

Arabic Phonology

Awaad Alqarhi

Correspondence: Awaad Alqarhi, Alshohdi, Makkah Saudi, Arabia. E-mail: amaq9768@gmail.com

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Abstract

The phenomenon seen in domains more than one is termed as Language Hybridization. Many languages have multiple dialects that tend to differ in the phonology concept. The Arabic language that is spoken in contemporary time can be more properly described as varieties having a continuum. The modern and standard Arabic language consists of twenty eight consonant phonemes along with six phonemes that might also be eight vowel in most of the modern dialects. Every phonemes have a contrast between non-emphatic consonants and uvularized or emphatic consonants. Few of the phonemes have also found to get coalesced into various other modern dialects whereas on the other hand, the new phonemes have already been introduced via phonemic splits or borrowing. The phonemic length and quality that applies to both consonants and vowels at the same time. There have been research that analyses how multicultural society in Australia gets operated only with a particular form of language generated in some linguistic environments. The scripts of English Language tend to have the capability of merging with other language that are native of a place for making it a complete new variety. The process is termed as Romanization. The hybrid or amalgamation of languages within the linguistic framework can be classified and characterized that makes its standardization easy. This paper aims to do a complete research on the linguistics of Arabic phonology.

Keywords: linguistics, languages, Arabic, phonology

1. Introduction

Language hybridization is a phenomenon that is seen in multiple domains, especially language. It can be defined as the as a process whereby separate processes which generate a whole another entity which only shares certain features with its sources and is completely compositional. Research says that multicultural Australian society operated with a specific generated language form in certain linguistic environments. What is meant by this is that English language scripts have the ability to merge with and embed into other native languages to an extent of becoming a whole new variety. This process is called Romanization. Within such a linguistic framework, these hybrid language forms could be characterized and classified, through which comparison is possible with the standardized form. In this context, Romanized Arabic is to be discussed. Romanized Arabic is a new form that emerged in computer mediated communication and it is generally used in informal contexts (Abd-El-Jwad, 1987). Even though the process of Romanization is rare in standard Arabic, it is still found in some use cases of Modern Standard Arabic (Abuahihab, 2015).

Romanized form of Arabic is used for a number of different reasons and purposes, such as, name and title transcription, cataloguing works in the Arabic language, language education, and representation of the Arabic language in scientific journals used by Linguists (Abushihab, 2016). The language variety seen in these formal settings often use diacritics and non-standard Latin characters. This contrasts with the informal settings of Romanized written communication seen in Arabic chat alphabet, such Arabizi. There are multiple innate problems in rendering the Arabic language in the Latin script. The process is not random and goes through the linguistic processes of transliteration, transcription or a combination of both to varying degrees. This paper will discuss Romanized Arabic with respect to the characteristic features which are exclusive to informal or spoken Arabic and formal or standard Arabic (Al Ani, 1970).

Even though the process of Romanization is important for the digitization of the language, we cannot overrule the conception that the background of the language and the phonological nuances are more or less concerned with the way it is structured across the history of the language, its use by the natives, language contact and evolution. These are factors that greatly determine how the phonology of a particular language, in this case Arabic will turn out to be and how different it will be from the dialects and other non standard varieties that are used in the neighbouring

regions. The scope of this particular paper is limited to the theoretical underpinnings of the Arabic Language Phonology and to hope that it can venture into the technical arena of language digitization and romanisation would be overshooting the ambitions (Al-Ali & Arafa, 2010).

The purpose of this paper is to serve as a model of reference for understanding the phonology of the Arabic language system and the differences it entails with its dialects. This paper purposefully restricts the discussions to the phonological theories and reports about the linguistic nuances in order to provide a head start to future discussions and thoughts on the romanisation and digitization of the Arabic language, since the process entails much more than just the phonology but also considers morphology and syntax (Al-Saidat, 2011).

2. Research Objective

This paper intends to present a thorough in depth understanding of the Arabic phonology and would conclude with whether or not there are nuances in the Arabic phonology in terms of the Modern Standard Variety and the dialectal varieties (Altakhaineh, 2016). Through a descriptive analysis of the phonological structures of the Modern Standard Arabic and a contrast with some of its localized varieties, the paper would connect certain dots regarding the miniscule differences in the language and the dialect.

3. Research Rationale

The first motivation behind this research stems from the increasing number of internet users in the Arabic spoken countries. The rate of growth is much higher than the average – there are over seventy one million active social media users every day. The introduction of internet in the Arabic-spoken regions has been the main cause behind this revolution, affecting various aspects of the lives of the people living there, including language (Broselow, 2017). Due to the proliferating use of internet in the Arab world, the necessity for such research has increased manifold in order to document the developments and changes which have occurred in the past few years.

The second motivation behind this research is to provide a technical definition of Romanized Arabic. From earlier research, it has been seen that modern standard Arabic or MSA is not the preferred form when communicating over the internet. Instead, a variety between English and colloquial or spoken Arabic is seen to have emerged. Other research has seen that users of the internet conjure innovative processes in adapting the native spoken forms of Arabic into the Latin script (Davis, 1995).

4. Research Methodology

The paper takes into consideration multiple academic sources and personalized interviews with native speakers as well Arabic Linguists in order to gain deep understanding into the linguistic structuring of the language. The research takes an exploratory paradigm to gain knowledge and understanding about the subject matter in details.

5. The Arabic Language Phonology

Traditional Arabic is a primarily a VSO language, which is the third most common word structure found in the world and has a relatively free word order (Ferguson, 1956). The language is pro-drop. The language is made up of non-concatenative morphemes, which means that unlike English, one cannot join morphemes after the root one after the other in order to come up with new words. This research however is focused primarily on Arabic phonology and specifically on identifying the differences that lie between the Romanised Standard Arabic and the Romanised Spoken Arabic. In order to proceed we would be required to dive deeper into the findings regarding Arabic Phonology (Gairdner, 1965).

This section is designed to provide us with a better insight into the phonology of the Arabic language as identified in three different use cases of the Arabic Language- Traditional Arabic, Egyptian Arabic and a non-standardised Jordanian Arabic spoken in the Irbid and accompanying region Hans, 2952.

6. Phonology of Arabic

Arabic is a Semitic language identified as belonging to the Afro - Asiatic language family. Modern Standard Arabic (MSA) is best defined as a language with a ‘continuum of varieties’, which incorporates around thirty different modern dialects of Arabic including the standardized form (Hashemi et al. 2014). MSA finds extensive use in writing, in media of print like magazines and newspapers and even in news reading, speeches and various types of formal conversations. MSA is characterized by the presence of twenty eight consonant phonemes and six vowels. All the phonemes contrast between ‘emphatic’ (uvularised) and the ‘non – emphatic’ consonants. Through language contact and evolution, many of these phonemes have over time have shifted into the dialects while new phonemes have found its way into the language through borrowing (Holes, 2004).

7. Vowels

Vowels in MSA are characterized by the following features:

- There are six vowel phonemes in Modern Standard Arabic forming three distinct pairs of short vowels and long vowels - /a, a:, i, i:, u, u:/. Certain spoken dialects also include / o: / and / e: / in their phonological setup (Kirchhoff & Vergyri, 2005).
- There are two diphthongs in Modern Standard Arabic, formed by combining short / a / with the semivowels / j / and / w /.
- In general, / a / and / a: / are retracted to [ɑ] when the neighbouring phonemes are /r/, / q / or a uvularised consonant in the following manner: / sˤ /, / dˤ /, / tˤ /, / ðˤ /, / ɰ /.
- In certain regional dialects, the pronunciation also takes the following shape: / x / and / ɣ /.
- In parts of Iraq and parts of the Gulf of Persia, the phoneme [ɐ] prior to the word boundary changes to [æ] when in the vicinity of most major consonants, like:
 Labial Consonants - / m /, / b / and / f /
 Most non emphatic consonants (Exceptions are - / r /, / θ /, / ð /, / n /, / t /, / d /, / s /, / z /, / l /, / ʃ / and / d͡ʒ ~ ʒ /)
 Pharyngeal consonants - / ʕ / and / ħ /
 Glottal Consonants - / ʔ / and / h /
 Semivowels and velar - / j /, / k / and / w /.
- North African and West Asian [æ] and [ɑ] are Allophones and are characterised differently as either [a ~ ɑ ~ ε] or [a ~ ä]. North western African Arabic is characterised by the open front / æ / being raised to [ε] or [e].
- In the case of / i, i:, u, u: /, the North African and West Asian Arabic realisation is in the form of [i ~ e ~ i] while in the vicinity of emphatic consonants and [q], [r], [ħ], [ʕ]. Different realisations of / u / include [u ~ o ~ u].

According to Thelwall, the following table provides a few examples of words that demonstrate Arabic Vowel Usage

Table 1. Examples of words that demonstrate Arabic Vowel Usage

	Short		long	
i	عِدَّ / ʕ i d /	" promise! "	عيد / ʕ i: d /	" holiday "
u	عُدَّ / ʕ u d d /	" count (command) "	عُود / ʕ u: d /	" lute "
a	عَادَ / ʕ a d d /	" counted "	عاد / ʕ a: d /	" came back "
aj			عَيْن / ʕ aj n /	" eye "
aw			عَوَدَ / ʕ aw d /	" return "

The following table shows the distribution of vowel phonemes in Modern Standard Arabic and Classical Arabic.

Table 2. Distribution of vowel phonemes in Modern Standard Arabic and Classical Arabic

	Short vowels		Long vowels	
	Front POA	Back POA	Front POA	Back POA
Close position	/ i /	/ u /	/ i: /	/ u: /
Open position	/ a /	/ a: /		
Diphthongs		/ aw /, / aj /		

The above table also represents the most common distribution of vowel systems among the dialects of Arabic with two distinct differences:

1. Dialectal system introduces a mid vowel which incorporates / i / and / u / under short front and back respectively (Ladafoged & Maddieson, 1996)
2. The mid vowel also includes / e: / and / o: / in the long front and back respectively.

In Arabic Phonology, the final heavy syllable of a root is always stressed. In most Varieties of Arabic, the long mid vowels (/ o: / and / e: /) are seemingly phonemic in nature and are capable of being used in Modern Standard Arabic in dialectal words or in some loanwords of foreign names. The long mid vowels / e: / and / o: / are always associated with the letters “ و or ي ”. The short mid vowels [o, ɔ and ɔ] are all probable allophones of / u / like in “ دكتور ” / d u k' t o: r / ('doctor') pronounced [d o k' t o: r], however the difference between the mid short vowels [u, ʊ] and [o, ɔ, ɔ] are never phonemic in nature unless being used in case of foreign words (McCarthy, 1984).

Similarly, short mid vowels [e, ɛ, ε] are all potential allophones of / i / across different dialects. For instance, “ بلجيكا ” / b i l' (d) ʒ i: k a / or / b a l' (d) ʒ i: k a / ('Belgium') pronounced [b e l' (d) ʒ i: k a]. However, the difference between the short mid vowels [i, ɪ] and [e, ɛ, ε] is never phonemic in nature and they mostly occur in complementary distribution (Mion, 2010).

8. Consonants

Modern Standard Arabic is characterised by 28 different consonants which fall under the following places of articulation – Labial, Dental, Dental – Alveolar, Palatal, Velar, Uvular, Pharyngeal and Glottal. Notwithstanding the divide, the number and the phonetic characteristic of most of the consonants has a certain aspect of regularity among most of the Arabic Speaking zones (Neme, 2013). Arabic is rich in three different types of consonants, namely Uvular, Pharyngeal and pharyngealised or emphatic sounds. The following are some key features of the Arabic Consonants (Neme & Laporte, 2013).

- The Emphatic coronals (/ s^s /, / d^s /, / t^s /, and / ð^s /) are responsible for causing assimilation of the emphatic to the adjacent non – emphatic coronal consonants (Saiegh-Haddad & Henkin-Roitfarb, 2014).
- / p / (پ) and / v / (ف) are not considered to be the part of the Arabic Phonemic Inventory as they are only used with Foreign words and are pronounced as / b / and / f /.
- The pronunciation of / d̤ʒ / (ج) has regional variation. Prominently, it is pronounced as [d̤ʒ] in the main Arabian Peninsula, Parts of Levant, Iraq, the northern regions of Algeria and Sudan, [ʒ] in most North western African dialects and the Levant, and [g] in major parts of Egypt and many of the dialects of Yemen and Oman (Selkirk, 1984).
- In terms of articulation, emphatic consonants are articulated with the back of the tongue approaching the pharynx. In Iraq and the Arabic Gulf, they are articulated with the velar region. / q /, / h /, and / ʕ / are considered the emphatic replacements to / k /, / h /, and / ʔ / respectively.
- The plosives can take the form of dental or alveolar depending on the region (Thelwall, 1990).
- In the Arabic spoken in Iraq and the eastern Arabian peninsula, ض / d^s / and ط / t^s / are pronounced as [d̤ʒ] and [t̤ʒ], respectively.
- In Sudan, even in the literary Arabic, / q / (ق) is usually pronounced as [g].
- In certain non – standard pronunciations and some varieties, / θ / and / ð / may be merged to form [t] and [d] or [s] and [z], respectively.
- Owing to evolution, in most regions, the uvular fricatives from the classical Arabic has turned to be velar or post velar (Versteegh, 2014).
- The voiced pharyngeal fricative / ʕ / (ع) is described as a ‘creaky voiced epiglottal approximant’. Its unvoiced alternative / h / (ح) is considered epiglottal, even though it is a true fricative in nature.
- Long consonants (either geminate or double) are pronounced exactly the way short consonants are pronounced, but in terms of time, they last longer (Watson, 1999). In Arabic, they are termed ‘mushaddadah’ (strengthened) and are marked with a shaddah. However, they are not pronounced ‘stronger’. In regions across Western Asia, a common feature that can be found in this case is the occurrence of an epenthetic [ə] between a long consonant and a pause (Watson, 2002).

9. Phonotactics of Modern Standard Arabic

The following structure denotes the Arabic syllable structure:

$$(C1)(S1)V(S2)(C2(C3))$$

It consists of an extra syllable onset, which consists of one or more consonants, a mandatory nucleus, an optional vowel that is either preceded or followed by a semivowel as well as an optional coda which again consists of one or two consonants⁴. The Arabic syllable structure follows the following restrictions (Zibin, 2019)

- Onset – the first consonant (C1) can be anything, either a liquid or a glide. Onset will be composed of just a single consonant whereas consonant clusters are found only in cases of loanwords. In some cases an epenthetic / a / finds a spot between consonants (Zurairq, 20015).
- Nucleus – consists of two semivowels (S1 and S2) and a vowel (V).
- Coda – The first consonant (C2) can be any consonant. Same is the case for the second consonant (C3).

In case of word stress, the placement of the stress also varies from dialect to dialect. Arabic employs three different types of syllables, namely Light, Heavy and Super – Heavy.

- Light: It is an open syllable that consists of a short vowel (i.e. C V), such as w a' a n d'
- Heavy: (i) An open syllable containing a long vowel (i.e. C V V), such as s ā.f a r a 'he travelled'. (ii) A closed syllable containing a short vowel followed by one consonant (i.e. C V C), such as min 'from' or ka. t a b . t u 'I wrote'
- Super-heavy: (i) A closed syllable containing a long vowel followed by one consonant (i.e. C V V C), such as b ā b# 'door' or m ā d . d u n 'stretching'. (ii) A closed syllable consisting of a vowel of any length succeeded by two consonants (i.e. C V C C, C V V C C), such as b i n t# 'girl' or m ā d d# 'stretching'.

The pattern of word stress in Arabic has been a matter of debate for a long time. Even with repeated exceptions, there is a generalised rule regarding word stress in Arabic that says that the stress will fall on the penultimate syllable of the word in case of a closed syllable and the antepenultimate in case of an open syllable. The following is the structure of the rule as it is agreed upon in Classical Arabic:

- Stress a pre - pausal super - heavy (C V V C, C V V G G, or C V C C) syllable:
[k i' t a : b] 'book', ['m a : d d] 'stretching (MASC SG)', [f a : ' r I b t] 'I/you drank'.
- If not, stress the rightmost or ending non - final heavy (C V V, C V C, or C V V G) syllable (until the antepenultimate): [d a' r a s n a :] 'we learnt', [š a : ' b u : n u n] 'soap (NOM)', ['m a k t a b a h] 'library', ['m a : d d u n] 'stretching (NOM)', ['m a k t a b a t u n] 'library' (non - pausal) (or [m a k' t a b a t u n]).
- If not, stress the leftmost (beginning) C V syllable (or antepenultimate): ['k a t a b a] 'he wrote', ['k a t a b a t u h u] 'library' (or [k a t a ' b a t u h u]).

The first two rules are followed by Modern Standard Arabic, however, in case of a missing final super – heavy or a heavy antepenultimate, the rule changes.

There are certain local variations of the Modern Standard Arabic where the spoken variant differs from the Classical and MS Arabic. The differences are noted in terms of grammar as well as pronunciation. The difference is vast and beyond the scope of this paper but just to give an example, the following are three examples of the phonological nuances that segregate the languages and the dialects:

- In Egyptian Arabic exists a requirement to transcribe / ʒ / or / $\widehat{dʒ}$ / since both are consolidated to [ʒ] using ج
- / g / does not form a part of the phonemic inventory of Urban dialects of Levantine Arabic (Lebanese, Syrian and Palestinian).
- Unlike / g / and / $\widehat{tʃ}$ /, / p / and / v / never occur natively in Arabic dialects and are always restricted to borrowed or loan – words in all cases of the following dialects: Moroccan Arabic, Tunisian Arabic, Algerian Arabic, Hejazi Arabic, Najdi Arabic, Egyptian Arabic, Levantine Arabic, Palestinian Arabic, Iraqi Arabic and Gulf Arabic.

/ g / is used in modern standard Arabic as a phoneme to pronounce some dialectal words and some loan words. However, in most modern Arabic dialect, it is considered a native phoneme or allophone mostly as a type of ق / q /

(as in the Arabian Peninsula and the Northwest African dialects) or as a variant of / $\widehat{d}z$ / $\widehat{ج}$ (as in the Egyptian and a number of Yemeni and Omani dialects). It is also identified as a foreign phoneme that appears only in loanwords, for example in most Levantine dialects where $\widehat{ق}$ is / ʔ / and $\widehat{ج}$ is / $\widehat{d}z \sim \text{ʒ}$ /.

The following table depicts the phonologies of different Arabic dialects where the variation revolves around the six consonants: $\langle \widehat{ج} \rangle$, $\langle \widehat{ق} \rangle$, $\langle \widehat{ث} \rangle$, $\langle \widehat{ذ} \rangle$, $\langle \widehat{ض} \rangle$ and $\langle \widehat{ظ} \rangle$:

Table 3. The phonologies of different Arabic dialects where the variation revolves around the six consonants

Alphabet	IPA	Modern Standard	Main Dialectal types			Uncommon distinctions			
ث	/ θ /	/ θ /	[$\underline{\theta}$]	[\underline{t}]	[\underline{s}]	[\underline{f}]			
ج	/ ʒ / or / $\widehat{d}z$ /	/ $\widehat{d}z$ /	[$\widehat{d}z$]	[ʒ]	[\underline{g}]	[$\underline{ɟ}$]	[\underline{j}]	[\widehat{dz}]	
ذ	/ δ /	/ δ /	[$\underline{\delta}$]	[\underline{d}]	[\underline{z}]	[\underline{v}]			
ظ	/ ʒ^s /	/ d^s /	[$\underline{\text{d}}^s$]	[$\underline{\delta}^s$]		[\underline{z}^s]	[\underline{d}]		
ظ	/ δ^s /	/ δ^s /	[$\underline{\delta}^s$]	[$\underline{\text{d}}^s$]	[\underline{z}^s]				
ق	/ q / or / g /	/ q /	[$\underline{\text{q}}$]	[$\underline{\text{g}}$]	[$\underline{\text{ʔ}}$]	[$\underline{\text{c}}$]	[$\underline{\text{k}}$]	[\widehat{dz}]	[$\underline{\text{ɣ}} \sim \underline{\text{ɟ}}$]

10. Cairene, or the Egyptian Arabic

The Egyptian Arabic is more commonly known as the Cairene Arabic. It is a sedentary variety of Arabic and owing to the dominance of the Egyptian media, has become the de facto standard variety in certain segments of the Arabic speaking population. We can identify a few special features of the Cairene Arabic as follows:

- Emphatic labials [m^s] and [b^s] and emphatic [r^s] are added to Cairene Arabic with marginal phonemic status.
- Cairene has also assimilated the inter - dental consonants with the dental plosives (e.g. / θ a l a / \rightarrow [$\text{t} \text{æ}^s$ l æ^s : $\text{t} \text{æ}^s$], 'three') except in Classical Arabic Loanwords where they are identified as native sibilant fricatives (e.g. / θ a : n a w i j j a / \rightarrow [$\text{s} \text{æ}^s \text{n} \text{æ}^s \text{w} \text{e} \text{j} \text{j} \text{a}$], 'secondary school').
- Cairene speakers pronounce / $\widehat{d}z$ / as [g] and de-buccalize / q / to [ʔ].
- Egyptian Arabic sometimes expresses minimal pairs like [$\text{ʃ} \text{æ} \text{j} \text{l} \text{æ}$] ('carrying' f.s.) vs [$\text{ʃ} \text{e} : \text{l} \text{æ}$] ('burden'). [$\text{g} \text{e} : \text{b}$] 'pocket' + [$\text{n} \text{æ}$] 'our' \rightarrow collapsing with [$\text{g} \text{e} \text{b} \text{n} \text{æ}$] which means ('cheese' or 'our pocket'), because Cairene phonology is incapable of handling long vowels before two consonants.

11. Fallahi or the Jordanian Arabic

The modern standard variety of Arabic spoken in Jordan is called 'Al-Arabiyya Al-Fusha' or shortened as Al Fusha. While in Jordan, the language came in contact with that of the native Jordanians, forming a pidgin which later turned into a creole with certain identifiable similarities with Al-Fusha. Currently, Jordanian Arabic incorporates many regional varieties like the urban Madani, The rural Fallahi and the Bedouin Badawi. While in Irbid Township, Madani is the most commonly used language, Fallahi finds extensive use in the rural context in the Irbid villages. A big part of places like Ajloun and Jerash also fall under this categorization (Jaradat, 2018.).

One of the components that make Fallahi different from Al-Fusha is the syllable structure of the language. In Fallahi, the complex onsets exist while in Al-Fusha they are omitted. Even in case of complex codas, it is only possible in the Fallahi variety and not in Al-Fusha, since in the former, it maintains the Sonority Sequencing Principle (Kastner, 1981).

There are certain significant differences between the vowel and consonant structures of Fallahi from the MSA, the following table depicts the way the consonants and the vowels in Fallahi are structured:

Table 4. The way the consonants and the vowels in Fallahi are structured

Consonants						
	Plosive	Nasal	Tap	Fricative	Affricate	Approximant Lateral
Labial	b	m		f		w
Inter-dental				θ ð ð̣		
(Post)alveolar	t ṭ	n	r	s ṣ ʃ z	dʒ	l
Palatal						j
Velar	k g					
Uvular				x ɣ		
Pharyngeal				ħ ʕ		
Glottal	ʔ			h		
Vowels						
	Frontal		Centralised		Backened	
	Short	Long	Short	Long	Short	Long
High	i	i:			u	u:
Mid		e:				o:
Low			a	a:		

Two key features of Fallahi phonology that differentiates it from Modern Standard Arabic are:

- the presence of Velar / g / in Fallahi along with the alveo-palatal variant / tʃ / instead of / k /.
- Diphthongs in Fallahi are also found to be absent. Therefore a word like ‘saif’ in Al-Fusha is changed to sound like *s e : f* in Irbid Arabic
- A feature of Irbid Arabic or more specifically Fallahi is the presence of complex onsets when they are followed by long vowels:
Sba : ɸa (C C V : C V) - Swimming
Wla : d (C C V : C) – Children
- / θ /, the voiceless inter-dental fricative has two other discrete variants, voiceless dental stop [t], and voiceless alveolar fricative [s]. In Irbid Arabic, these three represent a separate phoneme each. These three variants differ in a number of ways while occurring in different conditions. As shown in the following examples, they differ in terms of various minimal pairs
e.g.1. / θ a : m I r / [θ a : m I r] "Thamir"
 / s a : m I r / [s a : m I r] "Samir"
 / t a : m I r / [t a : m I r] "Tamir"
e.g.2. / θ a r a / [θ a r a] "soil"
 / s a r a / [s a r a] "He left early"
 / t a r a / [t a r a] "She can see"
- [T], [t], and [s] can also be considered to be allophones of the same phoneme / T /. For example
/ θ a l a : T / [θ a l a : T] "three"

/ θ a l a : T / [t a l a : t] "three"

/ θ a l a : T / [s a l a : s] "three"

- / dʒ /, the voiced post-alveolar affricate has two types: voiced post-alveolar affricate [dʒ], and voiced alveolar fricative [Z]. It must be noted that [dʒ] is connected more with Irbid Arabic whereas [Z] is associated with the Urban Speech.

12. Conclusion

For a Language like Arabic, it becomes very important to understand that there are a lot of people using the same language over a period of time and a lot of places. Thus, it is not difficult to guess that the linguistic features of the language will be different for all. In terms of phonology, Arabic has many different features that give it a different structure from its dialects. To identify all its features would be a tough task to accomplish. This paper has identified certain features of Arabic Phonology that can be employed and studied to find out which aspects of the phonological differences and theories can correlate and contribute to a future research project. Moreover, combining the study with a detailed study on the morpho-syntactic analysis of the Arabian language would also provide greater detail and insight into the entailments of the language and how Romanisation can be achieved. This paper has attempted to serve the purpose of being a start towards a bigger future study on the dialectal and standardised variations that come with the language.

References

- Abd-El-Jawad, H. (1987). Cross-Dialectal Variation in Arabic: Competing Prestigious Forms. *Language in Society*, 16(3), 359-367. <https://doi.org/10.1017/S0047404500012446>
- Abushihab, I. (2015). Dialect and Cultural Contact, Shift and Maintenance among the Jordanians Living in Irbid City: A Sociolinguistic Study. *Advances in Language and Literary Studies*, 6(4), 84-91. <https://doi.org/10.7575/aiac.all.s.v.6n.4p.84>
- Abushihab, I. (2016). Foreign words in Jordanian Arabic among Jordanians living in Irbid city: The impact of foreign languages on Jordanian Arabic. *Journal of Language Teaching and Research*, 7(2), 284-292. <https://doi.org/10.17507/jltr.0702.06>
- Al Ani, S. H. (1970). Arabic Phonology: An Acoustical and Physiological Investigation. *The Hague: Mouton*. <https://doi.org/10.1515/9783110878769>
- Al-Ali, M. N., & Arafa, H. I. M. (2010). An experimental sociolinguistic study of language variation in Jordanian Arabic. *The Buckingham Journal of Language and Linguistics*, 3, 220-243.
- Al-Saidat, E. (2011). English Loanwords in Jordanian Arabic: Gender and Number Assignment, *Language Forum*, 37(1), 59-72.
- Altakhaineh, A. R. M. S. (2016). *Compounding in Modern Standard Arabic, Jordanian Arabic and English* (Doctoral dissertation, Newcastle University).
- Broselow, E. (2017). *Syllable structure in the dialects of Arabic*. In *The Routledge Handbook of Arabic Linguistics* (pp. 32-47). Routledge. <https://doi.org/10.4324/9781315147062-3>
- Davis, S. (1995). Emphasis Spread in Arabic and Grounded Phonology, *Linguistic Inquiry*, 26(3), 465-498.
- Ferguson, C. (1956). The Emphatic L in Arabic. *Language*, 32(3), 446-452. <https://doi.org/10.2307/410565>
- Gairdner, W. H. T. (1925). *The Phonetics of Arabic*, London: Oxford University Press.
- Hans, W. (1952). *Arabisches Wörterbuch für die Schriftsprache der Gegenwart*.
- Hashemi, E. S. et al (2014). Phonological Adaptation of Arabic Loan Words in Persian: Consonants in International *Journal of Humanities and Social Science*, 4(1), 225-236.
- Holes, C. (2004). *Modern Arabic: Structures, Functions, and Varieties*. Georgetown University Press.
- Jaradat, A. (2018). *The Syntax-Prosody Interface of Jordanian Arabic (Irbid Dialect)* (Doctoral dissertation, Université d'Ottawa/University of Ottawa).
- K ästner, H. (1981). *Phonetik und Phonologie des modernen Hocharabisch*. Leipzig: Verlag Enzyklop ädie
- Kirchhoff, K., & Vergyri, D. (2005). Cross-dialectal data sharing for acoustic modeling in Arabic speech recognition. *Speech Communication*, 46(1), 37-51. <https://doi.org/10.1016/j.specom.2005.01.004>

- Ladefoged, P., & Maddieson, I. (1996). *The Sounds of the World's Languages*, Oxford: Blackwell, ISBN 978-0-631-19815-4
- Lipinski, E. (1997). *Semitic Languages*, Leuven: Peters.
- McCarthy, J. J. (1994). *The phonetics and phonology of Semitic pharyngeals*, in Keating, Patricia. *Papers in laboratory phonology III: phonological structure and phonetic form*, Cambridge: Cambridge University Press, pp. 191-233. <https://doi.org/10.1017/CBO9780511659461.012>
- Mion, G. (2010). *Sociofonologia dell'arabo*. Dalla ricerca empirica al riconoscimento del parlante, Rome: Sapienza Orientale
- Neme, A. (2013). Pattern-and-root inflectional morphology: the Arabic broken plural. *Language Sciences*, 40(2), 221-250. <https://doi.org/10.1016/j.langsci.2013.06.002>
- Neme, A. A., & Laporte, E. (2013). Pattern-and-root inflectional morphology: the Arabic broken plural. *Language Sciences*, 40, 221-250. <https://doi.org/10.1016/j.langsci.2013.06.002>
- Saiegh-Haddad, E., & Henkin-Roitfarb, R. (2014). *The structure of Arabic language and orthography*. In *Handbook of Arabic literacy* (pp. 3-28). Springer, Dordrecht. https://doi.org/10.1007/978-94-017-8545-7_1
- Selkirk, E. (1984). *On the major class features and syllable theory*. In Aronoff & Oehrle (eds.) *Language Sound Structure: Studies in Phonology*. Cambridge: MIT Press. 107-136.
- Thelwall, R. (1990). Illustrations of the IPA: Arabic. *Journal of the International Phonetic Association*, 20(2), 37-41. <https://doi.org/10.1017/S0025100300004266>
- Versteegh, K. (2014). *Arabic Language*. Edinburgh University Press.
- Watson, J. (1999). The Directionality of Emphasis Spread in Arabic. *Linguistic Inquiry*, 30(2), 289-300. <https://doi.org/10.1162/002438999554066>
- Watson, J. C. E. (2002). *The Phonology and Morphology of Arabic*. New York: Oxford University Press.
- Zibin, A. (2019). A Phonological Analysis of English Loanwords Inflected With Arabic Morphemes in Urban Jordanian Spoken Arabic. *SAGE Open*, 9(2).
- Zurairq, W. (2005). The production of lexical stress by native speakers of Arabic and English and by Arab learners of English. *University of Kansas*. <https://doi.org/10.1177/2158244019841927>