Al-Hilâlî and Khân (1419:133) translate this verse into English as: "And it has already been revealed in this Book (this Qur'ân)".
- (9) ﴿كَأَلَيْسَ فِي آيَةٍ﴾ Al-Qasas: (7). Al-Hilâlî and Khân (1419:516) mention that this verse means "but when you fear for him, then cast him into the river".

- (10) ﴿حِينَ يَنزِلُ الدَّهْرُ﴾ Al-Insân: (1). Al-Hilâlî and Khân (1419:803) state that this part of this verse means "a period of time" Al-Hilâlî and Khân (1419:803).
- (11) ﴿يَخْلُقُكُمْ فِي بُطُونِ أُمَّهَاتِكُمْ خَلْقًا مِّن بَعْدِ خَلْقٍ فِي ظُلُمَاتٍ ثَلَاثٍ﴾ Az-Zumar: (6). Al-Hilâlî and Khân (1419:619) explain this verse as: "He creates you in your mothers' wombs: creation after creation in three veils of darkness".
- (12) ﴿هَاقًّا أَقْرَبُوا كُنْيَةً﴾ Al-Hâqqah: (19). "Here! Read my Record" Al-Hilâlî and Khân (1419:781).
- (13) ﴿وَمَا أَدْرَاكَ مَا هِيَ﴾ Al-Qâri'ah: (10). Al-Hilâlî and Khân (1419:847) states that this verse means "And what will make you know what it is?"
- (14) ﴿عَمَّ يَتَسَاءَلُونَ﴾ An-Baba': (1). "What are they asking about" Al-Hilâlî and Khân (1419:809).
- (15) ﴿يَرْبِّ الْفَلَقِ﴾ Al-Falaq: (1). "with (Allah) the Lord of daybreak" Al-Hilâlî and Khân (1419:855).
- (16) ﴿نَارًا ذَاتَ هَبٍ﴾ Al-Masad: (3). Al-Hilâlî and Khân (1419:854) translate the meaning of this verse into English as: "in a Fire of blazing flames"
- (17) ﴿حَبْلٍ مِّن مَّسَمٍ﴾ Al-Masad: (5). "a twisted rope of palm fiber" Al-Hilâlî and Khân (1419:854).

References

- [1] Abdul Hamid, M. M. (1947) *Sharh Ibn Aqeel ala Alfyyat Ibn Malik*. Cairo: Egyptian Englo Publishing and Distributing Company.
- [2] Abu-Mansour, M. (1994) *Optimality and Conspiracy in the Syllable Structure of Arabic*. University of Massachusetts.
- [3] Al-Ani, S. (1970) *A Concise Analytical Study of Arabic Phonetics and Arabic Phonology*. Paris: Paris University Press.
- [4] Archangeli, D. (1970) *The Analyses of Optimality Theory as a New Trend in the Study of Linguistics*. Oxford: Oxford University Press.
- [5] Brame, M. (1970) *Arabic Phonology. Implications for Phonological Theory and Historical Semitic*. Cambridge: Cambridge University Press.
- [6] Gadoua, A. H. (1999) *A Study of Consonant Clusters in the Holy Quran*. Ottawa: Ottawa University Press.
- [7] Al-Hilâlî, M. and M. Khân (1419) *Translation of the Meanings of the Noble Quran in the English Language*. Riyadh: King Fahad Complex.
- [8] McCarthy, J. (2002) *A Thematic Guide to Optimality Theory*. Cambridge: Cambridge University Press.
- [9] McCarthy, J (2007) *Hidden Generalizations: Phonological Opacity in Optimality Theory*. London: Equinox.

- [10] McCarthy, J. and Prince, A. (1994) *The Emergence of the Unmarked: Optimality in Prosodic Morphology*. Oxford: Oxford University Press.
- [11] Prince, A. and Smolensky, P. (1993) *Optimality Theory: Constraint Interaction in Generative Grammar*. Colorado: Colorado University Press.
- [12] Qamhawi, M. (1969) *Al-Burhan fi Tajweed Al-Quran Al-Kareem*. Cairo: Egyptian Englo Publishing and Distributing Company.
- [13] Trask, R. L. (1996) *An Introduction to English Phonetics and Phonology*. Oxford: Oxford University Press.
- [14] Yule, G. (2010) *The Study of Language*. 4th edition. Cambridge: Cambridge University Press.

