The Phonetic Nature of Consonants in Modern Standard Arabic

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Abstract

The aim of this paper is to discuss the phonetic nature of Arabic consonants in Modern Standard Arabic (MSA). Although Arabic is a Semitic language, the speech sound system of Arabic is very comprehensive. Data used for this study were collocated from the standard speech of nine informants who are native speakers of Arabic. The researcher used himself as informant, He also benefited from three other Jordanians and four educated Yemenis. Considering the alphabets as the written symbols used for transcribing the phones of actual pronunciation, it was found that the pronunciation of many Arabic sounds has gradually changed from the standard. The study also discussed several related issues including: Phonetic Description of Arabic consonants, classification of Arabic consonants, types of Arabic consonants and distribution of Arabic consonants.

Keywords: Modern Standard Arabic (MSA), Arabic consonants, Dialectal variation, Consonants distribution, Consonants classification.

1. Introduction

The Arabic language is one of the most important languages of the world. With it is growing importance of Arab world in the International affairs, the importance of Arabic language has reached to the greater heights. Since the holy book Qura'n is written in Arabic, the language has a place of special prestige in all Muslim societies, and therefore more and more Muslims and Asia, central Asia, and Africa are learning the Arabic language, the language of their faith. Moreover there is a large number of people around the globe who learn this language because of its political importance. The importance of Arabic has also increased because of the prestigious position of the Arab countries in the world of international trade and commerce.(Fatihi, A.R. 2001)

1.1 Afro-Asiatic Languages

Arabic belongs to the Afro-Asiatic Languages. The Afro-Asiatic is a tie family of languages covers most of Africa, north of Sahara and the Sahara itself dipping down on the eastern side of the continent. The Afro-Asiatic family of language is also a major language family of South Western Asia. The family has five branches: Semitic group of languages, Egyptian, Berber, Cushitic and Chadic. After serving for millennia as the language of one of the world's most spectacular civilizations, Egyptian family of languages, comprising ligypiian, the language of Ancient Egypt, has been extinct. The Cushilic and Chadic languages are sufficiently different from each other. Thus the Semitic family of languages is the most dominating linguistic family among all the-Afro-Asiatic languages.(Fatihi, A.R. 2001)

1.2 Semitic Family of Languages

Arabic is one of the major languages of Semitic family. To be more specific it is an off-shoot of the languages of south west Asia. The name Semitic owes its origin to SHCM, mentioned in chapter X of Book of Genesis. The chapter deals with ARAM, ASHER, and CBER; that is Ramites, Assyrians, and Hebrew. The scholars of theology and history name these groups of people Semitic Races. Their relation with each other is evident by the close similarity and strong connection among them. Subsequent excavations have brought to light new information about some more races having similar characteristics. In the term **Semitic** has acquired a wider sense. Arabic belongs to the southern group of Semitic languages; this group includes the ancient Southern Arabic, with different dialects namely SABAEAN, MINAEAN, QATABANJAN, and HADRAMAWTEAN. They go back to the period extending over 8th century B.C. 10 full century A, D).

The oldest texts in classical Arabic are found in the inscription of ZABAD (512 A.D.), inscription of HARRAN (568 A.D.) and inscription of UMMUL JIMAL (568 A D.). This lexis alone cannot explain the sublimity of the classical

Arabic as evidenced in the Pre-Islamic Arabic poetry. By the sixth century A.D. the classical language of the pre-Islamic poetry had attained a stage of perfection, so much so that it could receive the inimitable Arabic of the holy book AL QURAAN. In the 8th century A. D. the scholars like AN Khalil and Sibawahi got interested in the development of the language and presented their observations in pioneering works like Al-Kitab which is supposed to be one of the greatest monuments of human intelligence.

1.3 Dialectal Variation

It can be said that Arabic is one of the most important languages of the modern world. A full understanding of the structure of the language may help in establishing the dialectal variation of Arabic. The central concept underlying the term dialect lies in the local variations in pronunciation, grammar or vocabulary. Though many criteria have been used for determining the status of a dialect within a speech community, yet most of the linguist tends to concentrate on the criterion of 'mutual intelligibility'. From the point of mutual intelligibility all the regional styles of Arabic can be viewed from two spatial dimensions, i.e., lying next to one another and spoken at each end of the language area. In both these situations there is hardly any problem of mutual intelligibility at any level of linguistic expression. (Chejne,A.1958)

The phonetic peculiarities of different formal styles of pronunciation, including the permissible degree of reduction and assimilation of speech sounds, are also an important criterion for designating a particular speech as regional variation from other regional styles of the same language. Regional variations in Arabic may be assigned to geographical factors, which had made inter-communication difficult among different regions of Arab world in the past. Consequently each region along with many other social and ethnic factors developed its own peculiarities exhibited at different levels of the variety spoken in that area. Moreover, the language contact and inter dialectal borrowings, too have contributed to dialectal variations. In Arabic clearer dialectal divisions are obtainable in the areas where mutual intercourse among the people living in different areas is hindered due to physical barriers such as high mountain ranges or wide rivers.(Greenberg, J. 1978)

At present, however, the increasing contact brought in by developed systems of communications, education and urbanization, among the speakers of different dialects of Arabic has greatly affected the speech habits of different regions and consequently, has made the task of demarcation of various dialects very difficult, by minimizing dialectal differences to a greater extent.

2. Arabic Phonology

The speech sound system of Arabic is very comprehensive. Considering the alphabets as the written symbols used for transcribing the phones of actual pronunciation, it has adequately covered the maximum number of sounds available in other languages. The human vocal system of articulator apparatus is a complete musical device and the elegance of this system has manifested to the fullest extent in the Arabic Phonology. Thus there are some sounds which are exclusively found only in Arabic Phonological system and not in any other language, such as /D/,/DH/,/S/,/T/, although we may come across some similar sounds there, but these are not well defined and distinguished from the aspect of articulation. If we consider that he primary task of phonology is to provide objective description of speech, then the sound symbols or notational symbols of Arabic phonology are efficient description of possible variety of articulation and sound patterns.

Keeping in view the arbitrary nature of linguistics, one remarkable fact about pronunciation is that it is in continuous process of alteration generation after generation. This is a process of alteration generation after generating. This process is natural and many factors, ranging from individual psychological and social factors play their role in the change. This is a universal law of nature; therefore, no phonological system of any language is immune to change.

Speech sounds are perpetual target of change and variation. The process involves many factors which have implosive and arbitrary nature. It is to be observed in principle that to determine the trends of this variation is not an easy job, because the process seems to be such slow and complex and takes a long natural course before it attracts the attention of observers and researchers. Departing from this point, we notice that the pronunciation of many Arabic sounds has gradually changed from the standard one in many colloquial dialects.

Apart from these minor developments in some regional dialects of Arabic language, the phonological base of the standard Arabic defined and resisted any change. This is exceptional in case of Arabic language, as no other language ever could maintain the consistency of its phonological sequences.

3. Definition of Modern Standard Arabic (MSA)

A fully agreed – upon of MSA does not yet exist, but there is a general consensus that modern Arabic writing in all its forms constitutes the basis of the identity of the language. Modern writing, however, covers an extensive range of discourse styles and genres ranging from complex and conservative to innovative and experimental. Finding a standard that is an identifiable segment of the modern Arabic writing language used for media purposes, and it has been the focus of linguists' attention for a number of years because its stability, its pervasiveness, and its ability to serve as a model of contemporary written usage. Dissemination of a written (and broadcast) prestige standard by the news media is a wide-spread phenomenon, especially in multilingual, diglossic, and multi-dialectal societies.

Elsaid Badawi's phrase fuSHâ al-âsr (فصحى العصر) is his Arabic term for MSA (1985, p.17), which he locates on a continuum (at "level two").

As he points out, the levels "are not segregated entities", (1985, p.17) but shade into other levels gradually. He identifies level two (MSA) as "mostly written" rather than spoken, and levels two and three as essentially "in complementary distribution" with each other (1985, p.19) that is, they function separate spheres, with some overlap. (Karin, C. Ryding. 2006)

4. Purpose

The purpose of this study is to highlight the consonantal system in Modern Standard Arabic (MSA). The study further delves into the phonological nature of Arabic consonants with regard to this particular variety, discussing several related issues including: Phonetic Description of Arabic consonants, classification of Arabic consonants s, types of Arabic consonants and distribution of Arabic consonants.

5. Methodology

Data used for this study were collocated from the standard speech of eight informants who are native speakers of Arabic. The researcher used himself as informant, he also benefited from four educated Yemens and three Jordanians whose Linguistic behaviour is judged to be /faSi:H/ ‘clear’, ‘eloquent’ through several successive sittings. These four Yemenis and three Jordanians, they are as follows:

(1) Four Ph.D scholars. (Yemenis)

(2) Three MA students in AMU (Jordanians)

6. Introducing Consonantal System in Arabic:

Arabic language consists of twenty-eight consonants which are categorized into stops, nasals, laterals trills, fricatives, affricates, and semivowels. Some peculiar velarized phonemes, also known as emphatics, form a fundamental part of Arabic consonantal system.

7. Phonemic-Contrast

The classic case of contrast, which is central to the phonemic principle, is the minimal pair phenomenon:

If two words differ as to only one sound, then the distinction between the two sounds must be phonemic. (Philip) Carr, 1993).

7.1 Consonant-contrast

Minimal pair

No.	Symbol	Arabic Example	English Meaning
1.	/’/	/qara’a/	‘to read’
2.	/ ‘/	/qara‘/	‘he knocked’
3.	/b/	/bard/	‘coldness’
4.	/f/	/fard/	‘individual’
5.	/n/	/nakara/	‘he denied’
6.	/m/	/makara/	‘he deceived’
7.	/š/	/šaraha/	‘he explained’
8.	/s/	/saraHa/	‘he went astray’

9.	/z/	/zara‘a/	‘he cultivated’
10.	/S/	/Sara‘/	‘he throw s.o-’down’
11.	/d/	/di:n/	‘religion’
12.	/t/	/ti:n/	‘fig’
13.	/T/	/Ti:n/	‘clay’
14.	/D/	/Daba/	‘to be melted’
15.	/θ/	/θaba/	‘to regain onsciousness, reward’
16.	/r/	/qar‘/	‘knocking’, rapping, beating, thumping’
17.	/l/	/qal‘/	‘rooting out’
18.	/h/	/hazama/	‘he defeated’
19.	/H/	/Hazama/	‘he tied-up’, bundled
20.	/ğ/	/ğazama/	‘he cut off’ to judge, decide
21.	/x/	/xasafa/	‘to be eclipsed’ (moon)
22.	/k/	/kasafa/	‘tobe eclipsed’ (sun)
23.	/q/	qalaba	‘he returned around’, ‘turn over’
24.	/G/	/Galaba/	‘he defeated, ‘to overcome’
25.	/D/	/naDir/	‘flourshing, fresh, verdant’
26.	/DH/	/naDHir/	‘similar, equal, an equivalent’
27.	/w/	/‘a:wana/	‘he helped’
28.	/y/	/‘a:yana/	‘he inspected, examined’

Table 1

In Arabic there are 28 consonants (or consonantal phonemes, to be precise). These are listed below along with examples that illustrate their occurrence in the initial, medial and final positions.

7.2 Classification based on place of articulation:

Phonetic Description	**Symbol**
bilabial (3)	/b, m, w/
labio-dental(1)	/f/
dental (4)	/d,t, D,T/
inter-dental(3)	/θ,D,DH/
alveolar(6)	/s, z, S, n, r, l/
Palato-alveolar (2)	/ š, y/
palatal (1)	/y/
velar (2)	/k, ğ/
uvular (2)	/q, x,G/
pharyngeal (2)	/H,‘/
glottal (2)	/h,’ /

Table 1

7.3 Classification base on manner of articulation:

Phonetic Description	**Symbol**
Stops(9)	/b,t,T,d,D,k,q,h,'/
Nasals(2)	/n, m/
Lateral(1)	/l/
Trill(1)	/r/
Fricatives(12)	/f,θ,D,DH,s,S,z,š,x,h,G,'/ Affricate(1) /ğ/
Semivowels(2)	/w,y/

Table 1

List of transcription system of Modern Standard Arabic (MSA)

(MSA) consonants	**IPA**
b	B
t	T
d	D
T	T
D	D
k	K
q	Q
,	?
h	h
ğ	j
f	f
θ	θ
s	s
S	s
x	x
D	ð
DH	ð
z	z
G	
'	ε
m	m
n	n
l	l
r	r
w	w
y	y

Table 2

The above transcription system is illustrated of the following table reproduced from Fatihi, A.R. (2001, p. 69) "Aspects of Arabic Phonology". Kotinga Publications, Delhi.

				Bilabial	Labiodental	Interdental	Alveolar	Palatoalveolar	Velar Uvular Pharyngeal glottal
Stops	Voiceless Voiced Emphatic			b			t d T D		k q ? h
	Nasals			m			n		
	Lateral						l		
	Trill						r		
Fricatives	Voiceless Voiced Emphatic				F	θ D DH	s z S	Š	x H G ‘
	Affricates							ʤ	
	Semivowels			w				y	

Table 3. Phonemic Inventory of Arabic Consonants

7.4 Classification of Consonant in Arabic:

Phonetically, the Arabic consonants are classified on the basis of points of articulation and manners of articulation. In the former case, the points of contact of the active and passive articulators are taken into consideration. Following this mode, the consonants of Arabic are classified into bilabial, labiodentel, inter-dental, alveolar, palato-alveolar, velar, uvular, glottal and pharyngeal categories. It needs to be mentioned that in some Arabic consonants velarization accompanies their primary mode of articulation.

On the basis of manner of articulation, the consonants are classified following the mode or way in which they are articulated. In terms of this classification the consonants of Arabic are categorized as stops, nasals, affricates, fricatives, laterals, trills and semivowels. The feature of voicing is also present in Arabic and both voiced and voiceless consonants are found in Arabic language.

7.5 Description of Consonant in Arabic:

This section deals with the description of the consonants of Arabic. The description presents the characteristics of every consonant and the positions they occupy in different words. Here, every consonant is separately described.

Stops:

Arabic has nine stops whose description is provided below:

/b/

/b/: is a bilabial voiced stop. It occurs in all the three positions, i.e., initial, medial and final, of a word e.g.

1. Initial Position:

Arabic Example	**English Meaning**
bašar	‘human beings’
baHr	‘Sea’
bayt/bait	‘home’
bali:G	‘eloquent’
ba‘d	‘afterwards’
basi:T	‘simple’
burha:n	‘proof’
baxt ‘luck	‘good fortune’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
‘abada	‘to worship’
HaSba:	‘average type of pearl’
miSba:H	‘lamp’
muba:Haθa	‘discussion’
abda:n	‘body (pl.)’
maba:rid	‘files (instrument)’
muba:rak -	‘blessed’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
kalb	‘dog’
la’ab	‘play’
ka:Dib	‘liar’
bawwa:b	‘door-keeper’
qalib	‘heart’
kita:b	‘book’
tura:b	‘dust’

Table 3

/t/

/t/: It is a voiceless alveolar stop. It is also found in all the three positions of a word e.g.

1. Initial Position:

Arabic Example	**English Meaning**
tamr	’dates’
tura:b	‘dust’
ti:nun	‘figs’
tuHfa	‘precious article,
tarğama	‘translation’
tisa‘	‘nine’
tuffa:H	‘apple’
tau:t	‘mulberry’
ta:ğ	‘crown’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
Kita:b	‘book’
ixtira:‘	‘invention’
muxt:ar	‘selection, village headman’
kita:b	‘book’
mutarğim	‘translator,
tamtama	‘to stammer’
ixtila:f	‘difference’
dustu:r	‘rule, regulation political constitution

Table 2

3. Final Position:

Arabic Example	English Meaning
suku:t	‘silence’
maxlu:qa:t	‘created things’
baxt	‘luck’
tu:t	‘mulberry’
bayt/bait	‘home’
baxi:t	‘lucky, fortunate (pl.)’
Ha:nu:t	‘shop, wine shop’
zayt/zait	‘oil’
sabt	‘Sabbath, Saturday’

Table 3

/d/

/d/: It is a voiced, alveolar stop and its distribution is exemplified through the following examples:

1. Initial Position:

Arabic Example	English Meaning
darasa	‘to study’
dunya:	‘world’
dali:1	‘guide’

Table 1

2. Medial Position:

Arabic Example	English Meaning
madras	‘school’
Mudi:r	‘director, manager, governor’
bidu:n	‘without’
abda:n	‘body (pl.)’
miqda:r	‘quantety’

Table 2

3. Final Position:

Arabic Example	English Meaning
Hadid	‘iron’
yad	‘hand
ba‘i:d	‘far’
ba‘d	‘afterwards’
mabarid	‘files (instrument)’

Table 3

/T/

/T/: It is a voiceless emphatic alveolar stop and occupies all the three positions in a word e.g.

1. Initial Position:

Arabic Example	**English Meaning**
Tabi:b	‘physician’
Ta‘a:m	‘food’
Tifl	‘child, baby’
Tawi:1	‘long, tall’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
ba:Til	‘vain, useless’
maT‘am	‘restaurant’
ba:Tin	‘interior, hidden’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
GalaT	‘wrong’
mabsu:T	‘contented, happy, cheerful’
basi:T	‘simple’

Table 3

/D/

/D/: is a voiced emphatic alveolar stop. This phoneme is present in all the three positions, which is elucidated through the given examples.

1. Initial Position:

Arabic Example	**English Meaning**
Daru:ri	‘necessary, essential’
Da‘i:f	‘weak’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
’aXDar	‘green’
maDbu:T ‘	correct, right, well regulated’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
’abyaD	‘white’
‘ari:D	‘wide’
mari:D	‘ill, sick’

Table 3

/k/

/k/: A voiceless velar stop, the phoneme /K/ is found in all the three positions, i.e., initial medial and final of a word. Its distribution is given below:

1. Initial Position:

Arabic Example	**English Meaning**
kabi:r	‘great, big’
kala:m	‘speech’
kita:b	‘book’
ka:Dib	‘liar’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
maktu:b	‘letter’
mutakalim	‘speaker’
maktabah	‘library’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
malik	‘king’
muba:rak	‘blessed’
DaHak	‘laugh (v.)’
šawk	‘thorns’

Table 3

/q/

/q/: It is a voiceless, uvular stop which is found in initial, medial and final positions of a word. For example,

1. Initial Position:

Arabic Example	**English Meaning**
qalb	‘heart’
qabr	‘cemetery’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
miqda:r	‘amount’
taqri:r	‘report’
mustaqi:m	‘straight’
maxlu:qa:t	‘created things’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
qalaq	‘trouble’
na:Tiq	‘spokesman, speaker’
manTiq	‘logic’

Table 3

/’/

/’/: It is a voiceless glottal stop. Its distribution is illustrated in the below given examples.

1. Initial Position :

Arabic Example	**English Meaning**
’inkasar	‘to broken’
’aHmar	‘red’
’aXDar	‘green’
’aswad	‘black’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
qara’a	‘to read’
li’anna	‘because’
ta’θi:r	‘influence impression’
ta’abbaTa	‘to carry under arms’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
buka:’	‘weeping’
somaa‘	‘sky’
xabba’	‘to conceal, hide’

Table 3

/h/

/h/: It is a voiced glottal stop. The distribution of this phoneme is a s follows:

1. Initial Position:

Arabic Example	**English Meaning**
hal	‘state, or condition’
ha:Da	‘this’
hum	‘they’
huwa	‘he’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
mahram	‘male escort’
zahra	‘flower’
ğabha	‘forehead’
za:hir	‘shining, flourishing
sahl	‘easy’

Table 2

3. Final Position:

Arabic Example	English Meaning
ru:h	‘soul’
wiğh	‘face’
SaHa:fah	‘press, journalism
hiğrah	‘migration’

Table 3

Affricates:

Arabic has only one affricate, namely, ğ. It needs to be mentioned that some scholars have classified it as a fricative. However, its pronunciation by majority of the native speakers favorite, its being an affricate. It is found in all the three positions of a word.

1. Initial Position:

Arabic Example	English Meaning
ğabba:r	‘mighty’
ğabi:n	‘forehead, brow’
ğadi:d	‘new’

Table 1

2. Medial Position:

Arabic Example	English Meaning
Hağar	‘stone’
wa:ğid	‘many’
wiğh	‘face’

Table 2

3. Final Position:

Arabic Example	English Meaning
Hağğ	‘Pilgrimage’ (to Mecca)
θalğ	‘snow’
zauğ/zawğ	‘husband’

Table 3

Fricatives:

In a fricative sound the points of articulation come very close to each other so that the air-stream passes through them with a friction. There are twelve fricatives in Arabic whose description follows:

/f/

/f/: It is a voiceless labio-dental fricative and occupies all the initial, medial and final positions of a word. For example:

1. Initial Position:

Arabic Example	English Meaning
fakkar	‘think’
fard	‘duty’, religious duty’
fa:kiha	‘fruit’
faras	‘horse’
fari:q	‘team, division’
faSi:H	‘elequent’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
daf‘	‘push’
rafD	‘refusal’
nafar	‘person’
tanaffas	‘breathe’
šifa:h	‘lips’
tafsi:r	‘exegesis’
’aSfar	‘yellow’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
nahi:f	‘thin’
xafi:f	‘thin’
xaTaf’	to set sail’
’inSa:f	‘justice, equality, impartiality’
niSf	‘half’

Table 3

/θ/

/θ/: It is a voiceless interdental fricative and has the below given distribution.

1. Initial Position:

Arabic Example	**English Meaning**
θaqi:l	‘heavy’
θala:θa	‘three’
θa:ni	‘other’
θa:bit	‘firm, sure’ established’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
θala:θa	‘three’
muθallaθ	‘triangle’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
θa:liθ	‘third’
muθallaθ	‘triangle’

Table 3

/s/

/s/: It is a voiceless alveolar fricative and has the following distribution. For example:

1. Initial Position:

Arabic Example	**English Meaning**
sinn	‘tooth’
saHa:b	‘raincloud’
sabi:l	‘path, way,
sa:biq	‘former, previous, forerunner

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
mustaqi:m	‘straight’
xamsa	‘five’
’aswad	‘black’
lisa:n	‘tongue’
masru:r	‘glad’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
šams	‘sun’
ra:s	‘head’
firdaus	‘paradise, garden’
muflis	‘bankrupt, poor’

Table 3

S/

/S/: It is an emphatic alveolar fricative. The /distribution of this phoneme in various positions is given below:

1. Initial Position:

Arabic Example	**English Meaning**
Sa:liH	‘good, proper’
Sa:mit	‘silent’
Sa:yim	‘one who fasts’
Sira:T	‘way, path’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
iSTila:H	‘technical use, idiom’
iSla:H	‘reform, movement’
taSwi:r	‘picture’
’Sfar	‘yellow’

Table 2

3. Final Position:

Arabic Example	English Meaning
mulaxxaS	‘summary, abstract’
muxliS	‘faithful’
qaSS	‘to cut’

Table 3

/š/

/š/**:** It is a voiceless alveopalatal fricative and its distribution is provided below:

1. Initial Position:

Arabic Example	English Meaning
šarab	‘drink’
šiğara	‘tree’
šahi:d	‘martyr’
ša:hid	‘witness’

Table 1

2. Medial Position:

Arabic Example	English Meaning
Haši:š	‘grass’
raši:d	‘upright, righteous’
raši:q	‘fine, elegant’
mašhu:r	‘famous’

Table 2

3. Final Position:

Arabic Example	English Meaning
Haši:š	‘grass’
mun‘iš	‘refreshing’
‘afš	‘luggage’

Table 3

/x/

/x/**:** It is a voiceless uvular fricative and occurs in initial, medial and final positions. For example:

1. Initial Position:

Arabic Example	English Meaning
xadd	‘cheek’
xa:lah	‘aunt’
xa:1	‘uncle’
xabi: r	expert, well informed’
xabar	‘news’
xa:dim	‘servant’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
naxal	‘to sieve’
’uxt	‘sister’
’axba:r	‘news (pl.)’
maxrağ	‘outlet, issue, exit’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
Tabax	‘to cook’
maTbax	‘kitchen’
’ax	‘brother’

Table 3

/H/

/H/**:** It is a voiceless pharyngeal fricative and its phonetic distribution is as follows:

1. Initial Position:

Arabic Example	**English Meaning**
Hala:l	‘lawful, right’
Hali:b	‘milk’
Ha:kim	‘ruler’
Haki:m	‘wise (man), doctor’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
miHra:b	‘niche in mosque, direction of Mecca’
maHbu:b	‘beloved
’aHba:r	‘learned man, doctor’
maHdadih	‘blacksmith place’
laHm	‘meet, flesh’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
ri:H	‘wind’
ru:H	‘soul, spirit’
Ta:H	‘fall’
SaHH	‘right, correct’
milH	‘salt’
masaH	‘wipe’

Table 3

/D/

/D/**:** It is a voiced interdental fricative and is found in initial, medial and final positions. For example:

1. Initial Position:

Arabic Example	**English Meaning**
Dahabi	‘gold’
Dira’	‘arm’
Duba:b	‘flies’
DabaH	‘to slay, slaughter’
Dali:l	‘low, abject, wretched’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
ğiD’ ’	‘palm trunk’
iDin	‘ear’
kaDab	‘tell untruth’
ha:Da	‘this’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
tilmi:D	‘pupil’
LaDi:D	‘delicious’

Table 3

/DH/

/DH/: It is an emphatic interdental fricative and has the below given distribution.

1. Initial Position:

Arabic Example	**English Meaning**
DHa:hir	‘manifest, external’
DHifir	‘nail’
DHahr	‘back’
DHari:f	‘witty person’
DHa:lim	‘oppressor’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
‘aDhm	‘bone’
muDHa:harah	‘demonstration’
maDHlu:m	‘oppressed, having a grievance’
muDHlim	‘dark’
’aDHhar	‘to show’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
Gali:DH	‘thick’
lafDH	‘word’
La:HaDH	‘to note’
HaafiDH	‘keeper; memorizer’

/z/

/z/: It is voiced alveolar fricative. It occurs in below given distribution.

1. Initial Position:

Arabic Example	**English Meaning**
zawğa	‘wife’
zo:ğ	‘husband’
zabu:n	‘customer’
zuğa:ğ	‘glass’
zaka:h	‘alms in Islam’
zaman	’time’
ziya:rah	‘a visit’
zaitu:n	‘olives’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
’azraq	‘blue’
muz‘iğ	‘disturbing, upsetting’
’izdiHa:m	‘crowding, a crowd’
zalazalah	‘earthquake’
’iğa:zah	‘permission, licence, leave’
Huzn	‘sadness’
Hazi:n	‘sad’
Hizb	‘party’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
’aruz	‘rice’
ba:riz	‘prominent, outstanding’
ğa’iz	‘passing, lawful’
‘a:ğiz	‘helpless, unable, Impotent’

Table 3

/G/

/G/: is a voiced uvular fricative and has the below given distribution

1. Initial Position:

Arabic Example	**English Meaning**
Gala	‘to boil’
GawwaaS	‘diver’
Guba:r	‘dust’
Ganna	‘Sing’
Gali:DH	‘thick’
Gasal	‘to wash’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
maGrib	‘west’
maGfirah	‘forgiveness,
’aGla:T	‘mistake’ (pl.)
maGmu:m	‘anxious, troubled, grieved’

Table 2

3. Final Position:

Arabic Example	**English Meaning**
marsaG	‘wrist’
bali:G	‘eloquent’
mablaG	‘sum (of money), amount’

Table 3

/ʿ/

/ʿ/: It is a voiced pharyngeal fricative and occurs in the initial, medial and final positions. For example:

1. Initial Position:

Arabic Example	**English Meaning**
‘amm	‘uncle’
‘amma	‘aunt’
‘ayn	‘eye’
‘ind	‘at’
‘aDD	‘bite(v)’
‘aDHm	‘bone’
‘ari:D	‘wide’

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
ša‘ar	‘hair’
ka‘b	‘heel’
am‘a	‘guts’
qa‘ad	‘sit’
na:‘im	‘smooth’
ta‘li:m	‘education, instruction’
mu‘allim	‘teacher’

Table 2

3. Final Position:

Arabic Example	English Meaning
iSba‘	'finger'
qaTa‘a	'cut (v.)'
sama‘a	'hear'
biD ‘	'some (number between 3 and 10) '
maSna‘	‘factory’

Table 3

Nasals:

There are two nasals i.e. /m/ and /n/ whose description is provided below:

/m/

/m/: It is a bilabial nasal and has the below given distribution.

1. Initial Position:

Arabic Example	English Meaning
maSna‘	'factory'
madrasah	'school'
maktab	'office'
maTbax	'kitchen, bakery'
munkar	'abmoination'
maktabah	‘library’

Table 1

1. Medial Position:

Arabic Example	English Meaning
’aHmar	'red'
xamsah	'five'
ğamada	'to free(v) '
sama‘a	'hear'
qamar	'moon'
šams	'sun'

Table 2

2. Final Position:

Arabic Example	English Meaning
’umm	'mother'
‘amm	uncle'
Ham	father-in-law'
damm	blood'
laHm	meat'
mustaqi:m	'straight'

Table 3

/n/

/n/: It is an alveolar nasal. Its distribution in initial, medial and final positions is exemplified below:

1. Initial Position:

Arabic Example	**English Meaning**
na:r	'fire'
naxlah	'female date palm'
na:dir,	'rare, rare thing,
nisa'?	'women'
na:SiH	'adviser'

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
Sanah	'year'
'iθnayn	'two'
Ganna	'sing'
θa:ni	'other' or 'second'
manSu:r	'conqueror (lit. the assisted of God'
'inSa:f	'equity, justice, impartiality'

Table 2

3. Final Position:

Arabic Example	**English Meaning**
man	'who'
'iθnayn	'two'
lisa:n	'tongue'
duxxa:n	'smoke'

Table 3

Lateral:

Arabic possesses a single alveolar lateral, i.e., /I/ which occupies the initial, medial and final positions. For example:

1. Initial Position:

Arabic Example	**English Meaning**
lisa:n	'tongue'
layl	'night'
la'iba	'to play'
la:zim	'necessary'
laDi:D	'sweet' or 'delightful'

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
kalb	'dog'
qalb	'heart'
θalğ	'ice'
θala:θah	'three'
’alfa:DH	'words'
alqa:b	'surnames, titles, epithets'

Table 2

3. Final Position:

Arabic Example	**English Meaning**
’akala	‘eat’
qali:l	'few' or ‘little’
θaqi:l	'heavy'
Tawi:l	'long', or ‘tall’
qa:la	'to say'

Table 3

Trill:

A single trill, i.e., alveolar /r/ is present in Arabic whose distribution follows:

1. Initial Position:

Arabic Example	**English Meaning**
ra’i:s	'head, chairman, chief
rabi:‘	'spring'
rajab	'seventh month of Islamic calender'
riHlah	'journey'
rağul	'man'
ra‘s	'head'

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
tarHa:b	'welcome'
mura:sil	'newspaper correspondent'
mura:qib	'supervisor, foreman, controller'
’arwa:H	'soul (pl.),spirit (pl.) '
’azraq	'blue'

Table 2

3. Final Position:

Arabic Example	**English Meaning**
’azra:r	‘button (pl.)′
za:’ir	′ visitor′
zahr	′ flower, blossom′
za:hir ′	‘shining, flourishing
sirr	′ secret′
’axDar	′ green′
DHahr	′ back′
qamar	′ moon′

Table 3

Semivowels:

Arabic language possesses two semivowels which are described in the following lines,

/w/

/w/: It is a bilabial semivowel which occurs in initial, medial and final positions. Its distribution is provided below:

1. Initial Position:

Arabic Example	**English Meaning**
waram	′ swell′
wa:di	′ valley′
waba:l	′ misfortune, evil
wuθu:q	′ trust, confidence′
wa:ğib	′ a duty

Table 1

2. Medial Position:

Arabic Example	**English Meaning**
mudawwar	′ round′
ğawwa:l	′ mobile′
huwa	′ he′
awra:q	′ paper (pl.),
awaza:n	′ weight, measure′

Table 2

3. Final Position:

Arabic Example	**English Meaning**
Daw’	′ light′
musa:wa:	′ equalized’

Table 3

/Y/

/Y/: The other semivowel in Arabic is the alveopalatal /y/ whose distribution is provided below:

1. Initial Position:

Arabic Example	English Meaning
yad	′ hand′
ya'as	′ despair′
yati:m	′ orphan′
yasi:r	′ easy, small′
yaqi:n	′ certain belief, conviction′
yami:n	′ right hand, oath′

Table 1

2. Medial Position:

Arabic Example	English Meaning
yaba:n	′ Japan'
'ayya:m	′ days′
xayyaT	′ sew′
'abyaD	′ white′

Table 2

3. Final Position:

Arabic Example	English Meaning
rama:diyy	′ grey′
Hanafiyy	′ Hanafite, follower of the rite of Abu Hanifa′

Table 3

7.6 Conclusion:

The preceding pages provide an exhaustive description of the consonantal system of Arabic language.

The different consonants have been classified according to their points and manners of articulation and their distribution has been provided exhaustively. Therefore, it can be said that Arabic has a rich consonantal system.

8. Phonemes / Allophones:

Two phonetically dissimilar sounds, which occur in the same position and are contrastive, are called phonemes. Thus, /n/ and /m/ in /nahr/ 'river' and /mahr/ 'dowry' are two different phonemes. A phoneme is realized differently, depending on its position in words. These positional defined realizations or variants are members of the same phoneme or its allophones. Thus, whereas /n/ and /m/ are phonemes in /nahr/ and /mahr/ since the substitution of one for another gives a different word, {m} is an allophone of the phoneme /n/ in (mamba') since the underlying form is /manba'/ and /n/ is realized as (m) under the effect of the phonetic assimilation. The pronunciation of the word either with [n] or [m] does no give a meaning change. It may only give an odd pronunciation in case of [n] in (manba').

The common allophones are as follows:

(i) Stops

(b) a voiced balabial unaspirated stop

[k^h] a velar voiceless aspirated stop

[q] a uvular voiceless stop

[t^h] a voiceless dental aspirated stop

[T] a voiceless dental valorised unaspirated stop

[d] a voiced dental unaspirated stop

[D] a voiced dental velarized unaspirated stop

[’] a voiced glottal stop

[‘] a voiced palato-alveolar affricate

[‘] Al-Ani (1971) writes “the /‘/is described as a voiced pharyngeal fricative in all the previous works in Arabic, literally as well as dialects. However, after a thorough acoustical analysis the author has found that the common allophone of /‘/ is actually a voiceless stops and not a voiced fricative”.

(ii) Fricatives

[f] a voiceless labio-dental fricative

[θ] a voiceless inter-dental fricative

[D] a voiced inter-dental fricative

[DH] a voiced velarized inter-dental fricative

[s] a voiceless sibilant alveolar fricative

[z] a voiced sibilant alveolar fricative zx

[š] a voiceless sibilant palato-alveolar fricative

[x] a voiceless velar fricative

[H] a voiceless velar fricative

[h] a voiceless oral fricative

(iii) Liquids

The phoneme /I/ has two distinct varieties: the emphatic (I) in which the front of the tongue makes contact with the alveolar ridge and the back of the tongue is raised towards the soft palate and the non-emphatic (f) in which the top of the tongue contacts, the front part of the alveolar ridge. The later is commoner than the former. The distinction between these two allophones can be clearly seen in the following example.

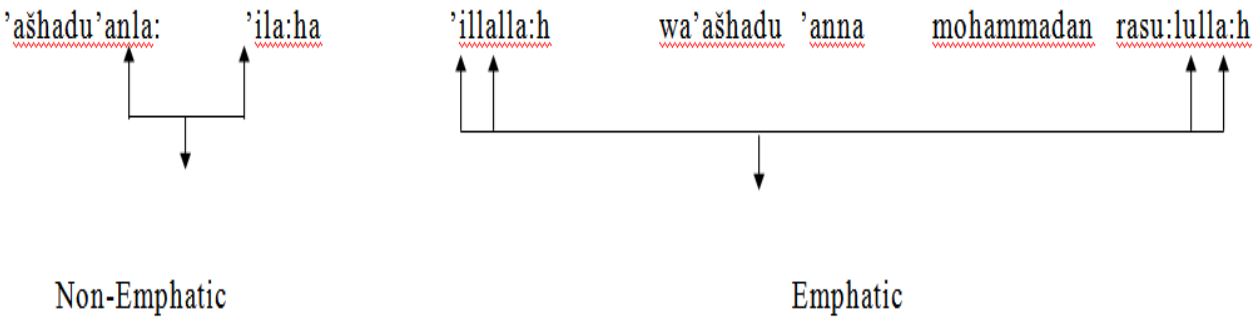

Figure (1)

‘I bear witness that there is no God save? Allah and I bear witness that Mohammad is the prophet of ’alla:h’.

(iv) (r) is a voiced alveolar trill

(v) Semi-vowels

(vi) (w) a voiced bilabial semi-vowel

(ii) [y] a voiced palatal semi-vowel.

(vi) Nasals

[m] a voiced bilabial nasal.

The phoneme /n/ has 4 allophones.

It is realised as labio-dental [m] when it is immediately followed by /b/ or /f/ as in [mamba‘] ‘spring’ and [mamfu:x] ‘scattered’ ‘blown up; swollen, pumped up.

It is realized dental [n:] when it is immediately followed by the dentals /θ/ or /D/ as in [man:θu:r] ‘scattered’ ‘prosaic’ and [mun:Dir] ‘warner’ cautioner’.

It is realized as [ɒ] when it is immediately followed by /k/ or /q/ as in [’iɒkisa:r] ‘state or process, of being broken, brokenness, breaking.

/n/ elsewhere

8.1 Consonant clusters in Arabic

There are no consonant clusters in word initial position. Clusters occur in medial and final positions. In medial position the cluster is broken up in pronunciation, the first consonant of the cluster being pronounced with the preceding vowel, the second with the following vowel. The medial clusters are clearly sequences of a syllable closing consonant and a syllable opening consonant. Samples of examples are given below:

(i) Medial clusters:

Symbol	Arabic Example	English Meaning
/kt/	Maktab	‘office’
/br/	Mibrad	‘file’
/nx/	Munxul	‘sieve’
/‘l/	’i‘la:m	‘information’
/nd/	’indafa‘a	‘to rushoff; to proceed without forethought’
/mt/	’imtaHana	‘to examine; subject to the test’
/st/,/xr/	’istaxrağa	‘to deduce’

Table 1

Final Clusters:

Symbol	Arabic Example	English Meaning
/tl/	Qatl	‘killing’
/lb/	Qalb	‘heart’
/xl/	Naxl	‘tree dates’ pl.
/rb/	Darb	‘beating’
/hb/	nahb	robbery’
/hr/	siHr	‘sorcery’
/hr/	Sihr	‘son-in-law’, ‘brother-in-law’
/lm/	Silm	‘peace’
/sm/	Daxm	‘big’, ‘large’, ‘magnificent’
/rθ/	Harθ	‘plowing’, tilling’

Table 2

9. Conclusion

Arabic is one of the most prominent languages of the Hamitic branch of the Afro-Asiatic family also called the Hamito – Semitic family. It is infixing language in which word-formation involves predominantly infixing vowels in a root consisting entirely of consonants.

The preceding pages provide an exhaustive description of the consonantal system of Arabic language.

The different consonants have been classified according to their points and manners of articulation and their distribution has been provided exhaustively. Therefore, it can be said that Arabic has a rich consonantal system.

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