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Lexical Borrowings in Immigrant Speech:

A Sociolinguistic Study of Ḥassāniyya

Arabic Speakers in Medina (Saudi Arabia)

By
Amin Mustafa M Alshangiti

Abstract

This study investigates lexical borrowings and the phonological processes associated with them as an outcome of the dialect contact situation in Medina (Saudi Arabia) between the Shanāqiṭa immigrant community, who immigrated to this holy city from Mauritania and who speak Ḥassāniyya Arabic, and the urban Hijazi community, who speak urban Hijazi Arabic. The study introduces to the reader the main phonological and morphological features of these two Arabic dialects and presents traditional and modern approaches towards lexical borrowings in Arabic. The present study adopts the quantitative sociolinguistic method which is widely used in sociolinguistic studies in order to analyse the speech of this immigrant community (focusing on borrowings from urban Hijazi Arabic), and correlates it with the social variables of age, educational attainment, ethnicity and gender.

The study focuses on six phonological variables which are correlated with the social variables; these variables represent common phonological features which contrast both dialects. These phonological variables are divided into two groups: consonantal and vocalic variables. For the consonantal variables, the present study investigates the variation of three variables: de-affrication ([dʒ] → [ʒ]), lenition ([f] → [v]), and initial *hamza* dropping ([ʔ] → [Ø]). As for the vocalic variables, the research examines three variables: re-syllabification, consisting of initial [CV] and sequenced [CV.CV] → syncope, epenthesis and metathesis; diphthongisation: monophthongs → diphthongs; and vowel centralisation: (i), (u) → [ə].

The statistical data analysis reveals that age (generation) plays a central role in the phonological variation between the study participants when they borrow linguistic elements from urban Hijazi Arabic; ethnicity is the second most important factor. The analysis also shows that socio-cultural and socio-psychological factors facilitate the strong linguistic preservation of Ḥassāniyya Arabic by this immigrant community in Medina.

To My Beloved Mother

Who Keeps Praying for Me Day and Night

Acknowledgments

First and foremost, all praise and thanks to the Almighty Allah; without His countless help, this work could not have been finished.

The Prophet Muhammad (peace be upon him) in a very beautiful and famous Ḥadīth said: "He who does not thank the people is not thankful to Allah" (Sunan Abi Dawud 4811).

I am deeply thankful to my supervisor, Professor Daniel L. Newman, for his guidance, support and insightful comments on my work throughout the whole period I spent doing this research. I really appreciate his patience and the way in which he helped me overcome all of the obstacles I faced during different stages of my research.

I cannot express how grateful I am to my mother Maryam, who never stops praying for me day and night. I do not have enough words to address my gratitude for her patience all these years. She kept asking me weekly "when you are going to finish?" I have finished, Mum, and I am coming soon to kiss your hands that you never stopped raising in your late night prayers for me.

My deepest gratitude to my dear wife Aisha for her endless support, patience and sacrifice. I will never forget her responsible commitment to our family, during the long time that I have been doing my research. My love and thanks also to my children Ahmed, Ibtihal, Omar, and the little one Ibrahim for their patience and great understanding of my situation.

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Last but not least, I would like to thank all the research participants for allowing interviews and recordings.

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List of Abbreviations

ADJ	Adjective
ADJP	Adjectival phrase
ADV	Adverb
ADVP	Adverbial phrase
ASP	Aspect
CA	Classical Arabic
CON	Conjunctions
CS	Code-switching
DAF	De-affrication
DEM	Demonstrative
DIP	Diphthongisation
EA	Educational attainment
fem.	Feminine
GCW	Grammatical Class of Word
HA	Ḥassāniyya Arabic
IHD	Initial *hamza* dropping
INT	Interjection
LB	Lexical borrowing
LEN	Lenition
masc.	Masculine
MSA	Modern Standard Arabic
N	Noun
NP	Noun phrase
P	Phrase
pl.	Plural
PP	Prepositional phrase
PREP	Preposition
PRO	Pronoun
RS	Re-syllabification
sing.	Singular
V	Verb
VC	Vowel centralisation
VP	Verb phrase
UHA	Urban Hijazi Arabic

List of Transliteration Symbols

The tables below show the Arabic transliteration symbols used in this research. Two categories of symbols are presented in each table. The first category, 'Scholary transliteration symbols', consists of the symbols used to represent the hypothetical pronunciation of Arabic word(s) in speech, such as the names of people, places, things etc. The other category, 'IPA symbols', consists of the symbols of the International Phonetic Alphabet (IPA), which are used for transcribing the data and all examples extracted from the real speech of the research participants.

Scholarly transliteration and IPA symbols used to represent consonants

Arabic letters	Scholary transliteration symbols	IPA symbols
ء	'	ʔ
ب	b	b [bˤ]
ت	t	t
ث	th	θ
ج	j	dʒ [ʒ]
ح	ḥ	ħ
خ	kh	x
د	d	d
ذ	dh	ð
ر	r	r [rˤ]
ز	z	z [zˤ]
س	s	s
ش	sh	ʃ
ص	ṣ	sˤ
ض	ḍ	dˤ
ط	ṭ	tˤ
ظ	ẓ	ðˤ
ع	'	ʕ
غ	gh	ɣ
ف	f	f [v]
ق	q	q
ك	k	k
ل	l	l [lˤ]
م	m	m [mˤ]
ن	n	n [nˤ]
هـ	h	h
و	w	w
ي	y	j

Scholarly transliteration and IPA symbols used to represent vowels

Scholarly transliteration symbols		IPA symbols	
Short	**Long**	**Short**	**Long**
a	ā	a	aː
u	ū	u	uː
i	ī	i	iː
ə	-	ə	-
-	ē	-	eː
-	ō	-	oː

Scholarly transliteration and IPA symbols used to represent diphthongs

Scholarly transliteration symbols	IPA symbols
ay	aj
aw	aw
ey	ej
ow	ow

Chapter One

Introduction

1.1 The Holy City of Medina

The thesis will begin by discussing the sociolinguistic situation in Medina, and will provide an overview of the city. The city was named *Al-Madinah* 'the city', also known as *Al-Madinah Al-Munawwarah* 'the Enlightened City', by the Prophet Muhammad (peace be upon him) in the 7th century, when he established the first Muslim community, thus replacing its pre-Islamic name *Yathrib*. It was the first capital city of the Muslim Nation, and is the second most important place for Muslims after Mecca, visited by millions of Muslims every year as part of their Hajj (pilgrimage) and Umra (minor Hajj) to Mecca every year.

Since the establishment of this holy city, it is a dream for many Muslims to come to the city to live and then one day to be buried in its graveyard *al-Baqī'* as recommended by the Prophet Muhammad (peace be upon him). Therefore, it is one of the most famous destinations for migrants from different parts of the Muslim world. In addition to the religious reasons behind the migration to Medina, there are different reasons that encouraged the flow of migration to this holy city, some of them external and some internal. Burckhardt (1829) (cited in Al-Harthi 2014: 6) describes how many of the pilgrims who come to the holy cities of Mecca and Medina decide not to return to their countries and prefer to reside in these holy places: "no year passes without some new settlers being added to their number; and no pilgrim caravan crosses the town without leaving here a few of its travellers, who stop at first with the intention of remaining for a year or two only, but generally continue to reside here permanently".
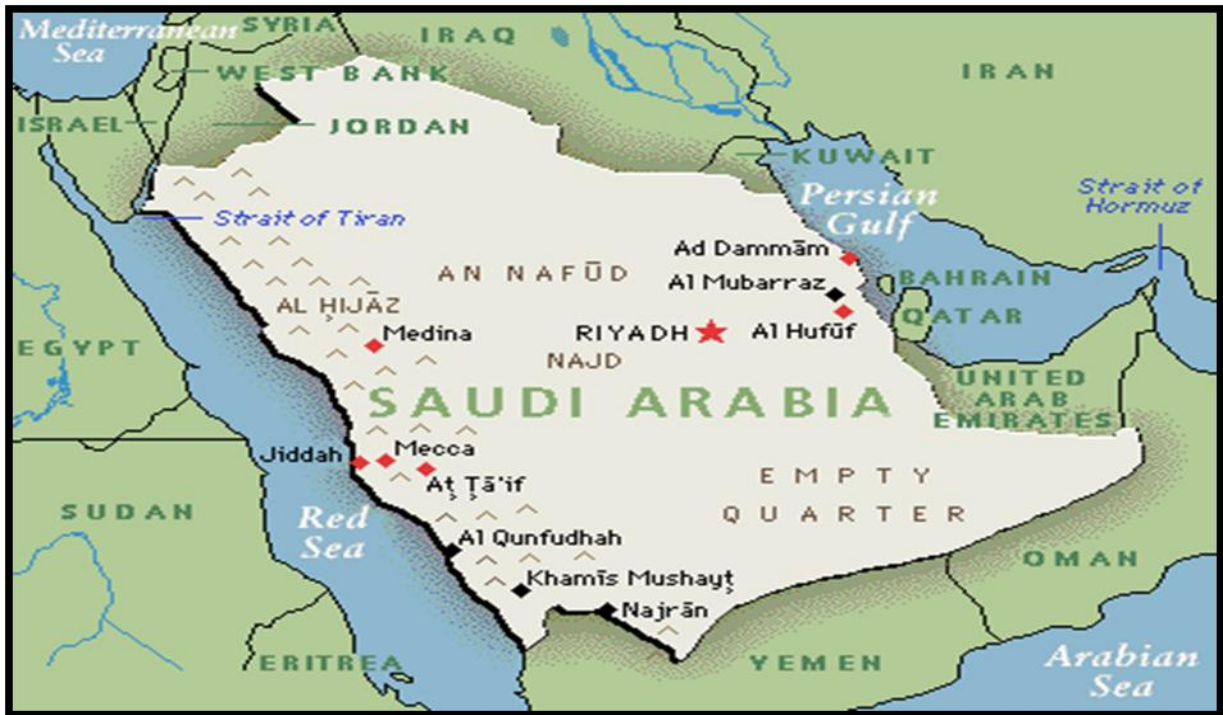
Map 1.1: Map of Saudi Arabia (showing Medina and other Hijaz cities)

Source: http://www.al-islam.org/ziyarat/saudi.htm

The Meccan historian, Al-Siba'i (1999), traced the flow of immigrants to the major cities in the Hijaz region (i.e. Mecca, Medina, and Jeddah) back to the 17th century (see Map 1.1). Alessa (2009: 24) argues that many of the immigrants who settled in the holy cities were encouraged to do by commercial purposes in addition to a desire to settle in Medina to be educated by religious scholars in the city. According to Altorki (1986: 9f), they arrived from different Arab countries, particularly from Morocco, Syria and Egypt (the migration from the latter to Hijaz was likely encouraged by the expedition of Muhammad Ali Pasha to Mecca 1811-1818), and from Iraq, to a lesser degree. Most of the Arab immigrants came to the region from Hadramawt and the Yemen, and from Najd after the Saudi rule of the region. In relation to many of the immigrants who came from non-Arab countries, Altorki states that Turks stayed in the region and intermarried with other ethnic groups; however, the number of other Asian communities, such as Indians, Indonesians, Malays and Bukharis only increased when transportation improved at the beginning of the 20th century. Interestingly, many of

these immigrants, both Arabs and non-Arabs, still have their land of origin as a surname, e.g. Al-Bukhārī (from Bukhara), Al-Ṭāshkandi (from Tashkent) and Al-Shanqīṭi (from Shanqīṭ in Mauritania) (see section 1.2 for information on the latter).

Although the presence of 'foreigners' in Medina predates the 19th century, Johann Burckhardt (Burckhardt 1829, cited in Al-Harthi 2014: 8) recorded the presence of immigrants in the early 19th century in his journey to the city. He noted that many of the Muslims who came to visit the Prophet's grave and mosque preferred to reside in the city instead of going back to their countries. In Medina today, it is very common to see many inhabitants of the city wearing Saudi traditional clothes and holding Saudi nationality but whose appearance is Asian, such as those from China, Indonesia, Malaysia and India etc., and others are from other parts of the world, such as Africa. The presence of many of these communities in Medina is mainly due to their male ancestors settling in the city and marrying local women (ibid: 9), which resulted in the descendants of immigrants being of mixed race. This common feature of Medinan society, i.e. inter-marriages resulting in mixed race descendants, does not apply to the Shanāqiṭa immigrants, who do not generally practise inter-marriage (see section 1.2 below).

An important factor that played a significant role in the demographic change of the Medinan population was the local policies of the Saudi government first introduced by the founder of the modern Kingdom of Saudi Arabia, King Abdulaziz. These policies were based on establishing homes in new cities for the Bedouins. Also, the government encouraged the nomads to live in existing cities. Medina was one of the cities that the Bedouins from the nearby areas were encouraged to move into. Recently, many of these Bedouin tribe members living near to Medina have moved to Medina, or at least send their children to study and/or work there (cf. Al-Harthi 2014: 8). Medinan society has undergone dramatic demographic

and social change in the last 25 years.[1] The tribal lifestyle and traditions dominate the social life of Medina, as tribal members in Medinan society now constitute a very large proportion of the population. In addition, the lack of significant employment opportunities and sophisticated industrial projects in Medina forced many native inhabitants to move to other big cities such as Jeddah, Riyadh and Dammam in search of better employment.

In addition, urban Hijazi families have an average size that is similar to that found in other Arab urban societies (such as Egypt), but is considerably smaller than that found in the tribal communities. The observer of these changes in Medinan society can come to the conclusion that the urban Hijazi community (the native inhabitants of the city) is shrinking in favour of the new tribal inhabitants. Therefore, this will significantly affect the urban Hijazi dialect spoken by the urban Hijazi people, and their diverse cultural nature.

1.2 The Research Speech Community

The speech community (or linguistic community) as a concept has different definitions in a sociolinguistic context and there is lack of agreement on it (see Patrick 2008). As an example of the different definitions, Labov (1972b: 120f) states that: "The speech community is not defined by any marked agreement in the use of language elements, so much as by participation in a set of shared norms. These norms may be observed in overt types of evaluative behaviour, and by the uniformity of abstract patterns of variation which are invariant in respect to particular levels of usage". Gumperz (1968: 463) argues that a speech community is formed by "a social group which may be either mono-lingual or multilingual, held together by frequency of social interaction patterns and set off from the surrounding areas by weaknesses in the lines of communication". Yule (2006: 250) simplifies this concept

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[1] The time when the researcher was a teenager living in Medina.

and suggests that the speech community is "a group of people who share a set of norms and expectations regarding the use of language".

In this section, the following considerations made when defining the study's speech community, are based on linguistic and non-linguistic criteria, in order to distinguish it from other speech communities in Medina. The speech community investigated in this research is known in Medina as the Shanāqiṭa Community (henceforth, SC). Al-Idrīsi (2009: 140) states that no definitive point can be identified for when the first group of this community migrated to the Hijaz region. However, the oldest documentation of the SC's *waqf* 'religious endowment' dates back more than 290 years. It is worth noting that this *waqf* mainly consists of numerous properties that are usually rented. The assets of these properties are distributed equally between the community members, regardless of the members' age, gender or ethnicity (except the Black Mauritanians who do not speak Ḥassāniyya Arabic (henceforth, HA) natively)).[2] The eligibility to benefit from this *waqf* is fulfilled as long as the beneficiary permanantly resides in Medina and he/she is originally from Mauritania, whether or not he/she is a Mauritania or Saudi citizen[3]. The presence of this endowment under the name of *'Awqāf Al-Shanāqiṭa bi Al-Madīnah Al-Maunawwara* 'the endowments of the Shanāqiṭa community in Medina' implies the existence of a community that benefitted from such an endowment. If we consider the modern age, the French colonisation of Mauritania in 1906, which resulted in it no longer being an 'Islamic land' (Al-Idrīsi 2009: 115), is likely to have encouraged sustained emigration to the Islamic East in general and to Hijaz in particular.

The majority of these immigrants settled in Medina and Mecca, while some families settled in other countries, such as Jordan, Sudan, Turkey, Egypt, Yemen, and Iraq. Later, these immigrants became known as the Shanāqiṭa; a name which can be traced back to

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[2] This applies to those who are Mauritanian citizens but who speak Ḥassāniyya as a second language, while their first language is one of the African languages (see Chapter Two).
[3] The researcher is the source of this information as one of the beneficiaries of *waqf*.

Shinqīṭ (Chinguetti), the old name of Mauritania (ibid). It seems that the SC's good reputation gained popularity from the early Shanāqiṭa scholars who came to the Islamic East and who had a good reputation regarding their knowledge of Sharia (Islamic Law) and the Arabic language (Al-Idrīsi 2009: 115). A good example of such a scholar is Muhammad Mahmud Al-Turkuzi (famously known as Walad Al-Talāmīd among the SC) who was in Hijaz and Egypt during the latter period of the Ottoman Caliphate, and Muhammad Al-Amin Al-Shanqīṭi (well-known as ʾĀbba Walad Khṭūr among the community), who was one of the most important scholars in Saudi Arabia (ibid).

Due to the fact that in the modern age, travel has become considerably easier, the number of Mauritanians immigrating to Hijaz has increased. However, many of them prefer to stay in *al-ʾarāḍī al-muqddasa* 'the holy lands' for the aforementioned religious reasons, as well as for assorted non-religious reasons, such as staying with their relatives or because of work. It is assumed that the flow of Shanāqiṭa migrants to Hijaz (particularly to Medina) started in the early 1980s, as before this time the community was relatively small.[4]

Today, the Shanāqiṭa are one of the main immigrant communities in Medina. There are no published details about the immigration of Mauritanians to Saudi Arabia in general and to the Hijaz region, in particular, but, based on the SC's endowment records, in 1998, however, Al-Idrīsi (2009) estimates that the SC in Medina consists of between 23,000 and 25,000 people, (including those holding Mauritanian and Saudi citizenship). In addition, the community is of a smaller size in Mecca and in other Saudi cities, such as Jeddah and Riyadh. This unofficial population estimate of the SC community in Medina, seems near to reality, as the number of Mauritanians in Saudi Arabia reached 20,000 in 2012, according to the

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[4] This assumption is based on my personal observation as a community member who witnessed different stages of the community growing up in Medina.

Migration Policy Centre (MPC)'s report published in June 2013[5]. According to this report, their "data are taken from Mauritanian statistics (i.e. the Mauritanian Ministry of Foreign Affairs and Cooperation)". This population size, necessarily, does not include community members who hold Saudi citizenship, as the Saudi law strictly does not allow dual citizenship.

The SC lifestyle and their strong cultural presence in Medina encouraged the media to try to discover and document their 'enigmatic' social lifestyle, which is not generally open to outsiders. According to *'Ayn 'Alā Al-Madīnah*, 'an eye on Medina', produced and broadcast by the Al-Arabiyya Channel (03-09-2009),[6] the Shanāqiṭa have their own neighbourhood in Medina[7] and live according to strict social traditions and popular culture inherited from their native country, Mauritania. The SC members (even those who hold Saudi citizenship) clearly disassociate themselves from the local Hijazi society, or what is locally known as *ahl al-balad*. This term, according to Altorki (1986: 10), is used by the native Hijazis whose origins are not from the Arabian Peninsula, to distinguish themselves from the recent "Bedouin tribes who have settled – as far back as the oldest informant can remember – in what were the outskirts of the city". This term is meant to refer to the cultural differences between the native inhabitants of the cosmopolitan Hijazi cities, who are not tribally affiliated, and those who affiliate themselves with Arabian tribes, such as Tamīm (from Najd), Juhayna, and Ḥarb (from Hijaz) (Alessa 2008: 26).

It seems that tribal immigrant groups in the major cities of Hijaz (such as Medina, Mecca and Jeddah) often encountered strong resistance to their assimilation into the lifestyle of the native urban Hijazi communities (*ahl al-balad*). For instance, Alessa (2008: 26) argues that the immigrant Najdi community maintained a separate identity in the city of Jeddah. This

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[5] Report obtained from the official website of the *Migration Policy Centre*:
http://www.migrationpolicycentre.eu/docs/migration_profiles/Mauritania.pdf (accessed 03/08/2015)
[6] Partly uploaded on YouTube at: https://www.youtube.com/watch?v=oMo_KOrclQE
[7] This big neighbourhood is sometimes officially called *Al-Sēḥ* or *Sēḥ Al-Shanāqiṭa* locally.

separate identity relates to some well-known historical issues, such this group being "ethnically related to Ibn-Saud who was threatening the Ashraf rule over Hijaz, [so] they were mistrusted". Therefore, the Najdi community was socially isolated and felt 'compelled' to isolate itself due to the native Hijazi community considering it to be loyal to the Najdi leader, Ibn Saud, who took over the Hijaz region following the rule of Ashraf. However, after the region became part of Saudi Arabia, this ethnic disadvantage "worked to their advantage, and they sought to maintain their identity as Najdites and enjoy the opportunities that it provided" (Altorki 1986: 12). They were not obliged to assimilate themselves into the lifestyle of the native urban Hijazi community as being Najdi gave them more opportunities than if they were considered as *ahl al-balad*.

In the case of the SC in Medina, the resistance towards adopting the local culture and norms of Saudi society in general and the local Hijaz society, in particular, can be traced back to several reasons. From the early existence of the community, the Shanāqiṭa religious scholars disagreed with their Saudi counterparts on different issues due to differences in the religious doctrines; the SC generally follow the Ashʿarite school of faith and the *Māliki* jurisprudential school, while the dominant school of faith for Saudis is Wahhabism and jurisprudential practice follows the *Ḥanbali* school. This in fact stopped many families from sending their children to the official Saudi schools in the 1970s and 1980s. However, in the late 1980s these families became less hesitant to send their children to these schools, and now such hesitation is almost non-existent.

Until the middle of the 1980s,[8] the only obstacle preventing the SC to be more open to the outsiders, mainly to the Hijazi society, was religion. Although there was a degree of social openness to the Hijazi society as the society was considerably small, this was probably simply a matter of necessity. In the 1980s, a huge number of Bedouin Hijazis migrated to

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[8] This is based on the researcher's personal observations.

Medina, most likely due to economic reasons: this is known in Saudi Arabia as 'the economic boom of the 1980s'. This excessive migration of the tribal members to Medina created huge demographic and cultural changes in Medina. The cosmopolitan nature of the culture and norms in Hijaz, in general, and in Medina, in particular, started to witness dramatic changes. The 'bedouinisation' or 'tribalisation' of Medinan social life and culture, appeared through different practices. Ethnic minorities, such as immigrants, were treated with suspicion due to the perception that they were not loyal to the Saudi society but were instead loyal only to their community and/or to their native country.

This new cultural dominance of Bedouin Hijazis in Medina made other minorities, who originally belonged to other areas or communities outside Arabia, feel isolated. Therefore, some of them, like the SC, practised some sort of deliberate social isolation, in which the social activities were mainly limited to fellow members of their society; this was also encouraged by the dramatic increase in the population of the society during the 1980s. New ideas and beliefs are said to have started circulating at this time. These were based on the community members perceiving themselves as different from other Saudi communities in Medina, and even as having a higher social status due to their historic excellent knowledge of the Quran and Arabic. This is especially meant to be a reaction to the tribal superiority of Bedouin Hijazi; ironically, the SC is a Bedouin community as well. The ideas and beliefs regarding the social superiority of the SC is stronger in the third generation of the SC, as this research argues (see Chapter Four).

One of the obvious signs of the social isolation and resistance towards assimilation into the Hijazi community, is that inter-marriage between the SC and other Hijazi communities is very rare, and socially stigmatised; marriages between the SC and Bedouin Hijazis are, especially, highly stigmatised; however, the old generation of the SC are more open to Hijazi communities, than are the second and third generations; the latter generations have become

very socially closed. Generally, the SC limits direct contact with Hijazi societies to formal circumstances, such as in the workplace, markets, schools, etc. This social situation has resulted in limited inter-dialectal contact between the community and the Saudi Hijazi community. The dialect spoken by the SC is considered to be a 'closed' dialect rather than an 'open' dialect. In relation to "the density and orientation of communication", Andersen (1988: 74) characterises the 'open' dialect speech community in terms of having "a lower density and more clearly defined orientation of lines of inter-community communication than central [close] dialects".

Moreover, maintaining a high level of contact in Medina with people of the same tribal background and with relatives from their original homeland in Mauritania has played a major role in Ḥassāniyya Arabic being preserved from one generation to another. Strong inter-generational face-to-face contact was strengthened in the 1980s onward by the numerous arrivals of Shanāqiṭa immigrants to Medina. In addition, parents do not generally recommend their children to have friends outside the community. As was indicated above, these strong bonds between the community members are also reinforced by the Shanāqiṭa community living in its own neighbourhood; other social groups did not live in this neighbourhood in large numbers. However, the big neighbourhood Al-Sēḥ and its surrounding areas that are inhabited mainly by this community are part of the government's huge development plan, which proposes that all these areas will be demolished in 2015. This development plan is expected to affect the strong social bonds of the community and it might also encourage them to establish more open social relations with Hijazi society as they will be housed in different areas in Medina. This is possible; however, it might be only temporary until members of the community are able to be housed together again in a neighbourhood similar to Al-Sēḥ.

An interesting social issue related to the community is that although these community members mostly share the same cultural[9] and linguistic norms, they are stratified into two main social groups, similar to the situation in their native country of Mauritania. These main social groups are: *Bīẓān* (pl. of *Bīẓāni*; White Mauritanian person) and *Ḥrāṭīn* (pl. of *Ḥarṭāni*); the freed slaves or offspring of slaves)[10]. The present study examines the linguistic variation between these two ethnic groups. Moreover, if we consider the social strata of the speech community, it is evident that social hierarchy is very strong in this community. It is possible to identify five social groups. These groups, from highest to lowest social status, are as follows:[11]

1. The *Zawāya* tribes,[12] which consist of the *Ashrāf* tribes (with the highest social status) and the non-Ashrāf tribes.

2. *Le-ʿArab* 'the Arab tribes;[13] in Mauritania and the Western Sahara they are also called *Ḥassān* or *Awlād Ḥassān*, 'the sons of Ḥassān', to which the dialect (Ḥassāniyya) is attributed (cf. Chapter Two).

3. *Ṣanhāja* (Zenaga) (the Ḥassāniyya speakers from Berber origins).

4. *Ḥrāṭīn*, as defined above.

5. *Mʿallmīn* (craftsmen/women).

Al-Naḥwi (1987: 36) proposed a tripartite classification, which he called a 'functional and non-ethnic classification' of the people of Mauritania. This classification consists of three

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[9] They have many cultural norms that are similar to the tribal lifestyle in the whole Arab regions.

[10] This name refers to the second big population of Mauritania, originally freed slaves, who speak HA fluently. It does not refer to the other Black Mauritanian minority, who speak other African languages in addition to HA (awkwardly). See Dia (2007).

[11] Marriage is always a very reliable social indicator of the social status of one's social stratum, as explained above. For instance, inter-marriage between people in the low social stratum and the people in the high and medium social strata is not socially accepted. It occurs rarely, and is subject to extreme social stigma.

[12] This is the plural of Zāwiya, which originally meant "the religious stronghold, centre (often of a Sufi ṭarīqa) or scholarly group" (McDougall & Scheele 2012: 258). Zawāya (pronounced by HA speakers as Zwāya, refers to white Mauritanian tribes, who are usually educated and who educate others (clerics), and are typically interested in religious affairs, which gives them a very high status in the very religious HA society. See Curtin (1971) and Ould-Bah (2011: 187).

[13] In Mauritania, this group of tribes is known collectively as 'warrior' tribes, who usually have military capability over others. See Curtin (1971).

categories. The first category is the same as the first strata mentioned above, i.e. the *Zawāya* tribes, which include Arab (mostly) and *Ṣanhāja*-origin tribes. The second category consists of *Le-ʿArab* (*Awlād Ḥassān*). He argues that both *Zawāya* and *Zawāya* have dual leadership of the Shanāqiṭa society, with the first group performing religious, educational and financial leadership and the latter group leading the community in military and war affairs. At the same time, they both share political superiority over other parts of the community. The third category includes those who do not have religious/educational or political and military power; people in this category are usually called *Laḥma* 'followers'. The tribes which belong to this category are usually less powerful than those in the previous two categories; therefore, they are controlled by the more powerful tribes, and graze animals and administer services to the more powerful tribes.. This category mostly includes Zenaga tribes and sometimes Arab-origin tribes, which are less powerful than the previously described tribes in the first and second categories.

Ḥrāṭīn, as an ethnic group, refers to the second largest population group of Mauritania, originally freed slaves, who speak HA fluently. It does not refer to the other Black Mauritanian minority, who speak other African languages in addition to HA (awkwardly) (see Dia 2007). Although they all similar to each other in terms of having dark black skin, both groups perceive themselves as a different community. The origin of the name of this community is a controversial issue. It seems that the closest origin of the term is the Berber word *Ahardan* 'dark or black'. It is also suggested that it might have an Arabic origin in the phrase *al-ḥurr al-thāni* 'the second free person' or 'the second class of free people'. However, none of these claims has strong proof of the origin of the term (Shoup 2011: 115). The origin of *Ḥrāṭīn* as an ethnicity seems to be similar to the situation in other Maghreb countries, such as Morocco, Algeria and Tunisia, with some small differences.

The *Ḥrāṭīn* ethnicity in Mauritania has a more defined identity than in the countries mentioned above. In other words, although this ethnic group is in general a part of the Ḥassāniyya speakers' culture and speech, *Ḥrāṭīn* have their own songs, dances and even names (ibid). The most important difference between the *Ḥrāṭīn* ethnicity in Mauritania and the ethnicity in other Maghrebi countries is the strong impact of slavery. The *Bīẓān* ethnicity's control over the *Ḥrāṭīn* ethnicity seems to be the strongest in the whole Arab world. It is known in *Ḥassāni* communities in Mauritania that during the French colonisation of the country, *Bīẓān* usually refrained from the modern educational opportunities that were available at that time, while they allowed *Ḥrāṭīn* (who were enslaved or freed with loyalty to them) to take part in the 'evil' new education system imposed by the 'colonist'.

The behaviour of the *Bīẓān* ethnic group in sending *Ḥrāṭīn* to be educated in the coloniser's schools was not driven by *Bīẓān* wanting to better the situation of Ḥrāṭīn. Instead, their intention was to expose this ethnic group to the undesirable situation that was imposed by the French authorities during their colonisation of the country. However, after the independence of the country, the *Ḥrāṭīn* ethnicity had better opportunities; therefore, some members of this ethnic group were able to migrate to other more developed areas in the region or even to Europe (ibid). In recent times, some of the *Ḥrāṭīn* group have reached very high positions in the government of Mauritania, such as the Speaker of the Parliament, Masud Belkhair.

It is worth mentioning that the tribal lifestyle has less of an impact on *Ḥrāṭīn* than on the other Shanāqiṭa community social strata in Medina. In their homeland, the typical lifestyle of *Ḥrāṭīn* is marked by full dependence, in all aspects of life on their former masters (the Whites). The new social status in Medina (where any manifestation of slavery is strictly forbidden and there is a relatively higher level of social justice than in their homeland) has

had an important effect on their linguistic norms. Those who belong to the Zenaga (third stratum) and *M'allmīn* (fifth stratum) live as subordinates to the first and second strata; the Zenaga were, originally, Berber, but the ethnic origin of *M'allmīn* is not known. Moreover, the members of these two groups, usually affiliate themselves with the Mauritanian Arab tribes, to which they have loyalty.

It is noteworthy that the community consists of members who hold Saudi citizenship and Mauritanians who live in Saudi Arabia as residents (the latter are a majority group). Only the Saudi citizens who belong to the SC (originally Mauritanian immigrants) were studied, in order to ensure that all participants are able to use urban Hijazi Arabic (henceforth, UHA) and HA fluently; fluent use of both UHA and HA is sometimes unachievable for Mauritanians in this community. Moreover, some community members are not willing to disclose details about their migration history. Therefore, some of them might give incorrect information in order not to contradict the official information on their migration history. This behaviour would result in obtaining inaccurate information about participants, which will be, probably, affecting the language variation analysis.

In other words, fluency in both dialects, i.e. HA and UHA was the main criterion for choosing the research participants, therefore, only Saudi citizens of this community have been chosen, which in general the most reliable indicator of the ability of mastering both dialects. This is because the Saudi nationality is not easy to obtain and the general procurers for any person to gain the nationality is to be a child of a Saudi father or Saudi mother (the latter with some restrictions), who himself/herself obtained the citizenship from his father or by being born in Saudi Arabia and live there until reaching adultness without travelling abroad during this time. Therefore, generally speaking, any Saudi citizen from this immigrant community is expected to master HA as first dialect and UHA as a second. However, this does not necessary mean that there are no non-Saudi citizen members of this community who

can master both dialects. The Saudi citizenship only applied for practical reasons and to avoid some complicated issues, one of which has been indicated above.

1.3 Research Objectives, Questions and Hypotheses

The main objective of the present study is to investigate one of the most frequent and obvious linguistic outcomes of the language contact phenomenon and the phonological changes that are associated with the borrowing process. More precisely, the focus of this research is on lexical borrowing and the phonological processes accompanying it as an outcome of the dialect contact situation in Medina between the SC, who speak Ḥassāniyya Arabic and the urban Hijazi community, the native inhabitants of the city, who speak urban Hijazi Arabic. In other words, the data used to fulfil this objective comprises the borrowed words and phrases from Hijazi Arabic that this immigrant community use in their intra-group conversations.

Furthermore, the present study will draw attention to further research that could be carried out in the three main areas investigated by this study. The present study will investigate three different aspects related to the phenomenon of language contact, which have not received adequate attention in Arabic studies in general. The first aspect is the study of the linguistic outcomes of the dialect contact with Bedouin immigrants who settle in the urban society, one that significantly differs from their native land as they are from a different country. In other words, the SC in Medina inherited a Bedouin lifestyle from their native country, Mauritania, and their spoken Arabic dialect, Ḥassāniyya, is classified as an Bedouin dialect. On the other hand, the host society, the urban Hijazi community, is believed to be one of the oldest urban communities in the Arabian Peninsula, and they speak an urban Arabic dialect, i.e. urban Hijazi Arabic.

The second aspect this study investigates is cross-dialectal borrowing, which is not a very common area in linguistic studies in general and is very rare in Arabic studies in

particular. Moreover, the third aspect the present study investigates is an uncommon area in sociolinguistic studies: the use of lexical borrowing and the phonological changes associated with it as sociolinguistic variables. In order to achieve the previously mentioned objectives, the present study adopts a quantitative sociolinguistic methodology, aiming to investigate the lexical borrowing by analysing linguistic data for the six phonological variables that are the study variables (cf. Chapters Four, Five and Six). Moreover, these variables represent the most frequent and obvious phonological elements that contrast both dialects.

Based on the stated study objectives and the methodology, adopted to achieve these objectives, the research aims to answer the following questions:

I.   What is Ḥassāniyya Arabic? In addition, what are the linguistic elements that are preserved from MSA and/or CA and which linguistic elements contrast Ḥassāniyya Arabic from these varieties? (Chapter Two).

II. What are the main linguistic features of urban Hijazi Arabic, and what are the most important linguistic features that contrast this variety from Ḥassāniyya Arabic? (Chapter Two).

III. What are the Ḥassāniyya Arabic phonological features that are subject to change when incorporating words or phrases from urban Hijazi Arabic, that differ from Ḥassāniyya Arabic in these phonological elements? (Chapters Five and Six).

IV. How do the phonological processes, associated with the cross-dialectal borrowing situation described above correlate with the non-linguistic factors, i.e. social factors? (Chapters Five and Six)

V.   What are the socio-cultural and socio-psychological factors that facilitate the strong preservation of Ḥassāniyya Arabic spoken by the SC in Medina from any significant changes? (Chapters One and Two).

VI. Are there any noticeable differences between generations (age groups) of the SC members in terms of the accommodation/importation of the urban Hijazi linguistic elements in their daily life intra-group conversations? (Chapters Five and Six).

VII. To what extent does the SC females' use of urban Hijazi borrowings and phonological processes support the general finding of sociolinguistic studies that women are generally more conservative in their speech and that they use more prestigious linguistic elements than males? (Chapters Four, Five and Six).

VIII. To what extent does the critical social situation in Mauritania (the native land of the SC) between *Ḥrāṭīn* (the freed/former slaves; the Blacks) and *Bīẓān* (the Whites; the former masters) have a social and linguistic impact on the SC in Medina? (Chapters One, Four, Five, and Six).

IX. What are the most frequent phonological processes accompanying the Arabic lexical borrowing from foreign languages, or what is known in Arabic studies as *al-taʿrīb* 'Arabisation', and to what extent are there similarities between these and those accompanying Arabic cross-dialectal borrowing situations? (Chapters Three, Five, and Six).

X. How does the use of borrowings from urban Hijazi Arabic, reflect the social status of the immigrant community of the Shanāqiṭa in Medina? (Chapters One, Five, and Six).

The researcher's pre-existing knowledge of the variety spoken by this community, as a native speaker, and one of its members, facilitated the proposing of a set of hypotheses, that the analysis of which the present study is intending to examine. It is hypothesised, that there are certain linguistic features in Ḥassāniyya Arabic that are more susceptible to change, adaptation and levelling, following lexical borrowing from urban Hijazi Arabic, or, probably, from any other Arabic variety. These linguistic features are not considered as essential elements of this dialect's phonological system.

Moreover, based on the general finding concerning the speech variation between males and females, it is hypothesised that the female speakers in the speech community under investigation will use a large number of urban Hijazi Arabic lexical borrowings and will show higher tendency than male participants to articulate these lexical borrowings with urban Hijazi Arabic phonological features. This is based on the fact that urban Hijazi Arabic is the prestigious variety spoken by the community in inter-group conversations; therefore, female speakers are expected to have a higher tendency to use more prestigious linguistic features than male speakers.

In addition, the young generation of the immigrant community is subject to retaining more of their cultural norms, and Ḥassāniyya Arabic linguistic properties, than the older generation in the community. This hypothesis is based on different cultural and socio-psychological factors, that have a significant impact on the social life of the community in Medina. Regarding the internal social considerations, as explained above, the present study classifies the community members into two main social groups, i.e. *Ḥrāṭīn* and *Bīẓān*. It is hypothesised, that the serious social problems between these two groups as a result of the previous and the ongoing (lesser) practice of slavery in the native country of the community (Mauritania) is having a similar impact (with lesser outcomes) on the social life of the community in Medina. Therefore, the *Ḥrāṭīn* ethnic group is trying to socially detach from their former masters (*Bīẓān)* in order to change their inherited social situation. As a result, it is hypothesised that *Ḥrāṭīn* will be more attached to the indigenous Hijazi community, in terms of their culture and linguistic performance, than is the case for *Bīẓān.*

Finally, the immigrant community members' attendance at the host community's official schools and other official educational institutions is an important factor in the integration of this immigrant community, especially the young members, into the host community. In the case of the Ḥassāniyya-speaking 'community', however, attendance at

official Saudi educational institutions is not expected to have a strong linguistic, or even social, impact on the community members. This is due to the strong impact of social community-internal factors, such as the strong bonds between the society members in the city and between them and their relatives in their native country (Mauritania), whose emigration to the city is increasing rather than decreasing. It is hypothesised that these social factors and others are underlying or significantly reducing the linguistic and social outcomes that result from SC members' attendance at official schools and universities in Medina.

1.4 The Structure of the Thesis

The thesis is divided into seven chapters. The present chapter (Chapter One) provides an overview of the Holy City of Medina and its demographic components. In addition, it defines the speech community under investigation, which includes their presence in the city and their social life. In this chapter, moreover, the research objectives, enquiries, and hypotheses are introduced, and it presents the organisation of the thesis. In Chapter Two, a general linguistic description of Ḥassāniyya and Hijazi Arabic, which includes three linguistic levels (phonological, morphological and lexical), will be provided. It also addresses some linguistic variables in Ḥassāniyya Arabic, which have a different realisation, within the speech community under investigation, from the linguistic usage in their native country (Mauritania).

Chapter Three reviews the phenomenon of lexical borrowing, and focuses on highlighting this phenomenon in Arabic. Moreover, special attention is given to what is known in Arabic studies as *al-Muʿarrab*, both in terms of traditional and modern approaches, especially with regard to the phonological and morphological aspects related to it. This chapter also sheds light on other linguistic phenomena in relation to lexical borrowing, i.e. code-switching and diglossia. In addition, different types of lexical borrowings, and the classification of lexical borrowings, were reviewed in this chapter. Chapter Four aims to

address in detail the research methodology. The main focus of this chapter is to explicitly define the statistical method adopted in the present study, in addition to the method used to select the study informants. The chapter will also provide information on how the informants' speech was sampled. In addition, this chapter gives a brief description of the study participants, including biographical information and some linguistic issues related to each individual participant. The independent variables (social) of this study are defined in this chapter, in addition to a brief introduction to the dependent variables (linguistic).

Chapters Five and Six provide the data analysis and discussion. They both consist of two main sections. The first section defines the phonological variables and describes them phonologically. In the second, these linguistic variables are statistically analysed and correlated with the social variables. The results of this statistical analysis are also discussed. In Chapter Five, in addition to the main sections, a summary of the general distribution of lexical borrowings, according to individual participant and word category, is provided. Chapter Five presents the data analysis and discussion of the consonantal variable results, while Chapter Six is allocated to the vocalic variable results. Chapter Seven concludes the research, presenting the main findings and stating the contribution of the research to the field of study. In addition, recommendations for future research related to the area of the present study are put forward.

Chapter Two

Introduction to Ḥassāniyya and Urban Hijazi Arabic

2.1 Overview

This chapter aims to provide an overview of the main features of the two Arabic dialects, that came into contact with in Medina, in the last century. Most of the attention in this chapter will be devoted to a general description of the linguistic elements of these two dialects, in order to prepare the ground for the linguistic analysis chapters, i.e. Chapters Five and Six. It is divided into two main sections. In section 2.2, a general linguistic description of HA (the Arabic variety spoken by the SC) will be given in detail. This general description mainly includes phonological, morphological and lexical elements of the dialect. The original linguistic elements of the dialect that are declining in use, or are not found any more in the speech community, will be highlighted during the description of the original linguistic features. In section 2.3, the phonological, morphological and lexical features of urban Hijazi Arabic will be highlighted.

2.2 Ḥassāniyya Arabic

In this section, a general linguistic description will highlight the most important linguistic components of HA. It concerns the variety of HA spoken in Mauritania, which generally includes that spoken by the SC who emigrated from Mauritania and settled in Medina, as highlighted above (section 1.2), with a few exceptions indicated in the results chapters. Furthermore, there will be a focus on certain linguistic issues relating to the variety spoken by the SC which have arisen in their new homeland of Medina.

Ḥassāniyya Arabic is one of the main Arabic dialects spoken in Northern Africa belonging to the so-called Maghrebi dialects (sometimes termed as Maghrebine Arabic). This group of dialects includes, in addition to Ḥassāniyya, the Arabic spoken in Morocco, Algeria, Tunisia, and Libya. From a historical point of view, Maghrebi dialects can be classified into two groups: pre-Hilālian and Hilālian dialects. According to Versteegh (1997: 96, 164), after the Arab conquest of North Africa, Arabicisation took place in two stages. The first stage started in the second half of the seventh century, when a relatively small number of Arab fighters settled in the urban areas in the region. Consequently, new urban Arabic varieties spread in these urban areas. In this pre-Hilālian stage of Arabicisation, Arabic did not reach the countryside and nomadic areas, which remained Berber-speaking at this time. Some Jewish Arabic dialects spoken in the region, such as in Tunis and Algiers, are attributed to this stage of Arabicisation. The main descriptive feature of these dialects is that they are sedentary dialects.

The second stage of Arabicisation widened the Arabic-speaking areas to include the Berber-speaking areas after the invasion of big Arab tribes in the eleventh century, namely Banū Hilāl and Banū Sulaym (which originally came from Syria and North Arabia). They were joined later by another Bedouin Arabic tribe which came from South Arabia: Maʿqil (also known as Banū Maʿqil). The Arabic dialects belonging to this stage of Arabicisation are called Hilālian dialects; they are Bedouin dialects, of which the dialect under investigation (Ḥassāniyya) is ascribed to. The name of this variety of Arabic is linked to an Arab tribe (Banū Ḥassān), one of the Maʿqil tribes which immigrated to Bilād Shinqīṭ (Mauritania) during the seventeenth century (Al-Naḥwi 1987: 32).

Versteegh (ibid: 165f) argues that although it is a fact that there is linguistic diversity between the Arabic dialects spoken in the region, these dialects can be classified as existing in one dialect area. This is because these dialects share common linguistic features which

distinguish the dialects from the other Arabic dialect regions. The common linguistic features shared by these dialects are attested at different linguistic levels, e.g. phonological, morphological, and lexical. For instance, the schwa sound /ə/ is very common as a realisation of the vowels /a/, /i/ and /u/, and simplifies the vowel system of these dialects.

Moreover, one morphological feature that is very common in the region can be found in the verb system, in which the /n-/ prefix is a marker of the 1st person masc. in the imperfect tense. Although these dialects share many lexical properties that are preserved or borrowed from Standard Arabic, the Berber lexical influence on these Arabic dialects is noticeable. This influence might extend to the phonological system, such as in the case of Moroccan Arabic (cf. Versteegh 1997: 164ff; Boucherit 2006; Taine-Cheikh 2007a; Pereira 2008; Gibson 2009). These and other linguistic features are investigated below with reference to HA linguistic features.

This variety of Arabic is commonly known, at least in its vast geographical area, as *klām el-Bīẓān* (the speech of the Whites) to be distinguished from the dialects spoken by Black Africans in Mauritania and the Berber dialects in Southern Morocco (Almakari 2011). HA is widely spoken in large areas of North Africa, which for this reason renders it difficult to define. Taine-Cheikh (2007a) estimates that the borders of this variety could extend from Goulimime (Morocco) in the north, to Tindouf (Algeria) in the northeast, Timbuktu (Mali) in the southeast, and the Senegal River in the south (see Map 2.1). The biggest HA area is Mauritania, where it is usually referred to as Mauritanian Arabic.[14]

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[14] See Al-Any (1968).

Map 2.1 Map of Mauritania showing the approximate areas where HA is spoken
Source: http://www.greece-map.net/africa/mauritania-map.htm

The approximate number of speakers of this variety is 3,278,190 (in 2006) according to the ethnologue.com website, with about 2,770,000 speakers in Mauritania and the remainder distributed over different areas.[15] This estimate does not take into account the number of HA speakers in Hijaz (Saudi Arabia) which, as mentioned above, is calculated at less than 30,000 speakers, the vast majority of whom are in Medina.[16]

There are relatively few comparative studies of HA focusing, on the wide area inhabited by its speakers. It seems that this Arabic dialect has attracted few Western linguists to study, during the 20th century (the studies which have focused on HA are mostly written in French). The most likely reason for this is that the area where this variety is spoken is mostly barren desert, and so is not very accessible for researchers. The most important and comprehensive study of HA was published in 1963 by David Cohen[17], and can be regarded as the principal study, as it provides better scope for studying HA, which was previously almost unknown in Arabic dialectology. Although this study deals with a specific area in Mauritania

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[15] See http://www.ethnologue.com/language/mey (access date: 24-01-2015).
[16] See Al-Idrīsi (2009).
[17] *Le Dialecte Arabe Ḥassānīya de Mauritanie (parler de la Gəbla).*

(Al-Gebla),[18] it describes in detail the variety spoken in Mauritania generally and in Western Sahara.[19]

The major author of HA literature is Catherine Taine-Cheikh, who based her PhD (1978) on a morphosyntactic study of Middle Arabic spoken in Mauritania. Subsequently, she published many articles in HA,[20] the most important of which being the HA-French dictionary, which includes a general linguistic description of HA.[21] Recently, Ahmed Almakari published his PhD (2011), which includes a study of HA spoken in Western Sahara, specifically, highlighting diminutives in the dialect, in addition to providing a French dictionary of HA.

2.2.1 The phonology of Ḥassāniyya Arabic

2.2.1.1 Consonants

Table 2.1 presents an inventory of HA consonants in modern HA, specifically the variety spoken by the SC in Medina.

Table 2.1: HA phonemic and allophonic consonants [22]

	Bilabial	Labio-dental	Dental	Dento-alveolar	Post-alveolar	Palatal	Velar	Labial-velar	Uvular	Pharyngeal	Glottal
Plosive	b bˤ		t d tˤ dˤ				k g		q		ʔ
Nasal	m mˤ			n							
Trill				r rˤ							
Fricative		f v	θ ð	s z	ʃ ʒ				x ɣ	ħ ʕ	h

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[18] Southwestern Mauritania.

[19] See Taine-Cheikh (2007a).

[20] See HA bibliography published by Catherine Taine-Cheikh (2010).

[21] See Taine-Cheikh (1988a).

[22] Five consonants mentioned in the main French sources of HA, i.e. Cohen (1963) and Taine-Cheikh (1988a, 2007a), have been disregarded in this table, namely /vˤ/, /nˤ/. /dʲ/, /tʲ/ and /nʲ/, since they do not exist in current spoken HA, specifically in the variety spoken by the SC in Medina. It is more likely that these consonants were spoken in traditional Ḥassāniyya, and as Versteegh (2001: 167) states, three of these consonants (/dʲ/, /tʲ/, /nʲ/) are found in "a small number of words, most of them of Berber origin".

			ðˤ	sˤ zˤ						
Approximant						j		w		
Lateral				l lˤ						

From Table 2.1 it can be clearly seen that HA includes all of the Classical Arabic *fuṣḥā* consonants, either as phonemes or as allophones. For instance, HA preserves the CA interdentals, which are only preserved in HA and some Bedouin dialects in the region, such as the dialect of Zʼīr (Aguadé 2008: 290) in the south of Rabat, which has very strong Saharan features (cf. Heath 2002: 26). It is worth noting that the preservation of the Classical Arabic interdentals, is one of main differences between HA and UHA, as will be highlighted, below, in the UHA section.

However, HA has certain non-Classical linguistic properties, as is clearly shown in Table 2.1. Some of these properties are shared between HA and other Arabic dialects. For instance, /ɣ/ varies among Ḥassāniyya speakers. It becomes /q/ in some Mauritanian speech areas, including the central, eastern, and northeastern parts of the country, as well as in Mali and Algeria (Taine-Cheikh 2007a). For example, /luɣa/ 'language', /ɣabrˤa/ 'dust', /t-ɣaddej-t/ 'I dined', and /ʃətɣal/ 'he worked' are pronounced /luqa/, /qabrˤa/, /t-qaddej-t/ and /ʃətqal/, respectively (Al-Any 1969). This linguistic feature is found in some East and West Bedouin dialects in the Arab world (Cohen 1963: 35f; Rosenhouse 1984: 10). For instance, this realisation occurs in different Arabic dialects in the Arabian Penusula, such as in the Gulf Arabic dialects[23] (cf. Holes 1987: 36, 1990: 263f; Prochazka 1988: 17, 23; Al-Sulaiti 1993: 7). Moreover, it is also attested in a few South Yemani dialects spoken near the Yemani and Saudi border (Watson 2007: 18).

On the other hand, it is, similarly to CA, realised as the uvular fricative /ɣ/ in western (including northern and southern) areas of Mauritania (Taine-Cheikh 2007a). It is worth

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[23] This Arabic-speaking area, according to Holes (1990: xi), extends from the southern of Iraq (Basra) down to the Gulf States: Kuwait, Bahrain, the United Arab Emirates, Qatar, Bahrain and the eastern part of Saudi Arabia (Al-Ḥasa).

mentioning that when /ɣ/ is geminated as /ɣɣ/, all Ḥassāniyya speakers without exception pronounce it as double /q/ (Taine-Cheikh 2007a; Al-Any 1969). An example is /ʃaqqal/ 'he employed (someone)', from the Classical Arabic /ʃaɣɣal/.

It is noticable from Table 2.1 that HA includes a phonological phenomenon, which is worthy of mention: the pharyngealisation of some consonants. For instance, the pharyngealisation of the following two consonants, which is not attested in Standard Arabic:

- The bilabial plosive /b/ → /bˤ/, e.g. /bˤaːtˤ/, 'armpit', /bˤatˤtˤ/ 'to hit', /bˤaːsi/ 'kind of traditional food'.

- The bilabial nasal /m/ → /mˤ/, e.g. /amˤmˤaːlu/ 'what happened to him?', /əmˤmˤejha/ 'water', /amˤmˤaːt-i/ 'my mothers''.[24]

- The dental nasal /n/ → /nˤ/, e.g. /nˤaːsˤəb/ 'he is cooking', /ənˤnˤaːqsˤa/ 'shameful', does not occur in CA or MSA.

The most frequent pharyngealisation process attested in HA relates to the voiced dental fricative /z/ becoming /zˤ/, e.g. /azˤrˤag/ 'mixing colours between white and black',[25] or 'a foolish person', /zˤaːrˤ/ 'he visited',[26] /əzˤrˤaːf/ 'giraffes', and /zˤwa/ 'he hooted'. Moreover, the voiced dental lateral /l/ is frequently pharyngealised to become /lˤ/. This pharyngealisation does not occur in MSA except in one word, /ʔalˤlˤaːh/ 'Allah', and its derivations, but it is commonly attested in Arabic dialects,[27] such as HA, e.g. /lˤgam/ 'he swallowed', /lˤsˤag/ 'to adhere'. This pharyngealisation in HA, in most cases, seems to be a side effect of contiguous emphatic phonemes; otherwise, it is frequent in words of Berber (Zenaga) origin (Ould

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[24] This refers to a woman who breastfeeds an unrelated child; therefore, this woman will be considered as a mother of that child (called a 'breastfeeding mother' in Arab cultures). This is very common in the SC in Medina and in Mauritania in general.
[25] In MSA it refers to the colour blue.
[26] For religious purposes, not normal visits, e.g. visiting graves, or asking religious people for prayers.
[27] See Al-Ani (1970:48).

Mohamed Baba 2004). Table 2.2 below shows all HA emphatic consonants with their plain counterparts.

Table 2.2: Corresponding plain and emphatic consonants (HA)[28]

Plain	S	d	t	ð	l	b	m	z
Emphatic	sˤ	dˤ	tˤ	ðˤ	lˤ	bˤ	mˤ	zˤ

Unlike other Arabic dialects, /f/ is realised as /v/, so this consonant phoneme becomes voiced. This change applies to all Ḥassāniyya speakers, except for those in Mali (Taine-Cheikh 2007a). Cohen (1963: 8f) mentions that, in only four cases, Ḥassāniyya speakers do not pronounce this phoneme as the voiced consonant /v/. These cases are as follows:

- When it is followed by a voiceless consonant, such as in /fsəd/ 'become spoiled', /fta:ra/ 'they are tired' or /fla:n/ used when 'referring to someone (male) known to the listener or mentioned before'.

- When this phoneme is doubled as in /twaffa/ 'he died' or /goffa/ 'long hair'.

- When this phoneme comes at the end of a word, for instance in /ʃa:f/ 'he saw', /sˤejf/ 'summer', /dˤejf/ 'guest' or /wa:gəf/ 'he is standing'.

- When this consonant is preceded by a voiceless consonant, such as in /maləħfa/ 'peplos (for women only)', /n-kfa/ 'turned over' and /t-faggad/ 'he remembered'. Otherwise, this consonant is always voiced, for example, in /na-ʕərv-u/ 'I know him' and /ʃa:vət-ha / 'she saw her' (Al-Any 1969).

A noticeable feature of HA is that, in general, it differentiates between the consonants /ðˤ/ and /dˤ/, a distinction which is not always obvious in other Arabic dialects. In other words, HA speakers produce words such as /dˤa:ʕ/ 'spoiled or damaged', /dˤejf/ 'guest', /qli:ðˤ/

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[28] The last four emphatic phonemes, i.e. /lˤ/, /bˤ/, /mˤ/ and /zˤ/ are not stable and in many cases they have been attested as a side-effect of pharyngealisation or are produced in borrowed words.

'thick', /ðˤaːləm/ 'unjust' and /Ѻðˤam/ 'bone' in the same way as in MSA. However, Al-Any (1969) states that, although this distinction between these two phonemes is clear in HA, it does not reflect the situation in MSA, where /ðˤ/ and /dˤ/ are pairs. In fact, both phonemes are pronounced as /ðˤ/ in the vast majority of speech. Examples are /vaðˤðˤa/ 'money' from the Classical /fidˤdˤa/, 'silver', /ðˤħak/ 'he laughs' from the Classical /dˤaħika/ and /ðˤaww/ 'light' from the Classical /dˤawʔ/. Moreover, the replacement of the voiceless alveolar pharyngealised plosive /dˤ/ with the voiced interdental pharyngealised fricative /ðˤ/, which is attested in many cases in HA, seems to be characteristic of different Arabic dialects that have a Bedouin 'nature'. For instance, it is very common in the Arabic dialects spoken in the Gulf region (Gulf Arabic). Holes (1987: 38) argues that the Arabic dialect spoken in Bahrain − "in common with other 'nomadic' dialects of the area (e.g. Baghdadi)… has a single phoneme /ðˤ/"; therefore, the merger of /dˤ/ and /ðˤ/ is the typical realisation of Arabic dialects spoken in the area (see also Prochazka 1988; Al-Sulaiti 1993; Ingham 1994; Abu-Al-Makarem 2007; Al-Qenaie 2011). Moreover, this merger of the two phonemes into /ðˤ/ is characteristic of other Maghrebi dialects that more or less have a Bedouin 'nature', i.e. Libyan and Tunisian Arabic (cf. Abumdas 1985; Gibson 2009).

It is very rare to hear HA speakers pronounce the phoneme /q/. It is normally realised as /g/, which is a realisation shared by many Arabic varieties in general and by most modern Bedouin dialects in particular (cf. Versteegh 1997: 89; Newman 2002a: 67). For example, /gaːl/, 'he said', /galˤb/, 'heart', /gbejl/, 'before a while', and /bagrˤa/, 'cow' from the Classical /qaːla/, /qalb/, /qubajl/, and /baqarah/, respectively (Al-Any 1969). It is worth mentioning that this phoneme is pronounced in relatively few words, such as /qbarˤ/, 'grave' (MSA: /qabr/), /qurˤʔaːn/ 'Quran', /əl-qijaːma/, 'the day of judgement' and /Ѻqal/ 'mind or intellect' (MSA: /Ѻaql/. In addition, this phoneme becomes /k/ in all vocabulary from the

Classical root /qatala/ 'to kill', which includes the following words in HA: /ktəl/ 'he killed', /kaːtəl/ 'killer', /maktuːl/ 'murdered' and /katla/ 'killing'.

The voiced affricate /dʒ/ in MSA, such as in /dʒaːʔ/, 'he came', /dʒalasa/ 'he sat', /dʒuːʕ/ 'hunger' or /dʒaːmiʕa/ 'university' is realised as a voiced palato-alveolar fricative /ʒ/ in all the Ḥassāniyya-speaking areas (Heath 2004: xii). For instance, Ḥassāniyya speakers pronounce these MSA words as /ʒa/, /ʒləs/, /ʒuːʕ/ and /ʒaːmʔa/, respectively. Further analysis of this phoneme, one of the study variables, is given in Chapter Five.

One of the phonological issues worthy of note in HA is the 'minimal pairs' phenomenon. Its existence in HA is, similar to other Arabic dialects, mainly noticeable in the following phonemes: /r/-/rˤ/, /l/-/lˤ/ /g/-/q/, and /dˤ/-/ðˤ/ but it is hard to find in other phonemes, such as /m/-/mˤ/. Examples are: /daːr/ 'he put' vs. /daːrˤ/ 'he wanted', /walla/ 'he returned' vs. /walˤlˤa/ 'or', /gaːs/ 'he went toward' vs. /qaːs/ 'he stuck/, /dˤall/ 'he erred (in religion) vs. /ðˤall/ 'he spent the day', and /tamaːtaːja/ 'Arabic gum tree' vs. /tamˤaːtaːja / 'a tomato' (Taine-Cheikh 2007a).

Taine-Cheikh (ibid) claims that the Ḥassāniyya inventory might be historically recognised by its tendency to avoid pronouncing the glottal stop /ʔ/, which is usually dropped in HA. This general tendency may be reinforced by the people of Mauritania and many neighbouring countries choosing Warsh Riwaya, characterised by its avoidance of *hamza* in many cases. Cohen (1963) explains in detail the different ways of avoiding its production,[29] for example, by lengthening the preceding word-medial vowel in order to indicate the dropped *hamza*, as in /muːmən/ 'believer', /biːr/ 'well', /rˤaːsˤ/ 'head' and /baːs/ '(something) wrong', from the Classical words /muʔmin/, /biʔr/, /rˤaʔs/ and /baʔs/, respectively. In addition, the final *hamza* is always dropped, so that the long vowel preceding it becomes a short vowel

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[29] See more details about *hamza* in Ḥassāniyya in Cohen (1963: 39-48).

in, for instance, /əs-sma/ 'sky' and /əl-ma/ 'water', from the Classical /as-smaːʔ/ and /al-maːʔ/. The case of *hamza* in HA (especially the case of initial *hamza*) is further investigated in Chapter Five, as this phoneme has been set as one of the study variables.

If we consider the sociolinguistic variables, it can be stated that non-educated HA speakers in certain limited areas of Mauritania[30] articulate the /t/ phoneme differently by pharyngealising it to be realised as /tˤ/. This pharyngealisation seems to be due to the contact between this phoneme and other phonemes such as /rˤ/, as in /tˤrˤaːb/ 'earth or floor' and /ja-tˤrˤak/ 'he abandoned (something)', instead of /trˤaːb/ and /ja-trˤak/, respectively (Cohen 1963; Tine-Cheikh 2007a). This linguistic phenomenon is well known among certain HA speakers, such as *Ḥrāṭīn*, who usually receive little or no education. HA spoken by *Ḥrāṭīn* tends, also, not to differentiate between certain phonemes, such as /θ/ ~ /z/[31], /s/ ~ /sˤ/ and /ʔ/ ~ /ʕ/. This linguistic behaviour (confusing phonemes) seems to be regarded negatively by *Bīẓān*, especially by the *Zwāya*,[32] who are usually considered as the aristocratic class of *Bīẓān* (Taine-Cheikh 2007b). In addition to the above, there is a tendency among the less educated Ḥassāniyya speakers to overlook /dˤ/ in the southwest of Mauritania a (Taine-Cheikh 2007a).

2.2.1.2 Vowels

Generally speaking, Ḥassāniyya does not show significant differences from Classical Arabic in its vowel and diphthong phonemes. This can be clearly seen in the following vowel inventory in Table 2.3 and the diphthong inventory in Table 2.4.

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[30] Such as Boutīlīmit. See Cohen (1963: 16).
[31] This phonemic realisation of /θ/ as /z/ seems unique to this group of HA speakers as "it is not attested for any variety of Arabic that a voiceless interdental goes to a voiced fricative" (D. Newman, Pers. Comm.).
[32] See section 1.2.

Table 2.3: HA phonemic and allophonic vowels

Vowels	
Short	**Long**
a	aː
i	iː
u	uː
ə a realisation of the MSA vowels [i] and [u]	-
-	eː a realisation of the MSA diphthong [aj]
-	oː a realisation of the MSA diphthong [aw]

Ḥassāniyya includes all the MSA vowel phonemes, in addition to an extra short vowel /ə/ (schwa). Heath (2003) states, that in Mauritanian Ḥassāniyya, in particular, the short vowels /a/ and /ə/ are frequent while the other short vowels occur only rarely. He indicates that /u/ is centralised to a schwa /ə/ realisation and does not appear as a phoneme in Mauritanian Ḥassāniyya. For instance, the Classical word /kubb/ 'pour' (imperative) is pronounced as /kəbˤbˤ/.[33] As Cohen (1970) pointed out (cited in Taine-Cheikh 2007a: 241), the combination of /i/ and /u/ is a noticeable linguistic pattern of behaviour in Arabic Bedouin dialects. The centralisation of these vowels to be pronounced as schwa is further investigated in Chapter Six, as this process is one of the areas of focus in this study.

It seems that the duration of the long vowel differs according to its position in a word. For instance, for the long vowel /aː/, the duration can be of average length, such as in /kaːl/ 'he ate', while it becomes a little longer before a suffix, as in /kaːlu/ 'he ate it', or much longer in /kaːl-uː-h/ 'they ate it'. Furthermore, *imāla*[34] is the realisation of this long vowel when it is located at the end of the word, since it is modified into a short vowel, as can be

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[33] The pharyngealisation seems to be a side effect of the preceding schwa sound. This might be supported by that when this schwa sound is unused in the majority of verb derivations, the original unpharyngealised phoneme /b/ is resumed. e.g. /kabb/ 'he poured', /kabbej-t/ 'I poured'.

[34] It is a traditional term whereby "the vowel *a* shifts from its zone of articulation to that of *ẹ* or to that of *e* (or even to that of *i*)" (Fleisch 1971: 1162) in modern phonetics.

seen in /ʒaː-h/ 'he came to him' and /ʒa/ 'he came' (Taine-Cheikh 2007a). In other words, according to Taine-Chiekh (2007a), this vowel /a/ undergoes *imāla* to be realised as /e/ when it is located at the end of a word, which she prefers to transcribe as /ä/ instead of /e/.

Table 2.4: Diphthongs in HA

Diphthongs
ej a realisation of the MSA diphthong [aj]
ow a realisation of the MSA diphthong [aw]
aj
aw
ij
uw

According to Cohen (1963:1 53-54), Ḥassāniyya has four diphthong phonemes, which are /aj/, /aw/, /ij/, and /uw/. The first two diphthongs are not always stable in this form (short vowel); in some cases they are realised as the long vowels /eː/ and /oː/, such as in /jaqeːr/ 'but' and /ʃoːr/ 'towards' (Cohen 1963: 53-54; Taine-Cheikh 2007a). It is worth mentioning that Heath (2004: x) rightly described the current situation of the diphthongs of the HA variety spoken in Mauritania (and this is evident in the one spoken by the SC in Medina) when he stated that the previously mentioned diphthongs merged into two main diphthongs /ej/ and /ow/. Therefore, based on the auditory analysis of the research data, it can be argued that HA has two frequent diphthongs and four infrequent diphthongs. The two frequent diphthongs are /ej/ and /ow/, which are the realisations of the MSA diphthongs /aj/ and /aw/, respectively. The infrequent diphthongs are the Classical diphthongs /aj/ and /aw/ and non-Classical diphthongs /ij/ and /uw/, which all are limited to special cases. Further investigation is made into the diphthongs and diphthongisation in HA in Chapter Six as this is one of the present study's linguistic variables.

2.2.1.3 Syllables and Consonant Clusters

For more than four decades, Arabic syllable structure has been the focus of many wide-ranging studies, for instance, Mitchell (1960); Harrell (1962); Johnstone (1967a); Al-Ani, Salman & May (1973); McCarthy (1979); Owens (1980); Abu-Salim (1982); Keegan (1986); Abu-Mansour (1987); Taine-Cheikh (1988b); Al-Otaibi (1989); Jarrah (1993); Farwaneh (1995); Dell & Elmedlaou (2002), amongst others, have all directed their research efforts to this domain in different Arabic varieties.

The Ḥassāniyya syllabic system is diversified. There are about 16 types of syllables represented in HA, including all MSA possible syllables, i.e. [CV], [CVV], [CVC], [CVVC], and [CVCC]. Cohen (1963: 83) claims that the most frequent syllables are [CVC] and [CVV], such as in /kaːtəb/ [kaː . təb][35] 'writer', which is also confirmed by Taine-Cheikh (2007a). Moreover, Cohen produced a statistical data analysis of the occurrence of all HA syllables. In his statistical data analysis of these syllables, the occurrences of [CVC] and [CVV] were almost the same; they accounted for 1,914 (27.34%) and 1,891 (27%) syllables, respectively.

Ḥassāniyya has different syllables with multi-consonant onsets, which is not allowed in Standard Arabic; however, it shares most of them with other Maghrebi dialects. These syllables, in order of frequency, are [CCVV] (e.g. /klaː-hum/ [klaːhum][36] 'their kidneys', [CCVC] (e.g. /ktəb/ 'to write'), [CCVVC] (e.g. /ktaːb/ 'a book'), [CCVCC] (e.g. /rˤkab-t/ 'I ride'), and [CCV] (e.g. /mrˤa/ 'a woman' (cf. Cohen: 1963: 82ff). Furthermore, HA has a semi-constant consonant cluster (blend) system. Consonant blends are very common in the dialect and are well-regulated by certain phonological rules. Generally speaking, consonant blends "introduce epenthetic vowels after elision of short vowels in an open syllable [in

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[35] [CVV. CVC].
[36] [CCVV. CVC].

multi-syllabic words] /malħafa > /malħfa/[37]... [realised [maləħfa]" (Taine-Cheikh 2007a: 242). However, monosyllabic words may differ somewhat from multi-syllabic ones. In the former type of word, 'metathesis' is attested on a regular basis, for instance, in /kbər/ 'he has grown up' and /tˤfəl/ 'boy'. It is important to indicate that the re-syllabification process in HA is further investigated in Chapter Six as it is one of the study variables.

In Ḥassāniyya, as in other Maghrebi dialects, the stress shifts in words formed according to the traditional verbal form فَعَل /faʕal/, such as in /katab/ 'to write', /dʒalas/ 'to sit down' and /dˤarab/ 'to hit', which are produced in HA as /ktəb/, /ʒləs/, and /dˤrˤab/, respectively. Presumably, the stress in these words is produced through the following process: fáʕal > faʕál > fʕəl (kátab > katáb > ktəb) (Versteegh 2001: 166). It is noticeable that the heavy stress is usually on the third mora (from the end). It may have occurred in the first syllable or in the second; examples are /maʒlas/ 'gathering' or 'social gathering' (first syllable), and /matrˤu:k/ 'abandon' (second syllable) (Taine-Cheikh 2007a).

2.2.2 The Morphology of Ḥassāniyya Arabic

2.2.2.1 Pronouns

Taine-Cheikh (2007a) states that, in HA, gender differentiation is not remarkable in the 1st person pronoun.[38] In this respect, Ḥassāniyya is similar to Classical Arabic and many other Arabic dialects in the 1st person singular; however, in the 1st person plural in personal independent pronouns, the gender is distinguishable, as is shown in Table 2.5:[39]

Table 2.5: Personal pronouns in HA

Person	Gender	Singular	Plural

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[37] As previously explained.
[38] See also Taine-Chiekh (1988a).
[39] See Cohen (1963: 147); Taine-Chiekh (2007). It is important to highlight that adding short vowels at the beginning of certain personal pronouns, geminating some semi-vowels and lengthening some short vowels in the middle of pronouns is dependent on the speaker and the area.

1st	masc.	a:na	(ə)ħna, naħna
	fem.	a:na	(ə)ħna:ti
2nd	masc.	(ə)nta	(ə)ntu:ma
	fem.	(ə)nti (or) (ə)ntijja	(ə)ntu:ma:ti
3rd	masc.	huwwa, hu:wa	hu:ma
	fem.	hijja, hi:ja	hu:ma:ti

HA has suffix pronouns (possessive and object pronouns)[40] which in most cases are similar to those in MSA and many other Arabic varieties. Table 2.6 below illustrates these pronouns.

Table 2.6: Suffix pronouns in HA[41]

Person	Gender	Singular	Plural	Example(s)	Gloss
1st	Object	-ni	-na	/ʃa:v-ni/ /ʃa:v-na/	he saw me / he saw us
	possessive	-i / -ja (after vowel)		/kta:b-i/, /kta:b-na/ /ma:-ja/, /ma:-na/	my book, our book / my water, our water
2nd	masc.	-ak / -k (after vowel)	-kum	/nʕa:lt-ak/ /ʒa:-k/ /ʔawla:d-kum/	your (sing.) shoe / he came to you (sing.) / your (pl.) children
	fem.	-ək / -k (after vowel)		/qalm-ək/ /ʒa:-k/ /qnam-kum/	your (sing.) pen / he came to you (sing.) / your (sing.) sheep
3rd	masc.	-u / -h (after vowel)	-hum	/rˤa:sˤ-u/ /ma:-h/ /ʒa:-hum/	his head / his water / he came to them
	fem.	-ha		/ʕamal-ha/	her job/work

There are 13 suffix pronouns in Ḥassāniyya, relating to object and possessive pronouns, as the above table shows. Some aspects of these pronouns will now be highlighted. The first is

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[40] With the exception of the case of the 1st person singular suffix pronouns, the same pronouns are used for objects and possessives.

[41] See Cohen (1963:150).

that, unlike other Maghrebi dialects, Ḥassāniyya distinguishes gender clearly in the second person singular (Cohen 1963: 151). Moreover, the ability to distinguish gender is not applied in the plural forms of these pronouns as the Bedouin dialects of Arabia do (see, for example, Ingham 1986, 1994, 2009; Holes 1984, 1990; Alessa 2008, only to mention a few). Additionally, after /mən/ 'who?' and /ma:/ 'not', two suffix pronouns are frequently used for the third person singular; /-hu/ (for the masculine) and /-hi/ (for the feminine).

However, Taine-Cheikh (2007a) argues that this pronoun (in its two forms) is a short form of an independent pronoun, which may mean that this pronoun is the short form of the previous third person personal pronoun /huwwa/ and /hijja/. This derivation may have been triggered by the similarity in pronunciation, though it would be more appropriate if it were considered as a clitic pronoun, rather than independent, since it is not produced separately in Ḥassāniyya. Finally, the possessive pronoun /li:l-/ has a special characteristic. It is pronounced in different forms depending on the gender: /li:l-/ (masc. sing.), /li:lt-/ (fem. sing) or /lwa:jl-/ (pl.) and, for the attached pronoun, as /li:l-i/ 'mine' (masc. sing.), /li:lt-i/ 'mine' (fem. sing.) or /lwa:yl-i/ 'mine' (pl.)[42] (Taine-Cheikh 2007a).

The Ḥassāniyya demonstrative pronoun system, comprising three forms, is similar to that of Classical Arabic (cf. Cohen 1967: 159 ff; Taine-Cheikh 2007a). This resemblance is based on its use of the same demonstrative forms (except the plural) with the same prefix and suffix.

    masc. sing. /ða/   fem. sing. /ði/   pl. /ðu/ (this)

These three demonstratives could be considered for neutral use, without referring to anything more than the general meaning of the demonstrative. In emphasising the meaning of demonstratives, the /ha:-/ prefix is attached, and the demonstratives remain neutral.

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[42] It could be used with different affix pronouns: /li:l-u/ (/-ha/, /-hum/ 'his, her, their', /li:lt-u/ (/-ha/, /-hum) …etc.

    masc. sing. /haːða/   fem. sing. /haːði/   pl. /haːðu/ (this, or this one)

The suffix /-k/ is added to indicate distance as follows:

    masc. sing. /ðaːk/   fem. sing. /ðiːk/   pl. /ðuːk/ (that, that one)

It is worthy of mention that HA does not combine the previous prefix and suffix with the demonstratives, as is the general rule in Classical Arabic. This distinguishes HA from some Arabic dialects, such as UHA, which combine them, as in /hadaːk/ (see section 2.3.2.1.). Moreover, the referent of a demonstrative pronoun may occur at the beginning or end of a phrase, examples are: /haːða ktaːbi/ 'this is my book' and /mart-i haːði/ <my wife this>; 'this is my wife', respectively (cf. Cohen 1963: 259ff).

Relative pronouns come in two forms in HA: /(ə)lli/ and /(ə)l/ 'who, that, which, what', without indicating gender or number differences. In both forms, the relative pronoun can be used with or without a preceding vowel, whether it comes at the beginning of the utterance or in the middle, such as in /(ə)lli(or (ə)l)-ʒaː-na maː-hu rˤaːʒəl/ 'the one who came to us is not a man' and /ətˤ-tˤəvla (ə)lli (or (ə)l) ʒaː-t-na jaːməs/ 'the girl who came to us yesterday'. However, more frequently, the preceding vowel is uttered in the first case and dropped in the second (cf. Cohen 1963: 157; Taine-Cheikh 2007a).

The last type of pronoun to be highlighted in this section is the interrogative pronoun (cf. Cohen 1963: 163; Taine-Cheikh 1988a, 2007a). HA interrogative pronouns have similarities to Classical Arabic and to some Bedouin dialects in the Arabian Peninsula. The most common interrogative pronoun in many Arabic dialects is /man/ 'who' (MSA), which varies from dialect to dialect. This interrogative pronoun is articulated in HA as /mən/, followed by a verb, as in /mən ʒaː-k/ 'who came to you?', or by the personal pronoun of the third person, as in /-hu/: /mən-hu/ 'who is it?'.

The second interrogative pronoun, which has several types, is /(ə)ʃ/. This 'original form' of the pronoun, may be preceded by the short vowel /ə/ by some HA speakers, when it comes at the beginning of the utterance, as in, /ʃ gaːs/ or /əʃ gaːs/ 'where did he go?', but not in /ənta ʃ-taʕraf/ 'what do you know?'. The different types of this pronoun have a shared general meaning, which is to signify 'what', but they can deliver more meanings, depending on their position. For instance, the form /aːʃ/ might come alone as a question when the listener wants to clarify something that has been said. This is in addition to it following a preposition, as in /mn-aːʃ/ 'from what?' or /ʕl-aːʃ/ 'for what?'. The last type of this pronoun is /ʃən/, which has two forms. The first one is used at the inception of speech (the beginning of the phrase or sentence), as in /ʃən waːsi/ 'what do I do?'. The other form is /ʃən-hu/[43] 'what is it?', which has the flexibility of being at the beginning or at the end of the sentence, as in /ʃən-hu ħaːl muħammad/, or /muħammad ħaːl-u ʃən-hu/ 'what is the situation of Muhammad?'. It is worth noting that different forms of this interrogative pronoun are very common in North African dialects. For instance, in Tunisian Arabic (cf. Gibson 2009: 566), it is produced as /aːʃ/ (the same as in HA), /ʃnuː-wa/: masc. sing. (/ʃən-hu/ in HA), /ʃniː-ja/: fem. sing. (/ʃən-hi/ in HA) and /ʃnuː-ma/: pl. (ʃənhuː-ma/ in HA).

The last interrogative pronoun in HA is /aj/[44], which has almost the same functions as in Classical Arabic, with very similar forms as well,[45] except that, unlike Classical Arabic, it does not indicate gender. This interrogative pronoun generally comes at the beginning of speech to enquire about something, but it can also come in the middle or at the end of a sentence. Moreover, it has different forms: it can be followed by a suffix pronoun, for instance, in /aj-kum sallam/ 'which one of you (pl.) saluted?' and /aj-hum ʒa/ 'which one of

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[43] The pronoun is followed by the third person personal pronoun.

[44] Some HA speakers geminate the semi-vowel in this interrogative pronoun, to be realised as /ajj/, which requires Standard diphthong /aj/ to be used, instead of the HA variant of this diphthong /ej/. See section 2.2.1.2 above and Chapter Six

[45] See Sībawayh (1988: 2/389-411).

them came?' (the position of /aj-kum/ in both examples could be reversed), and /(ə)ntu:ma [you-masc. pl.] aj-kum sallam/. It can also be used alone, without any affix or suffix, as in /aj lə-ktu:b/? 'which one of the books?' but, in this case, it can only come at the beginning of the utterance.

2.2.2.2 Adverbs

Some adverbs in HA are similar to those in other Maghrebi dialects, such as Moroccan Arabic, and some are very close to those in Classical Arabic, with minor differences in pronunciation (see, for example, Heath (2002: 452-453). The most popular adverbs can be divided into four categories: time adverbs, interrogative adverbs, quantity adverbs and place adverbs. For the time adverbs, /ðˤarˤk/ 'now' has several forms: /ðˤarˤka:ti/, /ðˤarˤka:təja/[46], /ðˤarˤka:təja:ha/ and /ðˤrˤejk/.[47] The other time adverbs are /ja:məs/ 'yesterday', /l-ju:m/[48] 'today', /əsˤ-sˤəbħ/ 'tomorrow', /əl-ba:rəħ/ 'last night', and /əl-lejla/ 'tonight' (Taine-Cheikh, 1988a, 2007a). There is one time adverb that is found only in HA. This is /əd-daħmi:s/ or /əd-dħejmi:s/,[49] which means the time period between Aṣr and Maghrib prayers.

The interrogative adverbs in HA are somewhat similar to their counterparts in MSA, but certain examples have fewer phonemes, some have phonemes in different positions, and some have added phonemes. Examples are /ejnta/ 'when?' (MSA: /mata:/), /kamm/ 'how much, or how many?' (MSA: /kam/), /mnejn / 'where?' (MSA: /minʔajn/), /əʕl-a:ʃ/ 'why?', /ʃ-ki:v/ and /ki:v-a:ʃ/ 'how?' (MSA: /kajfa/. The quantity adverbs are similar to those in Maghrebi dialects in form and meaning, and some of them might be comparable to those used in Bedouin dialects in the Arabian Peninsula. HA quantity adverbs include /ħatta/ 'very',

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[46] The semi-vowel in this adverb and in the following one is geminated by some HA speakers, therefore, these two examples are pronounced as /ðˤarˤka:tijja/ and /ðˤarˤka:tijja:ha/, respectively, which has resulted in the pronunciation of the infrequent HA diphthong /ij/. See section 2.2.1.2 and Chapter Six.

[47] The latter form has greater stress over a shorter time duration than the previous forms.

[48] Taine-Cheikh (2007a) transliterates this adverb as /l-yäwm/, which is similar to the one in Classical Arabic, but this cannot be validated in the current spoken Ḥassāniyya in Mauritania.

[49] This adverb is the diminutive form of the previous one, which denotes a shorter period of time, than does the previous one.

/jaːsər/ 'a lot' and /ʃwej/ 'few, or little' (cf. Taine-Cheikh 1988a; Ould Mohamed Baba 2001). It is noticeable that in some situations the adverb /ħatta/ may appear with two other adverbs to indicate a kind of exaggeration, as in /jaːsər ħatta/ and /ʃwej ħatta/. It is worth noting that only adverbs denoting a similar meaning to those in MSA, e.g. /l-juːm/ 'today', /əl-baːrəħ/ 'last night', /əsˤ-sˤəbħ/ 'tomorrow' (mainly time adverbs) are easy to identify as adverbs; however, in most cases there are no specific categorical characteristics which identify them as adverbs in the dialect.

There are two forms of place adverbs: non-derived (the original form) and derivative. The first group includes /huːn/ 'here', /vamm/ 'there', /hak/ 'over there', and /ilaːh/ 'toward there'. Except for the last one, these adverbs might sometimes be attached to the suffixes /-aːti/, /-aːtəja/ and /-aːtəjaːha/, as in /huːn-aːti/, /huːnaːtəja/ and /huːn-aːtəjaːha/[50]. The second type of place adverbs are derived from prepositions and these include /l-gəddaːm/ 'in front of', /ət-taħt/ 'under' and /əl-vowg/ 'above'. Some of these adverbs are transliterated differently in some French Ḥassāniyya resources (cf. (Taine-Cheikh 1988a); however, the transliteration above is according to the HA spoken by the SC in Medina.

2.2.2.3 Articles and Particles

HA is similar to Classical Arabic and many other Arabic dialects in having the definite article /al-/ 'the', but it is pronounced as /əl-/. The same assimilation of /l/ in this article that occurs in Classical Arabic before the fourteen Arabic 'sun letters' also occurs in HA, in addition to /ʒ/. Examples are /əʃ-ʃejn/ 'the ugliness', /əθ-θaːni/ 'the other/second', and /əʒ-ʒdiːd/ 'the new (one)' (Taine-Cheikh 2007a). This similarity to Classical Arabic is a general characteristic of HA. However, there are cases where the vowel in this article is dropped without being preceded by any consonant or vowel as in Classical Arabic, such as in /l-waːldejn ʒaːw/ 'the

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[50] The gemination of the semi-vowel, also occurs in the speech of some HA speakers, consequently, the infrequent HA diphthong /ij/ is pronounced. See section 2.2.1.2 and Chapter Six.

parents came' and /ʕaːg(ə)b l-maqreb/ 'after the Maghrib (prayer)' (Cohen 1963: 155-156). Like Standard Arabic, HA has no indefinite article, and does not allocate a specific particle for the genitive (Taine-Cheikh 2007a).

The most important types of particles in HA are: negations, prepositions, and conjunctions (cf. Cohen 1963: 232ff; Taine-Cheikh 1988a, 2007a; Ould Mohamed Baba 2001). For negations, there are two forms of negation in HA: /maː/ and /laː/. These two forms can be found in verbal and nominal sentences. The form /maː/ is associated with an assertive sentence, for instance, /maː ʒa/ '(he) did not come'. In a nominal sentence, this negative phoneme is connected to a suffix pronoun, as in /maː-hu/, /maːn-ak/… etc. The second form precedes the verb in an imperative sentence, as in /laː t-ʒi/ 'do not come'.

The main characteristic of prepositions in HA is that they are used as a supplement to the verbal denotation and come in different forms, meanings and functions. They are supplemented by suffixes, which can be nominal or pronominal.[51] They can be classified into two groups: the first group are those that have only a fixed form, regardless of the suffix, whether it is nominal or pronominal. This type includes /ʃoːr/ 'toward', /gəddaːm/ 'in front of', /urʕa/ 'behind', /saːbəg/ 'before', /voːg/ 'above', and /taħt/ 'under'. The other type of preposition has two types, depending on the suffix. There are three prepositions with two types: /b/ /biː-/: /b-ʕəlm-u/ 'by his knowledge'; /biː-h/ 'by him/it'; /v/ /viː-/: /v-əl-maktab/ 'in the office'; /viː-ha/ 'in her/it';[52] and /(ə)ʕla/ /(ə)ʕliː-/: /(ə)ʕla kətf-u/ 'on his shoulder', /(ə)ʕliː-h/ 'on him (it).'[53] Two prepositions, /mən/ 'from' and /ʕan/,[54] have the specific ending

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[51] Mainly personal, demonstrative, definite pronouns.

[52] In general, when these three prepositions are suffixed with nouns, no vowel is inserted, while when they are suffixed with personal pronouns, the long vowel /iː/ is inserted. The short form of this vowel is attached when they are suffixed with the 1st pers. sing. pronoun: /bi-ja/ 'by me', /vi-ja/ 'in me'.

[53] The second form of this pronoun is similar to the first two prepositions, when it is suffixed with pronouns. Therefore, the vowel is shortened when the suffixed pronoun is in the 1st pers. sing.: /(ə)ʕli-ja/ 'on me' and, also, the insertion of the vowel /ə/ is optional, when the prepositions are uttered initially.

[54] The meaning of this preposition is always included in the meaning of the verb, which differs depending on the context, so the preposition has no specific meaning. This contrasts with the case of other prepositions.

phoneme of /n/. In this case, this phoneme /n/ is doubled, as in /mənn/ and /ʕann/, when the suffix pronoun is included with the initial vowel. Examples are /mən ʒiːhət-hum/ 'from their side', /ʕtˤaː-ni ʃi mənn-u/ 'he gave me some of it', /ʒa ʕan-ha/ 'he left her' and /mʃa ʕann-i/ 'he left me'.

The second type of particle in HA are conjunctions, which can be classified into two types: coordinating and subordinating. Cohen (1963: 221ff) indicates 11 different coordinating conjunctions. The most frequent is /w-/ or /u/ 'and', which is also very common in Classical Arabic (corresponding to /wa-/) and other Arabic dialects. With regard to /w-/ (the first type of this conjunction), this is associated with words initiated by vowels, and /u/ (the other type) usually comes before words introduced by consonants. Respective examples are /l-ma w-ətrˤaːb/ 'the water and soil' and /mrˤa u rˤaːʒəl/ 'a woman and a man'. The most common other types of coordinating conjunctions, in addition to subordinating conjunctions,[55] together with their forms and functions, are shown in Table 2.7 below.

Table 2.7: Coordinating and subordinating conjunctions (HA)

Coordinating Conjunctions	Meaning	Subordinating Conjunctions	Meaning
walˤlˤa /rˤaːʒəl walˤlˤa mrˤa/	or 'a man or woman'	ʕan /ja-ʕraf ʕann-u/ (/ʕan-ha)[56]	that 'he knows that …'
ja-qeːr/ jaɣeːr[57] /jaɣeːr maː ʒa/	but 'but he didn't come	(ja)kaːn /ja-ʕrˤav (ja)kaːn-u hown/	whether 'he knows whether he is here'
allaː /allaː waːħəd/	otherwise, except, only 'only one'	ilaː /ilaː mʃa/	if 'if he left…'
arˤaː[58] /arˤaː-hum ʒaːw/	then, in this case '[the case is that] they came'	bihəlli /bihəlli vham-t/	because '…because I understood)
əsˤsˤa	therefore[59]	ijjaːk, (ə)bbaːʃ	for, to

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[55] See Cohen (1963: 224-28); Taine-Cheikh (1988a, 2007a); Ould Mohamed Baba (2001).

[56] /n/ in this particle is geminated when it is followed by suffix pronouns initiated by vowels, such as /-u/, /-i/, and /-ək/.

[57] It was previously mentioned that switching between /ɣ/ and /q/ occurs in HA.

[58] This conjunction is usually followed by a suffix pronoun, e.g. /arˤaː-hu/ 'in this case'.

/əsˤsˤa ʕaddal-ha/	'…therefore, do it'	/aːna ʒejt ijjaːk/ (ə)bbaːʃ)/	'I came for/to…'
zaːd	also	mnejn	when
/rˤej-t-u zaːd/	'I also met him'	/mnejn əʃowv rˤaːsˤ-u/	'when he sees himself...'

2.2.2.4 Nouns

The noun patterns in HA seem to have many similarities to their counterparts in MSA, although there are differences in the initial and final phonemes[60]. The following paragraphs discuss seven aspects of HA nouns. The first aspect to be discussed in this section is the feminine form in HA. Similar to CA/ MSA, the masculine form is unmarked, but the feminine form is marked by the /-a/ phoneme at the end in HA. However, the feminine ending *tāʾ al-taʾnīth* /-at/ or /-ah/ (when pausing), is not pronounced in HA and many other Arabic dialects (cf. Hachimi 2007: 156). Instead, the preceding vowel phoneme of this *tāʾ* is used to indicate femininity. For instance, /mudarrisa/ 'female teacher' and /tˤəvla/ 'young woman' are produced in MSA as /mudarris-ah/ and /tˤifl-ah /, respectively. Also, much like CA, HA has feminine nouns which do not have feminine ending phonemes; in CA this is called *mu'annath majāzi* 'figurative feminine'. Examples are /daːrˤ/ 'house', /ʔanz/ 'goat', /ʔejn/ 'eye' and /xaːdəm/ 'woman slave' (Ould Mohamed Baba 2001; Taine-Cheikh 2007a).

For the plural forms, generally speaking, in Ḥassāniyya, unlike CA, there are no such defined forms for the broken plural, even though CA linguists have tried to make these forms more systematic by dividing them into different categories. Furthermore, there are many irregular forms in CA.[61]In the case of Ḥassāniyya, similar to CA, it seems that the sounds of the masculine and feminine plural, as well as the dual forms, are more systematic and predictable. The masculine suffix in HA (and CA) is /-iːn/, such as in /mʕaddl-iːn/ 'nice/kind-

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[59] The above meaning is a random meaning. It is usually used to draw attention to a particular word in the sentence (Cohen 1963: 224).

[60] CA does not allow initial consonant clusters, while they are very common in HA, in addition to the fact that the inflection is placed in the last phoneme in the Classical word, while it is lost in HA as in other Arabic dialects.

[61] Such as *ṣiyagh jumūʕ al-kathra wa al-qilla* (plurals of abundance and paucity forms). See Sībawayh 1988: 3/567-631; see also Chapter Three (section 3.3.2.2).

pl.' and /muʒrim-iːn/ 'criminals'. It is worth mentioning that in HA, like in other Arabic dialects, loss of inflection is one main difference between MSA and colloquial Arabic. Therefore, the Classical masculine suffix /-uːn/ for the nominative case is absent in HA, similar to many Arabic dialects. The sound of the feminine form in HA, is the same as in CA, which is /-aːt/, as, for example, in /tˤaːvəl-aːt/ 'girls' and /muːmnaːt/ 'believer females'. The dual form is similar to that in CA, which is based on adding /-ajn/ or /-aːn/, depending on the grammatical analysis of the noun or adjective. The only dual form in HA is obtained by adding the /-ajn/ (realised as /-ejn/) suffix to the noun or adjective, for example, in /ktaːb-ejn/ 'two books' and /daːrˤ-ejn/ 'two houses' (cf. Cohen 1963: 197ff).

A special case related to the feminisation and pluralisation of the Berber origin words (loanwords) in HA is worth highlighting in this section. A feature of HA is that some words have a special linguistic characteristic not observed in other Arabic dialects, or at least not in other Bedouin dialects, the Arabic dialects to which HA belongs. These words are mainly of Berber origin and they have been integrated into HA through borrowing. The Berber-origin words usually attach special affixes in order to specify the gender. The most frequent prefixes are /iː-/ for masculine nouns, and /tiː/ for feminine nouns, and the suffixes /ən-/ for some plural nouns, as shown in the examples below:[62]

/iːggiːw/ 'singer' (sing. masc.) < /tiːggiwiːt/ (sing. fem.) < /iːggaːwən/ (pl.)

/iːʃʃiːr/ 'a child' (sing. masc.) < /tiːʃʃiːrət/ (sing. fem.) < /ʃaːʃra/ (pl.)

Nouns of habit and profession forms are other forms that HA share with CA, usually in the [C1aC2C2āC3] pattern. Examples are /sˤarˤrˤaːg/ 'thief', /kaððaːb/ 'liar' and /naffaːx/ 'blower'. Moreover, in CA, there are two frequent patterns for colour adjectives: [aCCaC], as in /ʔaħmar/ 'red' for masc. and [CaCCāC], as in /ħamraːʔ/ 'red' for fem. (Al-Rājḥi 1984). HA

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[62] See Ould Moḥamed Baba (2004); Taine-Chiekh (2007a).

has similar patterns, except that it drops the last phoneme in the second pattern, which is *hamza*. So the two patterns in HA for colour adjectives are: [aCCaC] for the masculine, as in /axðˤarˤ/ 'green', and [CaCCa] for the feminine, as in /xaðˤrˤa/. [CəCC] is the plural pattern of the previous forms, as in /ħəmrˤ/ and /xəðˤrˤ/ [/ħumr/ and /xudˤr/ in CA] (cf. Ould Mohamed Baba 2001; Taine-Cheikh 2007a).

The comparative form is another aspect of nouns in HA, which is worth discussing. In HA, the comparative form (underived noun) is based on the same pattern as the colour adjectives: [aCCaC] is the sing. masc. form, as in /akbarˤ/ 'bigger than', /ʔsqar/ 'smaller than' and /ʔxðˤarˤ/ 'darker than'. It is noteworthy, that the superlative form in HA does not follow the same rule as in CA, which is obtained by adding the article /al-/ as a prefix to the comparative form, as in /ʔsˤɣar/ 'smaller' and /al-ʔsˤɣar/ 'the smallest'. In HA, it is formed by adding the definite article to the simple adjective, so that /sqi:r/ 'small' and /kbi:r/ 'big' becomes /əs-sqi:r/ 'the smallest'[63] and /l-əkbi:r/ 'the biggest' (Cohen 1963: 212).

One of the interesting and noticeable linguistic phenomena in HA, is the frequent use of the diminutive form, which "is very productive and very differentiated for nouns and adjectives" (Taine-Cheikh 2007a: 244). This linguistic phenomenon is shared by many Bedouin varieties, such as the Bedouin varieties spoken in Hijaz. According to Cohen (1963: 211f), the diminutive in nouns and adjectives in HA occurs in six patterns, as shown in Table 2.8 below.

Table 2.8: Diminutive forms (HA)

	Form	Example	Diminutive	Gloss
1	CCayC	mqas	maqejs	scissors
2	CwayC	rˤa:sˤ	rˤwejsˤ	head
3	CwayCəC	lawlab	lwejləb	screw
4	CCayCəC	kbi:r	kbˤajjər	big

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[63] The assimilation of /-l/ in the definite article, occurs when it is followed by one of the 'sun letters' sounds, which is /s/ in this example. See section 2.2.2.3 above.

| 5 | CCayCCaC | mˤaddal | mˤejddal | kind, nice |
| 6 | CCayCīC | məski:n | msejki:n | poor |

He mentions (ibid: 212) some very frequent bilateral nouns (mainly ending with vowels) whose diminutive form does not relate to the groups shown in Table 2.8 above. For this type of word, the diminutive suffix /j/ is geminated. In addition, the vowels in the original forms are omitted when using the diminuitive forms. Thus, /bu/ 'father', /xu/ 'brother/ and /ʃi/ 'thing' become /bajj/, /xajj/ and /ʃwajj/, respectively.

2.2.2.5 Numerals

The numeral systems of HA seem to share many properties with MSA, especially at the phonological and syntactic levels (cf. Cohen 1963: 167ff; Taine-Chiekh 1988a, 2007a). The two main types of numerals (cardinals and ordinals) are clearly represented in HA. The HA numeral system can be divided into six groups, as shown in Tables 2.9-2.13 below.

Group one: 1 and 2

Table 2.9: Numbers 1 and 2 (HA)

Number	Cardinal form		Ordinal form	
	Absolute state	**Construct state**	**Masculine form**	**Feminine form**
1	wa:ħəd (masc.) waħda (fem.)	-	l-awwal	l-awwla
2	(a)θnejn (masc.) θəntejn (fem.)	-	(ə)θ-θa:ni	(ə)θ-θa:nja

Thus, these two numeral forms clearly distinguish the gender in both cardinals and ordinals. In addition, the absence of a construct state for cardinals should be noted, which is also absent in MSA.

Group two: 3-10

Table 2.10: Numbers 3 to 10 (HA)

Number	Cardinal form	Ordinal form

	Absolute state	Construct state	Masculine form	Feminine form
3	aθla:θa	aθlət	(ə)θ-θa:ləθ	(ə)θ-θa:lθa
4	arˁəbˁa	arˁbaˁ	(ə)rˁ-rˁa:bəˁ	(ə)rˁ-rˁa:bˁa
5	xamsa	axməs	(ə)l-xa:məs	(ə)l-xa:msa
6	sətta	sətt	(ə)s-sa:tt	(ə)s-sa:tta
7	sabˁa	asbaˁ	(ə)s-sa:bəˁ	(ə)s-sa:bˁa
8	(a)θmanja	aθmən	(ə)θ-θa:mən	(ə)θ-θa:mna
9	təsˁa	tsaˁ	(ə)t-ta:səˁ	(ə)t-ta:sˁa
10	ˁaʃrˁa	aˁʃarˁ	(ə)l-ˁa:ʃər	(ə)l-ˁa:ʃra

It can be seen from Table 2.10 that gender is indistinguishable in cardinals, while it is discernible in ordinals. Moreover, there is an optional initial short vowel /a/ in some cardinals (absolute state), while all ordinals have a short vowel /ə/ intuitively attached.

Group three: 11 and 12

Table 2.11: Numbers 11 and12 (HA)

Number	Cardinal form		Ordinal form	
	Absolute state	Construct state	Masculine form	Feminine form
11	ahdaˁaʃ	ahdaˁ-ʃarˁ	l-ahdaˁʃ	-
12	aθnaˁʃ	aθnaˁ-ʃarˁ	l-aθnaˁʃ	-

For these two numerals, there is no gender distinction in either cardinals or ordinals. In addition, a suffix (-arˁ) is preceded by both cardinal numbers to indicate the construct state. The definite article /l-/ is added as a prefix phoneme to the ordinal numbers.

Group four: 13 to 19:

The cardinal numbers in this group can be formulated as follows:

– Absolute state = Construct state in group two + /-tˤaʕʃ/ (suffix), e.g. /aθlətˤtˤaʕʃ/ '13', /arˤbaʕtˤaʕʃ/ '14', /axməstˤaʕʃ/ '15'… etc.

– Construct state = Construct state in group two + /-tˤaʕʃarˤ/ (suffix), e.g. /aθlətˤtˤaʕʃarˤ/ '13', /arˤbaʕtˤaʕʃar/ '14', /axməstˤaʕʃarˤ/ '15'... etc.

The ordinal numbers in this group are formulated as follows:

Ordinals = the definite article /l-/+ absolute state in group four, e.g. /l-aθlətˤtˤaʕʃ/ 'the 13th', /l-arˤbaʕtˤaʕʃ/ 'the 14th', /l-axməstˤaʕʃ/ 'the 15th'… etc.

Group five: 20 to 90

Table 2.12: Numbers 20 to 90 (HA)

Number	Cardinal form	Ordinal form
20	ʕəʃri:n	l-ʕəʃri:n
30	(a)θla:θi:n	əθ-θla:θi:n
40	arˤəbʕi:n	l-arˤəbʕi:n
50	xamsi:n	l-xamsi:n
60	sətti:n	əs-sətti:n
70	sabʕi:n	əs-sabʕi:n
80	(a)θmanji:n	əθ-θmanji:n
90	təsʕi:n	ət-təsʕi:n

Table 2.12 shows that these numbers are not declinable; therefore, they do not distinguish between genders. In addition, there is not a large difference between the cardinal and ordinal forms.

Group six: 100, 1,000 and 1,000,000

Table 2.13: Numbers 100, 1,000 and 1,000,000 (HA)

Number	Cardinal form	Ordinal form
100	mijja	l-mijja
1,000	alf	l-alf
1,000,000[64]	malju:n	l-malju:n

This last group does not show any difference between the cardinal and ordinal forms except that the dual form is derived by adding the dual suffix phoneme /-ejn/, as in /mitejn/ '200', /alvejn/ '2,000' and /malju:nejn/ '2,000,000'.

2.2.2.6 Verbs

The HA verb system is generally derivational, like CA. In traditional linguistic analysis, Arabic grammarians argue that Arabic verbs consist of a stem or root of three or more consonants, and other additional elements (vowels and/or consonants). Ibnu Fāris (d. 1004) was one of the early Arabic linguists who referred to the 'Central Meaning of the Root' theory. According to him,[65] every root (mostly triconsonantal roots) has a general meaning which is carried by all its derivations, in addition to the new meaning obtained by the derivation process. There are interesting issues related to verbs in HA that are worth noting. In HA, like other Arabic dialects in North Africa (Maghrebi dialects), the verb affix /na-/ for the form of the imperfect 1st person sing. is considered a shibboleth (cf. Versteegh 1997: 145f; Boucherit 2006; Caubet 2008; Gibson 2009). The vowel quality differs from dialect to dialect, depending on the initial consonant in the verb and vowel systems. For instance, it is centralised to be realised as schwa /ə/ or closed to be pronounced as /i/. The Classical verb /ʔa-ktub/ 'I write' is a good example. This form of the verb is /nə-ktəb/ in HA, Moroccan and Algiers Arabic, while it is /ni-ktib/ in Tunisian Arabic.

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[64] This number is used in current spoken HA, not in the classical form.
[65] See Maqāyīs Al-Lugha, p. 198.

Moreover, the fact that HA has a diminutive verb form, a linguistic phenomenon not permitted in Standard Arabic, should be mentioned. It indicates a bad state accompanying the action, as in /kejtab/, /ja-kejtab/ 'to write by hand badly'.[66] This can be formulated as [C1ayC2aC3] (perfect meaning) and [yaC1ayC2aC3] (imperfect meaning).

2.2.2.6.1 Trilateral verbs

Basic form (first form)

Table 2.14: Trilateral verbs (basic form) (HA)

Examples: /smaʕ/ 'to hear' (/a/ stem), /sbəg/ 'to precede' (/ə/ stem).			
	Perfect	**Imperfect**	**Imperative**
1st pers. sing.	smaʕ-t; sbəg-t	na-smaʕ; nə-sbəg	-
2nd pers. sing. masc.	smaʕ-t; sbəg-t	ta-smaʕ; tə-sbəg	asmaʕ; sbəg
2nd pers. sing. fem.	smaʕ-t-i; sbəg-t-i	ta-səmʕ-i; ta-səbg-i	asəmʕi; səbg-i
3rd pers. sing. masc.	smaʕ; sbəg	ja-smaʕ; jə-sbəg	-
3rd pers. sing. fem.	samʕə-t; səbgə-t	ta-smaʕ; tə-sbəg	-
1st pers. pl.	smaʕ-na; sbəg-na	na-səmʕ-u; na-səbg-u	-
2nd pers. pl.	smaʕ-t-u; sbəg-t-u	ta-səmʕ-u; ta-səbg-u	asəmʕ-u; səbg-u
3rd pers. pl.	samʕ-u; səbg-u	ja-səmʕ-u; ja-səbg-u	-

Table 2.14 shows the most frequent subclasses of tri-radical verbs in HA, which differ only in the stem vowel. There is a third verbal subclass, which is less frequent. This is based on combining the two other verbal sub-classes, as in /gʕad, jə-gʕəd/ 'to sit down' (Taine-Cheikh 1988a).

The other issue with this type of verb is the location of the glides in the tri-radicals. HA, in general, has a similar glide position in the verb to that of Classical Arabic. This group of verbs can be classified, according to the locality of the glide, into three types: initial glide (assimilated root), central glide (hollow root), and end glide (defective root), as shown in the

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[66] Taine-Chiekh (2007) argues that this diminitive form is rare; however, based on observation of HA speakers, especially those who are not highly educated, it can be stated that it is commonly found.

tables below. For instance, /usˤal/ 'to arrive' (from CA: /wasˤala/), /ga:l/ 'to say' (from CA:

/qa:la/) and /tˤɣa/ 'to tyrannise' (from CA: /tˤaɣa:/), respectively.[67]

Table 2.15: Trilateral 1ˢᵗ radical glide (HA)

Examples: /usˤal/ 'to arrive', /ugəf/ 'to get up'			
	Perfect	**Imperfect**	**Imperative**
1ˢᵗ pers. sing.	usˤal-t; ugəf-t	n-owsˤal; n-u:gəf	-
2ⁿᵈ pers. sing. masc.	usˤal-t; ugəf-t	t-owsˤal; t-u:gəf	owsˤal; u:gəf
2ⁿᵈ pers. sing. fem.	usˤalt-i; ugəft-i	t-owsˤli; t-u:gv-i	owsˤl-i; u:gəv-i
3ʳᵈ pers. sing. masc.	usˤal; ugəf	j-owsˤal; j-u:gəf	
3ʳᵈ pers. sing. fem.	wasˤlə-t; wəgvə-t; ugvə-t	t-owsˤal; t-u:gəf	
1ˢᵗ pers. pl.	usˤal-na; ugəf-na	n-owsˤlu; n-u:gv-u	
2ⁿᵈ pers. pl.	usˤal-tu; ugəf-tu	t-owsˤl-u; t-u:gv-u	owsˤl-u; u:gv-u
3ʳᵈ pers. pl.	wasˤl-u; wəgv-u; ugv-u	j-owsˤl-u; j-u:gv-u	

The trilateral 2ⁿᵈ radical glide (found in hollow verbs) tends to follow the CA morphological

derivational process with some phonological differences, as shown in Table 2.16 below.

Table 2.16: Trilateral 2ⁿᵈ radical glide (HA)

Examples: /ga:m/ 'to say', /ba:ʕ/ 'to sell', /xa:f/ 'to fear'.			
	Perfect	**Imperfect**	**Imperative**
1ˢᵗ pers. sing.	gəm-t; bəʕ-t; xəf-t/	n-gu:m; n-bi:ʕ; n-xa:f	
2ⁿᵈ pers. sing. masc.	gəm-t; bəʕ-t; xəf-t	t-gu:m; t-bi:ʕ; t-xa:f	gu:m; bi:ʕ; xa:f
2ⁿᵈ pers. sing. fem.	gəm-t-i; bəʕ-t-i; xəf-t-i	t-gu:m-i; t-bi:ʕ-i; t-xa:f-i	gu:m-i; bi:ʕ-i; xa:f-i
3ʳᵈ pers. sing. masc.	ga:m; ba:ʕ; xa:f	i-gu:m; i-bi:ʕ; i-xa:f	
3ʳᵈ pers. sing. fem.	ga:mə-t ; ba:ʕə-t ; xa:fə-t	t-gu:m; t-bi:ʕ; t-xa:f	
1ˢᵗ pers. pl.	gəm-na; bəʕ-na; xəf-na	n-gu:m-u; n-bi:ʕ-u; n-xa:f-u	
2ⁿᵈ pers. pl.	gəm-tu ; bəʕ-tu ; xəf-tu	t-gu:m-u; t-bi:ʕ-u; txa:f-u	gu:m-u; bi:ʕ-u; xa:f-u
3ʳᵈ pers. pl.	ga:m-u; ba:ʕ-u; xa:f-u	i-gu:m-u; i-bi:ʕ-u; i-xa:f-u	

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[67] See Sībawayh (1988).

Table 2.17: Trilateral 3ʳᵈ radical glide (HA)

Example: /kra/ ' to hire/rent', /lga/ 'to meet'.			
	Perfect	**Imperfect**	**Imperative**
1ˢᵗ pers. sing.	krej-t; lgej-t	nə-kr-i; na-lga	
2ⁿᵈ pers. sing. masc.	krejt; lgej-t	tə-kri; ta-lga	(ə)kri; (a)lga
2ⁿᵈ pers. sing. fem.	krej-ti; lgej-ti	tə-kr-i; ta-lgaː-j	(ə)kr-i; (a)lgaː-j
3ʳᵈ pers. sing. masc.	kra; lga	jə-kr-i; ja-lga	
3ʳᵈ pers. sing. fem.	kraː-t; lgaː-t	tə-kri; ta-lga	
1ˢᵗ pers. pl.	krej-na; lgej-na	nə-kr-u; na-lgaː-w	
2ⁿᵈ pers. pl.	krejt-u; lgejt-u	tə-kr-u; ta-lgaː-w	(ə)kr-u; (a)lgaː-w
3ʳᵈ pers. pl.	kraː-w; lgaː-w	jə-kr-u; ja-lgaː-w	

Table 2.18: Trilateral identical 2ⁿᵈ and 3ʳᵈ radicals (HA)

Example: /batˤtˤ/ 'to hit'[68].			
	Perfect	**Imperfect**	**Imperative**
1ˢᵗ pers. sing.	batˤtˤej-t	n-bətˤtˤ	
2ⁿᵈ pers. sing. masc.	batˤtˤej-t	t-bətˤtˤ	bətˤtˤ
2ⁿᵈ pers. sing. fem.	batˤtˤej-ti	t-bətˤtˤ-i	bətˤtˤ-i
3ʳᵈ pers. sing. masc.	batˤtˤ	i-bətˤtˤ	
3ʳᵈ pers. sing. fem.	batˤtˤə-t	t-bətˤtˤ	
1ˢᵗ pers. pl.	batˤtˤej-na	n-bətˤtˤ-u	
2ⁿᵈ pers. pl.	batˤtˤej-tu	t-bətˤtˤ-u	bətˤtˤ-u
3ʳᵈ pers. pl.	batˤtˤ-u	i-bətˤtˤ-u	

Taine-Chiekh (1988a) indicates that all verbs in this group have a similar thematic vowel alternation, which is /a/ in perfect verbs and /ə/ in imperfect and imperative verbs. However, there are a few exceptions, including /tamm/ 'to continue' (perfect and imperative) and /i-tamm/ (imperfect), as the thematic vowel in all forms is /a/.

Tri-radicals, derived patterns

Ḥassāniyya contains multiple productive derived forms, which can be classified as follows (cf. Cohen 1963: 130; Taine-Chiekh 1983, 1987, 1988a, 2007a):

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[68] Although this is a unique verb in Ḥassāniyya, it is commonly used.

Form II:

This form can be formulated as [C1aC2C2aC3] and is characterised by doubling the 2nd radical and contains two instances of /a/ as thematic vowels as shown in Table 2.19 below. It is the most frequent causative of the form I, e.g. /ktəb/ 'to write', /gbaðˤ/ 'to take' [C1C2ə/aC3=3-radical].

Table 2.19: Form II (HA)

Example: /saggam/ 'to straighten'.			
	Perfect	**Imperfect**	**Imperative**
1st pers. sing.	saggam-t	n-saggam	
2nd pers. sing. masc.	saggam-t	t-saggam	saggam
2nd pers. sing. fem.	saggam-ti	t-saggam-i	saggam-i
3rd pers. sing. masc.	saggam	i-saggam	
3rd pers. sing. fem.	saggmə-t	t-saggam	
1st pers. pl.	saggam-na	n-saggm-u	
2nd pers. pl.	saggam-tu	t-saggm-u	saggm-u
3rd pers. pl.	saggm-u	i-saggm-u	

This form is used when the 2nd and 3rd radicals are geminates, and when the 3rd radical is a glide. Examples are, respectively, /rˤaddad/ 'to repeat' and /maʃʃa/ 'to send or to recite (usually the Quran)'. Both of these verbs follow the same derivation process as the previous one.

Form III

This form is formulated as [C1āC2əC3], as shown in Table 2.20 below. It is characterised by the lengthening of the vowel preceded by the 1st radical, and the second thematic vowel is regularly /ə/.

Table 2.20: Form III (HA)

Example: /sˤaːtˤərˤ/ 'to arrange in lines/rows'.			
	Perfect	**Imperfect**	**Imperative**
1st pers. sing.	sˤaːtˤərˤ-t	n-sˤaːtˤərˤ	
2nd pers. sing. masc.	sˤaːtˤərˤ-t	t-sˤaːtˤərˤ	sˤaːtˤərˤ
2nd pers. sing. fem.	sˤaːtˤərˤ-ti	t-sˤaːtˤrˤ-i	sˤaːtˤrˤ-i
3rd pers. sing. masc.	sˤaːtˤərˤ	i-sˤaːtˤərˤ	
3rd pers. sing. fem.	sˤaːtˤrˤə-t	t-sˤaːtˤərˤ	
1st pers. pl.	sˤaːtˤərˤ-na	n-sˤaːtˤrˤ-u	

2nd pers. pl.	sˤaːtˤərˤ-tu	t-sˤaːtˤrˤ-u	sˤaːtˤrˤ-u
3rd pers. pl.	sˤaːtˤrˤ-u	i-sˤaːtˤrˤ-u	

The same derivation model can be employed as for the 2nd and 3rd radicals, for example /saːtt/ 'to put (things) in sixes'.

Form IV

This verb form contains the /sa-/ prefix, which is unique to Ḥassāniyya, and is probably the alternative of the CA causative and transformation form (أَفْعَل) /ʔafʕal/, as, for example, in /ʔaskara/ 'to make someone drunk'. This form can be formulated as /saC1C2aC3/ (سَفْعَل) /safʕal/; an example is /saħmarˤ/ 'to turn something red'. Table 2.21 shows the derivation process of this form.

Table 2.21: Form IV (HA)

Example: /saqbal/ 'to cause someone (thing) to face a direction'.			
	Perfect	**Imperfect**	**Imperative**
1st pers. sing.	saqbal-t	n-saqbal	
2nd pers. sing. masc.	saqbal-t	t-saqbal	saqbal
2nd pers. sing. fem.	saqbal-ti	t-saqəbl-i	saqbl-i
3rd pers. sing. masc.	saqbal	i-saqbal	
3rd pers. sing. fem.	saqəblə-t	t-saqbal	
1st pers. pl.	saqbal-na	n-saqəbl-u	
2nd pers. pl.	saqbal-tu	t-saqəbl-u	saqbl-u
3rd pers. pl.	saqbl-u	i-saqbl-u	

Form V

This form is the reflexive form of Form II. It can be formulated as [tC1aC2C2aC3], which differs only in terms of the prefix /t-/ from the active form [C1aC2C2aC3], as in /t-barˤrˤam/ 'he turned' and /t-saggam/ 'he went straight' (see Table 2.22 below). It also has no significant features other than those shown for Form II and the addition of the short vowel /ə/ in the imperfect form, as in /tə-tbarˤrˤam/ and /jə-tbarˤrˤam/. Moreover, in the imperfect form of this

verb the prefix /t-/ is assimilated to /s-/; therefore, it appears with first radical consonant geminates, e.g /nə-s-saggam/ instead of /nə-t-saggam/[69].

Table 2.22: Form V (HA)

Example: /t-saggam/ 'he/it went straighten'.	Perfect	Imperfect	Imperative
1ˢᵗ pers. sing.	t-saggam-t	nə-s-saggam	
2ⁿᵈ pers. sing. masc.	t-saggam-t	tə-s-saggam	t-saggam
2ⁿᵈ pers. sing. fem.	t-saggam-ti	tə-s-saggam-i	t-saggam-i
3ʳᵈ pers. sing. masc.	t-saggam	jə-s-saggam	
3ʳᵈ pers. sing. fem.	t-saggmə-t	tə-s-saggam	
1ˢᵗ pers. pl.	t-saggam-na	nə-s-saggm-u	
2ⁿᵈ pers. pl.	t-saggam-tu	tə-s-saggm-u	t-saggm-u
3ʳᵈ pers. pl.	t-saggm-u	jə-s-saggm-u	

Form VI

This form is also a reflexive form, corresponding to the active Form III [C1āC2əC3]. It is formulated as [tC1āC2əC3], for example, /t-sˤa:tˤərˤ/ '(it is) arranged in lines/rows' (see Table 2.23 below) and /t-ba:ʃər/ 'he rejoices'. When the same derivation procedure is applied to this form, it is similar to the active form, i.e. [C1āC2əC3] /sˤa:tˤərˤ/ and the only difference is the prefix /t-/. In addition, similar to the previous form (Form V), in the imperfect form of the verb, the prefix /t-/ is wildly assimilated to the first radical consonant by HA speakers, e.g. /nə-sˤ-sˤa:tˤrˤ-u/ instead of /nə-t-sˤa:tˤrˤ-u/[70].

Table 2.23: Form VI (HA)

Example: /t-sˤa:tˤərˤ/ 'to arrange in lines/rows'.	Perfect	Imperfect	Imperative
1ˢᵗ pers. sing.	t-sˤa:tˤərˤ-t	nə-sˤ-sˤa:tˤərˤ	
2ⁿᵈ pers. sing. masc.	t-sˤa:tˤərˤ-t	tə-sˤ-sˤa:tˤərˤ	t-sˤa:tˤərˤ
2ⁿᵈ pers. sing. fem.	t-sˤa:tˤərˤ-ti	tə-sˤ-sˤa:tˤrˤ-i	t-sˤa:tˤrˤ-i
3ʳᵈ pers. sing. masc.	t-sˤa:tˤərˤ	jə-sˤ-sˤa:tˤərˤ	
3ʳᵈ pers. sing. fem.	t-sˤa:tˤrˤə-t	tə-sˤ-sˤa:tˤərˤ	
1ˢᵗ pers. pl.	t-sˤa:tˤərˤ-na	nə-sˤ-sˤa:tˤrˤ-u	
2ⁿᵈ pers. pl.	tsˤa:tˤərˤ-tu	tə-sˤt-sˤa:tˤrˤ-u	t-sˤa:tˤrˤ-u
3ʳᵈ pers. pl.	t-sˤa:tˤrˤ-u	jə-sˤ-sˤa:tˤrˤ-u	

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[69] The assimilation of the prefix /t-/ is the most common pronunciation in HA; however, it is also attested in HA, that some speakers do not assimilate it.

[70] It is similar to the case in Footnote 72 above.

Form VII

This form is a passive form of the first form [C1C2ə/aC3] and, as Table 2.24 shows, it is driven by adding the prefix /(ə)n-/ to the first form. This form can be formulated as [(ə)nC1C2ə/aC3].

Table 2.24: Form VII (HA)

Example: /(ə)n-krˤah-t/ 'to be hated'		
	Perfect	**Imperfect**
1ˢᵗ pers. sing.	(ə)n-krˤah-t	nən-krˤah
3ʳᵈ pers. sing. masc.	(ə)n-krˤah	jən-krˤah
3ʳᵈ pers. sing. fem.	(ə)n-karˤhə-t	tən-krˤah
3ʳᵈ pers. pl.	(ə)n-karˤh-u	jən-krˤah-u

It should be noted that this passive form does not include words starting with /ʔ/, /l/, /m/, /n/, /r/ (/rˤ/), or /w/ as the 1ˢᵗ radical; for the passive form, such words follow Form VIII instead.

Form VIII

It is commonly used as a passive form of Form I in the cases where the first radical consonant is /l/, /m/, /n/, /r/, /w/ and /ʔ/, as indicated above. It can be formulated as [(ə)C1tC2ə/aC], e.g. /(ə)ltʕan/ 'to be cursed', /(ə)rtdəm/ 'to be to be buried'. However, it is not common to use this form in the active voice, such as /(ə)ʃtq(ɣ)al[71]/ 'to work'. It is worth noting that the passive meaning of verbs in this form in HA is the same as in Classical Arabic. The only difference between the CA and HA forms is a phonological one as the passive verb /(ə)ltʕan/ is /luʕina/ in CA. The following two tables show both cases in detail.

Table 2.25: Form VIII (1) (HA)

Example: /(ə)ltʕan / 'to be cursed'		
	Perfect	**Imperfect**
1ˢᵗ pers. sing.	(ə)ltʕan-t	n-əltʕan
3ʳᵈ pers. sing. masc.	(ə)ltʕan	j-əltʕan
3ʳᵈ pers. sing. fem.	(ə)ltaʕnə-t	t-əltʕan

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[71] Both /ɣ/ and /q/ could be used in this example, as explained earlier.

3rd pers. pl.	(ə)ltaʕn-u	j-əltaʕn-u

Table 2.26: Form VIII (2) (HA)

Example: /əʃtqal/ 'to work'.			
	Perfect	**Imperfect**	**Imperative**
1st pers. sing.	(ə)ʃtqal-t	n-əʃtqal	
3rd pers. sing. masc.	(ə)ʃtqal	j-əʃtqal	əʃtqal
3rd pers. sing. fem.	(ə)ʃtqalə-t	t-əʃtqal	əʃtaql-i
3rd pers. pl.	(ə)ʃtqal-u	j-əʃtaqal-u	əʃtaql-u

Form IX

This form is formulated by lengthening the vowel preceded by the 1st radical [(ə)C1C2āC3], and it is not frequently used in HA. It is usually used for colour adjectives, such as /(ə)ħma:rˤ/ 'become red', /(ə)sˤfa:rˤ/ 'become yellow', etc. Using this form for other kinds of adjective, such as /(ə)gsˤa:rˤ/ 'become short' and /fsa:q/ 'become a miscreant', is not common.

Form X

This form is formulated as [staC1C2aC3] and it is made up of Form I with the prefix /sta-/. This verbal form is widely used in HA, as well as in CA, and it has a similar meaning in both. The frequency of this form in MSA has encouraged the Academy of the Arabic Language in Cairo to declare that this form should be considered as a basis for analogical formations in Modern Standard Arabic in general (Al-ʿUṣaymi 2003: 630). The most frequent meanings of this form in HA, as in MSA, are to indicate seeking to achieve something or shifting from one condition to another. Examples are /sta-brˤak/ 'to seek a blessing' and /sta-ħmarˤ[72]/ 'to become red'. Table 2.27 below shows the derivation process of this form.

Table 2.27: Form X (HA)

Example: /(ə)sta-brˤak / 'to seek for blessing'		
	Perfect	**Imperfect**
1st pers. sing.	sta-brˤak-t	n-əsta-brˤak
3rd pers. sing. masc.	sta-brˤak-t	t-əsta-brˤak
3rd pers. sing. fem.	sta-brˤak-ti	t-əsta-bərˤk-i

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[72] See Cohen (1963: 136); Taine-Cheikh (1983).

3ʳᵈ pers. pl.	sta-bərˤk-u	t-əsta-bərˤk-u

2.2.2.6.2 Quadri-radicals

There are few quadri-radical verbs, and their derivation process goes in a regular manner. This type of verb has two forms: a basic form, which is formulated as [C1aC2C3aC4], such as /dagdag/ 'to break or damage', and the reflexive meaning of that form, which is configured by adding the prefix /(ə)t-) to the basic form to give [(ə)C1aC2C3aC4], for example, /(ə)t-dagdag/[73] 'to be broken or damaged'. The 1ˢᵗ radical is identical with the 3ʳᵈ radical, and the 2ⁿᵈ is identical with 4ᵗʰ in a few special cases such as /maħmaħ/t-maħmaħ/ 'to splutter' and /baɣ(q)dad/ t-baɣ(q)dad/ 'to rush (someone), respectively. The passive form of quadri-radicals is very stable and productive. It is configured by adding the passive prefix to the verb, that is, /u-/ in the perfect form and /ju (tu)/ in the imperfect form.[74] Table 2.28 below shows examples of perfect and imperfect forms of quadri-radical verbs with a consideration of these forms in the active and passive voice.

Table 2.28: Quadri-radicals (HA)

Example: /garˤmasˤ/ 'to pinch'				
	Perfect		**Imperfect**	
	Active	Passive	Active	Passive
1ˢᵗ pers. sing.	garˤmasˤ-t	u-garˤmasˤ-t	n-garˤmasˤ	nu-garˤmasˤ
3ʳᵈ pers. sing. masc.	garˤmasˤ	u-garˤmasˤ	i-garˤmasˤ	ju-garˤmasˤ
3ʳᵈ pers. sing. fem.	garˤəmsˤə-t	u-garˤəmsˤə-t	t-garˤmasˤ	tu-garˤmasˤ
3ʳᵈ pers. pl.	garˤəmsˤ-u	u-garˤəmsˤ-u	i-garˤəmsˤ-u	ju-garˤəmsˤ-u

2.2.3 Lexicon of Ḥassāniyya Arabic

Ḥassāniyya's close relationship to the origins of the Arabic language are very clear from looking at its linguistic and literary heritage and listening to Ḥassāniyya speakers in their

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[73] Similar to some cases mentioned above, the assimilation of the prefix /t-/ into the following consonant is, also, attested.
[74] See Taine-Cheikh (1983; 2007a).

everyday conversations. Some researchers of Arabic dialects claim that Ḥassāniyya has preserved the legacy of the Arabic language more successfully than most other dialects, and may be foremost in this respect. Despite the lack of inductive scientific proof for this argument, the best known Ḥassāniyya researcher, Catherine Taine-Cheikh (2007a: 249), reached a very important conclusion that "the majority of the lexicon, at least 80% of the lexical items and maybe 90% of the roots (if one only takes into account corresponding to families of names), are still of an Arabic origin".

This very important finding of Taine-Cheikh (2007a), which is supposed to be based on her wider study of Ḥassāniyya in the 1990s, i.e. *Lexique français-hassaniyya: dialecte arabe de Mauritanie*, is supported by some Arabic sources on the dialect. For instance, in his study of poetry in Mauritania, Walad Ebbāh (2003: 15f) concludes that the main characteristic of the dialect is its Classical Arabic origin; it also has two extra sources of vocabulary. The first one concerns religious vocabulary and numerous *Ṣanhājian* (Zenaga) vocabularies, while the latter is mainly applicable to grazing and agricultural life. This study also identified some phonological and morphological 'evidence' of the strong link between this dialect and Classical Arabic. For instance, the preservation of the dual form with the suffix /-ajn/ (realised as /-ejn/ in HA) is similar to that in CA.

Moreover, as mentioned above, in HA, similar to CA, there is no genitive marker, e.g. /ktaːb ərˤ-rˤaːʒəl/ 'the book of the man'. This differs from some Arabic dialects, in which using a genitive marker, e.g. /bitaːʕ/, /mtaːʕ/, /maːl/, is common. In addition, all Classical sounds have been preserved, generally without confusing between the sounds. For instance, the interdental Arabic sounds [θ] and [ð] have been preserved without changes, as these sounds occur in many Arabic dialects. Also, as has been reviewed above, many Classical verb forms have been preserved in HA, which seem to have been lost in many Arabic dialects. Today, many HA words which have a Classical origin are unknown in other Arabic

varieties, or even in MSA. Examples are /tərka/ 'children',[75] /bluːħ/ 'forced self eating or drinking', /mansˁab/ 'the pot',[76] /xərˁsˁ/ 'earring',[77] and so on.[78] Moreover, it could be argued that one of the most important factors in maintaining many classical elements in the Ḥassāniyya lexicon is that in Mauritania, unlike other nomadic areas in the Arab world, there is a particular interest in traditional education, particularly in the Arabic language and Quranic studies.

Although Ḥassāniyya has its own very clear and distinguishing linguistic characteristics, it shares some lexical elements with Maghrebi dialects, especially the Bedouin branches (see section 2.2.3). Examples are /dbaːbiːs/ 'sticks', /ʕlaːʃ/ 'for what' and /gðəf/ 'to vomit' (Versteegh 2001: 167; Taine-Cheikh 2007a). Although characteristically conservative, this has not prevented HA from enriching its lexicon by borrowing a considerable amount of vocabulary from different sources. The main lexical borrowings are from the Berber language (the Zenaga variety), which demonstrates a special characteristic within HA vocabulary, as previously explained.[79] Additionally, the vast majority of Zenaga borrowings are names of things, such as people, places (including geographical terms), plants and animals; consequently, they do not have a major impact on the grammatical structure of the dialect (Taine-Cheikh 2007b: 38). Examples are /avəgraːʃ/ 'young person, teenager', /atiːl/ 'maerua crassifolia' (tree), /azuzaːl/ 'gelding camel' and /nwaːkʃuːtˁ/ 'Nouakchott' (Ould Mohamed Baba 2004, 2005). Interestingly, Taine-Cheikh 2007a states that HA 'works' for the benefit of the Berber language as it seems that HA has maintained many Berber (especially Zenaga) lexemes, and it is, in many cases, the only source of these lexemes.

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[75] From CA /tirakatun/ 'family', originally meaning ostrich eggs. See Ibn Manẓūr (n.d.: 430).
[76] In CA /minsˁab/ is an iron tool upon which the pot is set to remain stabilised. See Ibn Manẓūr (n.d.: 436).
[77] According to Ibn Manẓūr (n.d.: 1134), /al-xurˁsˁu/ or /al-xirsˁu/ is an earring with a single stone.
[78] See Ould Mohamed Baba (2001).
[79] See Ould Mohamed Baba (2004).

As has been well documented, the Berber language has a very clear impact on the Arabic dialects spoken in North Africa, which can be recognised from the huge number of Berber loanwords in these dialects. However, the degree of influence of Berber on these dialects varies significantly. For instance, it seems that the Bedouin-nature dialects are structurally and grammatically less affected than the sedentary ones. If we look at two of the main dialects spoken in this area, Ḥassāniyya and Moroccan Arabic, we can identify how these two dialects are significantly different in this regard. As indicated earlier, although Ḥassāniyya Arabic borrowed numerous Berber (Zenaga variety) words, these borrowings have a marginal influence on the dialect's grammatical and phonological structure. On the other hand, in his study of Berber loanwords in Moroccan Arabic, El Aissati (2006: 294) assumes that the borrowing process "takes place at all levels of language: phonology, morphology, syntax, and lexicon, including levels of semantics and pragmatics". At the phonological level, for example, Berber has many ways of influencing Moroccan Arabic, such as the spirantisation of /b/ and /t/.

Since most of the Hassanophone areas were French colonies, it would not be surprising if French influenced the HA lexicon. This is, especially, the case for the HA spoken by Mauritanians, since Mauritania is the central Hassanophone area.[80]. However, in reality, French has had a very limited impact on HA, especially its classical version. It seems that there are two main reasons for this. Firstly, the nomadic lifestyle of the HA speakers did not provide the kind of stability that allowed people to receive the 'civilisation' coming from the West. The other reason is religious and cultural. HA speakers (in Bilād Shinqīṭ[81] to be precise) historically did not interact with the French colonialists; indeed, they were forbidden for reasons of religion to participate in educational activities provided by the colonial

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[80] See Taine-Cheikh (1998).
[81] Old name of Mauritania, see section 2.2 above.

authority.[82] More recently, young Mauritanians have included French words in their language as a sign of their modernity and this has created a difference between their language and that of the older generations and rural populations (Taine-Cheikh 2007b: 47f). Thus, HA borrowings from French tend to relate to a modern lifestyle, and they are clearly distinguishable from pure HA. Table 2.29 shows some examples of French borrowings in HA.[83]

Table 2.29: Examples of French borrowings in HA

Example	Gloss	French origin
wata	Car	auto
biroːh	office	bureau
butiːg	shop	boutique
tˤaːsˤa	bowl	tasse
tamˤaːta	tomatoes	tomates
caːrˤ	bus	car
culeːrˤ	colour	couleur
waːliːs	suitcase	valise

Accompanying the French influence, the developing Arab media have also brought many words from MSA into current spoken HA. These words are more obvious in religious contexts, such as religious ceremonies, lectures and learning sessions. Examples include /əl-ʒanna/ 'the haven', /əl-ʒihaːd/ 'the jihad' (religious war) and /əl-ʕaðaːb əl-muhiːn/ 'excruciating torment'.[84] Moreover, the rapid growth of the HA lexicon through adapting and including many MSA words appears to be playing an important role in building effective interaction between HA and the linguistic and semantic developments in the rest of the Arab world. For instance, the Mauritanian media use phrases such as /manhaʒijə-t ət-taɣiːr əd-diːmuqrˤaːfi/ 'systematic democratic change', /ərˤ-rˤaʔiːs əl-muntaxab/ 'the elected president', and /madaːrəs l-ummijja/ 'schools of illiteracy'.

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[82] See Al-Naḥwi (1987: 320-370).
[83] See Ould Mohamed Baba (2001).
[84] See Taine-Cheikh (1998).

Although HA is spoken widely in Mauritania, the Western Sahara and some of its bordering areas, the main differences between the HA spoken in various areas is in the lexicon, there being no significant differences at other linguistic levels. For instance, the core differences between the main varieties of spoken HA in Mauritania (HA central area), which are *Ahl Al-Sharg (Ahl al-Ḥawẓ)*, *Ahl Al-Gebla* and *Ahl Ādrār*, are lexical rather than phonological or morphological (Al-Any 1969; Ould Mohamed Baba 2006). Table 2.30 below shows some lexical differences between these varieties.

Table 2.30: Examples of differences between HA varieties [85]

Al-Ḥawẓ	Al-Gebla	Ādrār	Gloss
baːb	vumˤmˤ	daffa	Door
ɣarr/qarr	mrˤatˤ	mrˤatˤ; qaʃʃ	Fool
tˤab	vtər; tmarraθ	vtər	to feel tired, exhausted
məʃɣaːl	sˤaːnəʕ	mʕallam	blacksmith
vðˤaːħa	kəʃva	ħəʃma; kəʃva	shame
marˤrˤ	ðhab	uqəd	got lost

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[85] See Ould Mohamed Baba (2007:195).

2.3 Urban Hijazi Arabic

This section provides a general overview and linguistic description of urban Hijazi Arabic. UHA is spoken in the western region of the present day Kingdom of Saudi Arabia, which includes the two holy cities of Mecca and Medina as well as the cities of Jeddah and Taif. [86] In its various forms, UHA constitutes one of the three major dialect groups in Saudi Arabia, the others being Najdi and Sharqi. It is used by media and in commerce and is, therefore, widely understood. In the past, it was influenced by foreign dialects, but in more recent times it has been influenced by the Najdi dialect due to the political and economic significance of the Saudi capital, Riyadh, which is in the Najd dialect region, in addition to Bedouin Hijazi dialects.

The description 'urban' is meant in this research to distinguish this dialect from other Hijazi Arabic varieties spoken in this area. In the Hijaz region, two Arabic varieties are distinguishable: Bedouin Hijazi Arabic (mainly Ḥarb tribes speaking Arabic) and UHA. One of the ways in which the two dialects can be distinguished is through the use of diphthongs (see section 2.3.1.2 below for UHA). In Bedouin Hijazi Arabic (e.g. the Ḥarb dialect), the diphthong /aj/ and /aw/ frequently alternate with /aː/. This variant can be found in the speech of those who may fairly be presumed to be still unaffected by Standard Arabic. The following names of some tribes in the Hijaz region with classical diphthongs are generally pronounced with monophthongs instead: /dʒihaːna/ 'Juhayna', /mitˤaːr/ 'Muṭayr', and /iʕtaːba/ 'Otayba'. However, the monophthongisation of /aw and /aj/ to be realised as /oː/ and /eː/, respectively, is attested. Moreover, a frequent word like /jawm/ 'day' is usually pronounced /jaːm/ when it is used as a conditional particle, while either diphthong or monophthong pronunciations are attested when it denotes day. This realisation is usually found throughout the Ḥarb dialect,

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[86] See Map 1.2 which shows the main dialect areas.

particularly where speakers may have had contact with others from outside their own dialectal area, and have been exposed to MSA (Il-Hazmy 1975: 69f)[87].

The dialects of Mecca, Jeddah and Medina (UHA) share the same "basic phonological features, and to a lesser extent, morphological features" (Abu-Mansour 2008). UHA, however, differs in some important respects from other Hijazi Arabic dialects, namely Bedouin Hijazi Arabic, as shown in a study by Ingham (1971) on Meccan Arabic. In morphology and phonology, it is closer to Egyptian-Levantine Arabic, but its syntax and lexis are very much the same as the Hijazi spoken elsewhere. These distinguishing characteristics of Meccan speech (and UHA in general), are largely due to foreign influences; also highlighted in this section. Generational differences in spoken Hijazi have also been noted, for example, by Abu-Mansour (2008), as well as geographical differences, such as in the eastern part of the Hijaz area, where the dialect has been influenced by the Najdi dialect.

In the second half of the last century, a number of important studies concerning UHA were conducted. It is worth noting that, although most of these studies concern the UHA variety spoken in Mecca, the vast majority of cases raised in these studies are applicable to UHA in general regardless of the speech community. Sieny (1972) conducted one of the early studies on UHA and provided a detailed account of the syntax of Meccan Arabic. A similar study on a larger scale was conducted by Bakalla (1973) concerning the phonology and morphology of Meccan Arabic. Moreover, another two phonological studies of the UHA spoken in Mecca were conducted by Abu-Mansour (1987) and Kheshaifaty (1989).

The UHA spoken in Medina has received less attention than the one spoken in Mecca, presumably due to the importance of Mecca and the size of the community speaking this

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[87] It seems that UHA is one of the main sources of Ḥarb dialect change in Hijaz in general, and in Medina in particular. Ḥarb Bedouin tribes have now become one of the main Medina inhabitants. Therefore, they have acquired a number of urban Hijazi utterances.

variety. In addition, it is assumed that the previously mentioned studies were viewed to suffice as comprehensive studies of the phonological and grammatical aspects of this Arabic dialect in general, regardless of the speaking area. However, a very detailed and important study of the phonology of the UHA spoken in Medina, which is a very important supplement to the earlier studies, was conducted by Jarrah (1993). This study aimed to examine the syllable structure of the UHA, spoken in Medina, which applies the autosegmental representation as a framework. Very recently, Al-Harthi (2014) presented her study on L2 acquisition, which was conducted in Medina. The study gave an important socio-cultural introduction to the Medina society. It is important to mention that these studies were the main resources consulted for this section, in addition to few studies conducted in the early 1970s by Western scholars, such as the short study by Ingham (1971) and the basic course in UHA introduced by Omar (1975), which was developed by the U.S. Foreign Service Institute, reflecting growing U.S. strategic interests in the region. Moreover, the knowledge of the researcher as a speaker of the variety is also one of the main sources for the information presented in this section.

2.3.1 The phonology of Urban Hijazi Arabic

2.3.1.1 Consonants

Table 2.31: UHA phonemic and allophonic consonants

	Bilabial	Labio-dental	Dental	Dento-alveolar	Post-alveolar	Palatal	Velar	Labial-velar	Uvular	Pharyngeal	Glottal
Plosive	b		t d tˤ dˤ				k g		q		ʔ
Nasal	m			n							
Trill				r							
Fricative		f	ðˤ	s z sˤ zˤ	ʃ				x ɣ	ħ ʕ	h
Affricate					dʒ						
Approximant						j		w			
Lateral				l lˤ							

There are five emphatic or 'velarised consonants' in UHA, and these are listed in Table 2.32.

Table 2.32: Corresponding plain and emphatic consonants (UHA)

Plain	s	d	t	ð	l
Emphatic	sˤ	dˤ	tˤ	ðˤ	lˤ

Two Arabic consonants are not included in Table 2.31. These are the interdentals /θ/ and /ð/. In UHA, these interdentals do not occur. They are substituted by /t/ or /s/ and /d/ or /z/, respectively. For example, /θala:θa/ in Standard Arabic, which is the number 'three', becomes /tala:ta/ in UHA. The same is true for the coronal fricative /ð/, which is substituted by /d/ in UHA. For example, /ðaħi:n/ 'now' is realised as /daħ(ħ)i:n/.[88] However, Al-Jehani (1985) explained that these fricatives do exist in Meccan Arabic but that they are variably phonetically realised, due to a number of linguistic and extra-linguistic factors. Also in UHA, the /g/ is used in place of the Classical ق (qāf) /q/. In this respect, the realisation of /q/ as /g/ is not only a typical realisation of UHA speaking areas, including Mecca, Medina and Jeddah, it is also a typical realisation of most Arabic dialects of the Arabian Gulf, as previously highlighted. Although the uvular stop /q/ is substituted by the velar stop /g/ in UHA, some important words, such as /al-qurʔa:n/ 'the Quran', retain the /q/ sound.[89]

The glottal stop has a limited distribution and varies between a glottal plosive and a glottal creak according to its emphasis (Ingham 1971: 277f). In the initial position, it is often elided if it precedes a consonant, as in /wa-kal/ from /wa + ʔakal/ 'and he ate'. It also occurs in the medial and final positions, although many of the words in which this happens are borrowings, as in /saʔal/ 'he asked', from Standard Arabic. In addition, it can exist at the end of some words for emphasis, e.g. /laʔ/ 'no'. There will be further investigation of hamza

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[88] The gemination of the pharyngeal /ħ/, is attested in the speech of some UHA speaker in Medina.
[89] I heard some UHA native speakers in Medina and Mecca pronounce this word as /al-gurʔa:n/ following the general rule of realising traditional /q/ as /g/.

(initial *hamza*) in UHA, in this thesis, as it is one the linguistic variables analysed in Chapter Five.

2.3.1.2 Vowels

The vowel inventory of UHA has many similarities to that of HA discussed above. Table 2.33, below, shows that UHA recognises five basic vowels, three of which occur in both short and long forms, i.e. /a/, /i/ and /u/ and two further long vowels, i.e. /eː/ and /oː/ that are considered as realisations of the two MSA diphthongs /aj/ and /aw/, respectively. It is worth noting that, unlike the case in HA, these two diphthongs, and diphthongisation in general, are used with restrictions in UHA. According to Abu-Mansour (2008), these diphthongs can only be heard in UHA in words in the pattern of [CaCCaC], e.g. /ʔajsar/ 'easier', /ʔawdˤaħ/ 'clearer', which seem to be borrowed from MSA, and when the semi-vowels /w/ and /j/ are geminated, e.g. /mawwat/ 'to cause to die', /bajjadˤ/ 'to whiten'. Further investigation of diphthongisation in the two Arabic dialects under consideration, is presented in Chapter Six as it is one of the linguistic variables investigated in this research.

Table 2.33: phonemic and allophonic vowels in UHA

Vowels	
Short	**Long**
a	aː
i	iː
u	uː
-	eː a realisation of the MSA diphthong [aj]
-	oː a realisation of the MSA diphthong [aw]

The vowels are strongly affected by adjacent consonants. Ingham (1971: 275) notes that /a/ and /i/ are higher and more fronted in the vicinity of the palatals /j/ and /dʒ/. Also, in the

presence of the pharyngeals, their pronunciation is more open[90] and, in the presence of the emphatics, the vowels have a more retracted quality. In Meccan Arabic, however, the phonemes /i/ and /u/ are less restricted. Also, the allophones of the /a/ and /aː/ phonemes tend to be more retracted in the vicinity of the non-emphatic consonants. Meccan Arabic, (also applies to UHA spoken in other Hijazi areas, e.g. Medina, Jeddah) features the appearance of an anaptyctic /a/ vowel in the case of a consonantal initial suffix coming after a syllable with the [CVVC] structure at the morpheme boundary. For example, compare /kitaːba-na/ 'our book', in UHA, with /kitab-na/, as in the Egyptian variety (Ingham 1971: 275). Alqahtani (2010) contrasted Hijazi Arabic with Najdi Arabic, and confirmed the observation that Hijazi Arabic is not as close to Classical Arabic as Najdi Arabic and, moreover, that the reason for this is that epenthetic vowels are allowed in this variety.

2.3.1.3 Syllables and Consonant Clusters

Jarrah (1993: 57) produced very detailed account of the UHA syllabification process. He argues that, in UHA (similar to HA, as explained above) and other different Arabic dialects, all possible MSA syllables, i.e. [CV], [CVV], [CVC], [CVVC], and [CVCC] are attested in this variety. UHA comprises one additional syllable type – that of [CVVCC]. The distribution of this syllable type is limited to monosyllabic active participles and sometimes adjectives (e.g. /ħaːtˤtˤ/ '(he is) putting', and /saːmm/ 'poisonous). It is recognised as the least commonly occurring syllable type; in view of this, (Jarrah 1993: 62) suggests that it does not need to be included with those syllables that constitute the basic repertoire of syllable types. Therefore, it should be treated in accordance to the 'Chomsky-adjunction rule', according to which the final consonant(s) are joined to the preceding syllable (ibid). Unlike HA and other Arabic dialects, such as Palestinian Arabic (cf. Abu Salim 1982), all examples of this syllable appear on the surface. It is worth noting that the examples of this syllable might remain on the surface as

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[90] The effect of palatals and pharyngeals on the articulation of vowels is a common phenomenon; see, for example, Bhat (1978) and Buckley (2000) for 'palatalisation' and Al-Tamimi (2015) for 'pharyngealisation'.

[CVVCC] or may be modified, similar to Palestinian Arabic (cf. Abu Salim: ibid). The modification mainly includes the break of the consonant cluster at the end with active participles and changing the adjectives to verbal forms. Table 2.34 shows examples of both cases of this extra heavy syllable in UHA.

Table 2.34: Examples of the extra heavy syllable [CVV CVC] in UHA

Example	Type	Modification	Gloss
/ɣaːmm/	active participant	/ji-ɣumm/ [CV. CVCC]	suffocating
/dʒaːrr/	active participant	/dʒaːrir/ [CVV. CVC]	pulling
/xaːmm/	active participant	/xaːmim/ [CVV. CVC]	tricking
/dˤaːrr/	adjective	/ji-dˤurr/ [CV. CVCC]	hurting

Regarding consonant clusters in UHA, unlike in the Arabic Maghrebi dialects (including HA), clusters are identified in the final position, and are limited to only two consonants, i.e. [-CC]. Jarrah (1993: 94: ff) explores this issue in the UHA spoken in Medina, putting more emphasis on the sonority of the second consonant in the cluster[91]. His focus was centred on the basic groups of sounds that occur in Arabic, including fricatives, glides, liquids, nasals and stops. Table 2.35 below presents an examination of the clusters that occur between these linguistic features in UHA.

Table 2.35: Examples of consonant clusters in UHA

Example	Gloss	Type
/bard/ /kalb/	cold dog	liquid + stop
/bank/	bank	nasal +stop

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[91] The issue of 'sonority' is actually a controversial one. Nevertheless, Jarrah (1993: 91ff) in his analysis of syllabification of the UHA spoken in Medina seems to support Selkirk's (1984: 116) generalisation of 'sonority', which suggests that "in a syllable, there is a segment constituting a sonority peak that is preceded and/or followed by a sequence of segments with progressively decreasing value".

/bint/	girl	
/waʕd/ /misk/	promice musk	fricative +stop
/wagt/ /sabt/	time Saturday	stop+ stop
/sˤanf/ /rimʃ/	mark eye brow	nasal + fricative
/sˤulħ/	reconciliation	liquid + fricative
/nafs/ /naħs/	soul bad luck	fricative + fricative
/farm/ /barm/	mincing turning	liquid + nasal

There are a few points that need to be addressed relating to the above cases of the restricted consonant clusters in UHA (cf. Jarrah 1993: 95ff). Table 2.35 above shows examples of the final cluster of two stops; however, this permissibility should be limited to cases where the second stop is a coronal. Therefore, if both of the stops are coronal, they will not remain intact. In actuality, a rule of voice assimilation will then alter them into so-called fake or false geminates if they are recognised as being from other voice categories. For instance, /ħamad-t/ 'I praised (God)' is realised as /ħamat-t/. In addition, a special case involves the liquids /l/ and /r/ when clustering with other phonemes. When clustering with other consonants (e.g. stops and liquids, as exemplified in Table 2.35 above), the liquids have to be the first consonant and the other consonant is the second in the cluster. In the case of them being the second consonant in the cluster, an epenthetic vowel is applied to separate the consonants. The following examples illustrate this issue:

/ħibr/ 'ink' → /ħibir/, /gabr/ 'graveyard' → /gabur/

/gaml/ 'lice' → /gamil/, /gufl/ 'padlock' → /guful/

2.3.2 The Morphology of Urban Hijazi Arabic

2.3.2.1 Pronouns

The pronouns share some features with nouns and adjectives except that the dual is disregarded here, so that the plural means two or more instead of three or more. The pronouns may either have a free form, i.e. independent pronouns, or they may be attached to other words, i.e. suffix pronouns. Moreover, they may be used together for emphasis. The following two tables list respectively the singular and plural free forms (independent) and the joined form for possessive constructions (cf. Sieny 1972: 29ff).

Table 2.36: UHA personal independent pronouns

Person	Gender	Number	Pronouns
1ˢᵗ	-[92]	sing.	/ʔana/
1ˢᵗ	-	pl.	/nihna/; /ʔihna/
2ⁿᵈ	masc.	sing.	/ʔinta/
2ⁿᵈ	fem.	sing.	/ʔinti/
2ⁿᵈ	-	pl.	/ʔintu/
3ʳᵈ	masc.	sing.	/huwwa/
3ʳᵈ	fem.	sing.	/hijja/
3ʳᵈ	-	pl.	/humma/

Table 2.37: UHA suffix pronouns for possessive constructions

Person	Gender	Number	Suffix pronouns (Possessive) Examples: /kita:b/ 'book', /ʔabu/ 'father'	
			C-	V-
1ˢᵗ	-	sing.	-i /kita:b-i/	-ja /ʔabu:-ja/
1ˢᵗ	-	pl.	-ana /kita:b-ana/	-na /ʔabu:-na/

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[92] A dash in the gender column means that there is no contrast for either gender.

2nd	masc.	sing.	-ak /kita:b-ak/	-k /ʔabu:-k/
2nd	fem.	sing.	-ik /kita:b-ik/	-ki /ʔabu:-ki/
2nd	-	pl.	-akum /kita:b-akum/	-kum /ʔabu:-kum/
3rd	masc.	sing.	-u[93] /kita:b-u/	-h /ʔabu:-h/
3rd	fem.	sing.	-aha /kita:b-aha/	-ha /ʔabu:-ha/
3rd	-	pl.	-ahum /kita:b-ahum/	-hum /ʔabu:-hum/

For possessive pronouns, in the case of /-ana/, /-akum/, /-aha/ and /-ahum/, the first vowel, i.e. /a/, only appears if the consonant is preceded by another or a long vowel, as in /kita:b-akum/ 'your (pl.) book'. As for object markers, the same possessive pronouns are used, except that the /-an/ form is used for the 1st person singular either after a geminate consonant or when that consonant is preceded by another consonant or long vowel. Otherwise, the /-ni/ form is used in other cases: for instance, /ʃadd-ani/ 'he bound me' /za:r-ani/, 'he visited me' and /dʒa:-ni/ 'he came to me'.

It is worth noting that in the case of non-verbal negation transformation, UHA has what is termed by Sieny (1972: 232) 'negation pronominal suffixes'. He assigned this category to pronominal suffixes which are preceded by the /ma:/ '(be) not' negator. Table 2.38 below shows the different forms of this type of pronoun. Moreover, it also shows that this type of pronoun is very similar to that of Ḥassāniyya explained above, apart from shortening the vowel in the /ma:/ negator and gemination of /n-/ in the 'negation pronominal suffixes'.

Table 2.38: UHA suffix pronouns with the affix negator /ma-/

Person	Gender	Number	Suffix pronouns (with negation)

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[93] In the UHA spoken in Mecca, Sieny (1972: 31) indicates that /h/ "similar to MSA, might be used after the vowel /u/, therefore the above word might be pronounced /kita:b-uh/". However, I discarded this variation of this pronoun form as I did not find strong evidence from the UHA spoken in Medina.

1st	-	sing.	-nni /ma-nni/
1st	-	pl.	-nnana/-ħna /ma-nnana(ħna)/
2nd	masc.	sing.	-nnak/-nta /ma-nnak(nta)/
2nd	fem.	sing.	-nnik/-nti /ma-nnik(nti)/
2nd	-	pl.	-nnakum/-ntu /ma-nnakum(ntu)/
3rd	masc.	sing.	-nnu/-hu /ma-nnu(hu)/
3rd	fem.	sing.	-nnaha/-hi /ma-nnaha(hi)/
3rd	-	pl.	-nnahum/-hum /ma-nnahum(hum)/

Other aspects of the UHA pronouns that need to be highlighted are the demonstrative, relative and interrogative pronouns. Table 2.39 lists the demonstrative pronouns spoken in Medina and other UHA areas.

Table 2.39: UHA demonstrative pronouns

Gender	Number	Proximity	Pronoun
masc.	sing.	close	/ha:da/
fem.	sing.		/ha:di/
-	pl.		/hado:l(a)/
masc.	sing.	distant	/hada:k(a)/
fem.	sing.		/hadi:k(a)/
-	pl.		/hado:la:k(a)/

The /-a/ endings are dropped if the demonstrative pronouns are followed by the defining marker /al-/, e.g. /hada:k al-galam/ 'that pen', but is otherwise optional. The relative pronoun has only a single form, /ʔilli,/[94] which can therefore mean either 'who', 'whom' or 'which'.

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[94] This relative pronoun may be pronounced by some UHA speakers as /ʔalli/ if it is at the beginning of an utterance. Moreover, *hamza* /ʔ/ may be dropped when it is in the middle of the sentence.

An example is /humma ʃaːf-u ʔilli kaːnu hinaːk/ 'they saw whatever/whoever was there'. Interrogative pronouns are also few in number in UHA. These are /miːn/ and /ʔeːʃ/, which mean 'who?' and 'what?', respectively. An example is /miːn dʒaː ʔams/, which means 'who came yesterday?'.

2.3.2.2 Adverbs and Adjectives

Adverbs in UHA (like many other Arabic dialects) are normally optional elements "except those with copulas where they are necessary" (Al-Shurafa 2005: 86). They are distinguished from prepositions in that they are able to stand alone, but some adverbs of place can also function as prepositions (Sieny 1972: 43). Moreover, they do not form a heterogeneous group, that is, "they do not have specific categorical characteristics to identify them as adverbs" (Al-Shurafa 2005: 87). However, similar to those of HA, they exhibit a structural identity, and they form four main syntactic categories, distinguished by their semantic functions. These are: temporal and manner adverbs, time adverbs, place adverbs and interrogative adverbs. Some examples of common adverbs in UHA are given in Table 2.40.

Table 2.40: Examples of adverbs of time, place, manner and interrogative in UHA

Adverbs of time	/saːʕaːt/ 'sometimes', /baʕdeːn/ 'later'
Adverbs of place	/taħt/ 'below', /foːg/ 'above'
Adverbs of manner	/bi-ʃweːʃ/ 'gently' or 'slowly', /bi-surʕa/ 'quickly'
Interrogative adverbs	/mita/ 'when?', /kamm/ 'how much/many?', /feːn/ 'where?'

It can be noted, that many of the UHA adverbs are the same as those in some Arabic dialects and MSA. However, there are also notable lexical differences. For example, the common adverb 'very', when used for emphasis, is /dʒiddan/ in MSA, but in UHA /marra/ is exclusively used instead, and there is no inflectional ending for different cases. Also, /feːn/ is used instead of /ʔajna/ for 'where'. In sentences, the adverbs are joined to the verb instead of

forming a verbal phrase. Al-Shurafa (2005: 88) distinguishes three types of adverb: the first type consists of those that "modify the matrix verb of the VP in the main sentence, and in this case they modify the verb action with a limited scope". The VP-adverbs are those of manner or they are temporal or intensifier adverbs. The second type, referred to as 'sentence-adverbs', occur either prior to or at the end of the main sentence. The third type are termed 'coordinated adverbs', in which adverbs parallel adjectives. In this case, adverbs can be 'stacked', which means "more than one adverb can be found in a single phrase or sentence" in this Arabic dialect (Al-Shurafa 2005: 91). An example of each of the three types is given in Table 2.41.

Table 2.41: Examples of the three types of adverbs in UHA

VP-adverb	/sa: ʕat-i (a)l-jao:m wa:gfa/	'my watch has stopped today.'
S-adverb	/ħa ʔadʒ-i ʔana tˤabʕan/	'I will come, obviously'
Stacked adverb	/gul-t kilmat-e:n min hina w hina/	'I said two words from here and there'

As for adjectives in UHA, the inflection of adjectives takes place according to the optional markers for definiteness, gender, degree and number in the following order (Sieny 1972: 11):

adjective = + definiteness + adjective stem + (± gender marker ± number marker ± degree marker)

The final three items within the brackets are mutually exclusive. The adjective stem is comprised of a root and a pattern. The stems may be either simple or derived, and the latter may be nominal or verbal derivatives. Definiteness is indicated by the prefix /al-/, as in /al-kabi:r/ 'the big'. The gender marker is the inflectional suffix /-at/, which is usually accompanied by a variation in pattern. The degree marker, used to indicate whether the adjective is positive, comparative or superlative, is shown either by adding the modifier /ʔaktar/ 'more' after the adjective, or by transforming the pattern to ['aCCaC]. An example of the former is /ha:di tˤawi:la ʔaktar/ 'this is longer', and an example of the pattern is the word

/ʔaktar/ itself. However, not all comparative and superlative forms are derived from the same root. For example, the words for 'good', 'better' and 'best' are /tˤajjib/, /ʔatˤjab/ and /ʔaħsan/, respectively.

2.3.2.3 Articles and Particles

Similar to MSA (also to HA and other Arabic dialects, as previously mentioned in section 2.2.2.3), UHA has only one definite article, i.e. /al-/. As previously mentioned, when the word is prefixed by the definite marker /-l/, the definite article assimilates to the following sound when it is one of the fourteen Arabic 'sun letters' (as known in CA and MSA), e.g. /al-nadʒm/ 'the star' is produced as /an-nadʒm/. However, in UHA /dʒ/ and /k/ are also included – for example, /-l/ is assimilated in /al-dʒaːmʕa/ 'the university' and /al-kitaːb/ 'the book' and produced as /adʒ-dʒaːmʕa/ and /ak-kitaːb/, respectively. It is worth noting that the non-standard assimilation of /-l/ to the following /dʒ/ in the definite article in UHA, also occurs in other Arabic dialects, for instance, Eastern Libian (Abumdas 1985: 138), rural Palestinian (Shahin 2000: 18), Central Sudanese (Hamid 1984: 106) and Iraqi Arabic (Erwin 1969: 91f).

The genitive marker is /ħagg/, /ħagga-t/ or /ħagg-oːn/ for the masculine, feminine and plural forms, respectively. As in Standard Arabic, the prepositions either precede nouns, as in /fiː dʒidda/ 'in Jeddah', or they can be suffixed to them, as in /fiː-ha/ 'in her/it'. Common conjunctions include /wa/ 'and' and /ʔaw/ 'or', and subordinate conjunctions include /lamman/ 'when' and /madaːm/ 'as long as'. UHA has the following variations for some of the more common particles: /baɣa, ji-bɣa/ 'to want', /giːd/ 'already', /daħħiːn/ 'now, and /ʔileːn/ 'until'.

The use of the negative particles has some distinguishing features. These particles (in CA) include /laː/, /maː/, /lajsa/, /lam/, /lamma/, and /lan/. The first two Classical negators are used in UHA, i.e. /laː/ 'do not', which is used for negative commands and requests; therefore,

it is used with verbs, and /maː/ 'be not'. Al-Zahrani (2010) examined the morphosyntactic properties of the negative particles in UHA. He argues that, whereas in Standard Arabic the load is on /laː/ and its variants, in UHA, there has been a shift from /laː/ to /maː/ and its variants. Moreover, /maː/ has two allomorphs in UHA, /muː/ and /meː/. Generally, the former is used with masculine forms, while the latter is used with feminine forms. However, /muː/ is used more often for both masculine and feminine subjects as an unmarked negative. The form /maː/ is used with pronouns and verbs, whereas /muː/ is used to negate other parts of speech. For warning and threats, the negator /ʔisˤħa/ (or /ʔasˤħa/ 'let … not') is frequently used in UHA (Abu-Mansour 2008: 183). Table 2.42 shows examples of these negation particles in their different parts of speech.

Table 2.42: Examples of negation particles in UHA

Negator	Example/Gloss	Part of speech
/maː/	/maː dʒaː/ 'he did not come'	verb
	/maː-hi hnaːk/ 'she is not there'	pronoun
/muː/	/muː kabiːr/ 'it/he is not big'	adjective
	/muː raːjiħ/ 'he is not going'	verb
/meː/	/meː(muː) dʒa-ja/ 'she is not coming'	verb
	/meː(muː)sˤaʕba/ 'it is not difficult'	adjective
/laː/	/laː tu-ktub/ 'do not write'	verb
/ʔisˤħa/	/ʔisˤħa taːkul/ 'do not eat'	verb

2.3.2.4 Nouns

The majority of nouns are derived from verbs, from adjectives and from other nouns (Abu-Mansour 2008), so they can usually be identified from their structural patterns. Nouns can take four types of optional affixes. These mark: (i) definitiveness, (ii) gender, (iii) number,

and (iv) possession, in the following order (Sieny 1972: 6). The markers for the first and fourth are mutually exclusive.

Noun = ± definitive marker + noun stem + gender marker ± number marker ± possessive marker

The stem comprises a root combination of letters following a certain pattern. For example, the noun /kita:b/ 'book' has the pattern [CiCāC]. The two grammatical genders are masculine *muḏakkar* and feminine *mu'annath*, and they are not necessarily indicated by inflection. Similar to MSA and many Arabic dialects (e.g. HA), the masculine gender is unmarked and the feminine gender takes the morpheme ending /-a/, equivalent to /-at/ or /-ah/ in MSA. Examples are:

/sˤadi:g/ 'male friend', /sˤadi:ga/ 'female friend'

/walad/ 'boy', /bint/ 'girl' (an example of an exception to the rule)

Three number markers form the singular, dual and plural. The singular form is normally unmarked (similar to MSA and different Arabic dialects, e.g. HA) whereas the dual form has the morpheme /-e:n/. An example is /da:ʔira/ 'circle' and /da:ʔirat-e:n/ 'two circles'. The plural form is constructed by either varying the pattern, in which case it is known as having a 'broken plural', or by adding a suffix. The suffixation is either /-i:n/ in the case of masculine nouns or /-a:t/ for feminine nouns. Inanimate masculine nouns take the latter suffix. Examples are:

-/kita:b/ 'book', /kutub/ 'books' (broken plural).

-/mudarris/ 'teacher',/mudarris-i:n/ '[many male] teachers', /mudarris-a:t/ '[many female] teachers'.

-/kambju:tar/ 'computer', /kambju:tar-a:t/ 'computers' (feminine suffix; inanimate masculine).

2.3.2.5 Numerals

The numeral system of UHA lends itself to classification (cf. Sieny 1972: 35ff; Kheshaifaty 1997; Abu-Mansour 2008), as shown in Figure 2.1 below. This scheme highlights its distinctive morphosyntactic aspects. Kheshaifaty (1997: 22) proposes the diagram below for the classification of the numerals in UHA.
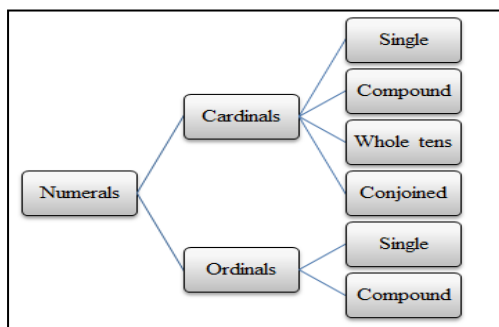
Figure 2.1: Classification of the UHA numerals

The complexity of numerals in UHA is similar to that in MSA, and to a large extent, to HA. In terms of morphology and syntax, the numerals have many properties in common with nouns and adjectives. On the other hand, they also have important distinguishing features. For example, whereas the ordinals 1ˢᵗ to 10ᵗʰ and the cardinal /waːħid/ reflect a gender distinction, the rest of the numbers do not. The formula for constructing the cardinal numbers is as follows (cf. Sieny 1972: 35):

Cardinal number = ± definiteness marker + numeral stem + possessive marker

The cardinal numbers can be further subdivided into simple, complex and compound forms. The first (simple cardinal), also can be divided into four categories. The first one includes /waħid/ 'one', which is the masculine form, and the feminine form is /waħda/, e.g. /ridʒdʒal waːħid/ (or /waħid raːdʒil/) 'one man', /ħurma waħda/ (or /waħda ħurma/) 'one woman'. A second category of simple cardinals is comprised of the numerals /itneːn/ 'two' to /ʕaʃara/ 'ten', and the multiples of ten as far as /tisʕamijja(h)/ 'nine hundred', e.g. /itneːn ʕaʃara/

ʔawla:d/ 'two/ten boys'. UHA is similar to MSA: /itne:n/ 'two' (/iθna:n/ in MSA)/ is used after dual nouns for emphasis; however, it is not frequently used in UHA, e.g. /hurmate:n itne:n/ 'two women'. The plurals of these numerals, i.e. /tala:ta/ 'three' to /ʕaʃara/ are formed by adding the suffix /-a:t/, for example, /tisʕa/ 'nine' becomes /tisʕ-a:t/ 'nines'. Another category consists of the words /ʔalf/ 'thousand' and /maljo:n/ 'million'. Their plural forms are irregular; for instance, the most common plural form of /ʕalf/ is the Classical form /ʔa:la:f/, however, it is also produced as /ʔa:la:f-a:t/, which is seemingly borrowed from the Egyptian Arabic form /ʔuluf-a:t/ (see Gadalla 2000). A fourth category of simple cardinals consists of the single word fractions, such as /nusˤsˤ/ 'half' and /ʕushr/ 'one tenth', e.g. /nusˤsˤ ak-kita:b/ 'half of the book'. They exhibit the patterns [CuCC], [CuCCēn] and ['aCCāC] in the singular, dual and plural, e.g. /nusˤsˤ/, /nusˤsˤe:n/, /ʔansˤa:sˤ/, respectively.

Complex numerals are formed by combining two simple numerals, in which case the first one modifies the second. In this category are, for example, the multiples of /ʕalf/ 'thousand', e.g. /tala:ta ʕa:la:f/ 'three thousand', except for /ʕalfe:n/ 'two thousand', and the multiples of /maljo:n/ 'million', e.g. /ʕarbaʕa maljo:n/ 'four million', except for the dual form /maljo:ne:n/.

As for ordinal numbers, according to (Sieny 1972: 38), the formula for constructing ordinal numbers is as follows:

Ordinal number = ± definiteness marker + numeral stem ± gender marker

The optional definiteness marker does not occur together with the numeral when the numeral precedes the modified noun, and the gender marker only applies to the ordinals for /ʔawwal/ 'first' to /ʕa:ʃir/ 'tenth'. The ordinals can be divided into three main categories, whereby the first category comprises solely the numeral /ʔawwal/ 'first' and its feminine form /ʔu:la/ and the plural form is /ʔawa:-ʔil/, e.g. /tˤa:lib ʔawwal/ 'first student-masc.', /tˤa:liba ʔu:la/ 'first

student-fem.', /tˤulla:b/tˤa:lib-a:t ʔawa:ʔil/ 'first students'. The second category comprises the numerals for 'second' to 'tenth', which take the feminine marker /-a/, which is equivalent to the MSA one /-at/. This category of ordinal numbers follows the patterns [CāCiC], e.g. /ta:lit/ and [CāCiCa], e.g. /ta:lita/ 'third' for masculine and feminine, respectively, similar to MSA and different Arabic dialects, including HA, as previously highlighted. The third category of numerals normally requires the definiteness marker and comes after the modified noun. This category also does not exhibit a gender contrast. An example is /ad-dars al-ʕiʃri:n/ 'the twentieth lesson', which is also similar to MSA and HA, as previously indicated.

2.3.2.6 Verbs

As in Standard Arabic, as well as in HA (as discussed above), the verb in UHA consists of a stem, which is a root of three or more consonants, and additional elements. Traditionally, this system is seen as a combination of consonantal roots, which carry the basic lexical content, and a pattern that carries the grammatical content (Bakalla 1973: 584). The pattern can consist of either vowel(s) or consonant(s) or a combination of both. Generally, words that derive from the same root share a degree of meaning. A typical example is the root /katab/ 'to write' (/kataba/ in CA) from which are derived /kita:b/ 'book', /ka:tib/ 'writer', /maktu:b/ 'written', and /kutta:b/ 'a traditional name of the place of study', all of which convey the sense of 'writing' or are related to it in some way.

From a generative point of view, however, it can be seen that the verb stems are "morphologically generated (or derived) from their respective roots by means of adding one or more affixes, or by adding no derivational affixes at all" (Bakalla 1973: 590). Moreover, the affixation process is usually regular, productive, and syntactically motivated at the morphological level. In short, the complete verb form actually consists of four parts: the root, the derivational element (or lack of it for simple verbs), a vocalic pattern that carries the aspectual function, and affixes for marking person, gender and number (ibid: 612).

The inflection of verbs in UHA, similar to MSA and many Arabic dialects, e.g. HA, occurs according to person, subject, aspect, tense, voice and the object reference. The ordering of the optional markers is in accordance with the formula given below (Sieny 1972: 16). The verb stem is comprised of a root combination of letters according to a certain pattern.

Verb = ± aspect marker + 1st tense person marker ± voice marker + verb stem + 2nd tense person marker ± (+ 1st object marker ± 2nd object marker)

The progressive aspect is indicated by several prefixes that are mainly used in other Arabic dialects. For instance, the prefix /bi-/, as in /al-bint bi-tuktub gasˤiːda/ 'the girl is writing a poem' is also used in sedentary Arabic dialects, similar to UHA, such as Cairene and San'ani Arabic (Watson 2007: 176ff), and in Bedouin dialects, such as Najdi Arabic (Cuvalay-Haak 1997: 238). It is very common in UHA, and in the Arabic dialect spoken in the Gulf coast (Gulf Arabic) (see, for example, Al-Qenaie 2011: 99), to indicate this meaning by preceding the imperfect verb with /gaːʕid/ (sing. masc.) and /gaːʕida/ (sing. fem.) or less frequently by /ʕammaːl/ (sing.masc.) and /ʕammaːla/ (sing. fem.).[95] The previous example could be used for all these forms; /al-bint gaːʕida) or /ʕammaːla/) ti-ktub gasˤiːda/. It is shown in UHA that some speakers combine /gaːʕida/ or /ʕammaːla/ and the prefix /bi-/ in the same sentence, i.e. /al-bint gaːʕida (or ʕammaːla) bi-tuktub gasˤiːda/. Ingham (1971: 285) states that in Meccan Arabic (this also applies to the UHA spoken in Medina), the prefix /bi-/ or /ʕamman/ (/ʕammaːl/ in the UHA spoken in Medina) is used to form the present continuous of the imperfect.

The tense-person marker is deemed appropriate because this marker indicates a number of things at the same time. In the present tense, it immediately precedes the verb stem. The two tenses (perfect and imperfect) are indicated as follows:

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[95] Using this form in UHA for the progressive is very similar to different spoken Arabic dialects, such as Egyptian and Sudanese Arabic, which indicates the influence of these dialects on UHA.

- The perfect tense does not have a marker in the active voice. So, for example, /katab/ could mean either 'to write' or 'he wrote'.

- The imperfect tense takes prefixes, as indicated in Table 2.43 below (Sieny 1972: 18). For example, /ni-ktub/ means 'we write'.

Table 2.43: Prefixes to form the present tense in UHA

Prefix Example: /dʒalas/ 'to sit'	Person	Gender	Number
ʔa- /ʔa-dʒlis/	1st	-	sing.
ni- /ni-dʒlis/	1st	-	pl.
ti- /ti-dʒlis/	2nd	-	-
ji- /ji-dʒlis/	3rd	masc.	sing.
ti- /ti-dʒlis/	3rd	fem.	sing.
ji- /ji-dʒlis-u/	3rd	-	pl.

To indicate the future tense, UHA uses the /ħa-/ marker, as in Egyptian Arabic,[96] which is added to the imperfect form of the verb before the 1st tense-person marker. An example is /huwa ħa j-ruːħ/ 'he will go'.

Regarding the voice of the verb, in the present tense, one of the four affixes /ʔa-/, /ti-/ /ni-/, /ji-/ (depending on the type of person) is used before the verb stem (see Table 2.44 below). To form the passive of a transitive verb in the past tense, one of the three prefixes /ʔan-/, /jin-/ (for a male person) or /ʔat-/ (for a male or female person), or /ti-/ (for a female person) is used. For example, /katab/ 'he wrote' becomes /ʔan-katab/ 'it was written', and /ji-ktub 'he writes' becomes /jin-katib/ 'it gets written'. There is also a reciprocal voice. It has the pattern ['atCāCaC] for the past tense, where [CāCaC] is the verb stem. For example:

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[96] In spoken Egyptian Arabic the marker is /ha-/ instead.

/niħna naːgaʃna (a)l-mawdˤuːʕ/ 'we discussed the matter' becomes /niħ-na ʔat-naːgaʃ-na fi (a)l-mawdˤuːʔ/ 'we have discussed the matter'.

The tense-person markers are summarised in Table 2.44 below (cf. Sieny 1972: 21f). To form the imperative, the same tense-person marker is used as in the present tense. If a verb begins with a consonant cluster, it takes the prefix /ʔa-/ or /ʔu-/ (the latter is more frequent than the former) to form the imperative. For instance, for the verb /gaʕad/ 'to sit', /ji-gaʕud/ (present tense for the 1ˢᵗ person), the imperative form is /ʔa-gaʕud/ or /ʔu-gaʕud/. Also, to form the 2ⁿᵈ person feminine singular and the plural in the imperfect tense, the Classical suffixes are absent. Hence, they are characterised by /-i/ and /-u/ instead of /-iːn/ and and /-uːn/, respectively. Examples are: /ti-ktub-i/ 'you-2ⁿᵈ fem. write', and /tu-tub-u/ 'you-pl. write'.

For the 3ʳᵈ person plural of the perfect form, the allomorph /-oː/ is found in the suffix when it precedes the suffix of an object pronoun. For example, /kaːtab-u/ 'they wrote to' becomes /kaːtab-oːk/ instead of /kaːtab-uːk/ 'they wrote to you'.

Table 2.44: Suffixes for the tense-person markers in the past and present tenses in UHA

Suffix	Tense	Person	Gender	Number
Example: /dʒalas/ 'to sit'				
	Past			
-t /dʒalas-t/		1ˢᵗ	-	sing.
-na /dʒalas-na/		1ˢᵗ	-	pl.
-t /dʒalas-t		2ⁿᵈ	masc.	sing.
-ti /dʒalas-ti/		2ⁿᵈ	fem.	sing.
-tu /dʒalas-tu/		2ⁿᵈ	-	pl.
-ø /dʒalas/		3ʳᵈ	masc.	sing.
-at /dʒalas-at/		3ʳᵈ	fem.	sing.
-u /dʒalas-u/		3ʳᵈ	-	pl.
	Present			
- ø /ʔa-dʒlis/		1ˢᵗ	-	-

- ø /ti-dʒlis/		2nd	masc.	sing.
-i /ti-dʒlis-i/		2nd	fem.	sing.
-u /ti (ji)-dʒlis-u/		2nd/3rd	-	pl.
- ø /ji-dʒlis/		3rd	-	sing.

The 1ˢᵗ person object markers work in the same way as the possessive markers for nouns, e.g. /kallamta-ha/ 'I spoke to her', /kallam-ak/ 'he spoke to you', /kallam-na/ 'he spoke to us'. However, a 2ⁿᵈ person object marker is restricted to the 3ʳᵈ person, and requires the 1ˢᵗ person object marker to be present. This is indicated the formula above (ibid). For instance, /ʔadde:t-ak-huwa/ 'I gave it to you'. It is worth noting that Sieny (1972: 24) considers this as an object marker "instead of set of pronouns" because of its unique characteristic as it is "used as a pronominal substitute for nouns that are direct objects". This characteristic of these object markers is not shared by the previously mentioned free personal pronouns. Therefore, the example above is used instead of /ʔadde:t-ak al-kita:b/ 'I gave you the book'.

It can be seen that the Arabic verb can take many forms in terms of its structural pattern. These forms for UHA are summarised with examples (cf. Abu-Mansour 2008: 184).

Form I: transitive in meaning and a base of derivation for the other forms: either [CaCaC] or [CiCiC]; these are common; examples are: /katab/ 'to write' and /simiʕ/ 'to hear'.

Form II: generally causative in meaning while some denote intensity, e.g. /wasi:ʕ/ 'wide' > /wassaʕ/ 'to enlarge' and /kasar/ 'to break' > /kassar/ 'to smash'.

Form III: usually reciprocal, e.g. /ka:tab-ni/ 'he corresponded with me'.

Form IV: have the prefix /ʔa-/ but are rare, e.g. /ʔaʕtˤa/ /ji-ʕtˤ-i/ 'to give'.

Form V: have a reflexive meaning; derived by prefixing /at-/ to Type **II**, e.g. /ʔat-ʕallam/ 'to learn' from /ʕallam/ 'to teach'.

Form VI: have reciprocity or pretence; derived by prefixing /at-/ to Type **III**, e.g. /ʔat-ʃa:war-na/ 'we consulted each other' from /ʃa:war-na/ 'we consulted'.

Form VII: replace the internal passive of MSA, e.g. /ʔankatab ad-dars/ instead of /kutiba d-darsu/ 'the lesson was written'.

Form VIII: reflexive; derived by infixing /-t-/ after first radical of Type **I**, e.g. /ʔahtamm/ 'to become concerned'.

Form IX: have the prefix /-sta-/; which denotes 'seeking for oneself', similar to the case in MSA and HA (as previously mentioned), e.g. /ʔa-sta-ɣfar/ 'to ask (God) for forgiveness'.

For the weak verbs in UHA, many follow set patterns. The geminate verb category has two allomorphs for the perfect tense. If we take the verb /ħabb/ 'to love' as an example, one form occurs before a consonant initial suffix, as in /ħabbeː-na/ 'we loved', and the other before a vowel initial suffix, as in /ħabb-at/ 'she loved'. The imperfect form is invariant. For example, 'I love' is /ʔaħubb/ and 'you love' is /ti-ħubb/. For the active participle, the pattern is [CāCiC], as in /ħaːbib/, and for the passive participle, it is [CaCCūC], as in /maħbuːb/ (Abu-Mansour 2008: 185).

Abu-Mansour (ibid) identifies four other categories of weak verbs. For example, Type **I** verbs that begin with a glottal stop, such as /ʔaxad/ 'to take' or 'he took', drop the initial glottal stop following the addition of an imperfect prefix and the vowel is lengthened, as in /n-aːxud/ 'we take'. The imperative form is /xud/ 'take!', the active participle is /ʔaːxid/, and the passive participle is /maʔxuːd/. It is worth noting that further investigation is made in Chapter Five concerning initial *hamza*, as this phoneme is one of the study's linguistic variables. The inflections in the other types of weak verbs in UHA are summarised in Table 2.45 and 2.46.

Table 2.45: Inflections of assimilated /w-/ and hollow (-aː-) verbs in UHA

Type	Perfect	Imperfect	Imperative	Passive
/w-/[97] e.g. /wigif/ 'to stand up'	/wigif/	/ji-wgaf/.	/ʔawgaf/	/waːgif/ 'standing up' /mawguːf/ 'detained'.
/-aː-/[98] e.g. /gaːm/ 'to rise', /ʃaːl/ 'to carry'	/gaːm/, /ʃaːl/ /gum-t/, /ʃil-t/[99]	/ji-guːm/, /ji-ʃiːl/[100]	/guːm/, /ji-ʃiːl/	/ʔat-ʃaːl/ /ʔat-ʃal-na/[101]

Table 2.46: Inflections of the third radical weak verb (/- aː/) in UHA

Examples: /rama/ 'to throw, /miʃi/ 'to go'			
Number/gender	**Person**		
	1ˢᵗ	2ⁿᵈ	3ʳᵈ
Perfect sing. masc. sing. fem. pl.	/rameː-t/, /miʃiː-t/ /rameː-na/, /miʃiː-na/	/rameː-t/, /miʃiː-t/ /rameː-ti/, /miʃiː-ti/ /rameːt-u/, /miʃiːt-u/	/rama/, /miʃi/ /rama-t/, /miʃja-t/ /ram-u/, /miʃj-u/
Imperfect sing. masc. sing. fem. pl.	/ʔa-rmi/, /ʔa-mʃi/ /ni-rmi/, /ni-mʃi/	/ti-rmi/, /ti-mʃi/ /ti-rmi/, /ti-mʃi/ /ti-rmu/, /ti-mʃu/	/ji-rmi/, /ji-mʃi/ /ti-rmi/, /ti-mʃi/ /ji-rmu/, /ji-mʃu/
Imperative sing. masc. sing. fem. pl.		/ʔarm-i/, /ʔamʃ-i/ /ʔarm-i/, /ʔamʃ-i/ /ʔarm-u/, /ʔamʃ-u/	

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[97] This type of weak verb is what is called in tradition Arabic studies *al-fiʻl al-mithāl* 'assimilated verb; it is initiated with /w-/ or /j-/.

[98] This type of verb is what is termed *al-fiʻl al-'ajwaf* 'hollow verb'. In this type of verb, the long vowel is a replacement of the second radical, either /w/ or /j/.

[99] Vowels are shortened before the consonant-initial suffix of the subject.

[100] Vowels depend on medial glide of the root.

[101] Vowel is shortened before the consonant-initial suffix of the subject.

2.3.3 Lexicon of Urban Hijazi Arabic

The lexicon of UHA is reflective of the diversity of its inhabitants in major cities. In particular, there are many borrowings, especially from the Egyptian-Levantine, Syrian and Yemeni dialects. Turkish influence is also evident as a legacy of its rule in previous centuries. Therefore, it differs from neighbouring dialects by having had a greater foreign influence (Ingham 1971: 274). Thus, many words can be traced to other dialects. Some of these dialects are old, rather than Standard Arabic, whereas some are variations of Standard Arabic (Abu-Mansour 2008). Table 2.47 below gives some examples of the foreign borrowings that have been incorporated into the UHA lexicon (ibid: 187). UHA also differs from the Bedouin varieties, which are widely known in Medina in particular, in that there are more terms that relate to fishing and seafaring (as it is close to the Saudi West coast) as well as urban affairs and fewer terms that relate to desert and nomadic life.

Table 2.47: Examples of foreign borrowings in UHA

Turkish/Persian origin	/kurta/ 'dress', /duɣri/ 'straight', /dandurma/ 'ice cream'
European languages	/taksi/ 'taxi', /kamira/ 'camera', /tilifizjo:n/ 'television'

Azhari (2007) studied how the Meccan lexicon has changed over time. Gal (1978: 227) noted that this change is observable, that new lexemes can be located to "synchronic variants in the speech of subgroups within the community", and that changes occurred due to "the redistribution of synchronic variants to different linguistic environments". Meccan speech (similar to the speech of the urban society in Medina and other urban Hijazi cities) is characterised by the dialect of the city dwellers rather than that of the tribes, which differs.

The distinctiveness of Meccan speech (and that of Medina as well) is explained by the fact that Muslims from other parts of the world have either left their mark or come to settle in Mecca and Medina, mainly for religious, but also for economic, reasons. It therefore has a

mixture of several cultures that have made it an open, unique society and this is reflected in its lexicon. Azhari (2007: 5) argues that "many of the lexemes have been discarded from the Meccan lexicon [UHA lexicon], others have been replaced by synonyms from other Hijazi dialects, and still others are used only in certain contexts or by people of a particular age or socio-economic background".

In addition, several lexemes have been incorporated, due to factors such as changes in lifestyle, the expansion of the city, education and the effects of the media.

2.4 Conclusion

This chapter has given a linguistic account of the dialect spoken by this immigrant community (HA) as well as the Arabic variety spoken by the host community (UHA). The focus of this linguistic account was on the linguistic levels at which the dialectal interference between these two Arabic dialects is expected to take place, i.e. phonological and morphological levels. It was shown above, that although many phonological and morphological items are shared by both dialects, they differ in numerous phonological, morphological, and phonomorphological elements. Six of these elements that contrast HA and UHA, i.e. the phonemes /dʒ/, /f/, /ʔ/ and another three vocalic contrasts: the short vowels /i/ and /u/, syllables and diphthongs, have been chosen to be the study's linguistic variables and will be highlighted and analysed in Chapters Five and Six.

Chapter Three

Lexical Borrowing

3.1 General introduction

Lexical borrowing (henceforth, LB) as a linguistic phenomenon resulting from language contact has attracted the attention of people writing about language from ancient times through to the present day. Arabic scholars, [102] during the early Islamic period, paid a great deal of attention to this phenomenon. Many of them explored this linguistic phenomenon in terms of studying the non-Arabic Quranic vocabulary, which will be highlighted below. It is worth noting, that in the literature[103] the term 'borrowing' is sometimes used as a synonym of 'loanword', the antonym of 'native word', which refers to "those [words] that can be traced back to the earliest form of the language" (Lehmann 1992: 2).

Despite the significance of LB as a linguistic phenomenon, up until now linguists have held different perceptions regarding its essence and definition. In fact, these differences are due mostly to the generalisation or the specification of its significance. In general, the term LB can refer to any exotic word or phoneme that has entered the lexicon of any language in any period of the history of that language. Crystal (2008:58) defines 'borrowing' as "a linguistic form taken over by one language or dialect from another". Similarly, with reference to the context of borrowing, the definition provided by the *Dictionary of Language and Linguistics*[104] is as follows: "the introduction into a language or dialect of elements from another language or dialect by contact and/or imitation". In this sense, 'borrowing' can refer to any linguistic switching or transformation of a certain word from one language/dialect to

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[102] Whether those who are ethnically Arab, such as Al-Khalīl Ibn Ahmed Al-Farāhīdi and Al-Kisā'i or mostly non-ethnically Arab, such as the Persian Sībawayh and Ibn Fāris.

[103] See, for example, Crystal (2008: 58).

[104] See Hartmann & Stork (1972: 29).

another. The concept of 'borrowing' disregards the source of this transformation, whether it is from the native speakers of a certain language/dialect who attempt to adapt some linguistic features of another language, or whether it is the case that non-native speakers of a language/dialect impose their native language features into other language/dialect(s) (Haspelmath 2009: 36).

Although, in the past, a considerable amount of literature has been published on this topic, it seems that the general meaning of LB was broadly defined by Muslim linguists when they were dealing with this phenomenon.[105] In fact, the aim of these scholars was to explain features of the linguistic situation of this phenomenon with regard to *al-Muʿarrab* in Classical Arabic, as discussed below. A wider meaning of 'borrowing' such as "the incorporation of foreign elements into the speakers' native language", as proposed by Thomason & Kaufman (1988: 21), aims to distinguish between this term and the more general 'interference', or to exclude the more specific 'substratum interference'. This generalisation of the concept of LB is intended to distinguish between two types of borrowing: 'non-lexical (structural) borrowing' and 'lexical borrowing' (Versteegh 2001: 472f). This specific point is highlighted in detail below.

For the purpose of this research, the definition of LB proposed above by Crystal (2008) will be adopted. This practical definition, as noted by Ngom (2002: 28-29), will facilitate the inclusion of any linguistic elements (whether phonological, morphological, syntactic, or lexical). Thus, this research will study the lexical elements borrowed by HA speakers, mainly from the Shanāqiṭa Community, from UHA. The main attention of this research will be on only the phonological processes associated with these lexical elements rather than morphological, syntactic and semantic ones. Moreover, the borrower has to be a native

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[105] See, for example, Sībawayh (1988: 4/303ff) and Al-Jawālīqi (1969: 51ff).

speaker of HA belonging to this community in Medina, as will be explained in detail in Chapter Four.

LB, one of the main outcomes of language/dialect contact and the process of this linguistic global phenomenon, requires (in general) two languages or varieties; the source of the loanwords and the recipient of these loanwords. The first part of this process is the *donor language*[106], the language or variety, from which the loanword has been borrowed. The second part is the *recipient language*, the language or variety into which the loanword has been integrated. Both of these terms have synonyms in the literature (cf. Haspelmath 2009: 37). For the former, 'source language' and 'borrowing language' are the alternatives, and for the latter 'model language' and 'replica language' are synonyms.

It seems that the study of LB, in the context of bilingualism (e.g. LB between English and French, Arabic and Spanish) has received greater attention in the literature than LB, in the context of bidialectalism (e.g. LB between British and American English or different Arabic dialects). This may be due to the fact that each language has its distinguishable phonological and morphological systems, even in the case of different languages which belong to the same language group, e.g. Arabic and Hebrew (Semitic), English, French, and Spanish (Indo-European). In contrast, the study of LB in bidialectalism has not received as much attention in the literature. The complexity of the cross-dialectal borrowing situation may have played a role in drifting away the attention of linguists from considering this phenomenon. This could be due to the fact that, in the study of LB within the same language varieties/dialects, interference sometimes takes place between the language varieties/dialects, which may lead to undistinguishable phonological or morphological systems. This is more

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[106] This term is based on the fact that this linguistic process mostly occurs when two different languages come into contact with each other, which is the most common situation in this process. However, even the *donor dialect* term is theoretically correct, but it is not very common in the literature of lexical borrowing. See, for example, Wolfram (1999).

likely to happen when two or more varieties/dialects belonging to the same or close geographical areas are in direct contact.

In the case study for this research, the previous statement may be applied, because HA and UHA belong to the same language, Arabic. However, these two Arabic dialects belong to distant geographical areas, i.e. Hijaz (Saudi Arabia) and Mauritania. This fact somehow facilitates the recognition of the different linguistic elements of the two dialects. The fact that HA is a dialect spoken by the SC, who were originally, nomadic Bedouins, while UHA is a sedentary dialect, is inevitably reflected in the linguistic elements of the two dialects.[107]

3.2 Overview of lexical borrowing in Arabic

3.2.1 Historical background

It is a universal phenomenon that all human languages are subject to influence from each other in various linguistic ways. Even languages that have a distinctive background, such as Arabic, the language of the two main sources of Islam, the Quran and the Hadith, are not exceptions. Moreover, according to numerous medieval linguistic works, the most important source of Islam, 'the Quran', contains a number of words which have non-Arabic origins, such as /sˤiraːtˤ/ 'path' and /firdaws/ 'paradise', which were borrowed from Coptic an Greek, respectively (cf. Khalīl 1978; Jeffery 2007) .

Moreover, the possibility of CA being influenced by other languages is corroborated by the Quran, as mentioned above, and encouraged many Muslim scholars (Arabs and non-Arabs) to pay attention to it when dealing with *tafsīr* (the interpretation of the Quran). The first and most important Muslim scholar to mention some words in the Quran that have foreign origins was Ibn Abbās (the cousin of the Prophet Muhammad (pbuh), who

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[107] See Chapter Two for more details about the linguistic elements of both dialects.

highlighted the phenomenon of LB in Arabic in the 7th century. Therefore, according to Bakalla (1984: 71), he is considered to be the first Muslim linguist in history .

Although LB is acknowledged in Arabic, in general, and in the Quran, in particular, some well-known medieval Muslim scholars, such as Abu-ʿUbayda (d. 824) denied it was so, and even stated, that whoever claims that the Quran includes non-Arabic words, indeed, commits a huge transgression. However, it seems that the majority of early Muslim scholars disagreed with Abu-ʿUbayda's opinion, including the most famous Muslim linguists Sībawayh (760- 796) [108] and Abu-ʿUbayd Ibn Sallām (770-٨٣٨) (Al-Ṣāliḥ 1962: 369f). Furthermore, Ibn Jarīr Al-Ṭabarī, who was one of the most prominent Muslim scholars of the interpretation of the Quran in the 9th century, claimed that the Quran includes words from all tongues (ibid: 368). It is true to say that although the previous statement of Al-Ṭabarī was an exaggeration, it is confirmation of the fact that the most ancient and trustful source of the Arabic language, the Quran, includes some words of non-Arabic origin, which had been integrated into Arabic prior to the time of its revelation.

The study of words of non-Arabic origin in the Quran, or what was named later as *al-Muʿarrab* in the Quran was the beginning of the study of LB in Arabic, which then extended to the study of this linguistic phenomenon in all forms of Arabic. Moreover, it resulted in providing new rules for deducing the characteristic of those foreign words which had entered Arabic and their linguistic features (Khalīl 1978: 138).[109]

The general framework of LB is the transfer of the vocabulary of a certain civilisation or culture to another nation or society, whether this vocabulary consists of names or concepts. This linguistic behaviour is a universal phenomenon which encompasses all languages.

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[108] His well-known Arabic grammar book al-Kitāb includes many rules of Arabic words that have non-Arabic origins.
[109] This will be discussed below.

Arabic, for instance, needed to borrow large amounts of vocabulary to express the elements of the new cultures (i.e. Persian, Turkish, etc.) that were integrated into the medieval Islamic civilisation, when Islam and Arabic were dominating. Many of these cultural expressions, and vocabulary, came from Persia and other places, becoming a new component of the medieval Islamic civilisation and Arabic lexicon from that period of time until the present day. The integration of foreign words into Arabic enriched the Arabic lexicon with cultural mosaic vocabularies; before Islam, the lexicon had been dominated by Arabic cultural components.

It seems that many foreign words entered Arabic during the period of the Umayyad Caliphate (662-750). During this particular period of time, the codification of a fundamental grammar of Arabic started from the idea of Abu Al-Aswad Ad-du'ali (603-688), in order to protect the original Arabic templates from mixing with non-Arabic ones, and was completed by Sībawayh (760-796), the young Persian linguist who had been taught by the Arab linguist Al-Khalīl Ibnu Ahmed Al-Farāhīdi (718-791). Sībawayh's book *al-Kitāb* later became the most influential source of Arabic grammar, or "the Quran of al-naḥw 'Arabic grammar'", as some of Sībawayh's followers described it (Alshangiti 2006: 8f). It is worth mentioning that none of the earlier works on Arabic, such as what was mentioned about Abu Al-Aswad Ad-du'ali, reached us as written work before Sībawayh's work. The book *al-Kitāb* was not only the first Arabic grammar book but was also the first 'book' produced in Arabic (cf. Carter 2004).

During the Abbasid Caliphate period (750-1519), the LB process expanded hugely, and this can be seen from any LB source from that period of time, such as *al-Mu'arrab*, the book written by Al-Jawālīqi (1073-1145) (cf. Al-Jawālīqi 1969). It is clear from this book that the majority of words of non-Arabic origin (or the Arabised words) are Persian, which can be attributed to the fact that Persian civilisation and its language had more influence on Arabic

than any others. This might have been Sībawayh's motivation for dedicating a chapter in his book to the phonemic substitution in some Persian-origin words (cf. Sībawayh 1988: 4/305).

At the current time, we can find large-scale borrowings which have entered Arabic at both levels of the language, Modern Standard Arabic or Arabic vernaculars, in the context of cultural influence, such as the many English loanwords that have entered Arabic. While Arabic lexicon was influenced by different cultures during all of its historical stages, pre-Islamic, early-Islamic, and medieval Islamic eras, it also had a big influence on other cultures, especially during the medieval Islamic period, which can still be seen in many lexical elements. Sapir (1921: 207) stated that: "There are just five languages that have had an overwhelming significance as carriers of culture. They are classical Chinese, Sanskrit, Arabic, Greek, and Latin". Therefore, in his words, Arabic entered "into the lexical heart of Persian and Turkish" (ibid).

3.2.2 The donor languages of loanwords in Arabic

There have been active and important attempts, throughout different periods of Islamic history, to extract and study the words that the Arabic language borrowed from other languages. This includes attempts made in the pre-Islamic era, early Islamic era and later historical stages, especially the Abbasid Caliphate period (662-1519). As was mentioned above, according to some narratives, the first endeavour was by Ibn ʿAbbās, afterwards this work became noticeably wider, and more specialised, especially in the Abbasid Caliphate period.

It seems that the first book showing interest in *al-Muʿarrab* was Al-Farāhīdi's dictionary *al-ʿAyn*, which seems to have influenced his student Sībawayh, who wrote a whole chapter in *al-Kitāb* dealing with this phenomenon (cf. Baalbaki 2014: 161ff). It is very obvious from these early studies of borrowings in Arabic, or *al-Muʿarrab*, and from the

preceding studies[110] that most Arabic words of foreign origin were borrowed from Persian. This fact seems to be due to the longstanding contact between Arabic and Persian, even before the advent of Islam, and which became more powerful and influential after Islam spread throughout the Persian Empire. Due to the large scale of the borrowings from Persian[111] throughout different stages of Arabic, some Muslim scholars may describe them as *al-ʾaʿjami* (non-Arabic or foreign), when they actually mean Persian-origin words (Blāsy 2001: 90). This mutual influence between Persian and Arabic, over a long period of time, is still visible in both languages, most notably in the large scale Persian-origin vocabulary in CA and MSA (and its varieties and dialects), and vice versa in Persian. In addition, to this day the Persian system of writing is still Arabic.[112] The close relationship with Persian societies amongst the Muslim society at the time of the Abbasid Caliphate, which includes language and political roles, may be summarised in the words of one of the most important Abbasid (and Muslim in general) Caliphs in history, Al-Ma'mūn,[113] who said: "the Persians ruled for a thousand years and did not need us (Arabs) even for a day. We have been ruling them for one or two centuries and cannot do without them for an hour" (Spuler 1995: 52).

In the above-mentioned book, *al-Muʿarrab*, Al-Jawālīqi (1073-١١٤٤) (cf. Al-Jawālīqi 1969) mentioned more than 700 loanwords in Arabic, the majority of them of Persian origin, and about 130 words of which were proper nouns (Abdul-Raḥīm 1990: 7). Therefore, special attention was paid to those Arabic words of Persian origin, especially by Persian Muslim linguists. For instance, the well-known Arabic linguist, Sībawayh, devoted a whole chapter in

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[110] For instance, Al-Jawālīqi (1969) and Al-Suyūṭi (1998) etc., in addition to numerous Arabic lexicons, e.g. Ibn Manẓūr (n.d.). Also, modern studies, such as Abdul-Raḥīm 1975, 1990; Baalbaki 2014.

[111] This means the Pahlavi language, which had influenced Arabic in the pre-Islamic era and in the following eras, not Modern Persian, as will be explained below.

[112] This influence of Arabic writing was clearly seen in Ottoman Turkish before the collapse of the Ottoman Empire and still in the modern time in languages like Kurdish and Urdu, not to mention the huge number of Arabic-origin words in these languages.

[113] His mother was Persian.

his book to explaining some of the rules of Persian loanwords (*al-Muʿarrab*) in CA,[114] as mentioned above. It is worth pointing out that the Persian loanwords in CA that were mentioned by Sībawayh and others belonged to the Middle Persian language or the Pahlavi language, which differs significantly from the Modern Persian spoken by contemporary Iranians (Abdul-Raḥīm 1990: 31-32).

Table 3.1 below shows examples of loanwords from Persian that entered Arabic in the Middle Ages and are still in use at the current time:[115]

Table 3.1: Examples of loanwords from Persian

Example	Gloss
خربز xirbiz	melon
ديوان diːwaːn	bureau
باذنجان baːðindʒaːn	eggplant
خيار xijaːr	cucumber
فنجان findʒaːn	cup
درهم dirham	dirham
برنامج barnaːmadʒ	program
زنجبيل zandʒabiːl	ginger
بستان bustaːn	garden
جاموس dʒaːmuːs	buffalo
سكر sukkar	sugar
نموذج namuːðadʒ	model, sample
جورب dʒawrab	sock
ميدان majdaːn	race ground, field
صندل sˤandal	sandalwood

Greek is also one of the main languages from which Arabic borrowed many names and terms. Although Arab linguists claimed that many words were borrowed from this ancient language in the pre-Islamic and early Islamic eras, needless to say, the vast majority of these words entered Arabic in the Golden Age. During this period of time, the Abbasid Caliphate period, especially at the time of Al-Ma'mūn (786-833), many Greek books on different subjects, such as medicine, philosophy and astronomy, were translated into Arabic (cf. Khalīl 1978:

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[114] See Sībawayh (1988: 4/305).

[115] For further explanation and more examples of Arabic words that originated from Persian and other languages, see Al-Jawālīqi (1969), Sībawayh (1988: 4/305ff), Abdul-Raḥīm (1990: 31ff), Al-Ṣāliḥ (1962: 371ff), Khalīl (1978:131ff).

306ff; Gutas 1998: 75ff). The following table shows some Arabic words that were borrowed

from Greek and are still frequently used in Standard Arabic and current Arabic dialects (cf.

Al-Ṣāliḥ 1962; Khalīl 1978; Abdul-Raḥīm 1990; Gutas 1998):

Table 3.2: Examples of loanwords from Greek

Example		Gloss
أسطول	ʔustˤuːl	navy
سجلّ	sidʒill	registry
فندق	funduq	hotel
إقليم	ʔiqliːm	region
فلسفة	falsafa	philosophy
قانون	qaːnuːn	law
بطاقة	bitˤaqah	card
بلغم	balɣam	phlegm
موسيقى	muːsiːqaː	music
جغرافيا	dʒuɣraːfja	geography
ياقوت	jaːquːt	ruby
قرطاس	qirtˤaːs	leaf
أسقف	ʔusquf	bishop
إنجيل	ʔindʒiːl	Gospel

The third language from which Arabic borrowed a good number of words is Latin. This

language was the official language of the Roman Empire from BC 64 until the Muslim

conquest of Syria (636), when Damascus became the capital of the Umayyad Caliphate (662-

750). The loanwords from this language entered Arabic via Syria according to Abdul-Raḥīm

(1990: 57), and was facilitated by the proximity of the Levant to the Arabian Peninsula, and

then by Damascus becoming the capital of the Islamic State (Umayyad Caliphate). The table

below shows some loanwords from Latin to CA which are still in use in MSA and in some

Arabic modern dialects (cf. Al-Ṣāliḥ 1962; Khalīl 1978; Abdul-Raḥīm 1990):

Table 3.3: Examples of loanwords from Latin

Example		Gloss
صابون	sˤaːbuːn	soap
قنديل	qindiːl	candle
ا(س)صطبل	ʔisˤtˤabl	stable
أوقية	ʔuːqijjah	ounce
فرن	furn	kiln
ميل	miːl	mile

قيصر qajsˤar	Caesar
بوق bu:q	horn
برقوق barqu:q	plum

There are a few words in Arabic that have been attributed to the Syriac language in the literature, such as الطور /atˤ-tˤu:r/ 'the mountain', عَدْن /ʕadn/ 'paradise', and اليَمّ /al-jamm/ 'the sea' (Khalīl 1978: 131). A number of other languages have been mentioned in the literature as participating in enriching the Arabic lexicon including: Hebrew, from which Arabic borrowed some religious words, such as the names of Prophets (peace be upon them), e.g. موسى /mu:sa/ 'Muses', إبراهيم /ʔibra:hi:m/ 'Abraham', إسماعيل /ʔisma:ʕi:l/ 'Ismail.[116] Moreover, Ethiopian is represented in the Arabic lexicon by a few words noted in the literature: for instance, برهان /burha:n/ 'proof', مصحف /musˤħaf/ 'the Quran (the book)', مشكاة /miʃka:h/ 'niche'. These are the most obvious languages mentioned in traditional Arabic studies. The main elements of the traditional linguistic approach towards borrowings in Arabic will be highlighted below.

Studying LB is valuable as it helps to draw a wide picture about the relationship between the donor and the recipient language. As discussed in Chapter Two, the relationship between HA and its main language donors, i.e. Berber (Zenaga variety) and French, to some extent becomes clear from analysing the main semantic fields of borrowings from these languages in the HA lexicon. However, this task is very difficult to achieve when looking through the traditional studies of *al-Mu'arrab*, as it is not feasible to determine the thematic categories that the lexical borrowings could be classified into. This seems to be due to the multitudinous meanings of these borrowings and differences between the traditional resources. Therefore, very often multiple meanings can be found for the same borrowing; sometimes it may refer to completely different meanings. This matter seems less problematic

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[116] There is another view concerning the borrowing of the names of Prophets (peace be upon them) from Hebrew. It can be summarised that Arabic borrowed these names from Syriac, which borrowed them from Hebrew, because the initiation of *hamza* in (most of) these names is a Syriac form not a Hebrew one. See Abdul-Raḥīm (1990: 62).

in the studies of *al-Mu'arrab* (or *at-ta'rīb* 'Arabisation') in the last two centuries as the means of eliciting the data of *al-Mu'arrab* has improved significantly. In his study of the influence of European languages on Arabic in the 19th century, Newman (2002b: 10) set up nine thematic categories in order to interpret the relationship between Arabic and the European donor languages. These semantic categories are as follows:

- state and economy

- science and technology

- transport, communications and travel

- arts, entertainment and education

- units of measurement, weight, etc.

- food and drink

- the military

- religion (sc. Christianity).

- other (miscellaneous).

3.2.3 Traditional linguistic approach towards lexical borrowing (al-Mu'arrab)

al-Mu'rrab is a very old term used in Arabic literature, for instance by Sībawayh (760-796) in *al-Kitāb*, Al-Jawhary (d. 1003) in his book *Al-Ṣiḥāḥ*, and Al-Jawālīqi (1073-1145) in his important book *al-Mu'arrab*, and by many others. The general significance of this term according to these resources is the linguistic elements that Arabic has taken from other languages. This can be clearly noted from Sībawayh's book, in which one of the chapters was titled: *ha:ða: ba:bu ma: ?uʕriba mina al-?aʕdʒamijj* 'This is the chapter of that which has been Arabised from non-Arabic'.[117] Al-Suyūṭi defines *al-Mu'arrab* as "the words used by

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[117] See Sībawayh (1988: 2/232).

Arabs that have been set for certain concepts not in their language" (Al-Suyūṭi 1998: 1/268).[118]

When considering the different traditional approaches towards *al-Mu'arrab*, several perceptions can be noted from the literature. Importantly, these traditional studies set some specific characteristics which enable non-Arabic words to be recognised. These rules were effective, due to the fact that some of those who set them, spoke some of the languages from which Arabic had borrowed. For instance, Sībawayh, Abū Ḥātim, Al-Jawhari, Al-Azhari, and others spoke Persian. The most common rules are demonstrated below:[119]

- When a word includes two incompatible sounds that cannot be in the same word in Arabic. For instance:

  ق (qāf) with ج (jīm): قبج /qabadʒ/ 'partridge', جوق /dʒawq/, ' a group of people or animals'.

  ص (ṣād) with ج (jīm): صولجان /sˤawladʒa:n/ 'sceptre', جصّ/dʒisˤsˤ/ 'gypsum'.

  س (sīn) with ذ (dhāl): أستاذ /ʔusta:ð/ 'teacher or scholar', ساذج /sa:ðidʒ/ 'naive'.

- When some sounds exist in a word in an order which is contrary to their usual arrangement in Arabic. For instance:

  ز (zāj) preceded by د (dāl): مهندز /muhandiz/ 'engineer'.[120]

  ن (nūn) precedes ر (rā'): زنّار /zunna:r/ 'belt, girdle'.

- When some words violate the Arabic frequent noun stem forms (*'awzān*). Therefore, there are certain dedicated noun stem forms for borrowed nouns. For instance: فاعيل *fā'īl*: قابيل /qabi:l/ 'Cain', شاهين /ʃa:hi:n/ 'Indian falcon' and فاعُل *fā'ul*: آجُر /ʔa:dʒur/ 'baked brick', كابُل /ka:bul/ 'Kabul', and فَعْلِل *fa'lil*: نرجس /nardʒis/ 'narcissus'.

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[118] My translation of Al-Suyūṭi's definition.

[119] See Al-Jawālīqi (1969:٥٩), Abdul-Raḥīm (1990:١٨), Khalīl (1978: ١٣٨).

[120] Another variety of مهندس /muhandis/, which is an agent noun formed from the borrowed word (هنداز) /handa:z/ from Pahlavi (the Middle Persian language). See Abdul-Raḥīm (1990:640).

- The multitude of the pronunciation forms is a strong indicator of the non-Arabic origin of a certain noun. This can be due to the different ways in which that noun is Arabised. The following two nouns are good examples of this rule: ميكائيل /miːkaːʔiːl/, ميكائل /miːkaʔil/ 'Michael (the angel)', and عَرْبون /miːkal, ميكئل /miːkaːʔil/, ميكائل /miːkim/ 'down payment'.[121] عُرْبون /ʕurbuːn/, عُربان /ʕurbuːn/, أُربان /ʔurbaːn/, أربون /ʔurbuːn/, عَرْبون /ʕarbuːn/,

Although the phonological and morphological rules, adopted by the traditional scholarly work in *al-Muʿarrab* are, to a large extent, valid and useful for this topic, this approach, however, has some deficiencies. These deficiencies can be noted in different aspects concerning the study of *al-Muʿarrab*. For instance, there is a lack of accuracy when attributing some Arabic words to their donor languages. This imprecision might be mainly due to unfamiliarity with the language families, at the time when the studies were conducted; therefore, some of these medieval scholars depended on the descriptions of preceding scholars without being able to verify, or validate, the origins of these borrowings in Arabic. This can be clearly seen in some Arabic words that are attributed to some Semitic languages, while in actual fact these words are commonly shared between the Semitic languages, e.g. كفر/kafar/ 'to cover, disbelieve'. This word is attributed in the literature to the Hebrew, Aramaic, and Abyssinian languages, while in actual fact it is shared between the Semitic languages (cf. Gesenius 1957: 497; Khalīl 1978: 141; Blāsy 2001: 287; Baalbaki 2014:161ff).

In addition, the traditional approach seems to have a tendency to relate the majority of borrowings to Persian, which is to some extent true; however, it is not always correct. This might be due to the reputation of the Persian language at the time such studies were conducted. In addition, there are oversights in the attribution of many words, along with being content with simply referring to these words as being *al-ʾaʿjami* 'non-Arabic' words

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[121] See also the roots: عربن and مكا in Ibn Manẓūr (n.d.).

(Khalīl 1978: 143; Al-Ṣāliḥ 1962: 372). The other noticeable point in both the traditional studies, and in contemporary resources which depend on the traditional resources, is the confusing transliteration when addressing the native pronunciation of the loanwords. This particular point seems to play an important role in the loss of the original forms of the borrowings. For instance, كنز /kanz/ 'treasure' is attributed in both the traditional and contemporary studies to the Persian word كنج /kandʒ/ while it is گَنج /gandʒ/ in Modern Persian and Pahlavi.[122]

These deficiencies in the traditional studies on the Arabic loanwords do not diminish their importance, especially if we look at the circumstances surrounding the period of time when those studies were conducted. At that time, it was difficult, if not impossible, to determine the sources of many words that had been borrowed in the pre-Islamic and early Islamic eras. It is, however, a fact that Arab linguists who carried out early Arabic studies were not sufficiently able to recognise the origins of the foreign linguistic elements that entered Arabic via borrowing due to the absence of diachronic studies (historical linguistic) of loanwords. This method of studying loanwords continued throughout the different stages of Arabic history until the current time. This fact might be the motivation for conducting an etymological study of the Arabic lexicon, which has not yet been done, apart from the uncompleted work by the German scholar, August Fischer, in the first half of the 20th century (cf. Haywood 1965: 110ff; Bahumaid, 1990: 25f).

3.3 Linguistic process of borrowing

It is important to mention that the traditional studies (e.g. *al-Kitāb, al-Muʿarrab min al-kalam al-ʾaʿjami,* old Arabic lexicons) pointed out very important rules of Arabisation. It seems that Sībawayh generalised the purpose of this linguistic device that Arabs use to adapt loanwords

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[122] See MacKenzie (1971: 35).

in terms of their 'desire' to assimilate any loanwords to the Arabic phonological and morphological patterns. He stated:[123]

> When they [Arabs] want to arabicize foreign words, they assimilate them into the structure of Arabic words in the same manner. Often they change the condition of a word from what it was in the foreign language, by assimilating to Arabic letters..., and replacing a letter, even though it be like Arabic, by another one. Furthermore, they change the vocalization and the position of augmentative letters, without reaching by it the Arabic word structure. Frequently, they shorten, as in the nisbah-construction, or they add, whereby they either attain the Arabic structure or not, as in the case of: /ʔaːdʒur/, /ʔibriːsam/, /ʔismaːʕiːl/, /saraːwiːl/, /fajruːz/, and /al-qahramaːn/.

It can be understood from the last part of Sībawayh's statement that Arabs tend to change the phonological and morphological patterns of the borrowings, regardless of whether these changes "attain the Arabic structure or not". Moreover, attaining the harmony of the sounds in the borrowings, according to Al-Kārūrī (1986, cited in Al-Qinai 2001: 111), is the reason behind the fact that Arabs always change some linguistic elements. This might be what Sībawayh meant when he stated that these changes might not attain the "Arabic structure". Al-Jawālīqi (1969: 54) described the two main types of phonological change that Arabs used to adapt loanwords when Arabising foreign words, saying that they "often change loan-words… by substituting foreign phonemes by their nearest homorganic Arabic equivalents. At times, they may even replace foreign phonemes by heterorganic substitutes. It is imperative to accommodate such changes lest Arabic should be infiltrated by 'foreign' phonemes".[124]

3.3.1 Phonological integration

The phonological integration of loanwords into Arabic generally includes four phonological processes, i.e. substitution, insertion, omission and metathesis.

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[123] The translation of the Arabic text is made by Stetkevych (1970: 59); see also Sībawayh (1988: 4/304).
[124] This translation of the original Arabic text is made by Al-Qinai (2001: 117); see also Kopf (1961).

3.3.1.1 Substitution

3.3.1.1.1 Consonant substitution

The changes involving foreign consonants in non-Arabic words can be classified into two categories: the replacement of sounds in non-Arabic words that exist in the Arabic phonological system, and the replacement of those that do not exist in it (see Al-Qinai (2001: 111). The first type involves the replacement of the foreign sounds that exist in the Arabic phonological system with other Arabic sounds. This is not always done in order to adapt the Arabic phonological sound, but it could be to ensure the harmony of the sounds, as mentioned above, or sometimes for an unknown linguistic justification. However, Ali (1987: 110) ascribed the tendency of early Arabs to velarise some foreign sounds that existed in Arabic (e.g. /t/, /d/, s/, and /k/ becoming ط /tˤ/, ض /dˤ/, ص /sˤ/, ق /q/, respectively) as thus preserving the character of Arabic: "Emphatic sounds, being among the distinguishing features of Arabic must thus have been felt to be more capable of embodying this distinction rather than the non-emphatic which are common to most languages". This linguistic behaviour is still observed in MSA and some Arabic dialects in the Arab world.

Before reviewing some frequent rules for the Arabisation of foreign loanwords, it is worth mentioning some infrequent changes that take place in some Arabised loanwords. For instance, سراويل /sara:wi:l/ 'trousers' (sing. سروال /sirwa:l/) can be traced back to the Persian word شراويل /ʃara:wi:l/,[125] according to Sībawayh (1988: 4/304).[126] It seems that sometimes Arabs tend to change some sounds in the borrowed words to their corresponding Arabic equivalents to make them more harmonious with the Arabic phonological system. For instance, ث /θ/, خ /x/, and ت /t/ in توث /tu:θ/ 'blueberries', خُربا /xurba/ 'chameleon'/, and تابه

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[125] The original form of this word (sing.) in Pahlavi and Modern Persian is شلوار /ʃalwa:r/ (see MacKenzie 1971:79, 137). It seems that two changes had been occurred in this word to be in Arabic form. First, sound replacement, i.e. /s/ instead of /ʃ/ and segmental metathesis.
[126] See also Al-Jawālīqi (1969:55).

/ta:bah/ 'frying-pan' are changed to their corresponding Arabic equivalents when Arabising these words to ت /t/, ح /ħ/, and ط /tˤ/, respectively, as in توت /tu:t/, حرباء /ħirba:ʔ/, and طابَق /tˤa:baq/ (Al-Qinai 2001: 111).

There are more frequent segmental changes in the loanwords in Arabic, which can be classified into two types: essential phonological substitution and non-essential phonological substitution.[127] It is worth pointing out that it is difficult to set comprehensive rules for the second type of phonological substitution which can include all phonological substitutions which occur when Arabic borrows some linguistic elements from other languages. Moreover, the rules proposed by many Arabic linguists from Sībawayh onwards seem to be based on selections of rules, without aiming to present comprehensive rules which govern this type of phonological substitution in Arabic loanwords. This might be clearly understood from Sībawayh and others who addressed these rules, saying: "...وربما أبدلوا...." " "...and they [Arabs] probably substitute…".[128] On the other hand, they display certainty in proposing the first type of phonological substitution rules; this can be interpreted as demonstrating their confidence in the comprehensiveness of the rules of essential phonological substitution, whereas they do not display such confidence in non-essential phonological substitution. Both types of phonological segmental change rule are exemplified in the following tables (cf. Al-Qinai (2001: 112ff).

It is worth noting that the examples given below for non-European languages entered into Arabic in the pre-Islamic and/or the medieval time, such as Persian, Latin, Greek, and Syriac. Regarding Turkish, it is most likely to have entered Arabic mostly when the Ottoman Empire ruled the entire Muslim word.[129] In the case of the European language examples,

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[127] See Abdul-Raḥīm (1990: 65).
[128] See Sībawayh (1988: 4/305-307).
[129] Although they are still frequently used in MSA and in some Arabic modern dialects.

these are more likely to have entered Arabic in the 19th century, when these languages started

influencing Arabic substantially (cf. Newman 2002b).

Table 3.4: Examples of frequent non-essential consonantal substitution in Arabic loanwords

Example	Gloss	Donor language[130]	Phonological substitution
/ʔaɣustˤus/ /waːtˤ/	August watt	Latin 'Augustus' English	t→tˤ
/dʒisˤsˤ/	plaster	Persian /kadʒ/[131]	dʒ →sˤ
/dirham/	dirham	Greek /dhrakhmi/	x →h
/muːdˤa/	fashion, vogue	Italian 'moda'	d → dˤ
/barmiːl/	barrel	Spanish 'barril'[132]	r → m
/tˤalsam/	talisman	Greek /telezma/	z → s
/buːliːsˤa/	insurance policy	Italian 'polizza'	z →sˤ
/buːðˤa/	ice-cream	Turkish /boza/	z →ðˤ
/sˤaːluːn/	saloon	English/French	s → sˤ
/balɣam/	phlegm	Greek /fleghma/	f →b
/θuːm/	garlic	Hebrew /foum/	f → θ
/sˤaːdʒ/	bread tin	Turkish 'sac'	k → dʒ
/xartˤuːʃ/	cartridge	French 'cartouche'	k → x
/ban(a)duːra/	tomato	Italian 'pomodora'	m → n
/buːtaqa/	melting pot	Persian /buːtəh/	h → /q

The most obvious and frequent change that occurs in Arabic loanwords involves changing the

non-Arabic sounds to Arabic ones. This change results in different alternative sounds

replacing the non-Arabic sounds. The non-standard Arabic sounds mainly include four

sounds: /p/, /v/, /tʃ/, /g/. It seems that the most frequent allophones of these sounds, at least in

MSA, are /b/, /f/, /ʃ/, and /dʒ/, respectively. However, other allophones are also attested with

these non-Arabic sounds, especially in the European origin borrowings. For instance, /v/ has

in addition to /f/ as an allophone: /b/ and /w/, and /g/ has another three allophones: /ɣ/, /q/,

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[130] In this column in this table, and in the following ones, single inverted commas ' ' are used, with the borrowings according to their spelling in the spoken donor languages. When obliques // appear, it is aimed to be used for phonetic transcription according to the current pronunciation of the borrowing in Arabic and it is also used for the original pronunciation of the word in the donor language when the donor language is no longer used as the conversational language. The transliteration of these kinds of words is done according to the Arabic resources used for the examples in these tables.

[131] The sound ج in this Persian word is transliterated as it appears in the Arabic resources used in this section; however, it is the Persian sound گ /g/ according to Modern spoken Persian and Pahlavi (Middle Persian) (as mentioned earlier), see MacKenzie (1971: 35), Doctor (1882: 336).

[132] The attribution of the Arabic word برميل to Spanish *barril* is according to Al-Qinai (2001: 113); however, it might be from the English word 'barrel'.

and /k/ (cf. Newman 2002b: 13). Table 3.5 below exemplifies some alternative segments to the non-Arabic sounds.

Table 3.5: Examples of frequent essential consonantal substitutions in Arabic loanwords

Example	Gloss	Donor language	Phonological substitution
/batˤaːtˤis/ (/batˤaːtˤa/)	potato	English	p → b
/ʔisfandʒ/	sponge	Greek /spongos/	p → f
/ʔunʃuːdʒa/		Spanish 'anchova'	v → dʒ
/fajruːs/	virus	English	v → f
/bahlwaːn/	clown	Turkish 'pehlivan'	v → w
/ʔinʃ/ /ʃiːk/[133]	inch cheque	English	tʃ → ʃ
munuluːdʒ/ /dʒumruk	monologue customs	English or French Turkish 'gümrük'	g → dʒ
/ɣaːz/	gas	English or French	g → ɣ
/karaːdʒ/[134]	garage	English or French	g → k
/qirʃ/	piaster	German 'groschen'	g → q
muntaːdʒ/ /ridʒiːm/	monologue customs	French 'montage' French 'régime'	ʒ → dʒ

3.3.1.1.2 Vowel substitution

The frequent essential phonological substitution of vowels can be clearly identified by the substitution of non-Arabic vowels with Arabic ones. The most common vowels, according to Abdul-Raḥīm (1990: 70), that do not exist in Arabic are: /e/ (close-mid front unrounded vowel), e.g. /e/ in /ten/ in English, /o/ (close-mid back rounded vowel), e.g /o/ in 'gros' 'big' in French, and /y/ (close front rounded vowel)[135]. These three non-Arabic vowels have been Arabised as /iː/, /a/ and /uː/, respectively. The following examples demonstrate the Arabisation process of these vowels: /depak (Pahlavi)[136] is realised as /diːbadʒ/ 'silk garment', /goːhr/ (Pahlavi)[137] is realised as /dʒawhar/ 'jewel, substance, essence, nature' and 'jupe' [ʒyp]

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[133] It is pronounced as /ʃeːk/ in different Arabic dialects.
[134] It is pronounced in some Arabic Eastern dialects, e.g. UHA as /garaːdʒ/.
[135] According to IPA description. See International Phonetic Association (1999: 180).
[136] See Abdul-Raḥīm (1990: 291), in MacKenzie (1971: 26): /deːbag/.
[137] In Modern Persian: گوهر, see MacKenzie (1971: 36), Abdul-Raḥīm (1990: 238).

'skirt' in French is realised as /dʒuːb/.[138] It seems, however, difficult to draw specific criteria for how foreign vowels are assimilated into Arabic rather than the "substitution and/or lengthening" of vowels in loanwords (Hafez 1996). Therefore, this assimilation seems to depend on how the speaker approximates them rather than particular phonological alternations (Al-Qinai 2001: 122), especially in the case of vernacular Arabic. Consequently, they are more likely to vary from one speaker to another, one variety to another and one speech community to another, even if the same word comes from the same donor language. For instance: 'douche' /duʃ/ (French) → HA /duːʃ/, UHA /duʃʃ/. Table 3.6 shows more examples of vowel substitution in four very frequent borrowings in MSA and three Arabic dialects, i.e. HA, UHA and Egyptian Arabic[139]:

Table 3.6: Examples of the phonological substitution of vowels

Example	MSA	HA[140]	UHA	Egyptian Arabic
'petrol' /petrəl/ (English)	/bitruːl/	/batruːl/	/batroːl/	/batroːl/
'docteur' /dɔktœʀ/ (French)	/duktuːr/	/daktuːr/	/daktoːr/	/duktuːr/ /daktoː(uː)r/
'double' /dubl/ (French)	-	/duːbla/	/dabal/	/dubl/
'September' /septembər/ (English)	/sibtambar/	/səbtambərˤ/	/sabtambar/	/sibtimbi(a)r/

3.3.1.2 Addition (intrusion)

One linguistic alternation attested in Arabic foreign borrowings is the addition of certain linguistic elements to adapt the new integrated words into the language. This linguistic behaviour is almost universal amongst languages to help ease the linguistic differences between recipient and donor languages. The most common reason for phonemic addition in loanwords is the presence of a sequence of phonemes, i.e. a consonant cluster, which is allowed with restrictions in Standard Arabic (cf. Al-Ani 1970: 78ff). This is also called *iltiqāʾ*

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[138] See Wehr (1980: 145). In HA, this French word is realised /ʒəb/.

[139] The HA and UHA usages, of these examples, are in accordance with the current usages of both dialects in Medina. For MSA usage of these borrowings, see Majmaʿ Al-Lughah Al-ʿArabīyyah (2004) (Al-Muʿjam Al-waṣīṭ) and Egyptian Arabic usage: see Hinds & Badawī (1986).

[140] In Mauritania.

al-sākinayn 'the consonant meet' (consonant clusters) in traditional Arabic studies, in which several ways to avoid this cluster in native Arabic words are addressed under the theme of *al-takhalluṣ min iltiqā' al-sākinayn* 'the avoidance of consonantal clusters'.

There is huge debate surrounding this subject in traditional studies and modern studies of Arabic, which revolves around the concept of *al-sākin* (Abāyna 1999). The traditional approach of this topic can be summarised as follows. There are four main cases of *iltiqā' al-sākinayn*. The first case is the cluster of two or more consonants, the sequence of *madd* 'long vowel' and a consonant (or vice versa); and the sequence of two long vowels is considered as *iltiqā' al-sākinayn*, which requires phonological changes, most frequently *ḥadhf* 'elision'. However, despite this controversial debate, phonologically speaking, the initial consonant cluster is not attested in Standard Arabic; however, it occurs in some Arabic dialects, e.g. HA and almost all Arabic dialects in Northern Africa (see Versteegh 1997: 166). It is a well-known saying in the traditional grammar books that 'Arabs do not start [the word] with *sākin* (consonant cluster) and do not pause on *mutaḥarrik* (short vowel)'. Therefore, it is always the general rule to break the consonant clusters in non-permitted syllables, i.e. [CC] and [CCC], even if it is attested in some current Arabic dialects.

As for loanwords consisting of impermissible consonant clusters in Arabic, the most frequent method involves breaking the cluster by adding a vowel at the beginning or in the middle of the syllable, or a new syllable can be added consisting of *hamza* 'glottal stop' and a short vowel. For instance, in order to convert the two syllables that do not occur in Arabic, i.e. [CC] and [CCC], into permissible forms, a vowel is added to the first type and a glottal stop with a short vowel to the second to become [CVC] and [CVCC], respectively. Table 3.7 below shows some examples of the addition of vowels or syllables to avoid consonant clusters in loanwords:

Table 3.7: Examples of the addition of vowels and syllables to avoid consonant clusters[141]

Example	Gloss	Donor language[142]	Phonological substitution
/kaːdir/	cadre	French 'cadre'	+/-i-/
/xiwaːn/	tray, table	Persian /xvaːn/	+/-i-/
/ʔiqliːm/	region	Greek /klima/	+/ʔi-/
/ʔisfiːn/	wedge	Greek /sfin/	+/ʔi-/
/ʔizmiːl/	chisel	Greek /zmili/	+/ʔi-/
/ʔismant/	cement	English	+/ʔi-/
/ʔistaːd/	stadium	French 'stade'	+/ʔi-/

It is worth noting that the integration of loanwords into Arabic involves gemination. The gemination of some phonemes is attested in Arabic loanwords, in order to adapt foreign words onto Arabic phonological patterns; for instance: battery [bæt(ə)ri] → بطّاريّة /batˤtˤarijja/. [143] Moreover, the orthography of some words might impact the Arabic pronunciation of borrowings. This linguistic behaviour is more frequent in Arabic dialects; for example, the French word 'dentelle' [dɑ̃tɛl] is pronounced as /dantella/ 'lace' in Egyptian Arabic, 'caramel' [ˈkærəmɛl] is pronounced as /karamilla/ in UHA,[144] and the French words 'boîte' [bwat] 'box' and 'paquet' [pakɛ] 'packet' are pronounced as /bˤatˤtˤa/ and /bˤakkatˤ/,[145] respectively, in HA. It seems that this phenomenon is less frequent in Arabic in general than other phonological processes of borrowing.

3.3.1.3 Omission (elision)

Due to the difference between the recipient and donor languages' phonological and morphological systems, elision may take place to reduce the gap between them, e.g. between

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[141] See Al-Qinai (2001: 124), Abdul-Raḥīm (1990: 81).

[142] It is important to emphasise that the pronunciation of the borrowings from non-European languages, e.g. ancient Greek and Persian, in this table and the following one is according to the resources consulted for this table; therefore, their transliterations are according to these resources. However, personal validation of these pronunciations is not possible as these languages are not spoken at the current time.

[143] The French origin 'batterie' [batʁi] or Italian 'batteria' [batteˈria] are possible, but the above description is based on the English originality of the Arabic loanword, see e.g. Al-Jawadi (1972: 120), Hafez (1996); however, there is only consonant substitution, i.e. /tˤ/ instead of /t/ if Italian originality 'batteria' /batteˈria/ is considered for the loanword.

[144] According to the Oxford English Dictionary (OED) (online), the origin of this word is uncertain. It is also 'caramel' in French, 'caramelo' in Spanish and 'caramello' in Italian. If this word was borrowed from the latter, then there is no gemination.

[145] The pharyngealisation of /b/ to be pronounced as /bˤ/ is clearly out of the effect of the pharyngealised phoneme /tˤ/ at the end of these two borrowed words.

Arabic and most of its donor languages: Persian, Greek and in modern times English and French. Therefore, vowels and consonants or maybe entire syllables might be elided, and this elision might affect them regardless of their position in the word, i.e. initial (aphaeresis), middle (syncope), and final (apocope).[146] In terms of the Arabic language, it seems that some consonants/vowels in loanwords are omitted, in order to maintain the harmony of sounds and to avoid what can be considered as a cacophony of sounds in the Arabic phonological system. For instance, when two sequenced sounds have close juxtaposition in the articulation of a word, its pronunciation usually becomes clumsy when located in the same word in Arabic; therefore, one of these sounds might be deleted to preserve the harmony of the word phonemes, e.g. /d/ and /z/ in /paːdzahr/ (Persian; Pahlavi) is Arabised as /baːzahr/ 'Bezoar'.[147]

In the traditional studies of Arabic, two terms were used for elision: حذف *ḥadhf* 'deletion', which is used by Sībawayh,[148] and نقصان *nuqṣān* 'omission', as used by some linguists after Sībawayh.[149] It seems that although the loanwords might be lightly or heavily affected by omission when they are assimilated to the phonological system in both Standard and Colloquial Arabic, this process is "trimming away consonants and syllables but a representative portion of the original term is left" (Smeaton 1973: 86, cited in Hafez 1996). Table 3.8 below shows some examples of loanwords that have been Arabised using elision.[150]

Table 3.8: Examples of elision in loanwords

Example	Gloss	Donor language	Phonological substitution
/ʔustˤuːra/	myth	Greek /historia/	aphaeresis
/maristaːn/	hospital	Persian /biːmarstaːn/	
/ʔuːqijja/	ounce	Greek /ounguiya/	syncope
/sabt/	Saturday	Hebrew /chabbat/	
/sˤiraːtˤ/	way, path	Coptic /strata/	
/burhaːn/	proof	Persian /puruːhaːn/[151]	

[146] See Crystal (2008: 160); see also Chapter Six (section 6.2).
[147] See MacKenzie (1971: 63); Al-Qinai (2001: 126).
[148] See Sībawayh (1988: 304).
[149] See, for example, Al-Jawālīqi (1969: 54).
[150] See Al-Qinai (2001: 125); Newman (2001b: 15).
[151] See Sher (1988: 21).

/faːluːb/	fallopian	English	apocope
/naʃa/	starch	Persian /naʃaːsteh/	
/nard/	backgammon	Persian /nardʃiːr/[152]	

3.3.1.4 Metathesis

This linguistic phenomenon, which refers here to change in the order of speech sounds,[153] is called *al-qalb al-makāni* 'the locative order change' in traditional Arabic studies. It is attested in Standard Arabic, such as /dʒaðaba/ and /dʒabaða/ 'pull out, draw' and Colloquial Arabic, such as /fuħara/ from Classical /ħufra/ in Sudanese Arabic, /ʔanaːreb/ from Classical /ʔaraːnib/ 'rabbits' (sing. /ʔarnab/) in Egyptian Arabic, /balanti/ from the English word 'penalty' in UHA, and /ʕraːf/ from Classical /ruʕaːf/ 'epistaxis' in HA.

This linguistic behaviour is attested in loanwords in Arabic, and can generally be attributed to the tendency of adapting the Arabic phonemic structure, whether in Standard or Colloquial Arabic. It seems that the oral way of transforming these loanwords into Arabic, especially in Colloquial Arabic, plays an important role in how some of the phonemes of these loanwords have been Arabised, which might result in hypercorrection. In the context of the modern age, presumably, the majority of Arabs do not speak other languages and are unable to access the donor languages' resources. Therefore, the most frequent way of acquiring foreign words is by hearing them infrequently, and then implementing them in everyday discourse. These foreign words are more likely to undergo further change when exchanged between speakers. In this case, the possibility then of preserving the original forms of these words is extremely low and may result in the reforming of the phonological pattern of the loanword to another with which the speakers are familiar (cf. Hafez 1996; Newman 2002b).

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[152] In the Pahlavi dictionary, this word is transliterated as /neːwardaxʃiːr/, which means that more phonemes have been elided. See MacKenzie (1971: 59, 103).

[153] See Hartmann & Stork (1972: 141); see also Chapter Six (section 6.2.3.) for further details.

In the context of Collequial Arabic, it seems that metathesis might be considered as a marker of being from a low class or being poorly educated, such as /belenti/ from 'penalty', /falenna/ from 'flannel' in Egyptian Arabic (see Hafez 1996), and /sandawiʃt/ from 'sandwich' in the UHA spoken in Medina. This can be observed widely in different Arabic dialects, such as HA which has borrowed many French words, such as /tbaːndi/ from the French word 'bandit' [ˈbændɪt]. It is worth mentioning that in Colloquial Arabic, metathesis not only occurs in loanwords from foreign languages, but is attested in loanwords from Standard Arabic, the prestigious variety. For instance, the word /tazawwadʒa/ 'he got married' becomes /(ə)ʒʒawwaz/ in HA and /ʔatdʒawwaz/ in UHA; also, /zawaːdʒ/ 'marriage', /sulħufaːh/ 'turtle', /ablah/ 'stupid, idiot', are /dʒuwaːz/, /suħlufa/, /ahbal/, respectively in UHA. Table 3.9 shows examples of metathesis in loanwords in MSA:[154]

Table 3.9: Examples of metathesis in loanwords

Example	Gloss	Donor language	Phonological substitution
/dʒinziːr/	chain, track for a tank	Persian /zandʒiːr/	metathesis
/farmala/	break	Turkish 'frenlemek'	
/ratˤl/	pound (the measurement unit)	Greek /litra/	
/munaːwara/	manoeuvre	Turkish[155] 'manovara' or 'manevra'	

3.3.2 Morphological integration

In this section, special consideration will be given to borrowings in MSA, especially from English (the primary lender for MSA and many Arabic dialects). This generalisation is based on the current situation of MSA and the spoken Arabic dialects. However, this was not the case in the 19th century, for example, when French was the overwhelming dominant language

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[154] See Al-Yasūʿi (1986: 193), Abdul-Raḥīm (1975: 200-202), Al-Qinai (2001).

[155] This word has more possible direct donors to Arabic: French 'manoeuvre' and Italian 'manovra', and the verb is ناور /naːwara/, which is identical, by analogy, to the Classical verb ناور /naːwara/ 'exchanging insults with others'. It is worth mentioning that this word and similar words that are formed through the frequent Arabic noun measures (patterns) (here مُفاعلة *mufāʿalatun*, such as مُقاتلة /muqaːtalatun/ 'fight') might be deceptive and confused with pure Arabic words, precisely when a possible Arabic root is in use, i.e. ن و ر and its derivations: نار /naːr/ 'fire, hell', نور /nuːr/ 'light', منارة /manaːra/ 'minaret', etc. See *Majmaʿ al-Lughah al-ʿArabīyya* (2004: 888, 961f).

donor of Arabic. In his data of 338 borrowings in the 19th century, Newman (2002b) found out that English was in the lowest place, compared to the four main language donors of Arabic, i.e. French, Spanish, Italian and English, in this period of time. With 70% of borrowing provided by French, only 3.8% was provided by English in this data. The percentage of Spanish borrowings was not far from the percentage of English borrowings at 7.1%, while the proportion of Italian borrowings was significantly higher than that of both languages, at 21.3%. The interpretation of the results of the above analysis is a reflection of "the dominant position of France, which for most of the century was viewed as the main model of modernity by Muslim nations" (Newman 2002b: 10). This 'model of modernity' of French in the 19th century, seems to be the main reason for the dominance of English borrowings in spoken Arabic, as well as MSA in the current time.

The traditional loanwords are not the concern in this section as they became, to a large extent, integrated into the core of basic Arabic vocabulary. In many cases, it is difficult to distinguish between those old borrowings and pure Arabic words, other than for those who have a good knowledge of comparative linguistics. Moreover, the Arabic morphological rules were written while these borrowings were considered as being from the main component of the Arabic lexicon. Therefore, it was rare to relate them to العُجمة *the'ujma* 'non-Arabic origin' at the time of Ibn Mālik (d. 1273) and those linguists who followed him. Furthermore, when they dealt with the Arabic verb/noun stems أوزان *'awzān*, they demonstrated them with some of these borrowings as they did with pure Arabic words. For instance, they used هارون *hārūn* 'Aaron' and قارون *qārūn* 'Korah' as examples of the noun stem فاعول *fā'ūl*, as they did with the pure Arabic name فاروق *fārūq*, which was called العَلَم *al-'Alam* 'the proper noun' in the traditional grammar books. This can be interpreted as demonstrating the full integration of the majority of these old borrowings into the Arabic phonological system. Much of the discussion was concentrated around whether or not these borrowings are pronounced with

tanwīn 'nunation', since, in general, a foreign proper noun is not given nunation, although there are a few exceptions.[156]

With respect to the traditional approach to the philological analysis of loanwords in Arabic, according to Al-Kārūrī (1986, cited in Al-Qinai 2001: 127) these studies[157] seem to divide loanwords into three classes: the first class includes loanwords which undergo segmental and analogical change to fit the Arabic phonological paradigms. An example is دِرْهَم /dirham/ 'dirham' (as with the Arabic word هِجْرَع /hidʒraʕ/ 'tall (person), idiot'.[158] The second class includes loanwords that are modified segmentally but do not fit the Arabic phonological paradigms. An example is آجُر /ʔa:dʒur/ 'baked brick', which can be assumed to be identical to the morphological stem فاعُل /fa:ʕul/, which does not exist according to the traditional studies of Arabic. The third class includes loanwords which are neither changed segmentally nor analogically, such as إيراهيم /ʔibra:hi:m/ 'Abraham' and خُ(و)راسان /xu(u:)ra:sa:n/ 'Khorasan'.[159]

3.3.2.1 Derivational paradigms

According to many empirical research studies in the literature on lexical borrowing, e.g. Poplack *et al.* (1988), Van Hout and Muysken (1994), Wohlgemuth (2006), Haspelmath and Tadmor (2009), nouns are always the easier and more frequently-borrowed lexical items from one language to another.[160] However, several derivations might be generated from these integrated loan nouns. The process of generating new derivations following Arabic

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[156] The general rule is that the proper Arabic origin nouns are also pronounced without nunation if their *wazn* 'stem' is similar to the verb stem, such as the proper nouns with the stem of أَفْعَل *'af'al* like the proper noun *'Aḥmad*, which is similar to the verb /ʔaḥmadu/ 'to praise (Allah)'. This is in contrast with non-verbal stem proper nouns like *Muḥmmad* and *Ṣāliḥ* as they are displayed with nunation except in the vocative case.
[157] See Sībawayh (1988: 304), Al-Jawālīqi (1969: 56).
[158] See Ibn Manẓūr (n.d: 32).
[159] It is noticeable in the traditional Arabic lexicons that there is always disorder and confusion when dealing with these kinds of loanwords in considering the trilateral or quadrilateral consonantal roots (consonantal patterns). For instance, إيراهيم /ʔibra:hi:m/ can be found in the triple radical بره /b r h/ and the quadrilateral one برهم /b r h m/, in the same book. See Ibn Manẓūr (n.d.: 271).
[160] See Chapter Five (section 5.3.4.).

morphological patterns follows two sequential stages, according to Hafez (1996):[161] firstly, trilateral or quadrilateral consonantal roots are abstracted, consistent with the common Arabic morphological rule. The next step is to generate different derivatives. For instance, هِدْروجين /hidru:dʒi:n/ from the English word 'hydrogen'[162] can be generated into the perfect verb هَدْرَجَ /hadradʒa/, the imperfective verb يُهَدْرِج /ju-hadridʒu/, the verbal noun هَدْرَجَةً /hadradʒatan/, and the passive participle مُهَدْرَج /muhadradʒ/. This derivational process is adapted according to the classical one, resulting in forms that can be respectively analogical to the pure Arabic words زِلْزال /zilza:l/ 'earthquake': زَلْزَل /zalzala/, يُزَلْزِل /ju-zalzilu/, زَلْزَلَةً /zalzalatan, and مُزَلْزَل /muzlzazal/.

In Colloquial Arabic, this process can be applied to some loanwords; however, it is not always easy to draw certain verb paradigms, because the phonological process is not always standard and in many cases is unpredictable. The following examples shown in Table 3.10 are taken from three Arabic dialects: HA (e.g. /talaffu:n/ 'telephone'), UHA (e.g. /isfilt/ 'asphalt'), and Egyptian Arabic (e.g. /narfaza/ 'nervousness'), to which the previous verb paradigms can be applied

Table 3.10: Example verb paradigms of loanwords in three Arabic dialects

Loanword	Abstracting root[163]	Perfect	Imperfect	Verbal noun	Passive participle
talaffu:n	tlfn	talvan	i-talvan	(ə)t-talvi:n	mutalvan
isfilt	sflt	saflat	ji-saflit	saflata	mitsaflit
narfaza[164]	nrfz	narfez	je-narfez	narfaza	menarfez

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[161] She implemented these two steps in her collected data from an Egyptian Arabic corpus.

[162] There are two more pronunciations of this word influenced by the English origin: /ha:jdru:dʒi:n/ and /hi:dru:dʒi:n/. This is in addition to /ʔa:dru:dʒi:n/, which is more likely to be influenced by the French word 'hydrogène' [idrɔʒɛn]. See Al-Jawadi (1972: 109), Wehr (1980: 37).

[163] The roots in this column are predicted and not based on the reality of these words.

[164] See Hafez (1996).

This derivational process may be seen in a small number of loanwords, mainly nouns; however, proper nouns do not undergo this derivational process in Arabic, whether they are pure Arabic proper nouns or borrowed ones. Nevertheless, another common derivational process, i.e. prefixing the definite article /al-/, is attested in many loanwords in Arabic that are frequently in use, whether they are old or modern loanwords, and therefore they are treated as common nouns.[165] Examples include /at-tilifu:n/ 'the telephone', /al-barna:madʒ/ 'the programme', /al-ja:sami:n/ 'jasmine', /al-kumbju:tar/ 'the computer, etc.

3.3.2.2 Number

In Arabic, the pluralisation of nouns occurs by suffixation. There are four forms of plural nouns, indicated by certain inflections. These are dual',sound masculine plural, sound feminine plural, and broken plural.[166] Generally speaking, loanwords are formatted according to these inflectional paradigms when assimilated to Arabic. However, this is not always the case, as is shown below. The first two types of plural nouns are not relevant to this research, as there is not much change involved in the process of borrowing, as the regularity of the normal Arabic nouns is the most frequent case. For instance, the English words 'computer' and 'British' are Arabised as /kumbju:tar/ and /biri:tˤa:nijj/, i.e. singular masculine forms. The dual form of /kumbju:tar/ is /cumbju:tar-ajn/ and the sound masculine plural of the next example is /biri:tˤa:nijj-u:n/, similar to the normal Arabic nouns.

The essential condition of the nouns formed according to the sound feminine plural pattern in Arabic is that they have to be feminine, i.e. ending with the above-mentioned *tā*ʾ.[167]Generally speaking, the majority of loanwords that end in *tā*ʾafter Arabising, whether

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[165] See Al-Qinai (2001).

[166] There are many forms of the broken plural in Arabic; for more details, see Holes (2004: 162-174).

[167] With a few exceptions, such as /ridʒa:l/ 'men' (pl.) → /ridʒa:la:t/.

they are ة or ت, would be pluralised according to the sound feminine plural form regardless of anything else. Table 3.11 shows some examples.

Table 3.11: The sound feminine plural of loanwords with *tāʾ* ending

Loanword	Gloss	Fem. plural form
بطارية /baˤtˤaːrijjatun/	battery	/baːtˤtˤarijj-aːt/
قنصلية /qunsˤulijjatun/	consulate	/qunsˤulijj-aːt/
أيديولوجية /ʔajdjuːluːdʒijjatun/	ideology	/ʔajdjuːluːdʒijj-aːt/
ديمقراطية /diːmuqraːtˤijjatun/	democracy	/diːmuqraːtˤijj-aːt/
سَنت /santun/[168]	cent	/sant-aːt/
طَشت /tˤaʃtun/[169]	big bowl	/tˤaʃt-aːt/

However, many words are formulated according to the sound feminine plural pattern, while their singular forms do not end with *tāʾ*. This, in many cases, is due to the lack of phonological assimilation of these loanwords to the Arabic phonological system, according to Smeaton (1973: 36, cited in Hafez 1996). Finally, loanwords without the *tāʾ* ending in their singular forms and pluralised according to this plural formula can be classified into two categories:

(i)   Adding only the feminine sound plural suffix to the singular form as in the native Arabic words, since there is no *tāʾ marbūṭah* to be dropped from the singular form. Table 3.12 below shows some examples.

Table 3.12: Adding only the feminine sound plural suffix to loanwords without the *tāʾ*

Loanword	Gloss	Fem. pl. form
/bantˤaluːn/	trousers	/bantˤaluːn-aːt/
/sandawitʃ/	sandwich	/sandawitʃ-aːt/
/ʔalbuːm/	album	/ʔalbuːm-aːt/
/miliːʃja/	militia	/miliːʃj-aːt/
/raːdaːr/	radar	/raːdaːr-aːt/

(ii)   The second category is formed by adding هـ /h/ to the sound feminine plural suffix, to become /-haːt/, as demonstrated in Table 3.13 below. This rule is

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[168] There is another pronunciation demonstrated in MSA: /sint/ → /sint-aːt/.
[169] This word is an old loanword from Persian (Pahlavi) /taʃt/; see MacKenzie (1971: 82). It is also pronounced as /tˤiʃtun/, another Arabisation variety is /tˤist/; see Abdul-Raḥīm (1990: 438).

determined by looking to the end of the Arabised word. In most cases, this addition is linked to the words with the /-u/ ending, as shown in Table 3.13 below.

Table 3.13: Adding /h/ to the sound feminine plural of loanwords without the *tāʾ* ending

Loanword	Gloss	Fem. plural form
/raːdju/	radio	/raːdiuh-aːt/
/kaːziːnu/	casino	/kaːziːnu-haːt/
/ʔustudju/	studio	/ʔustudju-haːt/
/siːnaːrju/	scenario	/siːnaːrju-haːt/
/ʃaːmbu/	shampoo	/ʃaːmbu-haːt/

It seems that formulating the sound feminine plural according to this plural pattern is unusual in Arabic as a whole, not only with loanwords. That is, however, if it is not assumed that this form /-haːt/ is used analogically to the sound feminine plural form used in /ʔumm/ 'mother' → sound feminine plural: /ʔumm-haːt/, which is a unique form of the sound feminine plural in Arabic. This unique form has been widely discussed among linguists in the Arabic traditional studies. This discussion can be summarised into two points of view. Firstly, /ʔumm-haːt/ is the sound feminine plural form of /ʔumm/, and /h/ is added to the form in order to distinguish between the sound feminine plural form of /ʔumm/ when it refers to the mother of animals and when it refers to the mother of humans. In the first, the sound feminine plural form is /ʔumm-aːt/, as the regular form, while it is /ʔumma-haːt/ in the other for differentiation. The other point of view is that /ʔumma-haːt/, is the sound feminine plural of the word أمّهة /ʔummahatun/, another variety of /ʔumm/, which is narrated in old Arabic poetry. Therefore, we can find this plural form /ʔumma-haːt/ in two roots in the old Arabic lexicons; أمه /ʔmh/ and أمم /ʔmm/.[170]

Although there is no strong evidence of the above analogical cause for the loanwords, shown in the table above, we can assume it to be reasonable because these borrowings (shown in the table above) end in syllables that are not found in Arabic. Furthermore,

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[170] See, for example, Ibn Manẓūr (n.d.: 135, 145).

inflectional endings, which are important in Arabic to demonstrate meanings, cannot appear at the end of these words. Moreover, it is not possible to add the frequent sound feminine plural suffix, i.e. /-aːt/ directly to these words without phonologically changing them or adding another phoneme between these word ends and the sound feminine plural suffix. This is due to the clusterisation of vowels, i.e. /-u/ (the last vowel in the example below) and /aː/ in /-aːt/, which is not permissible in Arabic. Therefore, the phoneme preceding this suffix has to be a consonant (or a semi-vowel), not a vowel. This assumption can be strengthened if we look at some of these words in some Arabic dialects, such as HA. The semi-vowel /j/ of the French word 'radio' [ʀadjo] is substituted by /dʒ/, i.e. /rˤaʒu/ and another semi-vowel is added when pluralising this word according to the sound feminine plural form, i.e. /rˤaʒwaːt/. Therefore, pluralising these words (in the table above and similar ones) according to this form /-haːt/ maintains the plural of these words without changing them, which is unlikely to occur when pluralising according to masculine sound plural forms, i.e. /-aːt/ in addition to maintaining the harmony of these words' syllables.

As for the broken plural, it is well known in traditional Arabic studies that there are many broken plural forms, but they do not occur with the same degree of frequency. They classified these forms into two main categories: plural of paucity forms and plural of abundance forms. There are four forms for the first category which can be formulated according to these stems: أَفْعِلَة *'af'ilah*, e.g. /ʔabnijah/ 'buildings', أَفْعُل *'af'ul*, e.g. /ʔabħur/ 'seas' , فِعْلَة *fi'lah*, e.g. /fitjah/ 'boys', and أَفْعَال *'af'āl*, e.g. /ʔaqmaːr/ 'moons'. On the other hand, there are numerous forms for the second category and they are difficult to imitate. For instance: فُعُل *fu'ul*, e.g. /sufun/ 'ships', فُعَل *fu'al*, e.g. /sˤuwar/ 'pictures', فِعال, e.g. /ridʒaːl/ 'men', فَوَاعِل *fawā'il*, e.g. /kawaːkib/ 'planets' etc.

It can be argued that it is difficult, sometimes impossible, to pluralise loanwords, especially modern ones, in these broken plural forms. This is because these rules were set

when the trilateral or quadrilateral consonantal roots of Arabic words were generally known, and the old loanwords were almost completely assimilated into the Arabic morphological and phonological systems. Modern loanwords have been adopted, especially from English, on a large scale and the situation of Standard Arabic as a native language of Arabs has completely changed, as Standard Arabic has not been a native language for Arabs for a long time. Therefore, modern loanwords that have been pluralised according to these forms are likely to be relatively fewer than those that do not follow these rules. Moreover, it is assumed that intuition and guesswork play a role in the Arabisation of these words rather than following disciplined morphological rules. Table 3.14 below shows some examples of loanwords that presumably follow some of the broken plural forms.

Table 3.14: Examples of loanwords in broken plural forms

Loanword	Gloss	Broken pl. form	Abstracting root[171]	Broken pl. pattern[172]
/birmi:l/	barrel	/bara:mi:l/	brml	فَعَالِيل *faʿālīl*
/fa:tu:ra/	bill	/fawa:ti:r/	ftr	فَوَاعِيل *fawāʿīl*
/ka:bil/	cable	kawa:bil/[173]	kbl	فَوَاعِل *fawāʿil*
/qunsˤul/	consul	/qana:sˤil/	qnsˤl	فَعَالِل *faʿālil*
/duktu:r/	doctor	/daka:tirah/	dktr	فَعَالِلة *faʿālilah*
/bank/	bank	/bunu:k/	bnk	فعول *fuʿūl*
/film/	film	/ʔafla:m/	flm	أَفعال *ʾafʿāl*

Whatever the case, the sound feminine plural form seems the most frequent form of pluralising modern loanwords in Arabic, because it is easier to use and more systematic than the broken plural form; it seems to be the case that many Arabs cannot master this latter form in native Arabic words and much less so in loanwords. To summarise, in the case of the Arabised words ending with *tāʾ*, the general practice is to pluralise them with the sound feminine plural. This is also applied to the Arabised words ending with the vowel /-u/ after adding /h/ after the vowel, as the phonological rules do not allow vowel clustering in Arabic.

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[171] Presumed abstracting root.

[172] It is also presumed to be what is termed as *wazn* 'measure' in traditional Arabic studies.

[173] It is also pluralised as /kaja:bil/; therefore, the presumed consonant root would be [kjbl], and the plural form would then be *fajāʿil* (quadrilateral root).

In other cases, the main pluralisation form consists of broken plural forms, which are numerous and are difficult to regulate. However, based on the examples given in the table above and others, we can try to understand why certain words come in a certain broken plural form and not in another.

It seems that taking the consonantal abstracting root of the Arabised word into consideration is very important, as is the case in native Arabic words. If the abstracting consonant of the Arabised word is trilateral, it seems that the word is pluralised according to the nearest trilateral stem form of the native Arabic word. For instance, the *wazn* (measure or pattern) of the word 'film' is similar to the very frequent Arabic word /sirr/ 'secret', which is, according to the Arabic model root system, فِعْل *fiʻl* (pl. /ʔasraːr/ أَفْعال *ʼafʻāl*); therefore, the pluralisation of /film/ (supposedly فِعْل *fiʻl*) as /ʔaflaːm/ (أَفْعال *ʼafʻāl*) is possible. Similarly, /bank/ (supposedly فَعْل *faʻl*) is pluralised as /bunuːk/, similar to /fann/ 'art' and /darb/ 'path, way', both of which are pluralised according to the model root فُعول *fuʻūl*: /funuːn/ and /duruːb/. Similarly, the plural form of the predicted consonant root of the word /kaːbil/ is /kawaːbil/, similar to /qaːlib/ 'model, template' (pl. /qawaːlib/).

In the case of a quadrilateral consonantal root, the general description that could initially be put forward is that it is irregular; however, it seems also that the plural forms are formulated according to the frequent Arabic word(s) that have phonetic similarities. The examples above exemplify this matter. In other words, the plural forms of /birmiːl/ and /fatuːra/ are /fawaːtiːr/ and /baraːmiːl/: فَعاليل *faʻālīl* and فَواعيل *fawāʻīl*, respectively[174], as the singular forms of them, are similar to those of the frequent Classical Arabic words: /sikkiːn/ 'knife' (pl. /sakaːkiːn/ and /qaːruːra/ 'flask' (pl. /qawaːriːr/), respectively. The other examples could be formulated in the same manner: /qunsˤul/ pl. → /qanaːsˤil/, similar to /sunbul/ 'spike'

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[174] This similarity is based on the *wazn* in the singular forms, as it is فِعْليل *fiʻlīl* in /sikkiːn/ and فاعولة *fāʻūla* in /qaːruːra/).

(pl. /sana:bil/ فَعالِل *faʿālil*) and /duktu:r/ pl. → /daka:tirah/, similar to /zindi:q/ 'atheist, unbeliever' (pl. /zana:diqah/ فَعالِلة *faʿālilah*) .

3.4 Lexical borrowing typology

One of the earliest attempts to classify borrowings was made by Bloomfield in his well-known book, *Language* (1933) (Treffers-Daller 2010). He distinguished between what he calls *cultural borrowing* and *dialect borrowing* (Bloomfield 1933: 444). Considering the origin of the speech forms seems to be the main reason behind this classification of borrowings. He defines *cultural borrowing* as a borrowing incident that comes from a different language, while *dialect borrowing* is present when the borrowed features come from within the same speech area. He exemplifies the latter by 'father' and 'rather', whereby speakers produce these words with /a/ who would otherwise produce them with /ɛ/ in their dialects.

It seems that the classification of loanword typology depends, in most cases, on to what extent these words have been assimilated into the phonological and morphological systems of the recipient language. The degree of assimilation of loanwords differs from one speech community to another, and what can be applied to a certain speech community cannot necessarily be applied to another (Versteegh 2001: 474). This can be seen clearly in some language varieties, such as when Berber comes into contact with Arabic in different speech communities. The situation of the Berber language in Mauritania (Zenaga variety), differs from that of another Berber variety in a country such as Algeria. In Mauritania, the Zenaga people mostly adopted Arabic. They now speak HA and generally do not speak any Berber varieties, or even know how to speak them.[175] Therefore, the Arabic influence on their

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[175] This statement is based on my personal interaction with many of the Zenaga people in our Shanāqiṭa community in my hometown of Medina.

language was huge and effective.[176] On the other hand, the Tuareg have preserved and retained their language (Berber) because they usually live in relative isolation, according to Versteegh (ibid), and the same reason could be argued as one of the main factors behind HA being preserved in the Shanāqiṭa community in Medina.

With respect to the phonological integration of loanwords in Arabic, Sa'id (1967: 36) classified loanwords in Arabic into two types:

(i)   "Borrowings marked by phonological transfer." This type of loanword might include those loanwords that were transferred into Arabic without any significant phonological change, while they include some linguistic elements that do not exist in Arabic and, therefore, the degree of integration is considerably low. An example is /ʔoːrkistra/ 'orchestra'.

(ii)   "Borrowings marked by phonological substitution." This type of borrowing, according to Sa'id, is seen when some of the loanwords' phonological elements are substituted by others from Arabic, such as substituting some foreign sounds with Arabic sounds, e.g. /p/ → /b/, /g/ → /dʒ/, etc. This classification is compatible with the one made by Haugen (1950: 212), when he used the term 'importation' for the first type of borrowing and 'substitution' for the second.

The other terminology found in the literature is a classification of loanwords into 'unassimilated' and 'assimilated' loanwords. The former might refer to loanwords that are used by the speaker as foreign words, whether they are used as peregrinisms or xenisms (Ngom 2002: 29). This means that these words are not naturalised according to the recipient language. In contrast, assimilated loanwords are naturalised and became 'true loans' (ibid). It

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[176] The influence of Zenaga on HA can, mainly, be noted from many words in the HA lexicon without affecting the structure of HA, as was discussed in Chapter Two, and from Mauritanian people in terms of traditions and customs.

seems that these two terms are similar to those mentioned above in that all of them are concerned with the degree of integration or assimilation that loanwords have received. Therefore, the first example used above can be cited as an example of unassimilated loanwords in Arabic, and the substitution in the other can be used as an example of assimilated loanwords. It could be argued that old loanwords mostly belong to assimilated borrowings, such as /diːbaːdʒ/ 'silk brocade' and /sukkar/ 'sugar' from the respective Persian (Pahlavi) words /depak/ and /ʃakar/.[177]

It seems that the most important classification of borrowings is Einar Haugen's tripartite one (Haugen 1950: 214). According to him, "based on the relationship between morphemic and phonemic substitution", borrowings can be classified into loanwords, loanblends, and loanshifts. 'Loanwords' refer to the type of borrowing that exhibits "morphemic importation without substitution". In the case of morphemic substitution and importation, 'loanblends' is the suggested term by Haugen. When only meaning has been borrowed, in other words, when morphemic substitution without importation is taking place, he designated 'loanshifts' as the term for non-lexical borrowings.

In the language contact situation of Arabic with other languages, it seems that the most significant types of borrowings are loanwords and loanblends as they are most frequent types. Arabic loanwords (pure loanwords, cf. Al-Jawadi 1972: 55) might be those words in which the foreign morphemic and all (or some) phonemic constructions have been transferred into Arabic. It seems that this term is a synonym of another term, 'loanforms', where the phonemic elements of the donor language are imported into Arabic, while no morphemic substitution occurs (Saʿid 1967: 39); for instance, /tirmuːmitr/[178] from the English word 'thermometer'. On the other hand, loanblends consist of those borrowings (whether a single

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[177] See Abdul-Raḥīm (1990: 291), MacKenzie (1971: 26, 79), who mentioned another possible Pahlavi origin: /deːbaːg/.

[178] It might be pronounced as /tirmumiːtir/ or /tirmuːmitir/.

word or a phrase) that include a native form combining borrowed elements (cf. Hartmann &
Stork 1972: 133-ff). Based on his detailed study of borrowings from English into Arabic, Al-
Jawadi (1972: 138) defines the most frequent categories of English loanblends in Arabic, for
instance:

- Arabic stem + English suffix. This category mainly concerns the English loan
  suffixes attached to some names of chemical substances, e.g. Arabic stem: /nuħa:s/
  'copper' + English suffix -ic → /nuħa:si:k/ 'cupric' etc.

- English stem + Arabic formative: (relative ي) or substantive يّة /-ijjah/, e.g. English
  stem: 'atlantic' + Arabic formative (relative ي): /ʔatˤlantˤijj/[179] 'pragmatism' +
  substantive يّة /-ijjah/ → /bra:ɣma:tijja/.[180]

Loanshift is another type of borrowing that does not consist of phonemic or morphemic
importation or substitution, but is more concerned with the meaning of borrowings, when
semantic importation takes place (cf. Haugen 1950: 215). Saʿid (1967: 101), following
Haugen's (1950) models, divides loanshift in Arabic into two models: the simple model and
the complex model. The former includes two types of loanshift: loanshift extension and
loanshift creation. An example of loanshift extension is /tajja:r/, which originally meant 'the
flow of water in a certain direction' in Arabic. The English word 'current' has a similar
meaning but it can also mean the flow of electricity,[181] so this additional meaning has been
borrowed by Arabic to extend the original meaning of the word. Loanshift creation refers to
"the process [which] takes place when a word new to Arabic is coined to match a model in
the secondary language" (ibid: 103). An example is /misba:r/ 'probe'. The loanshift process
would involve obtaining /misba:r/ from the Arabic root /sbr/, which means 'searching and

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[179] The gender is considered in this type of Arabic formative.
[180] It is pronounced more frequently in spoken Arabic as /bra:gma:tijja/. This Arabic formative always plays an
important role in generating new words, not only in loanwords but also in native Arabic words, such as /ʔinsa:n/
'human' → /ʔinsa:nijjah/.
[181] See Longman Dictionary of Contemporary English (1995).

examining', and then adding the Arabic instrumental pattern (miC1C2āC3) so that the term is analogical with the model of the English word 'probe', which means 'to physically explore or examine something'.

3.5 Lexical borrowing and other linguistic phenomena (code-switching and diglossia)

In addition to studying LB as a universal linguistic phenomenon resulting from the language contact context, there are other linguistic phenomena which result from language contact, e.g. code-switching (henceforth, CS) and diglossia. Special attention has been paid in the literature to the relation between LB and other linguistic phenomena motivated by language contact, and how LB differs from them. In this section, the two previously mentioned linguistic phenomena (CS and diglossia), and their relation to LB, and how they can be distinguished from each other will be highlighted. Haugen (1956) argues that the methods of borrowing and CS and mixing constraints are distinguishable and different from one another; therefore, they each have different significance in terms of meaning.

3.5.1 Code-switching

Although Haugen's (1956) statement above gives the impression that CS is clearly distinguishable from other phenomena, this is not actually the case between CS and LB, since there is no specific bounding convention. This also does not contradict the fact that many studies have been conducted on the grammatical restrictions placed on CS (e.g. Gumperz & Hernandez 1969; Gingras 1974; Pfaff (1979; and most famously, Myers-Scotton 1993a). Pfaff (1979) argues that although there is semi-agreement that CS should be distinguished from LB, there is little agreement in the literature regarding how these two phenomena can be distinguished from each other. Furthermore, Myers-Scotton (1993a: 163) states that although

both of them are produced according to the "same production procedures", the two forms differ from each other.

One important point for differentiating between the two phenomena is the linguistic context. Pfaff (1979: 295f) attributes the occurrence of CS to some degree of bilingual competence, while LB is attested in the monolingual competence. Bentahila & Davies (1983: 302), in their case study involving Arabic-French, state that the obvious classification that could be made between CS and LB is that when a monolingual Arabic speaker uses a regular French word it should be considered as LB, which is part of his linguistic competence. Furthermore, Myers-Scotton (1993a) similarly adopts Levelt's (1989: 6) definition of 'mental lexicon'[182] to differentiate between the two as the LB forms are considered as part of the ML (matrix language)[183] 'mental lexicon', while CS is not. Pfaff (1979) adds that one of the common differentiations between them is based on the number of words involved in the processes. When a single, non-native word is involved, the linguistic process should be classified as LB. On the other hand, when two or more words are involved, the process should be CS. This 'quantitative' classification approach seems problematic, according to Bentahila and Davies (1983: 303), since in the LB context, a whole phrase (e.g. in English: *faux pas*, *savoir faire*) might be borrowed and adapted in the recipient language.

Muysken (1995: 189f), after addressing the meaning of borrowing as "the incorporation of lexical elements from one language in the lexicon of another language", identified three levels through which borrowings should pass. The first level is when the bilingual speaker, in an unprompted context, incorporates a lexical element from language A to the discourse of language B, i.e. CS. The next level takes place when the occurrence of the incorporated lexical element(s) in language B becomes frequent amongst the members of the speech

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[182] He defines it as "the store of information about the words in one's language" (Levelt 1989: 6).
[183] The main language in CS utterances. See Myers-Scotton (1993a).

community, i.e. "conventionalised-CS". The final stage would include the adoption of these lexical elements into the phonological, morphological, and syntactic systems of language B, where they become part of the lexicon of language B. In addition they become fully recognised by monolinguals as part of their language (language B), i.e. nonce [184] and established loans. It can be understood, from the above, that Muysken considers CS as an early stage of the process before full linguistic integration takes place, and the recognition of monolinguals of inserted lexical elements being part of their language occurs. He illustrates the most important differences between CS and borrowing based on Poplack & Sankoff's (1984) study of the earlier work as follows (p. 190):

Table 3.15: Differences between CS and borrowing

	Borrowing	CS
no more than one word	+	-
phonological adap.	±/+	±/-
morphological adap.	+	-
syntactic adap.	+	-
frequent use	+	-
replaces own word	+	-
recognised as own word	+	-
semantic change	+	-

Although the previous characterisation is reasonable, it does not necessarily mean that all the lexical elements characterised as CS must automatically reach the final stage, i.e. borrowing. On the other hand, Muysken's description might lead to the argument that the 'borrowings' should go through all three levels, which necessarily include CS. Whatever the case, depending on the degree of *integration* of the incorporated linguistic elements, what is described by Myers-Scotton (1993a:163) as "traditionally recognised criteria" in drawing a clear boundary between CS and borrowing might result in confusing and impractical

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[184] See the hypothesis of 'nonce borrowing' in Poplack (2012).

outcomes. Therefore, adopting "absolute frequency and relative frequency of occurrence" might be "the most reliable [and practical] criteria" in differentiating between CS and LB, as she proposes. In addition, her point of view relates both phenomena to one model, and therefore they belong to the same linguistic process. She argues that "the motivation for distinguishing them, in order to assess models of morphosyntactic constraint on CS, seems to evaporate, at least for content morphemes".

The majority of studies conducted on the subject of CS have been done within the context of bilingualism, where the speaker shifts between two completely different language systems. These include: Poplack (1980) on Spanish-English; Pfaff (1979) on Spanish-English; Romaine (1995) on Punjabi-English; Poplack *et al.* (1989) on Finnish-English; Bentahila & Davies (1983) on Moroccan Arabic-French; and Myers-Scotton (1993a, 1993b) on Swahili-English. On the other hand, the bidialectalism context has received less attention in the literature, i.e. switching between standard varieties (e.g. Ramat 1995), and between non-standard varieties from the same languages (e.g. Blom & Gumperz 1986). Therefore, Gumperz's (1982: 59) definition of CS as "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems" seems valid for both CS directions. This idea of CS (the expansion to bidialectalism and bilingualism, rather than being limited to bilingualism) was not known before Blom and Gumperz published their article in the early 1970s (see Blom & Gumperz, 1986) on studying switching between two Norwegian dialects (Myers-Scotton 1993b: 47). However, although CS grammatical constraints have been extensively explored in the bilingualism context, the question of whether these constraint models could be applied in the bidialectalism context has not yet been sufficiently answered (Ramat 1995: 45).

In the Arabic context, a number of studies concerning CS have been published. The vast majority of these studies were conducted on the syntactic analysis of switching between

Arabic and other languages rather than correlating it to social motivations. More precisely, CS between North African Arabic dialects and some European languages has been studied extensively (Bassiouney 2009: 31). These studies include: Keddad (1986), Heath (1989), Boumans (1996), Lawson & Sachdev (2000), Caubet (2002), Ziamari (2007), to mention only a few. Moreover, the diglossic context of switching, i.e. switching between Standard Arabic (the prestigious variety) and other non-prestigious Arabic varieties (dialects), became a target topic of CS in the Arab world, although on a relatively smaller scale than the previously-mentioned one, e.g. Boussofara-Omar (1999, 2003), Bassiouney (2003, 2006, 2009), Mejdell (1999, 2006), Eid (1988), and Taine-Cheikh (1998).

The relation between CS and loanwords reflected in the work published so far can be summarised according to three points of view (see Mustafawi 2002: 219f). The first one attributes both of them to the same mechanism (Myers-Scotton 1992, 1993a; Eliasson 1990). This does not necessarily mean that they are identical, but that they undergo the same morphosyntactic procedure, although the occurrence constraints are different (Myers-Scotton 1992: 20f). The second view considers the number of words involved; CS only occurs when a single word (that is not an established loanword) is integrated into the recipient language (e.g. Bokamba 1988; Bentahila & Davies 1991; Eliasson 1994). The third point of view attributes them to a different mechanism. In CS the integrity of the grammar of both languages is 'respected', while only the grammar of the recipient language is 'respected' in borrowing, e.g. Poplack *et al*. (1988), Budzhak-Jones (1998), Poplack & Meechan (1998).

3.5.2 Diglossia

This linguistic phenomenon is closely linked to the previously-mentioned phenomena, i.e. CS and LB. On the one hand, all of them use two varieties and on the other hand, this use occurs within the same speech community. Diglossia is characterised as one of those varieties which

has a high social value while the other does not, although they hold the same general significance.

There are different views amongst linguistic researchers regarding who first introduced the term 'diglossia' into linguistic studies. It seems that this term was first coined by the Greek linguist Jean Psycháris. He referred to modern Greek diglossia in his novel *My Journey* (1888) as follows: "...if the intelligentsia did not subdue their own lexicon and as a result their own language (i.e., grammar and lexicon) to resemble that of the everyday common people and that of the masses, the contrary would inescapably lead to diglossia" (cited in Gkaragkouni 2009: 28). There are other thoughts contrary to this. For example, Sotiropoulos (1977: 10) attributed the first use of this term to the German linguist Karl Krumbacher in his book *Das Problem der modernen griechischen Schriftsprache.* He studied "the development of diglossia in Greek and Arabic" (Bahumaid 1990: 35). Bahumaid (ibid) states that it is accepted by many researchers that the introduction of this term is often mistakenly attributed to the Arabist French linguist William Marçais in his article *La diglossia Arabe*.

There seems to be less controversy concerning this term than that concerning CS or even LB; its general significance seems clear in the majority of studies concerning this phenomenon. Ferguson (1971[1959]:16) states that:

> Diglossia is a relatively stable language situation in which, in addition to the primary dialects of the language (which may include a standard or regional standards), there is a very divergent, highly codified (often grammatically more complex) superposed variety, the vehicle of a large and respected body of written literature, either of an earlier period or in another speech community, which is learned largely by formal education and is used for most written and formal spoken purposes but is not used by any sector of the community for ordinary conversation.

The general meaning of this term, which consists of two words: *di-* which means two and *lossia* 'language' in Greek, is that "two types of varieties of the same language [high

prestigious variety (H) and low prestigious variety (L)] co-exist side by side, each of which performs a specific function within the same speech community"[185] (Bakalla 1984: 85).

Diglossia, as defined in terms of switching between varieties of the same language, seems to be the most heavily used definition, as was mentioned above in Bakalla's definition. However, Fishman (1967: 29) generalises that the significance of this term is not limited to the monolingual context, but extends it to be "…used in connection with a society that recognized two (or more) languages for intrasocietal communication". Bassiouney (2009: 31) argues that in light of this generalisation of the scope of diglossia, it can be studied in the framework of CS; therefore, instead of using 'diglossic switching', CS might be used to convey the same meaning. This meaning might be that to which Mejdell (2006: 418) referred when stating that CS "should be understood in a broad context to encompass both varieties and different languages".

It is worth noting that, although the diglossic situation in the Arab world is not uniquely observed in the modern world,[186] it is complex to some extent. This complexity varies from one speech community to another. For example, the diglossic situation in GCC[187] countries has less complexity than that in some Arabic countries in Northern Africa, such as Algeria, Morocco, and Tunisia, and therefore can be distinguished from CS situations. The situation of diglossia and CS is more complicated "when dealing with North African dialects [of Arabic] where one is faced with register and language switching" (Al-Qenaie 2011: 20f). Moreover, even if comparing two Arabic countries in North Africa such as Mauritania and Tunisia, we will find that the diglossic situation in the former is distinguishable, when switching from HA (L) to MSA (H) in specific highly valuable social cases, e.g. lectures, religious preaching etc.

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[185] See Chapter One.
[186] There is a similar diglossic situation in some languages such as Greek and Swiss German. See Bakalla (1984: 85).
[187] The Gulf Cooperation Council.

This is also the case when switching to French in some cases, such as for education, official matters, and sometimes for prestigious purposes. However, the situation in Tunisia is different in that bilingualism, CS, and diglossia can all be used to describe some linguistic situations, as a result of the co-existence of MSA, French and Tunisian Arabic. As a result, these phenomena can be possible characteristics of the utterance (Al-Qenaie 2011: 21).

The diglossic situation of the co-existence of CA (the language of the Quran) side-by-side with many ancient Arabic dialects, such as the Banū Tamīm, Asad, and Ṭayyiʾ dialects, was well known, even in the pre-Islamic era. This issue was an important linguistic aspect discussed by Arab and Muslim philologists (Bakalla 1984: 85). According to Bakalla, the Arabic diglossic situation was not a source of great controversy before the 19th century, when the gap between Colloquial Arabic and MSA became problematic. This gap led to the use of Standard Arabic in discourse becoming strange to the vast majority of Arabs. From this point, some journalists, writers, and intellectuals called for the use of Colloquial Arabic in education and literature instead of MSA. In other words, this involved "pitting colloquialism against classicism, or rather standardization" (p.86). This was done on the ground that the colloquial (العاميّة /al-ʿāmmiyya/ or الدارجة /al-dārija/) form is more capable of conveying all different purposes of communication, whether in daily life or in cultural and intellectual contexts.

Although the movement of 'colloquialism' in the Arab world flourished in the 19th century, it has become weaker and no longer has the same momentum as before; therefore, it does not attract the attention of researchers today or encourage as much discussion as before (ibid). This can perhaps be attributed to three important factors. The first is that the people who wanted to implement this idea did not produce practical solutions to allow it to become a reality and make it ready to be popularised in the Arab world. In addition, this idea is seen as a Western product, and there is always a reluctance to accept any new idea that seems to be

supported by 'occidentalists',[188] especially if those ideas deal with cultural and religious matters. Another factor, involved in this idea not being widely accepted, was the special historic and cultural value placed on CA, even though at the time there was widespread illiteracy and poor education. In addition, CA always contains, according to those who opposed the colloquialism movement, some linguistic properties that cannot be found in other world languages. *Lughat al-ḍād* 'the language of *al-ḍād*' (c.f. Corriente 1978; Newman 2002a, among others) is a famous term describing how Arabs see their language as unique amongst other languages in the world. Ironically, the *ḍād* sound has disappeared from many of Arabic modern dialects.

Bakalla (1984: 86f) argues that certain obstacles stand in the way of the complete substitution of colloquialism against standardism. One of these hindrances is that, if we accept the idea of using colloquialism in the writing system instead of the traditional writing system, which Arabic dialect should be adopted? This might necessitate losing the standardisation that has been maintained for many centuries, as Standard Arabic is generally the language understood by the majority of Arabs, especially nowadays, when the widespread Arab media is playing an important role in reducing the gap between Standard Arabic and Colloquial Arabic. Furthermore, this might raise a relevant issue; if we assume that there is an Arabic dialect which could be used as the standard Arabic language, such as Egyptian Arabic, one could argue that at certain times or in certain political or educational situations it could become a stumbling block. For instance, Egyptian Colloquial Arabic has lost the propagation and superiority it had at the time when Abu-Melhim (1991) and Mitchell (1962) conducted their studies (D. Newman, Pers. Comm., cited in Al-Qenaie 2011: 34). Moreover, assuming that all Arabic dialects have a written form, which one should be used for the purpose of learning Arabic as a first, second, or foreign language? In addition, every Arabic

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[188] From occidentalism (inversion of orientalism), the stereotyped Eastern views of the West. See Said (1979) and Carrier (1995).

city has different dialects that sometimes have substantial differences (Bakalla 1984: 87), as in the case of Medina, where UHA co-exists with different Bedouin Hijazi Arabic dialects.

Although the concepts of 'colloquialism' in the Arabic context were relevant and may have prevented some negative impacts of Arabic diglossic issues, e.g. poor educational attainment, difficulties in learning Arabic, all the attempts to implement this idea were unsuccessful. Therefore, the question of whether Standard Arabic could become a native language as it was centuries ago is a legitimate one. The reasonable answer when considering the current Arab situation would be that it could not. However, the idea of trying to re-standardise Arabic by using Standard Arabic as the language of all communication matters for nursery school children has been suggested. This idea was implemented by Dr. Abdullah Al-Dannan (a Syrian linguist) in 1988 in Kuwait, and then in Syria, and now there are schools in Saudi Arabia and other Arab countries applying his idea of using only Standard Arabic during the school day. His theory is based on trying to resolve the problem of poor educational attainment by Arab children, especially in the early stage of learning, that results from the complicated diglossic situation. Moreover, it is based on the scientific evidence that children have the 'innate ability' to acquire language with its grammar; therefore, the best time to learn Standard Arabic is before the age of six. He claims that children whose school applies his theory are able to communicate in Standard Arabic as they learn it in school alongside their own colloquial form.[189] This idea seems theoretically applicable and it might contribute to reducing the negative impacts of diglossia in the Arabic context in the long term. Furthermore, it might be used as grounds for standardisation instead of colloquialisation.

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[189] See his idea on his personal website: http://www.lughatuna.info/index.htm

3.5.2.1 The diglossic situation of the research speech community

The typical traditional framework of 'diglossia', refers to two closely related languages, or two varieties of a language coexisting within the same speech community, where one of these varieties is considered as low variety (L), while the other is considered as high variety (H). Therefore, it is "certainly a suitable framework for understanding cross-dialect and cross-language contact, language change" (Sayahi 2014: 12). In some cases, its typical situation might be different in some speech communities. In the speech community investigated in this research, it seems the suitable description of the linguistic situation is triglossia (cf. Romaine 1995; Youssi 1995), not diglossia, as typically is the case with the linguistic situation of many Arabic-speaking communities. There are three Arabic varieties used by the SC in Medina, namely, HA (the native Arabic variety), UHA (the Arabic variety spoken by the Hijazi community), and MSA (the prestigious Arabic variety). MSA is used by the community, similarly in the rest of the Arabic-speaking communities, in formal situations, such as in education, sermons etc. The other two Arabic varieties are used in two different conversational situations.

The first conversational situation is when the community members talk to each other, whether they are Mauritanians (residents) or Saudi citizens, as in general, there is no difference when talking to any of these types of community members. In this context, the Arabic variety used in this intra-conversational situation is generally HA, in terms of the grammar levels (morphology and syntax). As for the phonological and lexical levels, there are some differences between the community members, which are dependent on some of the social factors investigated in this study. It is worth mentioning that at the lexical level, the type of words used for intra-group conversations are generally a mixture of HA and UHA words, even though the majority of words are of HA origin. In other words, we can generalise that the type of speech in this linguistic situation is HA with UHA borrowings, which differ

in terms of number and type from one speaker to another, depending on outside social factors. These factors which might play an important role in the number of borrowings and the degree of phonological adaptation might vary, but the most important factors are ethnicity, the degree of bound relations with Mauritanians, education, age and gender, which will be discussed in Chapter Four.

It is important to emphasise that this level of conversational speech is what is covered in the present study; the discussions that the research data were elicited from were conducted at this natural conversational level. Whether these discussions were conducted in the form of individual interviews or group discussions, this level of speech was generally maintained by vast majority of participants as the researcher was acting as an insider. It is worthwhile to mention that in the intra-group conversation situation performed by the community members, CS to UHA is rare, as this linguistic behaviour is not accepted and is stigmatised by the community members. It seems that two socio-psychological factors play an important role in the neglecting of systematic CS to UHA in the intra-group conversational situations. The first is that it is considered by the community members as an attempt to show cultural affiliation to 'Saudism' rather than 'Shanqīṭism'. The first means acting in terms of culture and traditions like Saudis and the second means embracing the Shanāqiṭa culture and traditions.

The second socio-psychological factor is related to the first one to some extent and strengthened by the very strong tribal bounds between the Shanāqiṭa community members, whether they are Saudi citizens or Mauritians residing in Saudi. The majority of the community are from the latter; consequently, their financial situation is not generally good, due to a low level of education (as they cannot attend the free Saudi government universities, according to the law, and no private universities exist in Medina) and they have poor practical skills (as those with a tribal background, usually, do not do professional jobs, such as fixing, crafting, etc.). On the other hand, the community members who are Saudi citizens have more

opportunities to be in a considerably better socio-economic situation like any other Saudi citizen. This socio-economic difference between the society members with the very strong tribal bond relationship made those who are in a better socio-economic status try to support those from the same tribal affiliation or those that have some family relations. Therefore, it is hard to differentiate between the family members, in terms of whether he/she is a Mauritanian or a Saudi citizen. This situation might prevent any significant shifting to 'Saudism', whether in terms of cultural or language use, as any clear shifting will be considered as denying your fellow tribal or relative members and it might be considered, in a very radical view, as a denoting a sense of shame of being with those of a low socio-economic position.

The above described sociolinguistic situation does not completely prevent clear CS to some UHA unassimilated words or phrases. This CS is mainly done intentionally for certain purposes, such as avoiding the use of a dishonourable HA words; therefore, switching to a UHA equivalent makes the situation more convenient. Moreover, this CS 'technique' might be used to draw attention to what the speaker is saying, as it is not a normal intra-group conversational feature to code-switch to UHA. In addition, there are other purposes, such as quoting what others have said and making jokes. It is worth noting that there are a few examples of CS produced for conversational purposes but they are not included in the data analysis as they are clearly related to CS and not to the lexical borrowing .

The second conversational situation is performed when the SC members have inter-group conversations. This includes conversations with Saudis and non-Saudis. The common practice of the participants included in this study (Shanāqiṭa Saudi citizens) is to carry out these inter-group conversations in UHA. Of course, there is a disparity in mastering continuous fluent UHA speech between the community members, as UHA is not the first dialect of the vast majority of the community members. It is very easy to recognise some

community members when they speak to others from their way of speaking UHA, even though they are Saudi citizens; this is due to the non-perfect mastering of this variety, especially in terms of phonology. For instance, there is the unperfected pronunciation of some sounds that contradict their native variety, along with noticeable syllable structure, pausing, intonation… etc. This behavior should not be seen as a contradiction to what was stated earlier: that all the research participants are Saudi citizen members of the society. This is because there is no big gap in the UHA fluency level displayed by Saudi citizens in the community. In other words, they in general master it to varying degrees. However, there is a big gap in UHA fluency between the Mauritanian members of the society, with fluency levels varying from high to very low.

It seems that two socio-psychological factors play an important role in driving the SC members to using this type of speech. The first one is that the society members feel that their dialect is not understood by the people outside the community; therefore, they completely switch to UHA when speaking to 'others' in order to be understood. This seems, to a large extent, to be true, even though the main reason behind this unfamiliarity with HA by Hijazi people is the SC members themselves, as they restrict speaking in their native dialect to the community members only. This situation might have led dramatically to a sort of isolation and the restriction of social activities to fellow society members in most cases.

The second reason that seemingly prevents the society members under investigation from freely expressing themselves in their dialect is to avoid stigmatisation from others as being affiliated with a 'non-Saudi' culture and dialect. This has clearly resulted from the fact that the tribal (Bedouin) lifestyle is gradually dominating the lifestyle of Hijazi society in Medina. This in turn has led to the gradual disappearance of the Hijazi typical social life, which was rich with a diversity of cultures, and is still observed in other Hijaz region cities, such as Mecca and Jeddah. The new situation in Medina with the dominance of the Bedouin

and tribal culture means that gradually the dialect was not convenient for other communities (even if they are Saudi citizens) to use to reveal publicly any kind of cultural and language practices, which appear in what was called 'Saudisms'.

This situation of bidialectalism "the ability of a speaker to command more than one dialect of a language and to show CS from one to another depending on social context" (Trudgill 2003: 14) is clearly CS, and it is not covered in the present research. Nonetheless, it might be an interesting topic for future research, wherein the linguistic elements, especially grammatical ones could be highlighted and investigated, in addition to examining the social motivations behind systematically and continuously performing this linguistic phenomenon in this conversational situation.

It should be noted from the above description of these two conversational situations that the levels of speech differ from each other. In the first intra-group conversational situation, HA is the main variety used in discourse with a number of (mostly) assimilated borrowings from UHA. In contrast, in the other inter-group conversational situation, the variety used is UHA. The main concern of this research is with the first situation, whereby effort has been made to carefully elicit purely UHA lexical borrowings imported by HA speakers in their intra-group conversations and daily-life discourse. There are certain criteria applied to determine whether these possible borrowings are actually borrowings or an independent development and/or borrowings from CA/MSA.

3.6 Conclusion

This chapter has highlighted this linguistic phenomenon, i.e. lexical borrowing (LB). Special attention was given to this phenomenon in Arabic, including the historical background of LB, and an early account of this process in Arabic, and its language donors. The traditional linguistic approach of LB, or what is known in traditional studies of Arabic as *al-Muʿarrab,* was introduced in this chapter. This approach still in operation in the modern *taʿrīb* 'Arabisation', which has been given attention in a substantial part of this chapter in terms of its phonological and morphological processes. The relation between LB and other linguistic phenomena, namely CS and diglossia, was also examined in order to clearly identify the case of LB covered in this research, which will be analysed and correlated with social factors in Chapters Five and Six.

Chapter Four

Methodology

4.1 Introduction

This chapter is divided into nine sections, and describes the methodology that will be adopted in this research. The second section gives a brief overview of the quantitative sociolinguistic method. Section three highlights the methods used in selecting the research informants. The methods of sampling the SC's speech will be clarified in section four. The following section identifies the four social variables used in this research. Section six presents brief information about the study participants. In section seven, the linguistic variables are presented, classified into two types, i.e. consonantal variables and vocalic variables. In section eight, a brief description will be provided of the statistical methods used in analysing the data, in addition to the system used to transcribe the interviews and group discussions. Finally, in section nine, the chapter will be concluded.

4.2 Quantitative sociolinguistic method

In empirical research (whether in linguistics or any other subject), the validity and the importance of the information collected depends, primarily, on the methodology that the fieldworker uses to obtain that information. It is always challenging to choose and adopt a suitable and valid methodological framework for a study, especially when it involves collecting informants' dialectal speech (or the vernacular). Vaux & Cooper (2003: 178) identified three basic challenges associated with attempting to conduct fieldwork in dialectology: the first basic challenge facing the fieldworker is to identify his/her informants and maintain their help and cooperation. In addition, it is important that the informants feel comfortable speaking non-standard dialect, as the researcher can face difficulty in "eliciting

dialect data successfully, in face of the fact that most speakers feel that they have no non-standard linguistic features" (ibid).

There are various sociolinguistic methods used to select samples and record their speech and choosing the appropriate method is, to a large extent, dependent on the research aims, and objectives, that the fieldworker is trying to achieve (Milroy 1987: 28). It is worth mentioning that not all sampling methods are relevant to all speech communities. For instance, if we take social class as a variable in two different geographical areas, such as in Western speech communities, which have been the subject of extensive studies in language variation, and in Arabic speech communities, we will discover that this variable is mostly defined in terms of socioeconomic standards (e.g. income, occupation, etc.) in Western speech communities (cf. Milroy (ibid: 29). This approach towards social class is very common among sociolinguists, including Labov (1966), Wolfram (1969), Fasold (1972), Trudgill (1974), and Rickford (1986: 215). Trudgill (1974: 32) states that "social classes are not organised or sharply demarcated social groups, but rather aggregates of people with similar economic characteristics".

On the other hand, in many Arabic speech communities (especially non-urbanised ones, i.e. rural and Bedouin), this social class might be more usefully defined by non-socioeconomic factors, such as level of education, ethnicity, tribal affiliation etc. In other words, it is more applicable in many Arabic-speaking communities (especially those with a strong tribal social life, such as HA speakers in their native land, Mauritania, and in Medina, where the SC immigrated to) for social class to be defined by non-socioeconomic factors. Therefore, it is very problematic to say that the correlation between linguistic variables and certain social variables should be applicable and typical for all speech communities, regardless of any differences between them (Al-Shehri 1993: 37f).

It is a fact, that the methodological framework adopted by William Labov, who was "the leading figure in this field and pioneered work of this type, notably in his 1966 publication"[190] (Trudgill 2003: 71), received more attention than any other study in the last century. The validity and importance of Labovian methodology, according to Trudgill (1998: 157), is that it proves that the language variation process is not a chaotic one.[191] In his study, Labov examined phonological variables, such as the rhoticity of the /r/ sound, and how the realisation of this variable, varied in the speech of the community under investigation. In his study, three social variables were examined: education, occupation and income. He identified four social stratifications, involved in the analysis and correlation between social and linguistic variables: lower class, working class, lower middle class, and upper middle class (cf. Labov 1966: 133ff). After the leading Labovian studies, many studies were conducted in a similar manner concerning different Western societies. For instance, Trudgill (1974) studied 'the social differentiation of English in Norwich'. This study examined the same social variables proposed by Labov (1966), in addition to three more variables: locality, housing scale (ownership, age, and type) and father's occupation. Then he proposed similar social stratifications to those previously proposed by Labov, with sub-divisions of those variables (cf. Trudgill 1974: 31ff).

Al-Shehri (1993: 39) argues that social class as a variable in language variation studies is more appropriately defined in socio-economic and education terms in the developed (highly industrialised) societies in the West. Moreover, the indicators proposed by Labov (1966) and Trudgill (1974), such as income, occupation and type of housing are very useful for identifying the social class scale in these societies, where economic changes in speech communities are clearly reflected in language variation. Therefore, the correlation between social class, based on the above criteria and linguistic variables, is clear and easy to trace. In

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[190] *The Social Stratification of English in New York City.*
[191] See, for example, Labov (1966, 2001).

contrast, due to the difficulty of finding clear socioeconomic stratification, this correlation in the so-called 'Third World' societies (lowly industrialised) might be irrelevant in some cases, or not fruitful to examine in others. On the other hand, educational attainment and religious affiliation, for instance, might be more effective markers of social-class differentiations in Arab world speech communities.

If we highlight the current social situation in Saudi Arabia, where the variety of Arabic under investigation is spoken, and in Mauritania, where this variety came from, several important points can be made in terms of social stratification. The social situation in Saudi Arabia, to a large extent, is similar to that in Mauritania in that tribal affiliation plays a significant role in positioning individuals and groups as having a high or low social status. The Saudi population can be divided into two main categories:[192] those affiliated to Arab tribes, and those who have no affiliation to any of these tribes. The first category is identified easily by surname, which usually refers his or her tribe's name, such as Al-ʿUtaybi (a member of the ʿUtaybah Tribe), and Al-Juhani (belonging to the Juhaynah Tribe),[193] whereas there are no Arab tribal names in the other category (cf. Al-Shehri (1993: 40).

In the latter category there are several ways of replacing the tribal names, most commonly by using the tribal *nisba* "a genealogical chain in the form of 'son of A, son of B, son of C, etc.'" (Beeston 1971) in geographical bases to refer to the place of origin, e.g. Al-Shanqīṭi (of Shanqīṭ; the old name of Mauritania)[194], Al-Turkustāni (of Turkestan), Al-Ḥalabi (of Ḥalab; Aleppo). This behaviour is believed to be a result of urbanisation and the limited number of tribal members in Medina before recent times. The other common way of

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[192] These two categories include only people holding the Saudi Nationality, not those who live in Saudi as labourers and their families. According to the last Census (2010) conducted by the Central Department of Statistics and Information in Saudi Arabia, the approximate size of the population in Saudi Arabia is 27,136,977. The non-Saudis form a total of 8,589,817 people. See the official website of the Department of Statistics and Information at: http://www.cdsi.gov.sa/english/index.php.

[193] This category here refers to only the tribal names from the Gulf region like the examples above; however, other tribal names outside this region are always considered as non-native Saudis.

[194] See Chapter One.

replacing the tribal names is by using family names without the *nisba*, such as Hāfiẓ, Jamal

Al-Lēl, and Kātib. It is worth mentioning that Saudi people belonging to this category usually

live in the main cities of the Hijaz Region, i.e. Mecca, Medina, Jeddah, and Taif, where there

has been a noticeable demographic change in the expansion and spread of the concept of

tribal affiliation in these cities, especially in the case of my home city, Medina.[195]

In Mauritania, the social situation is more complicated. In addition to the fact that tribal

affiliation is one of the main social stratifications, in the country as a whole, there are some

community groups, such as *Ḥraṭīn*, who are the second largest population group in the

country. Although many members of this ethnic group still affiliate themselves to their

former masters' tribes. [196]In the last few decades this ethnic group has begun to subscribe to a

new ideology, which I might term *Ḥrāṭīnism*. This ideology, or revolutionary movement, is

based on the negation of the current social status of this population, whereby *Bīẓān* (the white

Mauritanians)[197]deny them their rights and deal with them with contempt and at the same

time, exercise control of over all the social and economic outlets. Moreover, the *Ḥraṭīn* are

seeking their independence from their former masters. They want respect from the society as

a whole, as they have to deal with the hardest conditions, as they are the main labour force in

the country.

Despite the power of tribal life, and its social implications in Mauritania, it is unusual

for anyone from *Bīẓān* to add his/her tribal name as a surname, as is usual in the Arab

Peninsula. They are usually content with people knowing it and only mention the tribal

attribute verbally, when necessary, such as when introducing themselves. In fact, the Shanqiṭa

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[195] The rapid demographic change in Medina tends to strengthen the concept of tribal affiliation. Medina was a typical Hijazi city, where tribal affiliation was hardly found amongst its population; however, during the last few decades, Medina witnessed rapid tribal migration, most importantly from the Ḥarb and Juhaynah tribes (the biggest tribes in this area). I noticed this demographic change and its outcomes by comparing the situation from my early childhood (30 years ago) to the current situation.

[196] For instance, if his/her former master's tribe is l-aqlāl (a very big tribe in Mauritania), he/she would say when introducing him/herself /a:na qalla:wi/ 'I am qallāwi', 'affiliated to this tribe'.

[197] See Chapter One.

immigrants in Medina live their tribal life in a very close society, as in their homeland. This lifestyle is characterised by glorifying the tribe, and differentiating between tribes themselves in terms of origin and race, even with the well-known Arab tribes in Saudi Arabia. On the other side of the coin, those who belong to the Hijazi tribes, regard this community as any other non-tribal community in the Hijaz, i.e. as socially inferior, at least when compared with the superiority that these tribal members assume over non-tribals.

It can be noted from the above discussion, that tribal and ethnic factors, in addition to educational attainment, are very important social class indicators when studying language variation in Arab speech communities, especially in countries like Saudi Arabia and Mauritania. In such countries, the tribal and ethnic affiliation is a very important element, and is probably more important than socio-economic status, as a social class indicator. It should be emphasised that educational level, and tribal affiliation, are both important factors to take into consideration when studying linguistic variation in the vast majority of speech communities in Saudi Arabia and Mauritania. This is, also, the case in the non-urbanised communities in the Arab world, as previously highlighted. Moreover, one of these two factors can have more significance in a particular speech community when compared with another. Al-Ahdal (1989), in his study of Meccan Arabic, determines the stratification of social class in this community as reflecting the level of educational attainment, rather than race or colour. However, it will be clear from the discussion in Chapters Five and Six, that ethnic origin is very important in the stratification of social class in the SC in Medina.

4.3 Sampling the informants

4.3.1 Methods used for sampling informants

In sociolinguistic studies, the informant sampling method is no less important than the information the fieldworker is intending to collect from his/her informants. Therefore,

selecting an inappropriate method may have a negative effect on the reliability and validity of the study. Therefore, adopting a sampling method, that is suitable for the nature of the study, is an important factor "to bring out the relation between research design and research objectives" (Milroy 1987: 18). In sociolinguistics, there are two main widely-known sampling methods, *random sampling* and *judgment sampling*. Each of them has its own sociolinguistic objectives and adopting one of them should be based on what has been explained above.

The first method (random sampling) was first adopted by William Labov, in his groundbreaking study of English in New York: *The Social Stratification of English in New York City* (1966). The most remarkable aspect of his method, was that his sample frame, gave everyone in the speech community an equal chance to be selected for the study. This was aimed at resolving the representativeness problem (Trudgill 1984: 203). Labov's *sample frame* refers to any population list, which could include electoral registers and telephone directories. Milroy (1987:19) argues that William Labov in his innovatory work [1966] "was by no means the first urban dialectologist to be sensitive to the need to give a representative account of urban speech, his sampling methods are, however, important and distinctive". This Labovian method is clearly held in high regard since it was developed until recent times: e.g. Chambers & Trudgill (1980); Hudson (1980); Trudgill (1984); Wardhaugh (1986); Milroy (1987). The best example of a study that adopted this method, is Peter Trudgill's study of English in his home city of Norwich, *The Social Differentiation of English in Norwich* (1974), although it was also adopted by a number of other studies.

Despite the fact that the Labovian sampling method gained high prominence, as it represents a very important proportion of language variation studies, it is not free from criticism associated with its implementation in the proposed speech community. For instance, this method is not without bias; for example, electoral registers do not include people under

18 years old, and telephone directories only include those people who have a subscription with the service provider. In other words, Labov had a role in the selection of his samples, and in the exclusion of those who did not fulfil his criteria (Milroy 1987: 19). This method has been abandoned by the majority of sociolinguistic studies in recent times, in favour of *judgment sampling,* as representativeness is less likely to be achieved with large populations with diverse members. In addition, *random sampling* presents difficulties in terms of constructing a well stratified and balanced sample; *judgment sampling* is therefore preferable in this respect. (see Milroy & Gordon 2003: 24ff; Alessa 2008: 31).

Labov's sampling methods, which are relatively complicated, have been discussed and examined in terms of their suitability and validity. There is, also, a question concerning their validity in other disciplines outside linguistic studies (Trudgill 1984: 203). Moreover, Milroy (1987: 27) states that, ultimately, his method can, in actual fact, be described as *judgment sampling,* rather than *random sampling*, as although the Labov's sample size was large, he discarded the majority of his samples, because the sample members did not meet his criteria.

The *judgment sampling* method, on the other hand, seems more reliable when it is well-constructed, according to the researcher's judgments. The main principle of this method, is that the researcher chooses the different types of informants he/she intends to study, and then looks for a quota of informants that fits his/her proposed criteria. Ultimately, the judgment sample should be rational and well-motivated (Milroy 1987: 26). Moreover, this sampling method "has become the standard operating procedure not only in dialectology but also in sociolinguistics" (Bailey & Dyer 1992: 3).

In this research, the *judgment sampling* method was adopted, in order to select my informants from the Shanāqiṭa community in Medina. It could be argued that this method may be the only appropriate sampling method to use in the Arab world, where it is very

difficult, if not impossible, for the fieldworker to approach his/her speakers without pre-arrangement. This obstacle is due to the lack of openness in Arab societies, in general, and their extreme sensitivity to any form of individual information gathering. Moreover, there is a general lack of value placed upon, or even understanding, of the real purpose of this kind of empirical research, which depends on the collection of data through interviewing and recording of people's speech. The other reason for choosing the *judgment sampling* method in this case was that the Shanāqiṭa community in Medina can be easily defined, and is distinguishable from other communities in Medina, in terms of language, appearance, culture and neighbourhood.

In other words, the *judgment sampling* method is more appropriate to those social groups that are well-defined and specifiable. In contrast, the *random sampling* method rarely produces valuable outcomes, in studies of this kind of social group (Milroy 1987: 27). Finally, I was prompted to use the judgment procedure in my case study as I was relying primarily, on my comprehensive knowledge of the Shanāqiṭa community, and my good relations with many of its members. This helped me to identify, in advance, the people who would meet my research criteria, e.g. ethnicity, age group, education attainment, etc.

4.3.2 The researcher and the speech community

A good relationship between the researcher and the speech community, whose speech he or she intends to investigate, is extremely important, especially in the case of closed societies, such as Arab societies. Therefore, it plays a vital role in the fieldworker gaining access to these community members, thus allowing him or her to interview or record the participants without experiencing doubt or mistrust. Milroy (1980: 80) emphasises the link between the researcher having good relations with the community under investigation, and the success of the fieldwork: "…the closer the fieldworker is matched to subjects, the more successful he or

she is likely to be". In other words, success is less likely when a fieldworker, from outside the speech community, collects the data. For instance, social workers in Saudi Arabia, find it difficult to approach people they do not know to conduct social work, according to number of them, with whom I have good relations. This problem, in my opinion, comes into play when the National Census takes place; a considerable number of social workers have to be recruited to work within their neighbourhoods, despite the fact that the National Census date is widely advertised in the media, and by all the government institutions.

The researcher, for this study, has the advantage of being able to access the speech community, as I am a member of the SC and belong to this community both linguistically and ethnically. I was born and raised in Medina, while my parents were born and raised in Mauritania, and then immigrated to Medina in their early youth. I also married within this community, and my wife's family has almost the same social status as my family. As mentioned above, to a great extent the SC members live a tribal life in Medina, as was the case in their homeland; one clear manifestation of this life-style, is the social hierarchy, that is based on tribal originality and affiliation. The researcher belongs to the tribe of *Glāgma*, a well-known *Zwāya* (Ashrāf) tribe[198] in Mauritania, and in the SC. This tribe was originally from al-Ḥawḍ al-Sharqi (the Eastern Basin) in the East of Mauritania, where the main cities are Néma and Walatah.

Moreover, I speak HA (the main Arabic variety in Mauritania) as my first language and UHA (the main Arabic variety in the Hijaz region in the west of Saudi Arabia) as a second language. Therefore, a thorough knowledge of both varieties allowed me to identify the different aspects of language accommodation, that the SC members have experienced throughout the long period of dialect contact between HA and UHA in Medina. Labov (1972b: 215) maintains that "the study of language in its social context can only be done

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[198] First stratum in the SC in Medina and Mauritania, as mentioned earlier.

when the language is 'known' in the sense that the investigator can understand rapid conversation".

The relative ease of gaining access to the community, to conduct my research in Medina, does not necessarily mean there was no need for fieldwork assistants in certain circumstances, to allow me to effectively fulfil all my research criteria. Working with assistants or 'insiders' is important when conducting research in a speech community that has different social classes, as is the case of the SC in Medina, where the society is divided into two main ethnicities: blacks and whites, as explained above. In his study of black English, *Language in the Inner City: Studies in the Black English Vernacular*, Labov (1972a) relied on two black researchers (Robins and Lewis) as fieldworker assistants or 'insiders', to conduct fieldwork with black informants in Harlem in New York. This technique was designed to make the data collection take place in an informal manner. To some extent, the former study is similar to my case study, where there is a large group of black Mauritanians, to which I do not, ethnically belong. Nonetheless, working with fieldwork assistants, who linguistically and ethnically belong to the society is important, especially when the research concerns both genders and different ethnic groups, as was the case with this research. Therefore, if a fieldworker is looking to conduct fieldwork in any Arab community, he or she should cooperate with an assistant of the opposite gender.

Being a male fieldworker in Saudi Arabian communities is always problematic as, in many cases, the fieldworker is not able to fill his female quota. For instance, Al-Shehri (1993) in his study of Jeddah, states that the female quota was underrepresented in his sample even though he used a female assistant. In other studies, such as Al-Jehani's (1985) study of Mecca and Khtani's (1992) study of Abha (in Asir Province), females were not represented at all. On the other hand, the task of a female fieldworker might be relatively easier, because they can easily access female informants, and should find it much easier to access male

informants, than would be the case if a male fieldworker required access to female informants. For instance, Alessa (2008) in her study of Jeddah was able to easily access her female informants, and was, to a great extent, successful in accessing male informants, in addition to being helped by a male assistant. Her situation as a female resulted in "a fair representation of both sexes: 27 males and 39 females" (Alessa 2008:55).

In order to achieve representativeness in my data collection, the 'social network'[199] concept is beneficial to employ, as developed by Milroy (1980)[200] using the 'friend-of-a-friend' approach.[201] This technique is based on broadening the network contacts. For instance, when the first-order network contact (my friend, for example) introduces me to another person (a second-order network contact), then the second one may refer me to a third one (a third-order network contact), and so on. This technique was useful in facilitating the finding of suitable participants, that met specific social criteria that the researcher was not able to access from his first-order network contact.

In this study, the use of a fieldwork assistant, and the 'friend-of-a-friend' technique, were adopted, in order to overcome the problem of female underrepresentation, often faced in sociolinguistic studies conducted in Arab societies. In addition, it enabled me to have access to the black Shanāqiṭa community, with whom I do not belong, or have no good relationships. The latter technique (friend-of-a-friend) was to some extent successful, which allowed me to interview 4 Ḥarṭānis (3 males and 1 female). The interviews and the group discussion were arranged, primarily, by my first-order network contacts, namely, a friend of mine and my mother-in-law. On the other hand, the method of using a fieldwork assistant in order to elicit more data from female participants, did not work well. This is because the female participant

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[199] The concept of the 'social network' as an analytic concept was firstly introduced by Barnes (1954) (Milroy 1980: 46).

[200] See also Russel (1982); Bortoni-Ricardo (1985); Jabeur (1987).

[201] This term was first introduced by Boissevain (1974).

data elicited by the fieldworker was not good enough because of the poor quality of the recordings; therefore, it was discarded from the analysis. This assistant fieldworker was given some training in how to use the recording machine and the questions that needed to be asked in the interviews. Unfortunately, I had to stop using this method and disregard all interviews with females elicited by this assistant, as there was so much noise in the recordings, resulting from his lack of proficiency in using the recorder.[202]

It is worth mentioning, that I followed a specific technique when approaching my informants, in order to conduct interviews and recordings. This technique was based on avoiding giving the impression that I was doing my fieldwork for linguistic interest. Rather, the informants were notified that this research was being done in order to collect information about the SC in Medina, in a social context, involving culture, customs, and how its members have accommodated the Hijazi society and culture. This technique helped to obtain information, and encouraged the informants to keep their speech spontaneous, without trying to use UHA words, as a prestigious variety, or to use HA words that are no longer used, or are rarely used. Moreover, the language used to talk to the informants by the researcher was HA spoken in Medina, which is one that the community members are familiar with, and they use it as their first spoken dialect.

4.4 Sampling the informants' speech

This study is similar to many studies that have been carried out in the sociolinguistic field, that have paid special attention to vernacular speech: the level of speech that is produced spontaneously by speech community speakers. The most important feature of this kind of speech is that it represents the indigenous language of a speech community, which has the most important value of the natural speech of the speech community. Moreover, this kind of

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[202] The assistant fieldworker was a male (my brother-in-law) who has a very good number of female relatives who can talk to him freely because of being relatives and they were milk-brother and sisters, so there was no hesitation in sitting and talking openly.

speech is considered to be in contrast with less natural speech varieties, such as the *standard* and the *lingua franca*. (Crystal 2008: 511). In other words, this study looks at the horizontal linguistic variation,[203] which occurs as a result of dialect contact between HA and UHA, as two varieties of the same language (Arabic). More precisely, this study examines the lexical borrowings that have entered HA, as result of its contact with UHA in Medina. Therefore, the main focus was on accessing the vernacular speech of HA speakers, the SC. This is despite the fact, that maintaining complete speech spontaneity is difficult, if not impossible, to achieve, with the typical sociolinguistic method of data collection (interviews).

This is because although there are different Although there are different methods of collecting sociolinguistic data, the face-to-face social interview technique, is still the most common and effective method for eliciting sociolinguistic data (cf. Milroy & Gordon 2003: 57). This fact does not remove the common problem associated with this method, as mentioned above. The level of negative impact of this method on speech spontaneity might vary from one speech community to another, so this problem has motivated sociolinguists to design their interviews in a way that reduces the negative impact of this method. It is difficult to achieve speech spontaneity when collecting data by this method, as subjects often produce unnatural speech, or shift to a standard form, when they realise that they are being observed and tape-recorded by others.

William Labov coined the term 'observer's paradox' to describe the common major problem associated with eliciting the vernacular in a speech community. He explains this term, by stating that: "the aim of linguistic research in the community must be to find out how people talk when they are not being systematically observed; yet we can only obtain these data by systematic observation" (Labov 1972b: 209). In order to overcome this problem,

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[203] Horizontal variation is in contrast to vertical variation, which concerns the linguistic variation between standard and vernacular, or 'high' and 'low' varieties (Al-Shehri 1993: 49).

or at least to reduce its negative impact, different methods have been implemented by sociolinguists and fieldworkers, such as the anthropological technique of 'participant observation'. This technique is based on the fieldworker participating with the group under investigation, and becoming a member of this group for a period of time. Thus, the fieldworker will become an 'insider' observer, not an 'outsider' one. This new status of the fieldworker will facilitate in minimising the attention of the informants on their speech (Trudgill 2003: 101).

The 'pre-interview question' is a well-known technique adopted by William Labov (cf. Labov 1966) and others, in order to obtain spontaneous speech during interviews. With the 'pre-interview question', the fieldworker aims to trigger the subject's participation in an informal way by asking him/her about something he/she is willing and enthusiastic to talk about. Labov (1966) adopted the 'danger of death question',[204] while Trudgill (1974) asked his informants about something humorous.[205] The choice between these two 'pre-interview questions', seems to have depended on what interested the communities in New York and Norwich, at the time of the data collection.

In his study of Norwich English, Trudgill (1974) tried another technique to elicit vernacular spontaneity. This technique was based on the 'pre-interview conversation', and entailed encouraging the informant to speak outside the context of the formal interview, or interacting with the informant while they were speaking to a third person (Trudgill 1974: 51). This technique was used for this research, when collecting data from the SC in Medina, especially when interviewing informants outside the researcher's close network. The importance of this technique might be generalised as applying to the vast majority of Arab

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[204] "Have you ever been in a situation where you thought you were in serious danger of being killed... where you thought to yourself, "this is it?" (Labov 1966: 71).
[205] "Have you ever been in a situation, recently or sometime ago, where you had a good laugh, or something funny or humorous happened to you, or you saw it happen to someone else?" (Trudgill 1974: 51).

speech communities, if not all of them, since these communities are highly sensitive to any kind of interview, especially with strangers. Moreover, Blom & Gumperz (1972) in their study of CS, implemented another method in order to avoid the side effect of face-to-face sociolinguistic interviews, and to elicit spontaneous speech from their informants. This technique or method aimed to record 'spontaneous group conversation' instead of recording individual informants, which is more formal. It should be noted that both methods (sociolinguistic interviews and group conversations) were adopted in the present study, and both are explained in detail below.

4.4.1 Sociolinguistic interview

The core aim of this study is to examine the volume, and the direction of borrowings from UHA, that the SC members incorporate into their speech, as a result of their contact with the Hijazi community in Medina, in addition to the linguistic process that has accompanied these borrowings. It also analyses the differences between participants according to their social background (i.e. age, education, ethnicity, gender) regarding the type and volume of borrowings from UHA. The main method applied in the present study, in order to achieve this goal, is 'sociolinguistic interviews'. Labov (1984: 29f) argues that this method is the only systematic and effective way to elicit the valuable casual, speech that quantitative analysis demands. Although Labov's statement is to a large extent true, there are structural limitations in the data collected using this method. One of the most important limitations of this method, is that the elicitation of some variants is very difficult, or sometimes impossible, to achieve, due to the existence of vernacular forms, that can only be elicited in specific social situations.

These particular variants are unlikely to be elicited through formal interviews; instead, they occur in specific social situations, such as when peers are speaking to each other. This particular limitation of interviews can be identified at all levels of linguistic analysis

(phonological, morphological, syntactic and discourse). Milroy (1987: 51ff) clearly addresses this in her study of *Inner City Belfast*. She states that eliciting the vowel sound for 'meet' and 'meat' was problematic, since some variations of this vowel occur only in spontaneous speech, and not in informal interviews. Moreover, the limitation of the analysis of the data elicited, goes further in some studies, when comparing the data elicited by interviews, to that elicited from unobserved spontaneous conversation; there is a debate about the reliability of the data elicited by the first technique, as compared to the latter. It has been claimed that the approximation to the vernacular of the data elicited by the interview method is relatively poor (Al-Shehri 1993: 51).

One of the most useful approaches which overcomes, or at least reduces, the limitations of the sociolinguistic interview method, is to combine it with another supplementary method, namely, 'spontaneous group conversation' as mentioned above (highlighted in more detail below). Despite the possibility of the above limitations of the sociolinguistic interview method, the amount, and the quality of, the data that this method produces, by tape-recording, means that it is still the most important method for eliciting accurate data, especially in terms of phonetic variation (Labov *et al*. 1972). It is, also, the most obvious and structured method for collecting sociolinguistic data, as it allows the fieldworker to steer the interview back in the right direction, when he/she feels that it is digressing. The relative ease of controlling the interviews, enables it to be led in a way that facilitates obtaining the required pre-planned data.

The one-to-one technique was used in semi-formal interviews; however, the priority was to conduct these interviews in the presence of a third person (a relative or friend) to reduce the formality as much as possible, and a great effort was made to accomplish this aim. This is due to the assumption that the speech community members, under investigation, are not, generally, familiar with being involved in interviews. Therefore, it was, to a large extent,

effective at reducing the formality of the interviews, which resulted in the production of higher quality casual speech, in most cases (cf. Labov 1972b; Trudgill 1974).

4.4.1.1 Interviews: structure and topics

The main objective of the design and structure of this study, was to examine whether or not the lexical borrowings (and the related linguistic processes) in the speech of the SC members, resulting from dialect contact between their dialect (HA), and the Hijazi urban dialect in Medina, differ when correlated with the following social categories: education, age, gender and ethnicity. Therefore, the study interview was designed and structured to encourage the informants to produce vernacular speech, rather than them shifting to a standard or prestigious level of language, which might be manifested in different ways, such as shifting to pure HA, in order to show off competence, or to UHA, as the prestigious and official variety, in Medina. In order to avoid this undesired, but expected, behaviour, the researcher spoke HA to the informants in its vernacular form, as used in daily life between the SC members.

Labov (1984) applied the concept of 'conversational interview modules' (conversational networks), which refers to a "group of questions focusing on a particular topic" (Labov 1984: 33) as a very structured example of 'interview modules'. The most important feature of his conversational modules, is that they successfully engaged with the informants, as a result of choosing topics that addressed the previous experience of his informants. Moreover, the questions were designed to shift from one module to another in a systematic manner. The 'conversational interview modules' technique is very useful, because it allows the fieldworker to establish the interview with a good engagement with his/her informants, and then move on systematically and 'smoothly', from one module to the next. However, Labov's 'network modules' are not necessarily appropriate for all speech communities. Therefore, the fieldworker should design his/her interviews in a way that suits

the informants. It should be emphasised, that some of Labov's subject modules, such as the girls fighting and dating modules, are inappropriate to most, if not all, Arab communities.

In this study, the sociolinguistic interviews were designed using modules, rather than groups of formal questions to be answered, sequentially, by the subjects. In other words, the questions were organised around specific topics, which aimed to trigger the study variables by proposing topics that were likely to encourage participants to feel comfortable talking about them (cf. Milroy 1987: 70). Moreover, the interview modules, in the present study, were based, generally, on discussion topics, in which lexical borrowings were likely to occur. These chosen discussion topics consisted of cultural, religious, administrative and daily life topics. The main factor behind choosing these particular topics, was the assumption that they would be suitable for all community members, regardless of their gender, level of educational attainment, age group and ethnic origin. In addition, they were all open context topics, without high sensitivity in Arab communities, in contrast to political topics. These conversational topics are, linguistically speaking, are rich and so are more likely to trigger more lexical borrowings than other topics in the HA speech community in Medina. This is due to the fact that they probably represent the highest level of contact between SC members and the Hijazi community.

Designing interviews according to the module technique, as far as it facilitates conducting these interviews systematically, gives the fieldworker an opportunity to be flexible in changing or choosing from the various module topics. Milroy & Gordon (2003: 60f) argue that, in addition to the importance of obtaining willing subjects to take part in the interviews, the interviews themselves should be flexible to suit all interviewees, because not all conversational topics are appropriate for all subjects. Therefore, the conversational subjects in the modules below have been chosen as appropriate for the majority of informants involved in this research. However, the researcher was flexible, and was willing to choose

other topics if he realised some topics were not suitable for certain informants. It is worth mentioning, that the questions about personal life and family were generally avoided, although these emotive questions, i.e. about family life, tend to elicit a high level of natural speech. This is due to the fact that these kinds of questions are not generally welcome in Saudi societies, even though the SC are slightly more open about them; however, this lack of openness is now practiced by this community, as a result of the increasing Bedouin Hijazi influence on the whole Hijazi society in Medina, as was discussed in Chapter One.

It is worth mentioning, that before starting the interview with the participant, he/she was made aware of the scientific purpose of this research, which was stated as being generally concerned with the cultural and social aspects of the SC in Medina, as was mentioned earlier. Moreover, the participant was assured of the confidentiality of the information to be elicited from the interview, and it was emphasised that all participants will be anonymous, especially to female subjects, who are usually more sensitive about being identified by people outside the close family circle. This is a general procedure, but it was unnecessary when interviewing few of my friends and relatives[206], who already knew my subject and its scientific purpose. After introducing the aim of the research, the following five modules were adopted in all interviews:

1. Module one: biographical information and warming up.

2. Module two: cultural topics.

3. Module three: religious topics.

4. Module four: administrative topics.

5. Module five: daily life topics.

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[206] I interviewed three friends of mine, in addition to my wife and my brother-in-law.

The first module 'biographical information and warming up' aims to validate the subject's biographic information, regardless of whether or not this information is known by the researcher beforehand, because of the use of 'network contacts' mentioned above. This biographic information includes age, education level, place of birth and where they were raised, and the period of time they have lived in Medina. Other important biographic information, i.e. ethnical origin (*Bīẓāni* or *Ḥarṭāni*) was known by the researcher in advance, due to his thorough knowledge of the society, and the pre-arrangement of the interviews and their informants. In order to reduce formality to the absolute minimum, this biographic information, if not known in advance, tended to be mentioned indirectly through warm-up conversation topics.

These warm-up topics included, but were not limited to:

- Beautiful memories of the neighbourhood.

- Memories of early education stages in childhood.

- Differences between students today and when he/she started primary school.

- The latest interesting news.

These specific topics, at the beginning of the interviews, aimed to encourage the informants to speak spontaneously about their childhood experiences. In addition, the previously-mentioned biographical information (age, education level, etc.) would be more likely to be expressed through these topics. However, in the unlikely event of this essential biographical information not being known beforehand, and not being obtained through the discussion of these topics, the researcher would ask the informants for this information during the warm-up conversations. Table 4.1 exemplifies the warm-up topics and their associated questions that were asked to the participants.

Table 4.1: Examples of topics and questions in the warm-up module

Topic	Conversational question
study and work	ənta ʃ tədrˤəs/ təʃtaqal ðˤarˤk What are you studying/doing now? ʔənta ʃ kənt tədrˤəs/ təʃtaqal What were you were studying/doing?
latest interesting news	ʃənhu ʔaːxir u ʔakθarˤ xabarˤ ʕəʒbak What recent news has interested you the most?
good memories of early childhood	ʃənhi l-furˤuːq (ə)lli tʃowv-ha bejn ətˤ-tˤəllaːb l-juːm wətˤ-tˤ əllaːb lamman kənt tˤvejl sqajjər What are the differences between students nowadays and students when you were a little child?

The second module, adopted for the individual interviews, was a 'cultural topics' module, as cultural differences between the SC immigrants in Medina and the Hijazi culture are likely to trigger borrowings from UHA into the HA spoken by the SC in Medina. The following topics were chosen to prompt informants to speak in this context:

- Marriage customs of the SC.

- Preferable social gatherings.

- Special cultures and customs distinguishing the SC members.

- The relations between family members in the SC.

- The famous cuisine of the SC.

Table 4.2 shows examples of questions associated with some of these cultural topics.

Table 4.2: Examples of topics and questions in the cultural topics module

Topic	Conversational question
marriage customs of the SC	ʃənhi ʕaːdaːt w taqaːliːd (ə)ʃ-ʃnaːgtˤa f-laʕraːs What are the wedding customs and traditions of the Shanāqiṭa?
preferable social gatherings	ʃənhi l-munaːsabaːt lli t-fadˤdˤal taħdˤrˤha What are the social gatherings you prefer to attend?
special cultures and customs distinguishing the SC members	ʃənhi l-ʕaːdaːt w əθ-θaqaːfaːt lli t-majjaz (ə)ʃ- ʃ naːgtˤa ʕan ʕahl l-balad f-əl-madiːna What are the customs and cultures that distinguish the Shanāqiṭa from *ahl al-balad* (the original inhabitants; Saudi Hijazi community) in Medina?

The 'religious topics' module was targeted to encourage participants to produce borrowings in the religious context, which touches on the life of all Arab community members, in general, and Saudi on society in particular, in addition to reflecting the high level of religiosity of the SC, in general. The following topics were chosen to encourage participants to talk about religious issues, which are subject to much discussion in the community:

- Memorising the Quran and the good reputation of the SC in this respect.

- The reputation of the Shanāqiṭa religious scholars, and their impact in the past and at the current time.

- The new Muslim preachers in the media.

- The authenticity of the TV religious advisory (fatwa).

Table 4.3 exemplifies some questions that were asked in connection with some of these topics.

Table 4.3: Examples of topics and questions in the religious topics module

Topic	Conversational question
memorising the Quran	ʃənhi ʔahammijjət ħəfəðˤ l-qurˤʔaːn fəs-səqər w kiːf kənt ta-ħfaðˤ sqajjər What is the importance of memorising the Quran and how did you memorise it when you were a child?
the new Muslim preachers in the media	f-əl-qanawaːt (ə)l-ʕarˤabijja jaːsər (ə)mn əd-duʕaːt (ə)ʒ-ʒdaːd ; mən masˤərˤ, (ə)s-sʕuːdijja, mˤaritaːn, w qeːr-hum. (ə)ʃrˤaːja-k fiː-hum wə-f tˤariːqət daʕwət-hum In the Arab media, there are many new-style preachers from Egypt, Saudi Arabia, Mauritania, and other places. How do you view them and their style of preaching?
the authenticity of the TV religious advisory	(ə)l-fataːwa f-ət-təlvəzjuːn ʕaːdə-t məntaʃrˤa (ə)v-haːða (ə)z-zaman. ʃənhi ʕand-ak madˤaːrˤ-ha w mnaːvəʕ-ha The TV fatwa (religious advisory) is widespread nowadays. What are the advantages and disadvantages?

The 'administrative topics' module consisted of some conversational topics that stimulate subjects to produce borrowings, more or less, related to administrative issues, which participants are involved in almost every day. The following conversational topics were chosen for this purpose:

- Bureaucracy in government departments.

- The advantages and disadvantages of intercession and favouritism in government departments.

- The difficulties that women face when carrying out governmental transactions.

- Effective ways to speed up governmental transaction procedures.

- Favouritism (*wāṣṭa*) in government departments.

Table 4.4 shows examples of the questions related to some of these topics in this module.

Table 4.4: Examples of topics and questions in the administrative topics module

Topic	Conversational question
bureaucracy in government departments	(ə)l-muʕamlaːt (ə)l-ħukuːmijja daːjman (ə)-n-naːs t-guːl ən viːha jaːsər mn ət-taʕqiːdaːt (ə)l-maːl-ha daːʕi. ʃənhi ʕasbaːb haːða ət-taʕqiːd People always say that governmental transactions are associated with many unnecessary complexities. What are the reasons behind that?
effective ways to speed up governmental transaction procedures	ʃənhi (ə)l-wasaːjəl illi t-srraʕ (ə)l-muʕamlaːt (ə)l-ħukuːmijja What are the means that facilitate speeding up governmental transactions?
favouritism in government departments	ənta/ənti tə-staxdam/təstaxədm-i (ə)l-waːsˤtˤa aħjaːnan. ʃənhi ʕand-ak/ək madˤaːrˤ-ha w mnaːfəʕ-ha Do you use intercession/favouritism sometimes? What are the advantages and disadvantages?

The final conversational module adopted in the interviews was a 'daily-life topics' module. This module consisted of topics selected to trigger borrowings, in the context of expressing information on daily activities, in different aspects of the informants' daily-life. The selected topics are as follows:

- Division of time between daily activities.

- The importance of daily exercise.

- Their most important daily phone calls.

- Advantages and disadvantages of watching and following daily newscasts.

Examples of the questions concerning some of these topics are shown in Table 4.5 below.

Table 4.5: Examples of topics and questions in the daily-life topics module

Topic	Conversational question
division of time between daily activities	keːʃ t-qassam/t-qassam-i waqt-ak/ək bejn (ə)l-ʔanʃitˤa (ə)l-jawmijja maθalan (ə)l-ʕamal,(ə)d-dirˤaːsa (ə)z-zijaːrˤaːt wa ilaː ʔaːxirih How do you divide your time between your daily activities, such as work, study, visits, etc.?
daily exercise	ʃənhi ʔahammijjət (ə)r-rijaːdˤa (əl)-jawmija l-əsˤ-sˤaħħa What is the importance of daily exercise for health?
watching and following daily newscasts	laxbaːrˤ viːha kəl jowm ʃi (ə)ʒdiːd. madˤaːrˤ w mnaːvəʕ mutaːbʕət-ha w muʃaːhdətha jawmijan Up-to-the-minute news can be seen every day. What are the advantages and disadvantages of following daily newscasts?

4.1.1.2 Group discussion

The main objective of this method, in the present study, was for it to supplement the main method used to elicit the research data, i.e. individual interviews, which was explained in detail above. One of the most important characteristics of this method, is that it, usually, provides a high level of spontaneous speech as a result of its essence, whereby two or more people gather to discuss particular issues. The collective and reactive nature of this method, is expected to reduce (to a minimum) the speech-recording formality, which is one of the main problems of the interview method. Moreover, it is anticipated that the interactions between the parties involved in the discussion (including the fieldworker) will distract attention from the main role of the fieldworker as an observer of the speech behaviour, and will distract informants from the fact that they are being tape-recorded. Furthermore, this method allows the fieldworker to notice the linguistic differences between the speech of an individual (in the individual interview) and when the individual interacts with a group of people (in the group discussion).

The fieldworker can have two roles in group discussion sessions. He/she may be an observer of a group of participants who carry out their conversation on a particular topic, and

while he/she is watching, he records their speech and intervenes when necessary. This method has the advantage that the fieldworker has the chance to concentrate, and be more aware of the different linguistic behaviours that the members of the group are demonstrating. The disadvantage of this method is that when people realise there is someone (the fieldworker) sitting and observing them, and recording their speech, they will be, to some extent, subject to a sort of formality. Alternatively, in addition to observing and recording spontaneous conversations in group discussion sessions, the fieldworker can be involved in the discussion as one of the group. This technique is known as 'participant observation', which is referred to as "a process in which the observer's presence in a social situation is maintained for the purpose of scientific investigation. The observer is in a face-to-face relationship with the observed, and, by participating with them in their natural life setting, he gathers data" (Schwartz and Schwartz 1955: 344).

This method has a very important advantage, which is that formality will be reduced to an absolute minimum by the observer being one of the group. Therefore, eliciting vernacular speech with a very limited likelihood of a shift to formal speech, is a great benefit when compared with the disadvantages of this method. The disadvantages include the possibility of the fieldworker concentrating less on linguistic elements due to his/her emotional involvement with his/her participants; such emotional involvement could detract his/her attention from observing linguistic elements, and from interacting with other members in the conversation. On the other hand, the deep involvement and empathetic relationship of the observer with the subjects, helps him/her to understand their life and social behaviours more deeply, which adds very important validity and meaningfulness to his/her data (ibid: 350). In this study, the 'participant observation' technique was applied, and the researcher took part in the conversational group discussion as a group member. In addition, the discussion was

controlled in a casual way, for instance, by proposing the subjects for discussion, encouraging quieter subjects to participate, and maintaining equality in speaking time between subjects.

The structure of the group discussion sessions was similar to the one adopted for the individual interviews, explained above. In other words, the conversational group discussion followed the 'modules' technique applied to the sociolinguistic interviews. In order to obtain the best possible benefits from the group discussion sessions, they were limited to small groups; there were two or three participants in the three group discussions, plus the fieldworker, giving a total number of seven participants. These restrictions on the number of participants, was aimed at avoiding the possible problems associated with recording large groups of participants, which could result in chaotic recordings. For instance, Alessa (2008) in her study of the Najdi community in Jeddah (Saudi Arabia) discarded important data obtained using this method, because when analysing her data, she was not able to even identify speakers in some recordings, due to the large number of participants in some sessions (cf. Alessa 2008: 39). Moreover, a similar problem occurred in this research when the researcher gathered together six close friends, but was not able to control the discussion; everyone was interrupting each other and spoke over each other. Therefore, this group discussion was discarded, as the researcher was not able to elicit clear phonological details from it, although he was able to recognise all the speakers, and the recording was expected to provide very important data due to the diversity of speakers involved.

In the present study, the group discussion sessions took place in different locations, where people gather socially. It is worth noting that the researcher prioritised arranging the group conversation sessions in a very popular social gathering place in Medina, which many SC members attend nowadays, namely, *ʕəzba* (the plural: *ʕəzab*).[207] This social gathering

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[207] This word is borrowed from UHA /ʕuzaba/, which is presumably borrowed from the Egyptian Arabic word /ʕizaba/, which means 'manor' or 'manor house'.

place is similar to the *Duwāniyya* in Kuwait (cf. Al-Qenaie 2011: 155), with some characteristic differences. There are different types of ʕəzba; the most popular one is a rental flat, house, or just a room with a big yard. The rent of this property is usually shared by the main members of this 'social gathering', while other members can come for enjoyment, without paying. The people who attend this 'social gathering' are usually peers, who belong to different social stratifications and have different ethnic and tribal origins, but all belong to the SC. The gathering takes place on a weekly basis, and sometimes daily during holidays when most of the people have free time. The main social activities inside ʕəzba are usually watching TV, playing cards, telling jokes, and exchanging views and opinions, whether they be religious, social or political. Moreover, a very important activity in any social gathering in the SC is to drink green tea *atāy*,[208] as in most of the Arab societies in northern Africa.

The other type of ʕəzba is more functional, where certain groups from the same tribe or ethnicity of the SC have their own ʕəzba. In this type of ʕəzba, the members have more social concord, and there is less conflict than is usually the case when different tribal groups or ethnic group members socially interact. Generally speaking, the ʕəzba members are typically young males; however, in recent years, this form of social gathering has flourished to include other social categories, mainly old people, women, and teenagers. It was believed that conducting conversational group discussions in this popular social gathering place would be more likely to provide valuable spontaneous speech. This is due to the fact that in ʕəzba, peers are present, and the place itself is a pleasant social environment. Here, everybody tries to talk to other people using casual speech as, otherwise, they will be criticised for being too formal in such a social gathering, where only people from the SC are present.

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[208] Making *atāy* (green tea) in a traditional way is somehow a social obligation in any gathering, whether it big or small, which makes this congregational social practice the most important daily activity among the SC.

With respect to the length of sociolinguistic interviews and group discussions (spoken corpus), there is no agreement on this technical issue; it depends, in many cases, on the objectives of the research and sometimes on the linguistic variables under investigation. For instance, a short interview (20-30 minutes) is usually enough to obtain phonological data, while other linguistic data might take longer to elicit (Alessa 2008: 38). Before the research interviews commenced, pilot interviews were conducted to assess what would be a reasonable length for the individual tape-recorded interview, so that it would be adequate to elicit enough of the required data for the research. It was decided to conduct short interviews (from 21 to 27 minutes in length), as the pilot data collection analysis suggested that this length would be enough to elicit adequate data covering all the study variables.

As for the group discussions, it was decided to conduct a relatively short group discussions in the present study, for the same reasons mentioned above. Thus, the duration of these group discussions ranged from 44 to 48 minutes long. Ten individual interviews and three group discussion sessions were conducted. The total length of the spoken corpus, obtained from the individual interviews and group discussions, was about 6 hours of speech (exactly 368 minutes). More details of these interviews and group discussions and the participants are given in section 4.6 below.

4.5 Social variables

4.5.1 Age

Studying 'age' as a sociolinguistic variable, in order to correlate different age groups with linguistic variables in a speech community, seems to have been one of the most frequent social variables studied in this field, since Labov's 'inspirational' study of the speech community in New York City (Labov 1966). Although this variable has been extensively examined in the field, it "by itself has no explanatory value; it is only when examined in the

context of its social significance as something reflecting differences in life experiences that it becomes a useful analytical construct" (Milroy & Gordon 2003: 39). The importance of studying age in sociolinguistic studies, is not only due to its correlation with the linguistic variation in a certain language or dialect, but this social variable also plays an important role in one's mastering of a dialect in the case of shifting from one dialect to another, according to Chambers (1995: 85). He claims, that once people are over 14 years of age, it is difficult for them to acquire a new dialect, while the best age for acquiring a new dialect is under seven years of age, as children of this age are able to acquire native-like proficiency in the acquired dialect.

There are different approaches in the variationist literature, regarding classifying age groups, in order to investigate linguistic variation between different age groups. One of these approaches, involves considering chronological age as a grouping 'instrument'. The other approach suggested by Eckert (1996), is to group speakers according to their life stages: childhood, adolescence, and adulthood. Eckert (ibid: 156) states that the life stages approach is more appropriate than the chronological one,

> [as]other aspects of the passage through life are less specifically tied to chronological age and more tied to life events, such as changes in religious status (bar and bat mitzvah, baptism), institutional status (first day of school, retirement), family status (marriage, first child), legal status (naturalization, first arrest), and physiological status (loss of the first tooth, onset of menses). These events in turn are associated with life stages: childhood, adolescence, young adulthood, middle age, old age. It is these general life stages that are most frequently invoked to explain behaviour.

William Labov introduced two constructs (Trudgill 2003: 9) for analysing age-related linguistic change: apparent-time and real-time (Labov 1966). The first term, 'apparent-time', refers to studying language variation and change in a specific speech community, by comparing the speech of older speakers with younger ones. It is based on the assumption that

in the dialect of the community, change is manifested in the speech of different generations, as older speakers use old forms and younger speakers use newer ones (Trudgill 2003: 91). In other words, this method aims to study "the distribution of linguistic variables across age levels" (Labov 1994: 45f). The main objective of the other term, 'real-time', is to examine language variation and change at a particular point in time, in a specific speech community, with the fieldworker returning years later to do the same study on the same speech community. The aim is to identify the changes that have occurred in the speech community in the period of time since the initial fieldwork was conducted (Trudgill 2003: 109).

The main problem associated with the 'apparent-time' method is 'age grading'. This speech behaviour occurs when speakers in a community change their speech behaviour as they get older, and yet these alterations are repeated in every generation. For example, some speakers in a speech community modify their linguistic behaviour towards the acrolect when they reach middle age, and then, gradually, reach the prestigious level of speech by retirement age (ibid: 6). Labov (1994: 73) suggests the second method (real-time technique) to overcome the possibility of age grading occurring. He argues that "the obvious answer to the problems involved in the interpretation of apparent time would be to rely upon observations in real time, that is, to observe a speech community at two discrete points in time".

He identified two ways to elicit 'real-time' data (ibid). The first and easiest method is to compare the earlier speech community study results, with the results of the current study. The second approach for obtaining 'real-time' data, involves reinvestigating the same speech community that was investigated years previously. The fieldworker should replicate the methods used in the earlier study as closely as possible, with the same informants or others. For example, Anders Steinsholt used this method when he conducted a dialect research study on the Norwegian community of Hedrum in the 1930s, before returning to the same speech

community to do a similar one in the 1960s (Trudgill 2003: 109). Trudgill (1988) did the same when he revisited and studied the Norwich speech community, after conducting a study in 1974, which was based on the 'apparent-time' method. It seems that the 'apparent-time' method is more practical than the 'real-time' method, as the latter requires years or decades to allow the researcher to achieve his final findings, while the results of the former are available quickly after conducting and analysing the data. Furthermore, the results of the 'apparent-time' method data may be compared with 'real-time' data (Al-Shehri 1993: 61).

In the present study, two age groups (covering two generations) of HA speakers in Medina have been studied, examining the linguistic variation of the SC, as one of the main speech communities in Medina. The age groups are classified as follows:

- Second Generation (2nd G): the members in this group range from 36-56 years old. It includes HA speakers who were born and raised in Medina, while their parents were born and raised in Mauritania.

- Third Generation (3rd G): this category refers to HA speakers who were born and raised in Medina, as well as their parents also being born and brought up in Medina. The members in this group range from 20-35 years old.

These age categories were constructed in order to examine the linguistic variation related to these two age groups, and to explore the impact of the social life of the SC members, which is to a great extent in the Mauritanian style, on these two age groups. In addition, the first category (2nd G) represents society members who were born in Saudi Arabia to Shanāqiṭa immigrants, who were born and brought up in Mauritania before the society grew in the 1980s. The second age group (3rd G) category represents young people, who were born in Saudi Arabia after the community expanded due to the extensive migration of Mauritanians to Medina in the 1980s.

4.5.2 Gender

Regardless of the differences between the two terms concerning males and females, i.e. gender and sex, as the first is associated with social status, while the other is associated with biological context, male and female linguistic variation has been extensively highlighted by almost all sociolinguistic studies. This necessarily indicates the importance of studying gender-related linguistic variation in any speech community that has special linguistic properties. Labov (2001: 263) demonstrates explicitly that gender comes in different forms, and has a profound impact as a social variable in any speech community. The influence of gender indicated by Labov may result in language variation at different levels; this has been addressed by many studies, including Trudgill (1972), Cameron & Coates (1985), and Eckert (1989) to mention only a few.

It seems that the studies, especially Western studies that dealt with gender-related linguistic variation, have concentrated on standard and prestigious versus non-standard or vernacular speech between males and females. Moreover, the stable linguistic variants usually show clear gender-related differentiation, when the production of these variables is analysed statistically. For instance, in English, the variable '-ing' is a good example, where many studies have examined the gender-related differentiation in the production of this variable. These studies were conducted in different English-speaking communities and came to the general conclusion, that female speakers have a greater tendency than males to use the standard variant (ɪŋ) rather than the non-standard variant (ɪn) (see, for example, Fischer 1958; Labov 1966; Wolfarm 1969; Trudgill 1974). Furthermore, for the English interdental fricatives (θ) and (ð), women avoid using the non-standard variants (t) and (d) in some areas according to different studies, e.g. Labov (1966) in his study of New York and Anshen (1974) in his study of North Carolina.

The various degrees of linguistic variation between males and females are due to "the combination of economic, social and to some extent physical segregation by sex" (Francis 1983: 44). According to Milroy (1980: 112), it is a very common finding in urbanised Western speech communities that women are "approximating closer to the prestige pattern and style-shifting more extensively than men". As a result of this general finding, Labov considered women to be the initiators of linguistic change in a speech community, if not by themselves, by their direct influence on their children during the early age of language acquisition when children are forming linguistic rules (Labov 1972b: 302f).

Arabic studies, however, which have examined gender as a sociolinguistic variable have come to the opposite conclusion. In other words, men's speech is closer to standard variants than that of women in Arab speech communities. For instance, men approximate closer to the standard variant of ق (q) than women, as reported by Sallam (1980) and Schmidt (1986) in their studies of Egyptian Arabic spoken in Cairo. In Amman, men have a greater tendency to use prestige variants than women, according to Abdel-Jawad (1981). A similar finding has been demonstrated by different studies on different Arabic speech communities, e.g. Bakir (1986: Iraqi Arabic spoken in Basrah); Kojak (1983: Syrian Arabic); Wahba (1996: Egyptian Arabic spoken in Alexandria). The finding of the previous studies that contradicts the general finding of Western studies, mentioned above seems to be due to the diglossic situation of Arabic-speaking communities. In other words, it conforms with the local varieties (dialects) being considered as a low variety, while CA/MSA is seen as the prestigious (high) variety (Alessa 2008: 50).

Ibrahim (1986), supported by others, including Abdel-Jawad (1987) and Bakir (1986) proposes a new categorisation in this regard. He demonstrates that in Arabic-speaking communities, there are prestigious local varieties (supra-dialectal low), which are autonomous from Standard/Classical Arabic (Ibrahim 1986: 120). This pattern might lead to

the general finding of Western studies that women's tendency to approximate to prestigious norms is, generally, higher than that of men. This analysis to some extent conforms with Bakir's (1986) study of Basrah Arabic and Abu-Haidar's (1989) study of Baghdadi Arabic. Both studies came up with a similar finding, that women in both speech communities approximated to the prestigious variety, regardless of the direction of the approximation, which is in the direction of colloquial Iraqi in the first study and in the direction of Standard Arabic in the latter (Alessa 2008: 50-51). Chambers (1995: 144f) generalises the tendency of women, whether in the West or in the East, to approximate to standard varieties, and argues that:

> When the linguistic situation in the Middle East is re-analysed in this way, taking into account the social ramifications of diglossia, the discrepancy between male and female responses in Middle Eastern and Western societies disappears, although the socio-cultural organization differs remarkably from the Western world, the sociolinguistic behaviour is essentially the same; women use more standard forms than men in the same social group in both worlds. The female advantage in verbal abilities apparently overrides the socio-cultural differences.

There is another view, which might be considered as a third approach towards the impact of gender on language variation in Arabic-speaking communities. It is based on relating the language variation to outside factors rather than gender as the determiner of language variation. In a study on Tunisian Arabic spoken in Korba, Walters (1991: 219) ascribed the level of language used by both genders to the choices that make sense in the context of these speakers' lives, the varieties of language to which they have access, and the social options available to them. Moreover, in Jabeur's (1987) study on Tunisian Arabic, spoken in Rades, he argues that the speech differentiation in his speech community is not ascribed to gender essentially, but to other factors, such as the interaction between male and female speakers, educational opportunities, and socio-cultural changes. He found that due to cultural change,

young males and females interact face-to-face in many social situations, and therefore their speech approximation is similar, e.g. their similar approximation to the (aj) and (aw) variants.

It seems that taking into account outside factors, such as social, historical, cultural, and ideological factors, is very important when correlating gender as a social variable with different linguistic behaviours. Therefore, Jabeur's general conclusion, which is supported by studies on different Arabic-speaking communities, such as that of the Najdi community in Jeddah, Saudi Arabia (Alessa 2008) and the Fallahis speech community in Karak, Jordan (El Slaman 2003), might be applicable to all Arabic-speaking communities. Milroy & Gordon (2003: 108) state that:

> Gender affects language differently in different generations because of various life experiences and gendered language differences index salient intra-community social categories which need to be uncovered by researchers rather than treated as previously given.

In the present study, looking at gender-related linguistic variation in the Ḥassāniyya-speaking community in Medina, it is hoped to contribute to the gender-related analysis of the Arabic-speaking community, especially to those studies concerning female linguistic variation. The general finding that emerged from the correlation of the gender factor with the linguistic variables, suggests that female participants showed a higher tendency to use HA variants in most of the variables (mostly vocalic variables). However, they displayed a higher percentage use of UHA (which is supposed to be the prestigious variety) variants in most of the consonantal variables. It seems to be the case that this unsystematic behaviour towards the use of UHA variants (sequentially in the HA variants) is due to the fact that the vocalic variants are not easily recognised by ordinary people; therefore, they are unlikely to be stigmatised by the Hijazi society. On the other hand, the consonantal variables are clearer and more recognisable by the native speaker; accordingly, they are likely to be avoided for the sake of prestigious pronunciation and the avoidance of stigmatisation. Interestingly, the only

consonantal variable that the female participants produced at a higher level of usage, than the males, is the de-affrication of /dʒ/ as /ʒ/. It seems that this pronunciation (de-affrication) is not stigmatised as it widely spread in the Arab world, even being heard in the Hijaz region (cf. Chapters Five and Seven).

The current situation of women in the SC in Medina, generally, conforms to the situation of women in Mauritania, their original country. The Shanqīṭi[209] woman's situation in Medina, differs from that of the majority of Arab communities, especially Bedouin communities, where men have a superior and prerogative position over women. The Shanqīṭi woman imposes social power in different aspects of life, especially those related to the family members, including the man, whose participation in family affairs is dominated by the woman. The usual subordination of women to men, which is a dominant feature in the Arab community, especially in tribal communities, is very limited in the SC. Therefore, the Shanqīṭi woman seems to be the only woman in tribal Arab societies who has been able to snatch the dominance and superiority from the man, and even his religious and social right to having more than one wife[210]. Polygamy is socially taboo and not accepted under any circumstances, whether religious or social, in the SC in Medina or in Mauritania.

It seems that Shanqīṭi women have been successful not only in having polygamy socially banned in this community, but their 'ascendancy' has extended to the marriage contract itself. The typical marriage contract of a Shanqīṭi woman includes a statement saying that the man (the husband) should not be married to another woman and should not marry another woman while married to his wife; if he breaks this agreement of having only one wife, the right of divorce will be the wife's right, not his. This marriage contract is widely accepted

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[209] From the Shanāqiṭa community (SC).

[210] Getting married to up to four wives (polygamy) is legal (and is socially-accepted in many Arab communities, such as Saudi Arabia) and is accepted in all Arab countries, except in Tunisia. However, the legal situation in Tunisia was expected to change after the revolution, where the Islamic party related to the Al-Nahḍa Movement won the election in 2012; however, it is unlikely to happen now as the secular party won parliamentary and presidential elections last year (2014).

in Mauritanian courts, and recently the Saudi courts in Medina (where many men take more than one wife) validated it. One of the social powers of women in this community, which is not the case in Arab communities, is that the women in this community are not as worried about divorce as are Arab women. Furthermore, there is a very traditional pattern of behaviour in Mauritanian communities, which is receding in current times. According to this tradition, when the woman gets divorced, she might throw a party and invite her friends to share the moment. This is an indication that the social position of women is not similar to that of women in other Arab communities.

Due to the gender-deference issue mentioned above, female participants are underrepresented in this research, as most of the females approached by the researcher, or his supposed assistant refused to be recorded. This is clearly a consequence of the 'severe segregation'[211] of women in Saudi Arabia, and the sensitivity of being approached by an outsider of the opposite sex. It is worth mentioning that this 'severe segregation' of women is not general social practice in Mauritania, the native land of the immigrant SC, as the Mauritanians are more open in their native land. However, the SC, especially the naturalised Saudis among them, became more adapted to the social practice of segregating women than their counterparts in Mauritania, or even Mauritanians residing in Medina. In order to overcome this expected problem, the researcher recruited an assistant (as mentioned above), who has better access to female participants. Six female participants were interviewed; half of them were interviewed by the researcher and the other half were interviewed by the researcher's assistant. Unfortunately, the interviews conducted by the assistant had to be discarded due to the bad quality of the recordings, as explained above. Therefore, the female data considered in the data analysis was elicited from the interviews conducted by the researcher.

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[211] See Chapter Six for this concept.

4.5.3 Education

The significance of studying the effect of the level of educational attainment, as a manifestation of verbal contact, on language variation, is due to the considerable importance of studying 'contact' itself as an important factor of language change. This factor (contact) has been intensively highlighted by numerous sociolinguistic studies. Jespersen (1946, cited in Chambers 1995: 242) states that "the most important cause of language splitting into dialects is not purely physical, but want of communication for whatever reason". Labov (2001: 805) emphasises the importance of face-to-face interaction and argues that the lack of participation of African-Americans in the sound changes in his speech community is due to the "decreasing frequency of face-to-face interaction with speakers of the mainstream local dialect". The decreasing frequency of face-to-face interaction, addressed by Labov, seems to be one of the main factors involved in the lack of participation of the SC in Medina, in order to import significant changes to their native spoken dialect, i.e. HA.

It could be argued, that the limited social interactions of the SC members with the Hijazi community, have been responsible for maintaining the majority of HA linguistic features, and it is assumed that the vast majority of Saudi members of this community are not considered as native speakers of UHA. The only semi-native UHA speakers of the SC are some families in Mecca and Jeddah, who are very closely related to the Hijazi community by marriage and kinship. Therefore, studying education as a social variable in this speech community is important, in order to study manifestations of language change. This is due to the fact that education is the most powerful and effective source of face-to-face interaction between the SC members and the Hijazi community, in the light of the limitations on other forms of interaction. The strong SC social relations, such as marriage and close friendship have, to a large extent, limited the community members' interaction. Therefore, it is believed

that the more years of formal education members of the society have, the greater chances they will have for face-to-face verbal interaction.

In the Arab world, where the percentage of illiteracy is very high[212], the level of education is expected to be reflected in one's speech behaviour. Various sociolinguistic studies have investigated to what extent the level of education may have a direct impact on language variation. For instance, studies of different Jordanian Arabic speech communities, e.g. Abdel-Jawad (1981); Al-Khatib (1988); Kanakri (1988); El Salman (2003), link the use of the Standard Arabic sound (q) to the level of education that the speaker has attained. Al-Wer (1991: 52) emphasises the importance of the level of education of the speaker, which is an indicator of the amount of contact that occurs between him/her and the outside community. Therefore, this social variable is highly important in this study, as it provides the most effective form of verbal contact, while other forms of contact are relatively restricted, as mentioned above. As many community members have been educated in official Saudi schools, these schools are the only places of effective direct communication that bring them together with other Hijazi community members. Communication in the early years of primary school is not usually easy due to the fact that as small children the only variety spoken fluently is HA, which is the variety spoken within the family and the community. The more formal education the member of the society acquires, the more UHA he/she acquires.

In this study, the speaker sample is classified into three levels of educational attainment:

- Highly educated participants (High): those speakers who have been educated at university level or above.

- Medium educated people (Med): those speakers who finished high school or some training after it, i.e. completed at least 12 years in the formal education Saudi schools.

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[212] According to UNESCO (cited in Magin 2010), "40% of those over 15 years of age – nearly 70 million people – are illiterate." See http://www.gial.edu/documents/gialens/Vol4-2/Magin-Arab-Illiteracy.pdf

- Low educated people (Low): this describes participants with a basic level of education, including the two formal Saudi basic levels of education (primary and secondary schools) and the participants who were educated through traditional Arabic teaching, *kuttāb*, which is known in the SC culture as *maḥaẓra* (pl. *mḥāẓər*), without obtaining any formal level of education. In other words, participants with 0 to 9 years of formal education are considered as having a low level of educational attainment.

It is worth mentioning that the category of 'uneducated people' is not considered, because almost all members of the Shanāqiṭa Community are educated by one of the above methods according to my close observation, obtained by living all my life in this community.

4.5.4 Ethnicity

There is no consensus on the definition of ethnicity and the elements that this term might include. Owens (2001: 434) studied this social variable in the Arab world, and argues that it refers to "any of a number of social parameters by which, non-national social groupings are distinguished, including religion, shared history, skin colour, kinship, lineage and place of origin. The relevant criterion or criteria defining ethnicity may differ from place to place".

Fishman (1977: 17) insists on paternity as an important element that constructs ethnicity; therefore, he narrowly defines it as being "in part, but at its core, experienced as an inherited constellation acquired from one's parents as they acquired it from theirs, and so on back further and further, *ad infinitum*". According to Bassiouney (2009: 98), Owen's' definition is broader than Fishman's, including religion in the definition of ethnicity is problematic. She argues (ibid), that including religion when studying ethnicity in the Arab world might be politically charged, as this may not "reflect the way that people perceive themselves". She exemplifies her view with the situation in Egypt, where people tend to

perceive themselves as Egyptians (who have ancient history), rather than perceiving themselves as Copts or Muslims.

Owen's statement that the criterion/criteria defining ethnicity may differ, from place to place, seems to be very true in the Arab world, where the elements that define ethnicity may differ from those in the West, where the culture and religion are different. For instance, religious affiliation (Sunni or Shiite) is a core criterion in defining ethnicity in a country like Iraq, especially since the Shiites took power after the collapse of Saddam's regime, following the American-led invasion of the country. This criterion is irrelevant in other Arab countries, such as Mauritania, where the population of its original inhabitants are almost 100% Sunni Muslims. In this particular country (and in the SC in Medina by extension), skin colour, or more precisely, race, is an important criterion involved in forming ethnicity.

Hall-Lew (2010: 458) argues that the categorisation of the term 'ethnicity' and its related term 'race' is constructed in a similar way to any other social category, e.g. gender and class, in many studies such as Fishman (1989), Fought (2006), Eckert (2008), and Becker & Coggshall (2009). Moreover, the term 'ethnicity' is associated with shared aspects of a specific group of people, e.g. culture, religion, and heritage. The term 'race', on the other hand, is problematic, according to Hall-Lew (ibid), as it is "constructed with greater reference to perceived physical similarities, such as skin colour or facial features, which can vary widely within ethnic groups".

Studying ethnicity as a social variable correlating to language variation and change is important in the world as a whole, and especially in the Arabic-speaking communities that are ethnically diverse. Bassiouney (2009: 99) emphasises the importance of studying ethnicity in multi-ethnic Arab communities, stating that "in the past century the Arab world has been in a state of flux for different reasons, some of them political and some economic.

We definitely need more studies that examine variation between different ethnic communities in the Arab world". It is worth mentioning here that although there are a number of multi-ethnic Arab communities, only a few have attracted the attention of researchers. One of these multi-ethnic communities that have been linguistically studied exhaustively is Jordan. The demographic situation in Jordan is very interesting, with two large nationalities (Jordanians and Palestinians) living together in a small country. Although both communities share the same religion, and the Arabic varieties spoken by the two are very similar, the Jordanians and Palestinians conceive themselves as being of different ethnicities (ibid).

The situation in Mauritania (the native land of the SC in Medina) is interesting as it is not like any other in the Arab world, except in the Western Sahara (under the authorisation of the Moroccan government), which is culturally, linguistically, and ethnically very similar to Mauritania. The most important reality that marks the demographic situation in Mauritania, which is represented perfectly in Medina by the SC, is that typical Mauritanian society consists of two main ethnic groups. The first ethnic group is *Bīẓān*, and the other one is *Ḥrāṭīn*. The very strong social hierarchy allows *Bīẓān* to have an aristocratic position at the top on the society, while *Ḥrāṭīn* are at the bottom.[213] This very functional social hierarchical relationship between the society members could have an impact on the dialect, and

> could have led to a fracturing of the dialect [HA] and a limited acquisition of the masters' [əl-Bīẓān] idiom, particularly in the case of black slaves… The grouping in sub-groups, groups, and tribes was (and still is) based on (frequently revised) genealogies linked to common ancestors. This could well have brought about linguistic diversification, but uniformity has prevailed, within as well as between tribes (Taine-Cheikh 2007b: 39).

Even though slavery and its practices were banned long ago in Mauritania, firstly in 1905, then 1981 and more recently in 2007 (Corrigan 2007), the culture of slavery, and its social

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[213] See Chapter One for more demographic details about the SC.

hierarchy, is still strongly practised in HA-speaking communities. In Medina, where the SC members, whites and blacks, live together, the concept of slavery and its hierarchical considerations still exist in the *Bīẓān* mentality. Therefore, correlating ethnicity as a social variable with linguistic variables in HA-speaking communities would be significant, particularly in Medina, where the typical social situation of the blacks (*Ḥrāṭīn*) has significantly changed, as they have gained more respect than they had in their original country, Mauritania. The black Shanāqiṭa (*Ḥrāṭīn*) in Medina usually avoid the typical social life of the SC members, by being more attached to Hijazi social life, and, therefore, adapt more easily to UHA linguistic features, than do the *Bīẓān* (the former masters). Moreover, correlating ethnicity as a social variable with linguistic variables is expected to add an important contribution to black-white speech relationships in general, and to Arabic multi-ethnic studies in particular.

4.6 Brief description of the study participants

Brief information about the study participants will be highlighted in this section, including biographical information and the general observations noted during the individual interviews or group discussions. The participants' full names will not be supplied, as this will not contribute value to the research. Furthermore, some participants were promised anonymity, as they thought it might lead to problems, such as criticism from other community members. Therefore, an abbreviation of the participants' name or a nickname will be used for the sake of clarification.

ABD_H

This participant is a male public servant in his mid-50s, who was born during his family's emigration to Saudi Arabia and was then brought up in Medina (2nd G). He belongs to the largest ethnic group of the SC in Medina, i.e. the *Bīẓān*. He did not attain a good level of

education at official Saudi schools, only finishing secondary school (Low); rather, he only finished a few years of study, as he was able to skip some years after school assessments, a very common procedure at that time.

The interview with this man was valuable, as it was very clear, and he talked openly when he was interviewed in his close friend's house (my father-in-law). Moreover, this person's generation is very important, as it is considered to be the generation that witnessed all the stages of SC life in Medina. His family was one of the few who immigrated to Saudi Arabia, at the inception of the modern Kingdom of Saudi Arabia. [214] Moreover, this participant gave very important details regarding the early period of the society's formation (cf. Chapter One). Interestingly, he admitted that he does not speak Hijazi fluently, which was clearly recognisable from his speech. The interview with him lasted for about 22 minutes.

ABD_S and MAHF

These are two male *Bīẓāni* friends in their late 30s, who were both born and brought up in Medina by parents who were born and brought up in Mauritania (2nd G). They both completed their university studies and are now doing postgraduate studies (High) and are currently working as public servants. The joint group discussion that they were involved in was very productive, as they were very open and keen to discuss different topics recommended by the researcher. The first speaker (ABD_S) was more talkative and enthusiastic. This might be due to the tiredness that the other speaker (MAHF) expressed as he said he had worked long hours on the day the group discussion was set up. ABD_S's speech was relatively fast, which was reflected by his dropping some letters while talking, e.g. dropping the glottals /h/ and /ʔ/ or leniting them. Coincidentally, MAHF had a similar tendency to drop glottals, especially in final position. Moreover, few instances of CS

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[214] It is known in Saudi Arabian history as the Third Saudi State, which was founded in 1932 by King Abdul Aziz (Ibn Saud).

occurred in this group discussion, which can be justified as indicating the speakers' unwillingness to mention something embarrassing in his own dialect (HA), thus switching to UHA. Exactly this happened with MAHF when he avoided telling the story of an old man from the community who was urinating in a public area while people were watching:

/əl-waːħəd maː ʕand-u jaʕni ruːħ **u-guddaːm n-naːs**/[215]

'The one [who is doing that] does not care, he goes [and does it] in front of people'

Also, this behaviour appeared when the speaker ABD_S was trying to talk about what he angrily said to a Bedouin Hijazi man:

/t-ɣajjər əl-ħurma ət-ɣajjər kafar-k t-ɣajjir sajjaːra-t-ak/[216]

'You change [your wife], change your [car] tyre, change your car…'

The group discussion took about 45 minutes and was conducted in *ʕəzba* (see above).

AISH and KARM

These participants are a sister and her brother, who were born and brought up in Medina by *Bīẓāni* parents, who were also born and brought up in Medina (3rd G). They both obtained university-level education (High). AISH is a 28-year-old housewife and KARM is 25 years old, working as a teacher. The participants were interviewed separately, at different times and in different houses. The interview with AISH lasted for about 27 minutes, while KARM's interview lasted for 23 minutes. Both speakers' speech was relatively fast, which made the recognition of some words difficult. Therefore, in some parts of their speech I was compelled to slow down the recording during playback to be able to transcribe the interviews. Fast speech was not a big problem in AISH's interview, but it was immensely difficult in some parts of KARM's interview. For instance, he sometimes dropped final letters, which caused

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[215] The bold phrase is purely a UHA phrase.
[216] A part from the HA verbal prefixes /t-/ət-/ and the definite article /əl-/; the whole text is a mixture of Bedouin and urban Hijazi Arabic.

ambiguity, such as /maːhu mowdʒuːd/ 'it/he is not there' became /maːhu mowdʒuː/. Moreover, in connected speech, he would combine two words at once, resulting in a strange pronunciation, such as his pronunciation of this sentence: /ʔaːna ħjaːnan/ 'I, sometimes' as /ʔaːna han/. This ambiguity might be extremely problematic, when it causes a word with four or five sounds to be produced with only one or two sounds, e.g. /ənrˤuːħ/ 'I go' is pronounced /əħ/.

FAT and MAH_H

These two participants are a milk-brother and sister, something which is very common in SC; almost everybody in the community has some kind of milk kinship. Their families are strongly connected, which was why I involved them in such a discussion. The joint group discussion took place in my in-laws' house, as they have a good relationship with both of the participants. The first participant (FAT) is a *Bīẓāni* housewife in her mid-50s. She was born and brought up in Medina, by parents who were born and brought up in Mauritania (2nd G). She only attended a few years of primary school (Low) in her early childhood. The other participant (MAH_H) is 48 years old, a *Ḥarṭāni* male, who was born and brought up in Medina, by parents who were born and brought up in Mauritania (2nd G). His educational attainment was not high; he only finished primary school (Low), and is currently running a small business.

Unusual pharyngealisation of some sounds was noted in this participant's speech. For instance, he pharyngealised /m/, which is not usual in either HA or UHA, e.g. /kamˤaːn/ 'also' and /zamˤaːn/ 'a long time ago'. It is worth mentioning that this unusual pharyngealisation is also commonly attested in the speech of what is called in Hijaz, *al-Khīlān* (pl. of Khāl), 'the black person'. This participant also differed remarkably in his speech from other participants in the study. He showed a great tendency towards Hijazi speech. Not only that, he tended to

pronounce some HA words in a Hijazi way. For instance, he might monophthongise a HA diphthong to be more Hijazi-like, e.g. the HA word /ʃrejt-u/ 'I bought it' became /ʃreːt-u/, thus similar to the Hijazi word /ʔaʃtareːt-u/. Moreover, in his speech, CS was often observed. This particular issue is discussed in Chapter Five. The group discussion session lasted for about 48 minutes.

HART and SAMB

The two individual interviews of these participants were conducted separately in *ʕəzba*, where they usually (almost daily) meet their friends and spend their leisure time. They both belong to the *Ḥrāṭīn* ethnic group, and were born and brought up in Medina, by parents who were born and brought up in Medina as well (3rd G); HART is 33 years old, while SAMB is 26 years old. In terms of educational attainment, HART finished high school and did some technical training afterwards (Med) and is currently employed, while SAMB, oddly did not achieve any level of schooling (Low), only attending the traditional SC *maḥəẓra* (kuttāb) school (see section 4.5.3 above). He is currently unemployed. Moreover, he, unlike the typical situation of SC members, has very close Bedouin Hijazi friends, which can be verified from his Bedouin Hijazi Arabic borrowings, e.g. /axwijaːn-i/ 'my friends'.

It is worth mentioning that, in the first participant's (HART) speech, the pharyngealisation of the dental fricative /ð/ in the demonstratives /haːða/ 'this' and /haːðu/ 'those, these' occurred every time these diminutives were used. This pharyngealisation of the dental /ð/ in demonstratives and /t/ when coming into contact with the pharyngealised HA phoneme, such as /rˤ/ (e.g. /tˤrˤaːb/ for /trˤaːb/ 'earth or floor') seems to be typical of the *Ḥrāṭīn* ethnic group in general (cf. Chapter Two). HART's interview lasted for about 22 minutes, while SAMB's interview lasted for about 23 minutes.

KHID and MUS

Two separate individual interviews were conducted with these two close male *Bīẓāni* friends in their own houses (a 23-minute-long interview with KHID and a 21-minute-long interview with MUS). These participants are in their late 30s (KHID is 39 years old and MUS is 37 years old) and were born and brought up in Medina, while their parents were born and brought up in Mauritania (2nd G). Unsurprisingly, these two highly educated university lecturers produced the lowest number of borrowings in the research, compared with other participants. Their switching to MSA was observed in different parts of their speech, especially in the speech of KHID. In terms of their vernacular style, which is the research's concern, they had very different styles.

Although KHID's switching to MSA negatively affected his production of Hijazi borrowings, he used a larger number of borrowings than his friend MUS. His speaking style, like the majority of participants, used HA as the main speech variety with differing numbers (high, medium, or low) of Hijazi borrowings.[217] On the other hand, MUS switched to MSA less often, while the number of his Hijazi borrowings was very low. His speech can be considered as pure HA. One can suspect he was trying to show his ability to speak HA, as he knew that the research concerned this variety of speech. However, based on the researcher's close relationship with him as a close friend, it can safely be asserted, that this is his natural style of speaking. Moreover, the difference between these two friends in their speaking styles might be due to their different family backgrounds. In other words, KHID's family is more open to other Hijazi people, than is MUS's family.

KHAD

A 23-minute individual interview was conducted with this *Ḥarṭāni* housewife in her family house. She was very open, with me apart from the first few minutes of the interview. She was

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[217] See Chapter Five.

in her late 40s, born and brought up in Medina, by parents who were born and brought up in Mauritania (2nd G). She was not able to complete her schooling, as she got married immediately after finishing secondary school – a common practice for people at that time. From her speech, two important points emerged. The first one is that, in general, the *Ḥrāṭīn* ethnic group intentionally tended to be more Hijazi-like, and tried to exclude themselves from the SC, even though they are a major component of the community, for the reasons discussed above. This behaviour manifested itself in this lady's speech, as she repeatedly said /ʕand-hum/ 'they have' instead of /ʕand-na/ 'we have' when she was talking about the community's customs and traditions. She also tended to use Hijazi words instead of HA for prestigious reasons (as mentioned above). Moreover, she tended to use an HA word first, and then immediately replaced it with UHA. For instance, she used the HA words /ʃi/ 'something', and /mrˤa/ 'woman' and then immediately corrected herself (or, more accurately, switched) to the UHA synonyms /ʃajj/ and /ħərˤmˤa/, respectively.[218]

MIN

In *ʕəzba*, a 24-minute individual interview was conducted with this 52-year-old *Bīẓāni* male, who was born and brought up in Medina, by parents who were born and brought up in Mauritania (2nd G). Although he only finished high school and did not attend university, he switched to MSA very often, which might explain why he has a low number of UHA borrowings. His close contact with the Hijazi community, because of the nature of his job as a TV director, might play a role in his speaking style, which consistently uses the prestigious varieties of both UHA and MSA.

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[218] The native UHA pronunciation of this word is /ħurma/. In order to be harmonised with the HA phonological system, the speaker modified it by centralising the back vowel /u/ and pharyngealising /r/.

MUTZ, OUIL, and YUSF

These three young *Bīẓāni* participants (MUTZ was 21 years old, OUIL was 22 years old, and YUSF was almost 20 years old) were recorded in a group discussion in *ʕəzba* as it was the perfect place to gather these friends for an informal group discussion. All of these friends had a similar level of educational attainment, as they had all finished high school (Med). MUTZ and YUSF started attending university, while OUIL is not willing to continue his studies. Their family background is also similar, as all of them were born and brought up in Medina. YUSF's parents were born and brought up in Medina, while MUTZ and OUIL's fathers were born and brought up in Mauritania; their mothers were born and brought up in Medina (3rd G).[219] The recording (44 minutes long) was generally clear, but in some parts the speakers were very enthusiastic about discussing the topics suggested by the researcher, which made them interrupt and disagree with each other. This forced the researcher to exclude some parts of the discussion from the analysis, as recognising certain sections clearly was not possible. Collectively, they produced a very high number of UHA borrowings.

WADD

The last participant interviewed was a young *Bīẓāni* male (20 years old), who was born and brought up in Medina, by parents who were born and brought up in Medina (3rd G). His family is an old Shanāqiṭa family who immigrated into Saudi Arabia at the beginning of the modern kingdom of Saudi Arabia. He was interviewed in *ʕəzba* in the presence of his friends to reduce formality, as he is not personally known to the researcher. The 23-minute interview was arranged by a third person (my brother-in-law).

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[219] These three participants were classified as 3rd G, even though MUTZ and OUIL's fathers were born and brought up in Mauritania, for two reasons. The first one is that I did not notice any big differences between the three participants in terms of speech style or any unusual language feature which might be due to paternal influence. Secondly, in the SC in Medina, like the situation in their native land of Mauritania, women usually have a stronger influence on the children as men usually left any family matters to the women. In this regard, single women with children are very common in the society, as in the case of MUTZ and OUIL.

Although there was no prior relationship with this person, the interview was very informal. One of the noticeable aspects of the behaviour of this participant was his appreciation of belonging to the SC, and his sense of loyalty. Frequently, he said "we" when referring to the SC, in addition to showing his pride in the SC customs and traditions. Similar to other participants of his age, he produced a relatively high number of borrowings. His frequent gemination of some sounds, does not demonstrate systematic or phonological variation; rather, it is a personal style of speech.

The following table summarises the distribution of participants within the four social variables discussed above.

Table 4.6: Distribution of participants by social variables

Education	Age	Ethnicity	Gender
High (6): AISH ABD_S KHID MAHF MUS KARM	**2nd G (9):** ABD_S KHID MAHF MUS ABD_H FAT KHAD MAH_H MIN	**Bīẓāni (13):** AISH ABD_S KHID MAHF MUS KARM FAT ABD_H MIN MUTZ OUIL WADD YUSF	**Male (14):** ABD_S KHID MAHF MUS ABD_H MAH_H MIN KARM SAMB HART MUTZ OUIL WADD YUSF

Med (6): MIN HART MUTZ OUIL WADD YUSF	3rd G (8): AISH KARM SAMB HART MUTZ OUIL WADD YUSF	Ḥarṭāni (4): KHAD MAH_H SAMB HART	Female (3): FAT KHAD AISH
Low (5): FAT KHAD ABD_H MAH_H SAMB	-		-

4.7 Linguistic variables

The linguistic variable, as a sociolinguistic term, is sometimes known as a sociolinguistic variable, was initially developed by William Labov in his early work on variation theory and secular linguistics (Trudgill 2003: 82). Since then, correlating the 'linguistic variable' with different social variables, e.g. gender, age, class, etc., has become a main part of linguistic analysis in the sociolinguistic field. Fasold (1990: 224) defines the sociolinguistic variable as "a set of alternative ways of saying the same thing, although the alternatives [variants] will have social significance". In most cases, linguistic variables are phonological, while the occurrence of lexical and grammatical variables is relatively less frequent (ibid). In terms of the correlation between linguistic variables and social variables, two terms can be found in the field of sociolinguistics: dependent and independent variables.

The dependent variable literally means that the occurrence of this variable depends on another factor (the independent variable(s)). The dependent variables are the linguistic variables, because the occurrence of the latter is dependent on the independent variables, which are the social variables. Hatch & Lazarathon (1991: 63) point out that the dependent variables (linguistic variables) are those can be measured or quantified, while the independent

variables (social variables) are those that the researcher, or the fieldworker, supposes may have an impact, or be related to dependent variables. In this study, the independent variables are the four social variables discussed above, i.e. age, gender, education and ethnicity, and the dependent variables (linguistic variables) are the HA borrowings from UHA and their phonological processes, as explained briefly below.

Generally speaking, these linguistic variables have been chosen because they represent very important linguistic elements, that contrast HA (a Bedouin dialect of the SC in Medina) with UHA (the urban dialect of the sedentary Hijazi community). These borrowings and their phonological processes show important features of how SC members incorporate UHA elements into their speech. In the following paragraphs, these variables will be briefly defined with their possible variants, and they will then be explained and analysed in Chapters Five and Six. In Chapter Five, three consonantal variables are analysed, while three vocalic variables are analysed in Chapter Six. The six study variables are listed below with their variants.

1. The variable (dʒ) has different variants in Arabic. Only two of these variants that represent HA and UHA pronunciations are analysed in this research. The first one is the voiced palato-alveolar affricate /dʒ/, which represents the standard pronunciation in Arabic, in general, and in the UHA spoken in Medina. The voiced palato-alveolar fricative /ʒ/ is the pronunciation that represents the standard pronunciation of HA speakers. The phonological process of pronouncing linguistic elements with /dʒ/ borrowed from UHA according to HA pronunciation, i.e. /ʒ/, is called 'de-affrication' (DAF).[220]

2. The voiceless labiodental /f/ is almost the only pronunciation of native Arabic words in all Arabic-speaking communities. In contrast, the voiced variant of this variable /v/

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[220] See Chapter Five.

is most common in the HA spoken in Mauritania (and among the SC), as mentioned in Chapter Two. Therefore, /f/ represents the UHA variant of this variable, while /v/ represents the HA variant. The process whereby the voiceless /f/ becomes the voiced /v/ attested in the data is termed 'lenition' (LEN).[221]

3. Initial *hamza* /ʔ/ receives different treatment in Arabic dialects. Importantly, the characteristic of HA is to drop this variable, while in UHA, the common phonological treatment is to preserve it. In this case, the HA variant involves dropping the initial *hamza*, whereas the UHA variant pronounces this initial *hamza*. Moreover, the phonological process of dropping this initial *hamza*, associated with borrowings from UHA and displayed by HA speakers in Medina, is called 'initial *hamza* dropping' (IHD).[222]

4. HA and UHA possess different syllable systems, as shown in Chapter Two. Precisely, UHA allows an initial open syllable, containing a short vowel and a sequence of two open syllables containing short vowels, e.g. /dʒilis/ (dʒi.lis) 'he sat down' and /dʒalas-u (dʒa.la.su) 'they sat down', respectively. On the other hand, the HA syllable system does not, generally, allow that. Therefore, the re-syllabification processes (RS), i.e. vowel syncope and epenthesis (sometimes metathesis is added), are commonly attested in HA. In this research, the UHA variants are an initial [CV] syllable, and the sequence of two [CV] syllables, while the HA variant is the re-syllabification of the UHA borrowings, associated with the previous syllable types. This re-syllabification process is mainly manifested in two phonological processes: vowel syncope and epenthesis, and a possible third, i.e. metathesis.[223]

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[221] See Chapter Five.
[222] See Chapter Five.
[223] See Chapter Six.

5. The main characteristic of UHA is a monophthongal pronunciation of the Arabic diphthongs /aj/ and /aw/. On the other hand, the common practice in HA is to preserve these diphthongs as the HA variants /ej/ and /ow/, respectively. Therefore, in the data elicited from the SC, the UHA variant is the monophtongisation of these variables, while the HA variant, is the preservation of these diphthongs. In other words, the change of the monophthongised diphthongs by HA speakers when borrowing from UHA is termed diphthongisation (DIP).[224]

6. The Arabic vowels /i/ and /u/ are restricted and not common in HA; therefore, they are always realised as /ə/, as mentioned earlier. In contrast, they are considered as main parts of the UHA vowel system. Therefore, the phonological process of changing the UHA pronunciation /i/ and /u/ to the more centralised /ə/ by HA speakers when borrowing UHA words/phrases is called vowel centralisation (VC).[225]

It is important to emphasise that the researcher did not rely only on his thorough knowledge of both dialects (as a native of HA and bidialectal in UHA) or on his speciality in MSA/CA to determine whether or not a particular word/phrase is actually borrowed from UHA, or MSA/CA, or whether it developed independently. This thorough knowledge is undoubtedly vital in such research, but other criteria have been applied for this purpose. Before we indicate these criteria, it would be useful to identify all types of words/phrases that have been recognised in the interviews and group discussions; these are as follows:

(i)   Words/phrases lexically and semantically common in both HA and UHA but they are uttered according to UHA pronunciation. In this type of language, words/phrases seem to be mostly derived from CA/MSA in both dialects. Moreover, this type of words/phrases is not included in this research as it is not

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[224] See Chapter Six.
[225] See Chapter Six.

borrowing; rather, it might be studied in terms of the general language accommodation of UHA lexical elements by HA speakers. Table 3.17 below shows examples of this type.

Table 4.7: Examples of common words in HA and UHA

Example/UHA pronunciation	HA pronunciation	Gloss
/jidʒ-u/	iʒ-u	they come
/ʕalaja/	/ʕləja/	on me
/al-ʕiʃa/	lə-ʕʃa	the time of Isha Prayer
/taʕa:la/	/(a)tʕa:la/	(you) come
/dʒidda/	/ʒadda/	Jeddah
/fo:g/	/lvo:g/	up, above
/ʔabu:ja/	/bu:ja/	my father

(ii) Words/phrases borrowed from MSA. This type is also not included in this research. Table 3.18 exemplifies this category.

Table 4.8: Examples of words borrowed from MSA

Example	HA	UHA	Gloss
/ɣurfa/	/beyt/	/ɣurfa/	room
/ɣalatˤ/	/ɣalatˤ/	/ɣalatˤ/	mistake
/bajt/	da:rˤ	/be:t/	house
/al-mantˤiqa/	/l-mantˤiqa/	/al-mantˤiga/	the area, region
/mawdʒu:d/	/mawʒu:d/	/mawdʒu:d/	present, exist
/sajja:ra/	/wata/	/sajja:ra/	car

(iii) Words/phrases borrowed from other dialects, rather than UHA. Similar to the previously mentioned two categories, this type of borrowings is not included in the analysis. It is worth mentioning, that the vast majority of the examples of this type are borrowings from Bedouin Hijazi Arabic, which is gradually gaining a very strong presence in Medina. The following table shows examples found in the data.

Table 4.9: Examples of words/phrases borrowed from Bedouin Hijazi Arabic

Example	Bedouin pronunciation	Gloss

ʕazz-alˤlˤaːh	ʕazz-alˤlˤah	by Allah
w-ən-niʕim	w-an-niʕim	a phrase meaning the person just mentioned deserves honour
ʃə tˤawwad	weːʃ tˤawwid	which (tribe) do you belong to?
əs-salag	as-salag	hound dogs (but it refers here to bad people)
axwijaːn-i	ʔaxwijaːn-i	my friends
ʒhani	dʒhani	of Jhuyana (the tribe)
w-əntu b-karˤaːma	w-intu b-karaːma	a phrase said after mentioning something disgusting
ðoːli	ðoːli	those

(iv)   CS phrases. It is important to mention that this type of speech is not very common in the data, except in the case of one speaker belonging to the *Ḥrāṭīn* ethnic group, i.e. MAH_H (see section 4.6.5.), as he was systematically CS to UHA. Moreover, it is worth noting that, although CS to UHA formed most of CS cases, other CS cases to other Arabic dialects were recognised in the data, motivated by several different factors. Table 3.20 below shows examples of CS. It is also interesting to mention that in all of the examples shown in the table below, participants were verbally quoting others' speech and not using their own speech. Moreover, this type of CS is not covered by the present research.

Table 4.10: Examples of CS in the data

Example	Source	Gloss
əbn-aːxi	Bedouin Hijazi Arabic	my brother's son
mʕa l-xejl ja-ʃagra	Bedouin Hijazi Arabic	with the-horses, oh Shagra! (a name of a horse)[226]
batˤn-u maː tu-mɣus-u	UHA	his stomach does not hurt him
akal laħma najja	UHA	he ate uncooked meat
u guddaːm an-naːs	UHA	and in front of people
ti-ɣajjir kafar-k	Bedouin Hijazi Arabic	you change your [car]tyre
b-ni-ʃtik-i r-rabbi-na	Egyptian Arabic	we complain to our Lord

All of the previously mentioned types of words and phrases were easy to identify; however, differentiating between what is a borrowing from UHA and what is CS to it was not as easy

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[226] It is a well-known idiom in Saudi Arabia in general, especially in Bedouin areas, which means 'do what other people are doing'.

as in the previous case. The main differences between the cases of CS to UHA and the borrowings from it are as follows:

- The cases of CS were conscious and deliberate, as the speakers in most cases indicated that he/she was quoting others' speech, or was uttering a whole UHA sentence or phrase in the middle of his/her HA speech, for the purposes mentioned above. On the other hand, borrowings appeared more natural in speech and usually they were single words or very short phrases.

- One of very strong indications of CS is UHA whole sentences or parts of a sentence preceded and followed by HA elements. Switching back and forth in the same conversation is a very clear indication of CS, as Trudgill (2003: 23) defines CS as "the process whereby bilingual or bidialectal speakers switch back and forth between one language or dialect and another within the same conversation".

- As there are no big differences between HA and UHA in terms of phonotactics, the adaptation of the borrowing word to HA morphology is one of the criteria used to determine borrowings from code switching.

Another criterion that is used to determine borrowings from CS is the word order. It seems that Myers-Scotton (2006: 254) differentiates between the established LB and CS cases by indicating that those borrowings that have been established are following the word order of the recipient language, while CS resembles the donor language word order (see also Poplack *et al.* 1988). Although there is disagreement regarding this issue (see, for example, MacSwan 2004), it seems that this criterion is a very strong one, and is validated by the vast majority of borrowing cases in the data being established borrowings.

4.8 Data analysis and transcription

Before statistical analysis took place, great effort and time was given over to transcribing and

Before statistical analysis took place, great effort and time was given over to transcribing and classifying the data. It is worth mentioning, that the borrowings data, elicited from the recordings, were fully transcribed using the IPA (International Phonetic Alphabet) and were translated as such.

It is clear that quantitative analysis has been the most common method of analysis of language variation and changes since the early work of Labov, as highlighted above. Variationists since then have tried different statistical techniques to quantify the frequency of linguistic variables and their variants, and, recently, a number of types of software have been used for this purpose.

For the purpose of quantitative analysis of the data, two main methods have been adopted in this research, which require two datasets. The first type of analysis used is descriptive analysis (percentages). In this descriptive analysis, two methods have been used. The first type of descriptive analysis (percentages) is used to calculate the frequency index of the standard variants for each of the linguistic variables, as applied by Labov (1966). For instance, the frequency index for the HA variant observed when the Shanāqiṭa Community in Medina uses UHA borrowings is calculated as follows:

Total number of occurrences of HA variants

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Total number of occurrences of HA variants +

Total number of occurrences of UHA variants

For example, the HA variant of the first variable studied in this research (de-affrication) is the de-affrication of the affricate /dʒ/ to be realised as /ʒ/. The HA variant is /ʒ/, and the UHA

variant is /dʒ/.[227] The total number of occurrences of the HA variant, i.e. DAF (/ʒ/), is as follows: there are 14 occurrences of this variable produced by the young age group (the 3rd G). For the same group, the UHA variant /dʒ/ occurred 43 times. Therefore, the total number of HA and UHA variants is 57 (14 + 43). To calculate the percentage use of the HA variants, to be suitable for comparison with the other age group (the 2nd G), the frequency index of the de-affrication variable in the speech of this age group is:

$$\frac{14}{57(14 + 43)} = 25\%^{228}$$

As can be seen from the above calculation method, the main concern is to calculate the percentage use of the linguistic variable for each group without taking into account the individual percentage use of this variable.

The second descriptive analysis (percentages) concerns the percentage use of each linguistic variable by each of the 17 participants. For instance, Table 4.11 below shows that the percentage use of the first participant for the variable RS (ABD_H) was 1.75% (with this variable being used 6 times out of the total number of 343 tokens). Therefore, the equation to find his percentage use of this variable is as follows:

$$\frac{6}{343} * 100 = 1.75\%$$

Table 4.11: Example of descriptive (percentage) analysis (1)

ID	Subject	Ethnicity	RS	RS (%)
1	ABD_H	Bīẓāni	6	1.75
2	ABD_S	Bīẓāni	47	13.7
3	AISH	Bīẓāni	36	10.5
4	FAT	Bīẓāni	33	9.62
5	HART	Ḥarṭāni	19	5.54
6	KARM	Bīẓāni	30	8.75
7	KHAD	Ḥarṭāni	18	5.25
8	KHID	Bīẓāni	2	0.58

[227] See Chapter Five.
[228] Approximately, as the exact percentage is 24.56%.

9	MAH_H	Ḥarṭāni	20	5.83
10	MAHF	Bīẓāni	35	10.2
11	MIN	Bīẓāni	5	1.46
12	MUS	Bīẓāni	3	0.87
13	MUTZ	Bīẓāni	22	6.41
14	OUIL	Bīẓāni	30	8.75
15	SAMB	Ḥarṭāni	10	2.92
16	WADD	Bīẓāni	17	4.96
17	YUSF	Bīẓāni	10	2.92
Total 343				

The above analysis clearly shows the percentage data for the 17 participants, so we do not group them here by their ethnicity, education, gender or age. The next step is to find the average percentage use of this variable (RS) by each social group, in addition to the standard deviation percentage. Table 4.12 below shows these details for the two ethnic groups studied in this research: Bīẓāni and Ḥarṭāni.

Table 4.12: Example of descriptive (percentage) analysis (2)

Ethnicity	Average of RS (%)	Standard deviation of RS (%)
Bīẓāni	6.19	4.38
Ḥarṭāni	4.89	1.33
Total	5.88	3.88

The second type of analysis used in the present study is inferential statistics, i.e. one-way ANOVA and a post-hoc test, i.e. Tukey's HSD test. The ANOVA test is widely used for measuring equality/difference in means. However, it does not show which mean differs from other mean(s); therefore, another test needs to be used in conjunction with ANOVA to determine which mean(s) differs from other means. For this purpose, Tukey's HSD (honest significant difference) test is used in conjunction with ANOVA, i.e. as a post-hoc test. To prepare the data, initial duration/min steps before running these two tests were calculated, due to the fact that the data is not normally distributed and the population is not homogeneous.

This is because there are differences between the participants in terms of the actual time of speech and the number of participants in each social group.

To prepare the data for these tests, we considered the use of the individual participant and the actual duration of his/her speech, not the difference between the social groups, e.g. ages, genders. The actual duration of speech could have been the whole interview (majority of participants), or it could have been extracted from group discussion (participants 2, 4, 9, 10, 13, 14 and 17 in the table below). The next step was to normalise the individual use of each linguistic variable, e.g. RS in Table 4.13 below, by dividing it by the duration of his/her speech. For instance, the use of RS by the first participant (ABD_H), as shown in Table…below, was normalised by dividing his actual use of this variable (6 times) by his interview duration (22 minutes); therefore, the normalisation equation is as follows:

$$\frac{6}{22} = 0.27$$

Table 4.13: Example of normalized data

ID	Subject	Ethnicity	RS	RS/min (normalized	Duration/min
1	ABD_H	Bīẓāni	6	0.27	22
2	ABD_S	Bīẓāni	47	1.81	26
3	AISH	Bīẓāni	36	1.33	27
4	FAT	Bīẓāni	33	1.83	18
5	HART	Ḥarṭāni	19	0.86	22
6	KARM	Bīẓāni	30	1.3	23
7	KHAD	Ḥarṭāni	18	0.78	23
8	KHID	Bīẓāni	2	0.09	23
9	MAH_H	Ḥarṭāni	20	0.67	30
10	MAHF	Bīẓāni	35	1.84	19
11	MIN	Bīẓāni	5	0.21	24
12	MUS	Bīẓāni	3	0.14	21
13	MUTZ	Bīẓāni	22	1.29	17
14	OUIL	Bīẓāni	30	2	15
15	SAMB	Ḥarṭāni	10	0.43	23
16	WADD	Bīẓāni	17	0.74	23

| 17 | YUSF | Bīẓāni | 10 | 0.83 | 12 |

After normalising the data, a one-way ANOVA was executed on the use of this linguistic variable by the 17 individuals, using the individuals as factors in the analysis., then as two groups of ethnicities, as shown in Table 4.12 above. The next step was to run the post-hoc test for the normalised data, i.e. Tukey's HSD test, to find means that are different from each other, as ANOVA does not calculate this, as explained above. Table 4.14 below shows an example of the data analysis results after executing these tests on the normalised data of the RS variable versus the two ethnic groups.

Table 4.14: Example of One-Way ANOVA and Tukey's HSD tests' results

Test	Results				
One-Way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	0.413	0.4127	0.995	**0.334**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni - Bīẓāni	**-0.3673077**	-1.152347	0.4177319	**0.3344494**

The most important results in the table above are shown in bold type. In the ANOVA test results, the *p* value (0.334) shows that the difference between the two ethnic groups is not statistically significant as it is greater than 0.05, but it does not show the difference between the means of the two groups. However, Tukey's HSD test results above show that the difference between the means of the two groups is 0.367,[229] in favour of Bīẓāni, but the test does not show that this is significant ($\alpha=0.05 < 0.3344494$).

Therefore, the main procedure that was applied in the data analysis is as follows. The first method considered was to use a frequency index of the standard variants (Labov's 1966 method) to calculate the percentage of the actual use of HA and UHA variants of each

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[229] The mean for Bīẓāni group is 1.05, while it is 0.685 for Ḥarṭāni.

variable. The next method used involved calculating the individual percentage use of the HA variants (as they are the main concern of this research). The next step of this method was to calculate the average percentage use of each variable by each social group, in addition to calculating the standard deviation percentage. This percentage analysis method is meant to validate the outcomes of the first method. The final test that was performed on the data is inferential statistical analysis on the normalised data of each variable, to check whether or not there are significant differences in the use of each variable.

4.9 Conclusion

The quantitative sociolinguistic framework was adopted as the methodological framework in this cross-dialectal study of lexical borrowing. This method has been highlighted and reviewed in this chapter. Moreover, it has been shown, in this chapter, that the main source of the research data was elicited via recorded individual interviews and group discussions.

Similar to many quantitative sociolinguistic studies, social variables were chosen to be correlated with linguistic variables. Four social variables were selected and highlighted in this chapter: age, education, ethnicity and gender. The main criterion adopted, in order to choose the linguistic (phonological) variables, was to select the phonological elements that contrast HA and UHA.

These phonological variables are divided into two groups. The first group represent the consonantal variables as follows:

- De-affrication (dʒ) → [ʒ].
- Lenition (f) → [v].
- Initial *hamza* dropping (ʔ) → [Ø].

The other group consists of three vocalic variables, as follows:

- Re-syllabification: initial [CV], and sequenced [CV.CV] → syncope, epenthesis and metathesis.

- Diphthongisation: monophthongs → diphthongs.

- Vowel centralisation: (i), (u) → [ə].

The social and phonological variables are correlated and analysed according to the quantitative method outlined above in the following two chapters, i.e. Chapter Five and Six.

Chapter Five

Consonantal Variables

5.1 Introduction

It is common for variability to occur in speakers' language or linguistic variety systems when they try, in their daily activities, to accommodate towards a language/variety. This is central to the variationist theory, which multitudes of studies have adopted in the field of sociolinguistics. The variability associated with the use of six phonological variables, and the social constraints that are believed to have an impact on the variability, will be the focus of this chapter, and the following analysis chapter. It is important to emphasise that the language variation investigated in this chapter and the following one related to the HA spoken in Medina by Shanāqiṭa immigrants. This variety is very similar to the one spoken in Mauritania, reviewed in Chapter Two, because its speakers are generally of Mauritanian origin. The main noticeable differences emerged from the research data analysis between the HA spoken in Mauritania and the variety spoken in Medina are lexical. For instance, speakers of the HA variety spoken in Medina have borrowed many UHA words and phrases to be used in daily activities and these sometimes replace HA words and phrases. Moreover, as will be highlighted below, HA has generally borrowed numerous Berber words; however, the use of these Berber loanwords is very limited in the HA spoken in Medina. In addition, the French-origin words are also rare in the data, which indicates that the use of loanwords from the main sources of foreign words in the HA spoken in Mauritania, i.e. Berber and French, is limited in the HA spoken in Medina.

At the phonological level, there is no significant difference between the Mauritanian and Medinan HA phonological systems, apart from the disappearance of /e/ from the HA spoken in Medina, which was discussed in Chapter Two. Moreover, the data elicited from the

SC in Medina shows some minor changes in some phonemes. For instance, some Ḥassāniyya speakers in Medina pronounce the geminated /ɣ/ in certain words without any change, which is in contrast with the general rule of this phoneme in HA spoken in Mauritania, as mentioned inChapter Two. They pronounce the MSA word /ʃaɣɣal/ and the UHA word /ʃaɣɣaːl/ 'he works' with the geminate /ɣ/, similar to native UHA speakers.[230]

In this chapter, three phonological variables will be analysed. The three phonological features under investigation are: consonant lenition (LEN), de-affrication (DAF), and initial *hamza* dropping (IHD). These variables will be described in a general linguistic account, providing statistical information on the overall patterns in the data, before the statistical analysis of the variability of these phonological features is presented. The information provided includes: a summary of the general distribution of lexical borrowings, according to borrowing type, i.e. loanwords, loanblends and loanshifts; grammatical word class, e.g. adjectives (ADJ), nouns (N); and word category: content words, function words and phrases (P). Finally, the general trends of the borrowings will be examined according to the social factors under investigation in this study: age, level of educational attainment, ethnicity, and gender.

5.2 De-affrication [ʤ] → /ʒ/

'Affrication' generally refers to the replacement of stop or fricative sounds with an affricate, which is common in modern Arabic dialectology studies. An example is the affrication of the 2nd person singular feminine pronominal suffix /-k/ to be realised as /-tʃ/ in the Arabic dialects spoken in the Gulf countries, such as in Kuwaiti, or Bahraini Arabic (cf. Holes 1987; Al-Qenaie 2011), or as /-ts/ in Najdi Arabic (cf. Prochazka 1988; Ingham 1994; Alessa 2008). Moreover, interestingly, this process is also attested in Najdi Arabic with the voiced velar

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[230] The UHA gemination rules are well explained in Bakalla (1973: 85-119); see also section 2.3.2.6 above.

stop /g/ realised as /dz/ in some cases (see, for example, Johnstone 1963; Alrasheedi 2015). However, de-affrication (the reverse case of affrication), e.g. the substitution of a fricative by an affricate, is not as common as affrication. Moreover, as for Arabic studies, it is an uncommon term in Arabic dialectology or variationist studies. For instance, Al-Rojaie (2013) investigated the variation between Qaṣīmī (Najdi) Arabic speakers in the use of the Najdi variant /ts/, which involves affrication and de-affrication, i.e. the use of /ts/ and /k/, respectively. Importantly, it is used in the context of this research to denote the phonetic realisation of the affricate /ʤ/ as the fricative /ʒ/, by the immigrant SC in Medina, when borrowing UHA words.

/ʤ/ is considered to be one of the most important sounds in modern Arabic; its production varies between Arabic dialects according to the speaking area. The diversity between Arabic dialects in producing this sound encouraged Ibrahim Anis to comment that:[231] "This sound [jīm] has divided the Arab Nation, in the modern era, into sects and parties; the Cairene has his own *jīm*, the *Saʿidi* and the Sudanese have their own *jīm*, and the Levantine and Moroccan have their *jīm*" (Anis 1975: 70).

When we look at a linguistic comparison of the modern Arabic dialects, it is apparent that this variable differs from palatalised or affricated pre-palatals, dentals and sibilants. The five variants of this variable, as presented below, are the most common of the Arabic varieties (cf. Bishr 1970; Kaye 1972; Zaborski 2007; Woidich & Zac 2009).

Voiced palato-alveolar affricate /ʤ/

It can be argued that this variant is the most common /ʤ/ variant in Arabic and could be regarded as standard usage in Arabic in general as it is the standard pronunciation in CA/MSA and in most of the Bedouin Arabic dialects in the Arabian Peninsula, e.g. /ʤaːʔa/

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[231] My translation.

'he came'. Furthermore, it is also recognised as being highly salient in Medina as it is the standard form used in UHA: e.g. /dʒilis/ 'he sat down/remained'; therefore, it is likely to be adopted by the SC in Medina to substitute their native /ʒ/ variant.

Voiced palato-alveolar fricative /ʒ/

This is the most common realisation of the variable in the urban dialects in the Levant, namely, Syria, Lebanon and Jordan (Al-Wer 1991; Holes 2004). Moreover, it is the most common pronunciation in most of the Maghrebi dialects—such as the Bedouin dialects, as in Mauritania, the urbanised dialects in Libya, or the urban dialects in Morocco, Algeria and Tunisia (cf. Heath 1987).

Voiced palatal approximant (or semi-vowel)

The approximant realisation of this variable, is the dominant pronunciation in Eastern Arabic dialects, such as in the case of the Gulf region (the eastern region of Saudi Arabia, Bahrain, Kuwait, the United Arab Emirates and Qatar) (cf. Johnstone 1965, 1967b; Al-Amadidhi 1985; Holes 1987; Mustafawi 2006; Al Ameri 2009; Al-Qenaie 2011). In addition, this realisation is attested in a few rural Hijazi dialects in the western Arabian Peninsula, specifically in the south-west of Saudi Arabia (cf. Al-Shehri 1993: 76).

Voiced velar stop /g/

This realisation of the variable has gained in popularity and status, due to the main Arabic dialect associated with it: the urban Egyptian vernacular (cf. Schmidt 1974). It is, also, attested in various Peninsular Arabic dialects, such as in Yemeni dialects (Al-Shehri 1993: 76).

In the Arabian Peninsula, there is another realisation of the above variable: a voiced velo-palatal stop /ɟ/, which seems not to be widely spread in the area. It can be heard in some

northern Yemeni dialects (Behnstedt 1985: 42, cited in Watson 2007: 16). Moreover, it is attested outside the Peninsula, such as across Upper Egypt and in parts of Sudan (Fischer & Jastrow 1980, cited in Watson, ibid).

The variation between the first and the second above-cited variants of the variable, provides the foundation for this analysis; in other words, the variation between HA's only realisation of the variable /ʒ/—which is the only pronunciation that can be heard in the HA variety, spoken in Mauritania[232]—and the affricate /dʒ/. Moreover, as indicated in Chapter Two, the latter variant is commonly used in the UHA spoken in Medina as well as being the standard usage in MSA.

The importance of the study of this linguistic variable, may be demonstrated in two ways: the first is that the pronunciation of this variable as a voiced palato-alveolar fricative, is salient to observers of this immigrant society, but it is not a stigmatised pronunciation; secondly, the UHA usage of the variable is more prestigious, in addition to its conformity with CA/MSA usage. In addition, studying the distribution of the variant /ʒ/ is expected to provide insight into the degree of accommodation towards the UHA phonological system by the SC in Medina. In other words, /dʒ/ and /ʒ/ are phonetically close to one another, meaning that the HA speaker is unlikely to produce the UHA variant, regardless of whether he/she is used to doing so in normal speech. The production of the UHA variant is believed to arise out of real accommodation by speakers in this community.

It seems that this de-affrication process whereby /dʒ/ is realised as /ʒ/ has not received an important degree of attention in modern Arabic studies, compared to the approximant /j/, or the velar stop /g/ realisations. There are almost no studies concerning the variation

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[232] This realisation of the variable, which is also common in the variety spoken by the SC in Medina, is firmly preserved by the HA speakers in Mauritania. I could hardly find any speaker of this Arabic variety, whether via face-to-face conversation or via recorded clips, who could produce the standard pronunciation of the variable /dʒ/, even when speaking in MSA. It seems that the standard pronunciation is almost lost from HA discourse in Mauritania.

between /ʤ/ and /ʒ/ in the same speech community in the Arabian Peninsula, except a very short note by Ingham (1971) in his study of some of the linguistic characteristics of the UHA spoken in Mecca.[233] Moreover, the variation between /ʤ/ and /ʒ/ seems to have not reached a recognisable level of occurrence in the Arabian Peninsula, which might go some way to explaining why Al-Khairy (2005) excludes the voiced palato-alveolar fricative /ʒ/ from his empirical study of fricatives in Arabic; this variant rarely occurred in his data. However, in Arabic-speaking areas, such as the Levant, for example, we could identify studies where the voiced palato-alveolar fricative /ʒ/ is the common realisation of the standard voiced palato-alveolar affricate /ʤ/.

In his study of 'phonological variation and change in immigrant speech of the Arab-Israeli war immigrant speech in Damascus', Jassem (1987) explores the variation between /ʤ/ and /ʒ/ in this speech community. The linguistic situation of this speech community is the opposite to that of the SC in Medina; the first accommodates to the Damascus Arabic realisation of the standard /ʤ/ as /ʒ/, whilst the latter displays the opposite linguistic behaviour.

In the speech community studied by Jassem (1987), pre-immigrant speech preserved the standard pronunciation of this variable as the voiced palato-alveolar affricate /ʤ/. His analysis concludes with the suggestion that this pre-immigrant speech situation is no longer the same, as /ʤ/ now varies with /ʒ/. This variation has been adopted from Damascus Arabic since 1967, with both dialects having interacted on a daily basis. For instance, /ʤabhe/ 'forehead' and /ʤild/ 'skin' are realised as /ʒabhe(a)/ and /ʒild/, respectively, by this immigrant community (Jassem 1987: 97).

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[233] This realisation of /ʤ/ as /ʒ/ mentioned by Ingham (1971: 277) as occurring before the plosives /t/, /b/ and /d/ in the UHA spoken in Mecca seems to not be widespread in Mecca. Also, it seems to be a pronunciation of those of a Levant or Maghreb origin, who preserve their native realisation of the variable, as in the case of the SC in Medina.

As can be seen from the general linguistic description of HA,[234] the voiced palato-alveolar affricate /ʤ/ is absent from the phonetic inventory of HA, spoken in Mauritania, the native land of the SC. For example, it is absent in the following lexical items: /ʒa/ 'he came', /ʕaʒla/ 'hurry'. This has also been confirmed by almost all of the HA studies on Mauritania, as well as on other HA-speaking areas (cf. Cohen 1963; Taine-Cheikh 1988a; Ould Mohamed Baba 2001; Heath 2003; Taine-Cheikh 2007a; Al-Makari 2011).

The data elicited from the HA-speaking immigrant community in Medina show clear variation between /ʤ/ and /ʒ/ in the lexical borrowings produced by the data participants. It will be shown below that the percentage adoption of the UHA variant /ʤ/ is greater than the preservation of the HA variant /ʒ/.

5.3 Lenition [f]→/v/

The first use of lenition as a concept, according to Honeybone (2008), can be tracked back to the late 19th century in Germany. In 1989, the Celticist Rudolf Thurneysen penned a review of Pederson's (1897) work, entitled 'initial mutation in Irish' (ibid). In the literature on lenition, this term might denote different linguistic changes. It is recognised that lenition, as a concept, is seen to infer phonetic weakening, such as through an increase in segmental sonority, diachronically; sometimes, however, it is viewed as a morphological device, such as in the case of various Celtic languages. In this way, lenition is a phenomenon that has been widely adopted in a number of languages, and can be identified as a change to a fricative, from a stop or to a voiced obstruent, from a voiceless consonant. Importantly, it is common for lenition to comprise a number of different stages and, from a historical perspective, a language may be seen to demonstrate a change from stop to zero, through various intermediate phases (Hickey 1996).

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[234] See Chapter Two.

Elision, as a phonetic process, is one of the most radical types of lenition process, as identified by Carr (1993: 270f), where a segment is weakened to Ø. Watson (2007: 256) observes that across a significant amount of languages, stops are seen to lenite intervocalically. Moreover, intervocalic lenition is seen to encompass degemination, such as in the case of Malayalam (Mohanan 1993: 101); the frication of voiced stops, as in Welsh (Mohanan 1993: 102), Spanish (Kenstowicz 1994: 35), and Ḥaḍrami Arabic (Al-Saqqaf 1999); the frication of voiceless stops, as in Finnish (Mohanan 1993: 102) and Tiberian Hebrew (Kenstowicz 1994: 35); and the voicing of voiceless plosives, as in Malayalam and Welsh (Mohanan 1993: 101, 102).

Consonant lenition is widely recognised as a change that induces a consonant which is produced with a louder sound, and is a method where consonants are recognised as becoming weaker. Furthermore, the consonant adopts a nature that is more comparable with vowels, whilst being less consonant-like, as highlighted by Reyes-Rodríguez (2006: 12ff). Therefore, in the literature, many definitions have been assigned to this phenomenon. David Crystal (Crystal 2008: 274) defines lenition as "a weakening in the overall strength of a sound, whether diachronically or synchronically… Typically, lenition involves the change from a stop to a fricative, a fricative to an approximant, a voiceless sound to a voiced sound, or a sound being reduced (lenite) to zero". This definition is seemingly the most common one in modern studies concerning this term. However, some of both modern and old studies, have varying attributed to this term, as is a common phenomenon in phonological studies (cf. Honeybone 2008).

The definition of David Crystal and others is adopted in this research and lenition is used as a linguistic variable to refer to the phonetic process whereby the voiceless labiodental /f/ is realised as the voiced labiodental /v/ when the SC borrow UHA words in Medina. The labiodental /f/ generally appears to have the same distribution across all dialects. Importantly,

in the case of a handful of dialects, such as that of Cairene, a quasi-phoneme /v/ is voiced; this is commonly limited to loan words, including /villa/ 'villa', and is identified generally as being found only in the dialogue of educated narrators (Watson 2007: 14). It was indicated in Chapter Two, that the HA speakers would, for example, pronounce the MSA words /faʔra/ 'mouse' and /fahm/ 'understanding' as /vaːrˤa/ and /vahm/, respectively/. Cohen (1963: 8f) rightly considers the incidence of /f/ as an allophonic variant of /v/, with the situation being reversed in the context of other Arabic dialects. Moreover, the data collected from Medina supports this generalisation of the variation between /v/ and /f/. In addition, it was mentioned in Chapter Two that, in general, /f/ is realised as /v/ in HA, with a few exceptional cases, most frequently, when it is a geminate, or when contact is established with a voiceless consonant. Such a realisation is specific to this particular dialect, although it is also used by Mali Ḥassāniyya speakers (c.f. Heath 2004: xii; Taine-Cheikh 2007a: 241).

5.4 Initial *hamza* dropping [ʔ]→ /Ø/

In modern-day Arabic dialects, it seems that the non-initial glottal stop is not as frequently heard as in most other Arabic dialects. In this section, the use of this consonant will be highlighted in the two dialects under investigation, i.e. UHA and HA, in order to identify the main features of this consonant that contrast both dialects.

5.4.1 Hamza in UHA

In Meccan Arabic, as stated by Ingham (1971: 277), the glottal stop can be identified as a phoneme, with somewhat restricted use. In Meccan Arabic (this also applies to UHA in general), Abu-Mansour (1987: 262ff) identifies two different groups that *hamza* can be assigned to, namely, epenthetic and lexical. In the case of the latter—commonly referred to as root glottal stops—it may be identified as one aspect of a lexical root, and may occur in the case of the first, second or third radical. Root glottals, such as in the case of other root

consonants, are not commonly removed from speech. This may be the case for glottals in initial position, in addition to those found in medial or final position. Table 5.1 provides illustrative examples of root glottals in UHA.

Table 5.1: Examples of root glottal stops in UHA

Root	Example	Word position	Gloss
ʔsd	ʔasad	initial	lion
sʔm	siʔim	medial	he got weary
wdˤʔ	wudˤuːʔ	final	ablution
ʔkl	ʔakil	initial	food
ʔbb	li-ʔabuːja	medial	for my father
hdʔ	huduːʔ	final	quietness

The non-root *hamza* can be seen to be limited to word-initial position, and therefore is not recognised as an aspect of lexical roots. More inportant, it is generated through a rule that incorporates /ʔ/, in an effort to disallow vowel-initial syllables. Non-root glottals that come before the definite article (such as in the last two examples shown below) are always pronounced in post-pausal position, and are recognised as commonplace in Standard Arabic. Table 5.2 provides various examples of non-root glottal stops.

Table 5.2: Examples of non-root glottal stops in UHA

Root	Example	Gloss
dˤrb	ʔa-dˤrub	I hit
ħbs	ʔat-ħbas	he was detained/imprisoned
rwħ	ʔal-mirwaħa	the fan/ventilator
qmr	ʔal-gamar	the moon

However, this is not always the case as glottals may be removed in medial or final positions. Nonetheless, this particular environment may be recognised through the use of different forms. The framework of /ʔxud/ in the MSA verb /ʔaxað/ 'to take' can be taken as an example, as shown in Table 5.3:

Table 5.3: MSA verb /ʔaxað/ in UHA

MSA form	UHA form	Gloss

ʔa-ʔxuð	ʔ-aːxud	I take
na-ʔxuð	n-aːxud	we take
ta-ʔxuð	t-aːxud	you (masc.) take
ta-ʔxuð-iːn	t-aːxud-i	you (fem.) take
ta-ʔxuð-uːn	t-aːxud-u	you (pl.) take
ja-ʔxuð	j-aːxud	he takes
ta-ʔxuð	t-aːxud	she takes
ja-ʔxuð-uːn	j-aːxud-u	they take

The removal of the glottal stop, as shown in the above table, is without exception. As can be seen through the various examples, /ʔ/ is eradicated when in pre-consonantal position, thus implying a syllable-conditioned rule.

Overall, it may be suggested that in UHA, the glottal stop is removed whenever its position performs syllable closing; in other words, it is removed when it is responsible for creating a syllable coda. A comparison can be drawn between the framework detailed in Table 5.3 alongside the counterpart of the past tense MSA /ʔaxað/ and UHA /ʔaxad/ 'took', as detailed in Table 5.4.

Table 5.4: The past tense of the classical verb /ʔaxað/ in UHA

UHA form	Gloss
ʔa-xat-t[235]	I took
ʔa-xad-na	we took
ʔa-xat-t	you (masc.) took
ʔa-xat-ti	you (fem.) took
ʔa-xat-tu	you (pl.) took
ʔa-xad	he took
ʔa-xad-at	she took
ʔa-xad-u	they took

In such examples, as well as those detailed in Table 5.1, there is no deletion as the glottal stops generate the onset of the syllable.

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[235] The original UHA form is /ʔa-xad-t/ (from the classical /ʔa-xað-tu/); therefore, an assimilated geminate has occurred. The same process is also attested in the similar examples in the table.

In the instance of *hamza* completing syllable closure, its deletion and the subsequent compensatory lengthening of the preceding vowel is the recognised approach in UHA. As can be seen in Table 5.5, there are a number of examples that help to highlight this case.

Table 5.5: Examples of *hamza* completing syllable closure in UHA

MSA form	UHA form	Gloss
maʔmuːr	maːmuːr	ordered
mustaʔdʒir	mistaːdʒir	tenant
taʔxiːr	taːxiːr	delay
na-ʔkul	n-aːkul	we eat

In consideration of the Length Compensating Rules, as highlighted by Bakalla (1973: 62ff), this process is seen to limit the change of /ʔ/ in terms of length to environments, where the preceding vowel is /a/. When the preceding vowel is recognised as another besides /a/, i.e. /i/ and /u/, the glottal stop has a more familiar and ordinary pronunciation; nevertheless, the Compensatory Lengthening Rule is recognised in various examples, stemming from UHA spoken in Mecca, as highlighted by Abu-Mansour (1987: 268), as well as in Medina. The examples given in Table 5.6 demonstrate this.[236]

Table 5.6: Examples of *hamza* preceded by /i/ and /u/ in UHA

Example	Gloss
ji-ʔmur; j-iːmur	he orders/commands
ni-ʔmur; n-iːmur	we order/command
ti-ʔmur; t-iːmur	she/you order(s)/command(s)
dʒuzuʔ; dʒuzu/uː	part

The removal of the glottal stop in UHA, in the context of the rhyme position, can also be seen in monosyllabic nouns, which are nouns where a glottal stop is seen as being either consonant in the cluster. In this situation, the changes are as follows: [CVʔC] → [CVVC] and [CVCʔ]

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[236] It is worth mentioning that in the UHA spoken in Medina, in all of the examples given above, it is more common to pronounce *hamza* except in the last example /dʒuzuʔ/, as this has three possible realisations; the dropping of *hamza* is the most frequent, then the production of *hamza*, and finally the compensatory lengthening of the preceding vowel process.

→ [CVCC]. This suggests that the *hamza* process in the case of the first kind of syllable involves the elision of *hamza* together with the compensatory lengthening of the preceding vowel. In the case of other syllable types, however, the most widespread practice recognised involves geminates arising from assimilation. Overall, this group of nouns is restricted in number (ibid). Tables 5.7 and 5.8 show a number of examples to highlight these two rules.

Table 5.7: Examples of the deletion of *hamza* in the rhyme position (CVʔC → CVVC)

MSA form	UHA form	Gloss
faʔs	faːs	axe
kaʔs	kaːs	glass
biʔr	biːr	well
ʃaʔn	ʃaːn	matter

Table 5.8: Examples of the deletion of *hamza* in the rhyme position (CVCʔ → CVCC)

MSA form	UHA form	Gloss
qajʔ	gajj	vomiting
tˤajʔ	tˤajj	a name of an Arabian tribe
ʃajʔ	ʃajj	thing
najʔ	najj	raw

5.4.2 Hamza in HA

In HA (cf. Cohen 1963: 39ff), *hamza* has a very limited distribution in the variety spoken in Mauritania; in other words, the general characteristic of HA concerning *hamza* is centred on applying different methods in an effort to avoid this sound—regardless of its position in the word. Furthermore, the few words in HA, in which *hamza* is pronounced, are mainly very frequent words in MSA; therefore, the influence of standard pronunciation can be clearly seen. Moreover, in all of these words, *hamza* occurs initially and medially—not finally.[237] Examples of such words are as follows:

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[237] Although Cohen (1963: 40) mentioned some words in which *hamza* occurs finally, such as /v-əl-xalaːʔ/ 'in the wilderness', it seems these words are used when switching to MSA by educated speakers and not in a vernacular context.

Word-initially: /ʔalˤlˤaːh/ 'Allah', /ʔahl/ 'family, /ʔaːba/ 'he refused', /ʔasm/ 'name'.[238]

Word-medially: /mətʔallam/ 'suffering', /daːʔiman/ 'always', /malaːʔika/ 'angels'.

It should be noted that the word-initial *hamza* forms, considered here, do not provide conclusive evidence of *hamza* use, since they can be heard, mostly, without initial *hamza*. For example, /ʔahl/ is pronounced /ahl/ most of the time by HA speakers; therefore, the characteristic of HA, spoken in Mauritania (and in Medina by the SC), involves dropping the initial *hamza*. Considering the case of medial *hamza*, it is frequently pronounced in a fewborrowed classical words, whether in nouns, e.g. /malaːʔika/, adverbs, e.g. /daːʔiman/[239] or, most frequently, following the verb prefix /t-/, e.g. /t-ʔakkad/ 'be certain', /t-ʔaddab/ 'be polite', /t-ʔaqlam/ 'he adapts'. Needless to say, all of these examples are purely MSA words, and their respective forms are almost the same, except in the case of the deletion of the short vowel following the verb prefix /t-/ (cf. Cohen 1963: 39ff).

As mentioned above, most of the words in which *hamza* is pronounced, are classical ones. In addition, according to Taine-Cheikh (2007a: 249), with regard to the HA dialect: "at least 80% of the lexical items and maybe 90% of the roots, is still of an Arabic origin". Therefore, in HA, the vast majority of classical origin words that contain *hamza* are processed in one way or another to elide *hamza*, which is the characteristic feature of HA. Generally speaking, HA shares some of these processes with some of the pre-Islamic Arabic dialects, especially Hijazi dialects, as well as some Arabic modern dialects. Below, the most frequent phonological processes of *hamza*, according to its position in the word, i.e. initial, medial and final position, are briefly considered (cf. Cohen 1963: 42ff).

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[238] The last example /ʔasm/ also denotes the party held for a newborn baby ('Aqīqah).
[239] The doublets of these two words are more popular among HA speakers, which are, respectively: /malaːjka/, /daːjman/.

The phonological process of the word containing initial *hamza* generally depends on its morphological category, as well as its phonetic composition. There are four main processes, recognised as the most frequent, in the case of initial *hamza*. Firstly, the initial *hamza* is dropped with the preceding short vowel. This process is more common with dissyllabic words. For instance, the classical /ʔaħad/ 'someone', /ʔibliːs/ 'Satan, devil' and /ʔibra/ 'needle', are processed respectively in HA as /ħadd/,[240] /bliːs/,[241] and /bra/. Not all words undergo a simple phonological process, as these words, as mentioned above, only drop the initial *hamza*. In some cases, further changes may occur in an effort to add more complexity to the phonological change, e.g. the classical /ʔibitˁ/ 'armpit', /ʔisˁbaʕ/[242] 'finger' become /baːtˁ/, /sˁbəʕ/, respectively, in HA.

Secondly, the monosyllabic classical words with initial *hamza* are usually processed in HA by dropping only the syllable onset (*hamza*). For instance, the onsets (*hamza*) in the classical nouns /ʔardˁ/ 'land, earth, floor, ground', /ʔasˁl/ 'origin', /ʔamr/ 'matter, issue' and /ʔins/ 'mankind' are dropped in HA to become /ardˁ/, /asˁl/, /amr/ and /əns/[243], respectively.

Thirdly, in some dissyllabic or monosyllabic classical words, in addition to dropping the initial *hamza*, the short vowel following the *hamza* is lengthened. For instance, /ʔibil/ 'camels', /ʔuð(u)n/ 'ear' are pronounced in HA as /iːbəl/ and /uːðən/, respectively.

Finally, it has been attested that, in HA, in order to avoid initial *hamza* in some classical words, it can be substituted with the semi-vowels /j/ and /w/. For instance, /ʔamsi/ 'yesterday', /ʔilf/ 'friend, companion' and /ʔuðn/ 'ear' are pronounced in HA as /jaːməs/, /wəlf/ and /wəðn/, respectively. It can be seen in these examples that various other phonological changes

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[240] The gemination of the final consonant in /ħadd/ is a common method found in HA to indicate the trilateral form; see Cohen (1963: 175).

[241] This word is also used to express the beauty of a woman; the phrase /fiːha bliːs/ or /fiːha ʃ-ʃajtˁaːn/ 'devil/Satan in her' means 'she is beautiful woman'.

[242] Or /ʔusˁbuʕ/

[243] The vowel /i/ in the word /ʔins/ is centralised in HA after initial *hamza* dropping as a common practice in the variety.

have occurred, i.e. vowel centralisation occurs in all three examples in addition to vowel metathesis and lengthening in the first example.

As for the case of medial *hamza*, the process of avoiding medial *hamza* by HA speakers can be summarised in the following points. If the medial *hamza* is preceded by a short vowel in the close syllable [CvCC], e.g. /biʔr/ 'well', /ðiʔb/ 'wolf', /faʔr/ 'mouse', the *hamza* is dropped by lengthening the short vowel to become, /biːr/, /ðiːb/, /vaːr/, respectively. This phonological alternation is very common in many contemporary Arabic dialects, not to mention its popularity in some pre-Islamic dialects, such as in the case of the dialect of Quraysh, as shown in the way in which the Quran is recited according to the Medinan recitation, known as the qirāʼa (recitation method) of Imam Nafiʻ (Imam Warsh narration). The qirāʼa is the main recitation method used in most African Muslim countries, especially those in Northern Africa.

The elision of *hamza* and the lengthening of its preceding short vowel is not restricted to the above type of nouns; it is also attested in various syllabic nouns, e.g. /taʔliːf/ 'authorship, collecting' and /jaʔmur/ 'he ordered, commanded'. These examples are pronounced /taːliːf/ and /jaːmər/, respectively, in HA.

In the case of *hamza* occurring between two vowels, two frequent processes are adopted by HA speakers: the elision of *hamza* with the following vowel, and its elision with the following vowel to be substituted with the semi-vowel /j/. Examples include: /raʔaː/ 'he saw' and /daːʔiman/ 'always', which are pronounced in HA as /rˤa/ and /daːjman/, respectively.

Concerning *hamza* in the final position, the most common practice adopted by the HA speaker for words ending with *hamza* is the elision of *hamza*. For instance, the classical /rabaʔa/ 'he was raised', /maːʔ/ 'water' and /ħinnaːʔ/ 'henna' are uttered in HA as /rˤba/, /ma/

and /ħənna/, respectively. When the *hamza* is preceded by the semi-vowel /w/, the common phonological process is for it to be dropped without further change or, less frequently, the semi-vowel might be geminated. Examples include: /dˤawʔ/ → /ðˤaw/ or /ðˤaww/ 'light', /nawʔ/ → /naw/ or /naww/ 'cloud', and /sawʔ/ → /saw/ or /saww/ 'bad (person)'.

5.5 Statistical analysis of the distribution of lexical borrowings

In this section, the general trends concerning the lexical borrowings, found in the data, will be explored by examining the distribution of the borrowings in the linguistic production of individual participants, followed by the distribution of the borrowings according to word category (WC). This will be followed by a discussion of the distribution of lexical borrowings, according to social factors.

5.5.1 Distribution of lexical borrowings in the linguistic production of individual

Before examining the correlations between the six studied linguistic variables and the social factors[244] to find out whether or not there are correlations in the data, we should look at the general distribution of the borrowings found in the data. Table 5.9 shows the exact number of lexical borrowings used by individual participants.

Table 5.9: Distribution of borrowings per participant

Participant	Gender	Ethnicity	Age	Education	Borrowings (N)	Usage
ABD_H	M	Bīẓāni	2nd G	Low	44	Low
ABD_S	M	Bīẓāni	2nd G	High	141	High
AISH	F	Bīẓāni	3rd G	High	78	Medium
FAT	F	Bīẓāni	2nd G	Low	65	Low
HART	M	Ḥarṭāni	3rd G	Medium	64	Low
KARM	M	Bīẓāni	3rd G	High	61	Low
KHAD	F	Ḥarṭāni	2nd G	Low	72	Medium
KHID	M	Bīẓāni	2nd G	High	11	Very low

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[244] The three consonantal variables are analysed in this chapter and the other three phonological variables (vocalic variables) are analysed in the following chapter.

MAH_H	M	Ḥarṭāni	2nd G	Low	155	High
MAHF	M	Bīẓāni	2nd G	High	73	Medium
MIN	M	Bīẓāni	2nd G	Medium	27	Very low
MUS	M	Bīẓāni	2nd G	High	16	Very low
MUTZ	M	Bīẓāni	3rd G	Medium	60	Low
OUIL	M	Bīẓāni	3rd G	Medium	81	Medium
SAMB	M	Ḥarṭāni	3rd G	Low	65	Low
WADD	M	Bīẓāni	3rd G	Medium	60	Low
YUSF	M	Bīẓāni	3rd G	Medium	48	Low
					Total: 1121	

It is apparent from the table above, that the number of Hijazi borrowings ranges from a high to a very low frequency. These categories of the level of usage of borrowings, i.e. high, medium, low, and very low, are based on a comparison of the number of borrowings, in relation to the average number of borrowings per participant, which comprises 66 borrowings[245].

As can be seen from the table above, there are only two participants who produced a significantly higher number of Hijazi borrowings than the rest of the participants. Both ABD_S and MAH_H were very keen to talk about different topics suggested by the researcher, in two different group discussions. The relatively high number of borrowings does not seem to be due to a common social factor (such as age, education, ethnicity, and gender), as the two speakers differ from each other in all factors except gender, which seems to be insignificant in their case, when considering the other participants. There is strong evidence, from the speech style of MAH_H, that his ethnicity plays the main role in his word choice. He not only borrowed words, but does code-switching as well, as was previously mentioned in Chapter Four; code-switching is very common in the speech of people from the *Ḥrāṭīn* ethnic group in Medina. As for ABD_S, a *Bīẓāni* male with a high level of education, his style of speech is largely different from that of MAH_H, as his speech is more closely bound

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[245] This number is calculated from the total number of lexical borrowings found in the data (1121) divided by the total number of participants (17).

to Ḥassāniyya. From personal insight based on the researcher's close relationship with him, it can be suggested, that a large number of borrowings from UHA, might be due to his family members having no strong relationship with Mauritanians in Medina, even though his parents were born and brought up in Mauritania. His father, in particular, seems to be very keen to maintain only a limited relationship with Mauritanians, as he does not like their lifestyle.

On the other hand, three *Bīẓāni* male participants (KHID, MIN and MUS) produced a very low number of borrowings (50% below the average number of borrowings). This seems to be the result of their way of talking, which, at least for two of them (KHID, MIN), was not natural. These two participants switched to MSA more than other speakers, which seems to have noticeably affected the production of borrowings. It is not surprising that KHID's job as a university lecturer influenced his style of speech, especially the recording session which was similar to his weekly lectures, where he uses a microphone to talk to students. It is, therefore, possible that this similarity might have encouraged him to switch regularly to MSA, while his real speech style is different from his mode of talking to his peers. Similarly, MIN also switched to MSA during the interview, which seemed more natural than KHID's code-switching, as his pronunciation of MSA words, did not always agree with the MSA grammatical system. Even though his educational level is not high as KHID's, his job as the director of religious programmes might influence his choice of words. As for MUS, even though he is a university lecturer, his code-switching to MSA was considerably less frequent than was the case for the other two participants. In fact, his style of using pure Ḥassāniyya seemed to be the main factor contributing to the low occurrence of Hijazi borrowings in his speech. With regard to the remaining participants, the analysis of the production of UHA borrowings becomes more comprehensible if the participants are grouped according to the four social factors, that might play a role in their speech style (see section 5.5.3 below).

5.5.2 Distribution of borrowings by borrowing type

In the present study, which concerns the inter-dialectal borrowings, the borrowings have been classified according to Haugen's (1950) models. In other words, three types of borrowings in the cross-dialectal borrowing situation have been identified, i.e. loanwords, loanblends and loanshifts. The majority of borrowings found in the data are lexical, divisible into two types: loanwords, which comprise the majority of borrowings, and loanblends or 'hybrids' (cf. Haugen 1950), in which HA items are added to the UHA borrowings. The loanshifts (also known as semantic loans) comprise a relatively large amount of data. Table 5.10 shows the number of borrowings according to the type of borrowing, with Figure 5.1 illustrating the percentage totals of each borrowing type.

Table 5.10: Distribution of borrowings by borrowing type

Borrowing type	Example	Native UHA form	HA equivalent	Gloss	No. of occurrences
Loanwords	ʔiːwa ðaħːin barˤrˤa	ʔiːwa daħiːn barra	aheːh, walˤlˤaːhi ðˤarˤk mərgəb	yes now outside	**919**
Loanblends	(ə)l-ħərˤma l-əbgaːla na-sˤħa	(ʔ)al-hurma (ʔ)al-bigaːla ʔa-sˤħa	l-əmrˤa (ə)l-butiːg na-wʕa	the woman the grocery I wake up	**202**
Loanshifts	ħaːʒa rˤəħ-t xallasˤ	ħaːdʒa ruħ-t xallasˤ	ʃi gəs-t (ʔ)uːva	something I went to It/he finished	**470**
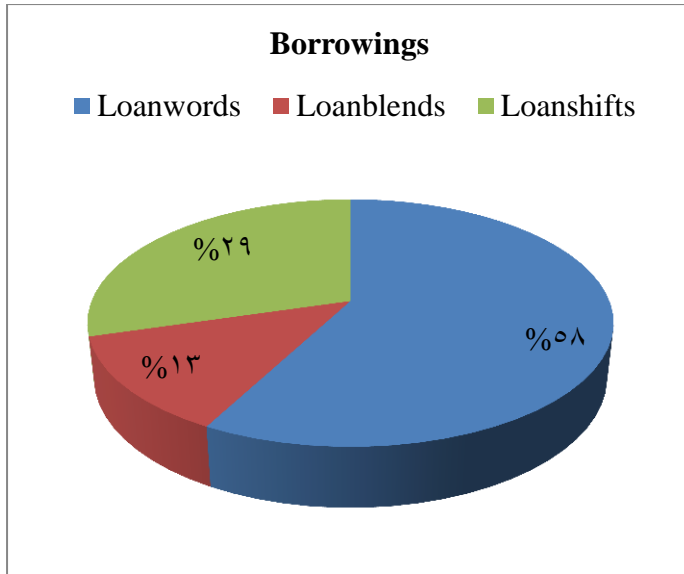
Figure 5.1: Distribution of borrowings by borrowing type (%)

Both Table 3.15 and Figure 3.1 clearly show that the majority of borrowings are lexical (71%), which is to be expected in any language contact situation. On the other hand, an unexpected finding is the relatively large number of semantic loans (loanshifts) in the data. It is important to note that studies on inter-dialectal borrowing are relatively few and that the few studies found in the relevant literature are mainly concerned with LB (or phonological borrowings, cf. Perkins 1977), not semantic borrowing. This fact does not preclude the assumption that in the situation of inter-dialectal borrowing (at least in the cases similar to the Arabic inter-dialectal borrowing found in the immigrant speech of the SC in Medina), the number of semantic loans (or semantic extensions) is likely to be considerably more than in the situation of language contact. This can be attributed to the fact that both varieties of language have many shared lexical items which might encourage the borrower to borrow only the meaning from the other variety to add to the native word existing in his/her native language. In this case, there would be no need to use a similar word with, probably, a different phonological system, which would be more difficult than adding a new meaning to a native form of the word.

It is important to emphasise that the analysis of the data, which is presented in Chapter Five and Chapter Six, does not include the third type of borrowing, i.e. loanshifts (see section 5.3.). This is due to the fact that the main objective of the research is to study the lexical borrowings and the phonological processes associated with them.

5.5.3 Distribution of borrowings by word category

Linguistically speaking, a single word may have different classifications according to different considerations. One of these concerns the meaning of the words used. More specifically, if the word has a stateable lexical meaning, it is called a content word or contentive. The majority of words in languages are content words. This classification differs from the relatively few words that primarily address grammatical relationships with other words or phrases, i.e. function words (cf. Crystal 2008: 108). These two classifications relate to single words. Considering the elicited data, a third classification relating to 'phrases' is added here to denote more than one word in speech. Moreover, the phrase may include only content words, or both content and function words. Table 5.11 shows the distribution of these three word categories found in the data.

Table 5.11: Distribution of borrowings by word category

Word category	Frequency
Content words	853
Function words	110
Phrases	158

As can be seen from the table above, as would be expected, that content words, such as verbs, nouns and adjectives, form the majority of borrowed words in the data, while phrases are in second place, according to frequency. The grammatical or function words are relatively infrequent borrowed words. Figure 5.2 illustrates the percentage occurrence of these three word categories in the data.
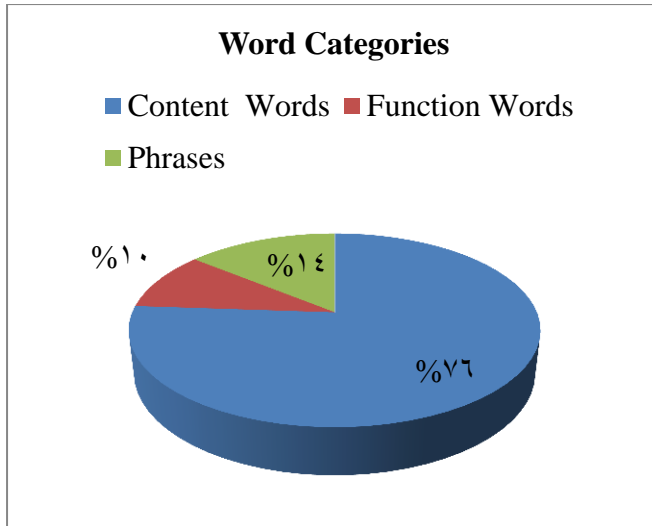
Figure 5.2: Distribution of borrowings by word category (%)

Figure 5.1 shows that content words dominate the borrowed words used in the data, accounting for an overwhelming majority of the borrowed words (76%), while the other two categories: function words and phrases, represent a less significant amount of borrowing in comparison. To have a better idea of the different types of these three word categories, Table 5.12 and Figure 5.3 below shed light on the frequency of different sub-classes of such word categories, also, traditionally known as 'parts of speech', or more recently, 'grammatical classes of words' (GCW) (cf. Crystal 2008: 352).

Table 5.12: Distribution of borrowings by grammatical class of words

GCW	Example	UHA form	HA equivalent	Gloss	Freq.
N	sˤaːmuːli navarˤejn ləbs	sˤaːmuːli nafareːn libs	(ə)mbuːr aragaːʒejn lbaːs	local baguette two people garment, dress	328
V	sawiː-h zʕal ħətˤtˤ	sawwiː-h zaʕal ħutˤtˤ	ʔaddl-u əʒ-ʒallaʒ dːir	(you-masc.) make/do it (he) got angry (you-masc.) put	203
ADV	leːʃ xalaːsˤ kəða	leːʃ xalaːsˤ kida	ʕlaːʃ wəxlˤaːsˤ kiːft	why? indicating finality as, like this	179
ADJ	kwejs zej-ha maʕleːʃ	kuwajjis zajja-ha maʕaleːʃ	zejn kiːvət-ha aːsəf	good, nice (looks) like her (I am) sorry	143
PP	maː l-ak ʃəɣl bəzˤzˤabtˤ mən-naːk	maː l-ak ʃuɣul bizˤzˤabtˤ minnaːk	maː daxx-l-ak gabˤaːl mən-hak	not your (masc.) business exactly from there	71

VP	ma: jxəsˁsˁ-ha madre:ʃ ʃadd ħe:lu	ma: jixusˁsˁa-ha madre:ʃ ʃadd ħe:lu	ma: jəʕni:-ha (ə)kka:ða wə-kka:ða ʃətmarˁ	does not relate to her so and so (he) works hard	40
NP	ja-rˁa:ʒil əʃ maʕna ma: ʕəmri	ja ra:dʒil ʔiʃ miʕna ma: ʕumri	ja-xxu:ja ða la:ʃ ma: gatˁtˁej-t	oh my friend! why? I never…	38
PRO	əntu humma nafəs-hum	ʔintu humma nafsa-hum	əntu:ma hu:ma b-rˁau:sˁ-hum	you (pl.) they (masc.) themselves	38
PREP	ħagg ʕaʃa:n vi:	ħagg ʕaʃa:n fi:	li:l bi:h-lli xa:ləg	of for, because of there is/are	19
CON	bass lamman wala	bass lamman wala	wəxlˁasˁ, uto:f ilejn ula:	but, however when and not, nor	18
DEM	haðu:li ðija aho:h	hado:li dija ʔaho:h	ðu ði arˁaʕi	those this (fem.) her is/I am	17
INT	jare:t ha: tˁejb	jare:t ha: tˁajjib	aʃkam ∗∗∗[246] ajwa	would that what! well!	16
ADVP	zej-ma:hum u-kiða ja:-kiða ja:-kiða	zejji-ma:humma u-kida ja:-kida ja:-kida	ki:v maka:nu kaða: wa kaða: ða walˁlˁa ða	(theyare) the same and so on either this or that	8
ASP	ga:ʕdi:n ħa niʒlis	ga:ʕidi:n ħa ʔadʒlis	mətba:rki:n la:hi mət-ba:rək	(pl.) progressive ASP will (progressive ASP) (masc. sing.) progressive ASP	2
ADJP	zej baʕdˁ ja: sˁaħħ	zajj baʕadˁ ja: sˁaħħ	məʃʃa:bhin: alla: ħagg	(they) are similar either true, correct, right [or wrong]	2

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[246] No lexical equivalent in HA; however, a similar meaning to the Hijazi interjection is usually uttered by HA speakers as a long sound like a moan, starting with /ʔ/.

Grammatical Class of Words
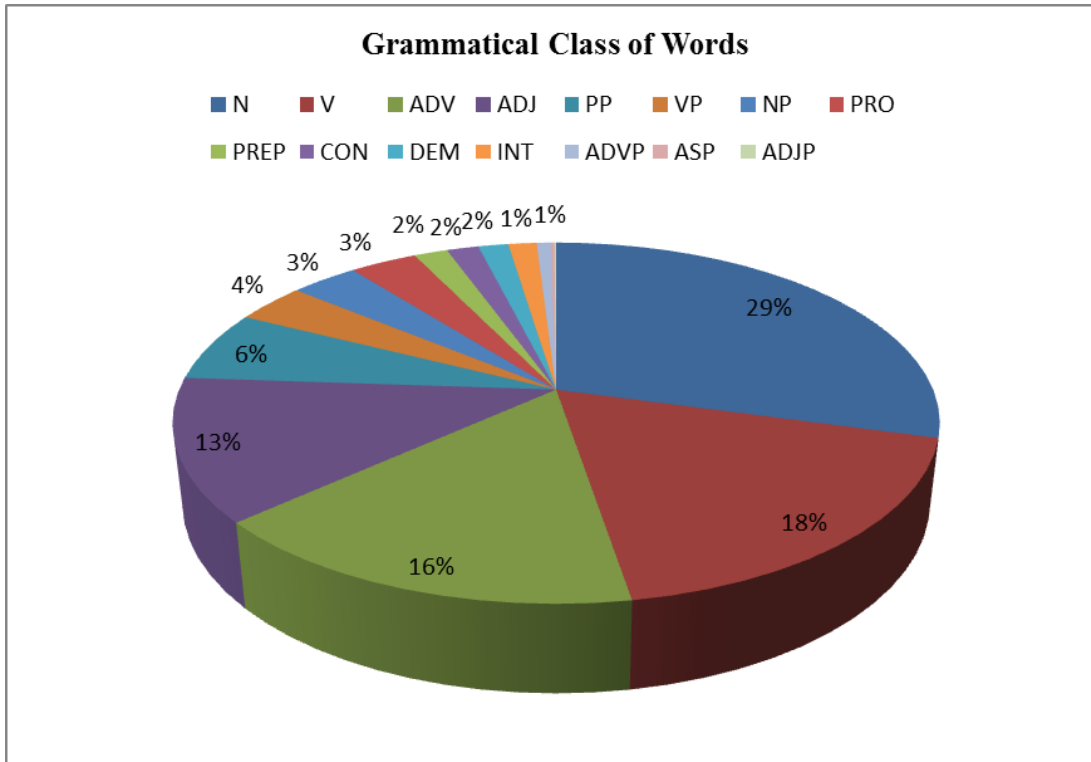
Figure 5.3: Distribution of borrowings by grammatical class of words (%)

The detailed examination of the data shown and illustrated in Table 5.12 and Figure 5.3 reveals that nouns, which occur 328 times in the data (accounting for 29% of borrowings), and verbs, which occur 203 times (accounting for 18% of borrowings), are the lexical items that are the most frequently borrowed from one dialect to another. This is a similar finding to that associated with the borrowing process from one language to another, which has been confirmed by much empirical research in the literature on lexical borrowing, e.g. Poplack *et al.* (1988), Van Hout and Muysken (1994), Treffers-Dalle (1994; 2010) (for further details, see Chapter Three).

In the case of the other types of content words found in the data, for example, adverbs (accounting for 16% of borrowings) and adjectives (accounting for 13% of borrowings), the higher frequency of the former can be assumed to reflect the higher borrowability of adverbs. However, this does not concur with the general findings of empirical research on borrowing between languages. For instance, possibly the most comprehensive quantitative analysis of

borrowings, based on 2.50 million words and conducted by Poplack *et al.* (1988) in Ottawa-Hull, found that "the overwhelming majority (64%) falls into the category of nouns, followed by verbs (14%), interjections and frozen expressions (12%), adjectives (8%), and conjunctions (1.5%). No other category reaches 1% of the data". If we cannot claim the higher borrowability of adverbs compared to adjectives in the context of cross-dialectal borrowing (as both word classes have a similar level of occurrence, i.e. 16% and 13%, respectively), at least it can be confidently argued that they have similar borrowability in this context, contradicting the cross-language borrowing extensively analysed in modern and traditional studies (cf. Poplack *et al*. 1988; van Hout and Muysken 1994; Treffers-Daller 1994; Matras 2008).

As for the borrowed phrases in the data, five types of phrases were found, i.e. prepositional, verb, noun, adverbial, and adjectival phrases, with varying degrees of frequency. Prepositional phrases are a considerably more borrowable type of phrase for the SC immigrants, while the frequency and distribution of verb and noun phrases are very close to each other at 4% and 3% respectively. The frequency and distribution of the last two phrase types, i.e. adverbial and adjectival phrases, are extremely low as they did not exceed 1% of the total number of borrowings. Similar to the general findings of the cross-language borrowing studies, the rate of borrowing for functional words is low. Six types of functional word types have been identified in the data, namely, pronouns, prepositions, conjunctions, demonstratives, interjections, and aspects. The variety of pronouns (except personal pronouns, which are rarely found in the data), such as possessive, interrogative, and relative pronouns in UHA are the most frequent functional words in the data, accounting for 3% of the total number of borrowings. The functional word types of prepositions, conjunctions, and demonstratives each account for 2% of the borrowings in the data. The last two functional

word types, i.e. interjections and aspects, together form less than 2% of the borrowings in the data.

5.5.4 Lexical borrowings and social factors

In this section, the purpose is not to provide a general idea of the frequency and distribution of borrowings according to the social variables (age, gender, education, and ethnicity) but rather, the focus will be on examining the possibility that social factors play a role in the willingness of participants to use UHA borrowings in their speech. Moreover, the aim in this section is to examine some of the research hypotheses mentioned earlier. For instance, it was hypothesised that the young generation of the SC, is more willing to preserve the social and cultural identity of the Shanāqiṭa than is the case for the older generations. Therefore, this cultural and social preservation is likely to be reflected in their style of speech. In other words, the level of HA word usage is expected to be higher than that of other generations, while UHA usage is more likely to be lower. In addition, the usage of UHA borrowings in turn is expected to be phonetically more attached to the HA phonological system. This particular point will be examined in section 5.6 below and in the following chapter.

The research hypothesis related to education suggests that although formal education in Saudi educational institutions provides an important opportunity for the SC members to have direct contact with the Hijazi society in schools and universities, it remains a much weaker influence than another social factor: the very strong bond of relationships between these community members; this is in addition to the common behaviour of refraining from having strong and open relationships with outsiders, i.e. people who do not belong to the community. It is also hypothesised that the ethnicity factor plays an important role in the vocabulary choice of the SC members. As has been mentioned earlier, the SC in Medina consists of two main ethnic groups: *Ḥrāṭīn* and *Bīẓān*. *Ḥrāṭīn* are expected to have a greater tendency to be

more Hijazi-like than *Bīẓān*, as they generally try to abandon the cultural and social life of the SC. This should not be regarded as odd if we understand the controversial social situation in their native country, Mauritania, where the relationship between the two groups is not in a good condition as a result of the remnants of the practice of slavery. Therefore, the image of the *Ḥarṭāni* enslaved by the *Bīẓāni* will remain in the collective memory of *Ḥrāṭīn* for a long time.

Moreover, the research hypothesis regarding the gender factor suggests that, in common with the findings of many studies in sociolinguistics, women would tend to be more careful in using words than men. In other words, they would use a more high status variety of speech than men. In the case of the dialect contact situation in Medina, the SC females are expected to use more refined vocabulary, which is, in the case of this study, the UHA vocabulary (borrowed words).

In examining these hypotheses relating to the use of borrowings, including age, gender, education, and ethnicity markers, a calculation of the number of borrowings will not be provided here. This is because there are different numbers of participants in each social group and so the total duration of the interview data varies. This means that there is a considerable difference in the exact number of borrowings elicited from each interview and group discussion. Instead, the average number of UHA borrowings per minute, used by each group, will be the criterion adopted to explain the general trend of borrowing use according to social variables. For instance, the number of UHA borrowings used by the first age group (the 2nd G) is 604 borrowings[247], while the total length of the interviews and group discussions of this age group is 202 minutes[248] (as shown in Tables 5.14 and 5.15 below).

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[247] The sum of 44, 141, 65, 72, 11, 155, 73, 27 and 16 borrowings.
[248] The sum of 22, 26, 18, 23, 23, 30, 19, 24 and 21 minutes.

In other words, Labov's (1966) method of the calculation of a frequency index of the standard variants, which concerns the percentage use of the linguistic variable for each group without taking into account the individual percentage use of this variable, is not used for this linguistic variable for the reason mentioned above. Therefore, it seems that the only appropriate method to calculate the percentages is the second descriptive (percentage) method explained in Chapter Four (section 4.8). This method involves calculating the individual percentage use of each linguistic variable, and then calculating the average percentage use of the linguistic variable (LB in this section) by each social group. This method of calculation is an attempt to reduce the impact of under-represented social groups, i.e. age and ethnicity, and the difference between the participants in terms of the number of borrowings produced in interviews of different lengths. Table 5.13 below shows the actual use of lexical borrowings by individual participants (column LB) and his/her percentage use out of the total number of borrowings used by all participants (column LB **%**).

Table 5.13: Individual percentage use of lexical borrowings

ID	Subject	Age	Gender	Education	Ethnicity	LB	LB (%)
1	ABD_H	2nd G	Male	Low	Bīẓāni	44	3.93
2	ABD_S	2nd G	Male	High	Bīẓāni	141	12.58
3	AISH	3rd G	Female	High	Bīẓāni	78	6.96
4	FAT	2nd G	Female	Low	Bīẓāni	65	5.8
5	HART	3rd G	Male	Med	Ḥarṭāni	64	5.71
6	KARM	3rd G	Male	High	Bīẓāni	61	5.44
7	KHAD	2nd G	Female	Low	Ḥarṭāni	72	6.42
8	KHID	2nd G	Male	High	Bīẓāni	11	0.98
9	MAH_H	2nd G	Male	Low	Ḥarṭāni	155	13.83
10	MAHF	2nd G	Male	High	Bīẓāni	73	6.51
11	MIN	2nd G	Male	Med	Bīẓāni	27	2.41

12	MUS	2nd G	Male	High	Bīẓāni	16	1.43
13	MUTZ	3rd G	Male	Med	Bīẓāni	60	5.35
14	OUIL	3rd G	Male	Med	Bīẓāni	81	7.23
15	SAMB	3rd G	Male	Low	Ḥarṭāni	65	5.8
16	WADD	3rd G	Male	Med	Bīẓāni	60	5.35
17	YUSF	3rd G	Male	Med	Bīẓāni	48	4.28
						Total 1121	

As explained in Chapter Four (section 4.8), the second type of data analysis (inferential statistics) is performed using a one-way ANOVA and a post-hoc test, i.e. Tukey's HSD test. The dataset used to perform this analysis consists of 'normalised' data. In this section, it refers to the normalised LB data. Table 5.14 below shows the normalised LB of individual speakers, together with the actual speech durations.

Table 5.14: Normalised individual use of lexical borrowings

ID	Subject	Age	Gender	Education	Ethnicity	LB	LB/min (normalised)	Duration/min
1	ABD_H	2nd G	Male	Low	Bīẓāni	44	2	22
2	ABD_S	2nd G	Male	High	Bīẓāni	141	5.42	26
3	AISH	3rd G	Female	High	Bīẓāni	78	2.89	27
4	FAT	2nd G	Female	Low	Bīẓāni	65	3.61	18
5	HART	3rd G	Male	Med	Ḥarṭāni	64	2.91	22
6	KARM	3rd G	Male	High	Bīẓāni	61	2.65	23
7	KHAD	2nd G	Female	Low	Ḥarṭāni	72	3.13	23
8	KHID	2nd G	Male	High	Bīẓāni	11	0.48	23
9	MAH_H	2nd G	Male	Low	Ḥarṭāni	155	5.17	30
10	MAHF	2nd G	Male	High	Bīẓāni	73	3.84	19
11	MIN	2nd G	Male	Med	Bīẓāni	27	1.13	24

12	MUS	2nd G	Male	High	Bīẓāni	16	0.76	21
13	MUTZ	3rd G	Male	Med	Bīẓāni	60	3.53	17
14	OUIL	3rd G	Male	Med	Bīẓāni	81	5.4	15
15	SAMB	3rd G	Male	Low	Ḥarṭāni	65	2.83	23
16	WADD	3rd G	Male	Med	Bīẓāni	60	2.61	23
17	YUSF	3rd G	Male	Med	Bīẓāni	48	4	12

These two sets of data will be further analysed in the following sections, where individual participants are related to their social groups, i.e. age, gender, education and ethnicity groups.

5.5.4.1 Age and lexical borrowings

The data shown in Table 5.15 and illustrated in Figure 5.4 reveal that the 17 subjects used on average 5.88% of 1121 tokens of LB, with a standard deviation of 3.31%. The average percentage use for the 2nd G is 5.99%, with a standard deviation of 4.59%, while the average percentage use for the 3rd G is 5.77%, with a standard deviation of 0.94%. Therefore, the 2nd G used much less LB than the average level of usage.

Table 5.15: Lexical: Average use of LB by age

Age	No. of lexical borrowings	Average use of LB (%)	Standard deviation of LB (%)
2nd G	604	5.99	4.59
3rd G	517	5.77	0.94
Total	1121	5.88	3.31
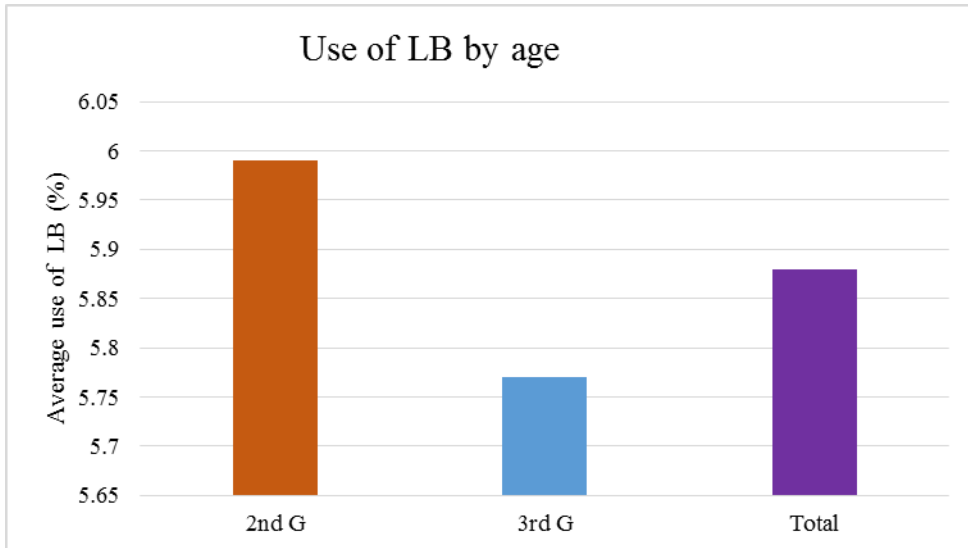
Figure 5.4: Average use of LB by age (%)

This calculation of the average percentage use of borrowing occurrences supports the research hypothesis regarding the use of borrowings by age groups. In other words, the rate of use of UHA borrowings in the speech of the participants aged between 20 and 35 years old (the 3rd G), is lower than the other age group, as a result of the social and cultural factors indicated above. In turn, they are expected to use more HA words in their speech, than the participants aged between 36 and 56 (the 2nd G). The result of this calculation is based on the total number of lexical borrowings, and is in harmony with this hypothesis. The tendency of the younger generation of the SC in Medina to use fewer UHA borrowings and more HA words is also supported by the semantic borrowings (HA words with extra borrowed meaning from UHA) found in the data.

Comparing the two standard deviation percentages for the two age groups, Table 5.15 reveals that the average percentage of the total standard deviation is 3.31%, with a percentage total of 4.59% for the 2nd G and 0.94% for the 3rd G. This can be interpreted as showing that the 2nd G group displayed more variation in the use of LB than the younger age group, as the latter group displayed a total standard deviation of 0.94%, which is significantly lower than

the average percentage, while the percentage total of the former is above the average standard deviation percentage.

The inferential statistical analysis of the normalised LB data displayed above in Table…is examined in Table 5.16 below.

Table 5.16: One-way ANOVA and Tukey's HSD test results for LB by age

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	$Age	1	0.21	0.21	0.018	**0.895**
Tukey's HSD		diff	lwr	upr	p adj
	3rd G-2nd G	**-0.2227778**	-3.756038	3.310482	**0.8948798**

Although the above percentage analysis shows that there is a difference between the age groups, as the 2nd G group displayed a higher percentage use of LB than the younger age group (the 3rd G), the ANOVA test results reveal that there is no statistically significant difference between the means of the two age groups: the *p*-value is greater than 0.05. Similarly, the Tukey's HSD test results identified the difference between the means of the two age groups as 0.22, which shows that the use of this variable by the 2nd G group is higher than that of the other age group. This difference is not statistically significant, as the *p*-value is also greater than 0.05.

5.5.4.2 Education and lexical borrowings

In sociolinguistic Arabic studies, it seems that this social factor (education) is not a preferred factor to be used in the study of cross-dialectal contact outcomes. This seems to be due to the fact that the variety used in official education is not Arabic vernacular, but rather MSA, which to a large extent differs from the spoken Arabic variety in all Arab communities. Therefore, many Arabic studies have not considered it as an effective factor to be considered in dialect contact situations. It should be mentioned here, that in the study of diglossia in

Arab communities, the education factor is essential, as it undoubtedly plays an important role in this linguistic situation.

Few cross-dialectal Arabic studies have focused on this social factor; an example of this is a study by Al-Shehri (1993) of the impact of urbanisation on the rural immigrants from the south-west area of Hijaz in Jeddah (Saudi Arabia). He argues, that the parallel increase of the use of the Hijazi urban variant /dʒ/, instead of the rural variant /j/, with the increase in educational attainment, "is due to the fact that educated speakers are actually sociolinguistically more aware, and therefore are more sensitive to the potentially unfavourable impact, which certain uses of their native dialect might have outside their native community" (Al-Shehri 1993: 86). The present research, as stated earlier, adopts a different view regarding this factor. In other words, educational attainment is used as an indicator of the level of direct contact with the Hijazi community; therefore, it can be expected to have a parallel impact on the level of accommodation to Hijazi words by the SC members.

Table 5.17: Average use of LB by level of educational attainment

Educational	No. of lexical borrowings	Average use of LB (%)	Standard deviation of LB (%)
High	380	5.65	4.25
Low	401	7.16	3.85
Medium	340	5.06	1.61
Total	1121	5.88	3.31
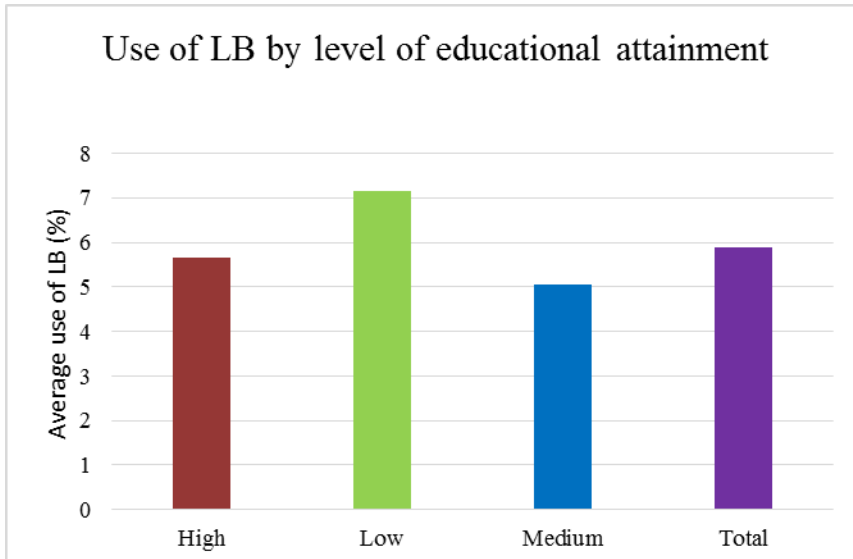
Figure 5.5: Average use of LB by level of educational attainment (%)

Table 5.18: One-way ANOVA and Tukey's HSD test results for LB by level of educational attainment

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	$Education	2	1.55	0.7765	0.327	**0.726**
Tukey's HSD		diff	lwr	upr	p adj
	Low-High	**0.67466667**	-1.766914	3.116247	**0.7540825**
	Med-High	**0.59000000**	-1.737956	2.917956	**0.7880151**
	Med-Low	**-0.08466667**	-2.526247	2.356914	**0.9954704**

The borrowing usage data shown in Table 5.17 and illustrated in Figure 5.5 reveal that the lowest use of UHA borrowings by SC members parallels increased educational attainment. This is in opposition to Al-Sheri's findings. It shows that participants with a high and medium level of educational attainment have a similar average percentage use of UHA borrowings, at 5.65% and 5.06%, respectively. Furthermore, the percentage total for the use of borrowings is 7.16% for participants with a low level of educational attainment. It also shows that participants with a high and medium level of educational attainment used less LB than the average percentage (5.88%), while participants with a low level of educational attainment used much more than this average percentage.

Moreover, the table above also shows that highly educated participants displayed more variation in the use of LB than the other two groups, as their average standard deviation percentage is 4.25%, while it is 3.85% and 1.61% for participants with a low and medium level of educational attainment. There is very minor variation in the use of LB by the participants with a medium level of educational attainment, while it is close to the average total standard deviation percentage, i.e. 3.31%. The one-way ANOVA test shows no statistical significance between means, as the *p*-value is greater than 0.05. Similarly, Tukey's HSD test, which determines which mean differs from other means, considers all of these differences between means as statistically insignificant, as all the *p* values are more than 0.05.

The above results seemingly support the research hypothesis presented above,[249] which means that formal education in Saudi schools, which allows direct contact with the Hijazi community, is not a strong enough factor to undermine the social and cultural impact of strong bond relationships between SC members in Medina. This decrease of UHA borrowings with increased educational attainment does not necessarily lead to a systematic decrease in the use of the native dialect (HA) with decreased educational attainment. Instead, educational attainment has a direct impact on the level of Arabic vernaculars in general, whether a native variety, or borrowed words from other varieties of Arabic.

This impact is manifested in the use of MSA in speech, which means there is a parallel increase in MSA words with increased educational attainment, which logically leads to the decrease in the use of dialectal items. This statement can be substantiated from the data, in which participant KHID, a university lecturer, produced only 11 UHA borrowings in about 23 minutes of interview data (about 2 borrowings per minute on average). In addition, his use of his native dialect items was relatively low, which can be attributed to the frequent use of

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[249] See further discussion below in this section, in other sections in this chapter and in the next chapter concerning the impact of this factor on the variation and the use of the linguistic variables.

MSA. It is worth mentioning, that there is an overlap between the level of educational attainment and age, the latter clearly playing a role in the statistical data obtained through its correlation with the education factor, and other linguistic variables. This matter will be addressed in detail when analysing the correlation between this factor and the phonological variables in this chapter and the following chapter.

5.5.4.3 Ethnicity and lexical borrowings

Table 5.19: Average use of LB by ethnicity

Ethnicity	No. of lexical borrowings	Average use of LB (%)	Standard deviation of LB (%)
Bīẓāni	765	5.25	2.97
Ḥarṭāni	356	7.94	3.94
Total	1121	5.88	3.31
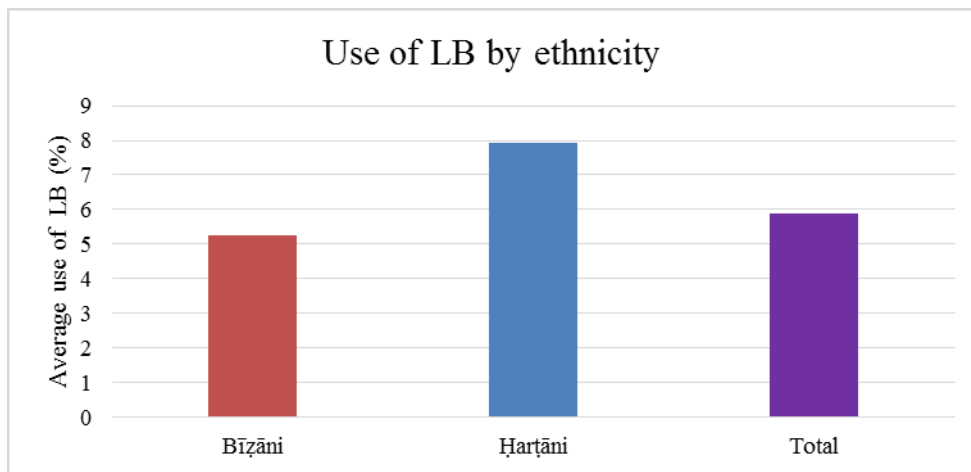
Figure 5.6: Average use of LB by by ethnicity (%)

Table 5.19 and Figure 5.6 illustrate the data related to UHA borrowings by SC members in Medina. They show that the average percentage use by speakers of *Ḥrāṭīn* ethnicity is 7.94%, which is higher than the total average percentage (5.88%), while the average percentage use of UHA borrowings is lower for speakers of the biggest ethnic community of the SC in Medina, the *Bīẓān* ethnicity (5.25%). Moreover, the average standard deviation percentages

suggest that there is more variation in the use of LB by the *Ḥrāṭīn* ethnicity than the *Bīẓān* ethnicity, as the latter displayed a higher score than the average standard deviation of 2.97%. The average percentage use of the *Bīẓān* ethnicity is 3.94%, which is higher than the total average percentage of 3.31%.

As for the inferential statistical analysis of the normalised data, Table 5.20 below shows the One-way ANOVA and Tukey's HSD test results for LB by ethnicity. Similar to the previous results of these tests, both tests considered the difference between means to be statistically insignificant, as the *p*-values in both tests are more than 0.05.

Table 5.20: One-way ANOVA and Tukey's HSD test results for LB by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	$Ethnicity	1	0.97	0.9672	0.429	**0.522**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni -Bīẓāni	**0.5623077**	-1.267464	2.392079	**0.5223759**

The above results indicate that speakers of the Ḥrāṭīn ethnicity have a greater tendency to use UHA borrowings than the other SC ethnic community, i.e. Bīẓān. This finding supports the research hypothesis related to the linguistic variation between the two SC ethnicities. In other words, the relatively high use of UHA borrowings by the Ḥrāṭīn ethnic community, signifies the attempt of the black ethnic community of the SC in Medina to become more involved in the Hijazi culture, and to gradually transform the SC culture and traditions. It is also common to hear some of these ethnic group members using HA words, in the UHA manner, either phonologically or grammatically, e.g. the monophthongisation of the HA diphthong in the phrase: /ħlejlə-k d-guːl-i/ '(I) dare you (fem.) to say' is pronounced as /ħleːli-k d-guːl-i/ by MAH_H. An interpretation of this linguistic variation, related to ethnicity, is that the gradual refraining from involvement in SC culture and traditions of this ethnic group, is not limited to

the use of HA, but is also manifested in other different social behaviours, as indicated earlier in this research.

5.5.4.4 Gender and lexical borrowings

Gender as a sociolinguistic variable received a high level of attention in extensive sociolinguistic studies in the last century, and still has a considerable reputation in modern studies. Labov (1972b) and many later studies, focused on how one's gender affects his/her style of speech. For instance, Labov (ibid) suggested that women in New York City are more careful in their speech than men, aiming to avoid stigmatised forms; therefore, they are more willing to use more refined (prestigious) forms than men. In this research, female speech is under-represented, as a result of social constraints; therefore, every possible attempt has been made to form a general idea about their speech style, and how it differs from that of males. As indicated above, one of the research hypotheses states that Shanāqiṭa women are more likely to use borrowings from UHA, as this variety is the more refined variety used by the community.

In order to examine the validity of this hypothesis, employing the use of borrowings as a criterion, a similar calculation method has been adopted to that above; the results are shown in Table 5.21 and illustrated in Figure 5.7.

Table 5.21: Average use of LB by gender

Gender	No. of lexical borrowings	Average use of LB (%)	Standard deviation of LB (%)
Male	906	6.39	0.58
Female	215	5.77	3.65
Total	1121	5.88	3.31
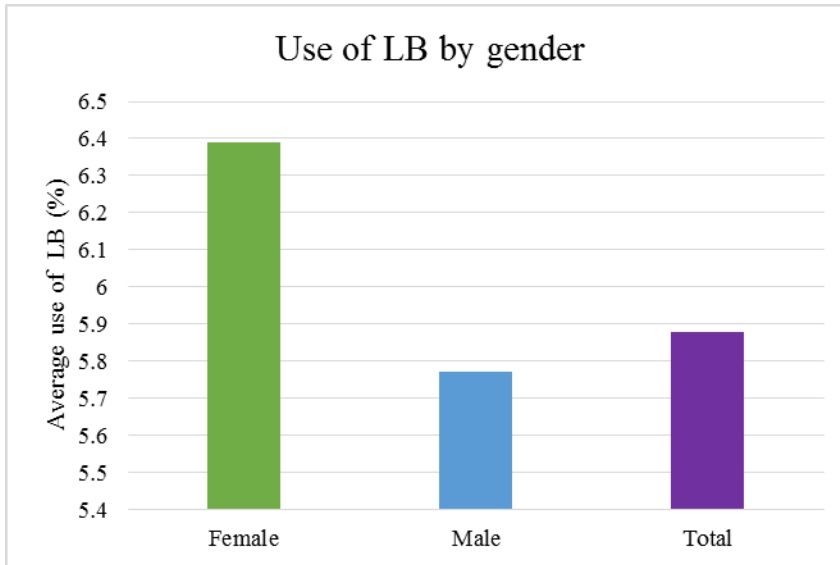
Figure 5.7: Average use of LB by gender (%)

The results of the average number of borrowings for both genders suggests that male participants show a stronger tendency to borrow more words from UHA than female participants, as the former's average percentage use of LB is 6.39%, whereas the latter displayed, to some extent, a lower level of borrowing at 5.77%. An interesting result is revealed by the standard deviation analysis, as it shows that although the male participants have a higher average percentage use of LB, their variation in the use of this variable is less than the female participants. The average standard deviation percentage of the male group is 0.58%, while it is significantly higher for the female group at 3.65%.

Regarding the analysis of the difference between means, Table 5.22 below shows the ANOVA and Tukey's HSD test results. The former shows no statistical significance between means, as the *p*-value is greater than 0.05. Tukey's HSD test identifies the difference between means in favour of the male group at 0.1578571; however, it does not consider it as significant, as the *p*-value is greater than 0.05.

Table 5.22: One-way ANOVA and Tukey's HSD test results for LB by gender

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Gender	1	0.06	0.0616	0.027	**0.873**
Tukey's HSD		diff	lwr	upr	p adj
	male-female	**0.1578571**	-2.220923	1.905209	**0.8726248**

Moreover, although this percentage analysis, shown in the table above, does not show a big difference between the means, it is not in accordance with the above hypothesis regarding the male and female use of variables. Further discussion on the impact of this social factor on language variation is shown in section 5.6.4 in this chapter and section 6.5.4 in the following chapter, in which similar results appeared with most of the variables.

5.6 Use of consonantal variables according to social factors

In this section, the same methodology for the analysis used in section …. has been applied to quantify the use of each linguistic variable, in addition to Labov's (1966) method of calculating the frequency index of the standard variants for each of the linguistic variables, as explained in Chapter Four (section 4.8). Therefore, three datasets will be used in this section to suit these analysis methods. Tables 5.23, 5.24 and 5.25 display, respectively, the total percentage use of the consonantal variables by social groups (Labov's method), the individual percentage use of the consonantal variables (second descriptive method) and the normalised individual use of the consonantal variables.

Table 5.23: The actual use of consonantal variables by social groups

Social groups		DAF		IHD		LEN	
		HA variant	UHA variant	HA variant	UHA variant	HA variant	UHA variant
Age	2 nd G	6 (11%)	51 (89%)	26 (54%)	22 (46%)	12 (14%)	72 (86%)
		Total 57		Total 48		Total 84	
	3 rd G	14 (25%)	43 (75%)	33 (61%)	21 (39%)	19 (23%)	65 (77%)
		Total 57		Total 54		Total 84	

		4 (11%)	33 (89%)	24 (67%)	12 (33%)	8 (14%)	50 (86%)
Education	High	Total 37		Total 36		Total 58	
	Med	9 (21%)	33 (79%)	23 (64%)	13 (36%)	17 (29 %)	41 (71 %)
		Total 42		Total 36		Total 58	
	Low	7 (20%)	28 (80%)	12 (40%)	16 (60%)	6 (12%)	46 (88%)
		Total 35		Total 30		Total 52	
Ethnicity	Bīẓāni	12 (17%)	57 (83%)	48 (63%)	28 (37%)	25 (21%)	92 (79%)
		Total 69		Total 76		Total 117	
	Ḥarṭāni	8 (18%)	37 (82%)	11 (42%)	15 (58%)	6 (12 %)	45 (88%)
		Total 45		Total 26		Total 51	
Gender	Male	16 (16%)	81 (84%)	50 (63%)	30 (37%)	27 (19%)	116 (81%)
		Total 97		Total 80		Total 143	
	Female	4 (24%)	13 (76%)	9 (41%)	13 (59%)	4 (16 %)	21 (84%)
		Total 17		Total 22		Total 25	

Table 5.24: Individual percentage use from the total use of vocalic variables

		Social group				Consonantal variable					
						DAF		IHD		LEN	
ID	Subject	Age	Gender	Education	Ethnicity	N.	%	N.	%	N.	%
1	ABD_H	2nd G	Male	Low	Bīẓāni	0	0	1	1.69	1	3.23
2	ABD_S	2nd G	Male	High	Bīẓāni	1	5	14	23.73	2	6.45
3	AISH	3rd G	Female	High	Bīẓāni	1	5	5	8.47	2	6.45
4	FAT	2nd G	Female	Low	Bīẓāni	1	5	2	3.39	0	0
5	HART	3rd G	Male	Med	Ḥarṭāni	2	10	2	3.39	1	3.23
6	KARM	3rd G	Male	High	Bīẓāni	1	5	2	3.39	0	0
7	KHAD	2nd G	Female	Low	Ḥarṭāni	2	10	2	3.39	2	6.45
8	KHID	2nd G	Male	High	Bīẓāni	0	0	0	0	0	0
9	MAH_H	2nd G	Male	Low	Ḥarṭāni	1	5	3	5.08	0	0
10	MAHF	2nd G	Male	High	Bīẓāni	1	5	1	1.69	3	9.68
11	MIN	2nd G	Male	Med	Bīẓāni	0	0	1	1.69	3	9.68
12	MUS	2nd G	Male	High	Bīẓāni	0	0	2	3.39	1	3.23
13	MUTZ	3rd G	Male	Med	Bīẓāni	2	10	7	11.86	5	16.13
14	OUIL	3rd G	Male	Med	Bīẓāni	2	10	6	10.17	7	22.58
15	SAMB	3rd G	Male	Low	Ḥarṭāni	3	15	4	6.78	3	9.68
16	WADD	3rd G	Male	Med	Bīẓāni	2	10	2	3.39	0	0
17	YUSF	3rd G	Male	Med	Bīẓāni	1	5	5	8.47	1	3.23

				Total 20		Total 59		Total 31	

Table 5.25: Normalised individual use of consonantal variables

Subject	Social group				Consonantal variable						Duration/min
	Age	Gender	Education	Ethnicity	DAF		IHD		LEN		
					N.	Norm.	N.	Norm.	N.	Norm.	
ABD_H	2nd G	Male	Low	Bīẓāni	0	0	1	0.05	1	0.05	22
ABD_S	2nd G	Male	High	Bīẓāni	1	0.04	14	0.54	2	0.08	26
AISH	3rd G	Female	High	Bīẓāni	1	0.04	5	0.19	2	0.07	27
FAT	2nd G	Female	Low	Bīẓāni	1	0.06	2	0.11	0	0	18
HART	3rd G	Male	Med	Ḥarṭāni	2	0.09	2	0.09	1	0.05	22
KARM	3rd G	Male	High	Bīẓāni	1	0.04	2	0.09	0	0	23
KHAD	2nd G	Female	Low	Ḥarṭāni	2	0.09	2	0.09	2	0.09	23
KHID	2nd G	Male	High	Bīẓāni	0	0	0	0	0	0	23
MAH_H	2nd G	Male	Low	Ḥarṭāni	1	0.03	3	0.1	0	0	30
MAHF	2nd G	Male	High	Bīẓāni	1	0.05	1	0.05	3	0.16	19
MIN	2nd G	Male	Med	Bīẓāni	0	0	1	0.04	3	0.13	24
MUS	2nd G	Male	High	Bīẓāni	0	0	2	0.10	1	0.05	21
MUTZ	3rd G	Male	Med	Bīẓāni	2	0.12	7	0. 41	5	0.29	17
OUIL	3rd G	Male	Med	Bīẓāni	2	0.13	6	0.4	7	0.47	15
SAMB	3rd G	Male	Low	Ḥarṭāni	3	0.13	4	0.17	3	0.13	23
WADD	3rd G	Male	Med	Bīẓāni	2	0.09	2	0.09	0	0	23
YUSF	3rd G	Male	Med	Bīẓāni	1	0.08	5	0.42	1	0.08	12

5.6.1 Use of consonantal variables by age

As indicated earlier, age, as a sociolinguistic variable, is believed to play a role in the

linguistic variation between the research participants' speech in Medina. It is hypothesised,

that due to the social factors and circumstances that the immigrant society of Shanāqiṭa face

as a minority group living in Medina, the young generation is gradually returning to the Shanāqiṭa culture and traditions. This 'renaissance' is also manifested in the choice of language, i.e. Ḥassāniyya linguistic elements. Table 5.23 above shows the percentage results from the first descriptive analysis of the actual use of the three consonantal variables, i.e. the de-affrication of the voiced palato-alveolar affricate ([dʒ]→ /ʒ/), 'initial hamza dropping' ([ʔ]→ /Ø/), and the lenition of the labiodental ([f] → /v/).

Generally speaking, the table reveals that there are differences between the age groups, in terms of the percentage use of HA variants of all the variables, and similarly in the use of UHA variants, of these variables, when borrowing from UHA.

As for the de-affrication variable, the percentage use of the fricated variant /ʒ/ by the two age groups analysed in this research is illustrated in Figure 5.8 below:
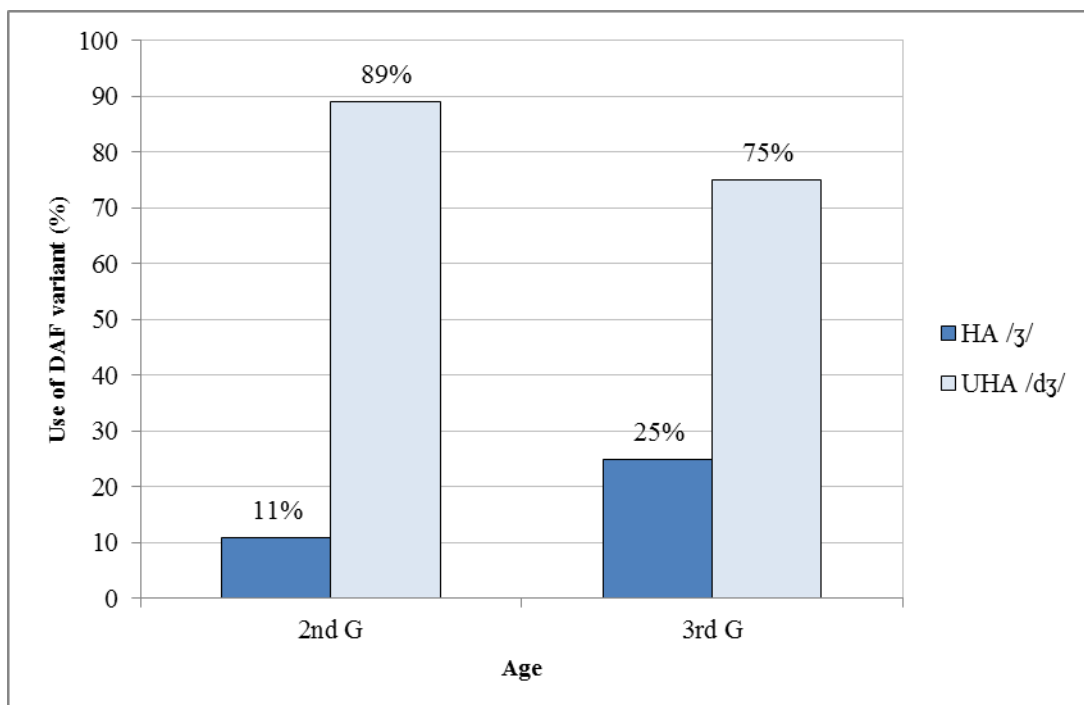

Figure 5.8: Use of DAF by age (%)

There is a clear difference in the percentage use of this variable between the two groups in terms of UHA borrowings. The statistical data above show that the HA variant /ʒ/ was found in only 6 out of 57 borrowings used by the oldest age group (the 2nd G), and accounted for 11% of the total, while the UHA variant /dʒ/ was used 51 times. In the younger age group (the 3rd G), there is a relative increase in the number of occurrences of the HA variant /ʒ/. Of the 57 borrowings used by this age group, this variant occurred 14 times, accounting for 25% of the total borrowings, while the UHA variant occurred 43 times.

Considering the individual percentage use of this variable, as shown in Table 5.24 above, the following table and graph show these individual percentages averaged according to the two age groups, in addition to the standard deviations of each group.

Table 5.26: Average use of DAF by age

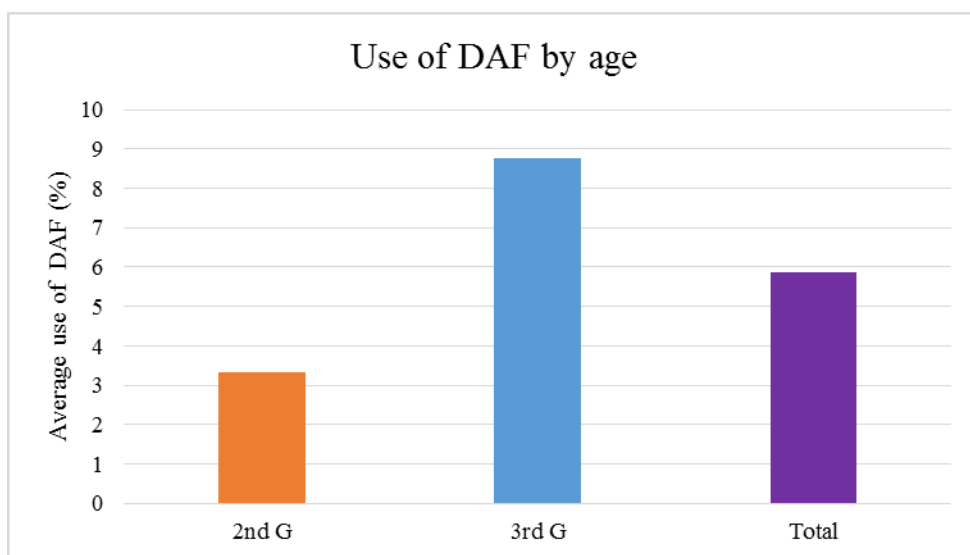| Age	Average use of DAF (%)	Standard deviation of DAF (%)
2nd G	3.33	3.54
3rd G	8.75	3.54
Total	5.88	4.41

Figure 5.9: Average use of DAF by age(%)

The 17 subjects used on average 5.88% of 20 tokens of DAF, with a standard deviation of 4.41%. The 2nd G group used on average 3.33%, with a standard deviation of 3.54%, while the younger age group used on average 8.75%, with a standard deviation of 3.54%. Therefore, for DAF, the 2nd G group used much less than the average value. These average percentage results are similar to those from the previous analysis of the general percentages of this variable. The standard deviation analysis tells us that there is no variation in the use of this variable as both generations have the same standard deviation. Table 5.27 below shows the statistical analysis of the significant differences between the mean values.

Table 5.27: One-way ANOVA and Tukey's HSD test results for DAF by age

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Age	1	0.01525	0.015247	12.85	**0.00271** **
Tukey's HSD		diff	lwr	upr	p adj
	3rd G-2nd G	**0.06**	0.02432224	0.09567776	**0.0027105**

This table clearly shows that there is a strong significant difference between the two age groups in the use of this variable. The ANOVA test's *p*-value is very low at 0.00271 and it is almost the same in the Tukey's HSD test. The latter reveals that the difference between the mean use of the two age groups in the normalised DAF results is 0.06, which the test considered as a significant difference.

The above results are contrary to what has been found by many sociolinguistic studies: that young immigrant generations (especially children) are more likely to be able to make big grammatical and phonological changes in their speech than older generations, in a dialect contact situation (cf. Kerswill & Williams 2000). This finding could be applied to the age groups of the present study by assuming that the younger generation (the 3rd G) are more likely to accommodate their speech grammatically and phonologically to UHA, than does the

older generation (the 2nd G), as the young generation, in general, are more open to outsiders, and are less conservative in accommodating different linguistic items.

The results shown above strengthen the research hypothesis related to age, which suggests that although the young generation, who were born and brought up in Saudi Arabia by parents who had, also, been born and brought up in Saudi Arabia, they have a greater tendency to retain more HA features than do the older generations. This gradual return by the young generation to the culture and traditions of Shanāqiṭa, seems to be motivated by their strong ideas and their desire to assume what they think is the right identity: the 'Shanāqiṭa identity'. This could also be motivated by their feeling that the Hijazi community (especially Bedouins) does not consider them to be indigenously related to Saudi Arabia, even though they hold Saudi nationality. There can be little doubt that the gradual increase in the immigration of Mauritanians, since the mid-1980s, effectively contributed to this powerful return by the young generation to their native identity.[250] Table 5.28 shows examples of the de-affrication variant found in the data:

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[250] This statement is based on the researcher's personal judgment as an insider-observer who witnessed the most important social changes of the society starting from the mid-1980s.

Table 5.28: Examples of UHA borrowings with the HA variant /ʒ/

Participant	Example	UHA form	Part of speech	HA equivalent	Gloss
AISH	i-rˤaːʒiʕ	ji-raːdʒiʕ	V	i-taːbəʕ	(he) follows up
FAT	ʒamb-ak	dʒamb-ak	ADV	ħðaː-k	near/close to you
HART	ərˤ-rˤaʒaːla	(ʔ)ar-radʒaːla	N	ər-rʒuːləja	manhood
MAH_H	tanʒiːd	tandʒiːd	N	***251	knitting mattress/sofa cover
MAHF	ja-rˤaːʒl	ja-raːdʒil	NP	ħagalˤlˤa	oh my friend!
MUTZ	l-harʒa	(ʔ)al-hardʒa	N	l-əmrədda	the story, matter
OUIL	t-haʒwal-ha	ti-hadʒwil-ha	V	t-hiːn-ha	(you) cause problems for her
OUIL	min-ʒidd	min-dʒidd	PP	ħaglˤlˤa ħagg	really/ seriously?
SAMB	na-ddiː-h waʒh	(ʔ)a-ddiː-h wadʒh	VP	nə-htamm biː-h	(I) give him attention
SAMB	ʒwaːz-i	dʒuwaːz-i	N	tˤabl-i	(my) wedding
WADD	ʕʒibt-u	ʕadʒabt-u	V	garrej-t viːh	(I) please him
WADD	ni-hriʒ	ʔa-hridʒ	V	n-rˤədd	(I) talk
YUSF	əl-haʒwala	(ʔ)al-hadʒwala	N	ət-txarmiːza	the mess/trouble

If we examine, in detail, usage of this variable, it is apparent that there are 4 participants

belonging to the first age group (the 2nd G) who did not use the HA variant /ʒ/, even once in

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251 No lexical equivalent in HA.

their speech. These participants are ABD_H, KHID, MIN, and MUS. As has been indicated, previously, in Chapter Four, the participants ABD_H and MIN are in their 50s, while KHID and MUS are in their late 30s. It was also mentioned earlier, that MUS produced the lowest number of UHA borrowings while he was using HA consistently in his speech, which was more than any other speaker. It is interesting to note that he did not use the HA variant /ʒ/ in the HA words and phrases, that he was using, so carefully, in his interview. For instance, in the texts below, we find him using the UHA variant /dʒ/ in /dʒamaːʕt-u/ 'his people', which is borrowed from UHA; at the same time, he used this variant in pure HA words, such as /na-ʕdʒal/ 'I rush/hurry'. Similarly, KHID used this variant in both pure HA words and borrowings from UHA, as well as in many MSA words, which he used in the interview, such as /i-dʒaːwb/ 'he answer (question)', /dʒamʕa/ 'social gathering' and /na-dʒid/ 'we find', respectively.

It can be argued that the use of the UHA variant /dʒ/ (also a MSA pronunciation), by the above participants, i.e. KHID and MUS, was a result of their high level of education, and their professional jobs as university lecturers, which is, also, an important motive for using MSA. However, this argument might be easily proven if it concerns the large number of MSA words and phrases, which they used, but cannot be validated as a motive for using the standard variant /dʒ/, as the data show that two speakers (ABD_H and MIN), who received a much lower level of education than these university lecturers, only used the standard variant /dʒ/ throughout their speech, whether it was in their HA or borrowed words from UHA. For instance, ABD_H used this standard variant in his native variety (HA) and in borrowed words from UHA in /dʒa/ 'he came' and /v-əz-zwadʒ-aːt/ 'in the weddings', respectively. MIN did the same in these native and borrowed words, respectively, /l-dʒaːmʕa/ 'the university', /dʒamaːʕt-u/ 'his people'. The remaining participants in this age group (ABD_S, FAT,

KHAD, MAH_H, and MAHF) mostly used only the HA variant /ʒ/ with UHA borrowings once, which indicates strong accommodation to the UHA variant /dʒ/.

In the young age group (the 3rd G), the majority of participants used the HA variant /ʒ/ in UHA borrowings two or more times. It can be argued, based on the results above, that the occurrences of the de-affrication of the voiced palato-alveolar affricate, did not reach a level, which would allow a conclusion to be drawn, that the SC immigrants in Medina are preservers of the HA variant /ʒ/ when borrowing UHA words. This is due to the fact that the number of occurrences of the Hijazi variant /dʒ/, in the borrowing process, is much higher than the HA variant. However, this does not stop the readership from assuming that the young age group (the 3rd G) are more likely to preserve the native variant /ʒ/ than the other age group, although they are more educated, and are, logically, farthest from pure HA, as third generation speakers.

Moving on to the initial IHD, the results of the linguistic usage of this variable, shown in Table 5.23 above, confirm that the young age group (the 3rd G) displayed a higher percentage use (61%) of the HA variant (IHD). To be exact, among the total of 54 borrowings, they dropped the initial *hamza* in 33 borrowings, i.e. 61% of the total, compared with the older group who dropped the initial *hamza* in 54% of borrowings (26 borrowings out of a total of 48). Figure 5.10 below illustrates the results.
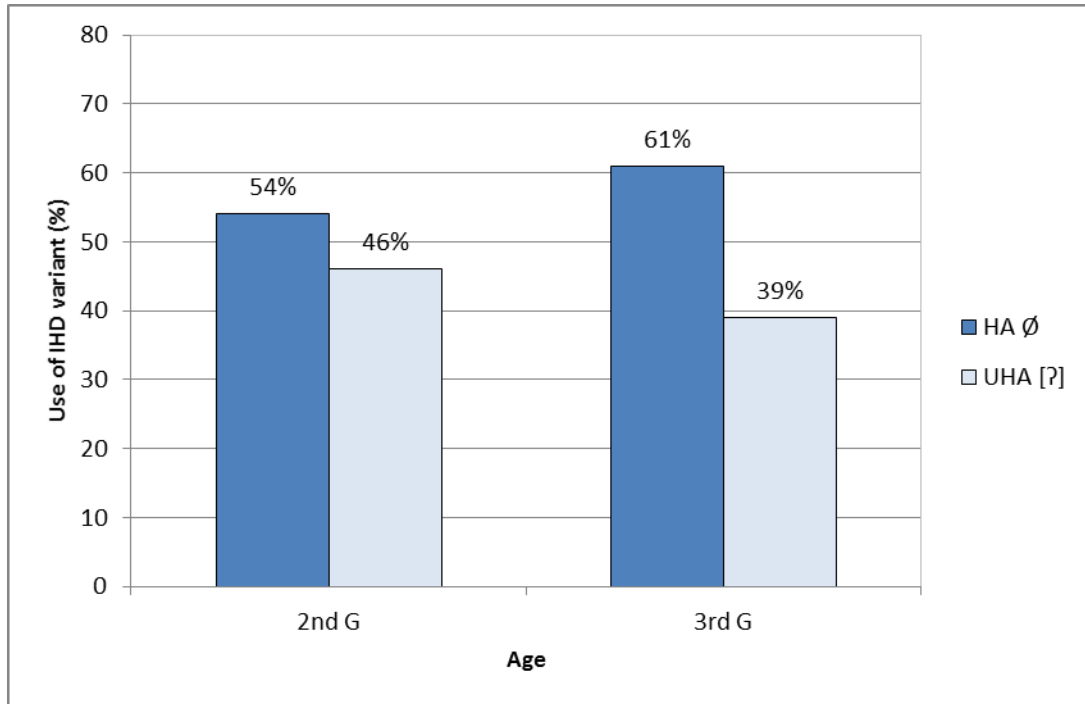
Figure 5.10: Use of IHD by age (%)

The relatively high occurrence of the HA variant indicates that the members of the young age group are more attached to HA usage, than were the older age group. Moreover, the high percentage use of the HA variant in both age groups can, generally, be interpreted as indicating that the dropping of initial *hamza* is still the preferred usage among SC members in Medina, whether with native HA linguistic elements or when borrowing from UHA or any other variety.

It is noteworthy, that the average use of the HA variant by the 3rd G age group, is barely above 4 times per participant, while it is used 2.8 times per participant in the 2nd G age group. It is important to clarify, that these calculations of the average use of the HA variant (IHD) by the 2nd G age group, are affected by the unusual use of this variant by a single participant, i.e. ABD_S. His use of this variant was very high (14 times) compared with other participants in the same age group. Table 5.29 below shows the exact number of occurrences of this variant by individual participants in this age group:

Table 5.29: Use of IHD by individual participants in the 2nd G

Participant	Use of IHD
ABD_H	1
FAT	2
ABD_S	**14**
KHAD	2
KHID	0
MAH_H	3
MAHF	1
MIN	1
MUS	2

The high use of this variant by ABD_S seems to reflect personal phonological behaviour, rather than revealing a general phonological trend of this age group. Therefore, the individual percentage use of this variable needs to be taken into account and then an average calculated for the whole age group to check the validity of the above analysis. The individual percentage use of IHD is shown in Table 5.24 above. Table 5.30 and Figure 5.11 below show the average values of the two age groups.

Table 5.30: Average use of IHD by age

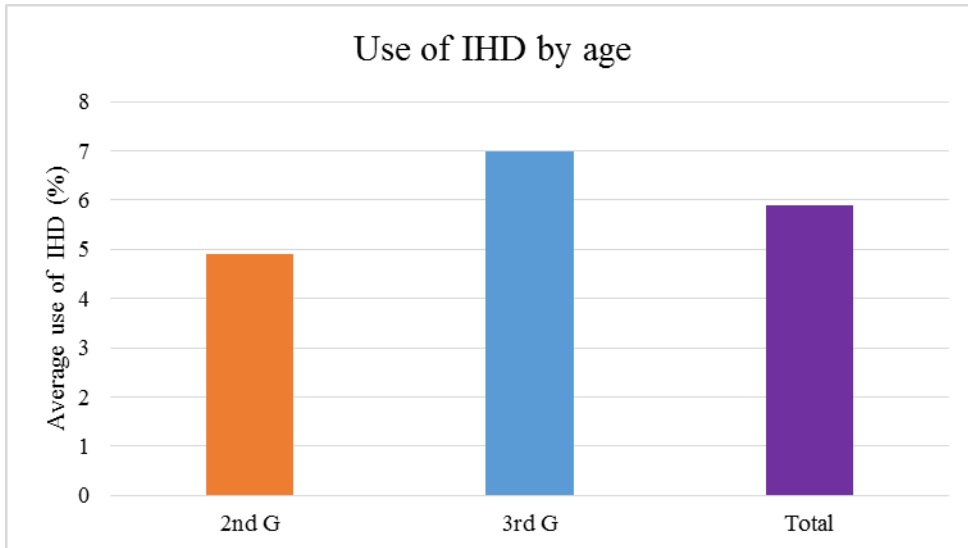| Age	Average use of IHD (%)	Standard deviation of IHD (%)
2nd G	4.89	7.21
3rd G	6.99	3.32
Total	5.88	5.66

Figure 5.11: Average use of IHD by age (%)

The 17 subjects used on average 5.88% of 59 tokens of IHD, with a standard deviation of 5.66%. The 2nd G group used on average 4.89%, with a standard deviation of 7.21%, while the 3rd G group used on average 6.99%, with a standard deviation of 3.32%. Therefore, the 2nd G used less IHD than the average percentage, while the use of the younger generation exceeds the average percentage use of this variable. These percentage results are similar to the total use percentage analysis presented above. The table above shows that although the 2nd G age group used less IHD, they have more variation in their speech, as their percentage standard deviation (7.21%) is higher than that of the other age group (3.32%).

The inferential statistical analysis performed by the ANOVA test and displayed in Table 5.31 below suggests that the difference between means is not statistically significant, as it exceeds 0.05. Similarly, Tukey's HSD test identifies the exact difference between means at 0.1125 in favour of the young generation participants (3rd G). However, the test considers this difference as statistically insignificant.

Table 5.31: One-way ANOVA and Tukey's HSD test results for IHD by age

Test	Results					
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Age	1	18.6	0.05360	2.172	**0.161**

Tukey's HSD		diff	lwr	upr	p adj
	3rd G-2nd G	**0.1125**	-0.05019586	0.2751959	**0.1611997**

The following table (Table 5.32) shows examples of UHA borrowings used by HA speakers in Medina with the dropping of initial *hamza*, in addition to the indigenous UHA pronunciation:

Table 5.32: Examples of UHA borrowings with IHD in the data

Participant	Example	UHA form	Part of speech	HA equivalent	Gloss
ABD_H	əʃʃuklu	ʔiʃʃuklu	NP	ki:f a:ʃ	how is that?
ABD_S	dda:-ha	ʔadda:-ha	V	ʕtˤa:-ha	he gave her
ABD_S	madre:h	madri ʔe:h	VP	kaða: wa kaða	so and so
ABD_S	l-a:dami	(ʔ)al-ʔa:dami	N	a:mana:dəm	the person/man
AISH	ams-ak	ʔams-ak	V	agbaðˤ/ aħkam	hold/take (2nd masc. sing.)
FAT	awwalma:	ʔawwalma:	ADVP	mki:vən	immediately
FAT	ətri:k	ʔitri:k	N	***[252]	a lantern
MAHF	əntu	ʔintu	PRO	əntu:ma	you (pl.)
MAH_H	jja:maha	ʔajja:ma-ha	ADV	ði:k əs-sa:ʕa	at that time
MUS	əlla	ʔilla	ADV	ahe:h	yes
WADD	aho:h	ʔaho:h	DEM	(a)rˤaʕi:ni	her is/I am
YUSF	əmbasˤatt	ʔambasˤatt	V	t-mownak-t	I became happy
YUSF	əstanna	ʔastanna	V	ħa:ni	wait (2nd masc. sing.)

The last variable shown in Table 5.23, is the unique HA pronunciation of the voiceless labiodental /f/ as the voiced labiodental /v/. The data in this table reveal that the young age group show a greater tendency to use the HA variant /v/ than the other age group, as from the same number of tokens (84 borrowings), the 3rd G age group displayed a percentage use of 23%

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[252] No lexical equivalent in HA.

(19 borrowings out of 84), while the 2nd G age group displayed a percentage use of 14% (12 borrowings out of 84). The results are illustrated in Figure 5.12 below:
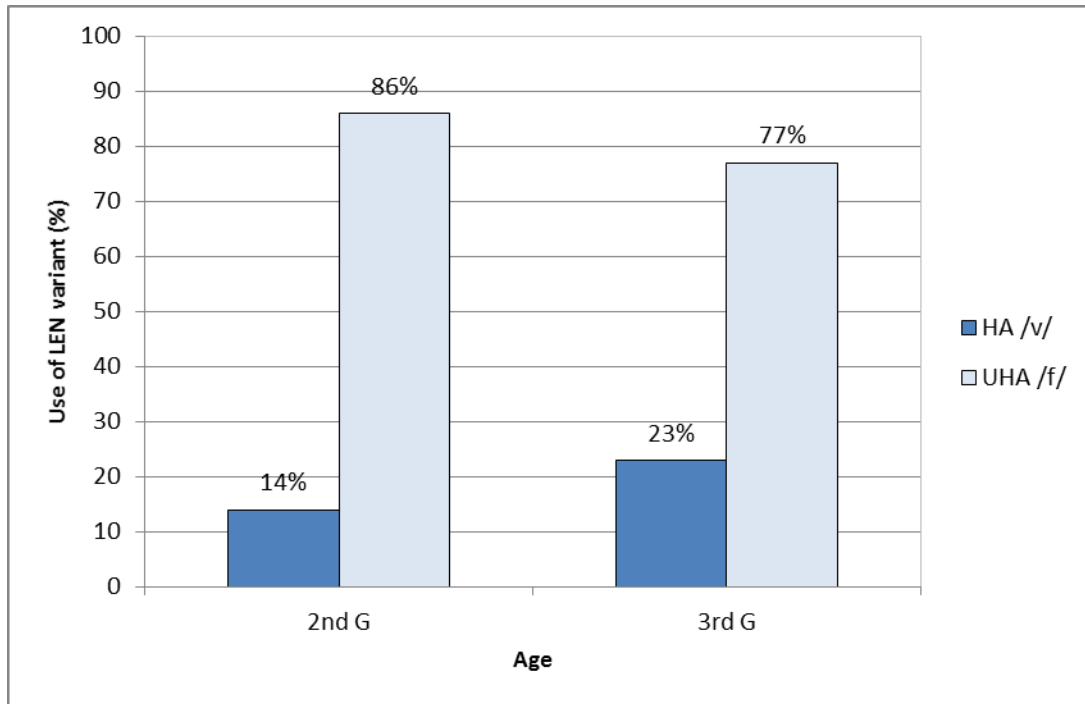
Figure 5.12: Use of LEN by age (%)

Considering the average percentage values from the relevant age groups, Table 5.33 and Figure 5.13 below show similar results in terms of which of the two age groups tend to use more LEN than the other.

Table 5.33: Average use of LEN by age

Age	Average use of LEN (%)	Standard deviation of LEN (%)
2nd G	4.30	3.95
3rd G	7.67	8.08
Total	5.88	6.27

Test	Results 0.284				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Age	1	47.8	47.82	**1.234**	**0.284**
Tukey's HSD		diff	lwr	upr	p adj
	3rd G-2nd G	**3.360278**	-3.087648	9.808204	**0.2841496**

These results might appear to strengthen the previous assumption that the younger generation of the SC, has a closer attachment to HA linguistic elements, than the older generation, which is one of the manifestations of the young generation seeking a unique identity. However, the low percentage occurrence of the HA variant /v/ and the relatively high percentage occurrence of the UHA variant /f/ should be considered, as it supports the previous notion regarding the gradual decline of this HA native pronunciation, which might lead to its disappearance in the following generations. Table 5.35 shows examples of the occurrence of this variant in the borrowings from UHA found in the data:

Table 5.35: Examples of UHA borrowings with LEN in the data

Participant	Example	UHA form	Part of speech	HA equivalent	Gloss
ABD_S	ʃa:jf	ʃa:jif	V	i-rˤa:ʕi	(he) is seeing
MAHF	əl-mavrˤu:dˤ	(ʔ)a-lmafru:dˤ	ADJ	l-ja:lˤlˤa	supposed
ABD_S	ve:n	fe:n	ADV	manejn	where?
AISH	vi:	fi:	ADV	xa:ləg	there is/are
AISH	vo:g	fo:g	ADV	lvo:g	up, above
KHAD	əl-kuve:ra	(ʔ)al-kufe:ra	N	***[253]	hairdresser (f)
MAHF	ma: vi:	ma: fi:	PP	ma: xa:ləg	no more
MIN	ta-vham ʕli:h	ti-fham ʕale:h	VP	ta-vəhm-u	(you) understand him
MUS	əl-ħava:jər	(ʔ)al-ħafa:jir	N	***[254]	a district name in Mecca
MUS	ə-rsˤe:va	(ʔ)ar-rusˤe:fa	N	***[255]	a district name in

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[253] No lexical equivalent in HA.
[254] No lexical equivalent in HA.
[255] No lexical equivalent in HA.

					Mecca
MUTZ	ji-vrig	ji-frig	V	jə-xtalaf	it differs
OUIL	l-ivluːs	(ʔ)al-fuluːs	N	l-vaðˤðˤa	the money
OUIL	t-lavlav	ti-laflif	V	tə-zzagnan	(you) go around
OUIL	valla	falla	N	tʃaʕʃiːʕ	enjoyment

It is worth noting that the HA variant has been abandoned by 29.4% of the participants, included in both age groups, as this variant never occurred in their speech. Such an absence in the speech of a number of the participants in both age groups indicates that the voiceless labiodental /f/ is increasingly accommodated to by the majority of participants, whether in their native HA elements, or when they borrow from other varieties, specifically UHA. Moreover, educational attainment is likely to play a role in this accommodation, as the speakers mostly obtained a certain level of official education. In addition, the widespread broadcast of Arab media might facilitate the undermining of the uncommon HA pronunciation.

5.6.2 Use of consonantal variables by level of educational attainment

According to Miller (2004), the study of education as a sociolinguistic variable is increasingly important in the modern era, due to the fact that the popularisation of education in the Arab world has resulted in the increase of the written form of Arabic, which is mostly MSA, thus leading to language change in favour of the frequent use of MSA. The change that Miller (ibid) referred to, might be manifested more clearly in vocabulary use, and certain forms or sounds, such as replacing the vernacular realisation of /g/ with the standard realisation /q/, and so on. However, the influence of education would seem, at least in the near future, to be limited to certain sounds, such as the variation between the standard /dʒ/ and the dialectal fricative realisation /ʒ/. For instance, with regard to urban Arab societies in

the Levant, especially in Lebanon, which is one of the most educated Arab societies, the dialectal realisation /ʒ/ is the dominant usage of this variable.

Therefore, in this research, education is considered an important factor involved in the close and direct interaction between the immigrant society (SC) and the Hijazi society in Medina. In other words, when the SC members attend Saudi schools and universities they have the best opportunity to interact with Hijazi people in these schools and universities. This direct interaction is expected to resulted in dialect change, and variation between the HA variants /ʒ/, IHD and /v/, and the Hijazi counterpart variants, /dʒ/, initial /ʔ/ and /f/, is expected to occur when HA speakers borrow UHA words or phrases. The examination of the impact of educational attainment on the immigrants' use of these variables is shown in Table 5.23 above.

The statistical results, shown above in this table, indicate that the education factor is not an effective indicator of the linguistic variation displayed by the participants, as the percentage use of the HA variant /ʒ/ does not seem to be systematically distributed according to educational level. For example, the lowest percentage use (11% of borrowing cases; 4 borrowings out of 37) of the HA variants was ascribed to the participants with the highest level of educational attainment, which was an expected result, as based on the above facts. However, the percentage use of this variant by the second group (medium educational attainment), accounts for 21% of borrowing cases (9 borrowings out of 42), which is slightly higher than that displayed by the lowest educational attainment group (20% of borrowings; 7 borrowings out of 35). Figure 5.10 below illustrates the difference between the three educational attainment groups, in terms of the use of the HA variant /ʒ/:
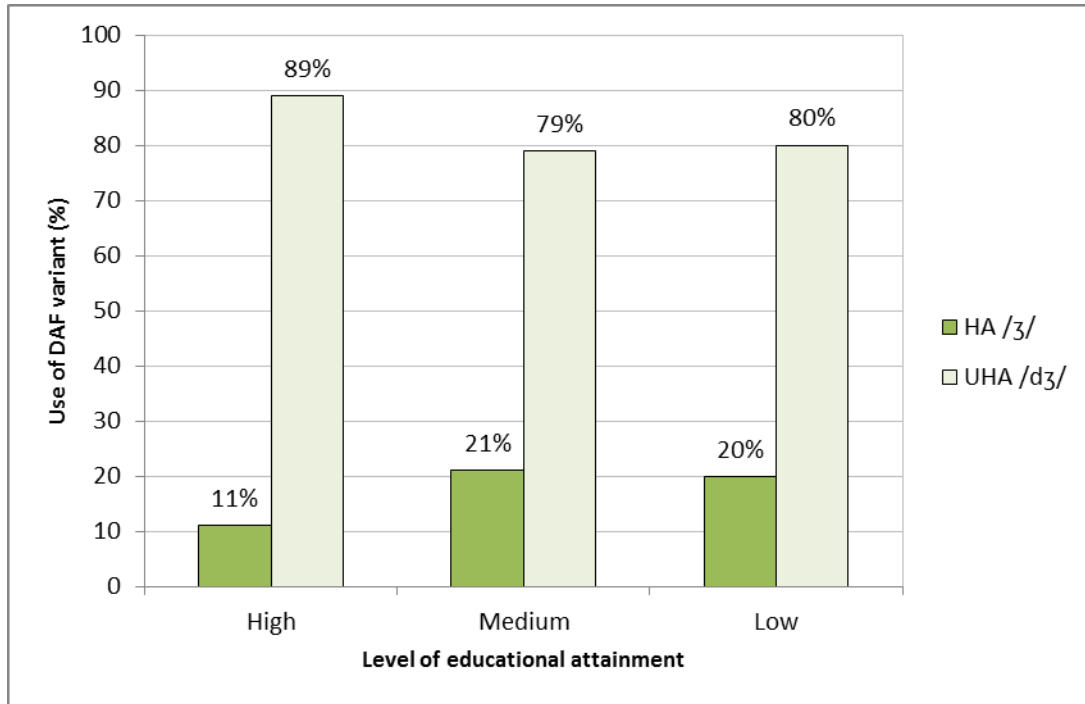
Figure 5.14: Use of DAF by level of educational attainment (%)

Although the percentage occurrence of this variant varies only very slightly between the medium and low educational attainment groups, it strengthens the suspicion that the level of educational attainment may have an impact on the variation between /dʒ/ and /ʒ/. The results from the analysis of the percentage use of this variable shown in Table 5.24 above for individuals, and averaged in groups in Table 5.36 and Figure 5.15 below, reveal similar results in terms of the direction of use for each group.

Table 5.36: Average use of DAF by level of educational attainment

Age	Average use of DAF (%)	Standard deviation of DAF (%)
High	3.33	2.58
Low	7	5.70
Med	7.5	4.18
Total	5.88	4.41
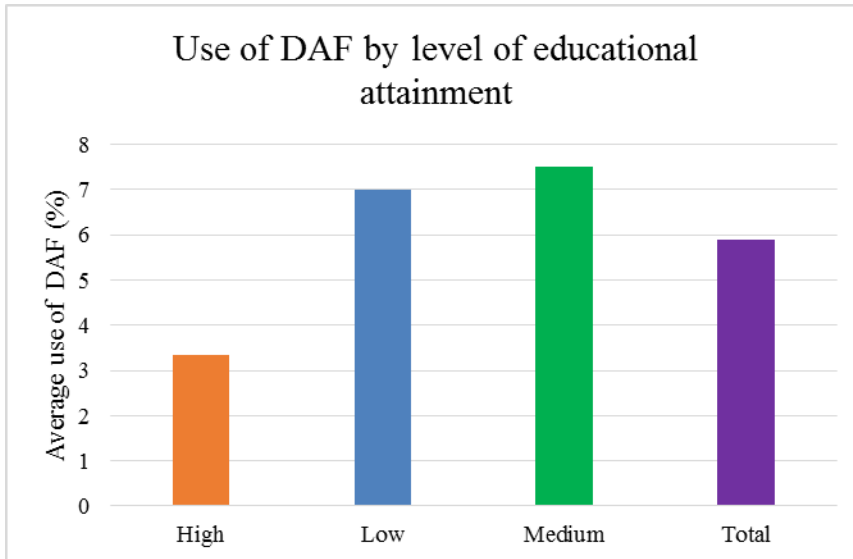
Figure 5.15: Average use of DAF by level of educational attainment (%)

The 17 subjects used on average 5.88% of 20 tokens of DAF, with a standard deviation of 4.41%. The highly educated group used on average 3.33% of DAF, with a standard deviation of 2.58%, while the group with a low level of educational attainment used 7%, with a standard deviation of 5.70%. Subjects with a medium level of educational attainment used on average 7.5%, with a standard deviation of 4.18%. Therefore, the medium and low educated groups used more DAF than average, while the highly educated group used much less than the average. Although the low educated group's total is actually in the middle range for the use of this variable, it is the only group that scores higher than the average standard deviation. In other words, the use of this variant by this group has more variation than that shown by the other groups.

Regarding the inferential statistics for this variable, the results of the two tests are shown in Table 5.40 below. Although the ANOVA test shows that the p-value is very close to the alpha value of 0.05, as it is 0.087, it is still considered as statistically insignificant, as it is higher than the alpha value. Similarly, the result shown in the post-hoc Tukey's HSD test for

the difference between the Med and High groups suggests that the *p*-value is very close to the alpha value but the difference is still considered as statistically insignificant.

Table 5.37: One-way ANOVA and Tukey's HSD test results for DAF by level of educational attainment

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Education	2	0.009734	0.004867	2.923	**0.087**
Tukey's HSD		diff	lwr	upr	p adj
	Low-High	**0.03366667**	-0.031006504	0.09833984	**0.3860466**
	Med-High	**0.05666667**	-0.004996782	0.11833012	**0.0736589**
	Med-Low	**0.02300000**	0.041673171	0.08767317	**0.630524**

The unexpected, relatively high, frequency of the HA variant, produced by the second group (medium level of educational attainment) may be explained by examining, in detail, the linguistic behaviour of the participants belonging to this group. The majority are in the same age group (the 3rd G). As indicated above, this age group show higher use of this variant than the other age group. The medium level of educational attainment group consists of HART, MUTZ, OUIL, WADD, and YUSF, all from the young age group (the 3rd G), and MIN from the first age group (the 2nd G) who never used the HA variant. As for the lowest educational attainment group, the majority of participants belong to the older age group (the 2nd G), whose use of the HA variant was lower than the other age group, as discussed above. It includes the participants ABD_H, FAT, KHAD, MAH_H, and SAMB, who is from the young age group (the 3rd G).

It is worth mentioning that the overlapping between the age and education factors, does not clearly allow examination of the extent to which educational attainment has an impact on the participants' variation in the use of this phonological variable. It is understandable that SAMB was the speaker who most produced the HA variant /ʒ/, as he had the lowest level of educational attainment amongst the study participants, as stated earlier. For instance, he used

this variant in both HA words and UHA borrowings, respectively (denoted in bold in the text below):

t-ʒiːb-hum   *l-jaːna xilaːl əsbuːʕ xalliː-hum*   ***i-raːʒʕuːn-i***   *aːna*

2pl-bring-them to-me   during week   let-2nd masc. sing.-them 3pl-visit-me   I

[Bring them to me and let them visit me [to finish their government transaction] within a week].

However, it is difficult to find a strong link between this factor and the use of this phonological variable in the research data.

The data for the second variable shown in Table 5.24 above, i.e. IHD, and illustrated in Figure 5.16 below, reveals that there is what seems to be a parallel systematic increase in the use of the HA variant (IHD) with the participants' increased level of educational attainment.

Figure 5.16: Use of IHD by level of educational attainment (%)
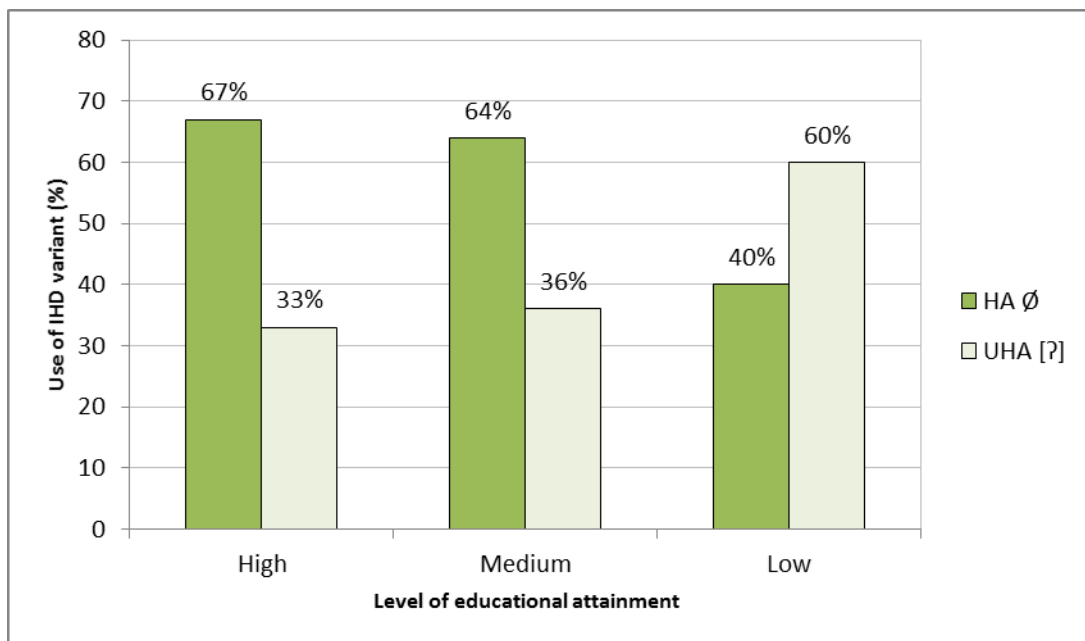
What is interesting about the results, above, is that the educational level, seemingly, plays a role in the increasing use of the HA variant, when, rationally, it should have the opposite effect. This is because formal education is considered as a means of direct interaction between the SC immigrants and the native Hijazi community. Therefore, it is assumed that

the increase in the level of accommodation towards UHA linguistic elements would be paralleled by the increase in the period of time spent in schools and higher education institutions. It can be argued, therefore, that these statistical results would be the expected result if they were reversed. For example, an expected result would be for the increase in the percentage occurrence of the HA variant to be in parallel with the decrease in educational attainment. Similarly, if considering formal education as a means for increasing the participants' ability to use the MSA variety, in which the realisation of the word-initial *hamza* is the standard use of the sound, the above results should be reversed.

It can be argued, however, that the systematic increase in the use of IHD is not closely associated with the increase in educational attainment, and, therefore, another factor could be in operation. It seems that the more likely accurate interpretation is to attribute these results to the overlap between the education and age factors; age has a direct impact on the results above. Specifically speaking, the results above are more understandable if we take into consideration the fact that the lowest educational attainment group members, who displayed the lowest percentage use of the HA variant (IHD) (in 40% of borrowings; 12 borrowings out of 30), were also all in the 2nd G age group, except for one participant (SAMB), who belonged to the young age group (the 3rd G). Moreover, the other educational attainment groups produced a relatively high percentage use of this HA variant, i.e. the high educational attainment group used this HA variant in 67% of borrowing cases (24 borrowings out of 36), while the medium educational attainment uttered it in 64% of the borrowing cases (23 borrowings out of 36). This can be ascribed to the fact that the majority of the medium educational attainment group members belong to the young age group (the 3rd G), while the high educational attainment group members are a mixed age group of the 2nd G and the 3rd

G.[256] Therefore, this method of calculation, i.e. calculating the percentage use of each group from the total use of this variable (which the overlap between the education and age factors prevents), enables a clear examination of whether or not educational attainment has an influence on the variation between the research participants, when borrowing linguistic elements including initial *hamza* from UHA.

To better examine the use of this variable by these groups, we considered the individual percentage use of this variable, as shown above in Table 5.24, and then averaged the values for the relevant groups. Table 5.38 and Figure 5.17 below show the results of this method of calculation.

Table 5.38: Average use of IHD by level of educational attainment

Age	Average use of IHD (%)	Standard deviation of IHD (%)
High	6.78	8.78
Low	4.07	1.93
Med	6.5	4.21
Total	5.88	5.66
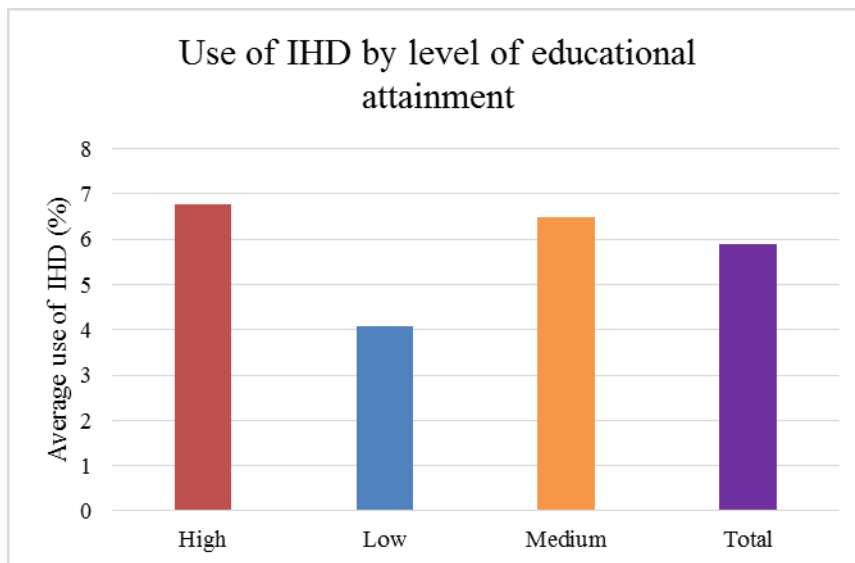
Figure 5.17: Average use of IHD by level of educational attainment (%)

The results of this calculation method seem to be somewhat opposite to the results of the previous method of calculation. The above results show that the 17 subjects used on average 5.88% of 59 tokens of IHD, with a standard deviation of 5.66%. The highly educated group used on average 6.68%, with a standard deviation of 8.78%, the group with a low level of educational attainment used 4.07%, with a standard deviation of 1.93%, while subjects with a medium level of educational attainment used on average 6.5%, with a standard deviation of 4.21%. Therefore, the groups with a high and medium level of educational attainment used more IHD than average, while the group with a low level of educational attainment used less than the average value. These results seem to suggest that the time spent in official education does not play an important role in increasing the use of UHA variants and reducing the use of HA variants. This is due to the fact that the results above show a parallel increase in the HA variant (IHD) according to increased levels of educational attainment.

In other words, the highly educated participants have the highest average use of the HA variant (IHD), while the low educated participants have the lowest use of this variant, with an average level of percentage use. The standard deviation percentages are in accordance with the average percentage use. This means that the research hypothesis related to the impact of the use of lexical borrowings and associated phonological processes is strengthened. The differences between these groups in the use of IHD are considered as statistically insignificant by the inferential statistical analysis in Table 5.39 below, as the *p*-values are always above the alpha value of 0.05.

Table 5.39: One-way ANOVA and Tukey's HSD test results for IHD by level of educational attainment

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Education	2	0.0529	0.998	0.327	**0.393**
Tukey's HSD		diff	lwr		upr	p adj
	Low-High	**-0.05766667**	-0.3156209		0.2002875	**0.8301921**

	Med-High	**0.08000000**	-0.1659497	0.3259497	**0.6784339**
	Med-Low	**-0.08466667**	-0.1202875	0.3956209	**0.3690136**

The statistical analysis results of the third consonantal variable, i.e. the lenition of labiodental /f/, are shown in Table 5.23 above and illustrated by Figure 5.18 below.
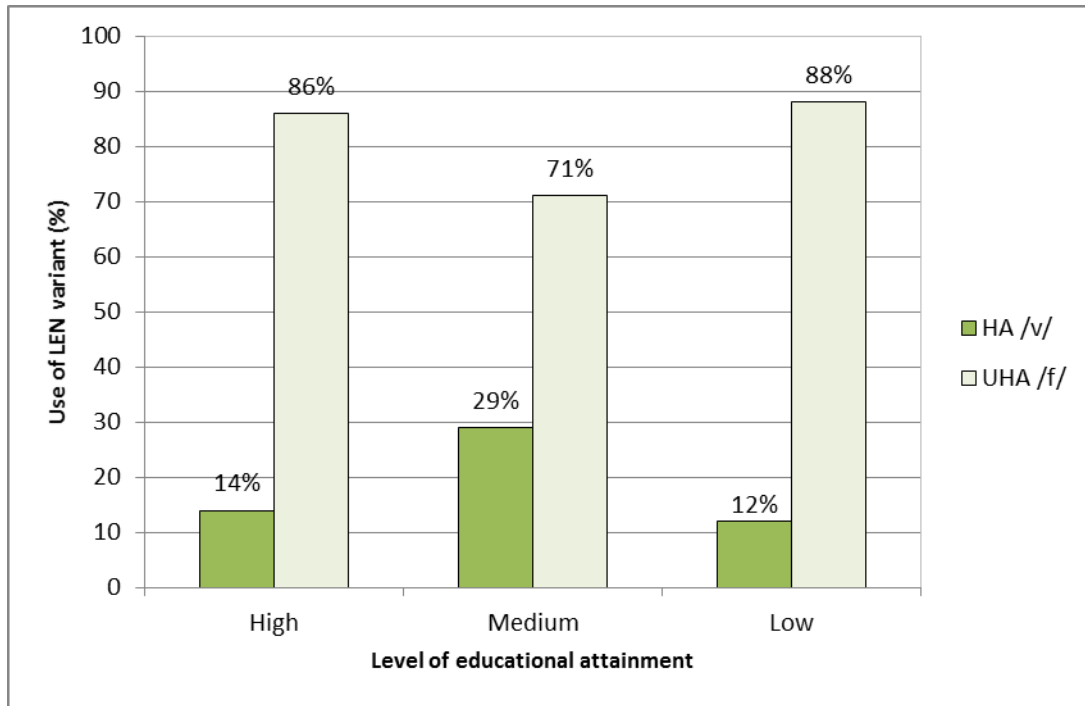
Figure 5.18: Use of LEN by level of educational attainment (%)

The lowest educational attainment group displayed the lowest percentage use of the HA variant /v/ (12% of borrowing cases; 6 borrowings out of 52), which is a similar finding to the other variables (/ʒ/ and IHD) and seems to be caused, not by education as a factor, but rather by age. To further investigate the impact of the interaction between education and age, a detailed analysis of the linguistic behaviour of the members in each group, reveals that the increase in the percentage use of the HA variant /v/, is paralleled by the increased number of 3rd G participants, and a parallel decrease in /v/ use is correlated with the increase of 2nd G participants. In other words, the lowest percentage /v/ use (12%) was produced by the low educational attainment group, as they include the lowest percentage of 3rd G participants (20%). Moreover, the highest percentage of /v/ use was 29% (17 borrowings out of 58), and

was produced by the medium level of educational attainment group as this group has the highest percentage of 3rd G participants, at 83%. Similarly, the high level of educational attainment group has an intermediate percentage of /v/ use at 14% (8 borrowings out of 58), as there is an intermediate percentage of 3rd G participants (34%). Table 5.40 below shows the interaction between the percentage use of the HA variant /v/ and the percentages of 3rd G participants:

Table 5.40: The interaction between educational attainment and age regarding the use of LEN

	LEN (v)	
	/v/ %	3rd G %
Low	12%	20%
High	14%	34%
Med	29%	83%

The average percentage use analysis shown in Table 5.41 and illustrated by Figure 5.19 below seem to support the above interpretation of the general use percentage analysis. This suggests that the highest average use of LEN should be accounted for by the Med education group as it includes the highest number of young age group members (3rd G). The Low education group should display the lowest average percentage use of this variable, as it includes the lowest number of 3rd G age group members.

Table 5.41: Average use of LEN by level of educational attainment

Age	Average use of LEN (%)	Standard deviation of LEN (%)
High	4.30	3.91
Low	3.87	4.21
Med	9.14	8.75
Total	5.88	6.27
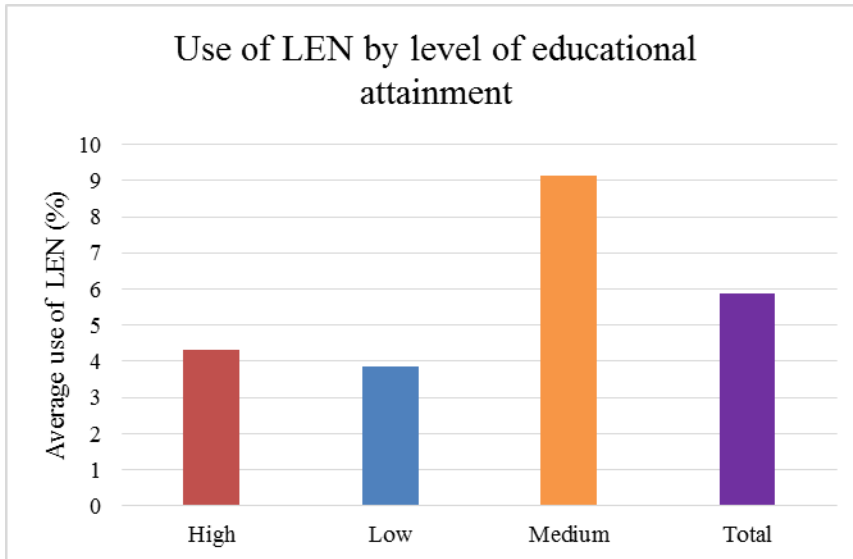
Figure 5.19: Average use of LEN by level of educational attainment (%)

The above results show that the 17 subjects used on average 5.88% of 31 cases of LEN, with a standard deviation of 6.27%. The highly educated group used on average 4.3%, with a standard deviation of 3.91%, the group with a low level of educational attainment used 3.87%, with a standard deviation of 4.21%, while subjects with a medium level of education used on average 9.14%, with a standard deviation of 8.75%. Therefore, the groups with a high and low level of educational attainment used less LEN than average, while the group with a medium level of educational attainment used much more than average. Therefore, the highest use of LEN is accounted for by the group with a medium level of educational attainment, followed by the highly educated group, while the group of participants with a low level of educational attainment have the lowest number of LEN realisations. Although there are differences between these three groups in the average use of LEN, ANOVA and the post-hoc Tukey's HSD tests (in Table 5.42 below) do not consider these differences as statistically significant.

Table 5.42: One-way ANOVA and Tukey's HSD test results for LEN by education

Test	Results

One-Way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Education	2	0.04943	0.02472	1.839	**0.195**
Tukey's HSD		diff	lwr	upr		p adj
	Low-High	**-0.006**	-0.18971281	0.1777128		**0.9959809**
	Med-High	**0.110**	-0.06516330	0.2851633		**0.2608068**
	Med-Low	**0.116**	0.06771281	0.2997128		**0.2573495**

The descriptive analyses (percentage) above demonstrate clearly that although the percentage use of the HA variant is relatively low, they also confirm that 3rd G participants are leading what has been described earlier as a 'gradual return' to Shanāqiṭa culture and linguistic elements.

5.6.3 Use of consonantal variables by ethnicity

Bassiouney (2009: 97) argues that "ethnicity is a crucial variable in a great number of places in the world at large, and in parts of the Arab world in particular. However, it is a variable that is crucial when present but not as crucial in places or communities that are not ethnically diverse, although these are now few and far between". In other words, for an Arab society such as the urban native Saudi society of the Hijaz region, although the native Hijazi society consists of different ethnicities, such as Arabs (e.g. Egyptians, Syrians, Sudanese, Ḥaḍārim),[257] Asians, and Africans, there are hardly any linguistic differences between these different ethnicities. Therefore, a sociolinguistic study of these indigenous inhabitants of Hijaz, is not expected to reveal important findings based on linguistic variation between these ethnicities. In contrast, a sociolinguistic study of variation in the immigrants' speech, such as the case of the SC in Medina (whose habitation in this Hijazi area is more recent compared to other native urban Hijazi society members), is more likely to reveal important issues related to this matter.

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[257] Plural of *Ḥaḍrami*; a person from *Ḥaḍramūt*.

This section will examine whether or not ethnic background plays a role in the linguistic variation between the ethnic groups in the study in terms of de-affrication, initial *hamza* dropping and lenition. Table 5.23 above shows the results of the data analysis concerning the general frequency percentage use of the three consonantal variables by the two ethnic groups. Generally speaking, the results above show that there is a connection between ethnic background and the use of HA variants, i.e. DAF, IHD, and LEN, although the connection varies between the phonological variables. From the total of 76 borrowing cases, the *Bīẓāni* ethnic community dropped the initial *hamza* 48 times (in 63% of borrowings), while in 37% of borrowings (28 borrowings) the initial *hamza* was retained, as it is in UHA. On the other hand, the *Ḥrāṭīn* ethnic community showed a lower tendency to keep its indigenous realisation of initial *hamza*, as from the total of 26 borrowing cases, 11 initial *hamza* dropping incidents were recognised, representing 42% of the occurrences of this variable, while their accommodation to the original UHA pronunciation in the borrowings, is higher than their preservation of the native HA pronunciation, accounting for 58% of borrowings (11 borrowing cases). A comparison of the percentage use of IHD according to ethnicity is illustrated in Figure 5.20 below.
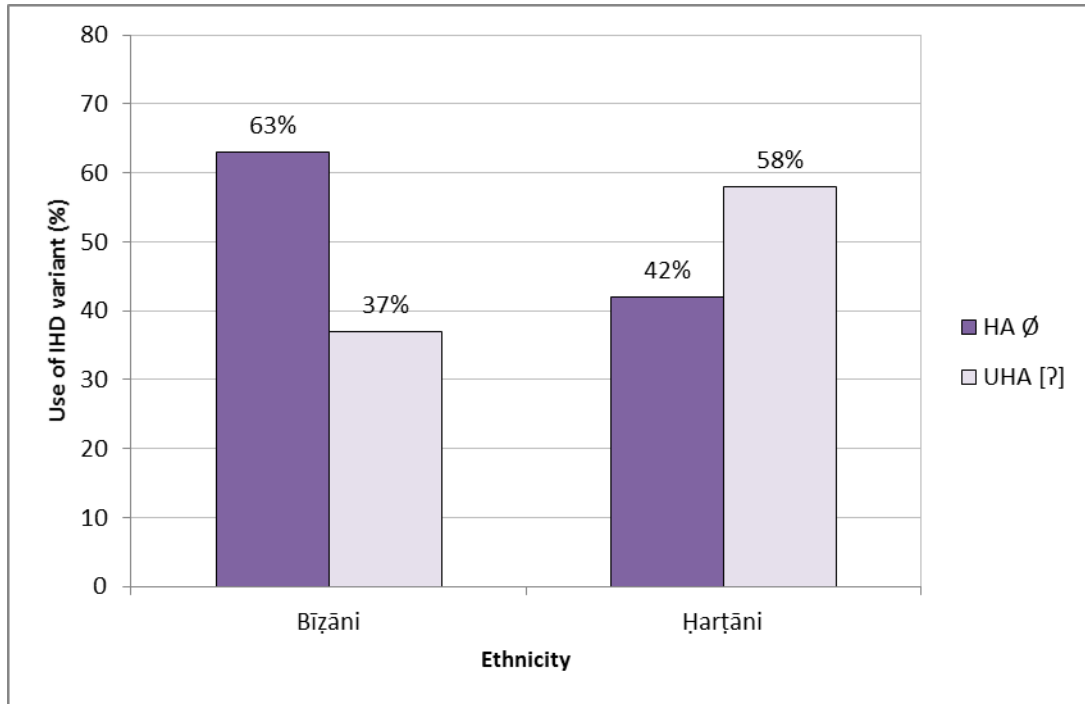
Figure 5.20: Use of IHD by ethnicity (%)

While initial *hamza* dropping occurred only 3 times in MHA_H's speech (*Ḥarṭāni*), it occurred 14 times in ABD_S's speech (*Bīẓāni*). Similar to MHA_H, the other *Ḥrāṭīn* ethnicity participants produced a low occurrence of this variant: KHAD (2), HART (2), and SAMB (4). Table 5.43 and Figure 5.21 below further examine the impact of ethnicity background on the use of IHD.

Table 5.43: Average use of IHD by ethnicity

Ethnicity	Average use of IHD (%)	Standard deviation of IHD (%)
Bīẓāni	6.26	6.43
Ḥarṭāni	4.66	1.62
Total	5.88	5.66
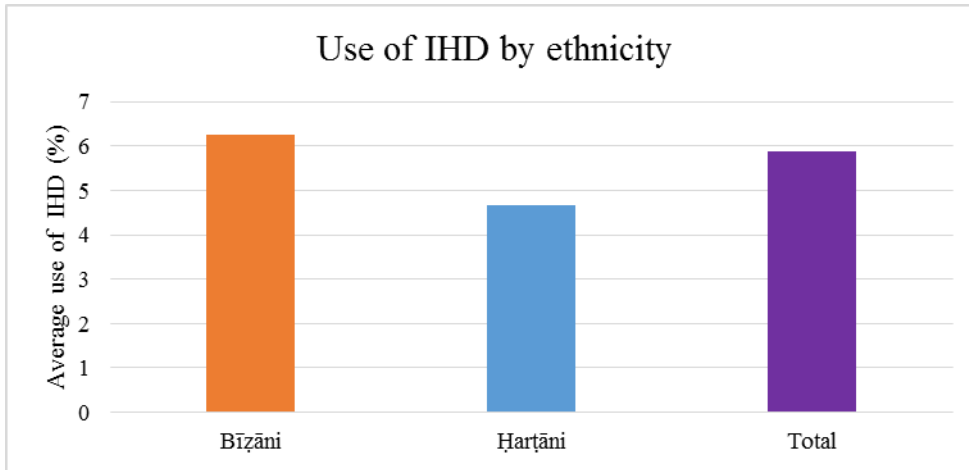
Figure 5.21: Average use of IHD by ethnicity (%)

According to the average percentage use of this phonological variable shown in the table and the graph above, the 17 subjects used on average 5.88% of 59 tokens of IHD, with a standard deviation of 5.66%. The *Bīẓāni* ethnic group used on average 6.26%, with a standard deviation of 6.43%, while the *Ḥarṭāni* ethnic group used on average 4.66%, with a standard deviation of 1.62%. Similar to the previous percentage analysis of the actual percentage use of the groups out of the total use of this variable, the *Ḥarṭāni* group used less IHD, on average. Although both methods of analysis above show a difference between the two ethnic groups in the use of IHD, the inferential statistics shown in Table 5.44 below do not consider these differences as statistically significant.

Table 5.44: One-way ANOVA and Tukey's HSD test results for IHD by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	$Ethnicity	1	0.0191	0.01911	0.708	**0.413**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni -Bīẓāni	**-0.07903846**	-0.2792038	0.1211269	**0.4132087**

It is worth noting that the results of both methods for the percentage analysis of the differences between the linguistic production of the ethnic groups strengthens the hypothesis related to the preservation of HA phonological elements among the two HA speakers' ethnic

groups, when borrowing from UHA is taking place. In other words, *Ḥrāṭīn* ethnic linguistic behaviour associated with the borrowing process tends to be more attached to UHA pronunciation than the other ethnic group (*Bīẓān*).

The de-affrication variable is shown in Table 5.23 above, as having a considerably low rate of occurrence. Similar to the following variable, it seems that the de-affrication of the voiced palato-alveolar affricate /dʒ/ is undergoing reduction in use among the HA speakers in Medina, as both ethnic groups show a significant rate of use of the UHA variant /dʒ/ compared with their indigenous HA usage of the /ʒ/ variant. Although there is no statistically significant difference between the ethnic groups in their use of the HA variant, dissimilar from the previous and the following variables, the *Ḥrāṭīn* ethnic community shows a higher use of the HA variant /ʒ/. From 45 borrowing cases, the HA variant was used in 8 borrowings (18%) by the *Ḥrāṭīn* ethnic group, while it was used in 17% of borrowings (12 borrowings out of the total of 69 borrowing cases) by the *Bīẓān* ethnic group. Figure 5.22 below illustrates the percentage use by both ethnicities.
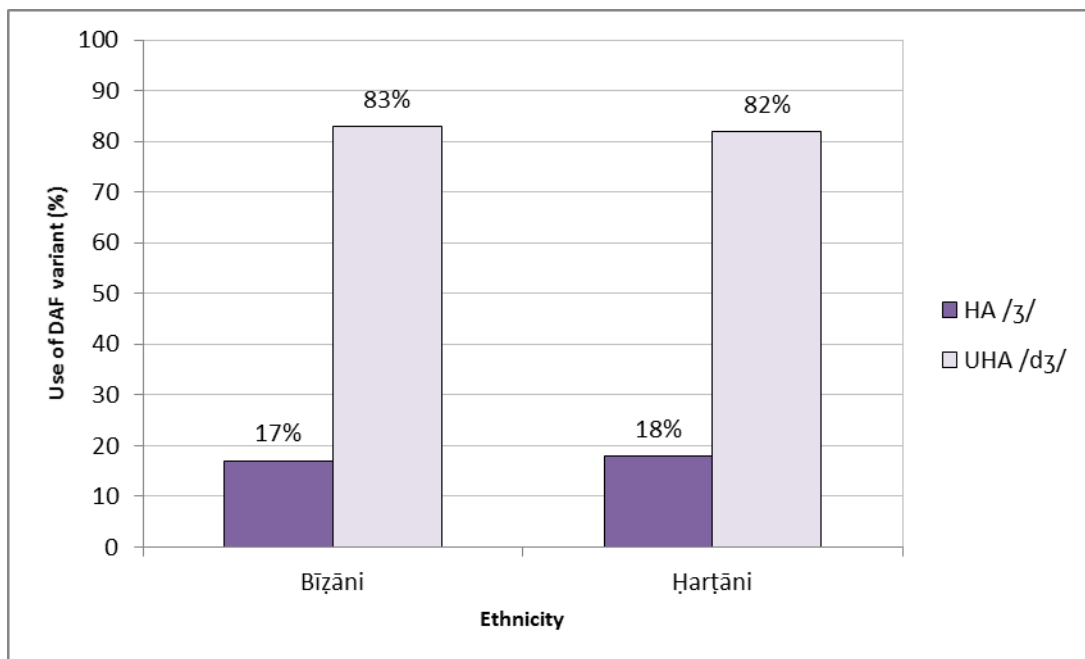
Figure 5.22: Use of DAF by ethnicity (%)

The results above seem to operate contrary to the research hypothesis concerning the linguistic variation between the ethnic groups as they appear to indicate that the *Ḥrāṭīn* ethnic community preserves the HA variant /ʒ/ more than the *Bīẓān* ethnic group, as the former produced a slightly higher percentage use of this variant in the data. However, it is far from certain to argue, based on the low rate of occurrence of this variable, that the *Ḥrāṭīn* ethnic group is more likely to preserve the HA variant than the *Bīẓān* ethnic community, as this argument contradicts all the previous and upcoming statistical analysis of the linguistic variables across ethnicity. More importantly, the percentage occurrences of the HA variant are very close to each other, i.e. 17% and 18%. However, the analysis of the average percentage use of this variable (shown in Table 5.45 and illustrated in Figure 5.23 below) confirms the above result, showing a clearer difference in the percentages between the two ethnic groups.

Table 5.45: Average use of DAF by ethnicity

Ethnicity	Average use of DAF (%)	Standard deviation of DAF (%)
Bīẓāni	4.62	3.8
Ḥarṭāni	10	4.08
Total	5.88	4.41
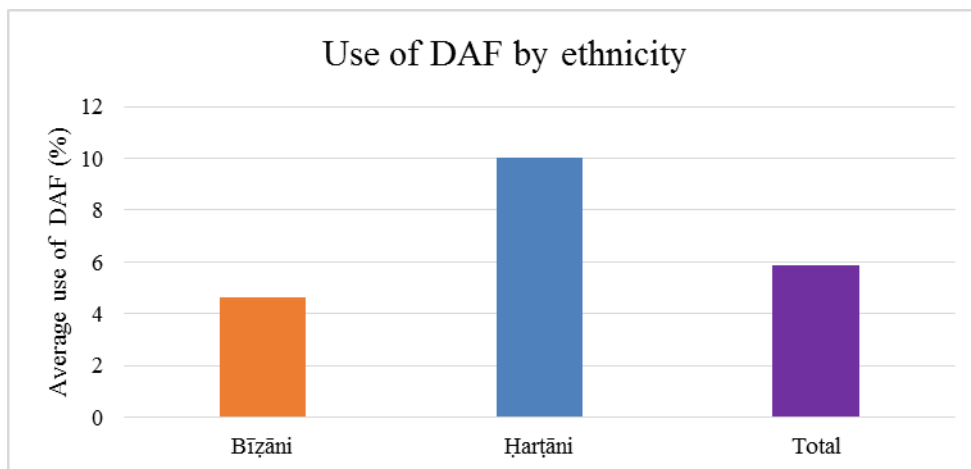
Figure 5.23: Average use of DAF by ethnicity (%)

The above average percentage analysis results show that the 17 subjects used on average 5.88% of 20 DAF cases, with a standard deviation of 4.41%. The *Bīẓāni* group used on average 4.62%, with a standard deviation of 3.8%, while the *Ḥarṭāni* group used on average 10%, with a standard deviation of 4.08%. As can be clearly identified, the *Ḥarṭāni* group used much more DAF, on average, which indicates a similar finding to the previous results on the general percentage use of this variable, with a clearer difference between the two ethnic groups. The standard deviation average percentages of the two ethnic groups suggest that the *Ḥarṭāni* group's use of DAF has more variation than that shown by the *Bīẓāni* ethnic group. However, in Table 5.46 below, which shows the statistical inferential analysis of the means, there is not a significant difference between the two ethnic groups in their use of this variable, as the *p*-values are greater than the alpha value of 0.05.

Table 5.46: One-way ANOVA and Tukey's HSD test results for DAF by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	0.00457	0.00457	0.294	**0.595**
Tukey's HSD		diff	lwr	upr		p adj
	Ḥarṭāni -Bīẓāni	**-0.03865385**	-0.1905385	0.1132309		**0.5954817**

The statistical analysis of the occurrence of the lenition of the voiceless labiodental /f/, realised as voiced /v/, is shown in Table ٥.٢٣ above. It clearly proves that the *Ḥrāṭīn* ethnic community's percentage use of the HA variant (accounting for 12% of borrowing cases; 6 borrowings out of 51) is considerably lower than the percentage use by the *Bīẓān* ethnic community of the same variant (accounting for 21% of borrowing cases; 25 borrowings out of 117) (see Figure 5.24 below).
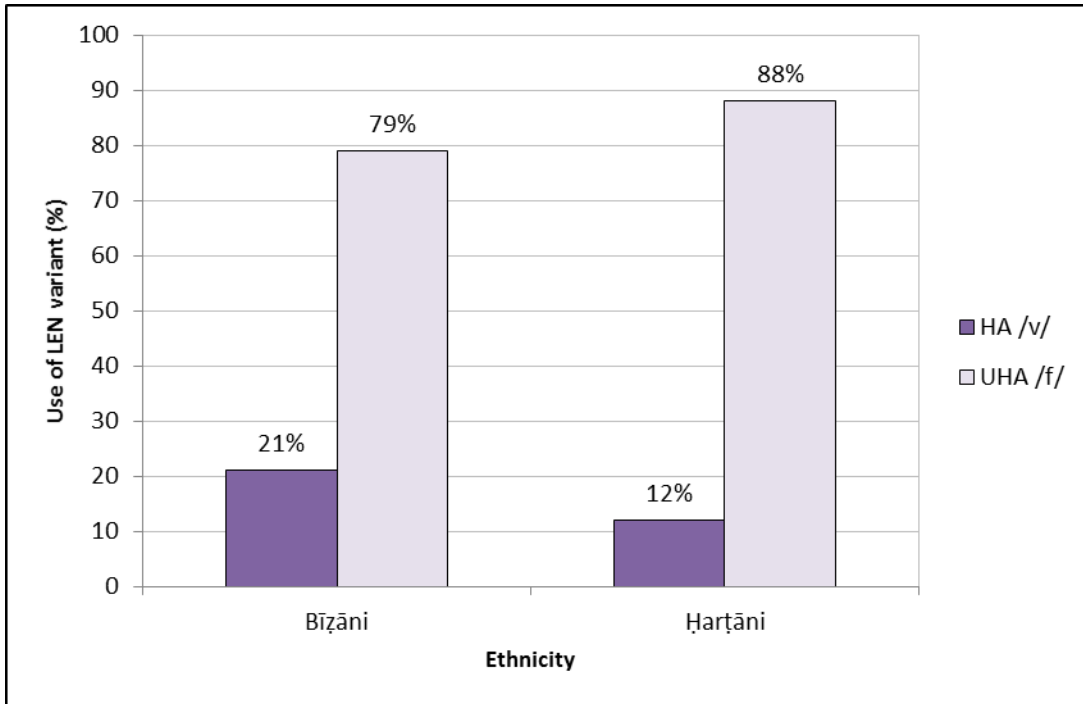
Figure 5.24: Use of LEN by ethnicity (%)

The other percentage analysis method (average percentage use) is used below for further investigation of the individual percentage uses averaged within the relevant ethnic groups. Table 5.47 and Figure 5.25 below show the results of this method. In general, they show similar results, i.e. the *Bīẓān* ethnic group tends to use more DAF than the black ethnic group (*Ḥrāṭīn*).

Table 5.47: Average use of LEN by ethnicity

Ethnicity	Average use of DAF (%)	Standard deviation of DAF (%)
Bīẓāni	6.20	6.90
Ḥarṭāni	4.84	4.16
Total	5.88	6.27
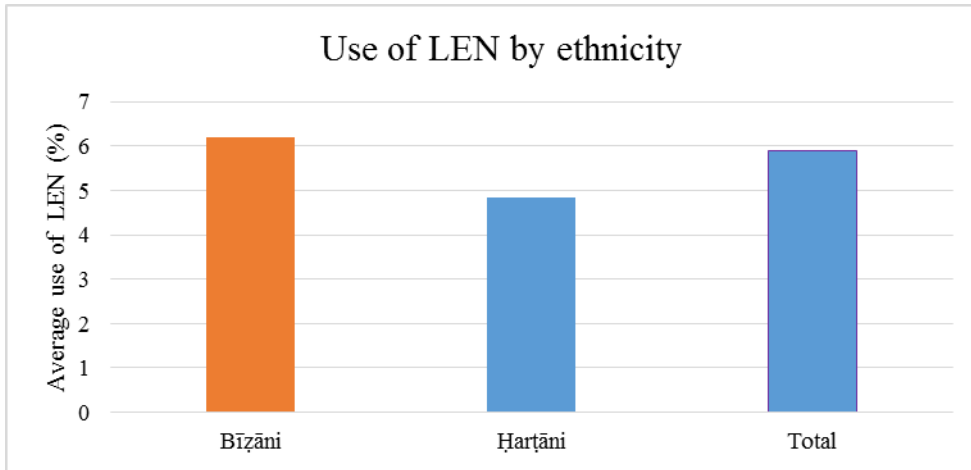
Figure 5.25: Average use of LEN by ethnicity (%)

The 17 subjects used on average 5.88% of 31 tokens of LEN, with a standard deviation of 6.27%. The *Bīẓāni* ethnic group used on average 6.2%, with a standard deviation of 6.9%, while the *Ḥarṭāni* ethnic group used on average 4.84%, with a standard deviation of 4.16%. Therefore, the *Ḥarṭāni* group used less LEN, on average. The One-way ANOVA and Tukey's HSD tests shown in Table 5.48 below do not recognise the difference between the two ethnic groups as being statistically significant.

Table 5.48: One-way ANOVA and Tukey's HSD test results for LEN by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	0.00457	0.00457	0.294	**0.595**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni -Bīẓāni	**-0.03865385**	-0.1905385	0.1132309	**0.5954817**

Moreover, the high frequency of use of the UHA variant /f/ by both ethnic groups (79% for the *Bīẓān* ethnic group and 88% for the *Ḥrāṭīn* ethnic group) indicates that the unusual realisation of labiodental /f/ as a voiced labiodental in Arabic, that is unique in HA, and at least in native Arabic words, is in decline among the HA speakers in Medina, due to its strangeness as a native Arabic item of pronunciation. This is in addition to other factors, such as the widespread broadcast by Arab media, which might play a role in this reduction.

Furthermore, such an unusual realisation is likely to be abandoned when its use occurs outside its native land. It is worth mentioning here, that the HA speakers, at least those from Mauritania, are not aware of the strangeness of their pronunciation of this sound when they use it among other Arabic speakers. Not only that, they do not even, generally, differentiate between standard pronunciation and their dialectal one, when reciting the Quran. For instance, a very famous Mauritanian Quran reciter, Muhammad Laqẓav, clearly pronounces the voiced labiodental /v/ in his recitations with few exceptions, which is in accordance with the HA pronunciation of this sound, as mentioned earlier.[258] It seems that this dialectal pronunciation is not stigmatised when reciting the Quran, as is the case with /ʒ/, a dialectal variant of /dʒ/.

5.6.4 Use of consonantal variables by gender

There are different approaches towards the association between gender and linguistic production, which might indicate that "it is only inside a culture that gender performance acquires meaning" (Sadiqi 2003: 313). Three different approaches are the most common in the literature (cf. Freed 2003: 701). Firstly, the 'dominance theory', discussed by Thorne & Henley (1975), suggests that the linguistic gender performance differences between men and women, are based on the fact that both genders are different in terms of power in their society. Another theory, the 'difference theory', was presented by Maltz & Borke (1982) and Tannen (1990, 1994). The core of this approach, is based on seeing that the differences between genders are significant, because men and women are two distinct groups. Their different speech styles are different in same-sex childhood peer groups. The third approach to linguistic gender performance is the 'community of practice theory'. The main argument of this approach, is that the speech community is distinguished according to 'allegiance' and

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[258] These recitations were carefully examined (using auditory analysis) via different clips published on YouTube. It is interesting to mention that I, myself, usually find it difficult to pronounce the voiceless labiodental when reciting the Quran and sometimes have to be careful to pronounce this sound as voiceless, like the standard pronunciation in Arabic, even though I represent the second generation of the SC, who were born and brought up in Medina.

'alliances' (Eckert & McConnell-Ginet 2013: 57; Sadiqi 2003: 12). Bassiouney (2009: 133) argues that this approach "can help explain the interaction between gender and other independent variables without resorting to differences among men and women".

Table 5.23 above shows the general percentage analysis results of the use of the three consonantal variables by the two gender groups. If we look closely at the differences between the genders in terms of the de-affrication process of the voiced palato-alveolar affricate /dʒ/, the data shown in Table 5.23 indicate that the percentage use by females of the HA variant /ʒ/, is slightly higher than that displayed by the male group of speakers. It shows that among the total of 17 borrowings, female speakers used the HA variant in 4 borrowings, accounting for 24% of the tokens. Meanwhile the male participants' percentage use of this variable (16%) was lower than that of the female participants, with this variant being used by the male group in only 16 borrowings out of the total of 97.

The use of the UHA variant /dʒ/ was significantly higher than that of the HA variant /ʒ/, which is in harmony with the previous statement, that the preservation of this pronunciation is in decline among the HA speakers in Medina. The data is presented in Figure 5.26 below.
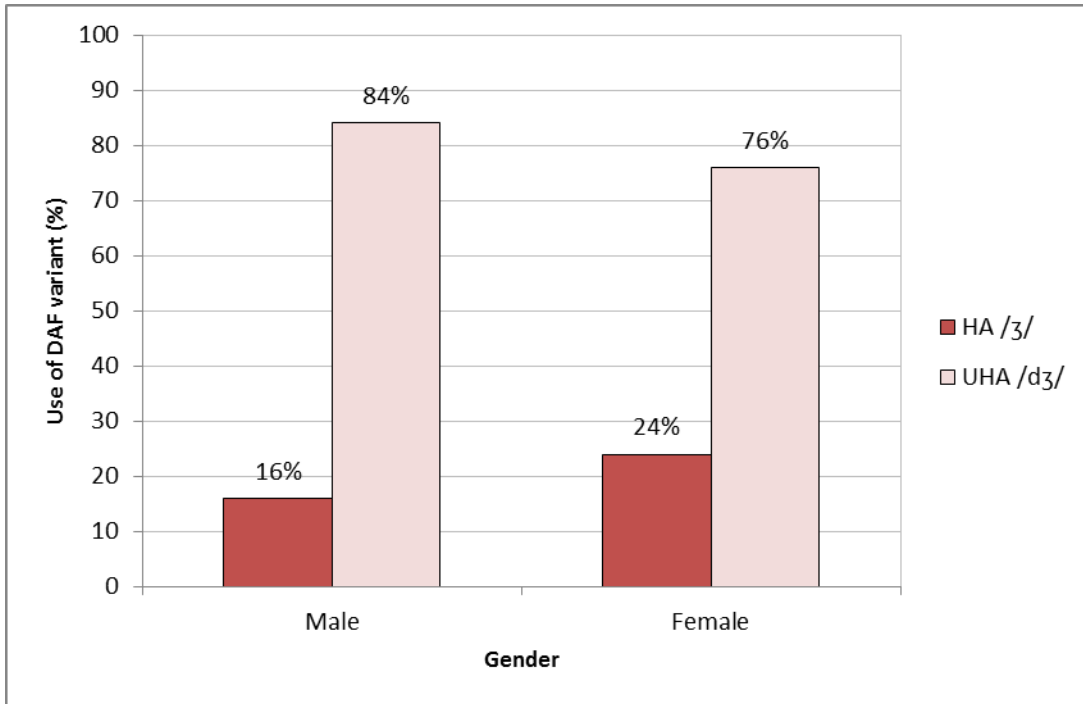
Figure 5.26: Use of DAF by gender (%)

If we look at the average percentage analysis of the use of this variable by the two genders displayed in Table 5.49 and illustrated by Figure 5.27 below, it clearly reveals a similar finding. In other words, female participants tend to use more of the HA variant (DAF) than the male group.

Table 5.49: Average use of DAF by gender

Gender	Average use of DAF (%)	Standard deviation of DAF (%)
Male	5.71	4.75
Female	6.67	2.89
Total	5.88	4.41

Figure 5.27: Average use of DAF by gender (%)

The above results show that the 17 subjects used on average 5.88% of 20 tokens of DAF, with a standard deviation of 4.41%. Females used on average 6.67%, with a standard deviation of 2.89%, while males used on average 5.71%, with a standard deviation of 4.75%. This means that females used more than the average value of DAF. Therefore, the results of both methods of the percentage use statistical analysis shown above do not support the research hypothesis regarding the linguistic variation resulting from gender affiliation. Table 5.17 above shows examples of the use of the HA variant /ʒ/ among the research participants. Moreover, the statistical analysis of variation between gender groups shown in Table 5.50 below reveals that statistically there are no significant differences between men and women in the use of this variable, when borrowing from UHA is taking place. The *p*-values for this test are greater than 0.05, i.e. *p*=0.746 for the ANOVA test, and the case is the same for the Tukey's HSD test.

Table 5.50: One-way ANOVA and Tukey's HSD test results for LB by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	2.24	2.241	0.109	**0.746**
Tukey's HSD		diff	lwr	upr	p adj
	Male-female	**-0.952381**	-7.112318	5.207556	**0.7463036**

As for the other variables (i.e. initial *hamza* dropping and lenition), the data shown in Table 5.23 reveal that there are similarities between the results in two aspects. The first similarity in the results is that the percentage use of HA variants (i.e. IHD and /v/) is higher in the male participant group than in the female one (see Figures 5.28 and 5.29 below).
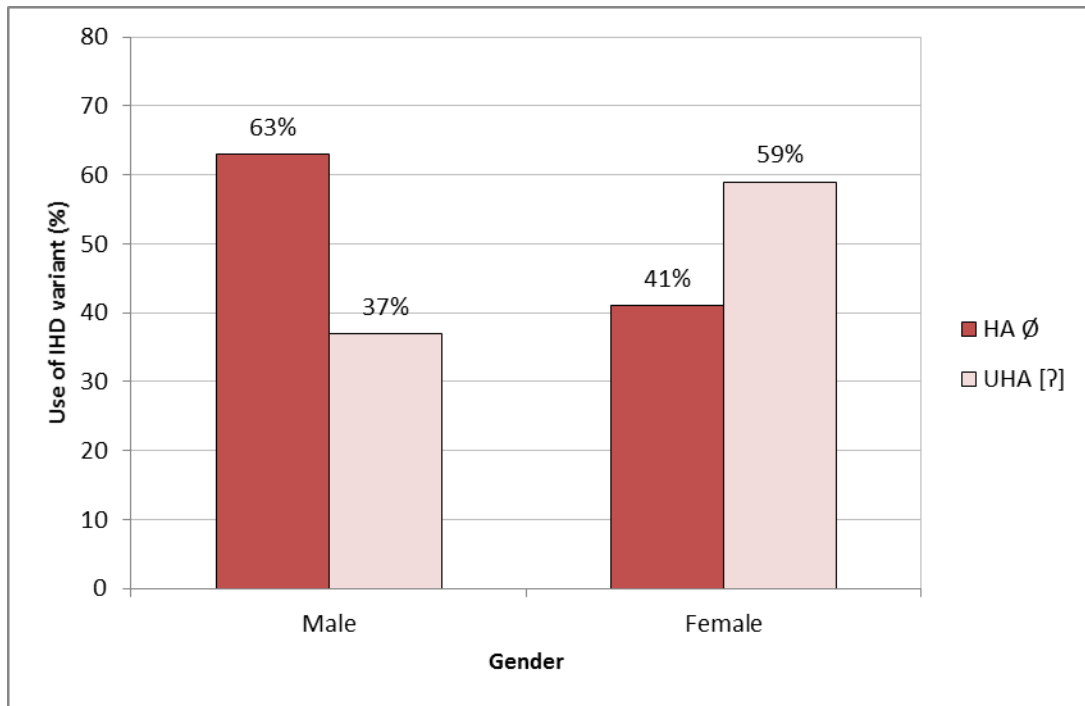
Figure 5.28: Use of IHD by gender (%)
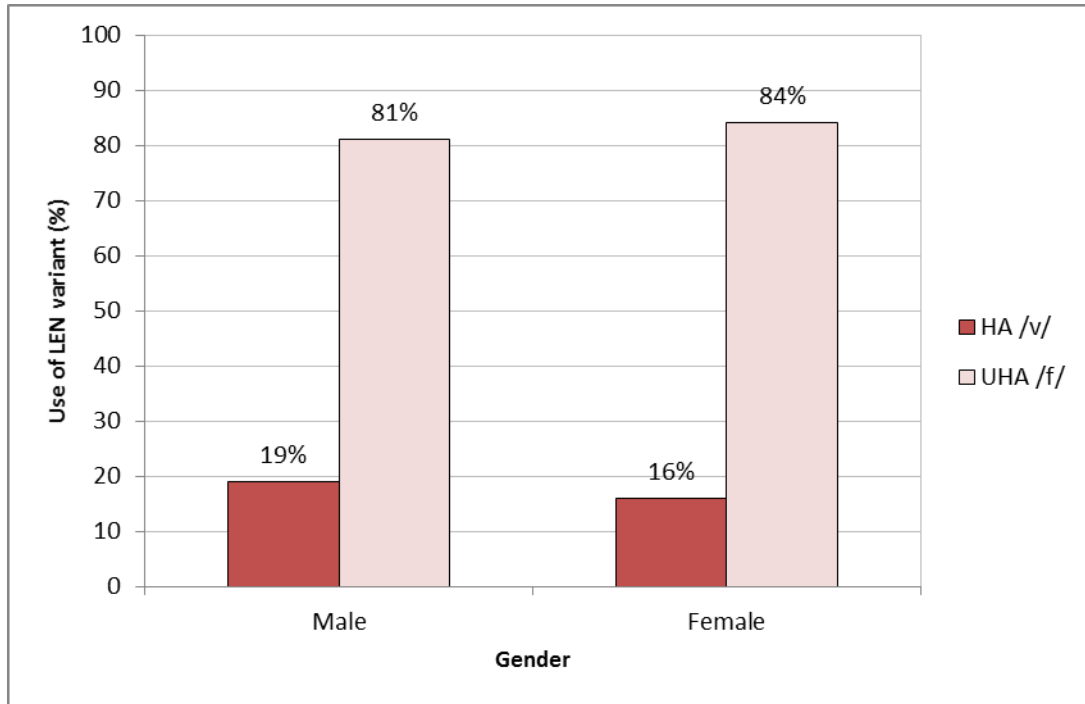
Figure 5.29: Use of LEN by gender (%)

In terms of the HA variants, males produced 63% of borrowings (i.e. 50 borrowings out of 80) and 19% of borrowings (i.e. 27 borrowings out of 173) with the HA variants IHD and /v/, respectively. On the other hand, the percentage use of these HA variants, was lower among female participants, as the percentage use of these variants by the female group was 41% (9 borrowings out of the total of 22) and 16% (4 borrowings out of the total of 25), respectively. The following two tables and figures show the average percentage use of these two variables by the two gender groups. In general, they show similar results in terms of which group tend to use more IHD and LEN when borrowing from UHA.

Table 5.51: Average use of IHD by gender

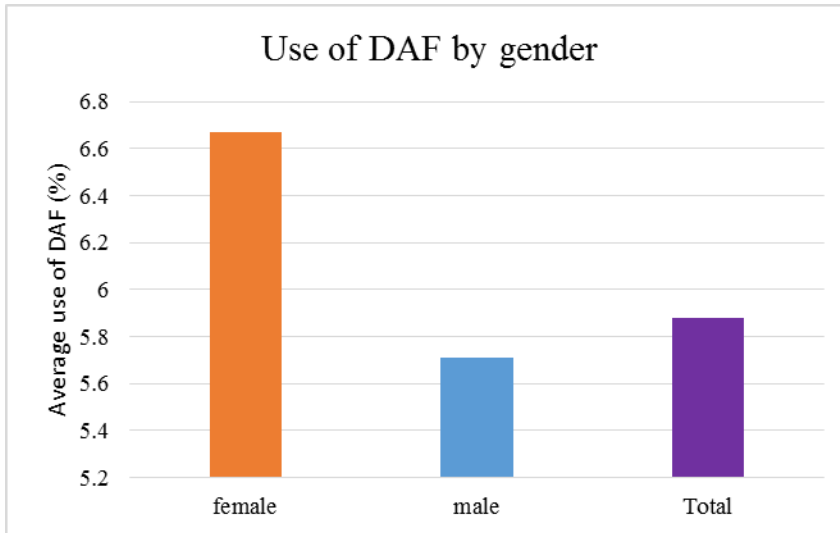| Gender	Average use of IHD (%)	Standard deviation of IHD (%)
Male	6.05	6.16
Female	5.08	2.93
Total	5.88	5.66
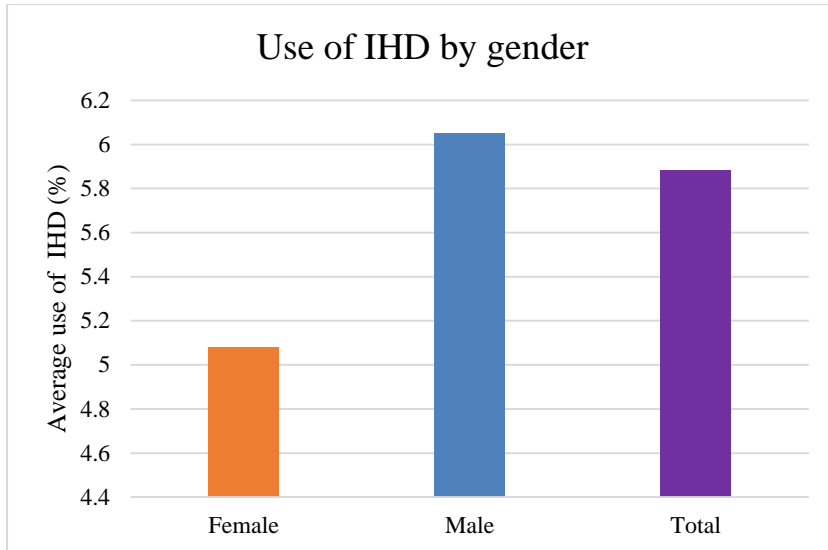
Figure 5.30: Average use of IHD by gender (%)

The above table and figure show that the 17 subjects used on average 5.88% of 59 tokens of IHD, with a standard deviation of 5.66%. Females used on average 5.08%, with a standard deviation of 2.93%, while males used on average 6.05%, with a standard deviation of 6.16%. Therefore, females used more than the average value of IHD.

Table 5.52: Average use of LEN by by gender

Gender	Average use of LEN (%)	Standard deviation of LEN (%)
Male	6.22	6.75
Female	4.3	3.72
Total	5.88	6.27
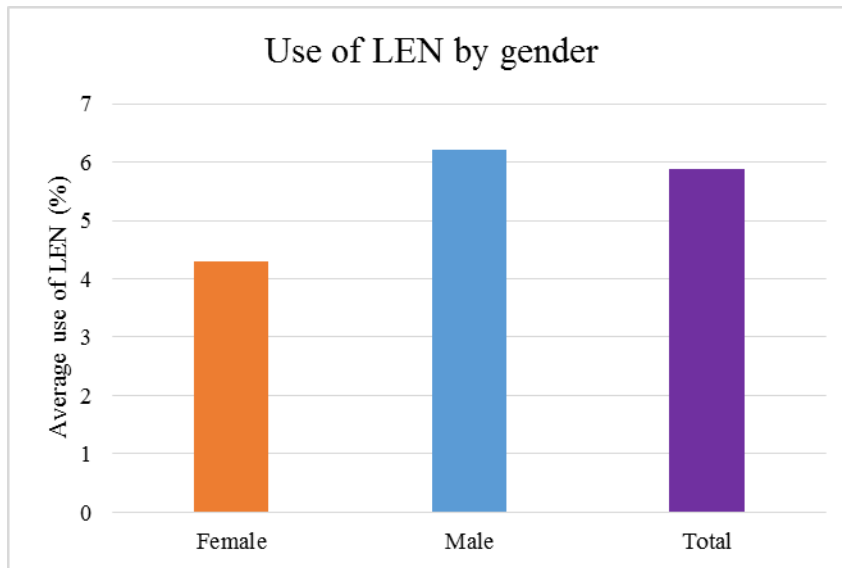
Figure 5.31: Average use of LEN by gender (%)

The above results in Table 5.52 and Figure 5.31 can be interpreted as showing that the 17 subjects used on average 5.88% of 31 tokens of LEN, with a standard deviation of 6.27%. Females used on average 4.3%, with a standard deviation of 3.72%, while males used on average 6.22%, with a standard deviation of 6.75%. Therefore, females used less than the average value of LEN.

The second similarity between these two variables is that there are no statistically significant differences between genders in the use of these variables when the borrowing process from UHA takes place. The *p*-values are greater than 0.05 in both variables for both the ANOVA and the post-hoc Tukey's HSD tests. Tables 5.53 and 5.54 below show the inferential statistical analysis of the use of IHD and LEN by the two gender groups.

Table 5.53: One-way ANOVA and Tukey's HSD test results for IHD by gender

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Gender	1	0.0067	0.006717	0.242	**0.63**
Tukey's HSD		diff	lwr	upr	p adj
	Male-Female	**0.05214286**	-0.1739651	2.392079	**0.6301631**

Table 5.54: One-way ANOVA and Tukey's HSD tests results for LEN by gender

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Gender	1	0.00696	0.006965	0.453	**0.511**
Tukey's HSD		diff	lwr	upr		p adj
	Male-Female	**0.05309524**	-0.1150357	0.2212262		**0.5111184**

It can be argued though, that, in general, the results of two of the three consonantal variables, i.e. LEN and IHD, strengthen the hypothesis concerning the linguistic variation between males and females in the SC in Medina. In other words, female participants have a greater tendency to use UHA variants of these two variables than male participants, due to their desire to present an image of refined style in their speech. However, the statistical analysis shows a higher female use of the HA variant DAF, which does not support this hypothesis (unlike the statistical analysis of the other two variables).

More discussion in the next chapter will examine the correlation between gender and the use of vocalic variables, which will help to draw an overall picture about this correlation. In addition, the relatively low percentage use of the HA variant /v/ (LEN) and /ʒ/ (DAF) works in favour of what has been previously stated, i.e. that the use of this HA variant is in decline among the HA speakers in Medina. Moreover, the relatively high percentage use of the IHD variant among both gender groups (even with various degrees of occurrence) indicates that HA speakers still do not prefer to adopt the use of initial *hamza*. Tables 5.34 and 5.37 above show examples of the use of the HA variants IHD and LEN, respectively.

5.7 Conclusion

We have seen from the discussion above that the consonantal variables, i.e. DAF, IHD and LEN, have received little attention in modern Arabic studies, especially in variationist sociolinguistics. Moreover, the analysis of the borrowings has revealed, that the most frequent word types used by the Shanāqiṭa immigrants in Medina, in the inter-dialectal

borrowing process were content words, e.g. nouns, verbs and adverbs. This is similar to the findings commonly found in the context of inter-lingual borrowing.

The statistical analysis of the correlation between the social variables (i.e. age, education, ethnicity, and gender) and the linguistic variables, has shown that the age factor plays a central role in the phonological variation between participants, when borrowing from UHA, followed by the ethnicity factor. It has been shown, that in all aspects of the analysis, the younger generation of immigrants has shown a greater tendency to preserve HA linguistic elements, whether in the number of borrowings used, as they used a smaller number of borrowings compared to the older age group, or in the phonological processes associated with the borrowing. In this latter case, they have shown a greater frequency of use of the HA variants when borrowing from UHA. This unexpected linguistic behaviour by the young generation of participants, has been ascribed to extra-linguistic motivations, i.e. socio-psychological.

Similarly, there are statistical differences between the two ethnic groups in terms of the number of borrowings used, and the phonological processes that occurred when borrowing from UHA took place. In this regard, the *Ḥarṭāni* ethnic group generally demonstrated a greater inclination to abandon HA variants, when borrowing from UHA, and therefore, they used more UHA borrowings and variants, than do the other ethnic group. This has also been attributed to extra-linguistic motivations facilitating such behaviour.

It has been indicated that these three variables are different in terms of frequency of occurrence. According to the analysis of the HA variant in the IHD data, this form of pronunciation seems to be well preserved by the immigrant community, when borrowing from UHA, especially by the *Bīẓāni* ethnic community, who form the majority population of the SC in Medina. On the other hand, the frequencies of the HA variants in the DAF and LEN

data are relatively small, which might gradually lead to the decline of these HA pronunciations among the immigrant community in Medina.

Finally, what has been described as a gradual return to the Shanāqiṭa cultural practices and language use, led by the young generation of the immigrants could cause more social isolation for this immigrant society, if no social changes occur to stop what is believed to be socio-psychologically motivated resistance to practices from outside the culture.

Chapter Six

Vocalic Variables

6.1 Introduction

This chapter has a similar structure to the previous one, consisting of two main sections. In the first section, the linguistic variables will be phonologically described, and in the other section these variables will be statistically analysed and correlated with social variables, i.e. age, level of educational attainment, ethnicity and gender. The phonological variables under investigation in this chapter are: re-syllabification (RS), diphthongisation (DIP), and vowel centralisation (VC). It is important to give a phonological account of these variables before starting on the statistical analysis and discussion, because these variables (especially RS and VC) are not commonly studied as phonological variables, under the umbrella of variationist sociolinguistics, in general, and in Arabic studies, in particular.

It is worth mentioning, that it is more difficult and complex to investigate the variation and change of vocalic variables, than consonantal variables, as the latter are more recognisable in one's speech. For example, it is not an easy task to decide whether or not the speaker has changed the pronunciation of the front high vowel /i/, so that it becomes centralised as schwa /ə/. This means that the researcher had to play back the recording many times, in order to recognise this phonological behaviour. Moreover, this task becomes even harder when analysing the speech of participants, who are speaking rapidly.

6.2 Re-syllabification variable

Continuous syllabification or, more specifically, re-syllabification, is a process of reanalysis that modifies the syllable boundary locations (cf. Crystal 2008: 467). It may include many sound

changes, in which sound deletion (syncope), sound addition (epenthesis) and changing the order of phonemes (metathesis) occurs. Re-syllabification, as a sociolinguistic variable, seems not to have occurred as frequently as other sound changes, due to its lower frequency in speech. William Labov has been a prominent figure in investigating re-syllabification; he studied "the possibility that resyllabification will account for the sonority hierarchy in the constraint of a following segment on /-t, d/ deletion" in English (Labov 1997:145). However, Labov provides numerous pieces of evidence, which contrast with the process of re-syllabification. He postulates, that re-syllabification could apply to the case where a single consonant that is situated between two vowels. He argues, that using this to explain the deletion of /t/ and /d/ in final consonant clusters, involves an attempt at expanding the discussion in a direction that no prior studies had ever identified one of his findings was that "the process of resyllabification is an important part of the English phonology being examined, but that its frequency is much too low to serve as an explanation for the effects of following segments on (t, d) deletion" (ibid: 169).

In Arabic dialects, like other languages and varieties, a number of phonological rules, including vowel syncope, epenthesis and metathesis, that may have an impact on a present syllable's structure through, for example, leaving various parts (such as consonants) as unsyllabified, i.e. outside of any present language templates. For instance, in UHA spoken in Medina (cf. Jarrah 1993: 86) there is an apparent tendency to re-syllabify three consonants, which is achieved through the developing of a language, centred on ensuring no segment remains unsyllabified. In this section, there will be an overview provided of the syllabically-defined rules surrounding syncope, epenthesis and metathesis, in an effort to highlight the way in which re-syllabification functions in Arabic dialects and, specifically, in HA, which has an impact when HA speakers borrow UHA words.

In modern spoken Arabic, there are different phonological processes related to the mechanism of re-syllabification. It is well known in the study of Arabic dialects, that there have been a number of developments, particularly in the case of north-east Arabian dialects. These are known to suffer from the so-called 'gahawa syndrome', which is re-syllabification, occurring in regard to gutturals, and which is defined as characterised by the presence of an 'a' in a [CC] sequence, where the first [C] is a guttural consonant, such as in the case of 'coffee', i.e. /gahwa/ → /gahawa/ (Owens 2003: 725). For example, in the case of the Najdi dialect, there is an imperfect form of the verb /ħafar/ 'to dig', notably /j-hafir/, which has developed and changed from */ja-hfir/ > */jahafir/. Moreover, 'gahawa syndrome' is also identified in a number of other areas, where Bedouin dialects, for example, were induced as a result of migration, such as in the case of Egyptian dialects south of Aṣyūṭ, for example (Versteegh 1997: 149).

6.2.1 Re-syllabification in HA

According to Taine-Cheikh (1988b), the changes in verbal bases in conjugation, and changes in verbal and nominal patterns, which are caused by the presence of a pronoun suffix or clitic, do sometimes appear as a phenomenon of metathesis, and as a phenomenon of the syncope of short vowels. She proposes a detailed examination of the Arabic dialect of Mauritania, and the alternations that affect the verbal bases following three categories: number, gender and person. This accurately defines the syllabic structure of Ḥassāniyya, and the rules of the re-syllabification. In fact, this procedure will pose the problem of the existence of a structure that distributes the prosodic weak and strong syllables. Therefore, the changes in verbal and nominal bases, explained below, will appear as deeply linked to the falling of short vowels, in a weak syllable; this is a rule of syncope, whose explanatory capacity has been recognised in other Arabic dialects, as has been mentioned above.

The re-syllabification processes in HA, which includes the three phenomena of metathesis, syncope and epenthesis, will be limited to trilateral and quadrilateral roots of verbs and non-verbal words, including nouns, adjectives and participles, in order to simplify the identification of patterns.

6.2.1.1 The processing of verbal forms

More details about the verb in HA, have been given, previously, in Chapter Two. The focus in this section will be limited to the re-syllabification processes associated with the use of verbs in deferent tenses. It is worth mentioning, that the 'nude' form of the verb, which occurs in the 3rd person masculine singular of the perfect form, is adopted here, as it, usually, has no derivative affix. The trilateral and quadrilateral forms are exemplified in Tables 6.1 and 6.2, respectively (cf. Cohen 1963; Taine-Cheikh 1988a; 2007a)

6.2.1.1.1 Trilateral forms

Table 6.1: Examples of RS in HA trilateral verbal forms

Examples: /ktəb/ 'to write', /gbaðˤ/ 'to take', /rˤgasˤ/ 'to dance'			
Person/number	**Perfect**	**Imperfect**	**Imperative**
1st pers. sing.	ktəb-t; gbað-ˤt; rˤgas-ˤt	nə-ktəb; na-gbaðˤ; n-ərˤgəsˤ	
2nd pers. sing. masc.	ktəb-t; gbað-ˤt; rˤgas-ˤt	tə-ktəb; ta-gbaðˤ; tə-rˤgəsˤ	(ə)ktəb; (a)gbaðˤ; (ə)rˤgəsˤ
2nd pers. sing. fem.	ktəbt-i; gbaðˤt-i; rˤgast-i	ta-k(ə)tbi; ta-g(ə)bðˤi; ta-rˤ(ə)gsˤi[259]	kətb-i; ag(ə)bðˤ-i; rˤəgsˤ-i; əktb-i; gəbðˤ-i; ərˤgsˤ-i
3rd pers. sing. masc.	ktəb; gbaðˤ; rˤgasˤ	jə-ktəb; ja-gbaðˤ; jə-rˤgəsˤ	
3rd pers. sing. fem.	kətbə-t; gabðˤə-t; rˤagasˤə-t	tə-ktəb; ta-gbaðˤ; tə-rˤgəsˤ	
1st pers. pl.	ktəb-na; gbaðˤ-na; rˤgasˤ-na[260]	na-k(ə)tbu; nag(ə)bðˤ-u; na-rˤ(ə)gsˤ-u	

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[259] The epenthetic schwa is less common than forms without it.

[260] In HA spoken in Mauritania, the suffix pronoun in these examples is /-ne/ instead of /-na/, (cf. Taine-Cheikh 1988a; 2007a; Cohen 1963); however, the vowel /e/ is almost absent from the data gathered on the HA spoken by the SC in Medina. The absence of this vowel is believed to be as a result of UHA influence. Therefore, /a/ is usually the substitute of /e/ where applicable.

| 2nd pers. pl. | ktəbt-u; gbaðˤt-u; rˤgasˤ-tu | ta-k(ə)tb-u; ta-g(ə)bðˤ-u; ta-rˤ(ə)gsˤ-u | kətb-u; agəbðˤ-u; rˤəgsˤ-u[261]; əktb-u; gəbðˤ-u; ərˤgsˤ-u |
| 3rd pers. pl. | kətb-u; gabðˤ-u; rˤagasˤ-u | ja-k(ə)tb-u; ja-g(ə)bðˤ-u; ja-rˤ(ə)gsˤ-u | |

If we consider the first verbal tense, the perfect tense, we recognise important points, regarding the process that occurs when the verbs are affixed. The 3rd person masculine singular in the perfect tense (the 'nude' form) of the examples given in Table 6.1 above, i.e. /ktəb/, /gbaðˤ/ and /rˤgasˤ/ can be syllabically formed as [CCVC]. This form is alternated with the 3rd person feminine singular, and the 3rd person plural, to become [CVCC]. It can be argued that the verb /ktəb/ [CCVC] in its 'nude' form, is changed to /kətb-/ [CVCC] in the 3rd person feminine singular and 3rd person plural. We can illustrate the scenario that is expected to have occurred in the two forms, as follows: /ktəb+ət/ [CCVC+VC] in the 3rd person feminine singular, and /ktəb+u/ [CCVC+V] in the 3rd person plural. Therefore, the final form would be /kətbət(u)/ [CVCCV(C)]. Thus, this phonological process (metathesis) can be formulated as follows (Taine-Cheikh 1988b: 215ff):

$$[C\ C\ V\ C + V(C)] \rightarrow \quad C\ V\ C\ C\ V(C)$$
$$\ \ 1\ 2\ 3\ 4\quad 5\qquad\quad 1\ 3\ 2\ 4\ 5$$

The verb /ktəbət/, before metathesis, consists of two syllables: [CCV] and [CVC]. After metathesis takes place, i.e. /kətbət/, it consists of these two syllables: [CVC] and [CVC]. It can be argued, that metathesis occurs, in order to avoid the formation of an open syllable [CCV] for a double consonant, as the initial open syllable does not conform to the syllabic structure of HA, especially in the case of the multi-consonant onsets.

If we consider the forms of the *imperfect*, we find that they are divided, fundamentally, into two groups: firstly, forms without a suffix (these are singular except the 2nd person

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[261] The verbal imperative form for the 2nd person plural is similar to the same form for the singular feminine one. Therefore, the following forms are attested with less frequency: /əktbu/, /gəbðˤu/, and /ərˤgsˤu/.

feminine form), and secondly, forms with the suffix /-i/ or /-u/. In the latter case, the presence

of a suffix in an initial vowel, which leads to the disappearance of the thematic vowel.

Moreover, the process of re-syllabification, prevents the formation of an open non-final

syllable. Consider the following example:

tagbaðˤ + i > * tagbaðˤi [CVC.CV.CV] > tagbðˤi [CVCC.CV]

This syncope process could be formulated, according to Taine-Cheikh (ibid) as:

V → Ø/ [CVCC-CV]

In other words, a phenomenon of syncope of the short vowel, is produced when it is in an

open non-final syllable, preceded by a [CVC] syllable. However, the deletion of the thematic

vowel, causes the formation of a double syllable coda [CVCC]. Considering the examples of

plural forms in Table 6.1, it is evident that the vowel positioned between R1 and R2, e.g. /jag-

g(ə)bðˤu/ [CVC(ə)CCV] is an epenthetic vowel (epenthetic schwa) which, according to

Cohen (1963: 90), is not always respected in the spoken discourse of HA spoken in

Mauritania.

The insertion scenario of the epenthetic vowel (schwa), can be seen in the example

below:

/jagbðˤu/ [CVCC.CV] → /jag(ə)bðˤu/ [CV.CVC.CV] .

The imperative forms of the examples shown above, seem to be more complicated than the

other two forms. It seems necessary to separate the verbs according to their thematic vowel,

so as to describe the forms of the imperative. In contrast to /agbaðˤ (gbaðˤ)/, /əktəb (ktəb)/ can

only be understood if we assume in both cases a [V_1CCV_2C] scheme, where [V_1] and [V_2] are

identical, and merge with prefixed and thematic vowels of the *imperfect*. It suffices to say

that the prefixed vowel remains, generally, in the case of /a/, and is almost always deleted in

the case of /ə/. Other changes to the verbal base seem explainable by the rules of metathesis, syncope and epenthesis.

However, a problem arises here, in terms of explaining the feminine and the plural imperative forms of /gəbðˤi/ and /gəbðˤu/ (sing. fem. and pl. of /gbaðˤ/), respectively. The vowel that appears between R1 and R2 is not, as in the case of /rəgsˤi/ or /kətbi/ (sing. fem. of /rgəsˤ/ and /ktəb/), identical to the thematic vowel. According to Taine-Cheikh (1988a), the first explanation, which comes to mind, is to consider that /ə/ develops from an epenthetic vowel, after the deletion of prefixed /a/. Therefore, the two identical patterns [CəCCi] of /gəbðˤi/ and /rəgsˤi/ or /kətbi/ are explained in two different ways; epenthesis in one case, and metathesis in the other.

6.2.1.1.2 Quadrilateral forms

The quadrilateral verbal forms, are relatively less common than the trilateral ones in HA. The following are some examples (in Table 6.2) which illustrate the process of the phonological phenomenon considered in this section (cf. Cohen 1963; Taine-Cheikh 1988a) .

Table 6.2: Examples of RS in HA quadrilateral verbal forms

Examples: /garˤmasˤ/ 'to pinch', /dagdag/ 'to break or damage', /ʃakrav/ 'to bind (someone)'			
Person/number	**Perfect**	**Imperfect**	**Imperative**
2ⁿᵈ pers. sing. masc.	garˤmasˤ-t; dagdag-t; ʃakraf-t	t-garˤmasˤ; d-dagdag;[262] t-ʃakraf	garˤmasˤ; dagdag; ʃakraf
2ⁿᵈ pers. sing. fem.	garˤmasˤt-i; dagdagt-i; ʃakraft-i	t-garˤmsˤ-i; d-dagdg-i; t-ʃak(ə)rv-i	garˤmsˤ-i; dagdg-i; ʃak(ə)rv-i
3ʳᵈ pers. sing. masc.	garˤmasˤ; dagdag; ʃakraf	i-garˤmasˤ; i-dagdag; i-ʃakraf	
3ʳᵈ pers. sing. fem.	garˤmsˤə-t; dagdgə-t; ʃak(ə)rvə-t	t-garˤmasˤ; d-dagdag; t-ʃakraf	
1ˢᵗ pers. pl.	garˤmasˤ-na; dagdag-na; ʃakrav-na	n-garˤmsˤ-u; ndagdg-u; n-ʃak(ə)rv-u	

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[262] Assimilation has occurred in the 2ⁿᵈ person and 3ʳᵈ person sing. in the imperfect form of the verb, for example, fem. forms of this verb, e.g. /t-dagdgu/ is pronounced as /d-dagdg-u/ 'she damages it', etc.

In general, all quadrilaterals, e.g. /garˤmasˤ/ and /ʃakraf/ (including cases where R3 = R4 as in /dagdag/), are phonologically the same in the three verbal forms, i.e. perfect, imperfect and imperative. The 'nude' verbal form is similar to the classical form of فَعْلَل (faʿlal); therefore, the verbal base identifies the pattern [R1aR2R3aR4], since the vowels are always phonologically /a/.

Changes in the verbal base, occur with the same grammatical endings which preceded them. That is to say; changes occur in the third person feminine and the third person plural, for the *perfect*, and in the second person feminine and all persons plural, for the *imperfect* and the *imperative*.

6.2.1.2 Non-verbal forms and grammatical suffixes

As has been explained, previously, in Chapter One, the masculine form is unmarked in HA, while the /a/ suffix is assigned for feminisation. Moreover, words suffixed by the suffix pronouns, e.g. /-i/, /-u/, /-ak/, and /-ək/ require phonological change in some non-verbal forms. In this section, the alternations of non-verbal bases will be discussed, e.g. nouns, adjectives, participles, when they are suffixed by the feminine marker of /-a/, and the suffix pronouns. These alternations involve the rules of metathesis, syncope and, in some cases, epenthesis. In order to explain this alternation, to be as a result of /a/ suffixation, the abstract form, that is, the masculine form, will be adopted as the base of the alternated word (cf. Taine-Cheikh 1988a).

6.2.1.2.1 Alternations with the feminine suffix /-a/

In HA, there are a large number of nouns with the pattern of [CVCCa], which is a feminine form (see Table 6.3 below). In a number of cases, some nouns are derived from others by adding the suffix /-a/; Table 6.3 illustrates some examples with their semantic relationship with other nouns (cf. Taine-Cheikh 1988a):

Table 6.3: Examples of nouns with the feminine suffix /-a/ [CVCCa] pattern

Example	Semantic relationship	Gloss
/bagrˤa/ ~ /bgarˤ/	singulative to collective	cow, cows
/gamlˤa/ ~ /gmalˤ/	singulative to collective	louse, lice
/kalba/ ~ /kalb/	feminine to masculine	bitch, dog
/tˤarˤħa/ ~ /tˤrˤaħ/	singulative to collective	chain, chains
/tˤəvla/ ~ /tˤfəl/	feminine to masculine	girl, boy
/zaɣba/[263] ~ /zɣab/	singulative to collective	hair, hairs

It is, however, necessary to note that the addition of the suffix /-a/ produces, in most cases, a metathesis in the nominal base. This is not surprising, since the metathesis is necessary, again, to avoid the creation of an open syllable [CCV]. For instance, it could be argued that the process of deriving the feminine form of /bagrˤa/, is processed according to this scenario:

bgarˤ+a > * bgarˤa [CCV. CV] > bagrˤa [CVC.CV]

Therefore, the metathesis process of the previous examples could be formulated as:

tˤfəl +a → tˤəvla

[CCVC + V] →[CVCCV]

In patterns in which the last syllable is [CVC], such as [CVVCVC], [CVCVCCVC], [CVCCVCCVC] and [CCVCCVC], the addition of the previous suffix leads to the deletion of the short vowel. This is the rule of syncope (optionally followed by the rule of epenthesis in some cases), which applies, as might be expected, so as to avoid the sequence of two open syllables. This phonological process is illustrated below in Table 6.4:

Table 6.4: Phonological process of [CVVCVC], [CVCVCCVC], [CVCCVCCVC] and [CCVCCVC] patterns with the feminine suffix /-a/

Example	Process	Gloss
/kaːməl/ (masc.) ~ /kaːmla/ (fem.)	syncope	whole, all
/muʔarˤrˤaf/ (masc.) ~ /muʔarˤrˤva/ (fem.)	syncope	defined, introduced
/mətbaʔrˤasˤ/ (masc.) ~ /mətbaʔ(ə)rˤsˤa/ (fem.)	syncope + optional epenthesis	unstable

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[263] /ɣ/ is often realised as /q/ in some Mauritanian areas, as mentioned in Chapter Two.

/muʃakraf/ (masc.) ~ /muʃak(ə)rva/ (fem.)	syncope + optional epenthesis	tied
/mgarˤmasˤ/ (masc.) ~ /mgarˤmsˤa/ (fem.)	syncope	pinching

The pattern of [mvR1R2R3a] [CVCCC+V] is attested in a number of feminine nouns, such as /mal(ə)ħfa/ 'female dress', /maðˤ(ə)ħka/ 'incisor', and /maʒ(ə)bna/ 'stomach'. These examples are presumably derived from the pattern $mv\text{R}_1\text{R}_2v\text{R}_3$ [CVCCVC]: /malħaf/, /maðˤħak/, and /maʒban/, respectively. The syncope of the vowel /a/ occurs, and then the optional schwa /ə/ is added. It is obvious that the syncope of the short /a/, after adding the grammatical suffix /a/, is triggered, by needing to avoid the sequence of two open syllables, which does not harmonise with the HA syllable system.

6.2.1.2.2 Alternations with the suffix pronoun

As was noted in Chapter One, all these suffix pronouns may be presented in the form of initial-consonant + vowel, initial-vowel + consonant and only vowel (cf. examples above). The second and the third types can be grouped together, to form one group, as the changes that occur when they are attached to the word are almost the same (cf. Taine-Cheikh 1988a).

If the pronoun is initially a vowel, (like the examples above), the alternation of the word is mainly dependent on the type of the syllable preceding the suffix pronoun. Table 6.5 illustrates the phonological processes of non-verbal words suffixed with suffix pronouns.

Table 6.5: Phonological processes of non-verbal words with suffix pronouns /-ak/, /-u/, /-i/

Example	Process	Gloss	Syllable pattern
/ʕərs/ ~ /ʕərs-ak/	no change	wedding, your (masc.) wedding	[CVCC]
/dabbuːs/ ~ /dabbuːs-u/	no change	wood stick, his wood stick	[CVVC] (final)
/marvag/ ~ /marˤ(ə)vg-u/	syncope[264]	elbow, his elbow	[CVCCVC]
/sˤaːħəb/ ~ /sˤaːħb-i/	syncope	friend, my friend	[CVVCVC]
/tˤfəl/ ~ /tˤəfl-u/	metathesis	child, his child	[CCVC] (monosyllabic)

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[264] When adding a suffix pronoun to a word with the syllable pattern of [CVCCVC], optional epenthesis is also produced by some HA speakers, so the above word would be pronounced /marˤəvg-u/.

It can be clearly seen, from the examples above, that the re-syllabification of words, when suffixed by suffix pronouns, depends on whether or not the addition of the pronoun will affect the syllabic system. In the first examples, no re-syllabification (no change) occurs, as the addition of the suffix pronoun does not contradict the HA syllable system. After adding the suffix pronouns to the first two examples /ʕərs/ and /dabbuːs/, they become /ʕərs-ak/ and /dabbuːs-u/, with the syllabification of the two words producing [CVC.CVC] and [CVC.CVV.CV], respectively, which are adapted in HA syllables, individually and sequentially. On the other hand, the addition of the suffix pronoun produces an inacceptable syllabic sequence in the following examples. In particular, the sequence of two open syllables in /marvag/ ~ */marvag+u/ [CVC.CV.CV], /sˤaːħəb/ ~ */sˤaːħəb+i/ [CVV.CV.CV] and /tˤfəl/ ~ */tˤfəl+u/ [CCV. CV] is not permissible in HA. Therefore, re-syllabification with syncope and metathesis is obligatory to avoid such a sequence.

It is worth mentioning, that when adding the first type of suffix pronoun, i.e. initial-consonant + vowel, it does not require any change in the preceding word. Consider Table 6.6, which shows that no change occurs to the above examples when they are suffixed by this type of pronoun. This can be attributed to the fact that all of these pronouns are independent syllables and, therefore, the word does not need to be re-syllabified.

Table 6.6: Phonological process of non-verbal words with suffix pronouns /-ha /, /-na /, /-hum/

Example	Process	Gloss	Syllable pattern
/ʕərs/ ~ /ʕərs-ha/	no change	wedding, her wedding	[CVCC.CV]
/dabbuːs/ ~ /dabbuːs-na/	no change	wood stick, our wood stick	[CVC.CVVC.CV]
/marvag/ ~ /marvag-ha/	no change	elbow, her elbow	[CVC.CVC.CV]
/sˤaːħəb/ ~ /sˤaːħəb-hum/	no change	friend, their friend	[CVV.CVC.CVC]
/tˤfəl/ ~ /tˤfəl-hum/	no change	child, their child	[CCVC.CVC]

6.3 Diphthongisation variable: [eː], [oː] → /aj/, /aw/

According to Crystal (2008: 146), this term diphthongisation is defined as a process where a monophthong has been diphthongised, through historical or dialect change. A wide range of vowel sounds, to differing degrees, in some languages/varieties, show evidence of this process. Using English and its varieties as an example, it is apparent that diphthongisation occurs more frequently in Southern British varieties of English than in others. An example from American English is that most speakers pronounce the word *say* as [sej], using a diphthong rather than a single vowel (Yule 2006: 39).

The first investigation of the diphthongs /aj/ and /aw/, as sociolinguistic variables, was by William Labov in his study of Martha's Vineyard speakers (cf. Labov 1972b: 21ff). His findings concluded that use of the centralised realisation of the second elements of the diphthongs, characterised the speech of the Vineyard speakers, which was considered as a movement away from the standard New England realisations. Moreover, the most frequent users of such centralised diphthongs, were young men wanting to be regarded as Vineyarders, not accepting mainland values, and disliking the interference of rich summer visitors in the traditional island way of life. This change was not towards Standard English, nor was it initiated by older speakers, but by young ones (cf. Bassiouney 2006: 91). In terms of Arabic studies, Jabeur (1987) and Trabelsi (1988) investigated the use of diphthongs and monophthongs related to gender, in Tunisia. Al-Shehri (1993) also did the same in Saudi Arabia, investigating factors such as age, education, and length of stay in the urban area.

In UHA, the historical change of /aj/ and /aw/, in /beːt/ < */bajt/ 'house', /moːt/ < */mawt/ 'death' produced the mid-vowels /eː/ and /oː/. The old diphthongs continue to exist in the realisation of morphological patterns: /ajsar/ 'easier' [aCCaC], /mawwat/ 'to cause to die' [CvC.C.vC] (Abu-Mansour 2008: 180). The preservation of the old diphthongs, is

restricted to some borrowed words from MSA, such as /ʔajsar/ and when /w/ and /j/ are geminated, e.g. /mawwat/, /mawwaːl/ 'song characteristic of popular tradition', /bajjaːʕ/ 'seller', /bajjadˤ/ 'he turned it white'. It can be argued that the main characteristic of UHA is monophthongisation, and therefore, diphthongs are generally avoided.

Al-Shehri (1993: 129) concludes his account of the phonological situation of the Arabic diphthongs, by stating that the monophthongal sounds /eː/ and /oː/, rather than being regarded as separate phonemes, are only considered as allophonic representations of the Arabic diphthongs. Thus, the variation in diphthong use, is not at all maintained at the expense of a phonemic contrast between separate phonemes. The monophthongal pronunciation of the present variable, is not only a characteristic of the non-indigenous speech of the urban community of Hijaz, but represents a dialectal feature in common usage among large numbers of Saudi Arabian dialect speakers.

In Maghrebi dialects, there are certain nomadic vernaculars in the region that also demonstrate the reduction of the diphthongs /aj/ and /aw/ to /eː/ and /oː/ (Pereira 2007). In the southwestern region of Libya, i.e. Fezzan (largely desert), according to Marcais (1977: 17, cited in Pereira 2007:85), free variation is said to exist between the diphthongs and complete reduction to /eː/ and /oː/; the former is often used by female speakers. Moreover, according to Owens (1983), Abumdas (1985: 41) and Panetta (1943: 17, cited in Pereira 2007:85), in Benghazi and Tripoli, following this model, the diphthongs /aw/ and /aj/ are reduced to /oː/ and /eː/, respectively. Yoda (2005: 92), in a study of the Arabic dialect spoken by Jews in Tripoli, claims that in this Arabic variety this reduction to /eː/ and /oː/ does not occur; the historic diphthongs /aw/ and /aj/ are reduced to /u/ and /i/, respectively. For instance, the classical /ħawʃ/ 'house' and /bajdˤaːʔ/ 'white (fem.)' are realised as /ħuʃ/, and /bidˤa/, respectively. Jabeur (1987: 13) summarises the situation of the Arabic diphthongs in the Arabic spoken in Tunisia by stating that the diphthongs /aj/ and /aw/ are preserved in the

Arabic variety of Nabeul but by contrast have transformed into /eː/ and /oː/ in the Djemmal variety and into /iː/ and /uː/ in the Tunis variety. Similarly, the diphthongs /aj/ and /aw/ have changed into the monophthongs /iː/ and /uː/ in Moroccan dialects (Kaye 1970).

Cantineau (1960: 102-105, cited in Jabeur 1987: 11) claims that this monophthongisation of the diphthongs represents "the situation in all North African dialects from Tunis to the Atlantic coast of Morocco". This generalisation seems problematic, as it misinterprets the situation of the pronunciation of the Arabic diphthongs over a very wide Arabic-speaking area, located on the Atlantic coast, mainly HA, spoken in Mauritania and Western Sahara. It has been mentioned in Chapter One, that HA spoken in Mauritania, generally preserves diphthongs, which results in two frequent diphthongs: /ej/ and /ow/ (the realisations of the Classical diphthongs /aj/ and /aw/, respectively, and in four infrequent ones: /aj/, /aw/, /ij/, and /uw/. Moreover, the first two diphthongs (or their traditional origins /aj/ and /aw/) may be monophthongised, to be pronounced as /eː/ and /oː/, respectively. The current situation of the diphthongs in HA, can be summarised in few points.

Firstly, according to the data elicited from the SC in Medina, and through personal observation of Mauritanian residents in Medina, HA can be said to exhibit only two frequent diphthongs: /ej/ and /ow/. These two diphthongs have developed from the traditional diphthongs /aj/ and /aw/, respectively. This analysis is based on careful auditory analysis of the data, and is also supported by the general observation of Heath (2004: x) on HA spoken in Mauritania, at least around Nouakchott. For instance, the classical /bajt/ 'house', /ʃajb/ 'white hair' and /ʃawk/ 'thorns' are pronounced as: /bejt/, /ʃejb/ and /ʃowk/, respectively. Moreover, it seems that the traditional pronunciation of the Arabic diphthongs (/aj/, /aw/) is uncommon, and only limited to what was indicated by Cohen (1963: 53), that the traditional forms of Arabic diphthongs are preserved in HA, when the semi-vowel is geminated. He gives two

examples of this incidence: /bawwa:ha/ 'people who go to recognise the herd', /gajjal/ 'he took a nap'.

It can be argued, based on the research data, that although HA speakers generally avoid the gemination of the semi-vowels /j/ and /w/ in their native words, in addition to the degemination of borrowed words from UHA, and the preservation of the Classical Arabic diphthongs, i.e. /aj/ and /aw/. If this happens, it should be kept as a marginal pronunciation, limited to a few words with a geminated semi-vowel, and when with the diphthongs are uttered initially. The latter case is supported by this thesis' data, as the only use of the Classical diphthong /aj/ in the data was in one word, the interrogative pronoun /aj-/ 'which?', see also section 2.2.2.1 above. Interestingly, similar case has been, previously, reported as an exceptional case in urban Hijazi Arabic (see section 2.3.1.2). The occurrence of the diphthongs /ij/ and /uw/ can be described as very rare, and limited to the case when the semi-vowel is geminated. These two diphthongs are, mainly, found in some personal pronounces and adverbs, such as /hijja/ 'she', /huwwa/ 'he' for personal pronounces, (see Table 2.5 in Chapter Two), and /hu:na:tijja/ 'here', /ðˤarˤka:tijja/ 'now' for adverbs (see section 2.2.2.2 above).

It worth mentioning, that the gemination of these pronouns and adverbs seem to be, to some extent, dependent on the speakers' way of pronunciation or, probably, in the area where HA is spoken. In the above given examples, the degemination is attested, in addition to the fact the personal pronouns /hu:wa/ and /heja/ seem to be more frequently used than the pronouns /huwwa/ and /hijja/. Similarly, the adverbs /hu:na:tijja/ and /ðˤarˤka:tijja/ seem to be very limited in use, as compared to /hu:n/ and /ðˤarˤk/, respectively. In short, the gemination of semi-vowel in diphthongs, is less common than the degemination, and, when it occurs, it allow the infrequent diphthongs, i.e. /aj/, /aw/, /ij/, and /uw/ to be pronounced.

Secondly, similar to other Arabic dialects, the long vowels /e:/ and /o:/ are attested in HA realisations of the Arabic diphthongs. For instance, the classical /ɣajra ʔanna/ 'but' and /fawqa/ 'above' are pronounced /ja ɣe:r/ and (ə)l-vo:g/, respectively. There is not enough evidence regarding the HA spoken by the SC in Medina (originally Mauritanian immigrants) to prove the regularity of the phonetic monophthongisation of the diphthongs, which is similar to what has been claimed by Heath (ibid) regarding the HA spoken in Mali. He argues that these realisations of the diphthongs are found before a backing-lowering consonant. For instance the classical /ʃajx/ 'chief' and the preposition /ʃawr/ 'towards' are pronounced /ʃe:x/ and /ʃo:wr/, respectively. The pronunciation of the example /ʃe:x/ as is given above, by Heath, depends on the meaning in the HA spoken in Mauritania. If the word means 'the chief' the diphthong is monophthongised. However, if it denotes 'the religious scholar' the diphthong is preserved. Therefore, it can be argued that the main characteristic of HA is diphthong preservation, while the general trend in UHA is the phonetic monophthongisation of the diphthongs

6.4 Vowel centralisation variable: (i), (u) → [ə]

The selection of the phonetic process vowel centralisation, was based on the clear difference between the vowel systems in HA and UHA, as has been shown in Chapter Two. In other words, the vowel centralisation process is intended to describe the centralisation of the high back rounded, and high front unrounded, vowels /u/ and the /i/ to be realised as schwa /ə/: the mid-central vowel. This variation between schwa and the other two vowels, evidently, occurs when HA speakers in Medina borrow some UHA words, as is explained in detail below. Before proceeding with a thorough explanation of the variation in the data, it is necessary to, briefly, clarify the variation between schwa and other vowels in Arabic dialects, including HA, as schwa is not an authentic Arabic vowel.

Some modern-day Arabic dialects, such as most North Mesopotamian, Mauritanian dialects, and many Bedouin dialects of the Maghreb, and in the non-Bedouin dialects of the Maghreb, including Casablanca, Tangiers, and the Jewish dialect of Tunis (Heath 1987: 27–8), /i/ and /u/ can be reduced to schwa, with very little distinction between them, or none at all. As a result of this blending, the dialects have a two short vowel system: open /a/ opposed to semi-closed /ə/ (Fischer & Jastrow 1980: 54; Singer 1980: 250, cited in Watson 2007: 21f). Moreover, Versteegh (1997: 166) claims that, with the exception of Eastern sedentary dialects, all Maghrebi dialects demonstrate a very simple two short vowel, /ə/ (< /a/ and /i/) and /u/, and long vowel, /aː/, /iː/, /uː/ system. In the Cherchell dialect this has progressed even further, with only one remaining short vowel, i.e. /ə/.

The variation taking place between schwa and other vowels in Arabic dialects, is mainly between schwa and the short vowels /a/, /i/, and /u/. However, variation between schwa and the long vowel /aː/ is also attested in some Gulf Arabic dialects, such as in Emirati Arabic. Schwa, according to Al Ameri (2009: 166), is apparently an allophone, not an underlying phoneme. No words with schwa, in the underlying form, before the application of a rule could be found. Therefore, it is possible to assert that /ə/ appears on the surface only. The following examples of words, as stated by Al Ameri (ibid: 228), illustrate the alternation between /aː/ and /ə/. The long vowel /aː/ appears before a zero suffix, and before vowel-initial suffixes, while the short vowel /ə/ appears before consonant-initial suffixes, possibly suggesting that there is something significant about the consonant that becomes attached to the end of the stem:

ʃaːf-t >   ʃəf-t 'I saw'

ʃaːf-t >   ʃəf-t 'you (m. sing.) saw'

ʃaːf-tiː >   ʃəf-ti 'you (fem. sing.) saw'

ʃaːf-tuː >   ʃəft-u 'you (pl.) saw'

ʃaːf-naː >   ʃəf-na 'we saw'

If we look at the phonetic realisation of vowels in HA, important issues arise, which are worth mentioning. As was explained in Chapter Two, HA has four short vowels, which can form a triangular system consisting of three degrees of aperture: the closed vowels /i/ and /u/, the middle vowel /ə/, the open vowel /a/, and three classes of localisation: high /i/ and /u/, low /a/ and central /ə/.[265] Cohen (1963: 75) drew a comparison between all HA sounds, based on the data collected from Mauritania (Al-Gebla area), and came up with the following frequency and percentage data, for the occurrence of the short vowels in his data. The following table illustrates his findings and shows that the frequency of /a/ and /ə/ is notably higher than the other short vowels.

Table 6.7: The frequency of HA vowels studied by David Cohen (Cohen 1963)

Short vowel	Frequency	%
a	1263	29.11
ə	1026	23.65
u	146	3.36
i	152	3.50

Generally speaking, it can be argued that the inherited three short vowels /a/, /u/, and /i/ are reduced to two short vowels /a/ and schwa /ə/, in the HA spoken in Mauritania (at least in Nouakchott). In addition, the old /u/ and /i/ have disappeared as phonemes, but they can be heard frequently as grammatical affixes, e.g. suffix pronouns /ktaːb-i/u/ 'my/his book' and as the verb prefix /i-/ in its third person singular form, as in /i-gassam/ 'he distributes'. The short

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[265] This triangular system of localisation is in general similar to the one identified by Cohen (1963: 54) and Taine-Cheikh (2007a); however, both of them consider that /a/ is centralised and therefore it is transcribed as /ä/. This realisation of /a/ seems to be instable in modern spoken HA in Mauritania and almost absent from the data collected from HA speakers in Medina; therefore, it has been excluded from the HA vowel system, similar to the /e/ vowel.

vowel /u/ is also attested in few borrowed CA or MSA words, such as /muħammad/ 'Muhammad' and /muqaːbala/ 'interview'. This general fact probably encouraged Cohen (1963: 60) to claim that the vowel system of HA appears to be constituted by two autonomous sub-systems. In these two sub-systems, two vowels /a/, /ə/ exist, which date back, directly, to evolution from the classic system. The other consists of borrowed forms or relevant dialectal innovations. It is worth noting, that in HA, like other Maghrebi dialects, /ə/ is not permitted to be placed in an open syllable, while the other frequent short vowel /a/ is allowed in closed and opened syllables. The other two short vowels are generally restricted to open syllables (cf. Cohen 1963: 54ff; Taine-Cheikh 2007a).

Cohen (ibid) describes this phoneme /ə/, in his elicited data, as a phoneme that can be uniquely defined in HA by its degree of aperture. It is the only middle vowel, in terms of aperture. The normal localisation of the phoneme, when it undergoes no modifying influence, is very slightly central. It is not always possible to distinguish this phoneme and /a/ among elements that articulate this phoneme slightly forward. Moreover, this phoneme is never presented before /w/ or /j/. In the cases where the morphological structure in a construction would lead us to expect *əw or *əj, this is always found to be /uw/ and /ij/.

6.5 Use of the vocalic variables according to social factors

This section concerns the analysis of the vocalic variables; the same statistical methods used for the consonantal variables in the previous chapter will be used. In other words, the frequency index used by William Labov (Labov 1966) will be applied to examine who tends to display more frequent use of the HA variants of these three variables. In addition, the individual percentage use of each variable will be averaged according to the relevant social group. Finally, in order to evaluate the degree of variance between participants in their use of the variables under investigation, the data was normalised. This was achieved through

dividing the individual use of each variable by the actual time of speech to prepare it for the analysis of variances by the ANOVA test and the post-hoc Tukey's HSD test. Similar to the previous chapter, the following detailed tables have been used for these three methods of analysis respectively.

Table 6.8: The actual use of consonantal variables by social groups (%)

Social groups		RS		DIP		VC	
		HA variant	UHA variant	HA variant	UHA variant	HA variant	UHA variant
Age	2 nd G	169 (58%)	120 (42%)	9 (8%)	97 (92%)	56 (29%)	139 (71%)
		Total 289		Total 106		Total 195	
	3 rd G	174 (62%)	107 (38%)	17 (19%)	71 (81%)	100 (34%)	198 (66%)
		Total 281		Total 88		Total 298	
Education	High	103 (68%)	29 (32%)	8 (13%)	55 (87%)	58 (28%)	150 (72%)
		Total 152		Total 63		Total 208	
	Med	153 (71%)	64 (29%)	11 (18%)	50 (82%)	67 (44 %)	85 (56 %)
		Total 217		Total 61		Total 152	
	Low	87 (43%)	114 (57%)	7 (10%)	63 (90%)	31 (23%)	102 (77%)
		Total 201		Total 70		Total 133	
Ethnicity	Bīẓāni	276 (69%)	125 (31%)	20 (15%)	115 (85%)	115 (35%)	210 (65%)
		Total 401		Total 135		Total 325	
	Ḥarṭāni	67 (40%)	102 (60%)	6 (10%)	53 (90%)	41 (24 %)	127 (76%)
		Total 169		Total 59		Total 168	
Gender	Male	256 (59%)	178 (41%)	20 (13%)	137 (87%)	120 (30%)	279 (70%)
		Total 434		Total 157		Total 399	
	Female	87 (64%)	49 (36%)	6 (20%)	24 (80%)	36 (38%)	58 (62%)
		Total 136		Total 30		Total 94	

Table 6.9: Individual percentage use from the total use of consonantal variables

		Social group				Consonantal variable					
						RS		DIP		RS	
ID	Subject	Age	Gender	Education	Ethnicity	N.	%	N.	%	N.	%

1	ABD_H	2nd G	Male	Low	Bīẓāni	6	1.75	2	7.69	13	8.33
2	ABD_S	2nd G	Male	High	Bīẓāni	47	13.7	2	7.69	25	16.03
3	AISH	3rd G	Female	High	Bīẓāni	36	10.5	5	19.23	7	4.49
4	FAT	2nd G	Female	Low	Bīẓāni	33	9.62	1	3.85	16	10.26
5	HART	3rd G	Male	Med	Ḥarṭāni	19	5.54	2	7.69	12	7.69
6	KARM	3rd G	Male	High	Bīẓāni	30	8.75	0	0	14	8.97
7	KHAD	2nd G	Female	Low	Ḥarṭāni	18	5.25	0	0	13	8.33
8	KHID	2nd G	Male	High	Bīẓāni	2	0.58	0	0	0	0
9	MAH_H	2nd G	Male	Low	Ḥarṭāni	20	5.83	3	11.54	9	5.77
10	MAHF	2nd G	Male	High	Bīẓāni	35	10.2	0	0	15	9.62
11	MIN	2nd G	Male	Med	Bīẓāni	5	1.46	0	0	3	1.92
12	MUS	2nd G	Male	High	Bīẓāni	3	0.87	1	3.85	6	3.85
13	MUTZ	3rd G	Male	Med	Bīẓāni	22	6.41	0	0	1	0.64
14	OUIL	3rd G	Male	Med	Bīẓāni	30	8.75	3	11.54	3	1.92
15	SAMB	3rd G	Male	Low	Ḥarṭāni	10	2.92	1	3.85	7	4.49
16	WADD	3rd G	Male	Med	Bīẓāni	17	4.96	3	11.54	6	3.85
17	YUSF	3rd G	Male	Med	Bīẓāni	10	2.92	3	11.54	6	3.85
						Total 343		Total 26		Total 156	

Table 6.10: Normalised individual use of vocalic variables

Subject	Social group				Consonantal variable						Duration/min
	Age	Gender	Education	Ethnicity	RS		DIP		VC		
					N.	Norm.	N.	Norm.	N.	Norm.	
ABD_H	2nd G	Male	Low	Bīẓāni	6	0.27	2	0.09	13	0.59	22
ABD_S	2nd G	Male	High	Bīẓāni	47	1.81	2	0.08	25	0.96	26
AISH	3rd G	Female	High	Bīẓāni	36	1.33	5	0.19	7	0.26	27
FAT	2nd G	Female	Low	Bīẓāni	33	1.83	1	0.06	16	0.89	18
HART	3rd G	Male	Med	Ḥarṭāni	19	0.86	2	0.09	12	0.55	22
KARM	3rd G	Male	High	Bīẓāni	30	1.3	0	0	14	0.61	23
KHAD	2nd G	Female	Low	Ḥarṭāni	18	0.78	0	0	13	0.57	23
KHID	2nd G	Male	High	Bīẓāni	2	0.09	0	0	0	0	23
MAH_H	2nd G	Male	Low	Ḥarṭāni	20	0.67	3	0.1	9	0.3	30
MAHF	2nd G	Male	High	Bīẓāni	35	1.84	0	0	15	0.79	19
MIN	2nd G	Male	Med	Bīẓāni	5	0.21	0	0	3	0.13	24
MUS	2nd G	Male	High	Bīẓāni	3	0.14	1	0.05	6	0.29	21
MUTZ	3rd G	Male	Med	Bīẓāni	22	1.29	0	0	1	0.06	17
OUIL	3rd G	Male	Med	Bīẓāni	30	2	3	0.2	3	0.2	15
SAMB	3rd G	Male	Low	Ḥarṭāni	10	0.43	1	0.04	7	0.3	23
WADD	3rd G	Male	Med	Bīẓāni	17	0.74	3	0.13	6	0.26	23
YUSF	3rd G	Male	Med	Bīẓāni	10	0.83	3	0.25	6	0.5	12

6.5.1 Use of vocalic variables by age

It seems to be a fact that the young generation is leading linguistic change, supporting Eckert's argument, that "adolescence is a crucial life stage for the study of variation, for it is the adolescent age group that has been found to lead all other age groups in sound change" (Eckert 2000: 4). The young generation of the Shanāqiṭa community in Medina seems to be taking the lead in what can, generally, be described as the maintenance of HA variants. This role of the young generation in linguistic change, was evident in the analysis of the previous three linguistic variables, where the dialectal use led by young immigrants seems to be part of a preservation process of the Shanāqiṭa culture. This was confirmed by the statistical analysis of the consonantal variable results in Chapter Five.

In this section, another three phonological variables, related to vocalic change, will be examined and correlated with the age factor. Tables 6.8 and 6.9 above show the statistical analyses of the re-syllabification, diphthongisation and vowel centralisation variables.

In Table 6.8 above, the percentage occurrence of RS in the data, indicates that the HA variant (RS) is preferred by the majority of SC members in Medina; from a total of 570[266] tokens that contradict the HA syllable system, 60% (343 [267] borrowings) were re-syllabified to be harmonised with the HA syllable system, while 40% (227[268] borrowings) were produced according to the UHA syllable system. With regard to the other two variables, the majority of participants preferred to use the UHA variants. Only 13% (26[269] borrowings) of DIP tokens (194)[270] were produced with the HA variant (diphthong), as compared to 87% (168[271] borrowings) being produced with the UHA variant (monophthongs). Similarly, from a total of

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[266] The sum of 289 and 281 LBs.
[267] The sum of 169 and 174 LBs.
[268] The sum of 120 and 107 LBs.
[269] The sum of 9 and 17 LBs.
[270] The sum of 106 and 88 LBs.
[271] The sum of 97 and 71 LBs.

493[272] VC tokens, 32% (156[273] borrowings) were produced with the HA variant (VC), while 68% (337[274] borrowings) were produced with the UHA variant (/i/ and /u/).

The first linguistic variable to be analysed in this section is the re-syllabification process that HA speakers perform, when borrowing from UHA. It is important to mention here, that the results shown in the Table 6.8 above include the three re-syllabification processes discussed earlier, i.e. vowel syncope, epenthesis and metathesis. This is due to the fact that they all are used in HA to re-syllabify words that are not in harmony with its syllable system, in addition to their interconnectedness or overlap, as indicated earlier. It is worthwhile mentioning, that the majority of the re-syllabification cases found in the data (72%) are related to vowel syncope, or what can be termed as the 'clusterisation' process, while vowel epenthesis and (possible) metathesis, are not as common as syncope (accounting for 28% of the total number of re-syllabification cases).

With regard to the variants of the re-syllabification variable, the HA variant is the re-syllabification of UHA words, which may be formed by vowel syncope, epenthesis, or metathesis. In other words, HA speakers phonologically change the syllables of words borrowed from UHA when these syllables are not harmonised with the HA syllable system. For instance, vowel syncope is applied when speakers borrow UHA words that consist of an open syllable with a short vowel [CV], e.g. the UHA word /hinaːk (hinaːka)/ 'there' becomes /hnaːk (hnaːka)/ (see Table 6.9 below). In this case, for example, the HA variant would be the re-syllabification of this word (i.e. vowel syncope), while the UHA variant is the pronunciation of this word, with an initial open syllable containing a short vowel, i.e. /hi-/. It is worth mentioning that the initial open syllable with a short vowel is not allowed in HA

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[272] The sum of 195 and 298 LBs.
[273] The sum of 56 and 100 LBs.
[274] The sum of 139 and 198 LBs.

except in a few words borrowed from MSA, e.g. /muħmmad/ 'Muhammad'. Table 6.11

below shows examples of the re-syllabification processes found in the data.

Table 6.11: Examples of UHA borrowings with RS

Example	UHA form	RS process	Part of speech	HA equivalent	Gloss
əkwejsa	kuwajjisa	epenthesis	ADJ	zejna, mʕaddla	good, nice (fem.)
ətka:rna	taka:rna	epenthesis	N	kwarˤ	the Black-African people
əʕja:l	ʕija:l	epenthesis	N	asˤħa:b	friends
ja-zəʕl-u	ji-zʕal-u	epenthesis	V	jə-ʒʒalʒ-u	(they) get angry, upset
na-sˤəgʕ-u	ʔa-sˤgaʕ-u	epenthesis	V	naxəbˤtˤ-u	(I) hit him
əlħa:l-hum	liħa:la-hum	epenthesis	ADJ, ADV	wħadhum	alone (pl.)
l-əbga:la	al-biga:la	epenthesis or metathesis	N	l-buti:g	the grocery
l-əflu:s	al-fulu:s	epenthesis or metathesis	N	l-vaðˤðˤa	the money
hna:k	hina:k	syncope	ADV	hak	there
bga:la	biga:la	syncope	N	buti:g	grocery
b-sala:mt-u	bi-sala:mat-u	syncope	PP	la: səqra	without offending (him)
bzˤu:rˤt-u	buzu:rat-u	syncope	N	ʃa:ʃərt-u	his children
ħa:rˤt-i	ħa:rˤat-i	syncope	N	karti:t-i	(my) district, neighbourhood
hna:ka	hina:ka	syncope	ADV	hak	there
rdʒu:lu	rudʒu:l-u	syncope	N	kərʔejh	his feet
zej-ha	zajja-ha	syncope	ADJ	ki:vət-ha	similar to her/it
ʕlatˤu:l	ʕalatˤu:l	syncope	ADV	msaggam	straightaway/straight
θja:b	tija:b	syncope	N	***[275]	Saudi men's dress (pl.)

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[275] No lexical equivalent in HA.

Table 6.11 shows two types of re-syllabification processes and a possible third process. The loss of a vowel (syncope), in order to re-syllabify the borrowed words, is shown in different examples in the table. There are two common reasons behind vowel syncope in HA (shown in the examples above). The first one is the avoidance of an initial open syllable with a short vowel [CV], for example: /biga:la/ → /bga:la/, /hina:ka/ → /hna:ka/, /tija:b/ → /θja:b/. In addition, a sequence of two open syllables is not permitted in HA; therefore, the UHA borrowed words are re-syllabified, by dropping the short vowel. For instance, the following examples show the vowel syncope process used in order to prevent the sequence of two or more open syllables: /buzu:rat-u/ → /bzˤu:rˤt-u/, /bi-sala:mat-u/ → /b-sala:mt-u/, /zajja-ha/ → /zej-ha/. In these examples, other processes have also occurred: vowel syncope of the short vowel in the initial open syllable (in the first two examples) and degeminisation in the third example.

The data relating to the general percentage use of RS, shown in Table 6.8 above and illustrated in Figure 6.1 below, reveals that there is a relatively small difference in the percentage use of this variable between the age groups. The young generation (the 3rd G) used the HA variant (RS) in 62% of borrowings (174 out of 289 borrowings), while this variant was used in 58% of borrowings (169 out of 289 borrowings) by the older generation (the 2nd G). The data indicates that the young generation has a greater tendency to use the HA variant, than do the older generation, which appears to support the research hypothesis relating to age. Moreover, the relatively high percentage use of the HA variant by both age groups (which is found in 58% of the 2nd G's borrowings and 62% of the 3rd G's borrowings) indicates the strength of the use of RS amongst HA speakers when they incorporate UHA elements into their speech.
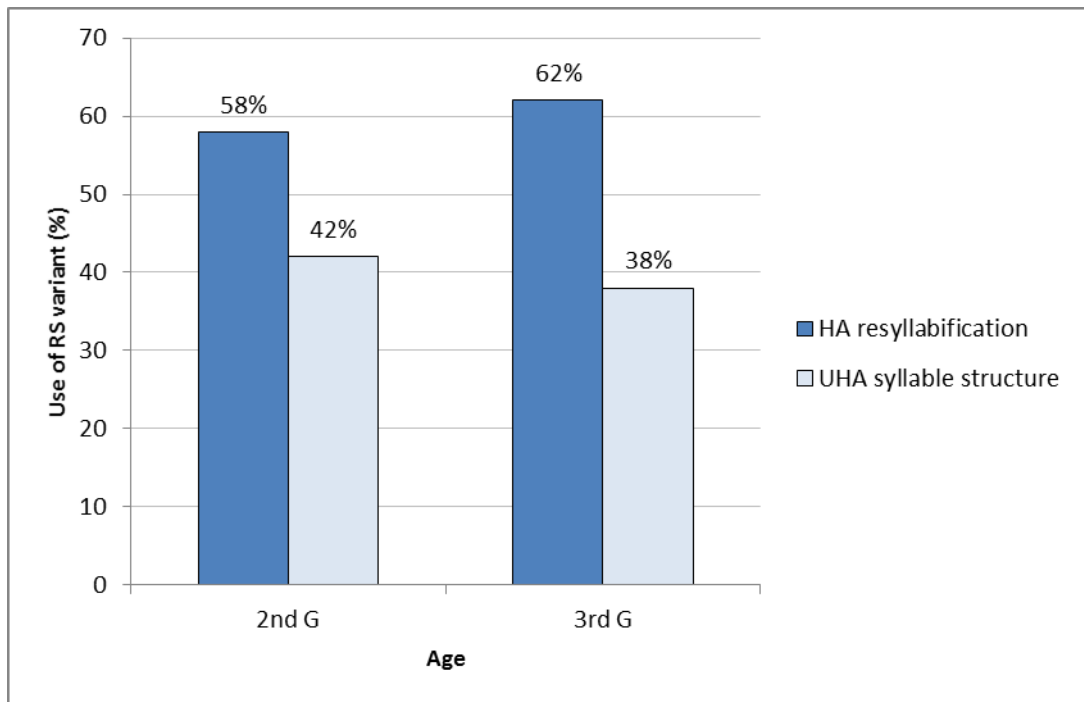
Figure 6.1: Use of RS by age (%)

Considering the second percentage method of calculation, i.e. the individual percentage use averaged according to age group, Table 6.12 and Figure 6.2 below show the results of the use of this phonological variable by the age groups.

Table 6.12: Average use of RS by age

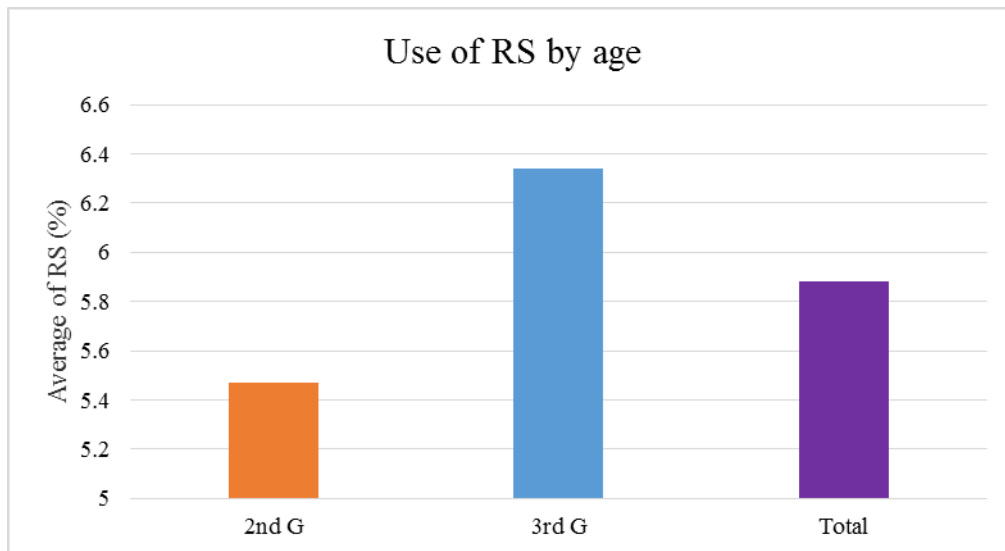| Age	Average use of RS (%)	Standard deviation of RS (%)
2nd G	5.47	4.78
3rd G	6.34	2.8
Total	5.88	3.88

Figure 6.2: Average use of RS by age(%)

The above table and figure display similar results to the first analysis method shown above. In other words, the younger generation group tend to use RS more frequently than the other age group. These results can be interpreted as showing that the 17 subjects used on average 5.88% of 343 tokens of RS, with a standard deviation of 3.88%. The 2nd G group used on average 5.47%, with a standard deviation of 4.78, while the 3rd G group used on average 6.34%%, with a standard deviation of 2.8%. Therefore, the 3rd G group used more than the average level of RS and with less variance as the standard deviation of their use of this variable (2.8%) is clearly less than the average value (3.88%). The ANOVA test for variances shown in Table 6.13 below considers the difference between the two age groups as statistically significant, as the *p*-value is greater than the alpha value of 0.05. Similarly, the post-hoc Tukey's HSD test specifies the difference between means at about 0.25, in favour of the 3rd G group, but does not classify it as significant; the *p*-value is similar to that which emerged from the ANOVA test.

Table 6.13: One-way ANOVA and Tukey's HSD test results for RS by age

Test	Results					
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Age	1	0.262	0.2618	0.616	**0.445**

Tukey's HSD		diff	lwr	upr	p adj
	3rd G-2nd G	**0.2486111**	-0.09145923	0.5886814	**0.4447818**

The second variable, shown in Table 6.8, is diphthongisation (DIP). It was mentioned above, that the preservation of the traditional Arabic diphthongs /aj/ and /aw/ is restricted in UHA, and the monophthongisation of these diphthongs, is common practice in this Arabic dialect. In contrast, in HA, the diphthongs are preserved, even though the traditional Arabic diphthongs are realised as /ej/ and /ow/, and the monophthongisation of these diphthongs is limited to certain cases, as explained above. Moreover, it is worth mentioning that the diphthong /ej/ is, to a large extent, more frequent than /ow/ in HA. The vast majority of the diphthongisation cases, found in the data, concern /ej/, with only one case of /ow/ being found (see Table 6.14 below). Importantly, all of the diphthongisation cases, or more precisely 're-diphongnaisation' found in the data consist of monophthongised diphthongs, i.e. /aj/ → /e:/ and /aw/→ /o:/ as the latter (monophthongised diphthongs) is the most common practice in UHA; diphthongs are therefore not common in this dialect. In other words, the monophthongised diphthongs in UHA are re-diphthongised by HA speakers. Therefore, the process will be, respectively, as follows: /e:/→/ej/ and /o:/ → /ow/. Table 6.14 below shows examples of this phonological phenomenon attested when HA speakers borrow UHA words/phrases and incorporate them into their daily intra-group conversations.

Table 6.14: Examples of UHA borrowings with DIP

Example	UHA form	Type of DIP	Part of speech	HA equivalent	Gloss
dʒejb-ak	dʒeːb-ak	/e:/→/ej/	N	ləbnt-ak	your pocket
əθ-θowb	(ʔ)at-to:b	/o:/→/ow/	N	∗∗∗[276]	a traditional Saudi male's dress
ə-ddejt-u	(ʔ)a-dde:t-u	/e:/→/ej/	V	ʕtˤejt-u	I gave him

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[276] No lexical equivalent in HA.

gejla	ge:la	/e:/→/ej/	N	nadwəja/wanga:la	picnic
sawwej-t	sawwe:-t	/e:/→/ej/	V	ʕaddal-t	I made/did
əl-ʕejʃ	(ʔ)al-ʕe:ʃ	/e:/→/ej/	N	***[277]	the bread
baʕdejn	baʕde:n	/e:/→/ej/	ADV	ma:hu ðˤarˤk	later, then, afterwards
ħakkejt-u	ħakke:t-u	/e:/→/ej/	V	rˤaddejt ʕli:h	I told him
daggej-t	dagge:-t	/e:/→/ej/	V	talvant	I telephoned
ħatˤtˤej-t	ħatˤtˤe:-t	/e:/→/ej/	V	tˤrˤaħ-t	I put
l-ʕejnijja	(ʔ)al-ʕe:nijja	/e:/→/ej/	N	***[278]	a name of district in Medina
lagej-t	lage:-t	/e:/→/ej/	V	rˤej-t	I found
vejn	fe:n	/e:/→/ej/	ADV	mnejn	where?
waddej-t-hum	wadde:-ta-hum	/e:/→/ej/	V	laħħag-t-hum	I/you take them to
tˤħajjnijja	atˤ-tˤiħe:nija	/e:/→/ej/	N	***[279]	the halva (halawa)
nafarejn	nafare:n	/e:/→/ej/	N	(a)raga:ʒejn	two people

The data shown in Table 6.8 above shows that the rate of occurrence of the HA variant DIP, is considerably lower than the UHA variant (monophthong), i.e. the HA variant occurs 26 times compared with 168 occurrences of the UHA variant.[280] These results could be interpreted, in line with the research hypothesis related to the age factor, and its impact on the use of this variable by the different age groups. This interpretation indicates that the monophthongisation of the diphthongs was adopted by the early HA speakers in Medina, as a result of accommodation towards UHA linguistic features. This situation has started to

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[277] No lexical equivalent in HA, as this type of bread (circle brown bread) is not known in Mauritania. However, the bread type that is known in Mauritania is called /mbu:r/ (plural of /mbu:ra:ja/ 'long French baguette', which is similar to what is known as /sˤa:mu:li/ 'soft short baguette' in spoken UHA.

[278] No lexical equivalent in HA.

[279] No lexical equivalent in HA.

[280] This number is obtained by adding the number of occurrences of this variant in both age groups, i.e. 9 + 17 = 26, and 97+71 = 168.

change, gradually; as was noted earlier, there has been a return to HA linguistic elements, led by the young generation of HA speakers, which is motivated by socio-psychological factors. This interpretation is supported by the percentage use of DIP variants by the two age groups illustrated in Figure 6.3.
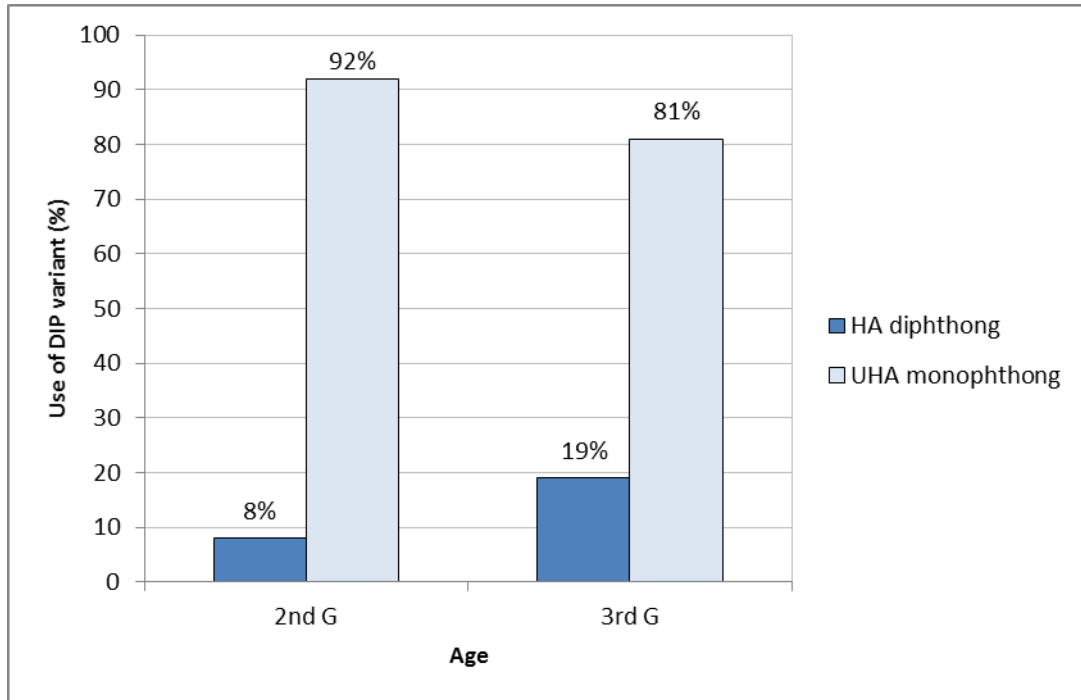

Figure 6.3: Use of DIP by age (%)

As indicated by Table 6.8, and illustrated in Figure 6.3, the young generation (the 3rd G) used the HA variant more frequently (which accounts for 19% of borrowings, i.e. 17 borrowings out of 88 tokens) than the older generation (for whom the HA variant is found in 8% of borrowings, i.e. 9 borrowings out of 106 tokens). In addition, the young generation used the UHA variant less frequently, i.e. usage rates of 92% (97 borrowings) for the 2nd G and 81 % (71 borrowings) for the 3rd G. This result is similar in this manner to the, previously mentioned, vocalic variable (RS), and to the majority of the research variables results. Moreover, by analysing the occurrence of the variants used by individual participants, we can identify that about 67% of the 2nd G participants did not diphthongise the UHA monophthongs at all, or only once, while this was the case for 38% of the 3rd G participants.

Moreover, the results from the average percentage analysis shown in Table 6.15 and illustrated in Figure 6.4 reveal a similar outcome to the general method used to calculate the percentage use of the age groups. In other words, the 3rd G group has a somewhat greater desire to diphthongise the UHA borrowings than the 2nd G group.

Table 6.15: Average use of DIP by age

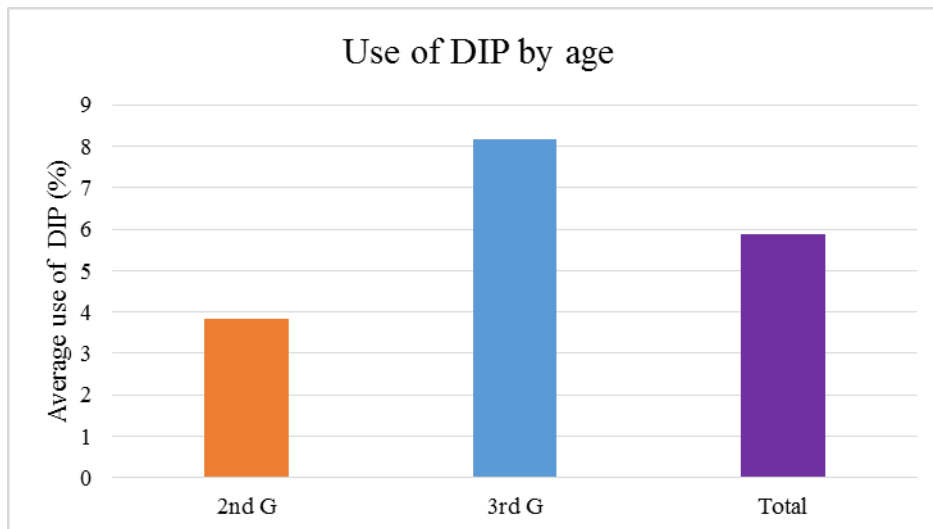| Age	Average use of DAF (%)	Standard deviation of DAF (%)
2nd G	3.85	4.3
3rd G	8.17	6.64
Total	5.88	5.79

Figure 6.4: Average use of DIP by age (%)

The above average percentages shown in the table and figure above can be interpreted as showing that 17 subjects used on average 5.88% of 26 tokens of DIP, with a standard deviation of 5.79%. The 2nd G used on average 3.85%, with a standard deviation of 4.3%, while the 3rd G used on average 8.17%, with a standard deviation of 6.64%. Therefore, the 3rd G used more than the average level of DIP, in addition to displaying greater variation when using this variable than the other age groups, as the former's average percentage standard deviation is higher than that of the 2nd G group.

The last variable to be analysed in this section is vowel centralisation (VC). As explained above, this phonological process consists of changing the UHA high back rounded and unrounded vowels /u/ and /i/, to be realised as schwa /ə/. Moreover, it was also mentioned above, that HA has two frequently used short vowels: schwa /ə/, which is generally a realisation of /i/ and /u/, and /a/. The use of /i/ and /u/ is generally restricted to certain contexts, such as suffix pronouns, e.g. /kta:b-i/u/ 'my/his book', verb prefixes, e.g. /i-saggam/ 'he straightens', and borrowed words from CA or MSA, e.g. /muħammad/ 'Muhammad' and /muvakkir/ 'intellectual'. As a result, the frequency of these two short vowels in HA in general is very low compared to the frequency of /a/ and /ə/ (see Table 6.7 above). Table 6.16 below shows examples of VC found in the data.

Table 6.16: Examples of UHA borrowings with VC

Example	UHA form	Type of VC	Part of speech	HA equivalent	Gloss
banga:ləja	banga:lija	i→ə	N	***[281]	Bengalis
bəlla:hi	billa:hi	i→ə	PP	ħagalʕlʕa	seriously!
d-dəkka:n	(ʔ)ad-dukka:n	u→ə	N	(ə)l-buti:g	the shop
əðˤ-ðˤəhrəja	(ʔ)adˤ-dˤuhrija	u→ə	N	(ə)ðˤ-ðˤəhər	the noon
gləb waʒh-ak	(ʔ)aglib wadʒh-ak	i→ə	VP	xərʕəʒ/mrʕəg	get out of here
ħəlu	ħilu	i→ə	ADJ	zejn	nice, good
həna	hina	i→ə	ADV	hown	here
ħərʕəmt-u	ħurmat-u	u→ə	N	marʕt-u	his wife
jə-sˤrʕəf əʕli:h	ju-sˤruf ʕale:h	u→ə	VP	ja-nvq-u	he sponsors him (financially)
kəða	kida	i→ə	ADV	ki:ft	as, like this/so
ləbs	libs	i→ə	N	lba:s	garment, dress

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[281] No lexical equivalent in HA.

ləssaːʕu	lissaːʕu	i→ə	ADV	mazaːl	he is still
maː lak ʃəɣl	maː lak ʃuɣul	u→ə	PP	maː daxxl-ak	not your (masc.) business
maː ʕəmr-i	maː ʕumr-i	u→ə	NP	maː gatˤtˤej-t	I never…
mənnaːk	minnaːk	i→ə	PP	mən hak	from there
rˤəħ-t	ruħ-t	u→ə	V	gəs-t	I went to
ʃəsm-u	ʃism-u	i→ə	NP	asm-u	what is he/it called?
taːxəð	taːxud	u→ə	V	tagbˤaðˤ	you take
tiʕdəm-kum	tiʕdim-kum	i→ə	V	t-warˤrˤatˤ-kum	it harms you
ʕəzba	ʕuzba	u→ə	N	***[282]	a social gathering place

The results shown in Table 6.8 indicate that the younger age group (the 3rd G.), as is the case in all the previously analysed variables, showed a more frequent use of the processes of vowel centralisation. The analysis of the percentage use of this variant reveals that the young generation, in the SC, leads what can be termed the 'preservation' of HA linguistic elements. In other words, the use of the UHA variants, i.e. /i/ and /u/, is stronger in the older generation as they used this variant in 71% of borrowings (139 borrowings out of 195 tokens), while the younger generation used it in 66% of borrowings (198 borrowings out of 298 tokens) . The percentage use of the centralised short vowel (ə) as a realisation of the high back rounded and high front unrounded vowels /u/ and /i/ illustrated in Figure 6.3 demonstrates that this indigenous HA pronunciation is still clearly present in the speech of HA speakers in Medina, not only in their pure HA but also when they incorporate other linguistic items into their speech.

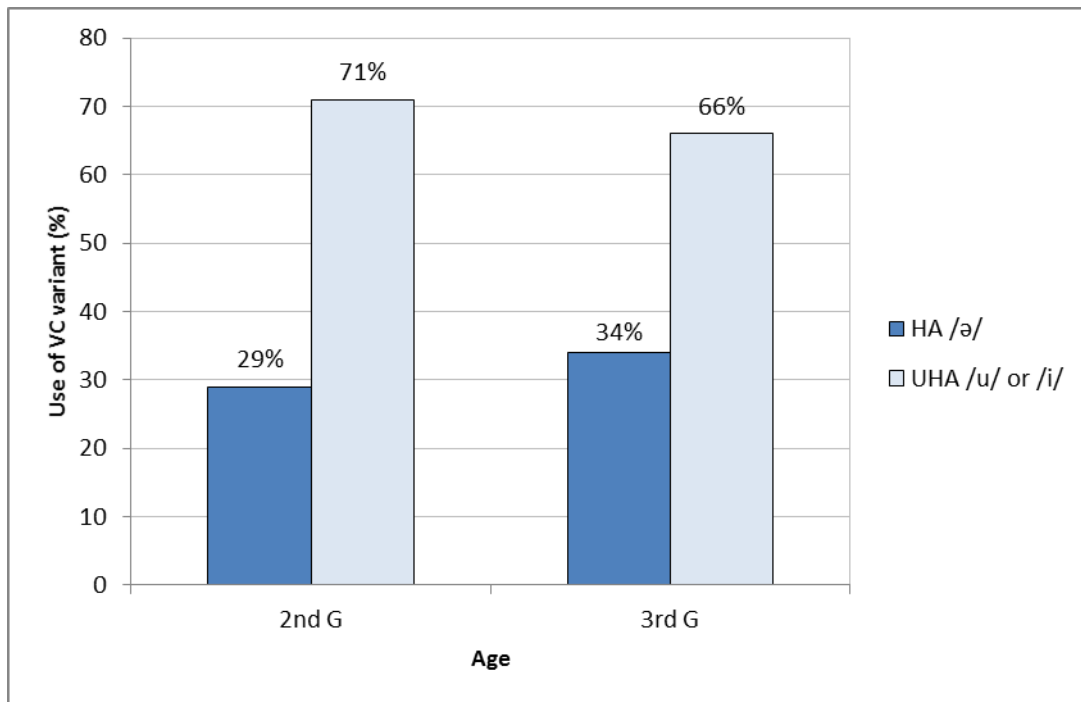[282] No lexical equivalent in HA.

Figure 6.5: Use of VC by age (%)

If we analyse the individual percentage use of this variable shown in Table 6.9 above, and then average these values within the relevant age group, we will come up with the following results displayed in Table 6.17 and illustrated by Figure 6.6 below.

Table 6.17: Average use of VC by age

Age	Average use of VC (%)	Standard deviation of VC (%)
2nd G	7.12	4.86
3rd G	4.49	2.74
Total	5.88	4.11
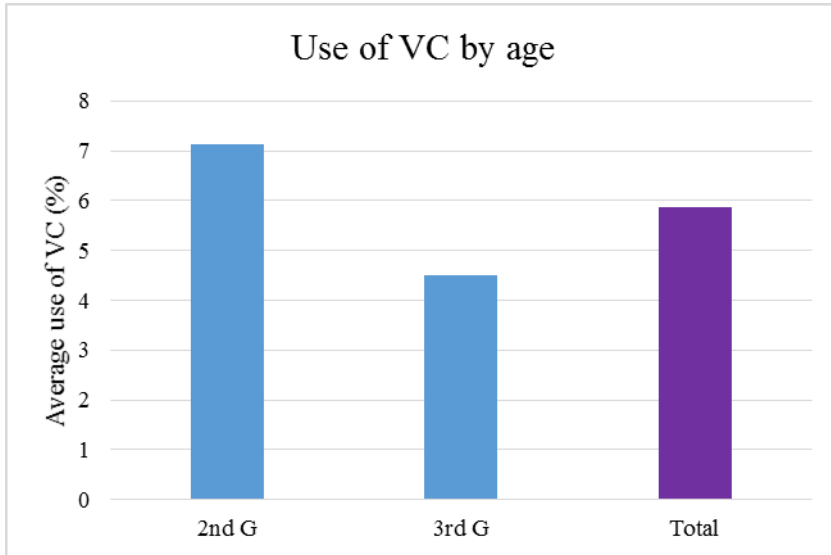
Figure 6.6: Average use of VC by age (%)

As has been previously explained in Chapter Four (section 4.8), the main objective of this method is to overcome the possible impact of the non-homogeneity of the data, which can affect the outcome of the first method of calculation of percentage use. This point has been clearly observed when comparing the results of the first method shown in Table 6.8 and the results shown in Table 6.17 above concerning the average percentage analysis method. In this table and Figure 6.6, the 17 subjects used on average 5.88% of 156 tokens of VC, with a standard deviation of 4.11%. The 2nd G used on average 7.12%, with a standard deviation of 4.86%, while the 3rd G used on average 4.49%, with a standard deviation of 2.74%. Therefore, the 2nd G used more than the average value of VC, which means that this age group displayed a greater use of this variable than the younger age group. It seems that the small difference in the general percentage use of this variable between the two age groups shown above, i.e. 34% (3rd G) and (29% 2nd G) is affected by the lack of homogeneity of the data. In other words, the results of the second method seem more reliable as it takes into account the individual percentage use scores and groups them according to the relevant age group and finally calculates the average percentage for the whole group.

6.5.2 Use of vocalic variables by the level of educational attainment

As mentioned above, the increase in the use of the UHA variants is hypothesised to be in parallel with the participants' increased educational attainment. This hypothesis is based on the fact that formal education in Saudi schools and universities in Medina, affords HA speakers with a very important opportunity to be in direct contact with the Hijazi community in these educational institutions. However, due to the overlap, and interaction between the factors of education and age, it is difficult to obtain conclusive evidence to support, or to otherwise reject, this hypothesis in relation to the results presented in Chapter Five. In this section, an effort will be made to understand the results shown in Table 6.8 above, taking into consideration the interaction between these two social factors, i.e. education and age.

It is important to note again that the majority of participants (80%) in the lowest educational attainment group (Low) belong to the 2nd G age group, while the majority of participants (83%) in the medium educational attainment group (Med) belong to the young age group (3rd G). The proportion of participants belonging to the 2nd G age group is relatively low (66%) in the highest educational attainment group (High), while the percentage of participants belonging to the young generation (3rd G) is considerably lower in this educational attainment group (34%) (see Table 5.40 above).

Therefore, based on this interaction analysis and the fact that age is an important factor in determining the use of HA variants, it would be expected for the medium educational attainment group, to display the highest use of HA variants, as this group consists of the highest number of 3rd G participants (based on the previously mentioned age-related hypothesis). On the other hand, the low educational attainment group would, accordingly, be expected to display the lowest percentage use of the HA variants, as this group has the lowest number of young generation participants (3rd G). The high educational attainment group

would be expected to have an intermediate level of usage as the HA variant use displayed by the 3rd G participants in this group is lower than the Med group and higher than the Low group. The results of the three variables in this chapter shown in Table 6.8 below confirm the above expectations, in a similar way to the general results presented in Chapter Five, though the results in Table 6.8 are clearer as the frequency of use of the vocalic variables, is considerably higher than was the case for the consonantal variables.

With respect to the number of borrowings with RS (see Table 6.11 for examples from the data), the table above shows that the HA variant (RS) is mostly used by the medium educational attainment group, as 71% of borrowings (153 out of 217) produced by this group of participants were used with RS, while 29% of borrowings (64 out of 217) were used with the UHA variant. Moreover, the high educational attainment group used 68% of borrowings (103 out of 152) with the HA variant (RS), while the UHA variant was uttered in 32% of borrowings (49 borrowings) by this group. The low educational attainment group adopted the UHA syllable system in 57% of borrowings (114 out of 201), while 43% of borrowings (87 borrowings) were used with the HA variant (RS). Figure 6.7 below illustrates the use of RS by the three educational attainment groups.
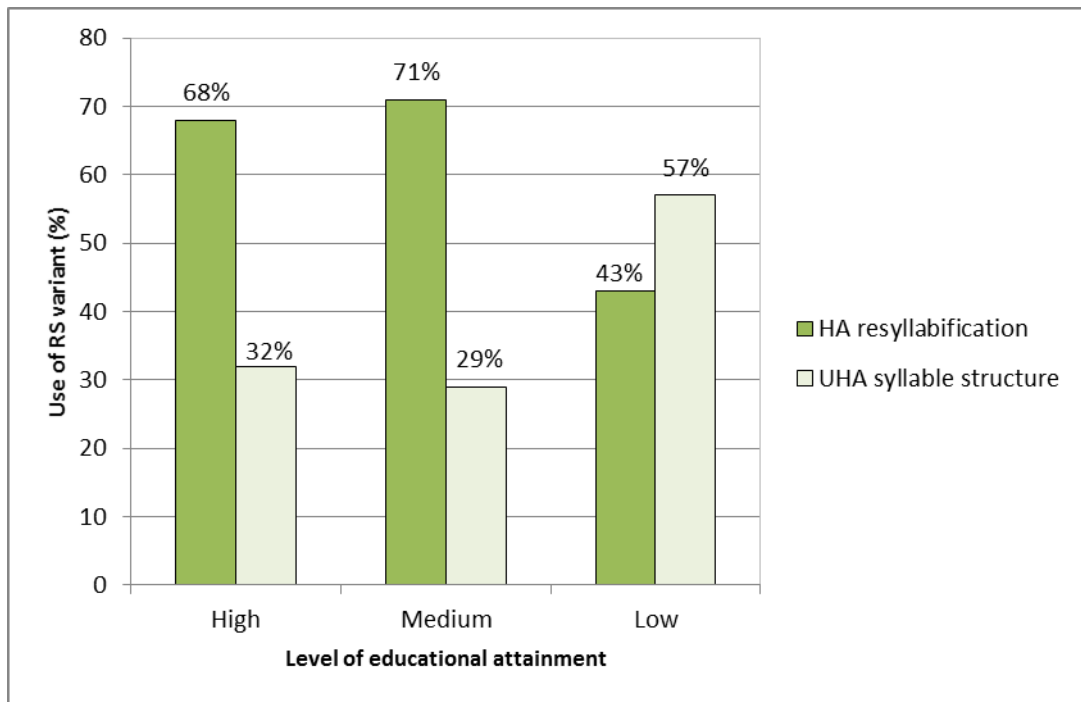
Figure 6.7: Use of RS by level of educational attainment (%)

If we re-analyse the data considering the individual use of RS shown in Table 6.9, and then average these percentages according to the relevant educational attainment levels, we can get the following results shown in Table 6.18 and Figure 6.8 below.

Table 6.18: Average use of RS by level of educational attainment

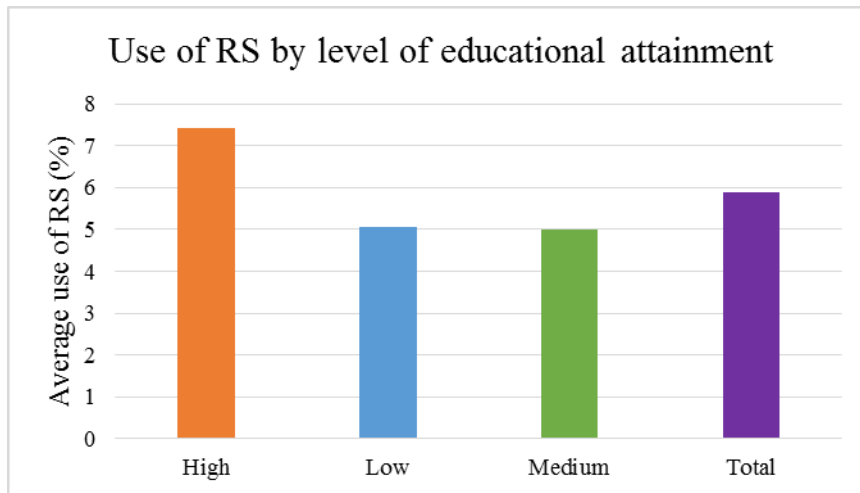| Ethnicity	Average use of RS (%)	Standard deviation of RS (%)
High	7.43	5.44
Low	5.07	3.04
Medium	5.007	2.58
Total	5.88	3.88

Figure 6.8: Average use of RS by education (%)

The results presented in the table and figure above are quite different to the results taken from the general percentage analysis results shown above. The 17 subjects used on average 5.88% of 343 tokens of RS, with a standard deviation of 3.88%. The highly educated group used on average 7.43%, with a standard deviation of 5.44, the group with a low level of educational attainment used 5.07%, with a standard deviation of 3.04, while subjects with a medium level of educational attainment used on average 5.007%, with a standard deviation of 2.58%. Therefore, the highly educated group used more than the average level, while the use of the medium and low educational attainment groups is almost the same. The highly educated group has more variation in their use of RS than the other two groups. Comparing the results elicited from the two methods above, we can draw two interpretations.

The first one is that the impact of the lack of homogeneity of the data seems to have an effect on the results elicited from the first method, as the second method, which considered individual percentages merged within the relevant group, produced different results. Secondly, the impact of the level of educational attainment seems not to have an effect on the participants' use of borrowings. In other words, according to the results that emerged from the average percentage method, highly educated participants displayed a higher usage of the HA variant, i.e. RS, while the medium and low educational attainment groups displayed

almost the same results. This interpretation of the results should be viewed as supporting the research hypothesis regarding the impact of educational attainment on the participants' language variation.

Regarding the inferential statistical analysis of the variation between the groups, Table 6.19 below shows the results of the One-way ANOVA and Tukey's HSD tests. In general, both tests show that there is no statistically significant difference between the educational attainment groups, as the *p*-values exceed the alpha value of 0.05.

Table 6.19: One-way ANOVA and Tukey's HSD test results for RS by level of educational attainment

Test	Results					
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Education	2	22.3	11.15	0.715	**0.506**
Tukey's HSD	Education					
		diff	lwr		upr	p adj
	Low-High	**-2.35933333**	-8.617066		3.898399	**0.5967906**
	Med-High	**-2.42666667**	-8.393180		3.539847	**0.5504677**
	Med-Low	**-0.06733333**	-6.325066		6.190399	**0.9995629**

The second vocalic variable shown in Table 6.8 is the diphthongisation variable (DIP). The data analysis, shown in the table above, reveals similar results to RS, in terms of the fact that the most frequent occurrence of the HA variant (DIP) is associated with the medium educational attainment group, while the high educational attainment group used the HA variant less frequently, and the low educational group displayed the least frequent use of the HA variant. As mentioned in section 6.5.1, in general, the percentage occurrence of the HA variant (DIP) is relatively low. All groups displayed a low percentage use of DIP; the high educational attainment group displayed a percentage use of 13% (it occurred in 8 borrowings out of 63), while the medium educational attainment group scored the highest percentage use of 18%, using it in 11 borrowings out of 61. The low educational attainment group displayed the lowest percentage use (10%), as they only used it in 7 borrowings out of 70 (see also Figure 6.9 below).
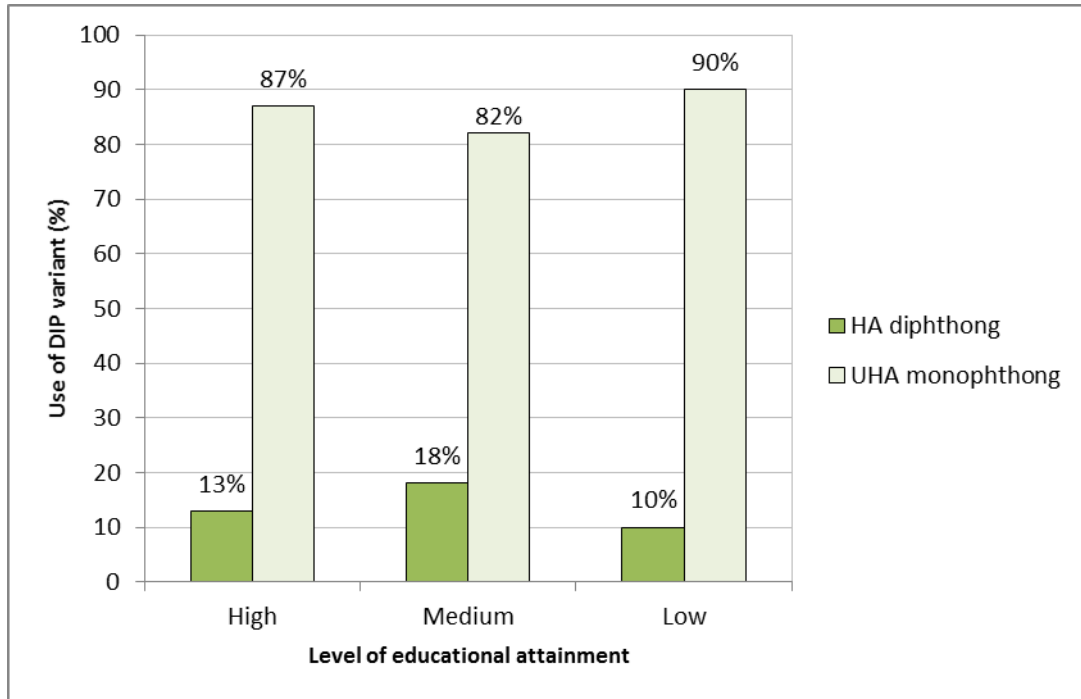
Figure 6.9: Use of DIP by level of educational attainment (%)

Although the occurrence of DIP is not as frequent as RS in the data, the interpretation of the RS variable is also applicable to the occurrence of DIP, as both variables' results, in relation to education, parallel each other. In other words, the medium educational attainment group displayed the highest use of HA variants, in both the DIP and RS variables, with the high educational attainment group displaying an intermediate level of use, and the low educational attainment group displaying the lowest level of use. The second method of calculation of the percentage use of variables, i.e. average percentage use analysis was applied, and the results are shown in Table… and illustrated by Figure… below.

Table 6.20: Average use of DIP by level of educational attainment

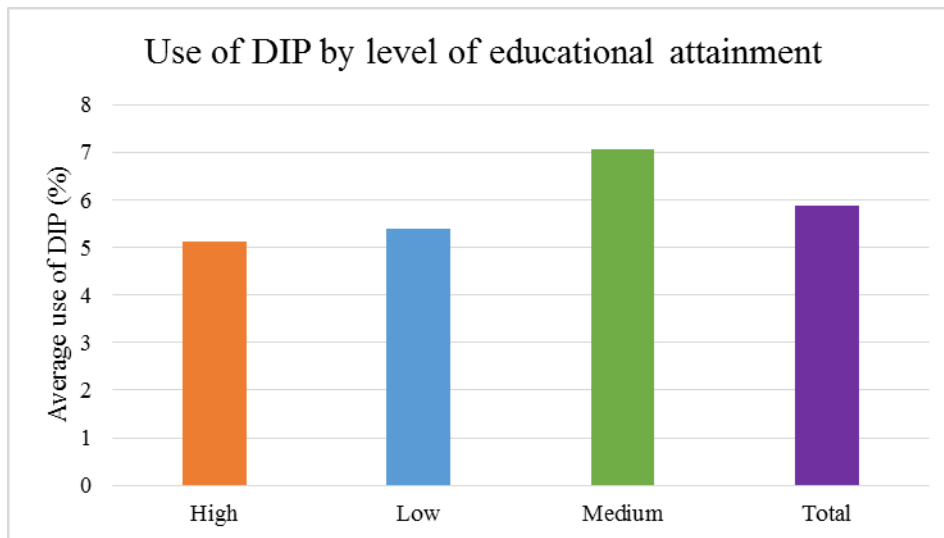| Ethnicity	Average use of DIP (%)	Standard deviation of DIP (%)
High	5.13	7.56
Low	5.39	4.38
Medium	7.05	5.66
Total	5.88	5.79

Figure 6.10: Average use of DIP by level of educational attainment (%)

The 17 subjects used on average 5.88% of 26 tokens of DIP, with a standard deviation of 5.79%. The highly educated group used on average 5.13%, with a standard deviation of 7.56%, the group with a low level of educational attainment used 5.39%, with a standard deviation of 4.38, while subjects with a medium level of educational attainment used on average 7.05%, with a standard deviation of 5.66%. Therefore, the highly educated group used less DIP than average, while the group with a medium level of educational attainment used much more than average.

Generally, it can be said that the results that emerged from both analyses seem to be convergent. In other words, in both methods of percentage calculation, the group with a medium level of educational attainment displayed the highest frequency of use of this variable. The other two groups displayed a slightly different direction of use in each analysis. According to the first method of calculation, the highly educated group displayed a slightly higher percentage use than the low educated group, while with the average percentage analysis, the latter displayed a slightly higher average percentage than the former.

Table 6.21: One-way ANOVA and Tukey's HSD tests results for DIP by level of educational attainment

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Education	2	12.8	6.42	0.172	**0.844**
Tukey's HSD	Education				
		diff	lwr	upr	p adj
	Low-High	**0.2576667**	-9.430403	9.945737	**0.9973326**
	Med-High	**1.9233333**	-7.313879	11.160546	**0.8506652**
	Med-Low	**1.6656667**	-8.022403	11.353737	**0.8952031**

Regarding the VC analysis results shown in Table 6.8, the results are also consistent with those of the other variables in terms of the use of the HA variant by the three groups. They indicate (see also Figure 6.11 below) that the medium educational attainment group displayed the highest percentage use of VC, as they used it in 44% of borrowings (67 out 152). The lowest percentage use of VC in the data was displayed by the low educational attainment group, as their percentage use of this variant was 23% (used in 31 borrowings out of the total of 133). The high educational attainment group used the variant in 28% of borrowings (58 out of 208).
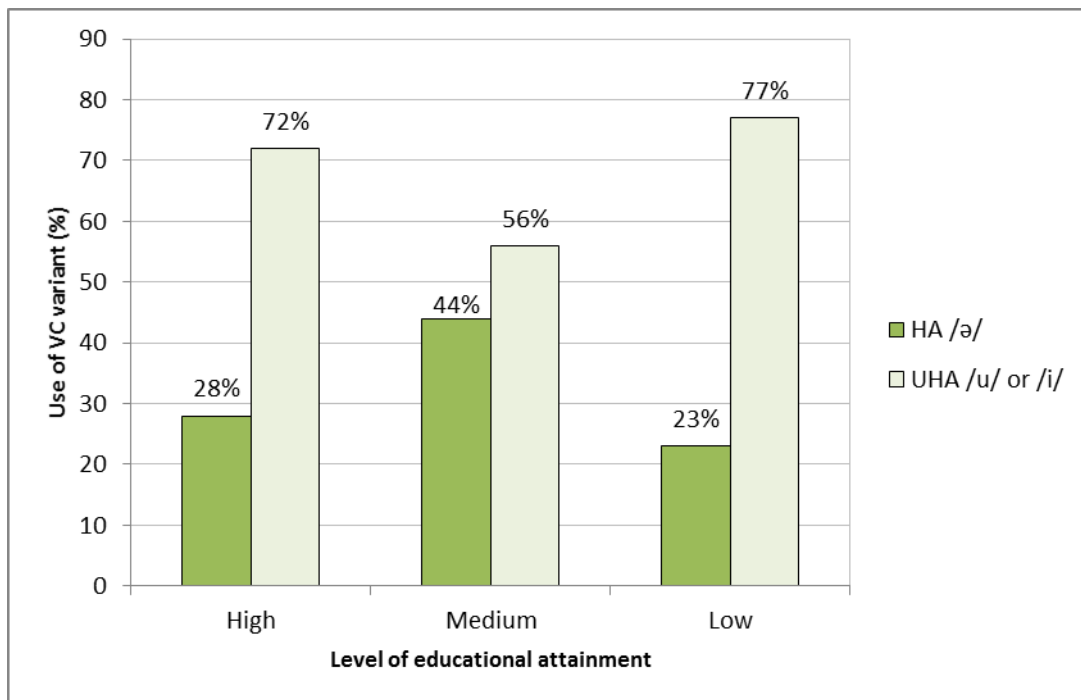

Figure 6.11: Use of VC by level of educational attainment (%)

Let us now see whether these results will be the same if we consider the average use of these variables by these three groups. Table 6.22 and Figure 6.12 below show the results of this method of calculation.

Table 6.22: Average use of VC by level of educational attainment

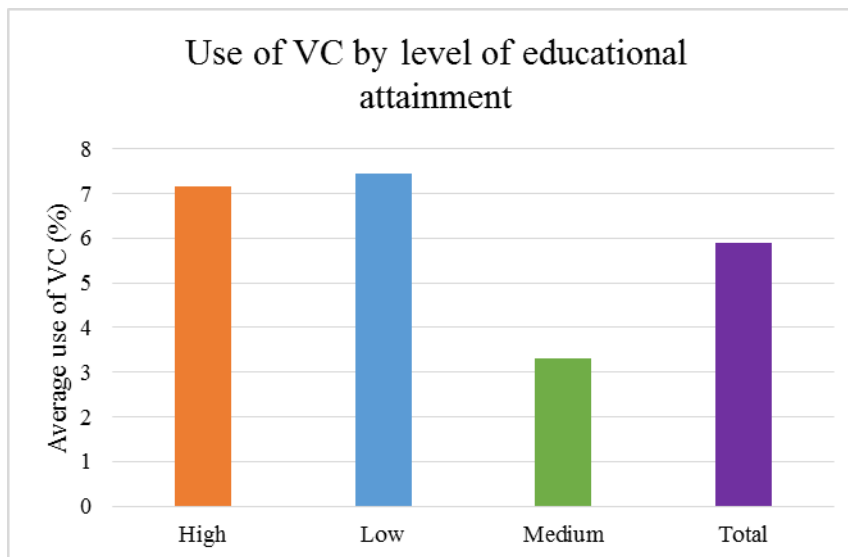| Ethnicity	Average use of VC (%)	Standard deviation of VC (%)
High	7.16	5.61
Low	7.44	2.29
Medium	3.31	2.48
Total	5.88	4.11

Figure 6.12: Average use of VC by level of educational attainment (%)

The 17 subjects used on average 5.88% of 156 tokens of VC, with a standard deviation of 4.11%. The highly educated group used on average 7.16%, with a standard deviation of 5.61%, the group with a low level of educational attainment used 7.44%, with a standard deviation of 2.29%, while subjects with a medium level of education used on average 3.31%, with a standard deviation of 2.48%. Therefore, the groups with a high and low level of educational attainment used more VC than average, while the group with a medium level of educational attainment used less VC than average. These results are almost the opposite to

the results that emerged from the first method. In other words, according to the first method, the participants with a medium level of educational attainment displayed a higher percentage use than the other two groups, which is opposite to the results for the same group according to the second method. Moreover, the highly educated participants' use of this variable is in middle place, followed by the low educated group of participants. On the other hand, the results of the same two groups are in the opposite order when using the second method.

Similar to the results of the analysis for the previous variable, the inferential statistics, i.e. One-way ANOVA and the post-hoc test, i.e. Tukey's HSD test, shown in Table 6.23 below show no significant difference in the use of this variable by the three groups.

Table 6.23: One-way ANOVA and Tukey's HSD test results for VC by level of educational attainment

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Education	2	61.51	30.76	2.059	**0.165**
Tukey's HSD	Education					
		diff	lwr	upr	p adj	
	Low-High	**0.276000**	5.849541	6.401541	**0.9923665**	
	Med-High	**-3.848333**	-9.688808	1.992141	**0.2309052**	
	Med-Low	**-4.124333**	-10.249875	2.001208	**0.2179149**	

It is important to note, that the results shown by both percentage analysis methods cannot be used to conclude that there is a correlation between the use of these variables and the level of education obtained by the participants. This is because the interaction between this social variable for educational attainment, and the other social variable (age), does not clearly facilitate such a conclusion. Therefore, these results are not strong evidence of the correlation between the use of a native HA pronunciation, when borrowing from UHA, and the level of educational attainment. In other words, age has a direct impact on these results.

6.5.3 Use of vocalic variables by ethnicity

Ethnicity is a crucial factor when analysing language variation, in situations where the speech community under investigation is ethnically diverse, like the case of the SC in Medina, in which there are two main ethnic groups: Whites (*Bīẓān*) and Blacks (*Ḥrāṭīn*), as explained earlier. This is why one of the research hypotheses is concerned with this issue, as it is hypothesised, that *Ḥrāṭīn* ethnicity participants are expected to show a higher tendency towards using, and accommodating towards UHA linguistic elements when borrowing from this Arabic variety. The statistical analyses of the correlation between the ethnicity factor and the use of the HA consonantal variants presented in Chapter Five generally validate this hypothesis. This is because for two of the three variables analysed, i.e. LEN and IHD, the *Ḥrāṭīn* ethnicity participants displayed a lower percentage use of the HA variants, while the results of the third variable analysed (DAF) showed almost the same percentage use of the HA variant by both ethnicities. In this section, another attempt will be made to examine the validity of this hypothesis by analysing the three vocalic variables. The statistical analyses of these variables are shown in Table 6.8 above.

The analysis of the results of this variable, shown in this table above, shows that the *Bīẓān* ethnic group used RS in 69% of borrowings (276 out of 401). On the other hand, the *Ḥrāṭīn* ethnic group used the HA variant (RS) in 40% of borrowings (67 out of 169). This means that the *Ḥrāṭīn* ethnic group used more UHA syllables when borrowing from this variety (in 60% of borrowings), while the *Bīẓān* ethnic group used the UHA syllables considerably less frequently (in 31% of borrowings), which is not in harmony with the HA syllable system (see Figure 6.13).
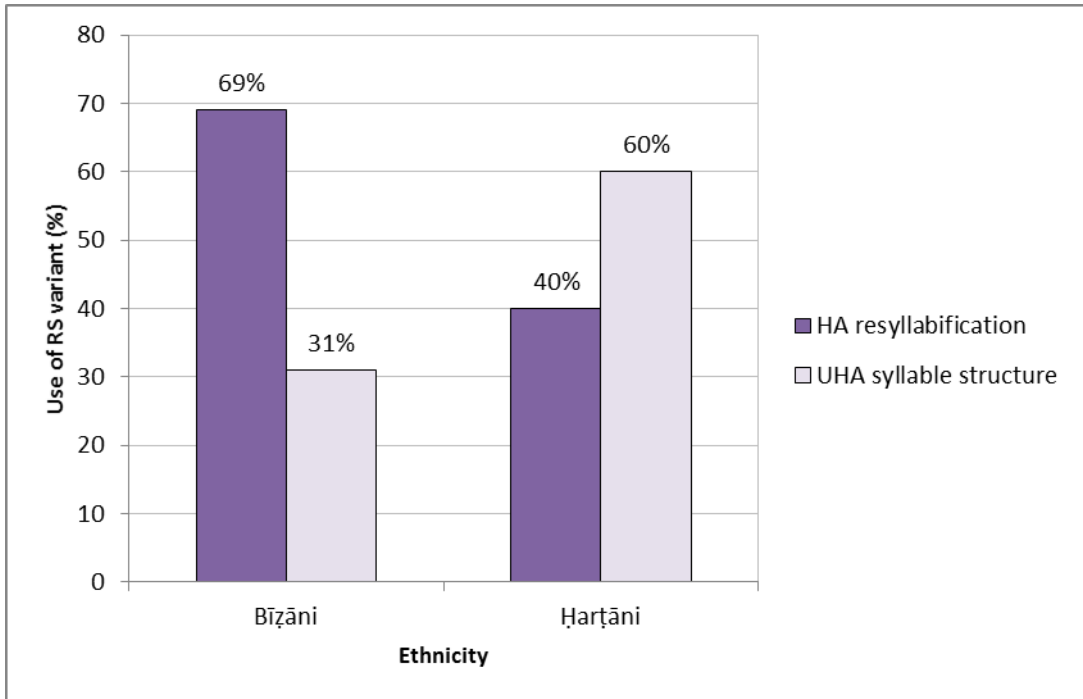
Figure 6.13: Use of RS by ethnicity (%)

In view of the individual percentage use of this variable shown in Table 6.9 above, similar results have emerged from the average percentage analysis method, the results of which are shown in Table 6.24 and Figure 6.14 below. In other words, the *Ḥarṭāni* ethnic group tend to use less HA variant RS on average than the *Bīẓāni* group.

Table 6.24: Average use of RS by ethnicity

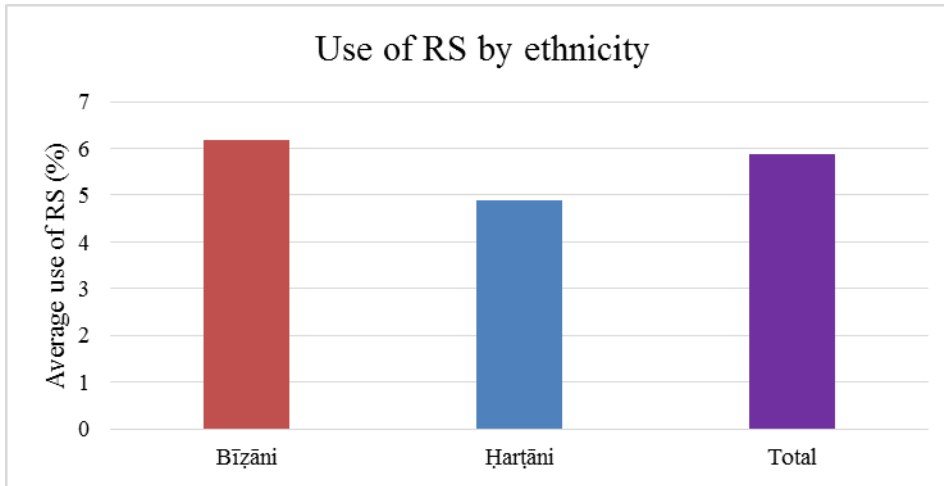| Age	Average use of RS (%)	Standard deviation of RS (%)
Bīẓāni	6.19	4.38
Ḥarṭāni	4.89	1.33
Total	5.88	3.88

Figure 6.14: Average use of RS by ethnicity (%)

The 17 subjects used on average 5.88% of 343 cases of RS, with a standard deviation of 3.88%. The *Bīẓāni* group used on average 6.19%, with a standard deviation of 4.38, while the *Ḥarṭāni* ethnic group used on average 4.89%, with a standard deviation of 1.33%. Therefore, the *Bīẓāni* group used more than the average level, while the *Ḥarṭāni* group used less than the average percentage use of this variable. Moreover, the *Bīẓāni* group had more variation in their usage of RS than the other ethnic group. Although the difference between the two ethnic groups is clear according to both methods above, the post-hoc test, i.e. Tukey's HSD test, considers the difference between the average percentage use of this variable by the two ethnic groups (0.3673077) as not statistically significant, as the *p*-value is greater than the alpha value of 0.05. A similar result emerged from the ANOVA test when comparing the means of the use of this variable by these ethnic groups. Table 6.25 below shows the results of these tests in detail.

Table 6.25: One-way ANOVA and Tukey's HSD tests results for RS by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	0.413	0.4127	0.995	**0.334**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni -Bīẓāni	**-0.3673077**	-1.152347	0.4177319	**0.3344494**

Regarding the use of the DIP variable by the two ethnic group, Table 6.26 below show shows the statistical analysis of variances results.

Table 6.26: One-way ANOVA and Tukey's HSD test results for DIP by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	0.00166	0.001656	0.254	**0.622**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni -Bīẓāni	**-0.02326923**	-0.1216588	0.07512033	**0.6215213**

Although the p-value of the DIP variable, does not indicate any statistically significant difference between the two ethnic groups, in terms of their use of the HA variant (DIP), the analysis of DIP, presented in the table above, shows similar results between the ethnic groups, in terms of the percentage use of the HA variant. In other words, the *Bīẓān* ethnic group showed a higher tendency to use DIP when borrowing from UHA, as they used it in 15% of borrowings (20 borrowings out of 135). In comparison, the *Ḥrāṭīn* participants used it in only 10% of borrowings (6 out of 59). These results are presented in Figure 6.15 below.
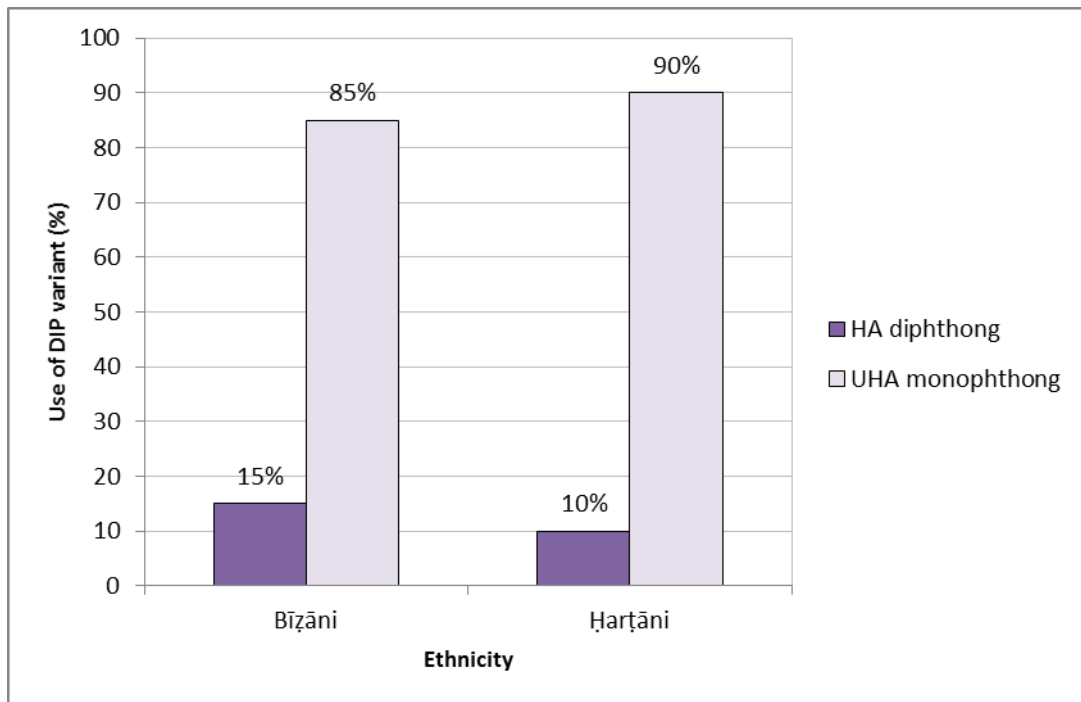

Figure 6.15: Use of DIP by ethnicity (%)

The analysis of the results of this variable, shown in Table 6.13, reveals that the use of the UHA variant (monophthongs) is the practice favoured by the vast majority of participants, regardless of their ethnicity. This might be a result of the monophthongisation of the traditional Arabic diphthongs, which is also attested in HA (see Chapter Two). Therefore, the participants may find it easy to adopt the UHA pronunciation of this variable, which does not seem to contradict the HA phonological system.

The average percentage analysis of the use of this variable by the two ethnic groups, shown in Table 6.27 and Figure 6.16 below, reveals similar results, though there are marginal difference between the two ethnic groups.

Table 6.27: Average use of DIP by ethnicity

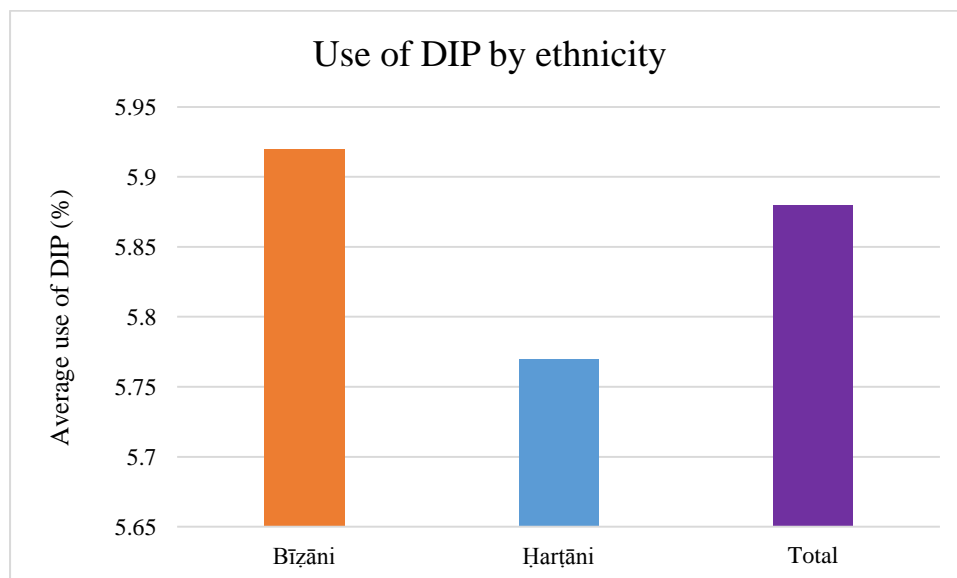| Age	Average use of DIP (%)	Standard deviation of DIP (%)
Bīẓāni	5.92	6.20
Ḥarṭāni	5.77	4.97
Total	5.88	5.79

Figure 6.16: Average use of DIP by ethnicity (%)

The 17 subjects used on average 5.88% of 26 instances of DIP, with a standard deviation of 5.79%. The *Bīẓāni* group used on average 5.92%, with a standard deviation of 6.20%, while the *Ḥarṭāni* group used on average 5.77%, with a standard deviation of 4.97%. Therefore, there is no significant difference in their average usage of DIP.

The statistical analysis of the VC variable, shown below in Table 6.28, reveals similar results to RS, as the *p*-values in the ANOVA and Tukey's HSD test (*p*=0.982) analysis shows no strong correlation between the use of VC and the ethnicity of the participant, as they exceeded the alpha value of 0.05.

Table 6.28: One-way ANOVA and Tukey's HSD test results for VC by ethnicity

Test	Results				
One-way ANOVA		Df	Sum Sq	Mean Sq	F value	Pr(>F)
	Ethnicity	1	0.000	0.00005	0.001	**0.982**
Tukey's HSD		diff	lwr	upr	p adj
	Ḥarṭāni -Bīẓāni	**0.003846154**	-0.3541992	0.3618915	**0.9820349**

Moreover, similar to the RS variable, the general percentage occurrence analysis of the HA variant (VC) among the ethnic groups, shown in Table 6.8, is clearly diverse. The *Bīẓāni* participants displayed more frequent use of the HA variant (VC), using VC in 35% of borrowings (115 out of the total of 325). As for the *Ḥarṭāni* participants, only 41 borrowings out of 168 (24% of borrowings) were produced with VC. These results are presented in Figure 6.17 below.
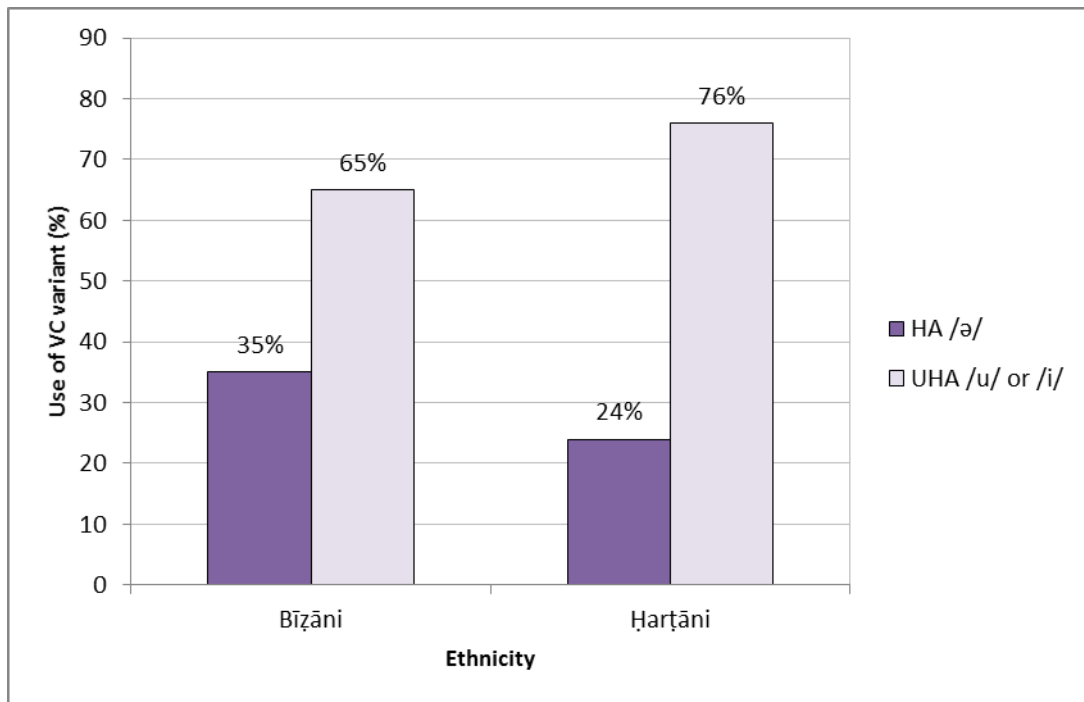
Figure 6.17: Use of VC by ethnicity (%)

However, using the second percentage calculation method (average percentage), the following results, shown in Table 6.29 and Figure 6.18 below, have emerged.

Table 6.29: Average use of VC by ethnicity

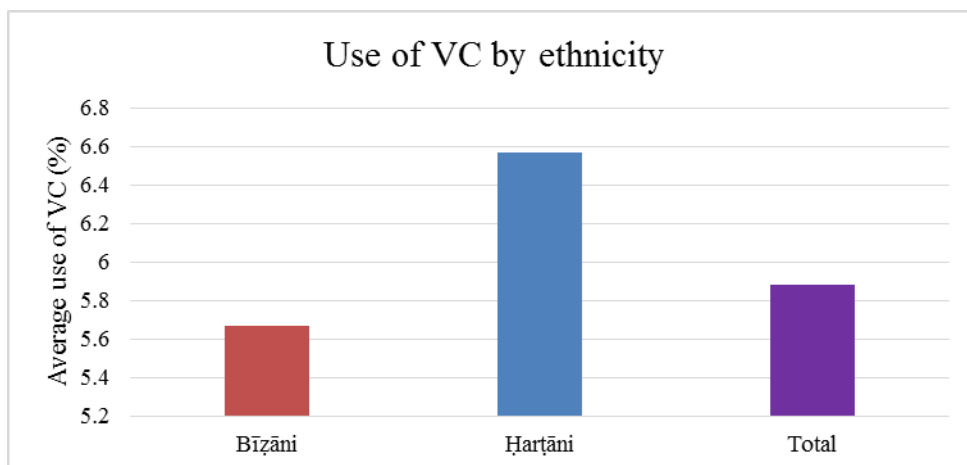| Age	Average use of VC (%)	Standard deviation of VC (%)
Bīẓāni	5.67	4.64
Ḥarṭāni	6.57	1.76
Total	5.88	4.11

Figure 6.18: Average use of VC by ethnicity (%)

The above results confirm the impact of the lack of homogeneity of the data on the results of the first method of calculation, Labov's method of calculating the frequency index of the standard variants for each of the linguistic variables. In other words, the analysis of the individual percentage use of this variable averaged according to the relevant group shows different results. The above table and figure show that the 17 subjects used on average 5.88% of 156 tokens of VC, with a standard deviation of 4.11%. *Bīẓāni* participants used on average 5.67%, with a standard deviation of 4.64%, while *Ḥarṭāni* participants used on average 6.57%, with a standard deviation of 1.76%. Therefore, the *Ḥarṭāni* ethnic group used more VC, on average, which is the opposite result to the first method shown above. Although the *Ḥarṭāni* ethnic group used more VC on average than the *Bīẓāni* group, the latter displayed more variation in using this variable than the former, as their standard deviation in the use of this variable is much higher than that of the *Ḥarṭāni* ethnic group.

6.5.4 Use of vocalic variables by gender

Gender is hypothesised to play a role in the linguistic variation displayed by male and female participants, in terms of their use of HA variants, as well as UHA variants. However, based on the statistical analysis of the variables in Chapter Five, gender seems not to be a strong factor, in conditioning the lexical and phonological variation displayed by the research participants. The common assumption (which this hypothesis is based on) is that females are generally careful in using their speech, which drives them towards more prestigious speech forms, than do males. Therefore, they are expected to use more UHA linguistic elements than men, as UHA is the prestigious variety used by the SC, when inter-group conversations take place, between them and the local Hijazi people and other Arab communities in Hijaz, who are not from their community. The previous statistical analysis in Chapter Five, does not support this assumption, however, both in terms of the fact that the linguistic differences

between the male and female participants were insignificant, and by the fact that the females showed a greater preference for the HA variants. In this section, another attempt will be made to analyse the vocalic variables, in order to test this assumption. The inferential statistical analyses of these variables are shown below in Table 6.30.

Table 6.30: One-way ANOVA and Tukey's HSD test results for RS, DIP and VC by gender

Test	Variable	Results				
One-Way ANOVA	RS	Df	Sum Sq	Mean Sq	F value	Pr(>F)
		1	0.440	0.4398	1.064	**0.319**
	DIP	Df	Sum Sq	Mean Sq	F value	Pr(>F)
		1	0.00024	0.000235	0.036	**0.853**
	VC	Df	Sum Sq	Mean Sq	F value	Pr(>F)
		1	0.0779	0.07794	0.961	**0.343**
Tukey's HSD	RS	Diff	lwr	upr	p adj	
		-0.4219048	-1.293513	0.4497035	**0.3185457**	
	DIP	Diff	lwr	upr	p adj	
		-0.009761905	-0.1200323	0.1005085	**0.8528644**	
	VC	Diff	lwr	upr	p adj	
		-0.177619	-0.5638442	0.2086061	**0.3425233**	

The two tests of variability shown in the table above reveal that there are no statistically significant differences between male and female participants in the use of HA variants, as the *p*-values are greater than 0.05 in all of the variables. This is similar to the same test results, concerning the use of the consonantal variables across gender, as was analysed in Chapter Five.

Table 6.8 above, shows that, unexpectedly, the female group displayed a higher percentage use of the HA variants. With the RS variable, the female group produced 64% of borrowings (87 out of 136) according to the HA syllable system (RS), while the male group

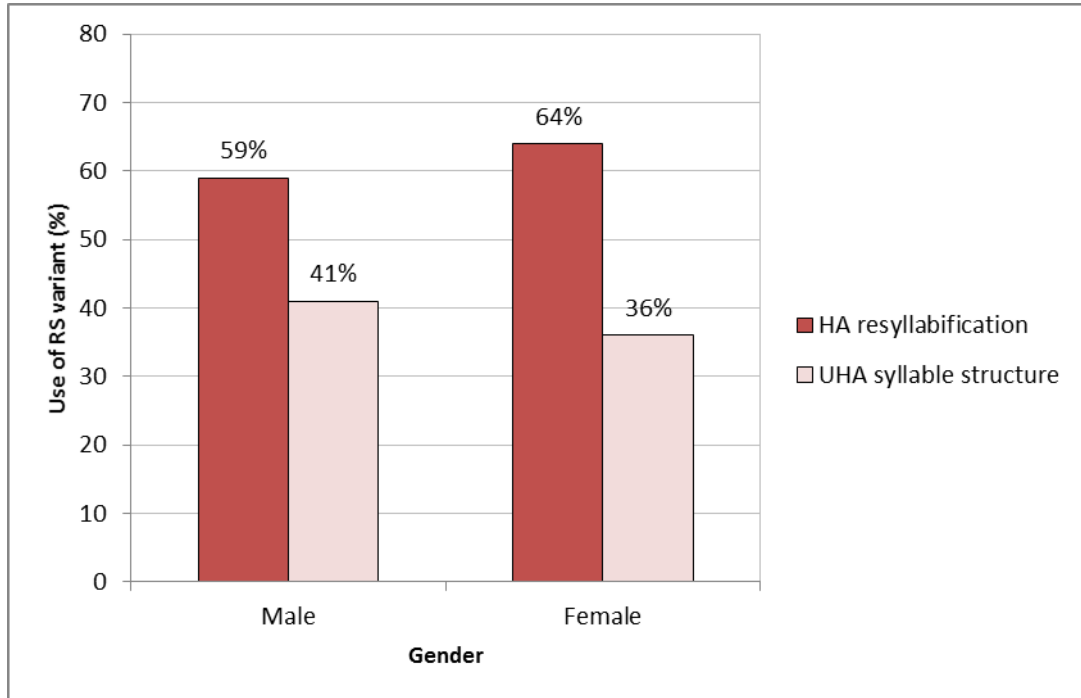displayed a lower percentage use of 59% (256 out of 434 borrowings). Figure 6.19 below illustrates this result.

Figure 6.19: Use of RS by gender (%)

The following table and figure show the analysis results of the average percentage use of this variable by the gender groups. In general, they show similar results with a clearer difference between male and female groups.

Table 6.31: Average use of RS by gender

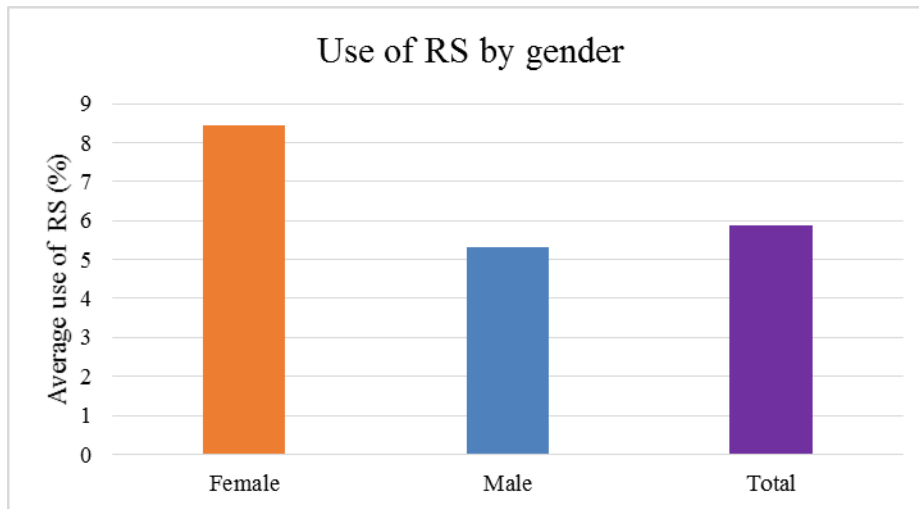| Gender	Average use of RS (%)	Standard deviation of RS (%)
Female	8.46	2.81
Male	5.33	3.93
Grand Total	5.88	3.88

Figure 6.20: Average use of RS by gender (%)

The 17 subjects used on average 5.88% of 343 tokens of RS, with a standard deviation of 3.88%. The female group used on average 8.46%, with a standard deviation of 5.33%, while the male group used on average 5.33%, with a standard deviation of 3.93%. Therefore, female participants' rate of usage was higher than the average use of RS. However, their use of RS has less variation than the male group, as the percentage of the standard deviation (2.81%) is lower than that of the male group (3.93%).

Likewise, with the DIP variable (even though the frequency of this variable is significantly less than the other two variables), the female group used the HA variant (DIP) more frequently, than the UHA monophthongs. From the total of 30 borrowings, the female group diphthongised the UHA monophthongs in 20% of cases (6 borrowings), while the male group displayed diphthongisation of the UHA monophthongs in 13% of cases (20 out of 157 borrowings). Similarly, with regard to the VC variable, the female group produced 38% of borrowings (36 out of 94 borrowings) from UHA with schwa /ə/ as a centralisation process of the UHA vowels /i/ and /u/, while the same realisation was produced by male participant at a lower percentage of 30% (120 out of 399 borrowings). These results are illustrated in Figures 6.21 and 6.22 below.
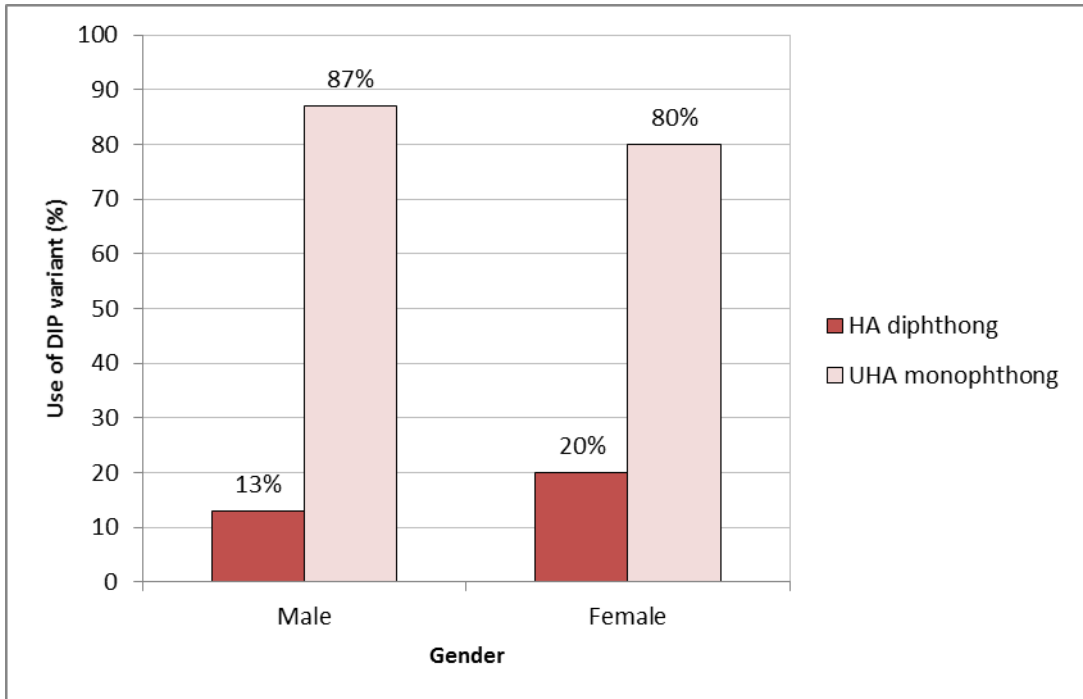
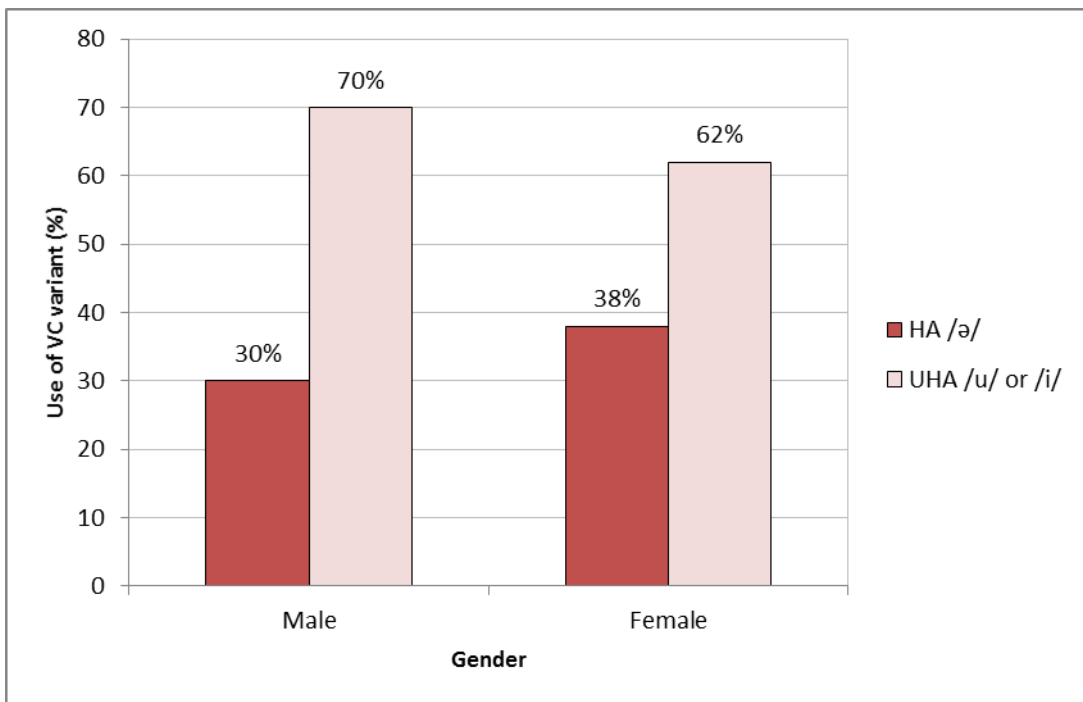**Figure 6.21: Use of DIP by gender (%)**

Figure 6.22: Use of VC by gender (%)

If we analyse the use of these two variables by male and female groups using the second method, i.e. individual percentages averaged in the relevant group, we produce the results shown in Tables 6.32 and 6.33., and illustrated by Figures 6.23 and 6.24. below.

Table 6.32: Average use of DIP by gender

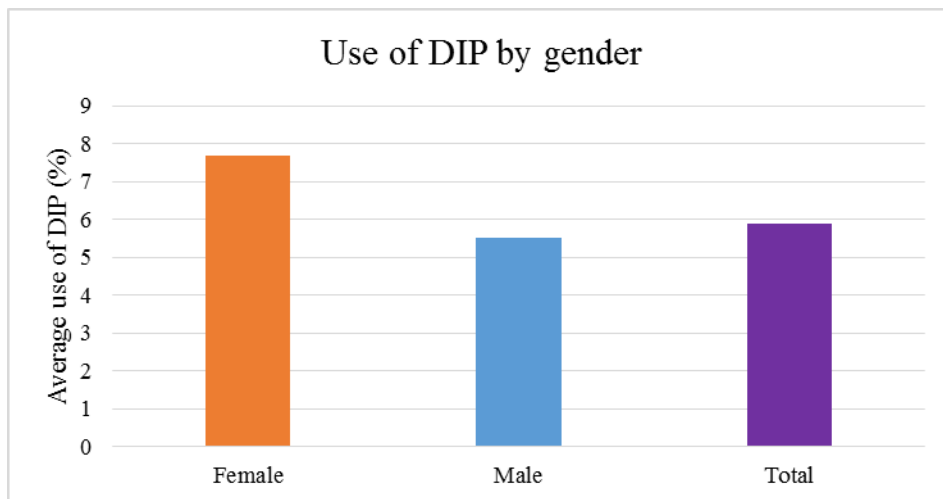| Gender	Average use of DIP (%)	Standard deviation of DIP (%)
Female	7.69	10.17
Male	5.5	4.94
Grand Total	5.88	5.79

Figure 6.23: Average use of DIP by gender (%)

The results above can be interpreted as showing that the 17 subjects used on average 5.88% of 26 tokens of DIP, with a standard deviation of 5.79%. Female participants used on average 7.69%, with a standard deviation of 10.17%, while the male group used on average 5.5%, with a standard deviation of 4.94%. Therefore, females' rate of usage was higher than the average use of DIP. Moreover, these results are similar to the results of the analysis of this variable by gender groups using the first method. The following table and figure show the results of the average percentage analysis of VC, which is also similar to the outcome of the first method of analysis of percentages concerning the use of this variable by gender groups.

The results below are as follows. The 17 subjects used on average 5.88% of 156 tokens of VC, with a standard deviation of 4.11%. Females used on average 7.69%, with a standard deviation of 2.94%, while males used on average 5.5%, with a standard deviation of 4.31%. Therefore, similar to the above variables, female participants used more than the average rate of VC.

Table 6.33: Average use of VC by gender

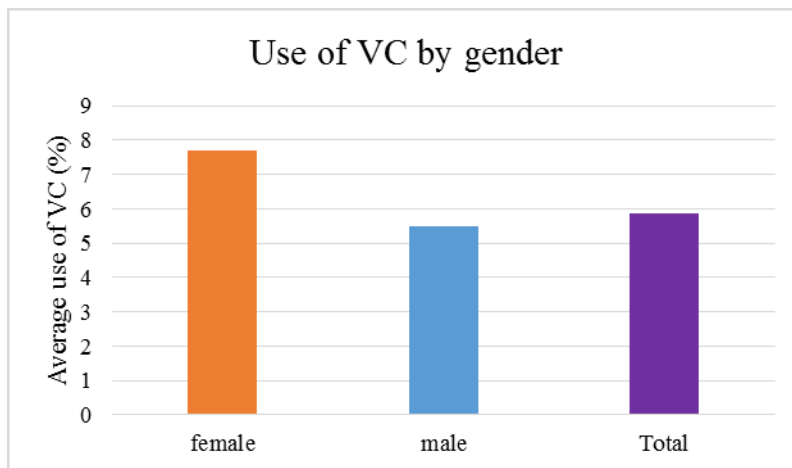| Gender	Average use of VC (%)	Standard deviation of VC (%)
Female	7.69	2.94
Male	5.5	4.31
Total	5.88	4.11

Figure 6.24: Average use of VC by gender (%)

The systematic higher percentage use of the HA variants by female participants, undermines the research hypothesis concerning the linguistic variation between male and female participants, according to which female participants are said to be more likely to use more prestigious variants (UHA) than male subjects, which is a common finding in sociolinguistic studies dealing with gender, as a factor in language variation. However, according to the analysis of this research data, as shown in the tables above, almost the reverse of this predicted finding is found in the present data, as female participants, in general, show a

greater tendency to use more HA variants, and less UHA variants, than male participants. The above results are likely to be due to what Al-Shehri describes, as "severe sex segregation enforced by religion and culture in Saudi Arabia [which] is reflected in the speech behaviour of women vs men" (Al-Shehri 1993: 9).

In other words, this 'severe' segregation is argued to decrease the chance of women having an equal opportunity to communicate openly with outsiders, which is reflected in the language variation displayed by immigrant women and men. This seems to be true in the case of the Shanāqiṭa immigrant community, as they have had to adapt to the social life in Saudi Arabia, as described by Al-Shehri, while in Mauritania (the native land) people are more open and direct communication between women and men is normal social behaviour. This social situation in Medina, means that the Shanāqiṭa females have fewer opportunities than males to communicate with other Hijazi people, and this can be added to the fact that this community, in general, is not open to outsiders. Moreover, this impediment to equal opportunities to communicate, experienced by the male and female participants in Medina, must be added to the fact that women in the Arab world generally receive less education than men in tribal communities, and this is exactly the case with the Shanāqiṭa immigrants in Medina. Therefore, the above results are more likely to occur as a result of the fact that female participants have fewer opportunities to communicate with the indigenous Hijazi people, than do male participants.

6.6 Conclusion

This chapter presented the results of three phonological variables relating to vocalic change in UHA lexical borrowings, which have been incorporated into the daily speech of the SC in Medina, in intra-group conversations. Before providing a statistical data analysis of the results of the phonological variables, i.e. RS, DIP and VC, phonological accounts of these

three variables were provided in order to be able to present a complete image of the data. Moreover, similar to the variables presented in Chapter Five, these three variables have received less attention in Arabic studies on phonological variation. Although both the HA and UHA variants of the variables under investigation, were subject to statistical analysis, the main concern of this study was the HA variants, that have been used when borrowing from native UHA words and phrases; this was also the case with the consonantal data presented in Chapter Five.

The statistical data analysis of the correlation between the occurrence of the HA variants, across age, indicated that the young age group (the 3rd G) showed a greater tendency to use the HA variants; they used RS in of 62% of borrowings, DIP in 19% of borrowings, and VC in 34% of borrowings. On the other hand, the older age group (the 2nd G) displayed usage rates of 58%, 8% and 29% for the proportion of borrowings realised with these respective variants. These results strengthen the research hypothesis related to the linguistic variation between participants according to age. Similar to the previous chapter, the statistical analysis of the use of these variants, according to educational attainment, was not effective enough to arrive at a clear interpretation of these results to be reached as the age factor clearly interacted with the participants' level of education. As a result, the research hypothesis related to this factor, and linguistic variation, was neither proven nor rejected.

As for the correlation between the use of HA variants and ethnicity, the statistical analysis obtained, revealed that there is a systematic correlation between the use of HA variants and the ethnic background of the participants. The *Bīẓān* ethnic group, systematically, displayed a more frequent use of all HA variants in borrowings, than did the *Ḥrāṭīn* ethnic group; 69% of borrowings by the former group were produced with RS, 15% with DIP and 35% with VC, while the *Ḥrāṭīn* ethnicity group displayed usage rates of 40%, 10% and 24% for borrowings realised with these respective variants. This, necessarily, means that

accommodation towards the UHA variants is greater for participants of the *Ḥrāṭīn* ethnicity. Therefore, the research hypothesis relating to the linguistic variation between participants across ethnic groups is strengthened by these statistical results.

On the other hand, the research hypothesis relating to the linguistic variation between participants, across gender, is not supported by the statistical data analysis. In addition, the analysis showed that the female group displayed a higher percentage use of all HA variants, than did the male participants. They produced RS in 64% of borrowings, DIP in 20%, and VC in 38% of borrowings, while the male group displayed usage rates of 59%, 13% and 30% for borrowings realised with these respective variants. These unexpected results have been attributed to other social factors, e.g. the 'severe' segregation of women in Saudi Arabia, and the lower level of education that women generally receive in the Arab world, especially in the tribal communities.

Chapter Seven

Conclusion

The main purpose of the present study was to investigate the urban Hijazi Arabic lexical borrowings, and the phonological processes associated with them, in the Ḥassāniyya Arabic spoken by the Shanāqiṭa immigrant community in Medina. As was shown, in the discussion above, that the core nature of the Holy City of Medina (as well as other Hijazi cities) is one of diversity, in terms of culture and dialects, as it is a cosmopolitan city inhabited by different ethnic immigrants. These immigrant communities became the main components of the urban Hijazi society in Medina. The immigrant Shanāqiṭa community (who are originally from Mauritania), is one of the main mosaic Hijazi communities in Medina. They have a strong and recognisable culture and linguistic presence in the city, as little has changed in their inherited culture and spoken language, when compared with that of their native North African Arab country, Mauritania. The urban life in Hijaz, seems to have had an insignificant impact on their culture and language use. The topic of lexical borrowings was chosen, instead of other common dialect contact outcomes, in order to examine to what extent the native phonological system of the dialect of this group of immigrants (HA), has had an impact on UHA borrowings, when they have been incorporated into intra-group conversations and dialogue in the community.

The host society's indigenous dialect (UHA), exhibits some phonological elements that differ from the speech community's dialect (HA). These phonological elements, in addition to morphological and lexical ones, were described in Chapter Two, which presented a linguistic account of these three linguistic levels in both dialects. This chapter showed that, although both dialects are varieties of Arabic, which means they share common linguistic

features, it is the distant areas in which both dialects are spoken, that has facilitated both dialects having distinctive linguistic features. It has been shown, in this study, that the phonological level is the most linguistically interesting one.

The detailed survey of both dialects in this chapter have helped to identify the linguistic variables that were later analysed and correlated, with the social variables in the data analysis chapters. These linguistic variables represent the most distinctive phonological features that contrast both dialects. They were divided into two groups, i.e. consonantal and vocalic. For the consonantal variables, it was shown that HA uniquely exhibits the non-Arabic sound /v/ as a phoneme, and /f/ as an allophone of this sound. Moreover, in HA, unlike the Peninsular Arabic dialects, or even many Arabic dialects outside this area, the omission of the initial glottal stop (*hamza*) characterises the dialect. In addition, it is similar to all Maghrebi dialects, in that the Classical voiced palato-alveolar affricate /ʤ/ is realised as the voiced palato-alveolar fricative /ʒ/, contrasting with the Peninsular Arabic dialects, including UHA. As for the vocalic variables emerging from the survey of both dialects, three phonological features were chosen to represent the distinctive and contrastive phonological elements.

The comparative nature of the description of both dialects, presented in Chapter Two, revealed that the syllable structure of both dialects seems to have fundamental differences; for instance, HA has a semi-constant consonant cluster (blend) system, while in UHA, the consonant cluster system is very strictly used. Therefore, the re-syllabification of UHA borrowings was one of the study linguistic variables. Moreover, that chapter revealed that due to the fact that the vowels /i/ and /u/ have restricted usage in HA, and the most common realisation of these two vowels is the schwa /ə/ (while they are very common in UHA), the centralisation of these vowels to be realised as schwa, was adopted as a second vocalic variable. The last vocalic variable, emerging from the description of both dialects, was diphthongisation. The selection of this variable was triggered by the fact that the realisation

of the Classical diphthongs /aj/ and /aw/ is restricted in UHA, while it is very common, and frequent, in HA (realised as /ej/ and /ow/ respectively).

According to the linguistic description of the HA, spoken by the SC, it is, to a large extent, similar to the variety of Arabic spoken in their native country (Mauritania). However, it exhibits a few phonological changes, and a large number of lexical ones. At the phonological level, there are certain sounds which are still in common usage by the native speakers of the dialect in Mauritania, but they are no longer in use by the SC in Medina, or they are in decline. The first one is /e/, or what is described by Taine-Cheikh (2007a: 242) as follows: "/a/ undergoes 'imāla and is realised more centralised (transcribed ä)". There is no strong evidence, in the data collected from the speech of the SC in Medina, to claim the existence of this vowel in their speech. Moreover, the realisation of the classical voiceless labiodental /f/, as the voiced labiodental /v/, and the classical voiced palato-alveolar affricate /dʒ/, as the voiced palato-alveolar fricative /ʒ/, seems to be in decline due to their low occurrence in the data.

At the lexical level, Chapter Two has shown that the most significant donor language to HA, is the Berber language (the Zenaga variety), which mainly enriches HA vocabulary, without having a major impact on the structure of the grammar of the dialect. The vast majority of Zenaga borrowings are names of things, and these borrowings demonstrate a special characteristic within HA vocabulary, and exhibit special cases of grammar, i.e. singular, plural, and masculine and feminine cases. Interestingly, these Zenaga-origin borrowings are rare in the data collected from the HA speech in Medina. However, close analysis of the HA spoken by the SC indicates, that, although the use of Berber-origin words is rare, HA is characterised as treating these borrowings in a similar way to UHA borrowings. In other words, the Berber-origin words mainly enrich the HA lexicon, similar to UHA

borrowings found in the speech of the SC immigrant community, in terms of providing naming terminology, without having a significant influence on the grammar of this variety.

Chapter Three was devoted to the phenomenon of lexical borrowing, and the main focus of the chapter was on describing it in the Arabic context. Both the traditional (historical) and modern approaches to this topic were highlighted. The traditional approach is what was described in numerous medieval linguistic works, such as that of Sībawayh and Al-Jawālīqi, and was called *al-Muʿarrab*. This chapter revealed that this approach is still used in modern times, and many of its phonological and morphological processes were used to form the modern *taʿrīb* 'Arabisation'. In order to build a solid ground for the data analysis chapters, this chapter also highlighted the relationship between lexical borrowing and other linguistic phenomena, namely, code-switching and diglossia. The focus of the chapter was narrowed down to present the diglossic situation of the speech community, under investigation in the present study. It was argued that the most relevant description of the linguistic situation of the research speech community, is that of triglossia (cf. Romaine 1995; Youssi 1995), not diglossia, as the community use three Arabic varieties in distinctive conversational situations.

The three Arabic varieties, used by the community, are HA, UHA, and MSA. The latter is used by the community in a similar way to the rest of the Arab communities, i.e. for formal situations, such as in education, sermons, lectures, poetry etc.; in other words, in highly prestigious situations. The other two varieties are used in completely different situations. In the case of HA, it is used as the main speaking variety, when intra-group conversations between the community members take place. As explained above, this HA variety spoken by the SC borrowed numerous words and phrases from UHA, without any significant impact on the structure of the grammar or the main phonological features of the dialect. The third conversational situation takes place when the community members have inter-group conversations with outsiders, i.e. any person who does not belong to the SC, whether he/she

is a native urban Hijazi, Bedouin Hijazi, or from any other Arab communities. In this conversational situation, UHA is the variety used continuously, regardless of the person's degree of fluency in it, which, to a large extent, is dependent on the level of contact with native urban Hijazis, and the extent of the need to use this variety in daily life affairs. Moreover, it was indicated that the research data was collected from only the second conversational situation, in which HA is used with numerous UHA borrowings.

Chapter Four presented and reviewed the quantitative sociolinguistic framework adopted as the methodological framework in the present study. In addition, it described, in detail, the methods and means that were used to collect, organise and analyse the data. This chapter emphasised the fact that data was mainly elicited by using a common method in sociolinguistics, i.e. tape recording. This chapter reviewed and described the two settings that were chosen for these tape recording sessions: personal interviews and group discussions. Two methods of sampling were reviewed and discussed, i.e. *random sampling* and *judgment sampling*. It was revealed that the sampling method adopted to sample the research participants, was *judgment sampling*. It was argued, in this chapter, that this method, seems to be the only appropriate sampling method to use in the Arab world, due to the difficulty, if not impossibility, to approach Arab speakers without pre-arrangement. This is clearly due to the lack of openness in Arab communities, and the unfamiliarity with this type of empirical research.

In this chapter, the method of transcribing the data was also highlighted, which was, mainly, fully transcribed using the IPA (International Phonetic Alphabet), and was translated as well. The research sociological variables were identified and defined, i.e. age, educational attainment, ethnicity, and gender. In addition, based on the linguistic description of both dialects displayed in Chapter Two, the phonological variables, which were to be correlated with the sociological variables, were briefly defined. It was argued here, that these

phonological variables represent the most frequent phonological elements that contrast HA and UHA. These phonological variables were classified into two groups: consonantal variables and vocalic variables. The first group consists of three variables:

- De-affrication (dʒ) → [ʒ].

- Lenition (f) → [v].

- Initial *hamza* dropping (ʔ) → [Ø].

The second group contains the variables that are involved with vowel change, and also comprises three variables:

- Re-syllabification: initial [CV], and sequenced [CV.CV] → syncope, epenthesis and metathesis.

- Diphthongisation: monophthongs → diphthongs.

- Vowel centralisation: (i), (u) → [ə].

Moreover, the research participants were briefly introduced, together with relevant information, which included biographical information and general observations, noted during the individual interviews or group discussions.

Chapters Five and Six consisted of the data analysis and discussion. The core focus of these two chapters was on the variability associated with the use of the phonological variables, and the social constraints that were expected to have an impact on the variability. Moreover, the analysis of the borrowings, revealed that the most frequent word types used by the Shanāqiṭa immigrants in Medina, in the inter-dialectal borrowing process, were content words, e.g. nouns, verbs and adverbs. This is similar to the findings commonly found in the context of inter-lingual borrowing. The statistical analysis of borrowing types, i.e. loanwords, loanblends, and loanshifts, revealed interesting findings. The analysis suggested that the highest number of borrowings found in the inter-dialectal situations consisted of loanwords

(58%), while the mixing between HA affixes and UHA borrowing words (loanblends) was relatively low at 13%. On the other hand, it seems that our speech community found it more preferable to use their own words, with their phonological and grammatical structures, with new meanings borrowed from UHA, than to mix HA affixes with UHA new borrowed words (loanblends). This finding is based on the relatively high number of loanshift words in the data (470 words out of the total of 1,591 borrowings; 29%).

These results also indicate, that there is a significant difference between the inter-dialectal borrowing and the inter-lingual borrowing situations, in terms of the borrowability rate of the different borrowing types. In the latter, the borrowability of semantic loans or semantic extensions (loanshifts) is usually low, compared to other types. Although there have been no adequate studies conducted on this matter, it can be concluded that, based on our data, the number of semantic loans (or semantic extensions) in the inter-dialectal borrowing situation (at least in terms of similar cases to the Arabic inter-dialectal borrowing demonstrated by the immigrant SC in Medina), is likely to be markedly higher than in a language contact situation. This can be explained, as reflecting the fact that both linguistic varieties share many vocabulary items, which may have the consequence of a speaker borrowing only the meaning from the other variety, to add to an existing native word. In such a situation, it would not be necessary to use a similar word with, probably, a different phonological system; this would present more difficulties for the users of the language variety, than the addition of a new meaning to a native form of the word.

It is possible to draw conclusions regarding the impact of the social factors on the variability of the use of these phonological variables, that emerged from the statistical data analysis, presented in these chapters. The age factor (generation) seems to play a significant role in the phonological variation produced by the study participants, when they borrow linguistic elements from UHA, while ethnicity is the second most important factor. The other

two social factors, i.e. educational attainment and gender, displayed a less important impact on the phonological variation produced by the study participants.

The data analysis of the occurrence of the HA variants (alongside the incorporation of UHA borrowings) according to age, indicated that speakers in the young age group (the 3rd G) demonstrated a greater tendency to use the HA variants across all of the consonantal and vocalic variables. The results support the research hypothesis relating to the linguistic variation of participants according to their age. However, the analysis of the linguistic use of these variants according to educational attainment, was not effective enough to enable these results to be clearly interpreted, as was the age factor, clearly interacted with the participants' level of educational attainment. As a result, the research hypothesis regarding educational attainment and linguistic variation was neither proven nor rejected.

Furthermore, with regard to the correlation between the use of HA variants and ethnicity, the analysis indicated a systematic correlation between the use of HA variants and the ethnic background of the participants. The *Bīẓān* ethnic group, systematically, used, almost, all of the HA variants more frequently in borrowings, than did the *Ḥrāṭīn* ethnic group. This indicates, that accommodation towards the UHA variants is greater for participants of the *Ḥrāṭīn* ethnicity. Therefore, this means that the research hypothesis relating to the linguistic variation between participants, according to ethnicity, is strengthened by these results. On the other hand, the research hypothesis regarding the linguistic variation between participants according to gender, is not supported by the data analysis. Moreover, the analysis showed that the female participants used the majority of HA variants at a higher percentage, than did the male participants. These unexpected findings have been attributed to other social factors, e.g. the 'severe' segregation of women in Saudi Arabia (a hypothesis suggested by Al-Shehri 1993), and the fact that women generally receive a lower level of

education in the Arab world, especially in the tribal communities, such as Mauritanians, and the research speech community of Mauritanian immigrants.

7.1 Contribution, Recommendations (Further Studies), and Limitations

The present study constitutes an original contribution to knowledge in two linguistic fields: sociolinguistics and dialectology and, specifically, to Arabic sociolinguistic and dialectology studies. It represents one of the Arabic dialects, that have suffered from a relatively low level of attention from Arabic dialectologists and linguists, although it is spoken by more than 3 million Arabs in Mauritania and its borders. Moreover, the present study is believed to be the most comprehensive study on the dialect written in English, as the vast majority of previous studies concerning this Arabic dialect were written in French.

It is one of the few studies that took lexical borrowings, and the phonological processes associated with them, as sociolinguistic variables to be correlated with sociological variables. Moreover, it is, to the best of the researcher's knowledge, believed to be the first to present an analytical approach to the variation between the White and Black Arabs. In other words, it presents a very new and unique area of Arabic studies, as it presents the speech of a unique Arab community who are still influenced by slavery practices, i.e. *Ḥrāṭīn* (former slaves) and *Bīẓān* (former masters) in Mauritania. This type of study has been mainly explored in Western studies, e.g. Labovian studies, by focusing on speech communities where slavery and its practice were forbidden centuries ago. However, slavery and its practices still significantly affect this community in Mauritania and, to a large extent, the research speech community in Medina who emigrated from this country. Therefore, this study investigated an area that is not commonly focused upon in Arabic studies.

This study, also, gave a solid ground for future studies concerning the inter-dialectal borrowing between Arabic dialects, especially in places that have a diversity of Arab

communities, such as the rich Arab countries, i.e. Arab countries of the Gulf (GCC), as their economic situation encourages emigration from different Arab communities, which have economic difficulties and fewer job opportunities.

Moreover, the main focus of the present study, was on the lexical borrowings that the speech community incorporate in their intra-group conversational situations; however, it did not include an investigation of inter-group conversation situations with people outside the community (outsiders). This was excluded from the present study as it involves a different type of linguistic analysis, i.e. the examination of code-switching (CS). Nonetheless, this conversational situation, which is usually held above the level of conscious linguistic awareness in UHA, is an interesting sociolinguistic area of enquiry, in which phonological and grammatical features could be explored, in addition to the social and socio-psychological motivations underlying this linguistic behaviour. Moreover, studying the HA spoken by the SC in other Hijazi areas, particularly in Mecca, would be expected to result in interesting findings, as the community is relatively big, and is adequate for such a study. However, based on the researcher's knowledge of the SC in Mecca, the HA variety spoken by them is more adaptable to UHA linguistic features, as the community is quite divided in different places in this big holy city, unlike the community in Medina, who live in very connected neighbourhoods.

The study also opens up the possibility of further sociolinguistic studies in Medina, as the city is highly diverse, and there has been a lack of such studies in the past. One suggested further investigation, in this regard, is to study the linguistic outcomes of the gradual demographic change in the city, that has occurred as a result of extensive migration of the Bedouin tribes, from the near-rural areas and deserts to the city. This huge demographic change is expected to bring new dialectal change to the city, which is more likely to lead to the dominance of Bedouin dialects over the native sedentary dialect of the urban Hijazi

community. There is an interesting area also to investigate, which is what extent the Bedouin dialect is influenced by UHA in the city. Finally, although the present study concentrates on cross-dialectal borrowing, it would nonetheless be a significant contribution to the field, if a study were undertaken to draw a comparison between inter-dialectal and inter-lingual borrowings from different aspects, such as the different types of borrowings and the phonological and morphological processes accompanying them. In addition, an interesting study would be to compare the borrowability of borrowing types, i.e. lexical borrowings and semantic borrowings, and parts of speech (e.g. nouns, verbs, adjectives…) in both borrowing situations.

Although the study is an original contribution to the previous stated research areas, it has some limitations, similar to other studies in the field. First, regardless of the huge efforts made to have an adequate number of female participants, but due to some social restrictions in Saudi Arabia regarding direct contact with unrelated females, I was only able to include 3 female participants in the study. I had to exclude 3 others from the study, as the recording quality of their interviews was poor; although the researcher had tried to overcome the previously mentioned problem, by entrusting this task to assistant, but although he had received some training in advance of the task, his low level of experience in recording such data, resulted in poor quality recordings. Second, due to the overlap between the educational attainment and age factors, it was not possible to examine, deeply, the research hypothesis relating to the impact of educational attainment on the linguistic variation, displayed by the study participants. Finally, some of the research linguistic variables, i.e. the vocalic variables, were complicated, and needed a great deal of time and effort to be correctly transcribed; however, the data transcription was impressionistic, with all possible efforts made to ensure that it was as close as possible to what had been uttered by the participants.

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