Emphasis in Classical Arabic

Mohamed A. Hasan

Faculty of Education, University of Benghazi, Libya

Realmanmohammedmohammed@yahoo.co.uk

الخلاصة

أقيمت هذه الدراسة لوصف ظاهرة (التفخيم) وتحليلها في اللغة العربية الفصحى وتعريفها وفقاً لمفاهيم علم الصوتيات النطقي الحديث، وتعد هذه الدراسة وثائقيةً في طبيعتها، حيث تم مراجعة بعض الدراسات السابقة المرتبطة بهذه الظاهرة؛ للوقوف على النتائج التي توصل إليها علماء الصوتيات العرب القدماء والمعاصرين، وقد تم استخدام أسلوب التجميع الثانوي الانتقائي بوصفه أداةً لجمع عينة الدراسة المتمثلة في ثلاث عشرة كلمة وعبارة تحدث فيها ظاهرة التفخيم، ويشير كلٌ من دولنال و لوكاست (2013) إلى التجميع الثانوي بوصفه أسلوباً يعيد فيه الباحث استخدام بيانات وتحليلها بعد أن جمعها بُحاث آخرون بدراسات سابقة. كما استُخدِمت المقاييس النطقية الصوتية؛ الحديثة لتحليل عينة الدراسية، ويوضح كلٌ من كولنز وانقر(2006) بأن هذه المقاييس تستخدم لوصف التغيرات التي تحدث بمخارج الاصوات وصفاتها؛ نتيجةً لمجاورة الأصوات لبعضها البعض، وقد استنتجت هذه الدراسة أن ظاهرة التفخيم باللغة العربية الفصحى تشير إلى الأصوات الانفجارية والاحتكاكية الصامتة التي تنطق بمنطقة الحنك الناعم و اللهاة والبلعوم، وعند النطق بهذه الاصوات بالمخارج سالفة الذكر تكون اكثر تميزاً علي المستوى السمعي و تنتج خاصية صوتية مسموعة تشبه الصدى.

Abstract

This study reports on /*tafxi:m*/ ***Emphasis*** in classical Arabic (CA). It studies and defines emphasis in CA in modern articulatory phonetic context. This study is mainly document-based research. Some earlier related works are reviewed to see how they study and define emphasis in CA. The data of this study are purposively collected through the secondary data collection method. This method is described as the process of making use of existing data collected by someone other than the user (Donnellan and Richard, 2013). Modern articulatory phonetic parameters (MAPP) are used to analyze the data of this study. MAPP are a set of criteria used to show how the phonetic features of sounds interact in the course of an utterance (Collins and Inger, 2006). This study concludes that emphasis in CA refers to plosive and fricative consonants which are articulated or co-articulated in the velar, uvular or pharyngeal regions. Further, this study reveals that most emphatic consonants (ECs) in CA are obstruent. When obstruent consonants, i.e. plosives fricatives and affricates are articulated or co-articulated in the velar, uvula or pharyngeal regions, they are more audible than anywhere else in the vocal tract.

1.Introduction

Emphasis in CA has been studied and defined by many Arab modern and classical phoneticians, however, most of the definitions speculated by these Arab phoneticians seem to miss some articulatory phonetic details. Alqaduri (2010), for instance, points out that an emphatic segment is a type of consonants (Cs) that is made with more muscular energy resulting in echo in the mouth. This definition does not describe the articulation involved in the utterance of the ECs. A better definition is sought, thus we turn to other phoneticians working on studies based on universal principles. Crystal (2004) indicates that the term *emphasis* refers to a type of consonants which is articulated or co-articulated in the pharyngeal or uvular regions of the vocal tract. This definition gives articulatory details missed in other definitions provided by Arab phoneticians, i.e. it identifies which regions of the vocal tract are involved in the utterance of the ECs. This study assumes that emphasis may cover velar, velarized, uvular, uvularized, pharyngeal and pharyngealized Cs. Algryani (2014) clarifies that emphasis is a controversial feature in CA. It is often referred to as pharyngealization, however, not all the ECs in CA are necessary pharyngealized. Hoberman (1995) explains that emphasis in CA can be realized as velarization, uvularization or pharyngealization. Alqaduri (2010) and Rakas (2017) both agree that the list of the ECs in CA includes /ṭ/, /ḍ/, /ɔ̃/, /ṣ/, /ʕ̞/ and /ħ̞/. Alqaduri (2010) claims that this list may further include the Cs: /G̞/, /X̞/ and /ʁ̞/. He argues that the Cs /ṭ/, /ḍ/, /ɔ̃/, /ṣ/, /G̞/, /X̞/, /ħ̞/, /ʁ̞/, /ʕ̞/ are always emphatic either in isolation or in context while the Cs: /r/ and /l/ are only emphatic when they occur in given contexts, e.g. /r/ as in /*Gurʔaan*/ 'Quran'. Emphasis may extend to neighboring Cs, e.g. /*naṣb*/ 'memorial'. In this word, the segment /*b*/ is emphatic under the influence of the consonant /*ṣ*/ (Rakas, 2017).

2. Classification of Emphatic Consonants

This part of the study discusses the classification of four types of the so called ECs in CA: the emphatic dental-velar Cs, the emphatic alveolar-velar C, the emphatic uvular Cs and the emphatic pharyngeal Cs.

2.1 Emphatic dental-velar consonants

According to Anees (1974), the Cs: /ṭ/, /ḍ/ and /ɔ̣/ are classified as dental-velar, i.e. they are homorganic. Their productions involve double articulation, i.e. they are made with two points of articulation. One point is formed by the tip/blade of the tongue as an active articulator and the upper teeth set as a passive articulator. The other point is identified by the back of the tongue as an active articulator and the velum as a passive articulator. Both points, equally, contribute to the identities of the segments /ṭ/, /ḍ/ and /ɔ̣/. In terms of voicing and manner or articulation, these three Cs show differences. The segment /ṭ/ is produced when the vocal cords are apart, thus it is voiceless. In contrast, /ḍ/ and /ɔ̣/ are classified as voiced. The Cs /ṭ/ and /ḍ/ are plosive. They are formed with dental-velar and velic closures. As /ṭ/ and /ḍ/ are articulated, the velic closure is retained while the dental-velar closure is released. Unlike, the segments, /ṭ/ and /ḍ/, the sound /ɔ̣/ is fricative. The Cs /ṭ/, /ḍ/ and /ɔ̣/ are emphatic in isolation and in context.

2.2 Emphatic alveolar consonant

Rakas (2017) describes the consonant /ṣ/ as voiceless alveolar-velar fricative. This description involves two primary places of articulation, i.e. a double articulation. One place involves the blade of the tongue as an active articulator and the alveolar ridge as a passive articulator. The other primary place of articulation involves the back of the tongue as an active articulator and the velum as a passive articulator. The production of this segment involves an incomplete closure in the alveolar and velar regions, hence, it is fricative.

2.3 Velar as a distinctive feature

Rakas (Ibid) demonstrates that the velar ECs: /ṭ/, /ḍ/, /ɔ̣/, and /ṣ/ have non-emphatic de-velarized counterparts, i.e. /ṭ/ vs. /t/, /ḍ/ vs. /d/, /ɔ̣/ vs. /ð/ and /ṣ/ vs. /s/. Velar in the Cs, /ṭ/, /ḍ/, /ɔ̣/ and /ṣ/ is distinctive as tested by the minimal pairs, (i) /*ṭi:n*/ 'mud' vs./*ti:n*/'figs', (ii) /*ḍarb*/ 'beating' vs. /*darb*/ 'road', (ii) /*ɔ̣il*/ 'shade' vs. /*ðil*/ 'humiliation' and (iv) /*ṣeif*/'summer' vs. /*seif*/ 'sword'.

A comparison is necessarily made, here, between the two terms ***velar*** and ***velarized.*** The former is a primary articulation made with the ***back of the tongue*** pressed against the velum whereas the latter is a secondary articulation made with the ***back of the tongue*** raised towards the velum. Crystal (2003) claims that a primary place of articulation of a velarized consonant must be somewhere other than velar in the vocal tract. The term *velarized* is usually used to describe Cs other than velars. The Arabic segment /l/, for example, is alveolar in isolation and it may be velarized when it occurs in given contexts as in the word /ʔallaah/ 'God'. The two terms *velar* and *velarized* are phonetically the same but phonologically different. Phonetically, they involve the same articulators, viz. the tongue back and the velum. Phonologically, the feature *velar* is distinctive whereas the feature *velarized* is redundant and has no functional value. Emphatic velar and non-emphatic de-velarized Cs in CA are tabulated as follows:

Table 1: Velar emphatic Cs and non-emphatic de-velarized counterparts in CA

Symbols	Voicing	Place of Articulation	Manner of Articulation
/ṭ/	-	dental-Velar	Plosive
/t/	-	dental-Alveolar	Plosive
/ṣ/	-	alveolar, Velar	Fricative
/s/	-	Alveolar	Fricative
/ɔ̴/	+	dental-Velar	Fricative
/ð/	+	Dental	Fricative
/ḍ/	+	alveolar-Velar	Plosive
/d/	+	Alveolar	Plosive

2.4 Emphatic uvular consonants

According to Rakas (2017), the consonants: /G/, /X/ and /ʁ/ are homorganic, i.e. uvular. In the productions of these segments, the active articulator is the back of the tongue and the passive articulator is the uvula. The sound, /X/ is voiceless whereas the other two sounds: /G/and /ʁ/ are voiced. The segment /G/ is made with a complete colure at the uvula region, hence it is plosive. On the contrary, the segments: /X/ and /ʁ/ are articulated with a partial contact of the back of the tongue and the uvula, therefore, they are referred to as fricative sounds. The consonants: /G/, /X/ and /ʁ/ are always emphatic in or out of context. Their emphasis may spread into adjacent non-emphatic Cs as in /ʕɨtG/ 'release', /ʔaXbaar/ 'news' and /baʁl/ 'mule' respectively. Emphatic uvular Cs are tabulated as follows:

Table 2: Emphatic uvular consonants

Symbols	Voicing	Place of Articulation	Manner of Articulation
/G/	+	Uvular	Plosive
/X/	–	Uvular	Fricative
/ʁ/	+	Uvular	Fricative

2.5 Emphatic pharyngeal consonants

Anees (1974) illustrates that both /ħ/ and /ʕ/ are phonetically identified as pharyngeal fricative. Their articulation involves the root of the tongue as an active articulator and the back wall of the pharynx as a passive articulator. /ħ/ is voiceless while /ʕ/ is lightly creaky (Rakas, 2017). The consonants: ħ/ and /ʕ/ are always emphatic in or out of context and their emphasis may extent to adjacent sounds. Emphatic pharyngeal Cs are tabulated as follows:

Table 3: Emphatic pharyngeal consonants

S	Voicing	Place of Articulation	Manner of Articulation
/ħ/	−	Pharyngeal	Fricative
/ʕ/	+	Pharyngeal	Fricative

3. Research Methodology

This part of the study spells out the research nature of this study and the methods employed to collect and analyze the data. As it is clarified in the abstract above, the most part of this study is document-based research

3.1 Data Collection

The method of secondary data collection is employed to reuse and develop data gathered from earlier studies. The purposive sampling technique is used to sample the data of the study. The data are sampled due to the reason that they involve ECs.

3.2 Data Analysis

The basic data analysis method adopted in this study is the use of modern articulatory phonetic parameters. This method tries to describe and analyze how the set of phonetic features, viz. voicing, place of articulation and manner of articulation effect on each other in connected speech (Collins and Inger, 2006). The collected data are tabulated and transcribed in International Phonetic Alphabet (IPA) as follows:

Table 3: Collected data

No	Data transcribed in IPA	Meanings in English
1	/jaṭbaʢ/	he types
2	/ʔalɖaaliin/	the disbelievers
3	/Waɔ˞ih/	Clear
4	/ʢaṣfuur/	Sparrow
5	/naṣb/	Memorial
6	/Kaʃṭ/	Erase
7	/faxm/	Luxurious
8	/muħaṣṣan/	Decent
9	/ʢitG/	Release
10	/baʁl/	Mule
11	/ʢuud/	Lute
12	/Guʔaan/	Quran
13	/naṣar-u-laah-a /	they advocated Gad

In the analysis of the collected data, three variables are taken into consideration: (1) the ECs are decomposed into articulatory phonetic features, viz. voicing, place of articulation and manner of articulation to see what is responsible for emphasis, (2) the spread of the ECs into the adjacent segments is described as progressive or regressive and (3) the secondary articulations in ECs are classified as velarized, uvularized or pharyngealized.

3.2.1 The verb complex, /jaṭbaʕ/ (he types)

As shown in table1above, the segment, /ṭ/ is described as voiceless dental-velar plosive. It involves a double articulation, i.e. dental-velar. The consonant, /ṭ/ in the verb complex /jaṭbaʕ/ is phonologically emphatic. The articulation of the segment /ṭ/ involves the back of the tongue, hence it is dorsal. Commonly, a dorsal sound involves the back of the tongue. As described above, the segment, /ṭ/ is plosive. A plosive is said to be obstruent. The term *Obstruent* is used in phonetic classification of speech sounds to refer to sounds involving a constriction, i.e. plosives, fricatives and affricates(Crystal, 2004).This study argues that the CA scholars like Sibawayh could, more audibly, have recognized the obstruent feature of the ECs but they did not use an accurate phonetic term to describe it nevertheless. Instead, they used the term, ***Echo*** to describe this feature. The emphatic feature of the segment /ṭ/ in the verb complex /jaṭbaʕ/ extends to the adjacent segment/b/.The emphasis of /ṭ/ moves forward, hence it is progressive. The emphasis of /ṭ/ does not spread throughout the entire the verb complex, /jaṭbaʕ/. The segment /b/ in the verb complex, /jaṭbaʕ/ is velarized under the influence of the adjacent dental-velar segment, / ṭ /.

3.2.2 The noun phrase, /ʔalqaaliin/ (the disbelievers)

As clarified in table 1 above, the segment /q/ is classified as voiced alveolar-velar plosive. It is emphatic both in the noun phrase, /ʔalqaaliin/ and in isolation, hence phonological emphasis. The emphasis of /q/ in the noun phrase, /ʔalqaaliin/ is neglected by the following vowel /aa/. The segment, /q/ is dorsal and obstruent.

3.2.3 The word, /Waðˠih/ (clear)

As stated in table 1 above, the sound /ðˠ/ is specified as voiced dental-velar fricative. It is phonologically emphatic both in the word /Waðˠih and in isolation. The word /Waðˠih/ involves no secondary articulation. The emphasis of the sound /ðˠ/ in the above said word is blocked rightward due to the occurrence of the high front vowel /i/. Such vowel is antagonistic to emphasis spread as it is high and forward in the mouth. Emphatics such

as /ṭ/, /ḍ/, /ɔ̃/ and /ṣ/ can be found in all vocalic environments, yet their emphasis might be blocked by vowel sounds of certain qualities, e.g. /i/ and /ii/ (Algryani, 2014). The segment /ɔ̃/ is fricative so it is classified as obstruent.

3.2.4 The word, /ʕaṣfuur/ (sparrow)

The segments /ʕ/ and /ṣ/ are phonologically emphatic. The consonant /ʕ/ is made with partial contact of the root of the tongue and the back of the pharynx, thus it is pharyngeal fricative (see table 3 above). The articulation of the segment /ʕ/ involves the root of the tongue so it is said to be radical. The segment /f/ is contextually velarized in the word, /ʕaṣfuur/. The emphasis of the consonant /ṣ/ progressively extends to the neighboring segment, /f/. The fricative consonant, /ʕ/ is classified as obstruent.

3.2.5 The word, /naṣb/ (memorial)

The consonant /ṣ/ is alveolar-velar (see table 1above). It is phonologically emphatic. The emphasis of the segment /ṣ/ progressively extends to the adjacent consonant /b/, hence the segment, /b/ is contextually velarized.

3.2.6 The word, /Kaʃṭ/ (erase)

According to table 1above, the segment /ṭ/ is voiceless dental-velar plosive. It is emphatic both in the word /Kaʃṭ/ and in isolation. Its emphasis extends to the neighboring sound /ʃ/. The emphasis of /ṭ/ in this context exhibits backward extension, hence regressive.

3.2.7 The word, /faxm/ (luxurious)

The segment /x/ is phonologically emphatic. As shown in table 2 above, it is classified as voiceless uvula fricative. The emphatic of the consonant /x/ spreads into the adjacent segment /m/ so it is progressive. The word /faxm/ exhibits no secondary articulation. The segment /x/ involves the back of the tongue, thus it is dorsal.

3.2.8 The word, /*muħaṣṣan*/(decent)

Both /**ħ**/ and /**ṣ**/ in the word, /*muħaṣṣan*/ are emphatic. The consonant, /**ħ**/ is classified as voiceless pharyngeal fricative (see table 3 above) whereas the consonant, /**ṣ**/ is described as voiceless alveolar–velar fricative (see table 1 above). /**ħ**/ is naturally emphatic in isolation and more emphatic in the vicinity of another emphatic ECs.

3.2.9 The word, /*ʕitG*/ (release)

The consonant /**G**/ is emphatic both in the word /**ʕitG**/ and in isolation. In terms of phonetic parameters, the segment /**G**/ is described as voiced uvular plosive (see table 2 above). The emphasis of the segment /**G**/ reverses back to the preceding consonant /t/. The emphasis of /**G**/ moves backwards, thus it is said to be regressive. The articulation of the segment /**G**/ involves the back of the tongue, thus dorsal.

3.2.10 The word, /*baʁl*/ (mule)

The consonantal sound,/**ʁ**/ is emphatic both in the word /**baʁl**/ and in isolation. It is commonly specified as voiced uvular fricative (see table 2 above). The emphasis of the consonantal segment /**ʁ**/ extends to the following segment/l/, hence progressive. In the utterance of the segment /l/ in the word /**baʁl**/, the back of the tongue is drawn further back to the uvular region, i.e. it is uvularized.

3.2.11The word, /*ʕuud*/ (lute)

The segment /ʕ/ is emphatic in the word /ʕuud/ and in isolation. It is classified as highly creaky pharyngeal fricative (Rakas, 2017).

3.2.12 The word /*GurʔaanG*/ (Quran)

Rakas (2017) points out that the segment, /r/ is voiced alveolar It is most commonly realized as flap when it occurs inter–vocalically or in a syllable initial position as in /*fari:G*/ 'team' and /*ri:f*/ 'country' respectively. The segment, /r/ is trill when it occurs in a syllable final position as in /*bahr*/ 'sea'. The sound /r/ is never emphatic in isolation. It is emphatic only when

it occurs in given contexts as in /***Gurʔaan***/'Quran'. As the segment, /r/ is uttered in the word /Gurʔaan/, the back of the tongue is raised so it may be velarized or uvularized. This study posits that velarized or uvularized consonants are emphatic in nature. The secondary articulation that the segment, /r/ has in the word /Gurʔaan/ may be due the occurrence the initial uvular sound /G/.

3.2.13 The construct phrase, /*naṣar-u l-laah-a*/ (they advocate God)

The consonant /l/ is usually realized as voiced alveolar lateral (Anees, 1974). Whether or not the consonant, /l/ is emphatic in the word, /ʔ*alla*h/ is controversial. Unlike Alqaduri (2010), Rakas (2017) argues that the segment, /l/ can be non-emphatic in the environments of any of the eight vowels in Arabic viz./i/, /ii/, /æ/, /aa/, /u/, /uu/, /ei/ or /əu/. However, Rakas gives an insight into deciding whether or not the consonant /l/ is emphatic in the word, /ʔ*alla*h/. Rakas (Ibid) ascertains that the segment /l/ in the word, /ʔ*alla*h/ is velarized. This present study speculates that a consonant is emphatic if it is velarized.

4. Conclusion

In modern articulatory phonetic context, this study concludes that emphasis in CA refers to plosive and fricative consonants which are articulated or co-articulated in the velar, uvular or pharyngeal regions. This definition is based on the description and analysis of the phonetic articulatory features of the so called emphatics.

Table: 5 articulatory phonetics features of ECs

Symbols	Voicing	Place	Manner	Additional features
/ṭ/	–	dental–velar	Plosive	dorsal – obstruent
/ṣ/	–	alveolar, velar	Fricative	dorsal – obstruent
/ɔ̴/	+	dental–velar	Fricative	dorsal – obstruent
/ḍ/	+	alveolar–velar	Plosive	dorsal – obstruent
/G/	+	uvular	Plosive	dorsal – obstruent
/X/	–	uvular	Fricative	dorsal – obstruent
/ʁ/	+	uvular	Fricative	dorsal – obstruent
/ħ/	–	pharyngeal	Fricative	radical – obstruent
/ʕ/	Creaky	pharyngeal	Fricative	radical – obstruent

Accordingly, articulatory phonetic features that are basically found responsible for emphasis in CA are velar, uvular, pharyngeal, plosive, fricative, dorsal, radical and obstruent. For a consonant to be emphatic in CA, it is expected to have some of these features. This study also concludes that Cs, /ṭ/, /ḍ/, /ɔ̴/, /ṣ/, /G/, /X/, /ħ/, /ʁ/, /ʕ/ are always emphatic either in isolation or in context while the Cs: /r/ and /l/ are only emphatic when they occur in given contexts. The two segments, r/ and /l/ can be emphatic as they are contextually velarized, uvularized or pharyngealized. This study assumes that emphasis may cover velar, velarized, uvular, uvularized, pharyngeal and pharyngealized Cs. The definition of emphasis speculated in this study is not applicable to the case of the segment /k/.This segment is voiceless velar plosive dorsal obstruent but it is not emphatic in isolation . It is recommended that the consonant /k/ is investigated in further studies. This study reveals that emphasis can extend to adjacent consonants either regressively or progressively.

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