A Sociolinguistic study of the Dawāsir dialect in Dammam, Eastern Arabia:

fortition of /j/ and unrounding of /a:/

Hind Khalifa Alaodini

A thesis submitted for the degree of Doctor of Philosophy

Department of Language and Linguistics

University of Essex

May 2019

Dedication

To my sun and moon, my lovely parents Khalifa and Aisha.

To my late grandmother Haya who passed away at the beginning of my work, I deeply miss you.

إلى شمسي و قمري، والداي العزيزان خليفة و عائشة

و إلى جدتي الراحلة هيا اللتي رحلت عن دنيانا في بداية رحلتي للدكتوراه: أفتقدك كثيراً

Acknowledgment

(و قل ربِ زدني علما).

سورة طه آية 114

الحمد لله حتى يبلغ الحمد منتهاه

I am deeply indebted to my beloved supervisor Professor Enam Al-Wer. Indeed, words fail to bring out the full extent of my appreciation, respect and gratitude toward your nice and loving character. Thank you for your continuous support throughout my PhD research, and for your patience, encouragement, and immense knowledge.

There are no proper words to convey my love and gratitude toward my lovely parents. My parents you are everything to me and you are my enlightening candles that brighten my life and soul. I am proud to be your daughter, thank you for the support and the strength you have provided me with throughout my life. To my two beloved sisters Mariam and Haya, I want to say you are very precious to me. I am really grateful that you are my sisters and thank you for always being close to me and for your continuous support and concern; I love you to the moon and back. My dear brother Abdulaziz, words fail to express my love and appreciation toward you; thank you dear for everything.

To my late grandmother Haya (May her soul rest in peace), there are many words I would like to say; I wish I will meet you in a better place. I wish that you could have been one of my participants, but your sickness and death stood in the way of your participation. Grandmother or as I used to call you '*yadda*', I have all the love for you and I still hear your voice inside me. I am sure if you were alive you would be proud of me.

The PhD journey would not have been enjoyable without the presence of my friends: Dr. Abeer Husain, Dr. Deema Alammar, Dr. Noora Abuain, Dr. Areej Alhawamdeh, Dr.

Khairia Alqahtani, Dr. Sara Al Sheyadi, Ghaida Al-Khaldi, Dr. Enas Jambi, and my lovely friend Carlie FitzGerald, as well as my lovely Emarati friends Shamma and Mahra. My friend Radwa Abdulfattah, your thoughtfulness is a gift I will always treasure.

To my uncle Dr. Mohammad Al-Dossari, I am proud to include your dissertation as one of my references. From the Saudi Embassy, to Mr. Fahad Al-Harbi, I can never thank you enough for your support. Thank you, Mohammad Al-Mutairi, for the continuous help and support.

I also take this opportunity to express gratitude to my kind and lovely friends, Dr Nuha Al-Essa and Dr Manal Al-Roziza. Nuha and Manal, you are my dearest friends and I will never forget our meetings and chats in London. In addition, I would like to express a deep sense of gratitude to the lovely Anne Blundell with whom I became acquainted at a later stage of my journey. As stressful as this period has been, it was a great delight due to her kindness and much appreciated support.

I would like to express my sincere thanks and gratitude to my true friend, the lovely Abeer Husain. Abeer is the first Saudi friend I knew in Colchester; our friendship goes back to 2011 when we were studying at the CESC. Thank you Abeer for all the support and encouragement you have provided me with. My appreciation is not only for now, but will last forever. I will never forget your kindness, support and for all the fun and happy moments we have had during the PhD journey.

My lovely friend Deema Al-Ammar, I appreciate your encouragement and support, and that fact that you are always by my side. I miss your company.

My warm thanks to the kind Dr Sara Al Sheyadi, you are a friend and a sister. Sometimes words fail to express my appreciation but your positive and nice attitude had a huge impact on me. Thanks for the useful chat and pieces of advice. I really enjoy your company.

Ghaida Al-Khaldi, you always know how to make life brighter for everyone you know; thanks dear, you are always in my heart and I will never forget you.

To my true friend Reema Al-Jabr, you are a friend and sister, thank you for your concern and continuous support.

A special gratitude goes to my lovely friend Sara Aqeel; I am proud of your friendship. I knew Sara when we were studying at the CESC. Sara was the first Arabic friend I knew. I enjoyed your company and our trips in and out of Colchester a lot. The happy moments will never be forgotten. I appreciate your encouragement and that you are always asking about me.

I would also like to dedicate this humble work to Mrs Fatima Al-Ghamdi, who passed away in August 2014. Mrs Fatima contributed to my research with useful references and I want to say to her that I will always remember her kindness and supplications for me.

I would like to deeply thank all of the participants in this study. You made this dream come true. Thank you for all the time and help you offered me during field work.

From the Department of Language and Linguistics, I would like to thank the members of my Supervisory Board Prof. Peter Patrick and Dr. Vineeta Chand for their feedback and support. I am thankful too to the administrative staff in the departmental office for their help and support.

I would like to thank all of the members of the Arabic Research Group: Abeer, Areej, Deema, Noora, Alya, Najla, Siham, Uri, Rob, Mohammad, Moayyad, Khalid, Wisam and Majid. Special thanks and gratitude go to Rob Potter and Mohammad Al-Rohili for their support and help during a difficult time.

To all those people who are in my heart and mind, I want to say a big thank you for always being by my side; and say that you will always be in my mind and in my heart. Thanks to all of the known and unknown well-wishers, friends and for all who contributed to my research both directly and indirectly.

Abstract

The present research investigates two sociolinguistic variables in the dialect of the *Dawāsir* who reside in Dammam in Kingdom of Saudi Arabia. Those *Dawāsir* immigrated from their homeland *Wādi ad-Dawāsir* in Najd to Bahrain and later returned to KSA, specifically Dammam. Dammam is a coastal city located in the Eastern part of KSA, very close to Bahrain. Sociolinguistic interviews were carried out to obtain data from 39 speakers from the *Dawāsir* who were born, and still live in Dammam.

The research investigates two variables: (ʤ) (the variation between [ʤ] and [j]); and the rounding and unrounding of the long vowel (ɑ:) word-medially. The correlation between internal (linguistic) factors and three social factors, namely age, gender and social networks is examined. The present study provides a quantitative analysis within the framework of the variationist theory, by using the multiple regression software Rbrul.

The data analysis shows that the occurrence of the traditional variants [j] and [ɒ:] is much lower in comparison to the innovative variants: 76 % for [ʤ] and 97 % for [ɑ:]. Overall, the use of [j] and [ɒ:] word-medially is receding, seemingly indicating a change in progress away from the traditional, local variants. The local dialect is undergoing levelling of the marked features toward the koinised or the supra-local linguistic features in KSA.

In regards to the social predictors, the results show that speakers who maintain loose social networks, predominantly men across the different age-groups (old, middle-aged, young) and young females, are leading the change in using the common features in KSA. On the other hand, speakers with tight social networks, mainly old women, are more conservative in retaining the traditional local linguistic features.

In terms of the internal factors, preceding environment is a strong predictor of variation. Contrary to the literature, the innovative variant [ʤ] prefers high vowels, and [ɑ:] prefers dorsal and coronal consonants.

Directory for the phonetics and the transcription system

In the present project, symbols listed in the table below are used for Arabic transcription. IPA (International Phonetic Alphabet) and EALL (Encyclopedia of Arabic Language and Linguistics) are used in the present thesis. IPA is used in transcription. EALL system in Arabic transliteration is used for people's names and places. But, when quoting examples from previous studies, the same symbols adopted by the researchers will be used.

Arabic	**EALL**	**IPA**	
ء	ʾ	ʔ	Voiced glottal stop *hamza*, e.g. *ʔakil* 'food'.
ب	b	b	Voiced bilabial stop *bāʾ*, e.g. *ba:b* 'door'.
ت	t	t	Voiceless dento-alveolar stop *tāʾ*, e.g. *ta:ʤir* 'merchant'.
ث	t̲	θ	Voiceless interdental fricative *t̲āʾ*, e.g. *θigi:l* 'heavy'
ج	j, ğ	ʤ	voiced post-alveolar fricative *ʤi:m/ğīm*, e.g. *ʤimal* 'camel'.
ح	ḥ	ħ	Voiceless pharyngeal fricative *ḥāʾ*, e.g. *ḥari:r* 'silk'
خ	x	x	Voiceless velar fricative *xāʾ*, e.g. *xe:tˁ* 'a thread'.
د	d	d	Voiced dento-alveolar stop *dāl*, e.g. *digi:ga* 'minute'.
ذ	ḏ	ð	Voiced interdental fricative *ḏāl*, e.g. *ðe:l* 'tail'.
ر	r	r	Voiced alveolar trill *rāʾ*, e.g. *ri:ʃ* 'feather'.
ز	z	z	Voiced alveolar fricative *zāy*, e.g. *ze:t* 'oil'.
س	s	s	Voiceless dental fricative *sīn*, e.g. *sagf* 'roof'.
ش	š	ʃ	Voiceless alveo-palatal fricative *šīn*, e.g. *ʃʤara* 'tree'.
ص	ṣ	sˁ	Voiceless velarised alveolar fricative *ṣād*, e.g. *sˁagir* 'falcon'
ض	ḍ	dˁ	Voiced velarised dento-alveolar stop *ḍāḍ*, e.g. *ʔabjadˁ* 'white'.
ط	ṭ	tˁ	Voiceless velarised dento-alveolar stop *ṭāʾ*, e.g. *tˁajr* 'bird'.
ظ	ḏ̣	ðˁ	Voiced velarised interdental fricative *ḏ̣āʾ*, e.g. *ðˁala:m* 'darkness'.

ع	ʿ	ʕ	Voiced pharyngeal fricative *ʿayn*, e.g. *ʕju:n* ‘eyes’.
غ	ġ	ɣ	Voiced uvular fricative *ġayn*, e.g. *ɣju:m* ‘clouds’.
ف	f	f	Voiceless labio-dental fricative *fāʾ*, e.g. *fa:r* ‘mouse’.
ق	q	q	Voiceless uvular stop *qāf*, e.g. *qalb* ‘heart’.
ك	k	k	Voiceless velar stop *kāf*, e.g. *kaʔs* ‘glass’.
ل	l	l	Voiced dental lateral *lām*, e.g. *lajl* ‘night’.
م	m	m	Voiced bilabial nasal *mīm*, e.g.
ن	n	n	Voiced alveolar nasal *nūn*, e.g. *nu:r* ‘light’.
ه	h	h	Voiceless glottal fricative *hāʾ*, e.g. *hawa* ‘air’.
و	w	w	Voiced labiovelar glide *wāw*, e.g. *ward* ‘flowers’.
ي	y	j	Voiced palatal glide *yāʾ*, e.g. *jasa:r* ‘left’.
	g	g	Voiced velar stop, e.g. *gabil* ‘before’.

Vowels:

	EALL	IPA
بعدين	ē	e:
قامت	ā	a:
بعيد	ī	i:
عيون	ū	u:
لون	ō	o:
ِ	i	i
ُ	u	u
َ	a	a

Abbreviation

ARAMCO	Arabian-American company (officially it is the Saudi Arabian Oil Company)
BE	British English
CA	Classical Arabic
DDA	Dammam *Dawāsir* Arabic
EA	Eastern Arabian
KSA	Kingdom of Saudi Arabia
MSA	Modern Standard Arabic
OA	Old Arabic
PBUH	Peace be upon him
RP	Received Pronunciation
SA	Standard Arabic
SN	Social Network

Table of Contents

List of Tables

List of Figures

List of Maps

Introduction

This thesis investigates the dialect of the *Dawāsir* who reside in Dammam, the context of the study, in the Kingdom of Saudi Arabia (henceforth KSA). This is an interesting case to explore because this group of speakers emmigrated from their homeland in Najd to Bahrain, before returning to Dammam in the Eastern province in KSA in 1923. This study focuses on two sociolinguistic variables; the two variables selected are among the most salient linguistic features of the *Dawāsir's* dialect. They are: 1) the variable (ʤ) which has two variants, the glide [j] and the affricate [ʤ]; and 2) the rounding and unrounding of the long vowel (ɑ:) in word-medial position. The data were analysed using the variationist approach that relies on collecting samples of natural and spontaneous speech from participants. The data were collected through audio-recorded sociolinguistic interviews with the *Dawāsir* that reside in Dammam. The dialect under investigation belongs to the Eastern Arabian dialects according to the classification given by Johnstone (1967), who asserts that the Kuwaiti, Qatari, Bahraini, and the Trucial Coast dialects relate to the Eastern group.

This introduction sets out the significance of the study, and the theoretical framework to be followed. Following this, the chapter will present the research questions and an overview of the structure and organisation of the thesis.

The significance of the study

The present study makes several noteworthy contributions to the field of sociolinguistic research in the Arab world, and these are summarised below:

- This thesis investigates a linguistically untouched dialect; these branches of the tribe and their migration/movement have never been investigated before in a linguistic context.

- The thesis will serve as a base for future variationist studies of the dialects in the Eastern Province of KSA, as there have been very few studies regarding the area to date.
- There is little published data on research into vowels in Arabic dialects, and most of those that do exist are descriptive; in contrast, the current thesis is based on empirical study and findings.
- Praat software was utilised to analyse the long vowel /a:/.
- These findings also enhance our understanding of dialectal differences relating to the social factors of age and gender.
- The findings for gender act differently from the universal belief (particularly in most of the western studies) that women prefer the prestigious or the innovative linguistic forms whereas men are inclined more to the local or less prestigious forms (Milroy and Milroy, 1997). On the contrary, in the current study, male speakers were found to prefer the innovative forms more than the female speakers.
- A key strength of the present study is the use of empirical research incorporating statistical analysis. Milroy and Milroy (1997: 49) state that data quantification is an advanced representation technique in describing the data which will enhance the accuracy of the findings and analysis, and enable us to discover and highlight differences in the linguistic behaviour of speakers in the community.
- The present study confirms previous findings and contributes additional evidence that suggests it is not always women who are leading the change in use of the innovative forms.
- This study demonstrates the important role of social networks in retaining or acquiring new linguistic features. Generally speaking, most of the Arabic sociolinguistic studies have not dealt with the notion of social networks.

Theoretical Framework

As stated above, the data were analysed through the variationist approach which is based on the work of Labov (e.g. 1966). The variationist approach is built on the fact that variation and change in language is not arbitrary and is not 'free' as previously believed. On the contrary, this variation has been proven to be structured and motivated or constrained by both linguistic and social factors.

The research questions

1- To what extent do age and gender affect variation and change in the dialect of the *Dawāsir* in Dammam?

2- How do social networks intersect with age and gender and affect dialect variation and change in the participants' dialect?

3- Is there any trace of koineisation toward the supra-local dialect in KSA governed by the Najdi dialect?

Outline of the thesis chapters

This thesis is arranged into six chapters;

The first chapter presents the historical and social profile of the community under investigation. Furthermore, it provides an overview of the organisation of the thesis, along with the theoretical framework and research questions to be addressed.

Chapter two offers a dialect description of the variety spoken by the *Dawāsir*, based on the data collected from the participants in my research.

Chapter three is concerned with the methodology used for the data collection and analysis, alongside a description of the dependent variables under investigation in this study.

Chapter four provides a literature review, discussion and the interpretation of the variation for the variable (ʤ).

Chapter five presents a literature review, discussion and findings for the second variable, the long vowel (ɑ:) in word medial position.

Chapter six presents the conclusions of the study, and draws together the results for both variables.

Chapter 1

Historical Profile

1.1 Introduction: The Journey of the *Dawāsir* during 1845 - 1923

This study investigates the circumstances of certain branches of the *ad-Dōsarī* tribe who emigrated from their homeland in *Wādi ad-Dawāsir* (the valley of the *Dawāsir*) in Najd in the Kingdom of Saudi Arabia (KSA) and moved to Bahrain. After a period of living in Bahrain, they then settled in the city of Dammam in KSA. The aim of this section is to provide a socio-historical profile of the branches of the *Dōsarī* tribe who emigrated from their homeland at a time when KSA was not yet a country, but was still evolving and expanding, in order to give context to the investigation of the dialect of this tribe in Dammam. Their journey is divided into three main waves, according to their historical movements.

These branches of the tribe emigrated from Najd to Bahrain in 1845 and returned to Dammam in the Eastern Province in KSA in 1923. The current research gives a detailed description of the origin of the tribe[1], and their branches, as well as detailing each location through which they passed during their journey in order to understand the changes that might have occured in their dialect. The journey of certain branches of the *Dawāsir* includes: Najd; *Wādi ad-Dawāsir*; the Arabian Gulf; Bahrain; the Eastern province; and Dammam (the location of this study).

It is worth noting that there is a dearth of detailed information concerning a number of locations, such as the Arabian Peninsula, Najd and *Wādī ad-Dawāsir*. This is due to the fact that these locations are inhabited by conservative and tribal communities who did not welcome outsiders. Amongst those considered as outsiders were European explorers who

[1] A detailed description of the whole branches of the *Dōssarī* tribe is given in section 2.

to the best of my knowledge might be the only ones with a concern in dating the events of the area, and as stated before their exploration might have been welcomed or prevented due to political, religious or cultural reasons. So, not allowing them to explore led to only general information being recorded because it was difficult to get through some tribal communities. The lack of information concerning Dammam specifically is due to the fact that it is a new city.

1.1.1 The identity of the *Dawāsir* and their journey from Yemen to Najd

The aim of this detailed review of the journey of the tribe is to attempt to provide an account of the characteristics of the dialect they have traditionally spoken. Therefore, the present review provides a summary of the origin of the tribe, and a geographical and historical description of the places the tribe settled in.

The *ad-Dōsarī* tribe is one of the largest and best-known in the Arabian Peninsula. The tribe originates from the south of Najd, from a valley that bears their name: *Wādī ad-Dawāsir*. Formerly, the *Dōsarī* tribe had been part of the *Qaḥṭānī-Azdy* tribe in Yemen (Al-Jaser, 1981; Al-Khatrash, 1988). The tribe lived in the area of the *Ma'rib's* dam (see Map 1), whose collapse in 115 BC prompted their migration from Yemen (AL-Ghamdi, 2008) to *Sarāh* in Najd. These scholars are of the opinion that after leaving Yemen *ʿAmru ʾal-Małṭūm bin ʿĀmir* led them to *Sarāh,* a town in Najd in the south of the Arabian Peninsula.

Map 1: The location of Maʾrib in Yemen

http://www.yemenpost.net/Detail123456789.aspx?ID=3&SubID=8025

Oppenheim *et al*. (1952) believe that the *Dawāsir* originate from two brothers called *Sālim* and *Ṣuhayb*, who formed two branches.

At the end of the 5th century AD, these families moved to the *ʾal-ʿAqīq* valley south of Najd, which was already inhabited by the *ʿAqīl bin Kaʿb* clan. When the *Dawāsir* moved to *ʾal-ʿAqīq* valley, they fought with *ʿAqīl'*s clan and defeated them. As a result of this victory, they conquered the valley changing its name from *ʾal-ʿAqīq* Valley to *Wadī ad-Dawāsir,* i.e. 'the valley of the *Dawāsir*' (Al-Jaser, 1981). From this valley, the tribe spread throughout the Arabian Peninsula.

Map 2: The location of Wādī ad Dawāsir.
http://en.wikipedia.org/wiki/File:Ar_Riyad_in_Saudi_Arabia.svg

1.1.2 *Wādī ad-Dawāsir*: The location and geography of *Wādi ad-Dawāsir*

Wādī ad-Dawāsir is located south of Najd (see Map 2, above), 650 Kilometers from Riyadh, the capital city of KSA. It is bordered from the north by *ʾal-Quwayʿyyah* and *Najrān* in the south. It is bordered from the east by *as-Sulayyil* and *ʾal-ʾAflāj* and from the west by *ʿAsīr* and Makkah. The capital of the *Wādī* is *ʾal-Xamāsīn* city, where all the

governmental administrations of the *Wādī* are located. The valley holds two groups of oases: *ʾas-Sulayyil* in the east of the valley, and *ʾal-Lidām* in the west (see Map 3).

Map 3: AL lidam and as Sulayyil location is circled.

https://www.infoplease.com/atlas/middle-east/saudi-arabia-map

The *Wādī* is a flat area surrounded by desert. Previously water flowed from the west, but it is now blocked by the sands and the dams that have been created to prevent the dangers of flood. The scarcity of water affected the life of the *Dawāsir* and their agriculture which, in addition to some other factors, encouraged the *Dawāsir* to leave their homeland and emigrate. In the coming lines, there is a description of their journey from Najd to Bahrain along with reasons for this migration.

1.2 The journey of the *Dawāsir* from Najd to Bahrain and the reasons for the immigration

Sections of the *Dōsarī* tribe emigrated from Najd, arriving in Bahrain in 1845. Lorimer (1902: 883) and Holes (2016: 8- 9) states that, they arrived in Bahrain in about 1845.

Al-Khatrash's (1988) article concerning the *Dawāsir* notes that the movement of the *Dawāsir* (or any other tribe) was a common feature of the Bedouin tribes residing in the Arabian Peninsula, as Bedouin tribes are known not to settle in one place but to move constantly in the search for food and water. Moreover, Al-Khatrash (1988) adds that it was not only the *Dawāsir* who immigrated to Bahrain, but there were other families that emigrated from Najd to Bahrain, such *as-Sādah, ʾal-Bū ʿAlī*, and *Bani Yās*.

As the present researcher's mother is from the *ad-Dōssarī* family, the researcher was able to question some members of the family, in order to gain a view from inside the community about the reasons behind their ancestors moving to Bahrain and returning to the Eastern province. The consensus was that their ancestors moved because of the poverty in their homeland in Najd, which was caused by the small amount of rainfall.

However, Oppenheim et al. (1952) note that, due to the small amount of rainfall in the *Wādī*, there was no water to drink or for agriculture. A number of *Dawāsir* therefore emigrated from the *Wādī*, leading to the possibility that the former fertile conditions of the *Wādī* described by historians (mentioned above in section 1.1.2) may have altered. Hence it can be said that their reasons for migration were unknown, but may have been due to seeking a better place to live, with easier access to food and water. Furthermore, as Ingham (1982: 11), reports there was "a process of emigration from Najd out to the settled lands", there were nomadic movements from families and individuals and those movements were sporadic. Those movements affected the dialect geography in the area. Additionally, there

is a dearth of information, generally speaking; the only written records about the history of the Arabian Peninsula are those of the European explorers and orientalists since the members of the Arab tribes kept only an oral version of their history. So, the French Revolution disrupted the movement of such explorers then. The French Revolution (1789) and its consequences in Europe prevented European explorers from exploring the area and antedate for the area (Oppenheim et al., 1952).

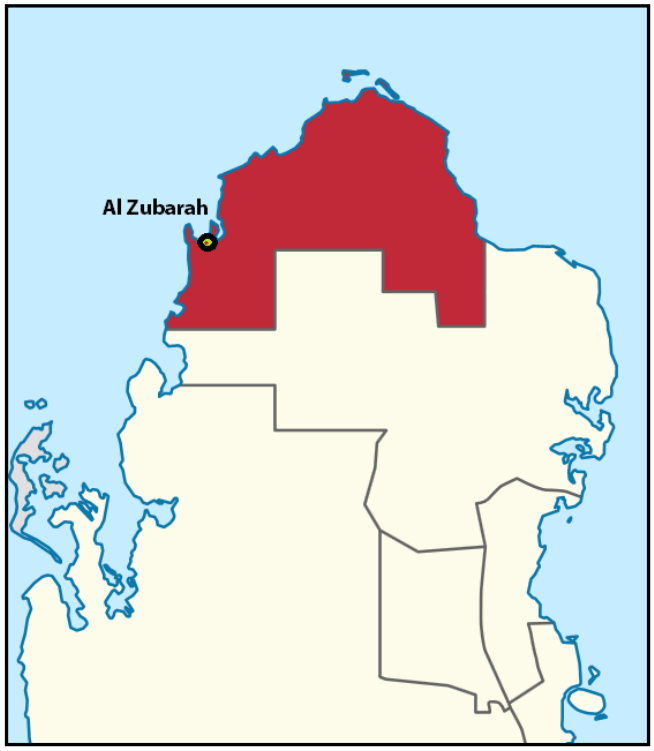
1.3 The route to Bahrain

Before describing the *Dawāsir's* journey, it is worth noting that to the best of my knowledge there are no writings by historians specifically regarding the tribe itself; most of the information which is available is concerned with the whole situation in the Arabian Peninsula and the historical movement of the tribes. Therefore, I included all of the information I found in the historical literature, regardless of whether it is definitively considered to be accurate or not.

The sections of the *Dōssarī* tribe which emmigrated to Bahrain consisted of the following*: ʾal-Berēk*; *ʾal-ḥasan*; *ʾal-Maxārīb*; *ar Rajbān*; *Rayayṯāt*; *Ṣahba*; and *Wadāʿīn*. They left Najd heading to the east of the Arabian Peninsula and eventually settled in Bahrain.

During their journey to Bahrain, they settled for a while on an island known as *az-Zoxnūnyyah*, located 16 kilometers to the south east of *ʾal-ʿUqair*, which is a seaport in the Eastern part of the Arabian Peninsula. It is not known exactly how long they stayed in *az-Zoxnūnyyah*; both Lorimer (1902: 883) and Al-Jaser (1981) state that they remained in *az-Zoxnūnyyah* for a number of years before immigrating to Bahrain, although they do not report the exact number of years. Al-Khatrash (1988) reports that the *Dawāsir* remained in

another place called *az-Zobāra* (see Map 4), which is located in northern Qatar and before that they were in *al-ʾAL-Aḥsa* in the Eastern province of the KSA. In reality, if they emigrated at different times, they may have settled in all three places (and others that remain unknown). As noted above, we cannot be certain due to the dearth of information regarding the tribe. They settled in the western part of Bahrain, establishing the two cities of *ʾal-Budayyaʿ* and *az-Zallāg*.



Map 4: The location of az-Zobāra in Qatar.

http://en.wikipedia.org/wiki/File:Al_Shamal_in_Qatar.svg

As the *Dawāsir* lived in Bahrain, it is necessary next to provide information about the island along with a description of the advent of the rulers of Bahrain and life of the *Dawāsir* there.

1.3.1 Bahrain

Located in the Arabian Gulf, the island of Bahrain has a rich history and civilisation. The name (Bahrain) means ‘the two seas’ and may originate from the meeting of the sweet water and the salt water there (Facey, 1994).

Map 5: The Kingdom of Bahrain

http://upload.wikimedia.org/wikipedia/commons/e/e7/Bahrain_map.gif

Bahrain (or since February 2002 the Kingdom of Bahrain) is an archipelago located on the west shore of the Arabian Gulf with a population of 1,234,571. The largest island is 55 kilometres long and 18 kilometres wide (see Map 5). The capital of Bahrain is Manama, historically the main location for pearl merchants. West of Bahrain is the KSA, connected by King Fahad’s Bridge. Iran is situated in the north, 200 kilometres across the Arabian Gulf. Southeast of Bahrain is Qatar. Being as it is located in the Arabian Gulf, Bahrain has

been a part of the rapid changes seen in the Gulf, particularly regarding the international struggle over its control (Al-Hamdani, 2010).

The climate is hot and humid in the summer and cool in the winter. There is little rainfall, and it only occurs in the winter. Bahrain is a flat archipelago with the highest point being known as *Jabal Doxān* 'mountain of smoke', standing at 134 metres high (Bulloch, 1984).

1.3.1.1 The demography of Bahrain

The inhabitants of Bahrain are Arabs, and some originate from Iran. They are divided into *Sunnis* and *Šīʿis*. The *Baḥārna* are *Šīʿis*, they are Bahraini-born *Šīʿis* native speakers of Arabic. There are some Bahraini *Šīʿis* and they are recent immigrants from Iran, they are known as *ʿAağam*.

There is also a group known as the *Holis*, who are also *Sunni*, being Arabs who migrated from the west coast of the Gulf to Persia and then returned to Bahrain. Some are also found in Qatar, KSA, and UAE. There is also a Jewish population in Bahrain, with one of the most well-known families being the *Nanoo*. Historians such as Al-Raihani (1924) have established that the population were Arabs, Persians, Indians and Europeans, among them being Muslims, Christians, Jews and Hindus.

1.3.2 The advent of *ʾĀl-Xalīfa's* power in Bahrain (1783)

ʾĀl-Xalīfa is the ruling family of Bahrain and they originate from Najd in KSA. They belong to the *ʾal-ʿUtūb* tribe which has many branches, including Kuwait's rulers, the *asʿSʿubaħ,* and the *ʾal-Jalāhmah*. *ʾĀl-Xalīfa* conquered Bahrain in 1783, and still remain as Bahrain's rulers.

The *ʾĀl-Xalīfa* left their homeland of *ʾal-Hadār* town in Najd, heading to Kuwait, and then to *az-Zobāra* in Qatar, which was famous for its pearl trade. After inhabiting *az-*

Zobāra, the *ʾāl-Xalīfa* conquered Bahrain following many battles with the Persians. Sheikh *ʾAḥmad bin Xalīfa* was the first of the *ʾāl-Xalīfa* to rule Bahrain, and he ruled from 1783 to 1794 (Al-Raihani, 1924).

1.4 The Dawāsir in Bahrain

Lorimer, describing the gulf geographically and historically in a well-known book, the *Gazetteer of the Persian Gulf, Oman and Central Arabia* (1902), describes the *Dawāsir* as being (at the time of writing) the second most powerful tribe in Bahrain, and the largest *Sunni* tribe after the *ʾal-ʿUtūb*. The *ʾāl-Xalīfa*, the ruling family in Bahrain, is part of the *ʾal-ʿUtūb*. He describes the *Dawāsir* stating that at the time of his documentation they had 800 houses in *Budayyaʿ* and 200 houses in *Zallāg*; these two cities are located in the west of Bahrain. He adds that in *Budayyaʿ* the *Dawāsir* were politically independent, being ruled locally by their Shiekh from the *Dawāsir*; they were not under the rule of Bahrain.

Both the *Dawāsir* and *ʾāl-Xalīfa* are Najdi tribes, but, as reported by Al-Khatrash (1988), they were not on good terms when living in Najd. However, their later alliance may have been caused by the fact that both tribes lived together in *az-Zobāra*, before arriving in Bahrain, and living side by side may have enhanced their relationship. After arriving in Bahrain, the *Dawāsir* settled in a place called *ʾal-Budayyaʿ* (see Map 6).

Map 6: Map showing the location of the two cities the *Dawāsir* established: *ʾal-Budayyaʿ* and *ʾaz-Zalāg* (circled).

http://go.hrw.com/atlas/norm_htm/bahrain.htm

The inhabitants of Bahrain worked as pearl-divers, traders, and farmers cultivating palm trees. Working in fishing and diving was not new to the *Dawāsir*, as they had worked at sea when they inhabited *az-Zobāra*. They had many boats and many of them worked as a *nawāxaḏa*[2] (meaning ships' captains). Their work had a positive effect on Bahrain's economy. They also gained the approval of *ʾāl-Xalīfas'* rulers who viewed them as active producers without an ambition for power. They were privileged citizens; for example they were exempted from paying taxes and given lands by the ruling family. It is clear that the *Dawāsir* enjoyed living in Bahrain, not only due to being privileged citizens, but also because it was a country that suited them, with its abundant water, food, and opportunities for trade (Al-Katrash, 1988).

[2] The singular is *nōxaḏah* نوخذة.

However, part of the policies forced on the inhabitants of Bahrain by the British Indian government through the British Political Agent in Bahrain was the payment of taxes. Those new laws from the British Political Agent were opposed by the inhabitants including the *Dawāsir,* but were eventually passed with support from Sheikh *ʿEissa bin ʿAli*, the ruler of Bahrain at that time.

There was a transition in the late 1920s in Bahrain toward modernity. This period is distinguished with reforms promoted by the British authorities. Holes (2005: XVII) reports that those reforms were initially resisted and then eventually encouraged by the ruling family there. The reforms included: 1) total alteration in the policy of pearl diving, 2) limiting the power of the sea captains and boat owners, 3) a new court system based around the right to a fair hearing regardless of sectarian affiliation. Furthermore, there were limits over the power of Sheikh *ʿEissa bin ʿAli* (the ruler of Bahrain at that time), and his family. Of course in reducing the power of the ruling family, there will be an effect on the tribal allies. As a consequence, there was opposition towards these laws, resulting in sectarian clashes between the *Dawāsir* and the *Šīʿi Baḥārna*.

1.4.1 The clash

Conflict arose between the *Dawāsir* and the English governor in 1923, resulting in the *Dawāsir* leaving Bahrain. There were many origins of this conflict, as noted by Al-Khatrash (1988). Firstly, British Political Agent in Bahrain enforced new laws on the inhabitants, one of which involved the payment of taxes. The *Dawāsir* opposed the enforcement of unfair laws (from the *Dawāsir'*s point of view) and felt that being forced to pay taxes humiliated them and undermined their position in Bahrain. Secondly, the ruler of Bahrain Sheikh *ʿEissa Bin ʿAlī* found that the British Political Agent was limiting his power and arresting many of his subjects in a bid to remove him as a ruler and replace him with his son, Sheikh *Ḥamad bin ʿEissa ʾāl-Xalīfa.* The *Dawāsir* objected to the British Political

Agent's attempts to limit Sheikh *ʿEissa's* power and replace him with his son, who was seen to be weak. Thirdly, the British Political Agent fined the *Dawāsir* 15,000 Rupees after accusing them of killing two of the *Šīʿi* Imam in *az-Zallāg*. The *Dawāsir* saw the imposition of this fine as another attempt to degrade their position on the island. Holes (2005: 145-155) reported another story, different to that given by Al-Khatrash, which was narrated by eye witnessed from the *Baḥārna* village *ʿAli*. The *Dawāsir* were accused of killing three men and a woman in *ʿAli*.

Al-Shorafaa (1996) reports that the *Dawāsir* left the island as a result of British interference in Bahrain's interior affairs. The *Dawāsir* were against this interference, which, as previously mentioned, removed the ruler of Bahrain from his rightful position. These actions made the *Dawāsir* afraid, because they found the removal of the ruler, in particular, a threat to their own position. On the other hand, their refusal to acknowledge the new laws was based on their belief that their position within the island was powerful, and if they decided to leave, the Saudi King *ʿAbdulʿAzīz* would be a strong ally. Therefore, the *Dawāsir's* reaction was to leave the country, due to the adverse effect the new laws had on them, along with the fact that King *ʿAbdulʿAzīz* supported their movement to the Eastern part of the Arabian Peninsula (See Appendix G), a part of his state which later became the KSA.

The British Political Agent in Bahrain warned the *Dawāsir* not to carry out their threat to move to Dammam; one reason for this warning was that the British were concerned that this exit could give King *ʿAbdulʿAzīz* a chance to interfere with the interior affairs of Bahrain (Al-Khatrash, 1988). The British Political Agent told the *Dawāsir* that if they left Bahrain the consequences would be: 1) confiscation of their properties in Bahrain; 2) the

divers they employed would be exempt from paying any debts to the *Dawāsir*; 3) they would not have the right to dive in Bahrain's pearl beds and would not be supplied from the waters of the *Xōrfišt's* spring, located in front of Bahrain, and with which they supplied their ships.

However, the governor wanted the *Dawāsir* to leave in order to weaken the power of Bahrain's ruler. To sum up, the circumstances surrounding the *Dawāsir* leaving Bahrain are complicated, but these are the reasons recorded in history.

1.5 The Dawāsir's journey from Bahrain to Dammam: The Arrival

On Friday 12th of July 1923, the *Dawāsir* moved from Bahrain to Dammam, using 80 to 90 boats. There were 4000 to 5000 immigrants to the Eastern part of the Arabian Peninsula (AL-Katrash, 1988). A brief history of the Eastern Province and a description of Dammam are given below, followed by a description of the *Dawāsir* settlement in Dammam.

1.5.1 The Eastern Province

The Eastern Province, which lies along the Arabian Gulf, has been "a commercially and culturally important route for many millennia" (Al-Doussari, 1994). From this quotation it can be concluded that this province played a pivotal role in this area throughout history. Facey (1994) states four factors that ensured the importance of the Eastern Province prior to the discovery of oil; these are: 1) its location; 2) the sea; 3) its considerable water resources; and 4) "the interplay of the nomads with the settled coast and oases" (7). Field (1986) reports that the coastal areas in the region were the best for pearl production and brought wealth to the region, while the Eastern Province was rich in the production of dates. *Waḥat ʾal-AL-Aḥsa* (the oasis of *AL-Ahsa*) is still known for its production of the finest quality dates. However, it was the discovery of oil that had the greatest impact on the

prosperity of KSA, in general, and the Eastern Province in particular. The Eastern Province is known to be the richest part of KSA, due to its extensive oil reserves. Furthermore, the region contains the headquarters of the Saudi oil company, ARAMCO (Al-Farcy, 1986).

Map 7: The Eastern Province area in comparison to the other provinces in KSA. http://www.tvtc.gov.sa/English/TrainingUnits/HigherTechnicalInstitutes/juf/AboutUs/Pages/Al-JoufProvince.aspx

The following paragraphs outline the geography and the ancient and modern history of the Eastern Province.

1.6 The geography and landform of the Eastern Province

The Eastern Province is the largest of the five provinces in KSA (see Map 7 above). The area of the region is 778,500 km^2, representing 36% of KSA's total area. It is a flat coastal area, bordered by Kuwait from the north, with Qatar, Bahrain, UAE and the Gulf to the east. From the south, it is bordered by Oman. The cities of the Eastern Province are as follows: Dammam; Dhahran; Khobar; Qatif; Al-Ahsa; Bqaiq; Ras Tannura; Jubail; Khafji; Hafr al-Batin; and an-Nuairyyah.

1.6.1 The dialects of the Eastern Province

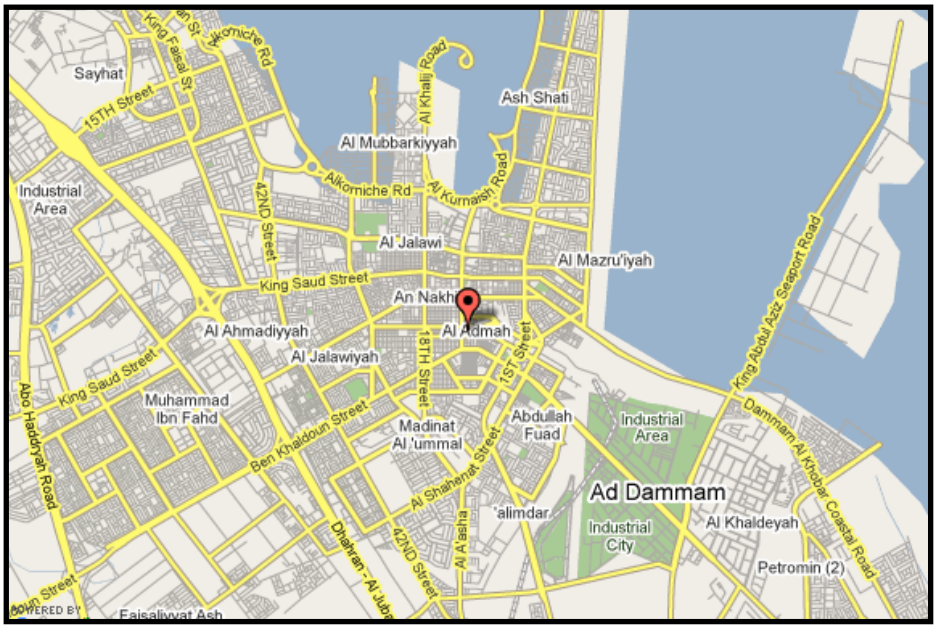
Al-Shorafaa (1996) describes the dialects in the Eastern Province in general and notes that it was a hub of many Arabic tribes, whose dialects influenced those of the Province. The dialects in the Eastern Province vary according to the location of the cities and towns, and have also been influenced by the arrival of many citizens from different parts of KSA seeking work. Al-Shorafaa (1996) notes, that there are many Gulf features in the province dialects, including the *kaškaša*.

In order to be able to understand linguistic changes it is necessary to access speakers in their speech communities (Milroy and Milroy, 1997). Therefore, it is necessary to provide here an overview of the location of the study, the city of Dammam.

1.7 Dammam: Location and Landforms of Dammam[3]

The capital of the Eastern province is Dammam. It lies on the Arabian (Persian) Gulf and is an important port for KSA. The Eastern province is the richest area in the Kingdom, as it is the hub of the oil industry and the location of the Arabian-American company (ARAMCO) (Al-Ayaf, 1995; Al-Hajri, 1998). Dammam consists of 145,531,015 km^2 with a population of approximately 1,033,597, and is the fifth largest city in KSA (see Map 8). Its neighbouring cities are: from the North Sihat and Qatif; from the south Dhahran and Khobar; from the east, it is bordered by the Arabian Gulf, and from the west it is bordered by the *ad-Dahna'a* desert.

[3] This information is taken from B. Habib (2007).



Map 8: A detailed map of Dammam city that shows the roads and some of the neighbourhoods. http://ds-lands.com/photo/cities/ad-dammam/05/

1.8 The history of Dammam

Historically speaking, Dammam is a city with a humble history, despite the fact that geologists have found evidence that the city was inhabited in the Stone Age. However, this is followed by a lack of information concerning any possible human settlement in the area. Al-Hajri (1998) reports that the history of the settlements in Dammam goes back to 2000 BC; however, she does not refer to any historical information to support this. Moreover, as noted above, there was no mention of Dammam in the history of the Eastern Province. According to Al-Ansari (2013), Dammam, Khobar, Dhahran, Bqaiq and Ras Tannura are all cities that emerged after the discovery of oil.

In 2011, ARAMCO published a report about the Eastern Province. Part of the report mentioned the life of the *Dawāsir* and the early inhabitants of Dammam. The report mentioned that after the *Dawāsir* returned from Bahrain they settled near an old fortress, worked as fishermen, casting nets for fish, and as pearl divers. The season of pearling lasted

from May until the end of September. The report from ARAMCO mentioned that the *Dawāsir* contributed in the development of the Eastern Province and the pearls they caught were sold to local traders and sometimes reached India and Europe.

Dammam can be seen to be established with the arrival of the *Dawāsir* in 1923, when Sheikh *ʾAḥmand bin ʿAbdullah ad-Dossarī* requested from King *ʿAbdulʿAzīz* to be allowed to settle in Dammam. It was then a small town, which subsequently grew with the discovery of oil.

The majority of the scholars consulted by the present researcher (e.g. Al-Shorafaa, 1992; Al-Ayaf, 1995; Al-Doussari, 1994; and Al-Hajri, 1998) agree that Dammam became important after the discovery of oil. Lorimer (1902) mentions Dammam, noting that there was a castle, known as Dammam's castle, which was destroyed in 1816 by a prince of the First Saudi State (1744-1818). Figure 1 (which is adopted from Al-Ansari, 2013) shows a reconstruction of the castle and the coast of Dammam.

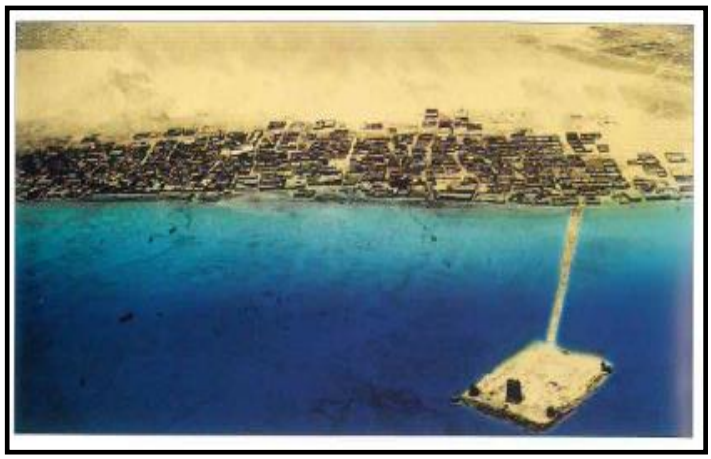


Figure 1: The location of Dammam's castle.

Lorimer (1902) adds that *Rḥama bin Jābir* (who ruled part of Qatar) established this castle in 1811. Al-Ansari (2013), however, states that the Portuguese established the castle

of Dammam in the sea 20 Kilometers away from Dammam's coast. This is a plausible explanation, as the castle of Dammam is similar to the one in Bahrain, also built by the Portuguese.

In 1843, during the era of the Second Saudi State, *Fayṣal bin Turkī* escaped his exile in Egypt. At the same time there was a quarrel among the *ʾāl-Xalīfa* ruling family in Bahrain. As a result of this quarrel, Sheikh *ʿAbdullah bin ʾAḥmad ʾāl-Xalīfa* moved with his family to Dammam's castle, which was owned by his son *Mubārak*. His cousin, Sheikh *Moḥammad bin Xalīfa,* seized Dammam, but at the same time the Saudis, under the control of *Fayṣal bin Turkī,* were on route to capture Dammam. In 1844 Dammam was under the control of *Fayṣal bin Turkī*, who supported Sheikh *ʿAbdullah bin ʾAḥmad ʾāl-Xalīfa*, the enemy of Sheikh *Moḥammad bin ʾAḥamd ʾāl-Xalīfa* the ruler of Bahrain. Hence, the ruler of Bahrain sent a letter to *Fayṣal bin Turkī* by the British Political Agent in Bahrain, considering the existence of the sons of *ʿAbdullah bin ʾAḥmad* as a threat to Bahrain, due to the close location of Dammam to Bahrain. In 1861, Britain sent a military vessel to Dammam and attacked the city, as well as *Qaṭīf* and *Al-Aḥsa*. As a result of this attack, the sons of *ʿAbdullah bin ʾAḥmad* left Dammam.

Hence, although there is insufficient historical information about Dammam, this section has established all of the known historical facts available. The following paragraph completes the journey of the *Dawāsir*.

1.8.1 The demography and the importance of Dammam

The demography of Dammam changed rapidly with the discovery of oil. Al-Doussari (1994) holds the view that the oil accumulation changed the form of the settlements in the Eastern Province. The city had previously been considered to be a small city with a small population. Map 9 which is adopted from Al-Ansari (2013) shows Dammam in the 1930s.

Even in 1946 it was still a small community containing between 2000 to 3000 people living in two narrow rows of houses built in the traditional manner (Facey, 1994). Al-Doussari (1994) and Facey (1994) add that the discovery of oil changed the demography of Dammam, leading to a migration from the two oases of *Al-Aḥsa* and *Qaṭīf* to Dammam. As mentioned previously, the population tended throughout history to concentrate in these two oases, due to the existence of springs and food.

Map 9: Dammam in the 1930s.

Moreover, in the past, dhows were commonly seen sailing along the coast. This ceased in the late 1940s, after the establishment of the railways that run from the coast to Riyadh. At the beginning of the 1950s, Dammam became the capital of the Eastern Province. This was after a period when Hofuf had been the capital of the province.

The discovery of oil in 1938 increased the population of the city, with Saudis from other regions in KSA settling in the city, particularly as Dammam is an important centre for trade. Moreover, Al-Hajri (1998) adds that the increase in the number of non-Saudis in Dammam was 272% by the year 1974, and and 325% by 1991. As a result of the growth in population, there was increasing urbanisation; Dammam contained 61% of the total

population of the Eastern Province. Moreover, Field (1986) reports that even immigrants from Bahrain and the southern states of the Gulf migrated to the Eastern Province. Al-Hajri (1998) conducts a geographical study regarding the Eastern Province, reporting that in 1974 the population of Dammam was 125,335, with the number increasing to 341,355 in 1991, meaning that the population increased by 272.35%. Holes (1995) illustarates that the Middle Eastern countries have experienced huge social change after World War II, including in the spheres of industry and education. As a result of these social changes, there has been an increase in the population which is connected to urbanisation, because of the rapid change towards work becoming available in the service and industrial sectors.

Dammam is an industrial and commercial centre that is third in importance in KSA only after Riyadh and Jeddah. Riyadh is the capital, while Jeddah is a main port to KSA by which pilgrims pass on their journey to Makkah, and Dammam is important in terms of industry and economy (Facey, 1994). With the reforms undertaken by ARAMCO, which resulted in many useful projects, Dammam started to develop and grow until it became the main port in the Eastern Province. Dammam is a commercial centre for the import and export of goods via King *ʿAbdulʿAzīz* port, established in 1949 (Al-Ayaf, 1995).

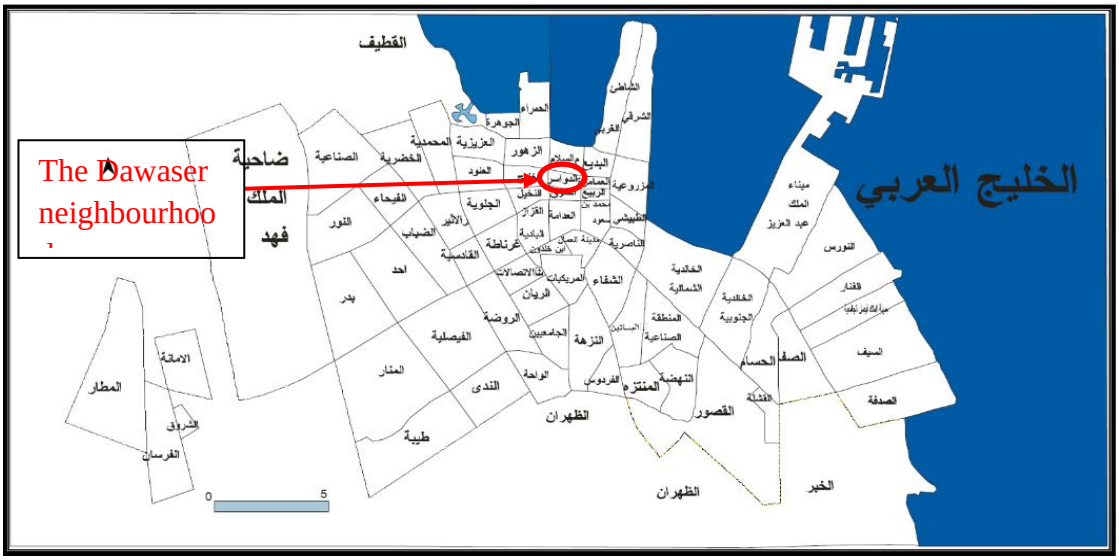
1.9 The *Dawāsir* in Dammam

The *Dawāsir* moved to Dammam because of various factors; key among the factors was that King *ʿAbdulʿAzīz* encouraged the *Dawāsir* to leave Bahrain; he even addressed them by letter acknowledging that they belonged to his mother's family[4] (Al-Khatrash, 1988). King *ʿAbdulʿAzīz* welcomed their arrival in Dammam and supported them, providing them with money and arms, believing that they would help to increase his power in the area.

[4] See the letter in the appendix 2

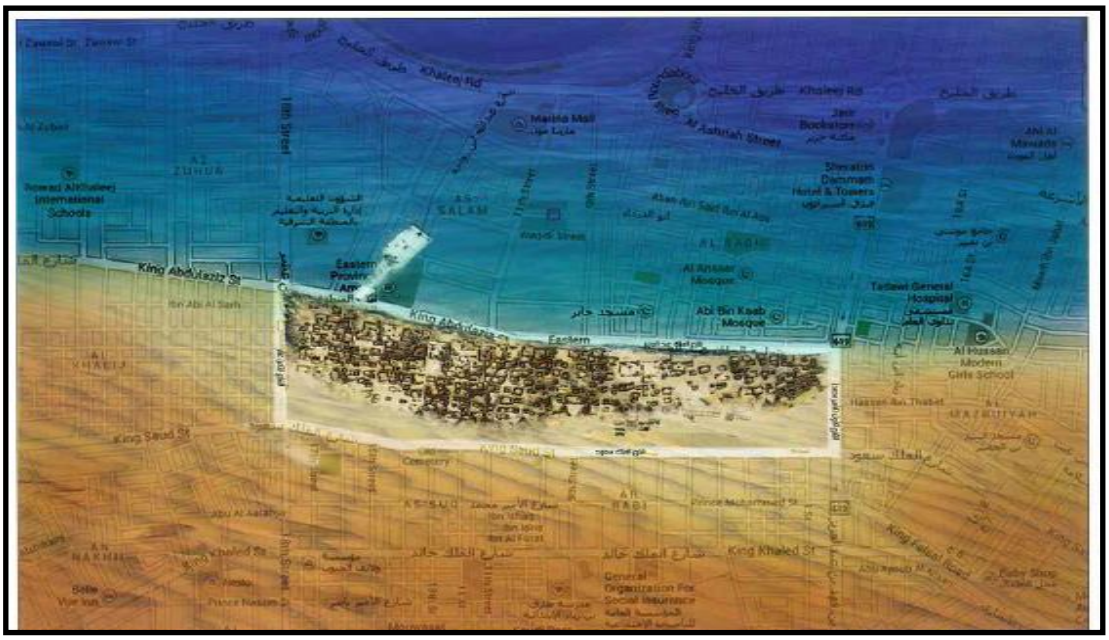
However, King *ʿAbdulʿAzīz's* relationship with the newcomers annoyed the British power in Bahrain, with Britain considering the close location of Dammam to Bahrain as a threat. This was a potential threat increased by King *ʿAbdulʿAzīz* making a promise to the *Dawāsir* to attack Bahrain in order to recover their properties there. It was true that the *Dawāsir* declared war in Dammam, which made the British government in Bahrain deploy the military vessel 'HMS Crocs' in front of Dammam's coast. Furthermore, the British Political Agent warned King *ʿAbdulʿAzīz* in a letter about his support for the *Dawāsir* in attacking Bahrain. The British Political Agent added that as the *Dawāsir* had left Bahrain willingly and without force, he (King *ʿAbdulʿAzīz*) had no right to encourage them to attack Bahrain or to return them there. He requested King *ʿAbdulʿAzīz* to move them from Dammam to Jubail city in the Eastern province, a place far from the coast. As a result of the British threat to cut off all supplies to King *ʿAbdulʿAzīz* from Iraq and India by the sponsorship of Britain, King *ʿAbdulʿAzīz* ceased his support for the *Dawāsir*, particularly given that he was preoccupied with other internal crises (Al-Khatrash, 1988).

However, the arrival of the *Dawāsir* in the Eastern province brought about the establishment of the two cities of Dammam and Khobar. In an interview undertaken by Al-Ayaf (1995) Sheikh *ʿAbdulʿAzīz ʾal-Qusēbī*, one of the well-known businessmen in the Eastern province, described the region by saying that the establishment of the two cities of Dammam and Khobar was due to the arrival of the *Dawāsir*, after their return from Bahrain. He reports that some of them moved to Khobar. Today, one of the old neighbourhoods in Dammam is still called the *Dawāsir* neighbourhood (see Map 10 which is adopted from B. Habib, 2006, which also shows Dammam's area in general).



Map 10: A Map shows the neighbourhoods in Dammam, showing the *Dawāsir* neighbourhood.

In the 1920s, Dammam was considered to be very small, with the *Dawāsir* being the main inhabitants. The city grew when many new families settled in Dammam after it became important due to the discovery of oil (Al-Ansari, 2013). The image below presents a comparison of the size of the old Dammam to modern Dammam, using just the north-east of the city as an example (See Map 11). This map is also adopted from Al-Ansari (ibid: 32).



Map 11: Old Dammam in comparison to the city area today.

1.10 Conclusion

In summary, this section has attempted to shed light on the past events of the area, in order to assist in understanding the development of the Arabian Peninsula. The aim of this chapter has been to assist the researcher in establishing a background to the investigation into the ways in which the local dialect has changed from a Bedouin variety to being closer to the dialect of the Gulf.

Moreover, the current study has attempted to follow the route of the *Dawāsir's* journey, providing a geographical and historical description in order to be able to understand the reasons behind potential dialectal change in the participants' linguistic features.

The *Dawāsir* were a large and influential tribe. They travelled between *Wādi ad-Dawāsir*, *az-Zobara*, Bahrain, and Dammam, and in each of these locations they enjoyed a privileged status. They established cities from scratch, expanded already established cities, and were involved in the economy of the various areas they inhabited. They worked in agriculture, fishing, pearl diving, trade, employing the inhabitants of the areas they lived in. They played an active and dynamic role which caused them to interact with various tribes in the areas they travelled through. All of these factors show that their dialect could have been affected in various ways. Their experience is almost unique which makes them an extremely interesting case study to investigate.

Chapter 2

Linguistic description of the *Dōssari* dialect in Dammam

2 Introduction

The dialect of the *Dawāsir* in Dammam contains many Gulf linguistic features, speakers of the *Dawāsir* Arabic in Dammam (henceforth DDA) speak differently from the *Dawāsir* who did not emmigrate to Bahrain. Typologically, DDA is a Bedouin dialect, but because of the migration and movement of this group, their dialect has diverged from its original form over time.

Dammam, the context of the study, is a city in the Eastern part of the KSA. Far too little attention has been paid to the dialects in the Eastern part of KSA; examples of these few studies are Smeaton's (1973) and Procházka's (1988b) descriptive studies of the Al-Ahsa's dialect. The most recent sociolinguistic investigations are those by Albohnayyah (2011) and (2018) and Al-Mubarak's (2015) theses on Al-Hofuf and Al-Mubarraz in Al-Ahsa. Most of the studies carried out in the Eastern Province investigate the dialect in Al-Ahsa. This might be because, historically, the Eastern Province was known as Al-Ahsa province. As mentioned previously (section 1.8.1), Al-Hofuf was the capital of the Eastern Province, until in the 1950s Dammam became the capital of the province. To the best of my knowledge, no other studies have investigated dialects in parts of the Eastern Province other than Al-Ahsa.

According to Johnstone (1967), the Gulf dialects, including Al-Ahsa, belong to the north Arabian dialects. He divides the dialects of the Arabian Peninsula into four main groups: 1) North Arabian dialects, 2) Ḥija:zi dialects, 3) South-western Arabian dialects, and 4) Omani dialects. In addition, Procházka (1988), who studied some of the Saudi

dialects including Al-Ahsa, divides the dialects in KSA into two groups: 1) the Southern Ḥijāzi dialects and the dialects of Tīhāma, and 2) the Najdi and Eastern Arabian dialects. It is worth mentioning that Procházka (1988) studied only the dialect of Al-Ahsa in the Eastern province and did not investigate any other varieties in the Eastern province.

This chapter aims to provide a descriptive account of the features of the dialect of the *Dawāsir* who reside in Dammam. The description is based on audio-taped natural speech data, my own observations as a native speaker of DDA and as an insider to the Dammam speech community, and Holes's (2006: 241- 255; 2016) description of the Bahraini dialect. This dialect has not been described before. Johnstone (1965) described the *Dōssari* dialect in Kuwait; both of his informants were of the *Dawāsir* who live in Kuwait.

2.1 Phonology

There are 30 sounds in the consonantal inventory of DDA.

2.1.1 Consonants

	bilabial	labio-dental	dental	interdental	alveolar	alveo-palatal	palatal	velar	pharyngeal	glottal
Plosive	ɓ (+)[5]		t (-) d (+) tˤ (-)					g (+) k (-) q (-)		ʔ (+)
Affricate						tʃ (+) ʤ (+)				
Trill/ tap					r (+)					
Fricative		f (-)		θ (-) ð (+)	s (-) z (+)	ʃ (-)		x (-) ɣ (+)	ʕ (+) ħ (-)	h (-)
Emphatic				ðˤ (+)	sˤ (-)					
Laterals					l (+)					
Emphatic					ɬ (+)					
Nasals	m (+)				n (+)					
Glides	w (+)						j (+)			

Table 1: The phonetic inventory of DDA.

The current dialect contains features from the Gulf dialects and common Saudi Arabic, including the Saudi supra-local features which are influenced by the dialect of Riyadh, the capital city, as will be shown in the description below.

[5] The symbol (+) stands for voiced sounds, whereas (-) stands for voiceless sounds.

The interdentals /θ, ð, ðˤ/

The current dialect retains the interdentals /θ, ð, ðˤ/ and in this respect is similar to most of the Bedouin dialects in the Arabic-speaking world. Like other dialects of this type, the lexical set of /ðˤ/ contains the lexical set of etymological **dˤ*, e.g. *mari:ðˤ* 'sick', *ʔabjaðˤ* 'white', and *faðˤi:la* 'virtue'.[6] It is noteworthy that, unlike the case of some other Standard sounds such as [q], [dˤ] is never produced even in the most formal contexts.

The hamza /ʔ/

In DDA, the glottal stop /ʔ/ (the *hamza*) occurs in many words, such as *ʔafðˤal* 'better', *ʔakbar* 'biggest', *siʔal* 'he asked' and *ʔahli* 'my folks'. It sometimes disappears word-initially and finally, e.g. *kal* 'ate', *xað* 'took', and *ʤa:* or *ja:*. It is dropped in many cases word-medial position, and the preceding vowel is lengthened: *ka:s* 'a glass', *ra:s* 'head', *fa:r* 'mouse' and *ya:xið* 'he takes'. Also, it disappears in the final position, e.g. *niʃa* 'starch', *ʤa:* 'he came' and *gara* 'he read'; it sometimes appears in words borrowed from the Standard such as *ʤuzuʔ* 'a part of'.

The *hamza* /ʔ/ can be pharyngealised and realised as /ʕ/ in some words, for example *ʕajal* ~ *ʕaʤal* < *ʔaʤal* 'so!'. Medieval grammarians called this phenomenon *ʕanʕana*, and Holes (2016) notes this phenomenon in his account of the Bahraini dialect, listing some examples such as *ʕanana:sˤ* 'pineapple' and *ʕaskari:m* 'ice-cream'. As a native speaker of the dialect under investigation, I can confirm that these words are still in use, but in my data I only have instances of the item *ʔaʤal*, which occurred with all three pronunciations: *ʕajal* ~ *ʕaʤal* ~ *ʔaʤal*

[6] In Arabic, the replacement of [dˤ] by [ðˤ] is historically a case of phonological merger of **dˤ* and **ðˤ*. See Al-Wer (2006).

The Old Arabic /q/

The Old Arabic (henceforth OA) /q/ is realised in this dialect as the velar stop /g/, e.g. *qidr* > *gidir* ‘pot’, *baqara* > *bgara* ‘a cow’ and *qabl* > *gabiɬ* ‘before’; OA /q/ is only heard in words borrowed from CA, e.g. *taqri:ban* ‘approximately’, and *fari:q* ‘team’. It is also retained in religious words such as *qadar* ‘fate’ and *qur’a:n* ‘the holy Qur’an’. In addition, /g/ can be affricated to /ʤ/, especially in the vicinity of high vowels, as in *ʤidir* ‘pot’, *ʤa:bli* ‘meet face to face! (fem)’, *rifi:ʤi:* 'my male friend' and *rifi:ʤti* 'my female friend'. A related point to consider regarding *rifi:ʤti* 'my female friend' is that /ʤ/ in this word can be affricated to /ʧ/. Holes (2016: 52) adds that /g/ can also be affricated in the vicinity of low vowels such as in *mʤa:bil* ‘opposite’, and that it can be affricated if it is not directly adjacent to high vowels and a consonant is separating it from the latter, as in *ʕirʤ* > *ʕirg* ‘vein’, *ʤidda:m* > *gidda:m* ‘in front of’ and *ri:ʤ* > *ri:g* ‘saliva’. All of the examples that Holes mentions can still be heard in the speech of DDA. Moreover, the affrication of /ʤ/ < OA /q/ occurs in a few words in the vicinity of back vowels, for instance in *ħlu:ʤ* ‘mouths’. The reason for the occurrence of /ʤ/ in the vicinity of back vowels is that in some nouns the /ʤ/ which was a result of affrication was subsequently regularised and lexicalised to form part of the plural.

/q/ and /ɣ/

Two speakers in my study showed variation between /q/ and /ɣ/ – they often replaced /q/ with /ɣ/ or vice versa, as in *taqri:ban* > *taɣri:ban* ‘approximately’, and *bitˁa:qa* > *bitˁa:ɣa* ‘a card’, or *biɣe:t* > *biqe:t* ‘I intended to’.

/ʤ/

There is variation between [ʤ] and [j] in DDA, and this will be explained in more detail in Chapter Four as it is one of the linguistic variables under investigation in my study. Pronunciations of words such as *ʤidi:d* > *jidi:d* 'new', *raʤʤa:l* > *rajja:l* 'a man', and *ʤi:baj* > *ji:baj* 'bring something' can be heard in DDA. Furthermore, variation between /ʤ/ and /j/ is common in general among indigenous people in Dammam city. It is also found in other areas in the southern provinces in KSA; it was reported by Procházka (1988b: 17) in his description of Bani Bisher and Rufaidah dialects, and was mentioned in the works of Al-Shehri (1993) and Al-Asmari (2015) on the southern parts of Saudi Arabia.

I noticed in the data that [ʤ] could be pronounced as [a] or [i] in one word only from CA which is *janðˤuʤ* 'to be cooked'; it can be heard as *jinðˤa* or *janðˤi*. Linguistically, [ʤ] undergoes a process of lenition in this word only, where consonants become weaker.

The affrication of /k/

The treatment of the CA sound /k/ is that of fronting and affrication to [ʧ], both in the feminine suffix and in the stem. Medieval grammarians call this process *kaškaša*. The feminine suffix /ʧ/, is used to indicate a singular female addressee; for example when saying *ʕindiʧ* "you have it", *ʔismiʧ* 'your name' and *kita:biʧ* 'your book'. The affrication of /k/ occurs in the stem of the word as in *jaʧwu:n* < *jakwu*:n 'they brand', *ʧibi:r* < *kibi:r* 'big' or 'elderly', *ʧabd* < *kabd* 'liver', *ʧalθam* < *kalθam* 'Kaltham, a female proper name' and *dja:ʧa* < *dja:ka* 'cockerels'. The word *miʧa:na:t* 'places' occurred in the speech of one of the old women.

Additionally, the affrication of /ʧ/ < OA /k/ occurs in a few words in the vicinity of back vowels, such as *smu:ʧ* 'fishes', but *ʃbu:k* 'wire fences'. The sound [ʧ] (not a

variant of /k/) occurs in foreign words, such as: *ʧu:la* ‘fire stove’ (Hindi-Urdu), *ʧa:j* ‘tea’ (Persian) and *kalaʧ* ‘clutch’ (English).

Dark /ɬ/

Like many other Arabic dialects, dark /ɬ/ is also found in DDA. The phonological distribution of dark /ɬ/ in the present data can be both: 1) phonemic and 2) allophonic. Ferguson (1956: 446) argued that dark /ɬ/ in Arabic appears in three situations: 1) in the word for God ‘*ʔaɬɬah’*, 2) in the vicinity of emphatics, and 3) in some unpredictable items such as loanwords. Ferguson argues that dark /ɬ/ is phonemically distinct – i.e. a separate phoneme – in CA and in most modern Arabic dialects, mainly, that the dark /ɬ/ is considered as an allophone for /l/ as well as in other languages. One of the arguments he raised to support his claim is that in Iraqi Arabic, for instance, there are some minimal pairs that show dark /ɬ/ to be a separate phoneme; the same minimal pairs also occur in my data:

xaɬɬi ‘my vinegar’	*xalli* ‘leave it’
xa:ɬi ‘uncle’	*xa:li* ‘empty’ (Ferguson, 1956: 449- 450)

In the above examples, we can find both dark and light /l/ as part of the same word, but resulting in two different meanings.

However, in the dialect under investigation, [ɬ] and [l] are in complementary distribution; [ɬ] occurs only in the vicinity of emphatic sounds; e.g. *inxaɬa* ‘palm tree’, *naxaɬ* ‘palm trees’, *gaɬb* ‘heart or a pendant’, *ʔasˁiɬ* ‘origin’ and *ramiɬ* ‘sand’ which also has an emphatic /r/. This type of conditioning in terms of the phonological environment suggests that [ɬ] is an allophone for /l/.

Furthermore, the word God '*ʔaɬɬah*' is usually pronounced with a velarised /ɬ/ in the current dialect, but it is conditioned by the preceding sound, which also indicates an allophonic variation. The word for God '*ʔaɬɬah*' is not velarised if it is preceded by /i/, whereas it is velarised if it is preceded by /a/, in line with the rules of CA and Qur'anic recitation, e.g. *bismilla:h* 'in the name of God' vs. *ʔismaɬɬah* 'May God protect you'.

Velar /x/ and [ɣ]

In this dialect /x/ and /ɣ/ are velar sounds, and are usually fronted as in: *xja:r* 'cucumbers', *xja:m* 'tents', *maxadda* 'a pillow', *jɣassil* 'to wash', *ɣija:r* 'spare part' and *ɣju:m* 'clouds'. But some words have a back /x/ and /ɣ/ probably due to emphasis spread from adjacent consonants, such as: *xaɬɬ* 'vinegar' and *inxała* 'the palm tree'. In these two examples, there is a dark /ɬ/ and the /x/ is a post velar.

So, the position of /x/ varies between post velar /χ/ and velar /x/, e.g. *χa:ɬi* 'my uncle' and *xi:ra* 'well-being', *naχaɬ* 'palm trees' and *naxi:l* 'palm trees'. It seems that this variation is affected by the following vowel sound, i.e. if /x/ is followed by low back vowels /ɑ/ and /ɑ:/ it is realised as a uvular /χ/, but if it is followed by the high front vowels /i/ and /i:/, then it is realised as the velar sound.

Likewise, the velar /ɣ/ can be realised as the uvular /ʁ/, e.g. *ʁa:jba* 'she is absent', *ʁa:r* 'became jealous' , or a velar sound, e.g. *jɣi:r* 'feels jealous MASC'.

***Ghawa* syndrome**

Ghawa syndrome is a Bedouin feature which also occurs in the sedentary dialect as an outcome of contact (De Jong, 2006). This linguistic phenomenon happens due to "the deletion of /a/ in CaC non-final syllables where C2 is a guttural, and epenthesis of /a/ after C2" (Holes, 2006: 612).

The occurence *Ghawa* Syndrome is present in DDA: *inxała* ‘palm tree’, *isˁxała* ‘she goat’, *ifħama* ‘a piece of charcoal’, *jħafir* ‘he digs’, *jxarib* ‘to break something down or to be damaged’, *jxatˁib* ‘to propose marriage’ and *tɣasil* ‘to wash’.

Deletion and assimilation

It is worth pointing out variations in the realisation of the phrase *ma:dri* ‘I do not know’. In one form, /r/ is deleted, which results in compensatory lengthening of the preceding consonants: *ma:ddi;* in another form, it is the /d/ that is deleted and the /r/ is lengthened: *ma:rri*, and this was especially noticeable in the speech of old female speakers.

Assimilation affects the sound /h/ when it is preceded by /t/ in the suffix pronouns *-hum* and *-ha,* as in *be:tta* > *be:tha* 2F.SG ‘her house’, *be:ttum* > *be:thum* F/M. PL ‘their house’, *ixitta* > *ixitha* F. SG ‘her sister’, and *ixittum* > *ixithum* S. PL ‘their sister’, this assimilation is normal in the Bahraini ʾArab dialects (Holes, 2016: 191). This assimilation is similar to what was found by Al-Hawamdeh (2016: 37) in her description of the dialect of *Sūf* in Jordan, i.e. there is gemination of the consonant before the drop of /h/ and it is constrained by the preceding sound, whether it is [t] or [s]; in my data the assimilation was with [t] only.

Besides, in the preposition *janb* ‘near’, the /n/ is pronounced as the bilabial /m/. Usually, this word is assimilated as *jamb*.

The prefix *ti-* will be assimilated if followed by: tˁ, ð, and d, e.g. *itˁtˁawwar* ‘developed’, *iððakkar* ‘remembered’, and *iddaxxal* ‘interfered’. The assimilation of the ti-verb prefix occurs categorically with all coronal consonants (Holes, 2016: 78).

Additionally, there is regressive assimilation between /d/ and /t/, with /d/ becoming /t/ in words such as *inwalatt* ‘I was born’. There is also assimilation between /l/ and /t/ in *gilt lah* ‘I told him’ which can be produced as *gitlah* in which the /l/ is deleted

and only the /t/ is heard. This feature of assimilation of /t/ with /l/ is also found in the Meccan dialect as described by Ingham (1971: 278). In other words, there is consonant cluster simplification, the dialect does not allow three-consonant clusters and it allows simplification in this case. Furthermore, the /l/ will be assimilated in expressions such as *xall nru:ḥ* to *xan nru:ḥ* 'let's go', which is a form of assimilation that occurs between /l/ and /n/ in connected speech. Here there is reduction or word cropping. The word *ʔabɣi* 'I want' becomes *ʔabi* where the /ɣ/ is deleted.

Furthermore, words that contain *al-ḥuru:f aʃʃamsiyyah* 'Sun letters' will have gemination or assimilation of the definite article /al/ namely before the following sounds /ðˤ, tˤ, dˤ, sˤ, d, t, z, n, s, r/, such as in *aʃʃams* 'the sun' and *annu:r* 'the light'. Whereas, words that contain *al-ḥuru:f al-qamaryyah* do not have assimilation.

Emphasis

Emphasis spread is found in DDA, in the vicinity of the emphatics /ðˤ, sˤ, tˤ/. Some sounds can be emphaticised, such as: labial /m/ can be emphatic /mˤ/, and liquids /l, r/ can be emphatic /ɬ/ and /rˤ/. These sounds become emphatics when surrounded by the emphatic sounds /ðˤ, sˤ, tˤ/ (Sibawayh, 1999, Al-Nasir, 1993), such as in *rˤisˤi:f* 'pavement', *tˤa:rˤat* 'to flew away', *ðˤarˤf* 'a circumstance or an envelope', and *mˤasˤirˤ* 'Egypt'.

Emphasis occurs in the environment of these (dorsal) consonants /g, x, ɣ/, *gamiɬ* /lice/, *daxaɬ* 'he came in', *gaɬam* 'a pen', *txaɬɬisˤ* 'to finish', *ʃiɣiɬ* 'work', and *ʔaʃɣa:ɬik* 'your work'. Additionally, /l/ and /r/ can be velarised when they occur adjacent to labials. Holes (2005b: xxx) in describing Bahraini Arabic, stated that /l/ and /r/ have velarised allophones when labial sounds and /g/ appear in the same word, e.g. *gabiɬ* 'before' and *gumarˤ* 'moon'. The current data is similar to Holes's, with /r/ having a secondary

emphatic value in the dialect under investigation, in words such as: *rˤa:ħat* ‘she has gone’, *rˤa:ħ* ‘he has gone’, *ħarˤa:m* ‘forbidden’.

De-emphasis of /sˤ/

It is notable that there is a de-emphasis in the alveolar fricative /sˤ/ which is found in one word: *sadir* > *sˤadir* ‘chest’, where the emphatic is realised as the non-emphatic counterpart /s/.

Raising of words ending with /-a/

It is worth illustrating that *imala*, the raising of /a/, is not common in this dialect, though it was found in the speech of a woman who is over 90 years of age. Examples from her interview are: *ʕale:he* > *ʕale:ha* ‘on her’, *sajjɒ:re* > *sajja:ra* ‘a car’, *ʔinte* > *ʔinta* ‘you’, *ja:jbite* > *ʤa:jibta* ‘I brought something’ and *minhe* > *minha* ‘from her’.

Retroflex /ɖ/ ډ

dāl is a sociolinguistic variable; it has two variants: [d] and [ɖ]. [ɖ] occurs word-initially, word-medially and word-finally; e.g. *ɖa:xi~da:xil* ‘inside’, *ʕinɖi~ ʕindi* ‘I have’, and *xa:liɖ~xa:lid* ‘Khalid’.

A preliminary analysis shows that retroflex /ɖ/ is a recessive feature that is only found in the speech of older women. On the other hand, it is not found in the dialect of middle-age and young females or males across different age groups. This could be because this feature is a marked feature in Saudi Arabia in general.

Stress

Stress can be predicted in relation to the syllable weight. Ingham (1971: 280) in his account for Meccan dialect, asserted that in general stress is ‘predictable’ from the syllable pattern of the word. According to Qafisheh (1977: 30), in Gulf Arabic, “[t]he stressed syllable in any given word is the one that is pronounced the loudest”. Additionally, syllable stress can be predicted from the consonant-vowel sequence in the word.

Qafisheh (ibid) adds that stress is governed by two rules: 1) all words are stressed on the penultimate syllable, but 2) if the final syllable is long (CVVC, CVCC, CCVVC, C_1C_2VVC), the stress is on the final syllable. Holes (2016) reports that in Bahraini dialect, the stress always falls on the final syllable when the word has two or more syllables and when the final syllable is long. This is similar to my data, e.g. in *ʤa:ˈboːh* ‘they brought him’ and *sħiˈboːh* ‘they dragged or presented him’ from my data. If not, stress will fall on the penultimate syllable, e.g. *ˈga:lat* ‘she said’ and *ˈʤa:bat* ‘she brought’. When the stress falls on the final, this means that the syllable is super-heavy, such as in *jik.ti.ˈbuːn* ‘they are writing’. These reports by Qafisheh and Holes are compatible with the stress pattern in the dialect under investigation here.

2.1.2 Vowels

Short Vowels	Long Vowels
/a, i, u/ i u a ɑ	/aː, ɑː, eː, uː, oː, iː/ iː uː eː oː ɑː

Table 2: Vowels in the Dawāsir dialect.

The vowel system in DDA has three short/long vocalic 'pairs' (/i, iː/, /ɑ, ɑː/, /u, uː/), and two long mid vowels (/eː/ and /oː/). The long mid vowels /eː/ and /oː/ stand for the realisations of the CA diphthongs /aj/ and /aw/ as *bajt* < *beːt* 'house and *fawq* < *foːg* 'above'. In the sections below the vowels will be discussed in greater detail.

1- /i/ high front vowel

This vowel usually occurs in open syllables, and rarely occurs in word-final positions as in *gaːðˁi* 'judge'. Some examples include *sirag* 'he stole', *birad* 'to get cold', *riʤaʕ* 'he came back', *simak* 'fish' and *kitab* 'he wrote'. The quality of the short /i/ in the current dialect is be affected by the adjacency of gutturals, as it is in the Bahraini dialect for instance.

Most of the time the high front vowel /i/ occurs in open syllables but it can also occur in closed syllables in a few items, e.g. *finjaːl* 'a small cup of Arabic coffee'.

According to Qafisheh (1977: 16) the short /i/ in the Gulf dialects is lowered and retracted in the vicinity of pharyngealised consonants, such as in

sˁidg ‘truth’ and *batˁin* ‘belly’ which is similar to my data. Sometimes short /i/ will be replaced by /a/, e.g. *birad* can also be pronounced as *barad* ‘to get cold’.

2- /i:/ the long counterpart of /i/

This vowel does not occur in word-final position in this dialect. Examples of items with long /i:/ are *ʤi:b* ‘bring something’, *jʤi:k* ‘he will come to you’, and *jbi:t* ‘sleep over at somebody’s house’. Usually the diphthong /aj/ occurs in word final position.

3- /a/

Regarding short /a/, it can be realised as [ɑ] and [æ]; short /a/ in this dialect is similar to what Holes (2016: 67) describes for the *ʿArab* dialect in Bahrain. He reports that the quality of the short /a/ in the vicinity of emphatics and gutturals except for /h/ is [ɑ] or [ɒ] as in *tˁaɬɬ* ‘mist’, but in the vicinity of /h/ it will be [æ] as in *hæli* ‘my family’ (67). In this dialect, short /a/ is realised as [ɑ] and [æ], e.g. *tˁabb* ‘entered suddenly’ or ‘fell down’, *ɣabb* ‘he disappeared’ and *hælmika:n* ‘this place’. Short /a/ can be raised at the end of words when they are not surrounded by gutturals or emphatics such as in *tˁilaʕni* ‘we went out’, *inti* 2SG.M ‘you’, which is found in the speech of one of the old women. Raising of the final /ɑ/ is also similar to what Holes (ibid) reports for older Arab speakers in Bahrain.

/ɑ:/

According to Qafisheh (1977: 17), when long /ɑ:/, in the Gulf dialects, occurs in the environment of emphatised/ pharyngealised consonants it is backed (and rounded). Additionally, in describing Kuwaiti Arabic, Holes (2007: 608- 620) says that long /a:/ has a more retracted articulation than the /a/, and this is also the case in the current dialect.

In my data, long /ɑ:/ can be rounded and backed. In the dialect of older speakers, especially old women, the long vowel /ɑ:/ word-medially is raised to the back vowel /ɒ:/, so this vowel in DDA is either: a) rounded or b) backed (unrounded), as in *bɒ:b* or *ba:b* ‘door’, *ʕɒ:ʃa* or *ʕa:ʃa* ‘a female’s name’, *tˤɒ:ħ* or *tˤa:ħ* ‘fell down’ and *mɒ:fi:h or ma:fi:h* ‘there is nothing’. The variation in long vowel /ɑ:/ word-medially is one of the linguistic variables under investigation in the current research (see Chapter Five).

4- Short high back /u/

This short /u/ usually occurs word-medially or finally, such as: *ʔuxu* ‘brother’, *humm* ‘they’, *fusta:n* ‘a dress’, and *ɣurfa* ‘a room’. Short /u/ in the vicinity of pharyngealised consonants will be more backed, such as: sˤubʕi ‘my finger’, *sˤubbaj* ‘pour’, *sˤufur* ‘zero or yellowish’ and *ðˤufdaʕ* ‘a frog’.

5- /u:/ the long counterpart of /u/

Long back rounded /u:/ occurs in closed syllables, such as: *ʔubu:j* ‘my father’, *ʕaru:s* ‘a bride’, *jdʒu:n* ‘they will come’, and *ʃbu:k* ‘wire fences’.

6- Short mid back rounded /o/

This short vowel occurs in a few items, such as: *lo* ‘if’.

7- Long mid back rounded /o:/

This is due to the monophthongisation of the diphthong /aw/, and the lack of the off-glide quality in words such as: *lo:n* ‘a color’, *jo:m* ‘a day’, and *sˤo:b* ‘toward (giving a direction)’.

8- The long mid front /e:/

According to Qafisheh (1977), this is the only long vowel in Gulf dialects that lacks a short counterpart (in this case, /e/). It is a monophthongal sound that lacks the glide /j/. Examples in the dialect: *sˁe:f* ‘summer’, *ilʔiθne:n* ‘Monday’, *tˁe:r* ‘a bird’, *ʤe:t* ‘I came’, *fiðˁe:t* ‘I have spare time’, *radde:t* ‘I have returned’, and *sˁadde:t* ‘I turned away.

9- Notes on short /i/ as /u/

Unlike in the other Gulf dialects, short /u/ does not replace short /i/, although sometimes it can be heard in the word *sufar* > *sifar* ‘travelling’. It is well-known that labials have an effect on the replacement of /i/ with /u/. However, labials have no effect in this dialect on the open syllable, for example *wigaf* ‘he stood’, *mika:n* ‘a place’, *bisˁal* ‘onion’, and *mitˁar* ‘rain’. It is unlike the *ʿArab* Bahraini dialect in which there is an effect of labials in open syllables, where labials encourage backing and rounding of /i/ to /u/; e.g. *muka:n* and *sˁubar* (Holes, 2016).

In the current dialect, there is a relationship between short vowels /i, u, a/ and syllable structure, which is similar to what is described by Ingham (2006) regarding the Najdi dialect. Short vowels /i/ and /u/ occur in the non-final open syllables, such as: *miʃat* ‘she walked’, *misak* ‘he held something’, *issufar* ‘travelling’ *sˁibar* ‘he was patient’, and *kitab* ‘he wrote’.

10- Diphthongs

Diphthongs can be found in word-final position in this dialect, for second or third person forms, as in *intaj* ‘F.SG you’ and *intaw* ‘F/S2.PL you’ for addressing a female in singular and females/males in plural, *ga:law* F/M 3PL.VERB ‘they said’, and *ħitˁtˁaj* F.SG IMP 'put'.

Diphthongs can occur in word-initial position in a few lexical items, such as: *mawqif* ‘situation’ or ‘car park’, *mawʤu:d* ‘existing’, *majʔu:s* ‘hopeless’, *zajtu:n* ‘olive’.

11- Epenthetic vowels

DDA does not allow certain consonant clusters. One way of avoiding unfavoured consonant clusters in the dialect is the insertion of a vowel. Epenthetic vowels are found in most Arabic dialects, such as Egyptian and Syrian (Farwaneh, 2006), and are also found in Gulf dialects as described by Holes (2006 and 2007) for the Kuwaiti and Bahraini dialect. As stated by Farwaneh (2006: 36) the phonological role of epenthesis or vowel insertion is to act as “a barrier against cluster formation”. The default epenthetic vowel seems to be short /i/, e.g. *faʤir* ‘dawn’ vs. *faʤr*, and *tamir* ‘dates’ vs. *tamr*.

Chapter Three
Methodology

3.1 Introduction

This chapter will present the methodology that was adopted and explain how the data was obtained for the current study. The chapter is organised as follows: Section 3.2 will provide details of the sample, while Section 3.2.2 will discuss the researcher and her relationship with the participants. The data collection process, methods and ethicak issues will be discussed in §3.3 and §3.4. Section 3.5 will deal with data analysis and coding, and the social and linguistic variables will be explained in sections 3.6 and 3.7.

3.2 The Sample

Since the study focuses on the dialect of the *Dawāsir* that reside in Dammam in relation to how social factors (age, gender and social networks) may affect the dialect, only the *Dawāsir* in Dammam who were born and reside there were included in the study. The sample consisted of 39 participants, ranging in age from 20 up to 90. My aim was to fill a sample divided into three age groups, and to study age, gender and social networks as independent variables. The process of defining the size and stratification of the sample will be discussed in the following sections.

3.2.1 Defining the sample size

An important point to consider in any sociolinguistic study is to choose participants who are representative of their community, which means that the chosen sample accurately "represents the larger population" (Milroy and Gordon, 2003: 24). Deciding how the sample will be obtained is among the first steps that researchers need to take (ibid). There are three procedures to follow in order to achieve a representative sample, according to Sankoff (1980a, cited in Milroy and Gordon, 2003: 26);

1) Defining the sampling universe.

2) Assessing the relevant variation within the community.

3) Defining the sample size.

There are two main approaches to choosing the sample in sociolinguistic studies; random sampling and judgement sampling. Random sampling was used by Labov (1966) in his survey of the Lower East Side of New York city. In general, this type of sampling can be achieved by choosing speakers at random from a community's electoral register or telephone directories (Milroy and Gordon, 2003). For example, in his (1974) study, Trudgill chose 50 adults from a local register of electors in his study in Norwich, and random sampling was also chosen by Edwards (1992) in his study of a black inner-city neighbourhood in Detroit. Random sampling is generally avoided in favour of judgement sampling in most sociolinguistic studies for two reasons. Firstly, it can be hard to achieve a truly representative sample through random sampling in diverse urban areas. Secondly, random sampling makes it difficult to achieve a balanced and well-stratified sample for the study (ibid: 2003). In addition, Chambers (1995: 39) reported that attempts at random sampling "have proven to be both unmanageable and unnecessary in sociolinguistic research".

Given that "the appropriate method for any population sampling is always triggered by the nature and the objectives of the research" (L. Milroy, 1987: 26), and that the present research project is targeting specific branches of a tribe, the sampling method which was judged to be most appropriate was the judgement method or quota sampling. The quota sampling method is where "the researcher identifies in advance the types of speakers to be studied and then seeks out a quota of speakers who fit the specified categories" (Milroy and Gordon, 2003: 31). According to Chambers (1995: 38), judgement samples can be employed when "dealing with a restricted sample in a well-

defined setting", as in Chambers' research in Canada when he chose his participants from a certain neighbourhood in Toronto and decided that young participants must have resided there all their lives and that the older people had to have lived there since their childhood. He concluded that any study that has to use "predetermined social criterion constitutes a judgement sample" (39).

From a practical point of view, random sampling in the case of the current research, which focuses on particular branches of the tribe (the *Dōsari*) within a larger community (Dammam), was not an option; such facilities as electoral registers, for instance, are unavailable. I designed my own sampling method according to what is relevant to my study, guided by my status as an insider to the community. I ascertained the number of speakers required to answer the research questions by dividing the participants into three age groups, two genders and strength of their social networks (two categories, see section 3.6).

I utilised my wide family contacts within the community to fill the quotas of the judgement sampling. This method is called 'friend of a friend' and it is described to have a 'the snowball effect' in obtaining sufficient number of speakers. The 'snowball method' as explained by Milroy and Gordon (2003: 32) involves participants recommending other people who might also be keen to take part in the research. An example of an Arabic study which, similarly to my study, focused on the speech of a certain tribe within a city is the study by Al-Shehri (1993) in Jeddah. In this study, he recruited speakers using his contacts within the community, and following the 'snowball method'.

One of the advantages of this technique is that it reduces the number of participants that may be hesitant or refuse to participate in the study since the researcher in this case is introduced to new speakers as a 'friend of a friend', i.e. not a total stranger (ibid). Many researchers, such as Milroy and Gordon, 2003, recommend the use of this

method for its effectiveness in filling the quotas of a research project. Lesley Milroy herself used this method in her Belfast study (Milroy, 1987). She maintains that the use of this method facilitated contact with new participants since she was introduced as a friend of a friend, which gave the impression that the researcher was part of the community, which in turn made participants feel less reticent and more motivated to help by taking part in the research.

Such a method is also useful in studying small groups, minorities, certain ethnicities, and immigrants (Milroy and Gordon, 2003). The point to be made here is that as the current study is investigating a specific family, this method was useful and was chosen as the most suitable method for the study.

I aimed in this study to have seven speakers per cell, but some cells ended up with less than seven speakers due to difficulties in obtaining approval from some participants to be recorded. Nevertheless, the sample size overall is sufficient to run a regression analysis (see Table 3.1 below).

3.2.2 The target community

Guided by the objectives of the study, only the *Dawāsir* who were born and raised in Dammam were included in the study.

The term ‘sampling universe’ defines the universe of people from where the sample of the study will be drawn. It is important for the researcher to know how to access the target community under investigation (Milroy and Gordon, 2003: 26). In the current study, the target population was selected according to their family and place of birth. Consequently, the subjects were required to be from the branches of the *Dawāsir* whose ancestors immigrated to Bahrain and moved back to Dammam. Additionally, the participants had to have been born and raised in Dammam. So, the *Dawāsir* who were not

born in Dammam and whose ancestors did not immigrate to Bahrain were excluded from the sample.

In any sociolinguistic study, it is important to decide the sample size after deciding on the sampling universe. Milroy and Gordon (2003) stated that samples in sociolinguistic studies tend to be smaller in comparison with survey-style studies. Sankoff (1980: 51-2, cited in Milroy and Gordon, 2003) stated that large samples can be problematic especially at the data analysis stage, and that it is most important to have a well-chosen sample that represents the society which is being studied, than a poorly chosen (large) sample which does not.

As alluded to above, some potential participants refused to be recorded; and they were therefore excluded from the initial sample. Based on my native knowledge of the community, I presumed from the start that employing male interviewers to assist in conducting at least some of the interviews with male participants was prudent. Eventually, sixteen of the nineteen male participants were interviewed by male interviewers.

Accessing the community

One of the important requirements in sociolinguistic research is that the researcher tries to reduce social distance between themselves and the interviewees, and to establish a rapport with the speakers (see Milroy 1987; Cheshire 1982). The researcher in the current study is an insider to the community. I was born and lived in Dammam and so I am a speaker of the local dialect. My parents were born and raised in Dammam, and they also still reside there. My mother is from the *Dōsari* tribe, as is my grandmother on my father's side. Being an insider to the community is an advantage since the speakers are more likely to

relax in the company of a fellow member of the community, and hence produce speech that is as close as possible to their vernacular.

The male data collection assistant is also an insider; he was born and has lived his whole life in Dammam. The male assistant helped the interviews to progress more smoothly, especially since he was well-known in the community and therefore able to gain the trust and support of the male participants. The fact that the male assistant and I both spoke the same dialect as the participants helped ensure the comfort of the participants and facilitated the production of natural speech.

In total thirty-nine participants were interviewed, comprising 20 females and 19 males, ranging in age from 20 to 90. At the time of the research (2015), the old female participants were all housewives, five of them uneducated, and the remaining two were educated up to secondary level. The two educated females were employed as teachers until retirement. All of the middle-aged females were educated up to Bachelor degree level and three of them were still in employment as teachers; three are retired and two of them did not work at all after graduation. With regard to the young females, three were still students, one of them was studying for a Master's degree in one of the local universities. Four women were graduates, three of whom did not work after graduating.

Regarding the males, three of them were educated to secondary school, one of the three studied for three years in Lebanon and returned to KSA to complete secondary school, he also completed many training courses with the oil company ARAMCO, and the other four had only received basic schooling. All of the middle-aged males had Bachelor degrees and were still working. Some of those in the young age group have finished their studies and started working, while two of them are in their final year at university.

My aim was to distribute the sample over three age groups, representing three generations, two genders (male and female), and two kinds of SN (tight (T) and loose (L)). The stratification of the sample is shown in the Table 3.1 below.

Age group	Social Network				Total
	Tight		Loose		
	Male	Female	Male	Female	
Old (60 and above)	5	6	3	1	15
Middle-aged (40-59)	1	5	4	3	13
Young (20-39)	0	2	6	3	11
					Total= 39

Table 3: The distribution of the sample of speakers.

As shown in the table above, the young male group all have loose networks; the tight SN cell for this group is empty.

3.3 Data collection

Data were collected from everyday speech of the participants through sociolinguistic interviews. This section explains the way the interviews were conducted.

3.3.1 Social interviews

It is important in sociolinguistic research to attempt to collect data in a spontaneous and normal setting, as stated by Labov (1972: 209):

> "…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".

One of the most popular methods of collecting data in sociolinguistic research is to conduct spoken interviews with the participants (Milroy and Gordon, 2003). Labov (1972) emphasised the significant role of interviews in gaining satisfactory data, stating that "the only way to obtain sufficient good data on the speech of any person is through an individual, tape-recorded interview" (209). The goal of the interviews is to elicit casual speech, which will act as the primary data for the sociolinguistic researcher (Becker, 2013). Milroy and Gordon (2003) assert that interviews are a very useful method to elicit unscripted speech. So, in an attempt to elicit a casual style, Labov (1984) emphasised the merits of a technique in which the interviewer asks questions designed to elicit narratives of personal experiences.

For Tagliamonte (2006) the best structure for a sociolinguistic interview is to start with questions that relate to the community, neighbourhood, and so on and then to narrow the interview into more personal topics as this will allow the researcher to measure the willingness of the interviewee to speak about particular topics, and then the researcher can continue by asking questions on topics which they feel the interviewee will be happy to discuss (39). Tagliamonte added that the interviewer needs to keep in mind that the main purpose of the interview is not to get information but to obtain natural and spontaneous speech data.

Likewise, Chambers & Trudgill (1980) assert that the concern of any sociolinguistic researcher is to obtain informal speech, typical of the informants' everyday normal speech, and to which they pay minimal attention because "the more attention speakers pay to the way they are speaking, the more formal and careful their speech is likely to be" (58). To overcome this, they can be asked specific questions that are likely to encourage speakers to lapse into casual speech (Chambers & Trudgill: 1980). Obtaining informal speech is especially challenging due to the problem of the "observer's paradox", viz. to observe the way people normally speak when they are not being observed (Milroy and Gordon, 2003: 49). The observer's paradox can be defined as "the notion that intervention or measurement by an observer can directly impact (or coordinate with) the behaviour of the system being studied" (Dale and Vinson, 2013: 305). Thus, to overcome the observer's paradox Labov used some techniques in the audio-recorded interviews. He tried to direct the interviewee's attention to emotional topics by asking them questions such as 'Have you ever been in a situation where you thought you were going to be killed?' (Labov, 1972: 93). The rationale behind such questions is that emotional involvement reduces attention to speech. Another technique to circumvent the observer's paradox is to raise "light topics" such as jokes, and hobbies to be discussed with participants (see for instance Trudgill 1974).

In the current study, I tried to elicit spontaneous speech throughout the interviews. Participants were interviewed in a friendly environment, and it was their decision whether they preferred to be interviewed at my house or in their own houses.

Most of the time, the participants were given the choice to express their thoughts and to speak freely about topics they liked. I also prepared topics that will provoke casual speech (see below), and that are also interesting to them. Milroy and Gordon (2003) maintain that the way to run a successful interview is to plan well, in order to keep the

interview going and the participants producing spontaneous speech, so the interviewer should prepare topics which will enable this to happen. Interview topics can vary according to the speakers and their interests. During the group interviews in the current research, topics of conversation were allowed to be raised by the speakers spontaneously. Furthermore, the topics I prepared differed according to the age group. For instance, old males and females are usually more interested in speaking about the past, their memories, describing life before modernisation, and some of the traditions especially during feasts, such as Ramadan and Eid. Middle-aged male speakers preferred to speak about their education, childhood memories, work and travelling. Middle-aged females spoke about their studying time, when they started to work, neighbours, and childhood memories. On the other hand, young men and women preferred to talk about technology, travelling, issues related to social media and their future plans. In general, most of the participants were asked about their age, place of birth, their friends and their education. The topics which were discussed in the interviews included: history, memories from childhood, work experience, education, travelling, feasts, and so on.

I utilised the technique of the 'naïve' interviewer, which was discussed by Becker (2013), but this technique did not work well all of the time. For instance, during an interview one of the male participants pretended that he did not have any idea about a topic that he would speak freely about when the recorder was not running. I think that it was because he was too shy to narrate a funny story that happened when he was an employee in ARAMCO.

The data were collected within a five-month period, from December 2014 to the end of April 2015. With regard to the length of the interviews, Labov (1984) suggested that the optimal length for a sociolinguistic interview is an hour, but for Milroy and Gordon (2003) even shorter interviews, for instance between 20 to 30 minutes, can elicit

useful phonological data. It can be said that there is no exact length guideline that should be followed, and it might be better to be left to the discretion of the interviewer and interviewees, or as suggested by Milroy and Gordon (ibid) the length can be determined by the goals of the research itself. Therefore, in this research, the duration of each interview depended on the speaker; the duration of the interviews was usually roughly 35 minutes. Participants were interviewed either in their homes or in my home, except for one participant who preferred to be interviewed by phone. I also conducted three group interviews; these comprised two or three participants, usually the mother and the daughters. Labov (1972b) developed the method of recording groups of speakers together at the same time, and this technique was also successful in overcoming the observer's paradox. Furthermore, the group interview has the benefit of reducing the level of formality (Russell, 1982).

Interviewing male speakers myself in a conservative society was not an easy task. I conducted two interviews with male speakers, and three were conducted by a woman friend who interviewed her husband, and another who interviewed two of her brothers. The rest of the male interviews were carried out by a male assistant, as mentioned earlier. All of the participants were briefed about the objectives of the research.

A Sony digital recorder (ICD-UX200F) was used to record all of the interviews in file format (wav). This device produced a very clear quality of recording, and it was not necessary to use an external microphone. Furthermore, the small size of the device was useful because it did not draw the participants' attention to the device, thus helping to reduce the effect of the observer's paradox.

3.4 Ethical issues

In the past twenty years, attention to ethics has played a crucial role in shaping linguistic research (Trechter, 2013: 34). Any linguist who conducts research is responsible for protecting the privacy and identities of the participants in his/her study (Milroy and Gordon, 2003).

I followed the standard procedure of obtaining consent; before starting the interview, I clearly explained to the participants that I will audio-record them. Initially, interviewees were given a written consent form, but later I relied instead on clear oral consent. Unfortunately, some of the potential participants refused to take part.

I also explained to interviewees that their participation is important to my study and that I need to collect natural speech from them; but I clarified the fact that they are volunteering, and that they can stop the interview or withdraw from participation at any time. I explained that the information taken, their names and identities will remain confidential and secure.

3.4.1 Coding procedures and Rbrul Analysis

Thirty-nine interviews were transcribed; each recorded interview lasted for thirty-five minutes, and so roughly twenty-three hours of data from conversational speech were analysed. The relevant tokens were extracted in order to analyse the variables under investigation.

The two variables: (ʤ) and (ɑ:) were treated as binary, i.e. the realisation of (ʤ) as either [ʤ] or [j]; and the realisation of (ɑ:) in word-medial position as either [ɒ:] or [ɑ:]. Forty tokens were extracted from each interview. Each variable under investigation was coded separately in the Excel spread sheet, along with the relevant linguistic and social factors.

Rbrul (Johnson, 2009) software version 3.2.3 (2015-12-10) "Wooden Christmas-Tree" was used to analyse the data. Rbrul carries out a multiple regression analysis (one-level, step-up & step-down), and allows cross-tabulation between categories (ibid). In relation to the second variable (a:), Praat was used to analyse the two variants and to confirm the existence of a phonological difference between them.

For the Praat analysis, audio segments were extracted from the interviews and inserted into Praat. Later, the formants (F1, F2 and F3) of each segment were extracted and coded into an Excel spreadsheet.

3.5 The Social variables: General description

As stated by Bright (1997: 81), there are two realities of any language; the first being that languages are always changing in many ways (for example vocabulary, grammar and phonology). The second is that these changes happen in different ways at different times and in different places. Linguists usually attempt to understand why and how change happens, i.e. the mechanism of change. According to the variationist approach, and since change is always preceded by a stage of variation, understanding the structure of variation is paramount to understanding how change proceeds. Understanding the structure of variation requires analysis of the linguistic and social constraints on variation. In this section, the social variables selected to be investigated for possible correlation with linguistic usage are explained.

Each variable will be explained separately in sections 3.5.11, 3.5.1.2 and 3.5.1.3.

3.5.1.1 Age

Linguistic variation can be analysed in sociolinguistic studies through the investigation of the language use of different age groups; according to Tagliamonte (2012: 43)

"[l]anguage use is intrinsically correlated with speaker age". Age is usually selected as a primary social factor especially because of its significance to understanding language change in apparent time studies (Labov, 1963). Apparent time studies provide a comparison in the usage of linguistic features in different age groups at the same point in time. According to Al-Wer (2006: 630), "In sociolinguistic research, age is used to give the investigation a depth in time"; so differences found in the linguistic behaviours of different age groups will be taken as an indication of linguistic changes in progress.

Change can be studied through two methods, the real time and apparent time methods (Milroy and Gordon, 2003).

The real-time method involves collecting data at different points in time (Labov, 1994; Chambers, 1995). Although studying language change in real time is a more reliable method, most sociolinguistic studies rely on the apparent time method, mainly for practical reasons (see below).

There are two types of real-time studies: trend and panel studies. In panel studies, data are gathered from the same speakers at two different points in time. Panel studies will necessarily be replications of earlier research projects with the same participants (Labov, 1994). On the other hand, the replication of studies with comparable (but not the same) participants can be considered to be the best source for real time research, and these are called trend studies. An example of a trend study is the re-study of Martha's Vineyard by Blake and Josey in 2003, which followed up the initial work of Labov in 1962 (Eckert, 1997). Another example is Sankoff and Blondeau (2007) in Montreal, where they used panel and trend subsamples that were gathered in 1971 and 1984 to analyse /r/ in Montreal French. There is also a further type of real time study, such as the work of Van de Velde, Van Hout and Gerritsen (1996). Their study is is based on

archived radio recordings from 1935 to 1993. The study analysed the devoicing of voiced fricatives /v, z and ɣ/ in the two varieties of standard Dutch: 1) the Southern standard Dutch which is spoken in Belgium, and 2) the Northern standard Dutch which is spoken in the Netherlands. The study showed that longitudinal studies which rely on data from old recordings can contribute to the research of language change in progress. In research on Arabic, Al-Qouz's study (2009) is a trend study which anchors its findings on Holes's (1987) research in Bahrain.

Sankoff (2006) maintains that panel studies are the only way to define the way speakers interact with and are involved in linguistic changes at different ages. However, as pointed out by Labov (1994), real-time studies in general can be expensive, and most researchers will not, or cannot, wait decades to finalise a piece of research (also see Chambers, 1995). This is in contrast with apparent time studies, which provide results relatively quickly.

Data for sociolinguistic research is mostly gathered through apparent time studies. Apparent time research is based on the investigation and quantitative analysis of linguistic variables in different age groups within the same speech community at the same point in time (Bailey, Wikle, Tilery and Sand, 1991). The main advantage of the apparent time method is that it provides instant results, without the need to wait for a number of years, and therefore can be claimed to be more practical (Lodzikowski, 2012). As Tagliamonte (2012: 43) asserts, "apparent time functions as a surrogate for chronicle (or real) time, enabling the history of a linguistic process to be viewed from the perspective of the present".

Support for the apparent time method is based on the idea that age-based differences signify differences in time, such that the old informants' speech is assumed to be representative of the state of the variety under investigation at a point in time when

these informants were adolescents. It is also assumed that the speech of the older generation is more conservative compared with that of the younger generations. The differences found between the older and younger speakers are taken to represent linguistic change over a specific timespan.

Numerous studies in various parts of the world, and involving different languages and speech communities, have shown that age is a significant social variable. The common pattern of the correlation between age of the speaker and linguistic variation and change is that the older generation tend to use traditional or older linguistic features considerably more often than the younger generation, who often introduce innovative linguistic features and disseminate them across the speech community[7]. Contrary to the expected pattern, Dubois and Horvath's (2000) study of Cajun English found that while the middle-aged speakers used the traditional features less often than the older speakers, as would be expected, some of the speakers in the younger generation reversed this pattern by using the traditional features more often than the older generation; a tendency that Dubois and Horvath called "recycling" (292).

Edwards (1992:101) shows the sorts of differences that can exist between the old and young age groups. The study investigates the behaviour of 66 black participants from inner-city Detroit in relation to six variables in Black English and in colloquial Standard English. Edwards investigated the effectiveness of social networks in explaining the variation in the community of the inner-city in relation to age and gender. The results show that the youngsters use less of the local markers, and more of the innovative forms, whereas the older age groups retained African American linguistic forms. Importantly in

[7] Al-Qahtani (2015), Hussain (2017), and Al-Ammar (2017).

this study there was an interaction between ‘age’ and ‘social network’ such that the younger generation typically belonged to loose social networks.[8]

Al-Wer (2013) maintains that age was found to be a significant variable in most Arabic studies of language variation and change. Usually, young age groups use innovative features, or the newer forms, more often than the old age groups. Examples from recent research include the findings of Ismail (2008) in Damascus; Al-Qouz (2009) in Manama; Al-Qahtani (2015) in Tihāmat Qaḥṭān, Al-Ammar (2017) in Hail, and Hussain (2017) in Medina.

3.5.1.1.1 Age division

Macaulay (2009) explained how age has been dealt with and divided up in sociolinguistic studies, adding that it will always be an important factor and that there is no general agreement on the most suitable method of grouping speakers by age in sociolinguistic studies.

For Eckert (1997) age can be thought of in terms of ‘life stage’: childhood, adolescence, adulthood. Chambers (1995) spoke about the physical and cultural indicators of these four groups, particularly that these stages are transitional, moving from a time when a speaker is looked after by their parents to the time when they go to work, marry and become independent.

Eckert maintains that age cohorts can be grouped “emically” or “etically”. To group emically means to group by shared experiences and life stages; whereas to group

[8] See also Kasstan (2017) about new speakers who belong to endangered or minority language community and their social network as a social variable.

etically is to divide participants by their specific ages (e.g. the young group are between the ages of 20 – 39; middle age 40-59, etc.). In the current study age was studied etically.

In the current study, the sample is divided by age into three age groups, in order to discern the potential apparent-time changes. The groups are: Old (60 and above, most of whom have little or no education, and they are the generation born before or brought up at the period of the oil discovery), Middle-aged (40- 59) and young (20- 39). These three groups represent three different generations of the native *Dawāsir* in Dammam. The old age group comprised men and women aged 60 and above, this group resembled the generation that lived prior to the prosperity that occurred after the oil discovery in 1938. In terms of profession, this generation practiced diving, fishing, farming and trading, while the middle-aged group grew up during the transition to modern-style economy. They are educated, employed, and some of them studied abroad. The third generation, the young participants, were born and raised in the time of economic prosperity and stability. They are more mobile and more cosmopolitan. As was mentioned in chapter one, Dammam has witnessed a huge growth in every aspect after the discovery of oil. This growth affected all sectors; health, education, employment, and housing. The growth attracted people both from inside KSA and abroad to come and work there. This growth implies that over time people have become more mobile and have wider SN.

The distribution of the participants by age is shown below.

Age group	Old (60 and above)	Middle-age (40- 59)	Young (20- 39)	Total
Number of speakers	14	14	11	39

Table 4: Distribution of the sample by age.

3.5.1.2 Gender

Gender seems to be of particular importance in variationist studies (Milroy and Milroy, 1997) and is now one of the social categories that is most often employed as a social variable. Having barely been considered in early studies, it is now thought to be one of the main social factors used to explain variation and change (Cheshire, 2002: 439). Labov (1966b) was the first to formalise the findings of gender-differentiated linguistic features, and to integrate them into a theory of language change. Labov (1991) summarised the differences between the language use of men and women under three principles:

Principle I. *In stable sociolinguistic stratification, men use a higher frequency of non-standard forms than women* (p 205).
Principle Ia. *In change from above, women favor the incoming prestige form more than men.* (p 213).
Principle II. *In change from below, women are most often the innovators.* (p 215).

According to principles Ia and II, most of the recorded linguistic changes are led by women.

Trudgill (1972) also wrote about the important role of gender in sociolinguistic studies, noting that most of the studies that dealt with gender in Western societies reported that women produce linguistic forms similar to the standard or prestigious variety more often than men (180) (see also Wodak & Benke, 1997; Talbot, 2010; Dubois and Horvath, 2000). By way of an interpretation of these generalisations, Trudgill proposes that through the usage of standard prestigious features, women gain and secure their social status. Eckert (1989) on the other hand believes that women are marginalised and this marginalisation leads them to exaggerate the use of linguistic norms that assert their status in the social group to which they belong; viz. women are *status bound* (rather than *status conscious*).

The pattern in relation to gender in the Arab world is now known to parallel that found in Western societies; nevertheless, the pattern has at times been misinterpreted. In early Arabic sociolinguistic studies, it was reported that the opposite case was true in the Arab world, that men use more standard and prestigious forms than women (Abd-el-Jawad, 1981; Kojak (1983 cited in Ibrahim, 1986)). In early Arabic studies, there was confusion between 'standard' and 'prestigious' language forms, until Ibrahim (1986) pointed out that earlier researchers were mistaken in equating prestige forms with standard forms, and that every Arabic dialect has its own prestige forms which are not necessarily the same as those found in SA. Based on these distinctions, he reanalysed data from Arabic and concluded that the findings from Arabic are consistent with the findings from other languages, namely that women tend to use the linguistic features that are generally rated higher in their respective communities. Further data supporting Ibrahim's interpretation emerged from Haeri (1997) in Cairo. Presenting more evidence in support of Ibrahim's thesis, Al-Wer (1997) further elaborated by reviewing cases of linguistic change in vernacular Arabic, which clearly demonstrate women's lead in linguistic change. Ibrahim, Haeri and Al-Wer agree that by setting aside SA and its features, no paradoxes in the interpretation of Arabic data arise.

Contrary to the general finding that 'women lead linguistic change', a number of studies in Arabic-speaking societies (and elsewhere) reported certain groups of women to be conservative. For instance, Holes (1980) found that men are leading the change in Bahrain in both sects (*Šīʿi* and *Sunni*). Furthermore, Holes (2006: 243 and 2016: 67-68) reports that women round the long vowel /ɑ:/ in word medial position more often than men, and that the backing and rounding of /a:/ is typical of Sunni Arab women. On the other hand, studies like Jabeur (1987) in Rades, an urban location in Tunisia, showed that old women maintained the use of local forms more often than men. Walters (1989: 208)

conducted a study in Korba, Tunisia. He studied the variable (ɛ:), which has three variants: [ɛ:], [ɨ:] and [I:]; with [ɛ:] being the standard-like variant, whereas [ɨ:] is the most stigmatised one. Walters pointed out that the classification of those variants as prestigious or stigmatised is inspired by the attitudes of locals there. His data showed that younger speakers and males preferred the prestigious variant [ɛ:] more than [ɨ:] and [I:], while older speakers and females preferred the stigmatised or older variants.

In more recent studies, Al-Hawamdeh (2016) investigates the traditional dialect of Sūf in Jordan, examining two variables: the palatalisation of /k/ (in the stem and in the feminine suffix *-ik*) and the develarisation of /l/. These two variables were examined in relation to linguistic factors and social factors namely age and gender. Overall, her results show that females were conservative in that they retained the traditional features while men led in the use of innovative linguistic features.

Al-Ammar (2017) on Haili Arabic, the study investigated the feminine plural suffix *-a:t*, which has the variants [ah] or [aj]. Men in the study were found to lead the change in using the innovative form [a:t]. Women, on the other hand, tended to retain the local forms more often; according to Al-Ammar, these results can be explained with reference to men's higher level of social contact and mobility relative to women's.

Age and gender interact in sociolinguistic studies. For instance, the results of Dubois and Horvath (2000: 296) showed "gender patterns strongly conditioned by age". In the current study gender is examined in interaction with age and social networks; taking into account that old women spend more time at home and interact with others less than youngsters. Furthermore, their social networks are tight and limited to relatives and neighbours, which will encourage retention of local linguistic features (see Milroy 1980

& 1987). On the other hand, interaction with outsiders is generally greater for men and young women, and therefore their social networks tend to be looser and wider than old women's social networks (see section 3.5.1.3). Therefore, it was predictable that the use of the variables under investigation will differ between males and females.

3.5.1.3 Social network

Linguistic innovation is linked with people who have several ties within the community, and who have a huge number of outside contacts (Milroy, 1993: 225-226). Social Network (SN) studies classify speakers' SN type as 'open' or 'close', and the speakers' connections with other members of their SN as 'uniplex' or 'multiplex'. The notion of SN examines the relationships between individual speakers within their communities and at the micro level, rather than, say, one's social class status (Milroy and Milroy, 1997). In the community under study in this thesis, over time changes have occurred in terms of employment, urbanisation, industrialisation, education and physical mobility. These changes affected the contact patterns, and hence the SN of the community's members in general. For some groups, SNs are no longer tight and restricted to family only; they have loosened and widened beyond the family and close-by neighbours. I hypothesised, along the lines suggested by L. Milroy, that the looser a speakers' SN is, the more likely they are to produce innovative features.

There are two reasons for choosing social networks as one of the social variables in my study: 1) all speakers belong to the same social class (roughly 'upper middle class' in western terms) and cannot be differentiated in that manner, and 2) based on my native knowledge of the community and the social change it has experienced over the seven decades or so, I hypothesised that contact with speakers of other dialects is key to understanding the mechanism through which linguistic changes permeate in the speech of

my informants. Classifying speakers according to the strength of their social network is thus a way of measuring the effect of 'contact' on linguistic variation and change.

Sociolinguistic research has demonstrated that social networks play a role in linguistic behaviour. Speakers appear to be "influenced linguistically" by their SN; according to Chambers & Trudgill (1980: 75):

> people who are well integrated into a particular social group may have linguistic characteristics rather different from those who are more peripheral in the group because the influence of the group will be less strong and less consistent on the peripheral members.

Social network analysis focuses on network ties; in other words the people with whom participants frequently interact. A social network is defined as "a boundless web of ties that reaches out through a whole society, linking people to one another, however remotely" (Milroy and Milroy, 1992: 5).

The idea of SN is focused on how specific speakers are tied to other members of the community and examines how these ties affect speakers' linguistic usages (Milroy and Milroy, 1980: 9). So, when speakers' SN are limited to the local community, they are more likely to produce local features. Writing about the community of Belfast, Milroy (1980: 175) maintains that "The closer an individual's network ties are with his local community in Belfast, the closer his language approximates to localized vernacular forms".

Milroy and Milroy (1992) point out the impact of maintaining dense or strong ties within the community as leading to: 1) dialect maintenance, and 2) resistance to change; whereas weak ties within the community and the presence of ties outside of the community lead to: 1) the rise of innovative features, and 2) language or dialect change.

Additionally, Wodak and Benke (1997) indicate that dense and multiplex networks can cause a rise in the use of some linguistic variants but will not necessarily outright determine the usage of linguistic variables. The hypothesis to be drawn from this is that whenever participants' SN show close ties to relatives, they will be more likely to retain their local forms; whereas the opposite will be true if their SN extend outside of their family.

According to Tagliamonte (2012: 37) the concept of network in sociolinguistic studies has three advantages:

1- When studying small and independent groups, this notion will be very useful.
2- It will facilitate data analysis when it is difficult to apply the notion of social class.
3- It also offers a procedure for dealing with variation between speakers individually.

Indeed, all of the three advantages that Tagliamonte lists can be applied to my research and participants.

Evans's (2004) study, which examined the role of SN on the acquisition of local norms by a group of migrants in Michigan, showed that tight SN for Appalachians in Ypsilanti restricted the acquisition of the new local norm of raised /æ/ (one of the features involved in the Northern Cities shift). This is consistent with L. Milroy's (1980) findings that tight SN within a group will discourage the adoption of new features that come from outside the group. Furthermore, Dubois and Horvath (2000) demonstrated that the use of dental stops among Cajuns is higher in the speech of those with close SN. The data showed that old and young females with tight SN use the dental stops (t and d) more, whereas women with open or loose SN (who married outside of the community, and also have a job outside of the community) do not use the dental stops (t and d), largely because these variants are considered to be highly stigmatised in the Cajun dialect. Additionally,

they added that "women and men in closed networks and men in open networks recycle the dental stop of the variable (dh)"[9] (297), but surprisingly men with loose SN were also found to recycle the dental stop (see also the results in Gal 1978 in Oberwart (Austria); and Thomas 1989 in Pont-rhyd-y-fen).

To my knowledge, the only study on Arabic that investigated the correlation between linguistic usage and social networks systematically is Jabeur (1987) in Rades in Tunisia.[10] Regarding social networks, the results in this study show that participants whose SN have more urban ties tended to abandon the rural features and use more urban features.

In order to measure the strength of SN for the participants in the current study, I used Milroy and Margrain's (1980) scale as a guide, assigning a score to a five-category social network index. Each participant is assigned a score of either one or zero in each of the five categories. The highest score achieved by a participant in this study was 5, while the lowest score was 1. All of the participants have some degree of relations and contact with others, and none of the participants scored zero.

[9] The transcription is adopted from the original reference.

[10] Other studies, e.g. Al-Essa (2009) and Al-Wer and Al-Qahtani (2016) use the notion of social network in interpretation only, but it was not use in the design of their sample.

The social contacts of the participants were measured by asking them questions related to their relations with the family, neighbours, marriage, visits, friends, and work colleagues, as detailed in Table 3.3.

1- Marriage	1 from the family	0 from outside the family
2- Neighbours	1 from the family	0 outsiders
3- Regular meeting with the family	1 regular meeting	0 less or no meeting
4- Friends	1 from the family	0 from outside the family
5- Studying	1 in Dammam or the region	0 elsewhere

Table 5: categories for measuring the type of SN.

If the participants scored 3 points or more then their SN was considered to be tight, while if they scored less than 3 their SN was categorised as loose (See Table 6). By 'tight network' I mean when the SN is limited to family or close neighbours, marriage or friendship or neighbours from the same family, and if they studied locally; on the other hand 'loose network' means when the SN includes frequent contact beyond the family, whether through marriage, friendship, neighbours from outside the family, or study outside of the city.

To assign scores to each category for each speaker, questions were asked both directly and indirectly during the interviews. Below are examples of some questions:

- How often do you meet members of the family?

- Do you have any relatives in other cities or non- *Dōsari* ones?

- Where did you study?

- Do you socialise with the family? Do you socialise with your workmates?

- Have you lived in another city?

It is worth mentioning, that sometimes there was no need to ask these questions because some of the information was obtained naturally through the interview, or according to prior knowledge regarding some speakers. The table below (Table 6) demonstrates the distribution of speakers according to their SN.

Type of SN	Score	Number of speakers
Loose	1, 2	20
Tight	3, 4, 5	19
		Total 39

Table 6: Speakers distribution by their SN.

3.6 Linguistic variables

The study investigates two linguistic variables that are considered to be salient features of the dialect under investigation.

3.6.1 (ʤ)

In the current research, (ʤ) has two variants, the alveo-palatal affricate [ʤ] (which is the MSA-like variant) and the semivowel or glide [j] (which is the traditional *Dōssari* variant). Below are some examples:

maʤlis ~ majlas ‘sitting room’

ʤa: ~ ja: ‘he has come’

ʤi:ra:n ~ ji:ra:n ‘neighbours’

waʤh ~ wajh ‘face’

The [j] form is considered to be a minority feature in KSA while it is a majority feature in the Gulf States. The [ʤ] variant is a supra-local form, i.e. the feature that can be found in the majority of the dialects in the region, including that of Riyadh.

3.6.2 (ɑ:)

There are two variants of the (ɑ:) variable: the rounded [ɒ:] and the unrounded [ɑ:]. Below are some examples:

xɒ:lid ~ xa:lid ‘Khalid’

rɒ:ḥ ~ ra:ḥ ‘he has gone’

bɒ:b ~ ba:b ‘door’

s*ɒ:ʕa* ~ s*a:ʕa* ‘a watch/ hour’

The rounded variant is considered the local feature and is a marked feature in KSA as a whole. The unrounded vowel is the innovative feature. The round pronunciation is characteristic of the Al-Ahsa dialects (Albohnayya 2018); and can be found in some of the Gulf dialects, such as Bahrain, as was described by Holes (2006; 2016).

Chapter Four

The variable (ʤ)

This chapter introduces the first variable *ǧīm* (ʤ) which has two realisations in the *Dawāsir* dialect: palatal alveolar affricate [ʤ], and glide [j]. The chapter is divided into two parts. The first part will introduce the history of the Arabic sound *ǧīm, *ʤ*, along with historical, descriptive and sociolinguistic studies that dealt with it. The second part will present the statistical results of the analysis of this variable and a discussion of the results.

4.1 The history of Arabic *ǧīm*

There are several different realisations of *ǧīm* in the modern dialects, most notably [g] (Egypt and parts of Yemen and Oman), [ʤ] (Saudi Arabia and the Levant), [ʒ] (the Maghreb and the Levant). This sound is most often realised in Standard Arabic as a voiced alveolar affricate [ʤ] or a fricative [ʒ]. As will be discussed below, these realisations descend from proto *g, through palatalised /gʲ/ (Cantineau, 1960). Some research into the historical development of this sound is available, including Cantineau (1960), Blanc (1969), and Kaye (1972). More recent research has been conducted on this variable in the Gulf States, for example in Bahrain (Holes, 1980, 1983, 1986, 2005b, 2015, 2016; Al-Qouz, 2009), in Saudi Arabia (Al-Shehri, 1993; Hussain, 2017), in Egypt (Woidich and Zack, 2009), in Kuwait (Taqi, 2010), and in Iraq Al-Shawi (forthcoming).

4.2 The description of /ʤ/ by medieval grammarians

Al-Farāhīdi (1980), *Al-Zamaxšari* and *ibn Al-Jazari* classify *ǧīm* as a palatal sound (*ʃaʤarijja*), because like other palatal sounds it assimilates the definite article *l-*. Sibawayh describes *ǧīm* as a voiced (*majhu:r*) and fortis (*ʃadi:d*) sound, and specifies its place of articulation as “the middle part of the hard palate together with the Shīn and Yāʾ”

(Sibawayh 1988: 433, cited in Al-Nassir, 1993). In his description, Sibawayh considers the normative articulation to be fronted /g′/, and mentions two non-normative pronunciations of *ǧīm*, namely /g/ and /ʒ/ (without specifying the dialects in which these realisations occur).

Finally, Ibn Sīnā states that in the early half of the 11th century the pronunciation of *ǧīm* was [ʤ], and he indicates that this was the normal pronunciation, as if hinting that this is the 'correct' realisation (Hary, 1996).

4.3 The development of /ʤ/ in modern descriptive studies

Several scholars have discussed various aspects of the history of development of /ʤ/. In this section, I shall present some of the arguments pertaining to this issue.

Blanc (1969) holds the view that Arabic is the only Semitic language that shows fronting of the velar stop /g/ to [gʲ], [dʲ], [ʤ] and [ʒ]. Arabic is also the only Semitic language that voiced Semitic **q* to /g/. He claims that the fronting of /g/ (*ǧīm*) took place before the shift, in some Arabic dialects, of q > [g], and that the realisation [ʤ] was common in the 7th and 8th century.[11] Blanc maintains that *ǧīm* was fully fronted and palatalised to [ʤ] , and that this pronunciation became the norm by the 11th century.

Blanc also cites evidence from modern Arabic dialects to evidence the suggestion that fronting of **g* occurred before the fronting of **q* included evidence from the contemporary dialects. He notes the pronunciation of *ǧīm in* Oman, where it diverges between the pre-velar [g′] and mediopalatal [g′], and is occasionally affricated. Blanc adds that the case of *ǧīm* in Oman is the nearest analogy to Old Arabic according to Sibawayh's description. He adds that *ǧīm* cannot be referred to functional pressure

[11] Blanc (1969) rejects Cantineau's (1950) and Martinet's (1959) position that the fronting of /g/ (*ǧīm*) was due to the phonological pressure which resulted from the voicing of /q/ (i.e. consonant chain shift).

because *ǧīm* was fronted before the shift of *q* to [g] as has been proven by contemporary dialect. Aaccording to Blanc, it is difficult to draw a link between the *qa:l* and *ga:l* split and the fronted and non-fronted *ǧīm*, since both variants were witnessed in *qa:l* dialects as in Cairaine Arabic and in *ga:l* dialects as spoken in Northern Arabia.

Kaye (1972) provides a detailed account of *ǧīm* both synchronically and diachronically, combining descriptive (synchronic) techniques with genetic (diachronic) techniques in order to follow the historical development of the Arabic *ǧīm*.

Kaye (1972) raises the question as to why it is only Arabic among the other Semitic languages that has /ʤ/ and not /g/. He reports that the fronting of /g/ occurred in the 8th century, according to the description of *ǧīm* given by Sibawayh. Sibawayh (1999) describes the sound as [ʤ]; and adds that there were non-norm variants for the [ʤ], such as [g] and [ʒ].

In his article, Kaye attempts to prove that Arabic *ǧīm* was /ʒ/ even before Prophet Mohammad (Peace be upon him). He states that Arabs were aware of the reflexes of *ǧīm*. He also includes the description of many scholars, such as Ibn Fāris and Muqaddasi, and Ibn Sīna who described *ǧīm* as:

> [j] [IPA ʤ] is pronounced by a complete obstruction of the air stream by the (front) end of the tongue by restricting (the air) at an area yielding membranes behind the (front) end of the tongue. (The air therefrom) passes through a narrow passage way and is directed towards the interstices of the lateral incisors, or other teeth, in order that the passage of the air through them may produce an acute hissing sound which blends with noise made by the strongly yielding membrances being released
>
> (Ibn Sīna (980-1047) in Kaye, 1972: 35).

Kaye also mentions that *ǧīm* has different realisations as [j] in Yemen, [dʲ] in Najd and [gʲ] in Oman, but he adds that more data are needed for these dialects and also for the

Gulf dialects. He bases his conclusion on the work of Cowan (1940), who ignores CA and written Arabic because he asserts that CA has never been a native language for any speakers. He instead only refers to spoken Arabic, and for Kaye this is not enough. Cowan reconstructs the Proto Colloquial Arabic (PCA), and Kaye draws his conclusion from Cowan's stages for *ǧīm*: PS */g/> PCA */ʒ/> Cairo Arabic /g/, Baghdadi /ʤ/, etc. He adds that /ʤ/ and /ʧ/ are non-Semitic, therefore /g/ and /ʒ/ correspond to the Semitic forms.

Another study that investigates *ǧīm* in the Egyptian dialect is Woidich and Zack (2009). [g] is the usual realisation of urban speakers of the contemporary Egyptian dialect, and comes from the dialect of the capital city Cairo and its surroundings. Nonetheless, rural areas in Egypt have the allophone [ʤ]. They discuss evidence from a variety of sources, both old and new (including documents written by European travellers), and convincingly defend the thesis that Egyptian [g] is a relic feature, rather than a later development from /ʤ/ (As Kaye, and Hary 1996[12], suggest).[13] The conclusions reached by Woidich and Zack (2009) about the development of Egyptian [g] as a variant of *ǧīm* are now widely accepted.

Cantineau (1960) describes *ǧīm* and illustrates its descent from Semitic **g*. He suggests the two formulas outlined below, which account for the realisations found in the modern dialects. [14]

---

[12] Researchers like Hary (1996) asserted that Egyptian [g] is depalatalised or back shifted from /ʤ/, according to the schema below.

g ⇒ g~ǵ~ǧ ⇒ ǧ ⇒ ǧ~g ⇒ g

6th/ 7th cent. 8th-11th cent. 12th-17th cent. 17th-19th cent. 19th-20th cent.

[13] Woidich and Zack (2009) also discuss [g] outside of Egypt, in the south of Yemen, Oman and in some parts of the Arabian Peninsula.

[14] Other scholars who also discussed the history and distribution of Arabic /ʤ/ include: Anīs (1999) and Zaborsky (2006).

1- /g/- /gj/- /dj/

2- /dj/ - /j/

/ ʤ/

Cantineau also lists the variants of *ǧīm* in contemporary Arabic dialects, as below:

1) [g] can be heard in Egypt and Oman, as in *gabal* ‘mountain’.
2) [gj] is sometimes confused with [dj]; this realisation is found in the Bedouin varieties in the north of the Arabian Peninsula, especially in the dialect of ʿAniza and Shammar, as in *gjabha* ‘forehead’ and *gjifin* ‘eyelid’. In these dialects, the pronunciation of [g] can be heard too, as in *gild* ‘skin’ and *rigil* ‘leg’.
3) [j], which can either be pronounced as [j] or as a short vowel [i]; this variant can be found in some varieties belonging to the tribes in the north of the Arabian Peninsula, in the dialect of *Bani sʿaxir*, *Sardiyyah*, *Sarḥān*, words such as *jabha* ‘forehead’, *iba:h* ‘foreheads’, and *ħa:jib* ‘doorkeeper’.
4) [ʤ] in Yemen, Iraq, in the Syrian desert, in rural Palestinian, rural Jordanian and rural Syrian dialects.
5) [ʒ] in Syria, Palestine, Amman; the fricative [ʒ] as an urban articulation can be found in cities such as Beirut, Damascus, Haifa, Nablus, Jerusalem and Gaza.
6) [ʯ] is another realisation for *ǧīm* that was used in limited areas such as in Tadmur (Palmyra), and in the villages of the eastern mountain in Syria, as in *ʯa:r* ‘neighbour’ and *ʯamal* ‘camel’; this realisation is voiceless (in contrast to the other realisations mentioned above which are voiced).
7) The *kaskasa* can also be one of the realisations of *ǧīm*, as [ts] as in *ħitsib* < *ħa:ʤib* ‘door keeper’ and *tsild* < *ʤild* ‘skin’. This articulation occurs in the ʾ*Assuxna* oasis between Tadmur and the Euphrates and can be caused by interference from Aramaic.
8) [dz] occurs in the dialect of the Jews in Algeria, as in *dzi:ra* for *ʤazi:ra* ‘island’.

4.4 Dialectological research

It is important to point out that not all of the lexical items that contain /ʤ/ exhibit variation between [ʤ] and [j] in Gulf dialects in general. Johnstone (1965), Holes (1980) and Matar (1985) all assert that some words will never have variation between [ʤ] and [j]. More specifically, these words are borrowings from foreign languages, and CA. Foreign words such as [ʤalbu:t] 'jollyboat', which is an Urdu term, and words that are borrowed from SA, such as [ʤa:mʕa] 'university' and [maʤalla] 'magazine' are consistently pronounced with [ʤ].

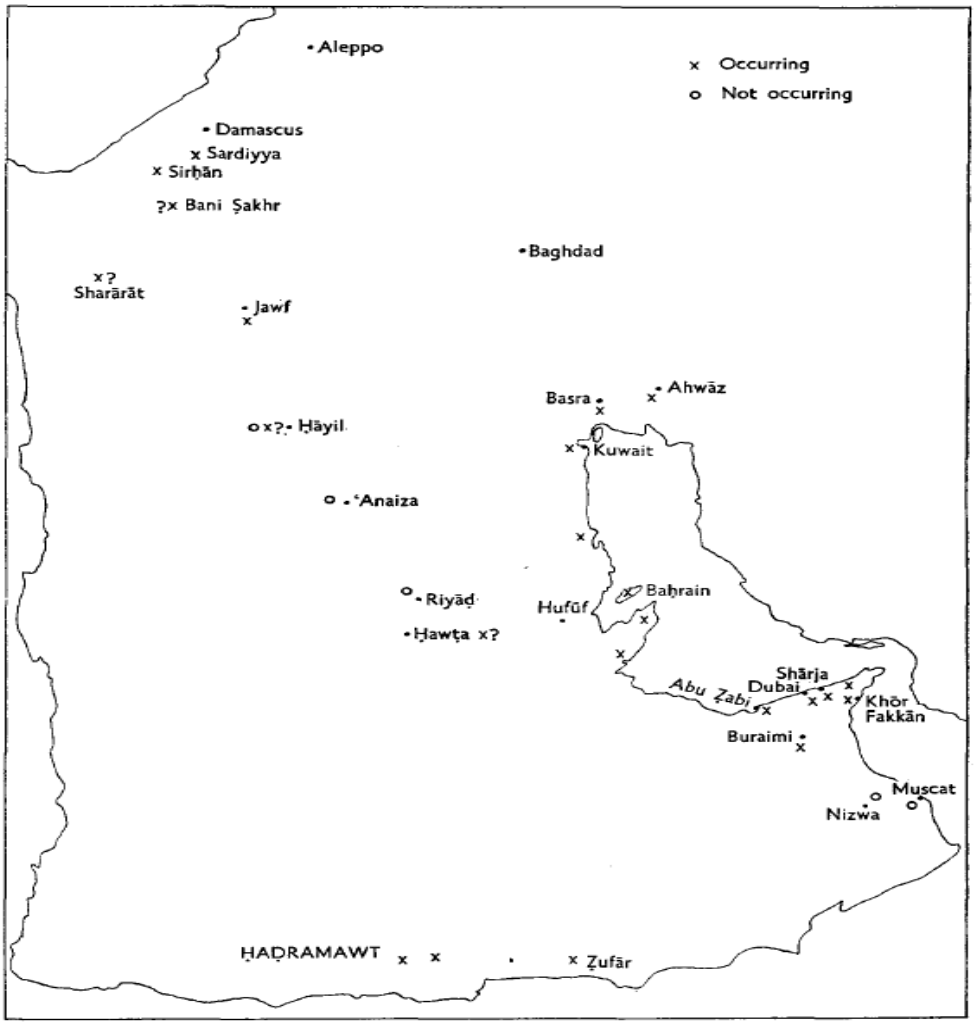
Ingham (1982) provided linguistic descriptions of the area that comprises of the north-eastern part of Arabia together with Khuzestan in southern Persia, Zubair and Basra in Iraq, the north of Saudi Arabia and Kuwait. One of the features he describes is *ǧīm* and its reflexes in the investigated area. He reported that [j] was a variant that is characteristic of the speech of the *Šīʿis* in the south of Iraq. In Kuwait, however, the glide variant is characteristic of the speech of the Sunni and Sedentary group generally, whereas [ʤ] is a Bedouin variant, regardless of whether the Bedouin are settled or nomadic.

The variation between [ʤ] and [j] was also mentioned in a descriptive study by Ingham (1986) on the dialects of some tribes in northern Arabia. Ingham mentions that variation between [ʤ] and [j] can be found in the dialects of the *Rašaydah* and *ʕAjman* tribes. He also notes Philpy[15] reports that this variation can be found in the dialect of Al-Murrah and Al-Manasīr. However, Ingham maintains that he himself did not encounter this variation in the dialect of the Al-Murrah, but he agrees with Philpy's opinion that [j] might appear as an effect of "rapid speech" (272).

[15] A British explorer, writer, Arabist and colonial intelligence officer.

In Johnstone (1965 and 1967) there are descriptions of the Eastern Arabian dialect in Bahrain, Qatar, Kuwait and the Trucial Coasts, the dialects of which are related to the ʿAnazi dialect group in central Arabia.

Johnstone (1967) reports that [j] can be found on the southern Arabian coast (e.g. Zufar and Hadhramut) and in the eastern Arabian dialects of Kuwait, Bahrain, Qatar, Al-Ahsa, UAE, Basra, Al-Ahwaz, Sardiyya, Sirḥān and the Sedentary dialects in Aljawf (see Map 12 adapted from Johnstone: 1965).



Map 12: The distribution of [j] as a variant of ǧīm according to Johnstone (1965).

In south Arabia, variation between [ʤ] into [j] is found in Hadramawt (Landberg 1952, cited in Johnstone, 1965). He adds that this feature was noted by Palgrave in 1865, who was a diplomat; he mentioned that the Arabs of Charak softened the [ʤ] into [j]. Furthermore, as Map 13 shows, this feature is extended to Ahwaz. This phenomenon as reported by Johnstone (1965) that it is lexically conditioned i.e. some lexical items are not variable, but others are. Likewise, while it is unusual, this process is 'reversible' and "this feature cuts across the normal dialect boundaries", as it appears in the North in the Shammari tribe dialects, on the eastern Arabian coast and in some of the southern Arabian dialects (Johnstone, 1965: 241).

Additionally, Johnstone wrote two articles (1961-1964) about some dialect characteristics of the *Dawāsir* in Kuwait. His study is based on two informants whose mothers were from the ʿAjmi tribe. Johnstone maintains that the ʿAjmi tribe had high social prestige. He explains that his participants avoided the use of [j] in place of [ʤ], because the use of [j] was considered to be a "Kuwaiti vulgarism" (249).

4.5 Sociolinguistic Studies

This section deals with some sociolinguistic studies that have investigated the variation between [ʤ] and [j]. Although the study of Mustafawi (2006) is phonological by nature, it is reviewed in this section because it dealt with *ǧīm* in the Gulf. Because of the scarcity of research on this feature in the context of the Gulf dialects, both sociolinguistic and phonological research is examined here. However, in the discussion I focus on the information that relates to sociolinguistics only.

Saudi Arabia

A.Hussain (2017) conducted a comparative study in Medina in KSA, comparing the variation in the affricate [ʤ] and the fricative [ʒ] between the urban and Bedouin

communities there. Historically the original realisation of *ǧīm* for both communities was the affricate (ʤ). In later years, there has been variation between the affricate [ʤ] and the fricative [ʒ]. The occurrence of [ʒ] in Medina is due to the influence of Jeddah. Jeddah in Hijaz is considered the commercial capital of the KSA, and this is considered to be a change from above. The urban community was found to use the innovative variant [ʒ] more than the Bedouin community, largely because the lifestyle of both communities is different. Intermarriage between Medinis and people from Jeddah is considered to be normal, however, it is difficult for this to happen in the Bedouin community. The results show that both communities use the innovative form [ʒ], but the urban community is further ahead than the Bedouin community in using the innovative variant. Furthermore, the younger a speaker is, the more likely they are to use an increased amount of the innovative variant [ʒ]. However, the young participants from the Bedouin community were found to be using [ʒ] at a greater rate than the young urban speakers.

A study carried out by Al-Shehri (1993) regarding the Al-Shehri tribe in Jeddah investigates the variable *ǧīm* in the dialect of the community of rural immigrants of the tribe in Hijaz. The effects of immigration and accommodation of rural migrants into urban areas were considered. There is variation for this variable between the affricate [ʤ] and the glide [j], and this was studied with respect to age, gender, education and length of residence. The researcher reports that [j] is a socially stigmatised feature in the Hijaz region and is considered a marked feature of the rural migrants' speech. The researcher's justification for this was that [ʤ] resembles the SA form in both pronunciation and orthography, while [j] does not.

The results of his study show a steep decrease in the use of [j] among the rural immigrant participants. He states that in west Arabia [j] "exhibits a lower status than the one exhibited by the same variant in the Gulf region" (79). His elderly age group showed

a greater tendency to use [j], in order to assert their "tribal identity" (81). Furthermore, the researcher interviewed speakers in the rural area, where there is variation between [ʤ] and [j]. However, the change occurring from [j] to [ʤ] in the rural area is unlike the change in the immigrant community, being slower in the rural community than in the rural immigrants' community in Jeddah because of their low amounts of contact with outsiders. It was notable that older speakers in the rural area retained the use of [j] more often than the younger speakers because of their tight social networks, and therefore less contact with users of [ʤ]. Rural migrants who moved to Jeddah were aware of the social status of [ʤ] there. Therefore, they used [ʤ] more often than the speakers who remained in the rural area. Al-Shehri's results show that the older speakers tended to use more rural variants, but the younger speakers "seem[ed] to assume leadership in the increasingly progressive change in pronunciation from /j/ to /dž/" (92). In his study, the difference between male and female usage of the variable was very small. The justification for there being only a slight difference was that this linguistic feature is considered a marked one, so all speakers would have a sociolinguistic awareness of the use of the variants, regardless of gender.[16]

Bahrain

Holes wrote extensively about Bahraini and Kuwaiti dialects, as well as Omani dialects. In his examination of the linguistic nuances in the Gulf dialects, Holes comments on variation in *ǧīm*. He maintains that in Kuwaiti dialects, /ʤ/ is 'categorically' [j], except in foreign borrowings where [ʤ] will be retained. An example he provides of the latter is *ʤu:ti*, 'shoes' (2007: 610).

[16] See also Al-Asmari (2015) study on the variation between [ʤ] and [j] in Rijal Alhajir dialect in KSA.

Holes examined Bahraini dialects in general, and focused on dialects spoken by both sects the *Sunnis* and the *Šīʿis* (1980, 1983, 1986, 2016), including a coverage of variation in /ʤ/.

It can be stated that Bahrain is a special linguistic case, because the community there is divided into four groups: *ʕArab*, *Baḥarna*, *ʕAjam* and *Hwala* (Arabised Persians) (Holes, 2016). These four communities are divided into two sects: Sunnis and *Šīʿis*. The ʕArab and Hwala are *Sunnis*, whereas the Baḥarna and ʕAjam are *Šīʿis*. In Bahrain, many phonological variables distinguish the speech of the Sunnis from the speech of *Šīʿis*, and one such example is the variation between [ʤ] and [j].

In addition, the *Sunnis* and *Šīʿis* have been segregated socially. They traditionally lived in different areas in Bahrain, with the exception of just one area, which is called *Madīnat ʿĪsa*, where they live together. According to Holes (1980), the variation between [ʤ] and [j] can demonstrate the sectarian linguistic differences, which are constrained by 'sect' as a major social factor. The use of the non-standard variant, [j], is a marked feature of the *Sunni* dialect, whereas the use of the standard variant [ʤ] is a marked feature of the *Šīʿi* dialect (see further below).[17]

Speakers who use [j] enjoy greater social prestige in Bahrain. According to Holes, there are two main reasons for the elevation of the social status of [j] there. Firstly, [j] is used in the dialect of the *Sunni* royal family in Bahrain, and, secondly, the *Sunni* dialect is popular in the other Gulf States, which is evident in the media where the *Sunni* dialect is used in TV shows and on the radio (Holes, 1980).

[17] Procházka (1981) reports that variation between [ʤ] and [j] is also found in the variety of *Šīʿi* of Diraz, a village in Bahrain.

Holes (1980) also found that in the *Sunni* dialect there is a link between literacy and the tendency to use [ʤ] instead of [j]. Educated *Sunnis* acquire the standard [ʤ] through their study of Modern Standard Arabic (MSA), the official language of education in Bahrain. The illiterate participants in Holes's study, however, retain [j] generally. Indeed, non-standard variants were used more often by both *Sunni* and *Šīʿi* illiterate participants (Holes, 1983).

He adds that men use [ʤ] more often than women, and that men are leading women in the use of [ʤ] among *Sunni* speakers. There is a tendency among *Šīʿi* male speakers to use [j] (which is considered a *Sunni* variant) more often than women; he explains that in doing so the male *Šīʿi* speakers were adapting to the prestigious Sunni feature, as the *Sunni* dialect is dominant in the area (85) and *Sunnis* are more secure linguistically as the dominant social group. Holes (1983) adds that literate *Sunnis* can speak freely without any fear of ridicule unlike the *Šīʿi* speakers. It is the *Šīʿis* that sometimes use the non-standard Sunni variant because it is considered locally prestigious, as opposed to their local and non-prestigious variant even though it is the 'standard' variant, due to the fact that they are under "pressure from the high-status dialect" (448).

Holes's research in Bahrain focused mostly on the phonological variation between the *Sunnis* and *Šīʿis*, whose first language is Arabic, and therefore in his 1983 study the *ʕAjam* were excluded, because Arabic is their second language rather than their first. Differences exist between the *Shi'is* and *Sunnis* in terms of religious rituals, and there are also social differences between them as well. The *Sunnis* and *Šīʿis* live in separate towns and it is true that there is segregation in terms of living areas, and no intermarriage occurs between them. However, the relation between sect and dialect has begun to 'blur' due to: 1) mixed schools, 2) rapid industrialisation, and 3) the media (1983, 435). Dialect variation in Bahraini communities seems to be increasing because of the influence of the

locally prestigious Sunni dialect, as well as the increased exposure to “the supradialectal variety of Arabic (MSA)” (438).

However, in Holes’s (1986) article about the dialect differences between the *Šīʿis* and *Sunnis* in Bahrain, he found that there are some linguistic differences within the *Baḥārna* (*Šīʿi*) group. The researcher demonstrates that, in general, there are rural and urban *Baḥārna* and some linguistic features differ among them; for example rural *Baḥārna* have a voiceless retracted /ķ/ for OA /q/, which is considered ‘embarrassing’ by the urban *Baḥārna.* Furthermore, the educated and most of the urban *Šīʿis* have an inclination towards use of the supra-dialectal standard in Bahrain (34).

Holes also mentions that in some parts of Bahrain, such as the northeast of Manama in the villages of *Sanābis*, *Dirāz* and *Rās Rummān*, the *Šīʿi* resident there have [j] in their dialect rather than [ʤ], in contrast to the other *Šīʿi* in Bahrain. His justification for this was that the *Šīʿis* in those three villages originally migrated from Al-Ahsa in the eastern part of KSA, where the local *Šīʿis* have this variation between [j] and [ʤ]. Moreover, these three villages are linked through intermarriage with the *Šīʿi* of Al-Ahsa. Therefore, Holes chose to study this group in Bahrain because the *Šīʿi* of the northeast of Manama and *Rās Rummān* have a different dialect from the other *Šīʿi* in Bahrain, and through the use of this feature the dialect of the *Šīʿi* in Bahrain converges towards that of the *Sunni* Arabs there who are both politically powerful and linguistically secure.

As a result, he divided his sample into three divisions:

1- *Baḥārna* A, are urban *Baḥārna* from Manama (who use [ʤ], a standard-like feature).

2- *Baḥārna* B, from the three villages of *Sanābis*, *Dirāz* and *Rās Rummān* (who use [j], a non-standard feature).

3- *Al-ʿArab* (who use the [j], a non-standard feature).

Holes gathered data from 87 speakers, divided into those who were literate and those who were non-literate, from three groups: *Baḥārna* A, *Baḥārna* B and *Al-ʿArab*. He chose to study both the literate and non-literate speakers in order to ascertain whether exposure to the Standard in a leaning environment had any kind of effect on dialect change. He also wanted to investigate the extent to which the communities maintain or abandon their societal norms. The *ʿArabs* and *Baḥārna* B groups are socially diverse but have the same linguistic norm for this variable, [j], whereas the *Baḥārna* A group use [ʤ] which is the standard-like form.

The results showed that the literate speakers of the *Baḥārna* A group had a tendency to prefer [j], which is used by the socially high-status group. The justification that was given was that it might be that literates from *Baḥārna* A found it better, when communicating with a foreigner, to use the local standard forms. Regarding the results of *Baḥārna* B, their use of the non-standard [j] was found to be different to the use of [j] by the Arabs. Moreover, Holes (1986) listed three reasons for the variation that occurs in the morphology of the members of both communities in Bahrain. He argued that these differences were caused by: 1) new forms of employment, 2) formal education, and 3) increased contact between the members of the *ʿArabs* and *Baḥārna* groups. Although Holes was talking specifically about the variation in the morphological structure here, this can also apply to the *ǧīm* variable under investigation in this thesis.

In a more recent study, Al-Qouz (2009) investigates Bahraini teenagers and children from the age of 7 to 17, and examines the sectarian differences between the *Sunnis* and *Šīʿis* in Bahrain. She collected data from a mixed-sect area and went to schools that comprised mixed sect students.

Her study can be considered to be a replication of Holes's (1980-1987) research in Bahrain. She studied many variables in the dialect of *Šīʿis* and *Sunnis* in Bahrain, one of which was (ʤ) which in Bahrain can show a sectarian difference and has two variants: the standard like [ʤ] which is the *Šīʿis* variant, and the non-standard [j] which is the Sunni variant.

Her results showed that *Šīʿi* children used the non-standard Sunni feature [j] because of their exposure to the Sunni speakers. However, *Šīʿi* males used [ʤ] more often, and private school children acquired [j] earlier than state school children. It is worth mentioning that [j] has a high status in Bahrain, and the Sunni dialect is considered to be prestigious there. It is worth mentioning here that Holes (2016) has commented that his work comprises the whole of Bahrain, where Al-Qouz's research deals with Manamah's only. Her findings show that the *Baḥārna* participants in her study are adopting the Arab (*Sunni*) [j] variant over their heritage and MSA-like variant [ʤ], whereas the Arabs retain their variant [j] which is not found in MSA. This result is comparable to Holes's findings.

Qatar

Al-Amadidhi (1985) conducted a study of some salient linguistic features in the Qatari dialect, including *ǧīm*. The researcher demonstrates that variation in *ǧīm* takes place in a large number of lexical items in the Qatari dialect, and that it happens 'optionally' (25). This is an old phenomenon mentioned by Ibn Jinni (2001) and was present in the dialect of the *Tamīm* tribe. He adds that there had been no systematic study which dealt with the variation between [ʤ] and [j] in Qatar (which was the context of his study). Additionally, he states that most of the studies that described the Gulf dialects did not consider intra-linguistic factors and extra linguistic factors, such as speaker ethnicity and education level. Nevertheless, in this study, the occurrence of [j] is described as

"colloquialisation". In order to investigate the intra and extra linguistic factors, data was collected from 48 speakers divided into four groups: 1) Bedouins, 2) Tribes, 3) Howala, and 4) Persians (ʿAjam). All of these groups are sedentary except for the Bedouins, and each was divided into two age groups. The first age group combined old participants aged 50 years and over, this old age-group represents the pre-oil discovery period. The young age group contains speakers aged from 20 to 35 years old and represents the period after oil discovery. As outlined above, education was one of the social factors investigated in the study, but the level of education was only investigated for the young age group, and was divided as follows: elementary, secondary and university educated. Informal and formal sociolinguistic interviews and reading styles were used to investigate the variables.

The results reveal that the "colloquialisation" of *ǧīm* (i.e. the use of [j]) occurs in the pure dialectal context and words, while the standardisation of *ǧīm* will occur in the context of standard and loan words. Moreover, [j] occurs in the speech of the sedentary social group, so it can be said to be a sedentary linguistic feature, whereas [ʤ] is a Bedouin feature that is used widely among Bedouins. The factor of age shows two directions in the use of [ʤ] and [j], the Bedouins were moving toward the use of [j], while the sedentary group were moving towards greater use of [ʤ]. Overall, the concept of register shift was important in the study and proved that in formal situations/styles there is a preference for [ʤ] among speakers, but in informal situations the preference is for [j]. In terms of education, the higher a speaker's level of education, the less likely they are to use [j].

Also in Qatar too, Mustafawi's (2006) investigated variation between [ʤ] and [j]. She considers this phenomenon to be an example of lenition. The researcher talks widely about this feature and states that it is a very ancient phenomenon. She bases this assertion on an old inscription from *Liḥjāni*, a pre-Islamic inscription in which the grapheme ي is

used for *ǧīm*. She reviews studies that have dealt with this phenomenon and reports that most of them have described it as unconditioned. However, Mustafawi claims that this phenomenon must be 'lexically conditioned' as it does not occur at *all* words that contain /ʤ/ (125). Accordingly, she states that common lexical items are more likely to undergo lenition than those which are less common. Nevertheless, religious lexical items do not undergo the lenition process at all, even if they are used daily (Al- Amadidhi, 1985: 158, cited in Mustafawi, 2006). Furthermore, she adds that the greater a speaker's education level, the more likely they are to produce [ʤ], and this is especially common among the younger generation. Her results show that lenition occurs more often in the onset than in the coda, and in the latter when it is preceded by low vowels. She also reported that the higher the level of education of the speaker, the greater their use of formal speech will be, and this context promotes the use of the variant [ʤ]. Gemination usually resists the process of lenition, if the geminate occurs in the coda and is preceded by any vowel other than a low vowel (Kirshner, 2000). However, as will be presented shortly, in my data gemminate words such as *raʤʤal* can also be lenited and pronounced as *rajjal*.

Kuwait

A study conducted by Taqi (2010) investigating the Kuwaiti dialect examined the use of the variable (ʤ) by two ethnic groups there: the Najdi and *ʕAjami*. Taqi reports that [j] was the predominant variant for the sedentary people in Kuwait while [ʤ] was used there in more formal situations; she also states that [ʤ] is used more in Kuwait among the *ʕAjamies*, whereas the Bedouins use [j] more often. Her study also shows that the Kuwaitis felt proud to use [j] more than [ʤ], and demonstrated this by using [j] for words that were pronounced mostly with [ʤ] elsewhere, as in the example she provided; *ta:jir* which means 'merchant' instead of *ta:ʤir*. In addition, she states that young *ʕAjamies* are inclined to use the Najdi variant of [j] more often as it is the prestigious form in Kuwait.

According to the data she collected, there are three lexical classifications for variation between [ʤ] and [j]: 1) some words are produced only with [ʤ], 2) some words are produced only with [j] and 3) some words are produced variably with either [ʤ] or [j] (124). She reports that less frequently used and less modern words were pronounced with [ʤ] regardless of the age, gender or ethnicity of the speakers who produced them. In contrast, non-standard, more modern and more frequently used words were pronounced more often with [j], as in [je:t] meaning 'I came', and [rajjal] meaning 'a man'. Other words are variably pronounced with a [ʤ] or a [j] according to the age, gender and ethnicity of the speaker, e.g. the male name [ʤabir] is realised as [ʤabir] by the *ʕAjam* and [jabir] by the Najdi. Ethnicity was found to be an essential social factor and was significant in showing the differences in the use of (ʤ) between the Najdi and *ʕAjami*. Age was also found to be significant, with young *ʕAjamies* found to use more [j]; this shows that they were following the prestigious form in Kuwait, and in doing so indexing their Kuwaiti identity. Gender was found to be significant as well, with males of both ethnicities using [ʤ] more than females, while the *ʕAjami* males used [ʤ] more than the Najdi males. In summary, Taqi's study shows "that [j] is connected to prestige and considered the preferred local variant in Kuwait" (203).

Another study undertaken by Al-Qenaie (2011) on Kuwaiti Arabic examined diglossic switching by speakers for four phonological variables (the affrication of /k/ to [ʧ], the affrication of /q/ to [g] and /q/ to [ʤ], and the palatalisation of /ʤ/ to [j]). He studied varieties at three different levels: 1) the Modern standard Arabic; 2) Kuwaiti standard Arabic; and 3) informal Kuwaiti Arabic; and investigated the four variables in relation to the social factors of age (young, middle-age and old), gender, religious affiliation (*Sunni* or *Šīʿi*); and speakers' origin (inner-*Hadʿar* 'urban' or outer-Bedouin).

As this chapter is concerned with the variable *ǧīm*, the following discussion will focus on this variable only. Al-Qenaie reports that the palatalisation of (ʤ) is not linguistically conditioned but is socially conditioned in Kuwait, and dialectal forms such as the use of the variant [j] will occur far more often in informal settings than formal settings. He finds that men in his data set use more of the dialectal features including the variant [j] than women in informal settings. Sunni speakers use more of the dialectal features than the *Šīʿi* speakers do. Young speakers in informal settings use more of dialectal features in comparison with the other age groups. The variant [j] is considered an urban variant; therefore, the use of this variant is less frequent in Bedouin speech, especially among those who reside in the outer city of Kuwait, whereas it is used more in the dialect of the urban speakers who reside in the inner city of Kuwait. In summary, the use of the variant [j] is most favoured by younger speakers in informal settings; and the two factors of age and level of formality are the most strong predictors of the occurrences of the dialectal features in Kuwait.

A more recent article regarding the case of (ʤ) in Kuwait was written by Dashti, Akbar and Taqi (2015), which focus on the sound change in the dialect of Kuwaities. Although (ʤ) is a feature of MSA, in Kuwait it used to be the non-prestigious form and [j] (which is not found in MSA) was the prestigious form. The study examines the potential change to this variable's social meaning in Kuwait, and for this reason, 40 speakers were interviewed from different age groups, genders, levels of education, neighbourhoods and social networks. Despite its small size, Kuwait is distinguished by its socio-ethnic diversity, with rapid social and political changes taking place. The population of Kuwait is urban, and the Bedouins and the sedentary people can be found on the outskirts of the capital.

The Bedouin participants were found to favour [ʤ], with the sedentary participants also showing a tendency towards [ʤ], even though tradiationally they would be expected to use [j]; this shift is likely due by their widening SN and greater contact with Bedouins. The Bedouins were found to use [ʤ] more often, and it can be said that it is the norm for Bedouins to use [ʤ] rather than [j]. Male speakers used [ʤ] more often than females, and both SN scores and neighbourhood affected the increase of use of the Bedouin form [ʤ], as opposed to the sedentary form [j] in Kuwait. This could imply a dialect shift caused by the political and social processes present in the area.

The previous sections have discussed the findings of the most relevant studies of *ǧīm* from historical, descriptive, and sociolinguistic perspectives. In the following sections, a summary of the main findings of this thesis will be presented, together with a statistical analysis of the variable (ʤ).

4.6 Findings and discussion

4.6.1 Introduction

In the following sections, the quantitative findings and analysis of (ʤ) are presented. The Rbrul software was used for the quantitative analysis. Two methods were used to analyse the data: 1) cross-tabulations were carried out in order to obtain correlations between the factor groups (the dependent variable (ʤ) and the social variables: Age, Gender, SN) and 2) in order to obtain the factor weight and the P values, a regression analysis or modelling was carried out including all of the linguistic and social factors. Statistical modelling is important and adds value to the findings of studies as it provides a "formal mathematical assessment of the relationship between the dependent variable and the independent variables" (Taglimonte, 2012: 121).

4.6.2 The variable (ʤ) in the current research

The variable (ʤ) in the current study has two variants; the affricate [ʤ], which is the dominant and widely used variant in KSA, and the glide [j], which is the traditional form and it is a recessive feature in KSA. Below are some examples from the data collected for this variable.

ʤa:b (v) ~ *ja:b* 'he brought'

nitʤammaʕ (v) ~ *nitjammaʕ* 'to gather'

tiʤj (v) ~ *tiji* "to come"

masʤid[18] (n) ~ *masjad* 'mosque'

raʤilha (n) ~ *rajilha* 'her husband'

ilʤaha:l (n) ~ *iljaha:l* 'the children'

ʤidi:d (adj) ~ *jidi:d* 'new'

wa:ʤid (adj) ~ *wa:jid* 'a lot'

Additionally, variation between [ʤ] and [j] can also be found in some proper names, as in the examples below:

naʤla ~ najla

ʤabir ~ jabir

ʤa:bir ~ ja:bir

faraʤ ~ faraj

ʤumʕa ~ jimʕa

ma:ʤid ~ ma:jid

[18] The change in the short vowels in the pronunciation of the word mosque is notable. If it is pronounced with [ʤ], the [ʤ] will be followed by /i/ *masʤid*, while if it is pronounced with [j], it will be followed by [a] *masjad.*

The table below presents the occurance of the variation between [ʤ] and [j] in the data.

Preceding	ʤ	j	Total	Example	Gloss
ʃ	4	1	5	*ʃja:nna*	what has come to us?
ʕ	1	3	4	*ʕʤila*	rushing out
tˤ	1	0	1	*baʕd ilhubu:tˤ ʤi:t*	after the hypoglycaemia I came
ðˤ	1	0	1	*lirrija:ðˤ ʤa:w*	they came to Riyadh
b	4	4	8	*mub ʤa:jji:n*	they will not come
ʧ	1	0	1	*liʧ ji:t*	for you I came
d	22	3	25	*radd ja:nna*	he came again
f	3	6	9	*tʕarf jahha:l*	you know children
g	2	1	3	*issawwa:g ʤa:j*	the driver has arrived
h	19	5	24	*tawwah ʤa:jbah*	recently he brought it
ħ	3	1	4	*ra:ħ ʤa:b*	he went to bring something
ʤ	30	0	30	*raʤʤa:l*	a man
k	3	1	4	*ilmalik ʤa:j*	the king is coming
l	59	15	74	*ilʤumʕah*	Friday
m	33	16	49	*mja:wir*	close to
n	62	10	72	*ʔinʤi*	we will come
r	20	5	25	*rʤu:li*	my legs
s	12	7	19	*ilmasjad*	the mosque
sˤ	1	0	1	*waħda w nusˤ ʤa:j*	one thirty he came
t	33	42	75	*tji:n*	you will come
w	64	10	74	*wʤi:h*	faces
j	151	44	195	*jju:n*	they will come
z	1	0	1	*ʤa:hiz ʤidi:d*	ready and new
Total	971	301	**1272**		

In the traditional *Dōsari* dialect, [j] occurs in all phonological context. However, there seems to be some lexical conditioning, since borrowed or loan words always occur with [ʤ] (these words were excluded from the analysis) (see below).

Indeed, the dialect under investigation fits into the classification given by Holes (1980: 77-79), where lexical items from borrowed languages will be exempted from the variation, as follows:

1) Borrowed items are pronounced with [ʤ], as in: *ʤu:ti* 'shoe' (Urdu) and *ʤalbu:t* 'jollyboat' (English/ Urdu). In feminine plural forms (i.e. by adding the feminine plural suffix –a:t), borrowed items are pronounced with the affricate, e.g. *je:g* 'jug' (English) is *ʤ*e:ga:t in plural form.
2) Items borrowed from CA also pronounced with [ʤ], such as *ʤubin* 'cheese', *ʤa:mʕa* 'university', and *ʤa:hiz* 'ready'.
3) New words to the dialect that have [ʤ], will sometimes be replaced by other lexical items, such as: *ħiʤra* is whether *da:r* or *ħiʤra* 'room', *zawa:ʤ* is said *ʕirs* 'wedding', and *zawwaʤ* will be *ʕarras* or *zawwaʤ* 'he married'. However, the word *jawwaz* for *zawwaʤ* 'have married him to a woman' can be heard in the speech of old females.

4.6.3 Coding Protocol

The variable (ʤ) has two variants: the innovative [ʤ] and the local form [j]. Files were coded in Excel sheet that was converted to a comma separated value file (.csv), in order to be used in Rbrul. The total number of tokens is 1272. The tokens of this variable were coded for four factor groups: linguistic variables (number of syllables, preceding and following sounds), age, gender, and SN. Other linguistic factors such as syllable position (whether the variable occurs in coda or onset position), stress (whether the variable is occurs in stressed or unstressed syllable) and gemination were checked but because of the large difference in the number of tokens in each factor group, the results were deemed

unreliable[19] due to their irregular results, they were eliminated from the analysis. The attempt to include these two factors in the first place was based on the findings from A. Hussain (2017) where both factor groups were returned as significant.

To find the best model, coding of the variable took more than one step. The tokens were coded for the following factor groups:

1. Preceding environment: For the first run I coded for preceding sounds individually. The variable (ʤ) appeared after the consonants /ʃ, ðˤ, b, ʧ, d, f, g, h, ħ, ʤ, k, l, m, n, r, s, sˤ, t, w, j, z/. I re-coded the sounds according to their place of articulation because of the difference in the number of tokens. Table 19 in the appendix shows examples of lexical items from the data in these environments along with the number of tokens in each environment. Tokens were conflated as: coronals, dorsals and labials. I performed three runs, using three different combinations of consonants before deciding on the final Rbrul model, as follows:

- In the first run, the factor group included: glide /w, j/, coronal /s, sˤ, t, d, l, z, ʤ, ʃ, n, r, ʧ/, dorsal /g, k, ħ, h/, labial /b, f, m/, high front /i, iː/, high back /u, uː/, low front /a, aː/, and low back /ɑ, ɑː/. In this run, the preceding linguistic environment was selected as significant ($P < 0.001$), and the results (see Appendix B) showed that [ʤ] occurred most often when preceded by a high front vowel (87%, with a FW 0.758) or a glide (80%, with a FW 0.606); in other words, high front vowels and glides encourage affrication (see Zeroual, 2006). Consonants (coronals, labials, dorsals) disfavoured the use of [ʤ], and as the number of tokens with preceding

[19] These factors can be examined in future research that includes a larger dataset, and, perhaps, elicited data.

labial and dorsal consonants was very low compared to the other consonants, they were later conflated with preceding coronal sounds into one factor group called ‘consonants’.

- In the second run, further analysis was carried out of the preceding sounds, where all of the consonants (excluding glides) were conflated, in order to identify whether the surrounding phonological environment has any effect on the fortition of [j]. Preceding glide favoured the application value.
- In the third run, the glides /j/ and /w/ were separated; /w/ was conflated with the high back vowels, and [j] was coded in a separate factor group. In order to monitor whether the presence of /j/ had any effect on the variation between [ʤ] and [j] as linguistically /j/ can affect affrication. Zeroual (2006) states that affrication can be triggered by /j/ in both the preceding and following environment. The results of this run, however, showed that preceding [j] disfavoured the application value, which might be due to the relatively small number of tokens in this environment (187 tokens). Only preceding high vowels were favoured. I therefore decided to include [j] with high vowels in the same factor group.

The same process was followed for the vowels /a, ɑ:, i, i:, u/ in the preceding environment. The vowels were initially coded according to position, length and height, but because of the large variance in the number of tokens, in the final run the vowels were coded according to length and height only.

2. Following environment. Similarly, three different combinations of consonants and vowels were tried before deciding on the best model. Details are below.

- The consonants which occurred after (ʤ) were: / tˁ, b, f, h, ħ, ʤ, l, m, s, t, w, j, z/. In the first run, each the following consonant represented a separate factor group. None of the consonantal environments were returned as significant.
- Consonants were grouped as (coronal, dorsal, and labial). In this run, following coronals favoured [ʤ] most strongly and only high front vowels favoured [ʤ]. Due to the low number of tokens in the consonantal environment, Therefore, all consonants were coded in one group 'consonant'. Glides in this run were coded separately, and were not returned as significant. This may be because there are only six tokens of [j] and two tokens of [w] in the following environment.

- In the third and final run, the six tokens containing [j] were coded as 'high front vowel', and the two tokens of [w] were coded as 'high back vowel'. The vowels which occurred after (ʤ) were: /a, a:, e:, i, i:, o:, u, u:/, and the same procedure was followed for coding these as for the following consonants. After running the model, /o:/ was conflated with the high back vowels, and /e:/ was conflated with high front vowels, due to the low number of tokens of each. In this run, high front was returned as significant Table 22 (see appendix E) shows the distribution of tokens which were followed by a vowel.

3. Number of syllables: This factor was coded as monosyllabic, disyllabic and polysyllabic (trisyllabic was conflated with polysyllabic); examples of these include:

Monosyllabic: *ji:t* 'I came', *ʤa:w* 'they came', *ʤa:* 'he came', *ʤadd* 'grandfather and *ʤi:b* 'bring!'.

Disyllabic: *ja:ni* 'he came to me', *wa:ʤid* 'many', *ʤidi:d* 'new', *ʤabir* 'a man's name' and *jiri:d* 'palm fronds'.

Polysyllabic: *ilmiʤa:lis* 'sitting rooms', *ilfaʤir* 'dawn', *rju:li* 'my legs', *rajilha* 'her husband' and *iljinu:bi* 'located in the southern'.

4. Age. Three age groups were coded for: old (aged 60 and above), middle-aged (40-59) and young (20-39).

5. Gender: Male and female.

6- Social Networks: Tight and loose.

The final model comprised of five factor groups: preceding sound (5 factors), following sound (4 factors), number of syllables (3 factors), age (3 factors), gender (2 factors), and social network (2 factors).

For all three models, Rbrul returned 'age', 'gender', and 'SN' as statistically significant.

4.6.4 The results

This section will present the quantitative analysis of the data. A factor weight above 0.5 means that a variant is favoured, whereas a factor weight below 0.5 means a variant is disfavoured. The results are displayed in Table 7. The usage of the innovative feature [ʤ]

(the application value) is relatively high (971 tokens) in comparison with the use of the traditional feature [j] (301 tokens).

Rbrul returned the number of syllables, preceding sounds and following sounds, alongside the three social variables as significant. The most highly significant factor group is age with ($P < 0.001$), followed by gender with ($P < 0.001$), and then the SN with ($P < 0.001$).

R^2 0.549			
Numbers of syllables (P = 1.11e-05)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
mono	198	86%	0.676
disyl	683	77%	0.453
poly	391	68%	0.366
Preceding sound (P = 0.00426)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
high back	73	87%	0.638
high front	358	82%	0.595
low front	367	75%	0.449
consonant	445	72%	0.419
low back	29	44%	0.396
Following sound (P = 0.00252)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
consonant	73	82%	0.648
high front	613	79%	0.545
high back	176	60%	0.405
low front	410	76%	0.4
Age (P = 7.26e-24)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Young	295	96%	0.826
Middle-aged	409	78%	0.457
Old	568	64%	0.2
Gender (P = 4.58e-22)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Male	651	90%	0.712
Female	621	61%	0.288
Social Network (P = 1.24e-16)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Loose	670	93%	0.679
Tight	602	57%	0.321

Table 7: Rbrul results of the correlation between the use of [ʤ] and the independent variables (linguistic environments, age, gender and SN).

Table 7 shows that Rbrul returns number of syllables as significant ($P < 0.001$), and, again, the affricate [ʤ] preferred monosyllabic (86%, FW 0.67), while the disyllabic

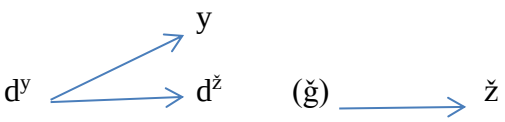
and polysyllabic were disfavoured. As shown in Table 0.1, the number of tokens in the three categories of this factor group (number of syllables) varies considerably, with only 187 tokens falling in the 'mono' category, compared with 683 in dysyllabic words and 391 in polysyllabic words. A separate model was run where all the monosyllabic tokens were excluded.[20] This model did not return the number of syllables as significant at all.

The [ʤ] variant is favoured or most likely to occur when it is preceded by high back (87%, FW 0.57) and high front (82%, FW 0.68) vowels, while after low front vowel and consonants, [ʤ] is disfavoured. Regarding the following phonological environment, [ʤ] was favoured when followed by a consonant (82%, FW 0.65) and high front vowel (79%, FW 0.55). According to Bhat (1978) and Zeroual (2006), fronting usually happens before front vowels. Additionally, Zeroual states that the [j] occurs "in general in the context of a low vowel" (525), which is supported by the result displayed above, seeing as [ʤ] is disfavoured after low vowels. However, contrary to expectation, the environment that favours [ʤ] most in the results is high back rather than high front, although the latter environment also favours [ʤ].

[20] Indeed, Zeroual (2006) maintains that affrication is not affected by the number of syllables.

4.6.4.1 The linguistic constraints and trajectory of change

As mentioned in section 4.2, historically, etymological *ǧīm* was the velar stop [g] which was then palatalised as [gʲ] (Cantineau, 1960; Blanc, 1969; Woidich and Zack, 2009). Both sounds [j] and [ʤ] are palatal sounds, which historically resulted from the palatalisation[21] of the velar stop /g/. According to Cantineau's scheme (below), the glide [j] realisation is older than the affricate realisation [ʤ], the development of which would have resulted from 'Yod coalescence'.[22]



(adapted from Cantineau, 1960: 89)

Similarly, in the dialect under investigation, the [j] > [ʤ], is a case of fortition. The change of glide> affricate involves two aspects of the same process:

1) fronting: moving forward within the palate.
2) fortition: changing from an approximant to an affricate.

Secondly, the glide becomes an affricate, which is described as a case of fortition. Fortition is a process associated with the 'strength' of articulation or a "process where a sound is produced more forcefully" (Spencer, 1996: 63). Trask (1996: 149) defines fortition as "[a]ny phonological process in which some segment becomes 'stronger' (more consonant-like)". He refers to some dialects in Basque, where the glide [j] developed into an affricate, fricative or plosive. Fortition can also be found in Spanish

[21] Bhat (1978: 49) defines palatalisation as "instances of assimilation of different consonants brought about by a neighboring front vowel or a palatal semivowel".
[22] For instance, compare English *would you > woul/ʤ/a* (see Wells 1982).

and Argentinian Spanish, where [j] changes to a fricative [ʒ] in onset position (Baker and Wiltshire, 2002), as in the example below:

yate /jate/ > [ʒate] 'yacht'

(ibid, 2002: 33).

Lass (1984:177) proposed a hierarchy of consonants according to their strength:

stop > fricatives > approximants > zero

Strong ⟵ weak

Based on the above discussion and the sonority scale adopted from Lass (ibid), the [glide]> [affricate] change in DDA is:

a) A substitution of a weaker or a lenis sound with a fortis equivalent.

b) A change from right to left in the sonority hierarchy.

Therefore, a change from [j] to [ʤ] is considered as a case of fortition.

[j] ⟶ [ʤ] fortition.

The historical development of the pronunciation of *ğīm* for the case of DDA can be summarised as follows:

1- Prior to the *Dawāsir's* immigration to Bahrain,
etymological * g ⟶ dj ⟶ ʤ. (historical linguistic change).

2- After their immigration to Bahrain, ʤ ⟶ j. (Sociolinguistic change).

3- After their return to Dammam in 1923, j ⟶ ʤ. (Sociolinguistic change).

To conclude, from the above results regarding the linguistic constraints on the variation of *ǧīm* in DDA, it can be inferred that the phonological rule for fortition in this dialect is:

j ⟶ ʤ / ———— [Front vowels, glide /j/].

In sum, the results show that the affrication of [ʤ] in DDA is favoured in the following environments:

- When preceded by high back and high front sounds.
- When followed by consonants and high front sounds.
- In monosyllabic words.

Overall, the collected data show that the use of [ʤ] (innovative feature) is greater than [j] (traditional feature), within the whole sample. However, the fact that speakers started to abandon [j] is mostly driven by the social factors of age, gender, and SN. Section 4.5.5 discusses the correlation of the variable with the social factors.

4.6.5 The variable and the social factors (Age, Gender and Social Networks)

In this section, the results related to the linguistic variable (ʤ) and the social factors are shown. All the social factors were returned significant (age, gender and social network), (see Table 8 below):

Age (P =7.26e-24)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Young	295	96%	0.826
Middle-aged	409	78%	0.457
Old	568	64%	0.2
Gender (P = 4.58e-22)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Male	651	90%	0.712
Female	621	61%	0.288
Social Networks (P = 1.24e-16)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Loose	670	93%	0.679
Tight	602	57%	0.321

Table 8: Correlation of the use of [ʤ] and the social factors.

Age

Table 8 shows the distribution of the innovative variant [ʤ] by three different age groups (old, middle-aged, and young).

	No. of Tokens	**[ʤ]**	**Factor Weight**
Old	568	64%	0.2
Middle-aged	409	78%	0.457
Young	295	96%	0.826
(P = 7.26e-24)			

Table 9: Rbrul results for [ʤ] realisation by age group.

Rbrul returned age as highly significant (P < 0.001). The results show that there is an increase in using [ʤ] in the younger speakers group. The younger speakers are the most advanced users of [ʤ] by (96 %, FW 0.826), followed by middle- aged speakers (78 %, FW 0.457), and finally older speakers (64 %, FW 0.2). These results indicate that the (ʤ) variable is undergoing change in progress toward the affricate [ʤ], led by younger speakers. Younger speakers almost shift entirely toward [ʤ].

The usage level of the innovative variant [ʤ] by the young group is similar to that found in Al-Shehri's (1993) research, where young speakers were found to be using the urban or innovative variants, including [ʤ], more often than the rural features in Jeddah. In Al-Shehri's research [j] is considered 'rural', while [ʤ] 'urban' or 'supra-local'. The speakers in the current study follow the general trend by replacing localised variants, here [j], by supra-local or less marked variants, such as [ʤ].

In general, the use of the innovative feature by the youngsters in this study could be due to many reasons: it could be an attempt to index their 'real' origin (two of the young participants emphasised that their origin is Najdi and that there is no need to use

the ‘Bahraini variants’, as they put it. So, youngsters are consciously using [ʤ] in their speech, as will be shown shortly). Or perhaps technically they were recycling their original feature [ʤ], similarly to the process happening in Cajun English as highlighted by Dubois and Horvath (2000).

Moreover, it is necessary to make clear that the young participants (regardless of gender) in the current project used the [j] variant is used consistently only in one lexical item, *jadda* instead of *ʤadda* ‘grandmother’. They were asked why they used [j] instead of [ʤ] in this word in particular. Most of the participants answered that this was the way the word was introduced to them since their childhood, so they had got used to addressing their grandmothers with this form. There are indications that their use of [ʤ] is conscious. For instance, they maintain that their parents told them not to use [j] in place of [ʤ]. Interestingly, they claimed that they did not hear their parents use [j] often, which is contradicted by the overall level of usage of this variant by the middle age group (55%). Furthermore, they maintain [j] is not used in their current dialect, but used to be part of a dialect their ancestors used when they emigrated from Bahrain. In other words, for them [j] is clearly marked as ‘non-Saudi’. Consequently, the preserve of [j] among innovative speakers in the word /jadda/ might be an example of a core dialectal vocabulary that is more resistance to change. This might indicates that this variation is partially lexicon-based.

The revelation that parents tell their children not to use [j] is meaningful; it indicates that the parents’ generation are/were under pressure to abandon their heritage pronunciation of this sound, which may have marked them out as ‘outsiders’; in turn they may have wanted to spare their children unfavourable labelling on the part of the larger community as ‘outsiders’, ‘not real Saudis’, etc. One of the middle-aged female participants told me that she used to speak differently before she went to university. She

said that she used to speak with the 'Dammami dialect', by which she meant using [j], but that she started to speak differently, especially when she started to work. At work she interacted with her colleagues who were from different parts of KSA, who do not have [j] in their dialects. As a consequence, she started to hide some of her linguistic features, so that her dialect would seem neutral, i.e. sounds like others' from different dialectal backgrounds. In other words, she was accommodating to the other dialects. Her justification for such linguistic behaviour was that these features are not suitable to be produced in public – for example, in her opinion [j] was "not suitable to be used in front of others". The interview with this participant took place after she retired. During the interview the participant did produce some of the local features, such as [j], affricated /k/ and the rounded variant of the long vowel /a:/ (see chapter 5). Below is an example from her speech, which illustrates variable usage, here, in the same word:

> *naðˤðˤafna ilmi**ʤ**a:lis iljo:m, tʕarfi:n ilmi**j**a:lis ɣabbirat baʕad halɣbar illi ʤa:na*
>
> 'we cleaned the living rooms today, you know living rooms became dusty after the dust we had'.

Her report of having changed her linguistic behaviour later on in life supports Sankoff's assertion that "individual speakers change over their lifespans in the direction of a change in progress in the rest of the community" (Sankoff 2005:1011).

If the parents tell their children not to use [j] for *ǧīm*, it means that variation in this variable is meaningful, and associated with overt social values. According to Silverstein (2003: 193) the importance of orders of indexicality is that it shows "how to relate the micro-social to the macro-social frames of analysis of any sociolinguistic phenomenon". Johnstone, Andrus and Danielson (2006) explain the orders of indexicality according to a study they carried out in Pittsburgh. First-order indexicality is when a linguistic form

acquires a sociodemographic character which is only noticeable to experts (i.e. linguists), and is usually not even noticeable to speakers within the community, until it reaches 2nd order status. The second-order indexicality is when people are aware of the first-order associations for social reasons, such as for work and identity, or when people become aware that they speak differently, and their speech carries some marked or stigmatised features. Third-order indexicality is when a linguistic variable is explicitly known to both insiders and outsiders as a local feature. For example, in the Pittsburgh study cited above, the variable (aw) has a third-order indexicality. As a result this variable is well known as a feature of 'Pittsburghese', and the realisation of (aw) showcases the social class and local identity of a speaker in that community. Third-order indexicality can be gleaned through media comments; in Pittsburgh, newspapers initially ridiculed the local dialect, but through their coverage it later gained legitimacy as a source of local pride.

In the current study participants especially men and younger speakers did the reverse and abandoned the local form [j] because they were aware that it is a marked feauture and is not popular in KSA.

It is always important to consider the local social meaning of linguistic variables. If the variable has a negative social meaning it will likely be abandoned by speakers, such as in Al-Ammar's (2017) research, where men avoided the use of the lenited forms of (-a:t) for the feminine plural suffix in Hail, because of the overt stigmatisation of the lenited variants [a:j] and [a:h]. In contrast, for the variable *–ah,* whose variants do not have strong associations with any particular social meanings, Al-Ammar found only a slight difference in the usage of the innovative low variant [a] between the two gender groups.

With this in mind, the fact that the participants in my study show awareness for the abandonment of features such as [j] means that the variable *ǧīm* can be considered to

have second-order indexicality. One of the young male speakers, working in trade, expresses awareness of dialect differences in the following way:

> *tiʕrif ʕalaʃa:n ʔana ʔaʃtiɣiɬ bissu:g fatˁabi:ʕi: innu: lahʤitik btitɣajjar, liʔannik tismaʕ lahʤa:t mixtalfa min izziba:jin. la:zim titkallam maʕa izziba:jin btˁari:qa mafhu:ma. bass la:zim innik tgu:l inna iddamma:m laha jahʤa! la: ha:ðˁa muʃ sˁaħi:ħ. ʔaʤda:dna ka:naw jitkallimo:n ɣe:r w ha:ðˁa sˁaħi:ħ, w miθil ma: gilt innah ʔaj ʔaħħad bjiʤlis bmika:n tˁabi:ʕi innah lahʤitah ra:ħ titɣajjar. ʔaʤda:dna ʤa:w billahʤa ilbaħre:njja liddamma:m baʕðˁ inna:s jsammu:nha lahʤa damma:mjja, bass ha:ðˁa mu: sˁaħi:ħ. ha:ðˁi lahʤa ʤa:bo:ha ʤdu:dna min ilbaħre:n. widdali:l ʕala innah kala:mi sˁaħi:ħ, innah lamma istaqarraw hina, il ʔaʤja:l illi ʤa:t baʕadhum bidat titɣajjar lahʤathum. liʔanhum sˁaraw jirʤiʕu:n lʔasˁlhum, w bidat tixtifi illahʤa ilbaħre:njja.*

> ‘As I work in the market it is normal that my dialect will be changed, because you hear from each customer a different dialect. You have to answer this and that, you are not going to change your dialect, but you have to speak with them in a way the customer will understand. But that Dammam has a dialect, no, this is not true. Our ancestors were speaking differently which is true, and as I said for anyone who remains in a place, it is normal that their dialect will be changed. Our ancestors came with the Bahraini dialect, not Dammam’s dialect. Some people call it the *Dammāmi* dialect, which is not true. It is a dialect brought by our ancestors from Bahrain. The proof that my opinion is true, is that when they settled here, and the generations afterwards followed, their dialect started to change, because they

went back to their origins, and the Bahraini dialect started to disappear.'[23]

From the above quotation, it can be seen that speakers are aware when they eliminate the marked features of their speech. Importantly; the speaker above also notes that he changes his dialect so that a customer can understand him more easily. Therefore, he adjusts his dialect for self-advertisement, and for the purpose of facilitating and improving interactions in the marketplace (or workplace). He and his brother both work in trade and they speak the Najdi dialect, but as he stated above, most of the *Dawāsir* are shifting again towards their original dialect. This is similar to the situation in Alqahatani's (2014) study, where the honey producers retained their local linguistic features, e.g. producing the lateral fricative [ɮˤ] instead of the interdental [ðˤ], in an attempt to bolster and 'prove' the authenticity of the commodities they were selling. In this manner, they also used their linguistic features as a form of self-advertisement for working purposes too.

[23] تعرف علشان أنا أشتغل بالسوق فطبيعي انه لهجتك بتتغير، لأنك تسمع لهجات مختلفة من الزباين. لازم تجاوب هذا و ذاك، فانت ما راح تغير لهجتك، بس لازم تتكلم مع الزباين بطريقة مفهومة. بس انك تقول انه الدمام لها لهجة! لاهذا موش صحيح. أجدادنا كانوا يتكلمون غير و هذا صحيح، و مثل ما قلت انه أي أحد بيجلس بمكان طبيعي انه لهجته راح تتغير. أجدادنا جاو باللهجة البحرينية للدمام بعض الناس يسمونها لهجة دمامية، بس هذا مو صحيح. هاذي لهجة جابواه جدودنا من البحرين. و الدليل على انه كلامي صحيح، انه لازم لما استقروا هنا، الأجيال الّي جات بعدهم بدت تتغير لهجتهم. لأنهم صاروا يرجعون لأصلهم، و بدت تختفي اللهجة البحرينية.

Gender

Table 10 shows the distribution of the innovative variant [ʤ] amongst male and female speakers.

Gender			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Male	651	90%	0.712
Female	621	61%	0.288
(P = 4.58e-22)			

Table 10: Rbrul results for the realisation of [ʤ] by gender.

Gender was returned as statistically significant (P < 0.001). Table 10 above shows the overall use of [ʤ] among males and females. The average of the female participants' use of [ʤ] is (61%, FW 0.288), whereas for males, the average use is as high as (90 %, FW 0.712). Male speakers strongly favour the innovative variant, and are leading the change towards the use of [ʤ].

Furthermore, a cross-tabulation was carried out in order to identify any correlation between speaker age and gender, and the differences in the treatment of (ʤ) between males and females among the three age groups, a cross-tabulation is presented below in Table 11.

Age	**Female**	**No. of tokens**	**Male**	**No. of tokens**	**Total**	**No. of tokens**
Old	35%	83	83%	282	64%	320
Middle-aged	68%	177	95%	143	78%	365
Young	94%	124	98%	162	96%	286
Total	61%	384	90%	587	76%	971

Table 11: Cross-tabulation of age and gender for *ǧīm* .

As outlined above, both age and gender were found to be statistically significant for the variable (ʤ). It appears that older females are the most conservative group with 35 % use of [ʤ] (cf. Thomas, 1989).

According to the data in the current study, men in all three age groups are leading women in the use of the innovative variant [ʤ], this seems to be a change in progress. The overall use of the innovative variant by males (regardless of age) is as high as 90%. The young males are the most innovative group overall, using [ʤ] in 98% of the total occurrence of this variable, while the young females are the most innovative of the three female age groups in showing 94% use of [ʤ].

So the three male groups (with the addition of the younger females) are the leaders in using the innovative variant [ʤ], and this seems to represent a case of change toward the use of the supra-local feature influenced by the dialect of Riyadh in KSA. Supra-localisation is “the process by which, as a result of mobility and dialect contact, linguistic

variants with a wider socio-spatial currency become more widely adopted at the expense of more locally specific forms" (Britain, 2010: 194). Indeed, this result is the opposite of what has been found in the majority of past sociolinguistic studies, where most of the time women have been found to be ahead in leading innovations/changes (see the summary and generalisations in Labov 1990). For Labov women are driven by the local prestigious linguistic forms. There are, however, a number of exceptions to this generalisation in a range of societies, e.g. Thomas (1989) in Welsh village; Walters (1989) in Tunisia, among others).

There are several observations that lead to a plausible explanation for the linguistic behaviour of men and women in this study. One of the relevant observations is that the affricate sound is perceived to be more 'masculine' than [j]. For instance, when one of the speakers was asked about the reason for not using [j] in his speech, he replied that this feature is for women, and that it is unlikely for men to use [j] in front of other men for fear of *ʕe:b* 'shame'. The behaviour of the older speakers may be key to understanding the basis of the perception that [j] is inappropriate for men. The gap between men and women in the older group is quite large: 83% compared to 35%. Women's social activities used to be restricted to their homes, and their contact circle confined mostly to their immediate and extended families; they did not have access to jobs or education. This is a situation that would promote the maintenance of the traditional norm of speech. It is therefore not surprising to see that they use [j] predominantly. Men of the same age group on the other hand had considerably wider and more mixed networks of friends and work colleagues; and those who worked in the pearl trade as either traders or divers travelled regularly to other cities. Men in other words had (a) More access to the target feature; and (b) motivation to converge to the speech of the majority group. It is possible in my opinion that the perception that [ʤ] is more

acceptable for men is based on frequency of usage within the tribe; in other words, because people heard men use [ʤ] more frequently, and women use [j] more frequently these variants acquired gender marking, and became stereotypes. This is reminiscent of the stereotypes associated with the variants [g] and [ʔ] of *Qāf* in Jordan, as explained by Al-Wer and Herin (2011).

Access to the target feature and contact with speakers whose dialects do not contain [j] as a variant also explain the behaviour of men in other age groups, and of younger women. Dammam is a city with a diverse range of dialects. As Labov (1963: 307) pointed out in his study of Martha's Vineyard, "social evaluation interacts with linguistic structures" – this means that speakers are aware of the social currency of linguistic features and adapt their speech accordingly. [j] is unlikely to be heard often in public as it is stigmatised.

In addition, men can be more strongly influenced by the national norms that are common in KSA, and they might use these as a way to showcase their Saudi identity. According to Abd-el-Jawad (1986), and Al-Wer (1991), there is a general tendency in language change of movement towards prestigious varieties. Labov (1972a: 3) notes that before the spread of any 'phoneme' or variant "it is necessary that one of the two rivals shall acquire some sort of prestige". For instance, there are examples of abandonment of some rural variants in favour of prestigious urban ones even if those new variants do not originate from the standard variety. One such example comes from Al-Wer's (1991) research in Jordan where the participants under investigation were abandoning Jordanian linguistic features such as [θ] and [ʤ] in favour of the prestigious Levantine features [t] and [ʒ] – even though both [θ] and [ʤ] are features of CA and the speakers taking part in the shift were highly educated.

In a further example, one of the old male participants in my data who had studied at a university in California brought up a story from when he was a student there; one of the Saudi students, who was speaking a Najdi dialect, was mocking him for his accent and they ended up having a quarrel over the matter. He was ridiculing him for the fact that there was variation between [ʤ] and [j] in the dialect of Dammam in general, and his dialect in particular. The participant reported that he replied confidently that they use words such as: *rajja:l* 'a man' and *dija:j* 'chicken'; however during the dispute he did not produce any words with the glide [j] for *ǧīm* . This might be due to the pressure of the marketplace, as he utilised his linguistic features to fit the situation, using his sociolinguistic knowledge that [ʤ] is the popular/less stigamtised variant. As mentioned above, men are pulled towards the Saudi Standard dialect where [ʤ] is the dominant feature with greater (overt) prestige. Furthermore, the participant's SN might have affected his dialect, because he later worked for ARAMCO and in trade. Therefore, he would have mixed with speakers of other varieties, especially when he worked in trade after leaving ARAMCO.

Social Network

As was explained earlier, the participants in the present research were divided into two groups according to their social network scores. Table 12 shows the differences in the use of the innovative feature [ʤ] according to the participants' SN.

Social Networks (P = 1.24e-16)			
	No. of Tokens	**[ʤ]**	**Factor Weight**
Loose	670	93%	0.679
Tight	602	57%	0.321

Table 12: Rbrul results for [ʤ] realisation by type of SN.

As seen earlier, men and youngsters (of either gender) use the innovative [ʤ] to a greater extent, and the results show that social network is also significant, as displayed in the figures. The 'SN' factor was selected as significant by Rbrul ($P < 0.000$); the use of [ʤ] was generally found to be more advanced among those with looser networks. Gender and SN have been found to intersect together, according to Milroy and Milroy (1997) SN can interact with both age and gender.

With this in mind, a cross-tabulation was carried out in order to ascertain the influence of SN on the use of the innovative form [ʤ] among males and females within the three age groups (see Table 13).

Social Network = Loose	**Female**	**No. of tokens**	**Male**	**No. of tokens**	**Total**
Old	75%	48	96%	180	91%
Middle-aged	79%	84	94%	117	88%
Young	97%	77	98%	164	98%
Total	85 %	209	96 %	461	93 %
Social Network = Tight					
	Female		**Male**		**Total**
Old	25 %	183	69 %	157	45 %
Middle-aged	62 %	175	100 %	33	69 %
Young	91 %	54	(no participants)	0	91 %
Total	50 %	412	75 %	190	58 %

Table 13: Cross tabulation of SN, age and gender in the use of [ʤ].

Among those participants with loose SN, males use the innovative variant [ʤ] 96 % of the time, more than the females who use it in 85 % of tokens; while the males with tight SN are slightly further ahead of their female counterparts at 75% and 50% respectively. By focusing on the differences between speakers of the same gender within each SN type we can also see that the usage of [ʤ] is higher among the middle-aged and

younger age groups. Clearly, the influence of SN is significant. In general, there is a wide difference in the use of [ʤ] between those with loose and tight SN, at 93 % and 58 % respectively. It is particularly notable that males in the old age group with tight SN use [ʤ] 69% of the time, considerably more often than the tight SN older females, who use the innovative form just 25% of the time. The young age male group all have loose networks; the tight SN cell for this group is empty. This group do not have tight SN.

The current result in relation to the effect of SN in abandoning or retaining the old linguistic features is similar to Thomas's (1989) study. The SN in Thomas's study also played a role in the absence or presence of the old feature. She reported that speakers with tighter SN were more likely to show greater use of the older and traditional linguistic features. This is similar to the group of fishermen from Chilmark in Labov's (1963) Martha's Vineyard study, who had the most close-knit in-group ties on the island and were found to be centralising (i.e. using the local feature) more often than other groups in Labov's study.

As can be seen in Table 13, males in all age groups, and also young females, whose SN are loose are clearly the most advanced users of [ʤ]. The role of SN in changing the linguistic norms uncovered here is similar to that found by Dashti et al. (2015), as mentioned above (section 4.5.8), where the Kuwaiti participants were shifting from [j] to [ʤ] because of the effect of their SN. The females with tight SN are the least frequent users of [ʤ], especially the old females whose use of the innovative variant is somewhat low (25%), in comparison with the old males whose SN are loose (96 %). As mentioned above, the reason for this is that the males mix with speakers of other dialects that have [ʤ] and are accommodating to the new variant. Their contact with speakers of other dialects, especially with other men, is greater and their SN are generally wider than the females'. They mix with others at work, at mosques, with friends, through trade, and

in the street. Some of the older male participants with loose SN received their education and courses from ARAMCO. One of the participants received part of his education in Lebanon before joining ARAMCO and receiving further training, while other older participants worked in trade. All of the old participants are retired now. The older females with tight SN used to regularly gather together especially in the morning, often for short visits. Most of the time they visit neighbours who are from the same tribe. On the other hand, most of the older females whose SN are loose went to work after secondary school, so their higher education level and greater contact with others from different dialect backgrounds affects some of their linguistic features, such as their use of [ʤ].

In relation to the middle-aged group, the influence of SN is very clear. Overall, speakers with loose SN show 88% use of [ʤ], whereas the middle-aged speakers with tight SN use [ʤ] in 69% of tokens. As for the middle-aged and young speakers with tight SN, their use of the innovative form [ʤ] is categorical at 100%. These results can be interpreted according to their SN type and their amount of contact with others. Both genders in these age groups socialised more often with others from different dialects in terms of studying, work and friendships. Their SN became tighter when they retired, while some of the female participants did not work at all. All of these participants have spouses from the same tribe and they did not leave Dammam to work outside.

In relation to the young speakers, it can be said that their lifestyle is totally different from their ancestors, which affects their use of the local variant. Usually younger speakers have looser SN, and even the few younger speakers with tight SN still abandoned the local variant [j]. The youngsters socialise outside of their family, and they follow more closely the trend towards use of the supra-local form [ʤ]. Their use of [ʤ] is high in both for those with loose SN (98%) and those with tight SN (91%). Generally speaking, the world nowadays is more open through technology and social media. The

interests of the younger generation are different. Nowadays they are interested in technology, travelling, communicating online, and making new friends from different parts of the world through social media or even via video games. This new lifestyle will expand their SN and will allow them to socialise more with others.

In general, the increased use of [ʤ] compared to [j] can be described as a case of koineisation, specifically levelling out of a minority feature, [j], and convergence to a common norm [ʤ]. According to Chambers & Trudgill (1980), speakers usually tend to prefer the higher status variants. In similar fashion, Miller (2004) adds that many of the Arabic contemporary dialects 'recede' in the wake of the pressure from new urban forms (4), and the urban dialects from the main capital cities (in the case of this thesis it is the city of Riyadh) play a crucial role in cementing the 'regional or the national standard' (3), so urban dialectal forms will diffuse towards rural areas and the urban forms will carry greater prestige.

The spread of innovative forms from the capital cities that Miller (2004) reports, can be seen in the current data. The preference for [ʤ] is due to societal pressure in KSA, where it is the dominant variant. Therefore, it can be noted that Riyadh becomes a focal area in diffusing the innovative linguistic features in KSA. [j] is a minority variant in KSA, but a majority variant in the Gulf. The participants are attracted more by the norms in KSA than the Gulf features, although geographically, the location of Dammam is very close to Bahrain and the other Gulf States. This is an important finding in the current study; despite the location of Dammam, which is very close to the Gulf countries, it is still pulled towards the linguistic norms in KSA. For instance, in Al-Qouz's (2009) study in Bahrain, the participants preferred [j] more than [ʤ] and even the *Šī ʿi* participants showed a tendency to use [j] which is not their norm. This is because [j] is the supra-local and dominant feature there. Therefore, it can be stated that the participants in the current

research behaved similarly to Al-Qouz's participants, in acquiring the common features or supra-local features in the country.

Koineisation and urbanisation

Theoretically, the increase in the use of the innovative feature could be caused by many reasons such as identity, immigration, or that their return to Dammam led to dialect levelling/ koineisation. Koineisation is "the levelling of variant forms of the same linguistic items (especially phonemes and morphemes), and simplification- the reduction of phonological and morphophonemic complexity" (Kerswill, 2013: 231). In other words, it is a process whereby less frequently occurring variants will be lost in favour of more widely used forms in the dialects that are common in the area (Kerswill, 2002). To apply this explanation to the variation between [ʤ] and [j] in the current study, it can be said that the less frequent variant in KSA is [j], and the widely used variant there is [ʤ]. Furthermore, as was illustrated by Holes (1995), there are many factors that can force linguistic changes in any community, such as urbanisation, industrialisation and literacy rates. These factors are considered to be the major social factors that forced linguistic changes in the Middle East. These three social factors were explained when Holes described the changes that happened in three Arabic cities, Baghdad, Amman and Manama. This can be applied to the context of the current study. As was explained in Chapter 2, Dammam's history started with the advent of the *Dawāsir* in 1923, but the flourishing of this city came after the discovery of oil which brought industry, urbanisation and literacy to the city. These factors affected the linguistic features there, as the city became a hub for other dialects from inside and outside KSA. It can therefore be stated that the koineisation of the national dialects has occurred as a result of the developments that have happened to the city. Consequently, the increased use of the innovative feature [ʤ] is an indication that dialect levelling/koineisation is taking place.

The term levelling is “a widely used term in dialectology to denote the process by which, over time, a reduction of variants of the same variable occurs” (Britain, 2010: 194). He adds that as a result of contact, the majority variants will level away all other variants regardless of whether the majority variants were derived from the standard or are stigmatised forms. According to Kerswill (2002: 671) levelling decreases the differences that occur between dialects and lead to a ‘homogenization’ of the dialects in the area. Additionally, Kerswill (2002) differentiates between dialect levelling and diffusion, because in diffusion there will be a spread of linguistic forms across an area.

In Al-Wer’s (2007) Amman project, which was based on the outcomes of Jordanian and Palestinian dialect contact, participants were found to be levelling out their traditional linguistic features as a result of the process of koineisation. In the study data was gathered from speakers who arrived in Amman from three generations. Indeed, the linguistic behaviour of the participants in the Amman project is similar to the participants in the current research. The first generation (whether Jordanians or Palestinians), who arrived in Amman as adults, show divergence in marked and traditional features. Put differently, some of their linguistic features were levelled out in favour of koineised features. One of the forms that was levelled out is the affrication of /k/, which is a linguistic feature of the Jordanians from Sult city. The second generation show a mix of dialectal features; because they were born in Amman, and their contact with speakers was different to that of their parents, they were exposed to a mixture of other varieties. The third generation show stability in their usage of the koinised linguistic norms, due to their “sense of identification with the group and with the locality” (74). The presentation of the three stages in Al-Wer’s study is similar to the case in the current study, according to the data regarding the second and third generations. The middle-aged and young participants in the current study behave similarly to the second and third generation in Amman, and

this is due to their higher levels of contact with different varieties and the process of koineisation whereby they levelled out some local forms in favour of supra-local or koinised ones.

Additionally, the results of this study are in line with the research that was carried out by A. Hussain (2017) on Medini Arabic, whose results show that there is a tendency toward the koinised or the supra-local forms in Hijaz. A. Hussain investigates the variation in *ǧīm* between urban and Bedouin communities in Medina. In Medini Arabic, there is variation between the affricate [ʤ] and the fricative [ʒ]. The traditional feature is [ʤ] as it appears in the speech of the old speakers, while the fricative [ʒ] is the innovative form and was found in the speech of youngsters from both communities. The fricative [ʒ] is a distinctive feature of Jeddah which is the capital of the Hijaz region, so due to contact with speakers from Jeddah there was diffusion of the fricative [ʒ]. The data shows that both communities are adopting the incoming variant [ʒ], especially in the young females in both communities.

So, from the results of the current study, there is an indication that the dialect of the participants is undergoing levelling of the marked and minority linguistic feature [j]; and there is a change in progress toward the koineised or supra-local variant [ʤ].

On the other hand, Miller (2004) asserts that there is an effect of migration on dialectal norms, as it "will lead to levelling of the urban vernaculars, but without radical transformation" (5). This is happening in the capital cities of Casablanca, Algiers, and Tunis where the national koines are spreading and this is leading to "progressive attrition" of the old dialects that are spoken by old women (Miller, 2004: 6). Dammam is considered to be a newly emerged city whose importance arose from the oil industry. Therefore, it can be said that the situation in Dammam mirrors that given by Miller

(2004). following Miller's assertion that with new cities there will be a mixed population (as is the case in Dammam) and subsequent adoption of a koine, in this case the dialect of the capital city Riyadh where the common majority feature is [ʤ], while [j] is considered a minority feature in KSA. According to Trudgill (1986), when speakers come into contact with other language varieties, they usually modify the features of their own varieties. This could apply to the case of this thesis where the participants came across other varieties that were considered to be the norm in KSA, and therefore modified their varieties in order to be accepted in the community, especially as Dammam is a city that is considered a hub for other residents from other cities in KSA. According to Trudgill (1986) that convergence is related to accommodation. What is meant by convergence is any 'reduction' of linguistic differences, and from this point there will be an increase in the similarities between the social and geographical linguistic varieties (Berruto, 2005: 81), and language convergence will reduce the distance between linguistic differences through contact (ibid, 2005). This was also illustrated previously as [j] is considered a minority feature in KSA, while [ʤ] is the supra-local feature, which might well motivate the speakers in the current study to use the latter more often.

4.7 Summary

This chapter has presented the results of the analysis of the variable (ʤ). The variable has two realisations: 1) the affricate [ʤ] (the innovative form) and 2) the glide [j] (the local form).

The data show that the influence of external (social) factors on the variation is stronger than internal (linguistic) ones. The results show that [ʤ] occurs more frequently in monosyllabic words (86 %, FW 0.676), after high front vowels (82%, FW 0.625), before high front vowels (82%, FW 0.648) and consonants (82 %, FW 0.648).

All of the social factors were found to be significant. In addition, the results show that there is a change in progress from the old variant [j] to the koine form [ʤ]. Men (90%, FW 0.712) and the young age group (both males and females) are leading the change towards use of the innovative form [ʤ]. Additionally, [ʤ] is more likely to occur in speakers with loose SN (93%, FW 0.679).

Chapter Five

The variable (ɑ:)

One of the salient features of the dialect under study is the rounding of the long vowel /ɑ:/ in word-medial position. The long vowel /ɑ:/ has two variants in the current study: rounded [ɒ:] (the local form) and unrounded [ɑ:] (the innovative form); unrounding in my data generally does not involve fronting, although a front long realisation /æ:/ occured in a few tokens (all in the speech of two young male speakers), the long vowel /ɑ:/ was fronted /æ:/.

It is worth pointing out here that most of the Arabic sociolinguistic studies have dealt with consonantal variables. There are only a few sociolinguistic studies in the Arab world that have dealt with vowels, such as; Irshied (1984), Al-Wer (2007), R. Habib (2012; 2014), Abu Ain (2016), Al-Bohnayyah (2018).[24] The present study fills a part of this gap. Al-Wer (2007) suggests that Arabic studies which analyse vocalic features are rare due to the widely believed impression that variation in consonants is more salient than that in vowels. She adds that consonantal variation is easier to detect because it is discrete, whereas this is not always the case for vocalic features, where variation tends to be gradient/continuous.

In the current dialect the unrounded vowel is [ɑ:], but in a few tokens fronted [æ:] was found too; [ɑ:] or [æ:] are both low vowels, but for [æ:] the high point of the tongue will be at the front of the mouth, while for [ɑ:] the high point will be at the back of the tongue (Rogers, 2000), see Figure 2 below which is adopted from Rogers (ibid: 29).

[24] This situation contrasts with English where the majority of variationist research has focused on vocalic features.

Rogers describes rounding as the process through which the lips become rounded, as in the figures below (adopted from Rogers 2000: 30).

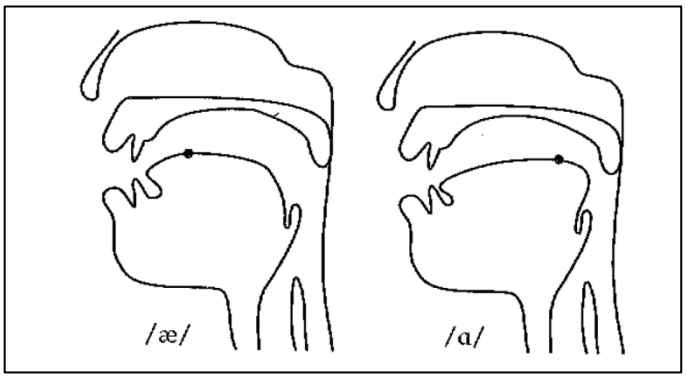


Figure 2: The position of the tongue when producing the low vowels [ɑ:] and [æ:] (Source: Rogers, 2000: 29).

Figure 3: The lip and tongue position in rounding (Source: Rogers, 2000: 30).

Furthermore, as can be seen in Figure 3 above the position of the tongue while rounding is towards the upper palate. The raising of the tongue toward the upper palate was described by Sibawayh as *tafxi:m* (emphasis or velarisation). Later, it was called pharyngealisation because of the presence of pharyngeal constriction, or uvularisation, due to "the upper pharyngeal constriction in the oral emphatics similar to the constriction found in the uvular fricatives" (Watson, 2002: 269).

5.1 What is rounding and unrounding?

In this section I aim to explain the process of rounding and unrounding of the long vowel /ɑ:/.

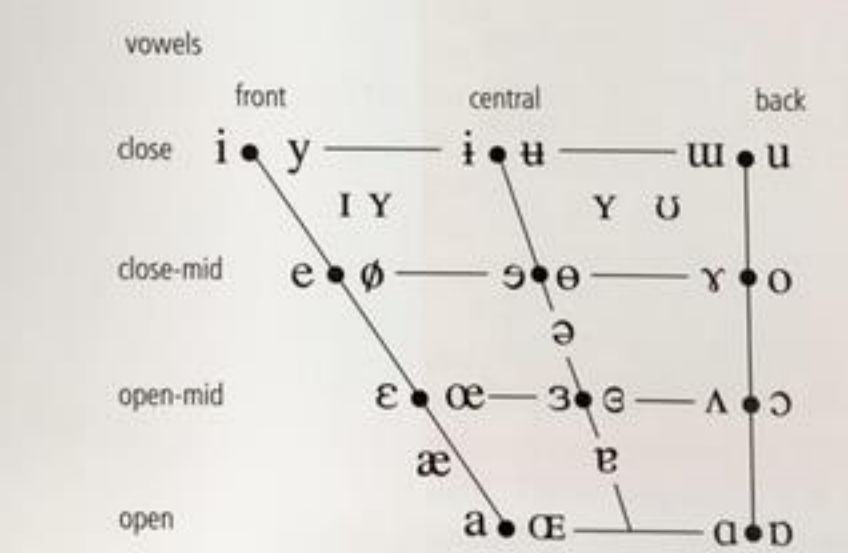


Figure 4: IPA vowel chart.

Figure 4 which is adapted from Zsiga (2013: 58), shows the cardinal vowels, and the position of back rounded and unrounded vowels. Rounded vowels are so named because during their articulation the lips will have a rounded shape. Rounding is one of the three defining characteristics (distinctive features) of the production of vowels; the others being height and backness. Higher vowels are more rounded than lower ones. Ferguson (1956: 451) adds that "emphasis in Arabic should be regarded as a distinctive feature of the vocalic system". Ladefoged and Ian (1996) maintain that back vowels are usually rounded, and front vowels are unrounded, albeit with some exceptions as in Bavarian German where front vowels can be rounded and back vowels can be unrounded. Furthermore, they add that there is a relationship between height of the vowel and rounding, in as much as the more backed and high the vowel is, the more rounded it will be.

5.2 Rounding in the Semitic languages

Rounding is an old feature that occurred in old Semitic languages such as Aramaic. It can also be found in Persian (Shademan, 2002). M. Hussain (2008) describes Semitic languages and the differences and similarities between them. One of the features he describes is rounding. Semitic languages, including Arabic, share some linguistic features in terms of phonology, syntax and also lexical items. These shared features include the short and long vowels. Aramaic is a Semitic language, and can be divided into West and East Aramaic. The dialect of Palmyra is an Eastern Aramaic variety, and in some cases in this dialect long /a:/ will be produced as [o:] (which is also known as the emphaticised /ɑ:/, see below). According to Holes (2005b: 28), at the time of the advent of Islam, the eastern coast of the Gulf comprised of a mixture of Arabs, nomads, and Persians. He also adds that Aramaic was spoken by the Christian population there. Aramaic, Syriac and Greek were languages used in the Gulf, e.g. "Nestorians bishops of the area were using Syriac".

M. Hussain also examines the western Syriac. In this language, the long vowel /a:/ can be emphatised to [o:]. Eastern Syriac lacks this feature; for instance, the word 'saver' in Eastern Syriac is [pa:ro:qa:] while in Western Syriac it is [po:ru:qo:]. He adds that Hebrew is similar to Western Syriac in changing the long /a:/ to [o:], for example the word **qa:til* 'killer' changes into /qo:ti:l/, and the same word is present in Aramaic too. M. Hussain (2008) adds when describing Arabic that rounding is called *tafxīm* and happens according to the adjacent emphatic sounds in the word. Sibawayh (1999) mentions three phonological phenomena regarding the vowels in Arabic: *tafxi:m, itˤbaq*[25]

[25] Sibawayh described the four consonants (sˤ, dˤ, tˤ, and ðˤ) as *Mutˤ baqa* "[i]f you apply your tongue in their place, it will close on from their [primary] places up to that part of the tongue opposite the velum, towards which you raise the tongue. Applying the tongue this way the sound will be enclosed between the tongue and the velum (on one side) and the places of the letters (on the other side)" (Sibawayh, 1999 version cited in Al-Nassir, 1993).

and *imala*. Indeed, Sibawayh did not clearly describe the phenomenon as rounding. He described emphasis (or *tafxi:m* as it is in Arabic), where the long vowel /a:/ will be emphatised. It is not clear whether he was referring here to rounding or not.

5.3 Rounding and unrounding in the Arabic literature

5.3.1 Old grammarians

Rounding can be found in many dialects and languages around the world. To the best of my knowledge, there are not many Arabic studies on the rounding and unrounding of the long vowel /ɑ:/, though it occurs in many of the contemporary dialects, such as Iraqi, Lebanese, Libyan (AL-Nassir, 1993), Bahraini (Holes, 2006 - 2016), and rural Syrian dialects (R. Habib, 2012). Sibawayh (1999), Ibn Jinni (2001), Al-Rafiʿi (1940) referred to this phenomenon as *tafxi:m* or velarisation. The word *tafxi:m* was defined by Mustafawi (2006: 33) as "an auditory feature used in the old texts to mean "heaviness or thickness"; while velarisation is defined as "a secondary articulation that refers to the raising of the tongue body toward the back of the soft palate" (Davis, 2006: 636).

As outlined above (5.1) Sibawayh did not call this phenomenon rounding, he described the process of *tafxīm* 'emphasis', and by this he may or may not have meant rounding. But according to Herin (2013: 106) "*tafx̱īm* roughly refers to velarisation or emphasis". Therefore, what Sibawayh discussed regarding *tafxīm* 'emphasis' will be included here along with other researchers who described this phenomenon. According to Davis (2006) there is a very minor acoustic distinction between the phenomena of velarisation and pharyngealisation.

Sibawayh (1999) described the phonetic values of vowels, and he described the variation in the realisation of many vowels, whether across the Arabic dialects in general or within one dialect. To him there are three phenomena that affect the phonetic values of

vowels: *imala, tafxi:m* and *itˤbaq*. Our focus here will be *tafxi:m*. Sibawayh used the term *tafxīm* to refer to the long vowel (ɑ:) *ʾalif*.

Ibn Jinni (2001) defined the inclination of the ʾalif /a:/ to /ɔ/ as velarisation or *tafxi:m*, and he separated the seven elevated consonants (sˤ, dˤ, zˤ, tˤ, q, χ, ɣ) from the other consonants. In his description of the Arabic sounds, *Al-Rafiʿi:* (1940: 98) describes velarisation or *tafxi:m* as a phenomenon in which the sound will be emphaticisied and he considers all emphaticised sounds as velarised; these sounds are: sˤ, dˤ, tˤ, ðˤ, q, χ, ɣ. He provides some examples such as *sˤa:diq* 'honest' and *ðˤa:lim* 'unjust', and adds that these sounds prevent *imala*. The *ʾalif* or the long vowel /a:/ will assimilate to the previous sound, in terms of whether the sound which occurs immediately before it is emphatic or non-emphatic.

ʔAlif attafxi:m is used by Sibawayh to describe the backing and raising of *ʔalif* and *fatħa* which are the open vowels in Arabic. To Sibawayh (1999) the value of *ʔalif al-mustaʕlya* will change if it is surrounded by the elevated consonants (the four velarized consonants of Arabic /sˤ, t, dˤ, ðˤ/ and the three uvulars /q, x, ɣ/) to become *ʔAlif attafxi:m.* So, *ʔalif al-mustaʕlya* is different from *ʔAlif attafxi:m*. Sibawayh added that these sounds will prevent *imala*[26] or the raising of /a:/. These sounds are called 'elevated' or *mustaʕlya* because when they are produced there is raising of the back of the tongue toward the soft palate (Ibn Jinni, 2001: 62).

Ingham (1971) also notes that the quality of the vowels is usually controlled by the surrounding consonants. He divides these consonants into four groups: the palatals, pharyngeals, emphatics, and the neutral or the rest (275). The spread of emphasis was

[26] When the short /a/ raised to be /e/ and when long /a:/ inclined to be /e:/ (Ibn Jinni).

also explained by Watson (2002) as an autosegmental spread for a feature from a consonant to an adjacent vowel or consonant.

Sibawayh (ibid) maintains that in Hijaz *ʾAlif attafxīm* is used in words such as *ħaya:t* 'life', *zaka:t* 'the religious tax' and *sˁała:t* 'prayer'. AL-Nassir (1993: 38) described this *ʾAlif* as: "This variant of the Alif is slightly backed and raised towards the close back vowel /u:/ having the phonetic value [o:]". Sibawayh mentioned that the grapheme *waw* و is written for these words in the Qura'an to emphasise that the Arab of Hijaz used *tafxīm* with a long vowel when pronouncing them. AL-Nassir adds that this vowel *(ʾAL-ʾAlif almufaxxama*) is likely to be between the two cardinals, /ɔ/ and /o/. AL-Nassir (1993: 181) further asserts that this *ʾAlif* might have originated from the grapheme *waw*:

> It could also be an indication that this Alif is a development of an older Waw in these forms which underwent a lowering process that produced the [o:] of Ḥijaz and ultimately became the open Alif [a:] attested in /ṣa'la:t/ of Eastern Arabic. The Hebrew form /ṣi'loh/ (cf. Weingreen, 1959), equivalent to Arabic /ṣa'la:t/ might support this hypothesis.

For phoneticians, the term *tafxīm* or emphasis may comprise more processes than velarisation; it may also comprise pharyngealisation with some degree of labialisation or glottalisation (Jakobson, 1962 cited in Bakalla, 2006: 422). Watson (1999) states in her analysis of the Palestinian and San'aani dialects that pharyangealisation and labialisation encourage emphasis. Linguistically, Bakalla (2006) asserts that emphasis is encouraged when both the low open back vowels /ɑ/ and /ɑ:/ are preceded or followed by emphatics. Emphasis is described by Kopczynski and Meliani (1993: 184) as a co-articulation for /tˁ, dˁ, sˁ, ɬ/, and phonetically entails these four points: "laryngopharyngeal constriction, raising of the larynx, raising of the back of the tongue, and concomitant lowering of the front of the tongue".

5.3.2 Rounding and unrounding in recent studies

Some researchers, such as Johnstone (1967), Holes (2005b, 2006, and 2016), AL-Nassir (1993), and R. Habib (2012), describe rounding and unrounding in their studies. Other researchers like Watson (1999 - 2002), Bakalla (2006), and Mustafawi (2006) explain the phenomena of *tafxi:m*, emphasis or velarisation.

Most of the works mention rounding and unrounding briefly in their dialect description, as is the case in AL-Qahtani's (2015) study. When describing the dialect of the *Tihami Qaħtani* in *ʿAsīr*, she mentions that the long vowel /a:/ is rounded as in the words *ʃo:h* 'sheep' and *ko:n* 'was'. Watson (2002: 268) illustrates that one of the most recognised features in Arabic phonology is 'emphasis'. Usually the presence of these sounds will affect the consonants and vowels within the syllable and beyond the syllable boundary. Watson (1999 - 2002) describes the spread of emphasis in some Arabic dialects, namely Palestinian, Cairene and San'ani. The feature of emphasis or pharyngealisation was also described by Qafisheh (1977) as not only restricted to pharyngealised sounds, but as a feature that affects the adjacent consonants and vowels, or that may even affect the whole word.

Procházka (1988a: 20) describes emphasis in his description of the Saudi dialects. He reports that emphasis is found in Najdi and Eastern Arabian dialects. For these dialects emphasis occurs on consonants other than /tˤ, sˤ/ and /ðˤ/. Labials /b, m, f / can be emphatics too, as can the liquids /l, r/. He clarifies that this is a non-phonemic emphasis, but it has an effect on the vowels.

Furthermore, Qafisheh (1977) in his description of Gulf Arabic, mentions that generally in the Gulf dialects long /ɑ:/ is pharyngealised more than in the other Arabic dialects. He explains that this realisation is an outcome of contact with other languages such as Persian and Urdu.

Additionally, it is found in Algerian Arabic as argued by Kopczynski and Meliani (1993). In their comparison of the vowels between Algerian Arabic and English, they describe the low front long vowel, and report that /a:/ will be lowered and will be "retracted [ɑ:] when contiguous to emphatics /'fa:Dil/ ⇒ ['fɑ:Dil] "virtuous"" (186).

5.3.2.1 Johnstone

Johnstone (1967) describes most of the Eastern Arabian dialects in terms of consonants, vowels, syntax and morphology. He describes the long vowel /ɑ:/ as "an open, slightly retracted, central vowel often difficult to distinguish from back *a*, and [which] is markedly different in quality from the short *a*" (ibid: 23).

He maintains that the long vowel /ɑ:/ in Bahrain has two tendencies:

1) entirely back, even in the adjacency of the non-emphatics, and this realisation is influenced by Persian, e.g. [skɑ:ʧi:n] 'knives' (35). He thus alludes to the fact that backing can be an unconditioned phenomenon.
2) The long vowel /ɑ:/ in the adjacency of non-emphatics can be [a:] or sometimes [æ:] among educated speakers.

5.3.2.2 Younes and Watson

The distinction between emphatic and nonemphatic sounds is caused by the backness of the low vowels, where "back ɑ̲ is found in emphatic and front ɑ in nonemphatic environment" (Younes, 1993: 119). Younes (1992) writes about the status of /r/ in Arabic and its role in emphasis. He defines two kinds of emphasis, primary and secondary, and follows the definition of the phenomenon given by researchers such as Al-Ani (1970), Ghazeli (1977), and Herzallah (1990). He defines emphasis as "a secondary articulation involving the back of the tongue, which accompanies a primary articulation at another point in the vocal tract" (216). The word emphasis stands for *tafxi:m* in Arabic, while other terms used in the literature that carry the same meaning are: backing, velarisation,

pharyngealisation and dorsalisation. He adds that linguists distinguish between the primary emphatics [sˤ, dˤ, zˤ, tˤ and ðˤ] and the secondary emphatics that include /r/, /l/, /m/ and /b/ (Blanc, 1953; Mitchell, 1976; Harrell, 1957; Erwin, 1963; Cowell, 1964; Broselow, 1976; Ghazeli, 1977 cited in Younes, 1992).

Younes investigates the phonological behaviour of /r/ in relation to emphasis in the Palestinian dialect. Although he speaks about emphasis in terms of the variable /r/ rather than the long vowel /ɑ:/ which I am investigating, it is important to include Younes's thoughts on emphasis, especially regarding the secondary emphasis impact which /r/ has as the current data show.

Watson (1999) describes the spread of the phenomenon of emphasis in some of the Arabic dialects. She illustrates that in some Arabic varieties, such as Cairene dialect, emphasis will affect the whole word whereas in Abha (a city located in the south of KSA) emphasis will rarely spread outside of the adjacent vowel. The spread of emphasis depends on the dialect itself and varies from one dialect to another. Additionally, emphasis comprises more articulatory features "to create the auditory impression of darkening" (Harrell, 1957; Lehn, 1963; cited in Watson, 2002: 269). Watson (2002) adds that pharyngeals /*ħ* and *ʕ*/ are considered as emphatics.

5.3.2.3 Holes

The case of rounding was discussed by Holes (2005b, 2006: 243, and 2016) in his description of the Bahraini dialect: he notes that the long vowel /ɑ:/ has "a very backed or rounded quality in any phonetic environment". He adds in his book (2016) that the backing and the rounding of /ɑ:/ is obvious amongst women in Bahrain, especially those from *Muḥarrag* and *al-Ḥidd*, as in *mɔ:y* 'water' and *hɔ:ði* or *hɒ:ði* 'this'. Whereas, in the

Baḥarna dialect there is no rounding for the long vowel /ɑ:/. He adds that long /ɑ:/ is fronted and missing the lip rounding in the environment of non-emphatics, but will be backed; e.g. *hɒ:ði* in the Sunni dialect is *ha:di* in northern and eastern *Baḥarna* dialects. But the *Baḥarna* in the villages raise the medial /ɑ:/ in some words, as in *kiti:ba* < *kita:ba* 'writing' and *giri:yya* < *gira:ya* 'reading'. Furthermore, he mentions the 1st person pronoun *a:na* for the Sunnis in Bahrain, as the initial vowel in this pronoun has a long backed and rounded realisation.

Speaking about Bahrain, Procházka (1981) also mentions the presence of the back vowels in the dialect of *Šīʿis* in Bahrain in his descriptive and comparative study of their relationship with the east of Muharraq and the Omani dialect in Al-Ristaq. He reports that backing occurs in words with labial consonants. He is not describing words with long /ɑ:/; but words such as *xift* will be *xuft* "I was afraid" and *gimt* will be *gumt* "I got up".

5.3.2.4 Al-Wer

Al-Wer (2007) investigates long /ɑ:/ in Amman, Jordan; she describes the differences in the pronunciation of the vowel between Jordanians and Palestinians. The long vowel /a:/ is backed in both Jordanian and Palestinian dialects, but it is more backed in Palestinian dialects especially in the vicinity of /r/ with some degree of lip rounding and a pharyangealised feature. In the Jordanian dialect, the Palestinian norm variant in *ra:ħ* 'he has gone' will be *rɒ:ħ*. As an exception, if the word has /i/ after /r/ no rounding or pharyangealised feature will occur; an example which the researcher provides of this is /mbɛ:riḥ/ 'yesterday' (12).

5.3.2.5 Al-Nassir and Bakalla

Both Al-Nassir (1993) and Bakalla (2006) speak about *tafxi:m* and explain the work of Sibawayh. The word *tafxi:m* is "derived from the root form *faxm* (grand)" (AL-Nassir,

1993: 103). The word *faxm* is "generally signifying 'thickening, magnifying, enlargement, emphasizing" (Bakalla, 2006: 321).

Al-Nassir (1993) explains that the emphaticised [a:] will occur if it is surrounded by one of *al-ħuru:f al-mustaʕlya* 'the elevated consonants' ($s^ʕ$, $d^ʕ$, $z^ʕ$, $t^ʕ$, q, χ, ʁ). He adds that Gairdner adds the velarised *Lām*, or dark /l/ to the *mufaxxama* consonants.

5.3.2.6 El-Gindi

In his book describing the Arabic dialects, EI-Gindi (1983) outlines the old Hijazi dialect, and mentions that the Hijazi dialect does not have *imala*[27] (raising) but instead has the *fatħ* (a), but they do have emphasis or *tafxi:m* in their dialect. He mentions that *ʾabu Ḥayyan*[28] reported that "these ʾalifs were moved to be wāw in the Hijazi dialect" (279). *ʾAbu Ḥayyan* adds that the Hijazi *ʾalif* /a:/ was between the *ʾalif* /a:/ and the *wāw* /w/, and even that they wrote it with *wāw* in writing as in *azzaka:t* 'the Islamic tax or alms' and *alħaya:t* 'life'. Indeed, *wāw* replaced the ʾalif /a:/ so, *azzaka:t* 'the Islamix tax or alms' was written in the Hijaz as *azzakɔ:t* and *alħaya:t* as *alħayɔ:t*. Their writing was affected by their dialect and, as El-Gindi (1983) puts it, their writing was as a 'mirror' of their dialect. He then mentions that in one of the Prophet Mohammad's (PBUH) letters, written by another Hijazi person, the word *ka:n* was written as *kɔ:n*, with the letter *wāw*. This narrated story provides a hint of the Prophet's dialect and because of the intensity of *tafxi:m*, or emphasis, the *ʾalif* /a:/ was written as *wāw*. In the Qur'an the words *Sʕala:t* and *Zaka:t* are written with the letter *wa:w* too, الصلوة و الزكوة.

[27] It is the approximation of the /a:/ to /i:/ and the short vowel /a/ before it to be /i/ "El-Gindi, 1983: 275".
[28] Abū Hayyān al-Tawhīdī was one of the intellectuals and thinkers in the 10th century.

5.3.2.7 Mustafawi

A study was carried out by Mustafawi (2006) on Qatari Arabic (QA). In her research, she describes *tafxīm* and its interaction with affrication in QA. *Tafxīm* to the old grammarians is related to the following sounds: emphatics ($t^ˤ$, $d^ˤ$, $s^ˤ$, $ðˤ$) and uvulars (q, ɣ, x). She adds that pharyngealised, emphatics or uvularised consonants have two points of articulation:

> The primary point of articulation occurs in the anterior part of the vocal tract (for Arabic emphatics). The secondary point of articulation consists of a constriction in the upper pharynx.
>
> (Mustafawi, 2006: 87).

Additionally, Mustafawi illustrates that emphatics exhibit a spreading effect, from the emphatic consonants to the adjacent consonants and vowels, and she mentions an Iraqi study done by (Ali and Daniloff, 1972: 102-103) which found that syllable structure determines emphasis. The Iraqi study illustrates that emphasis can be spread over two open syllables in multi-syllablic words, but emphasis will be blocked in monosyllabic words of the type CVCC.

5.3.2.8 Habib

A study carried out by R. Habib (2012) investigated one of the rural dialects in Syria. It is worth noting that Syrian Arabic comprises of urban and rural dialects. R. Habib's study focuses on the rural dialect in a village named *ʿOyūn Alwādi*. In her study, she investigates *imala* and rounding in the rural variety of the village. While the urban varieties contain the vowels [a] and [a:], in rural varieties such as the target dialect these vowels will be produced as either [e], [o] and [e:], [o:]. R. Habib gives some examples which occur in the village, taken from the research on rounding, e.g. *ra:ħ* and *ro:ħ* 'he went' and *saraʔ* and *saroq* 'he stole'. Only Habib's description and analysis of rounding

will be included in the discussion here as the phenomenon of *imala* lies outside the scope of the current study.

Rounding in the rural village occurs as the short [o] and long [o:] vowels respectively, as in the following examples:

Examples with short [o] include *dˤarab* produced as *dˤarob* 'he hit', and *saraʔ* as *saroq* 'he stole'. Whereas examples of long vowel [o:] include *dˤiraːr* produced as *dˤiroːr* 'a proper name', *fisˤtˤaːn* as *fisˤtˤoːn* 'a dress', and *raːħ* as *roːħ* 'he went'. These examples were extracted from natural interviews obtained from 50 children and adolescents from *ʿOyūn Alwādi* village. The participants aged from 6 to 18 and were divided equally into 25 males and 25 females, and also into four age groups. R. Habib states that the social factors have strong effects on the variation of both *imala* and rounding, but does not explain what these effects are as she deemed this to be beyond the scope of her study. It should be noted that the rounded cardinal vowel in R. Habib's study is cardinal number six /ɔ/ (whereas the rounded variant in the current data is [ɒː]).

R. Habib illustrates that rounding in her study is different from the *tafxīm* or emphasis that has been discussed in the Arabic literature. She adds that despite the fact that many grammarians try to describe the emphaticised [a:] in a way that will lead us to think that they mean rounding, this is actually not the case. She points out that Sibawayh, in particular, did not provide the phonetic value of the variant [a:], and also that az-*Zamaxšari* did not combine the emphaticised [a:] with rounding; furthermore, this [a:] will not be imalized or raised.

R. Habib's results show that both short and long rounding occur in word final syllables in the dialect she investigated, as in the examples below (2012: 59):

Urban variety	**ʿOju:n ʾAl-Wādī variety**	
dˤira:r	*dˤiro:r*	‘a proper name’
nidˤa:l	*nidˤo:l*	‘a proper name’
dˤʕa:f	*dˤʕo:f*	‘weak or thin’
sˤajja:d	*sˤajjo:d*	‘hunter’

She illustrates that rounding in her data occurs in two cases:

1- When the vowel is preceded or followed by /r/.

2- When the vowel is preceded or followed by emphatic sounds.

The researcher’s results show that the use of the emphasised [ɑ:] is affected by the presence of four consonants in the surrounding environment (tˤ, dˤ, sˤ, zˤ), and by rhotic /r/. These sounds differ from those reported by Sibawayh, who claimed that rounding is triggered by the seven consonants (sˤ, dˤ, zˤ, tˤ, q, χ, ʁ). In other words, R. Habib only found four of the sounds noted by Sibawayh (tˤ, dˤ, sˤ, zˤ) (and also /r/) to affect rounding in her dialect. The sound /r/ was not reported by Sibawayh to have any effect in conveying emphasis.

R. Habib adds that when emphasis is added to the sounds which surrounded [a:], the vowel will behave like an emphatic and this leads to rounding, as in this example *fisˤtˤa:n ~ fisˤtˤo:n* ‘dress’ (60). Additionally, she illustrates that while rounding can be triggered by the surrounding consonants, vowels and semi-vowels have no effect on rounding. From R. Habib’s results, if /a:/ is surrounded by emphatic consonants and /r/, the value of the vowel will be retracted and raised to the mid position and will be rounded, as in *ʒi:ro:n* ‘neighbours’. Younes (1994: 232) states that /r/ will be emphatic if it occurs adjacent to low back vowels. He adds that the quality of /r/ exists in some of the Arabic dialects (for instance the Syrian dialect) and in some other languages, such

Catalan, has an emphatic feature. It is worth noting that uvulars in R. Habib's study did not have any effect in inducing rounding.

As noted above, R. Habib only analyses the linguistic constraints on rounding in her dialect and unfortunately does not discuss the impact of social factors; although it would have interesting and useful to know more about their role in favouring or disfavouring a variant or another.

5.3.2.9 Al-Bohnayyah

More recent research has been carried out by Al-Bohnayyah (2018) regarding the unrounding of the long vowel (ɑ:) in the Al-Ahsa[29] urban dialect in KSA. He studies this variable in relation to age, gender and sect. The results show that Sunni speakers unround more than *Šī'i* speakers, and this means that sect has no effect on the maintenance or abandonment of this variable; rather this is caused by koineisation towards the dialect of Najd which resembles the supra-regional variety in KSA. Crucially, the change in the current variable is also motivated by the social meaning of one variant; as the rounded variant has widely been linked to *Šī'a* speakers by outsiders. Given the external pressure associated with sectarian identity-related issues that are involved, this compels the *Sunnis* to use the other, unrounded, variant in order to 'prove' their identity as *Sunnis*.

His sample comprises 36 native speakers of the urban dialect of Al-Ahsa from two-age groups (young and old). The data was analysed in Rbrul, and the results show that speakers have a high tendency to unround the long vowel (ɑ:) in word-medial position. In terms of linguistic constraints, the unrounded variant [ɑ:] is favoured in monosyllabic words and when it is preceded by emphatics. All of the social factors (age,

[29] Al-Ahsa is a governorate in the Eastern Province of Saudi Arabia, and it is very close to Dammam, 164 km.

gender and sect) were returned as significant. Young speakers are the most innovative group in using the innovative variant most often (the unrounded long vowel [ɑ:]), whereas the older speakers use both the traditional and the incoming variant at equal rates. In terms of gender, the male speakers and the young females are the most innovative groups in using the target variant. In the case of sect, *Sunni* speakers used the unrounded form more than the *Šīʿi* speakers.

The researcher underlined the impact of the central supra-local features in KSA in promoting the use of the innovative form. Al-Bohnayyah's study is significant in investigating the dialect of both sects, *Sunni* and *Šīʿi*, and he asserted that the concept of 'sect' cannot and should not be isolated from the accompanying social pressures and impacts which should always be held in mind. Sect is an important factor to investigate especially in the Eastern province where there is a mixture of Sunnis and *Šīʿis*.

5.4 Data analysis

5.4.1 Coding Protocol

The variable (ɑ:) has two variants: the innovative [ɑ:] and the local form [ɒ:]. Files were coded in Excel sheet is converted to a comma separated value file (.csv), were prepared for Rbrul analysis. The total number of tokens is 1571 tokens.

The following factor groups were coded for this variable:

Linguistic factors

The analysis began by considering the following linguistic factors:

- closed and open syllables
- number of syllables
- preceding sound, following sound
- preceding sound voicing

- following sound voicing
- preceding roundness
- followed by roundness
- position in the word

Additionally, in the initial analysis preceding and following consonants were coded individually; because of uneven distribution (see Appendix G), consonants were coded according to place of articulation. The rounded and unrounded variants appeared in the vicinity of the sounds given in Table 14, which also shows the number of tokens in each environment, while some examples from the data are given in appendix F.

Preceding	**rounding**	**unrounding**	**Total**
coronal	68	555	623
dorsal	52	362	414
emphatic	36	254	290
labial	54	188	242
Total	210	1359	1569

Table 14: Frequency of the rounded and unrounded variants after the preceding environment.

Phareangeal sounds were grouped together with emphatic sounds on the basis that, like emphatics, they have an effect on spreading emphasis. According to Watson (1999) and Davis (1993: 149) the pharyngeal consonants are traditionally called emphatics (See also Al-Ani, 1970 and Hellmuth, 2013).

/m/ and emphatic /r/ were included with the emphatic sounds. The /m/ in my data, especially before the long vowel /ɑ:/, is always emphatic, as in *maːxið* ‘he has taken’, *ilmaːj* ‘the water’, and *maːbi* ‘I do not want’. With respect to /r/, two types of /r/ occurred in my data: emphatic, e.g. *rˁaːħ* ‘he has gone’, *rˁaːsi* ‘my head’, *isˁsˁarˁaːħa* ‘frankly’, and *rˁaːbiʕ* ‘fourth grade’; and plain. The plain realisation occurs generally when /r/ is preceded or followed by /i/, as in *biːr* ‘well’, *riːm* ‘Reem (proper noun)’; *riːg* ‘saliva’.

Similar phenomena are reported in other Arabic dialects. Davis (2006) maintains that velarised /r/ will occur mostly in the adjacency of low vowels. According to Younes (1992), in Palestinian Arabic /r/ is considered to have a secondary emphatic effect. In Younes's classification, emphatics are divided into those with primary emphasis, which are the consonants [sˤ, dˤ, zˤ, tˤ]; and secondary emphasis, namely /ɬ and r/. According to Watson (2002) /ḅ, ḷ, ṃ, ṛ/ are secondary emphatics. Al-Wer (2007) states that /r/ in the dialects of both Jordanians and Palestinians in Jordan affect the quality of long vowel /ɑ:/, such that it encourages backing of the vowel, and in the case of Palestinian extreme backing may be accompanied by rounding. Cantineau (1940-1946 cited in Herin, 2013) considered /l and r/ as *Mufaxxama* or velaraised sounds, along with the phareangeals /ħ and ʕ/.

At earlier stages in the analysis, 'syllable type' was added in order to examine whether it had any effect on rounding and unrounding, but it was not returned as significant. This factor was added because an Iraqi study undertaken by Ali and Daniloff (1972: 102-103 cited in Mustafawi, 2006), states that the syllable structure has an effect on conveying velarisation in the word. In addition, Al-Bohnayyah (2018), who carried out a study in Al-Ahsa in the Eastern Province in KSA found that syllable structure has an effect on rounding and unrounding. The differences in the results obtained by Al-Bohnayyah and the current study with respect to the effect of syllable type may be simply due to the different social context, and differences in the research design between the two studies.

It is worth mentioning that in the penultimate run, 'roundness of preceding segment' and 'roundness of following segment' were included as factor groups. In this run, roundness of the preceding segment was returned as the only significant linguistic factor. Because of the very large difference in token numbers between rounded segments

(162) and unrounded segments (1407), the factors of roundness were excluded from the subsequent final run; such a huge difference in the number of tokens is very likely to skew results.

Following a number of trial models, the model that has been adopted includes the following linguistic factor groups: preceding sound (four factors), following sound (four factors), syllable type, voicing of preceding sound and voicing of following sound. Some useful details in the initial runs are clarified in the results section below.

5.4.2 Acoustic analysis (Praat)

Since my coding was predominantly based on my own impressionistic auditory evaluation, I conducted a limited acoustic analysis via Praat in order to verify that my impressionistic coding was accurate and grounded in the variation which exists for this variable. Forty tokens were extracted from both male and female speakers, from different age groups and social networks. Speech samples for both rounded and unrounded vowels were chosen and inserted in Praat. For each segement F1, F2 and F3 (the first through third formants) were extracted. These formants were distributed in an Excel spreadsheet. The chart below shows the formants of the vowels in this sub-sample.

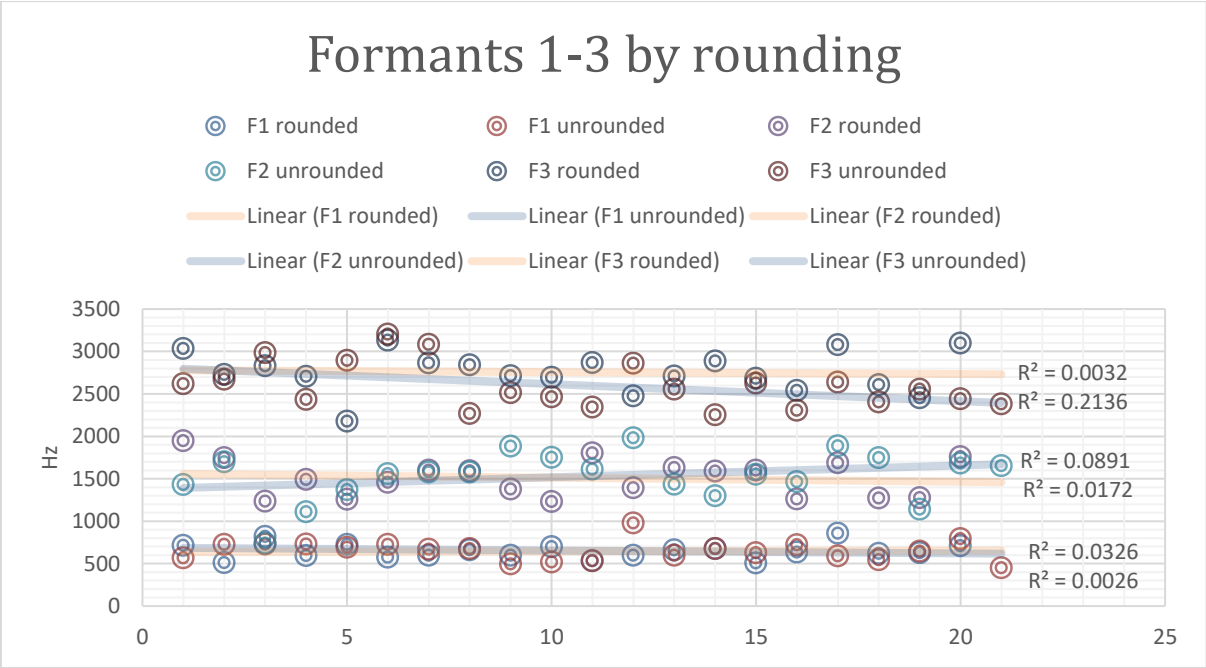


Chart 1: Formants 1, 2 and 3 for the rounded and unrounded segments.

The chart shows F1 (which approximates vowel height), F2 (approximating the degree of backness) and F3 (approximating the roundedness of the lips). With respect to the height we see flat lines, for the backness (F2) there is a minor slope, while there is a greater difference in F3. With respect to F1 we do not expect variation since it is a low vowel, regardless of roundedness. But F2 and F3 are indicators of roundedness, because roundedness is a combination of both F2 and F3.

The chart above illustrates that there is little variation across the tokens for the vowel I had coded as being rounded. There is variation across the vowel that was coded as unrounded such that some of the unrounded segments fall below the range of the rounded variant, but some others overlap with the rounded variant. The linear regression lines for F2 almost completely overlap. The unrounded segments are slightly lower than the rounded ones, or higher. However, with F3 there is a clearer difference in directionality. There is a straight line for the vowels coded as rounded and some variation

in the expected direction. The chart shows that there is not much of a difference in F3 but there is some difference in F2. The results of the acoustic analysis show that my initial impressionistic coding was for the most part accurate, and successfully reflects the distinction that exists between rounded and unrounded variants.

5.4.3 Rbrul results

In this section, the quantitative analysis of the data will be presented; multi regression tests were performed on Rbrul. In order to obtain factor weights and P-values, a model of the data was run with all of the factor groups included (both social and linguistic factors). The application value is the innovative unrounded variant [ɑ:]. The results are displayed in Table 15.

R^2 = 0.66. Application value: [ɑ:]			
Preceding (P = 1.78e-07)			
	No. of Tokens	[ɑ:]	**Factor Weight**
dorsal	239	90%	0.67
coronal	624	89%	0.583
emphatic	465	85%	0.499
labial	242	77%	0.261
Age (P = 2.39e-41)			
	No. of Tokens	[ɑ:]	**Factor Weight**
Young	462	99%	0.9
Middle-age	518	92%	0.507
Old	590	71%	0.098
Gender (P =3.32e-40)			
	No. of Tokens	[ɑ:]	**Factor Weight**
Male	796	96%	0.812
Female	774	76%	0.188
Social.Networks (P = 0.0152)			
	No. of Tokens	[ɑ:]	**Factor Weight**
Loose	781	97%	0.586
Tight	789	75%	0.414
Grand mean = 0.866			

Table 15: Rbrul results of the analysis of (a:).

Overall, the innovative unrounded variant [ɑ:] is used in approximately 86% of the total number of tokens. This is a strong indication that the change towards this variant is at a fairly advanced stage. In addition to the unrounded back variant, the data also contained 18 tokens of a fronted variant, approaching /æ:/, which were used by two young men. Further comments on this usage is provided in section (5.8).

The results show that all social variables, age ($P < 0.001$), gender ($P < 0.001$), preceding sound ($P < 0.000$), and social network ($P < 0.000$), were selected as significant. However, of the linguistic variables, only the preceding sound was returned as significant ($P < 0.001$). In this predictor, unrounding is favoured after dorsals (90 % FW 0.67) and coronals (89 % FW 0.58). When the variable is preceded by emphatics and labials, unrounding is only slightly disfavoured, almost neutral, but occurs in 85% of tokens with a FW of 0.499 for emphatics, and in 77% of tokens preceded by labials at a FW of 0.261. These results are broadly in line with the theoretical expectations of the effect of emphatics and labials on surrounding vowels/sounds; for instance, Watson (2002) maintains that emphatics and labials stimulate rounding and backing. According to Donegan (1993), adjacent labials can encourage rounding. Further, Sibawayh (1991) and Mustafawi (2006) maintain that emphatics trigger velarisation or rounding.

In addition, for phonologists such as Hume (1992), coronals encourage frontness, and Hume adds that both front vowels and coronal consonants are considered to be coronal. It can be said that the results are in line with Johnstone (1967), the vowel /a/ is usually realised as [æ] if not surrounded by emphatic and guttural consonants (excluding /h/). Davis (1993: 153) specifically adds that the phonemes /i/, /j/, /ʃ/ and /ʤ/ were coded as coronals, and these sounds are characterised by a high tongue position. This feature usually blocks the tongue from being retracted, and tongue retraction encourages rounding and backing or, put differently, it spreads emphasis. In other words, the tongue's retracted feature is characteristic of emphatic consonants, as emphatics encourage the retraction of the back of the tongue. Finally, according to Younes (1993), non-emphatic consonants will block backness and encourage /ɑ/ fronting, which explains the effect of dorsals and coronals in the current data, namely that they favour the unrounded variant at 0.67 and 0.58, respectively.

It is worth noting that Al-Bohnayyah's study (2018) deals with the same variable in Al-Ahsa in the eastern province of KSA, and therefore it would be extremely useful to compare the current results with his. In Al-Bohnayyah's recently completed thesis in Al-Ahsa, the results show, similarly to the current study, that the preceding sound is significant; however, he also found that preceding emphatics favour *unrounding*. The change towards the unrounded variant seems to be more advanced in Al-Ahsa than in Dammam, such that in Al-Ahsa the incoming variant has already broken one of the most resistant environments, namely a preceding emphatic.

5.5 The variable and the social factors (age, gender and social networks)

Age

The results show that there is an increasing tendency to use the innovative unrounded variant amongst the whole sample. The results concerning age show that the change is almost complete among the youngest generation (99%; FW 0.90), followed closely by the middle age speakers (91%, FW 0.50); the older age group use the innovative feature the least (71%), and disfavor it at FW 0.98. These figures strongly indicate that this feature is undergoing change. The trajectory of change is from the local rounded variant [ɒ:] toward the innovative unrounded variant [ɑ:]. Taking into account the present results alongside those of Al-Bohnayyah from the same region (the Eastern province) who also found that in Al-Ahsa the rounded realisation is being levelled out, we can conclude that this is happening at a regional level. This change is motivated by the fact that the rounded variant is highly marked in the country as a whole.

The differences between age groups reflect the differences in their social history. The older age group are the first generation of the returnees; they either returned as children with their parents or they were born in Dammam. But even after their return in 1923, some of them still went to Bahrain for short visits. The reason for them going to

Bahrain was mainly to seek medical treatment there. According to Field (1986), Bahrain was the most developed among the Gulf countries. It was at the forefront of female education. The first school for girls was established in 1919. Education in KSA was exclusively for men, though most only received a basic education or primary education except for those who joined ARAMCO. It can be said, that there was no educational system in KSA in general. In the 1940s, there were some primary schools for boys only in some parts of KSA. The first school for girls was opened in 1955 in Jeddah. In Dammam there were a few male-only schools, where only a primary education was offered. Pre-schools consisted of the *mtʿawwaʔ*[30] for boys and the *mtʿawwaʕa*[31] for girls, and at this level they only recited the Qur'an and learned the alphabet. The first school was established in 1942 in Al-Khobar[32] and in 1954 the first school was established for boys in Dammam. In 1960, (i.e. fairly recently), the first school for girls was established in Dammam. There was no public transport, which restricted peoples' mobility. People in the eastern province at that time could travel to Bahrain via small wooden boats, but this was difficult and expensive. People travelled to Bahrain for medical treatment or to visit relatives, and some families sent their male children to study there (one of my participants studied in Bahrain). The social contacts of the speakers in this generation were limited, confined mainly to relatives in Dammam or Bahrain. Therefore, we woul expect their speech to reflect a stronger influence of Bahraini features. The middle-aged group were born between (1965 and 1979) and grew up after the discovery of oil in 1938. They experienced a totally different situation to the previous generation, where the economy of the country flourished, and many (white collar) jobs were available. Education was available for both genders at all levels, along with scholarships abroad. Moreover, the

[30] A man who used to teach children Qur'an and the alphabet.
[31] A woman who used to teach children Qur'an and the alphabet.
[32] A city in the eastern province, which is 15 kilometres away from Dammam.

health sector developed to include state and private hospitals. Free treatment became available for everyone in the state hospitals.

By the time the young generation were born (from 1980 onwards) the services in all sectors had become even better. The younger generation interact considerably more with speakers of other Saudi dialects, especially since Dammam is a hub for job opportunities. Youngsters have more educational choices especially at university level, as there are many universities in the country. Mobility is greater and easier and therefore, there is more exposure to other dialects among this generation.

With respect to gender, men favour the incoming variant (FW 0.81) and use it at a rate of 96%, while women disfavor it (FW 0.18) and use it at a rate of 76%. Similarly to the variable (ʤ), male speakers are in the lead of the change.

As for social network, speakers with loose networks slightly favour unrounding (FW 0.58), and use it at a rate of 97%, while speakers who belong to tight networks disfavor unrounding (FW 0.41) and use it at a rate of 75%. We notice that the rate of usage of the incoming variant is relatively high for all ages, gender and social network groups; the lowest figure of the use of this variant is 71%.

Gender and age

The overall results show a clear lead of the male speakers in the use of the innovative feature. Men use it in 95% of the total occurrence of the variable, and strongly favour it at FW 0.81. Women use it in 76% of the total occurrence and disfavor the unrounded variant at 0.18. In order to have a clearer picture of the behaviour of different gender and age groups, Table 16 displays the results of a cross tabulation of gender and age.

Gender	Old	No. of tokens	Middle-age	No. of tokens	Young	No. of tokens	Total
Female	40%	98	88%	298	99%	193	76%
Male	93%	325	100%	180	99%	266	96%
total	71%	423	92%	478	99%	459	86%

Table 16: Cross tabulation of the use of [a:] variant by age group and gender.

The first observation is that the figures clearly show that older female speakers' behaviour that is responsible for the 'impression' that male speakers in general are in the lead of this change. We notice that the younger female speakers use the incoming form almost categorically, matching in this behaviour that of the younger male speakers. This finding is reminiscent of the findings in several previous studies, on Arabic as well as other languages, where the older female group were found to be more conservative than all other age and gender groups (see for instance, Walters 1989; Thomas 1989; Al-Qahtani 2015). The interesting pattern in this study as well as in other studies is that younger women almost reverse the pattern of the older generation. In the current study, the gap between the older women and the middle aged women is relatively large (40% versus 88%), and increases further when we look at the younger women who use the incoming variant almost categorically, thus matching the rate of the younger men. On the other hand, the gap between the different generations of the male speakers is considerably smaller: 93% going up to 100% and 99% in the younger group. We also notice that in the middle-age group there is a smaller difference between the male and female participants, at 88% and 100% respectively. This can be interpreted as a reflection of social change, particularly a change in the number and nature of the opportunities available for women, which have increased steadily and have extended to include a range of career

opportunities. In the past women were deprived of education and work outside of the home. However, in more recent times, for the middle-aged and young women, the situation has changed considerably. They now have access to education, and they can work after graduating from university. Through this, of course, they will come into greater contact with other speakers from different varieties, most of whom do not have rounding in their speech.

The gap between the women and men decreases steadily with age, and in the younger generation the figures show identical linguistic behaviour with respect to this feature among the male and female speakers. A similar pattern was found in Al-Bohnayyah's (2018) research in Al-Ahsa.

These results regarding the change in younger women's usage, in terms of divergence from the local forms, are also similar to those of Al-Qahtani (2015) in southern Arabia and Al-Ammar (2017) in Hail. In Al-Qahtani's (2015) study, women were inclined more towards the use of the innovative variants which were the emphatic interdental fricative [ðˤ] for (ḍād), and the use of the innovative definite article *-l* instead of the local *-m* article. This change was led by young females. In Al-Ammar's (2017) investigation, younger women were also found to be using the local forms less, and were ahead in using [a] in favour of the traditional [e] for the feminine ending variable. It is important to point out that both studies found that the availability of local schools brings young women into direct interaction with other varieties in which the dialectal features will likely follow the supra-local forms.

Social network

As discussed earlier, participants in this study are divided into two groups according to their social networks, whether they have: 1) loose SN, or 2) tight SN. Table 17 shows the differences in the use of the innovative long vowel [ɑ:] in relation to the participants' SN.

Social Network (P = 0.0152)			
	Tokens	**[a:]**	**Factor Weight**
Loose	781	97%	0.586
Tight	789	75%	0.414

Table 17: Rbrul results for the realisation of [a:] in relation to social networks.

Rbrul analysis returned social networks as significant (P < 0.000); the use of unrounding was generally found to be more advanced among speakers with loose SN (97 %, FW 0.586). They were found to use the unrounded [ɑ:] 97 % of the time, much more than speakers with tight SN. However, participants with tight SN who mostly mix with people from the same family, use the unrounded [ɑ:] 75 % of the time (FW 0.414). These results lend further support to the effect of social network in linguistic variation and change (L. Milroy 1980, 1987), by demonstrating that (a) social network correlates with linguistic usage; and (b) the tighter the social network of an individual the more likely it will be that this individual will adhere to the local norm of speech.

A cross-tabulation between SN, age, and gender, has been carried out in order to investigate the correlation between these independent variables and the use of the innovative form.

Application value: unrounding [ɑ:].					
Loose Social Network	**Female**	**No. of tokens**	**Male**	**No. of tokens**	**Total**
Old	(no participants)	0	96%	136	96%
Middle-age	93%	128	100%	135	96%
Young	99%	114	99%	0	99%
Total	95%	242	98%	271	97%
Tight Social Networks	**Female**	**No. of tokens**	**Male**	**No. of tokens**	**Total**
Old	40%	242	91%	212	64%
Middle-age	85%	210	100%	45	87%
Young	100%	80	(no participants)	0	100%
Total	67%	530	93%	257	75%

Table 18: Cross tabulation of age, gender, and SN in the use of unrounded [ɑ:].

From Table 18, clearly shows that the lower overall usage of the innovative variant among the speakers with tight social network is mainly due to the behaviour of the older women –whose score (40%) is the lowest among all sub-groups. They are followed by the middle age female speakers (85%). All remaining groups' rate of usage is extremely high, reaching 100% in the case of middle age men. Interestingly, social

network seems to have no effect in the case of middle age men, both groups, loose and tight social network, use the innovative variant categorically[33].

Fronting of /a:/

As mentioned earlier, the unrounded vowel [ɑ:] which is favoured in the current data is different from the vowel that is found in the supra-local form /a:/. The back unrounded variant that is used by the majority of speakers in this study may be considered a transitional form, assuming that the change will ultimately converge with front /a:/, i.e. the 'norm' elsewhere in the country. One piece of evidence that supports this possibility is that the data contain some tokens of the front variant, specifically 18 tokens (see below).

The front vowel was found in 18 tokens in the speech of two young male speakers; they are brothers and work in trade, and thus regularly come in face-to-face interaction with customers who speak a variety of dialects. They are thus motivated to accommodate to their customers, and perhaps also accommodate 'in anticipation' to what they think is the norm or consider as such. They are the same speakers who proclaimed that they abandoned [j] in favour of [ʤ] consciously (section 4.5.6). The tokens in which they used a front variant are listed below, some of these tokens occurred more than once.

[ʔasˁdiga:j] 'my friends'
[iddamma:m] 'the city, Dammam' (3 tokens).
[ilħa:lijja] 'the current'
[ʕa:d] 'so' (2 tokens)
[ħa:ʤa:ti:] 'my things'

[33] This groups's behaviour is similar to the younger women in Gal's 1978 study in Oberwart; she found that the nature of the social network played no role in the degree of shift to German among the younger women.

[xa:riʤ] ‘abroad’

[irroħa:t] ‘going out’

[ilwa:ħid] ‘the person’

[iððikraja:t] ‘memories’

[ħa:ʤa] ‘something’

[ʕja:l] ‘children/friends’

[ʕama:mik] ‘your uncles’

[ʔama:kin] ‘places’

[mika:n] ‘place’ (2 tokens).

[nitga:bal] ‘to meet’

[ha:ði] ‘this’ (2 tokens).

[ʤa:t] ‘she came’ (4 tokens).

[la:zim] ‘should’

The above tokens show that fronting can occur in the speech of these two participants in different environments.

Within this theory –that the back unrounded variant is a transitional form- it is unclear why the speakers overall do not simply converge towards an assumed target variant [a:], bypassing [ɑ:]. Another possibility is that the back unrounded realisation is the final stop, so to speak; i.e. that the change recorded in the current study, and indeed in Albohnayyah’s study in the same region, will simply become a characteristic feature of the eastern provinces, and as such functions as a symbol of ‘eastern regional identity’. By unrounding the vowel, the speakers level out a marked and stigmatised feature but at the same time maintain ‘a flavour of the Eastern province’; through this development, they distinguish themselves from the other *Dawāsir* who did not immigrate to Bahrain, or they may wish to distinguish their dialect from the dialect of Riyadh as a way to showcase their regional and social identities. It is also worth noting that the back realisation is not as marked as the rounded realisation.

5.6 Summary

In this chapter, unrounding of the long vowel (ɑ:) in word-medial position, was presented along with a discussion and analysis of the findings. The results show that the unrounded vowel is more likely to occur if it is preceded by dorsal (90%, FW 0.67) and coronal sounds (89%, FW 0.583). Rbrul returned all of the social factors as significant. Age, gender and SN interact in influencing the frequency of occurrence of the variants. The age groups at the younger end (young 99%, FW 0.9 and middle-aged 92%, FW 0.507) are the most advanced users of the innovative form, which indicates that there is a change in progress; what increases confidence in this conclusion is that the incoming variant, unrounded, shows a high rate of usage (86%). Male speakers lead female speakers in the old and middle age groups, but the difference between the gender groups is eliminated in the younger group –where female speakers use the innovative form equally as frequently as the male speakers. Speakers with loose SN (97%, FW 0.586) used the unrounded variant more often than speakers with tight SN.

Chapter 6

Conclusion

The present study was designed to investigate two linguistic variables in the dialect of branches of the *Dawāsir* who migrated to Bahrain and returned to Dammam. Dammam, which is the capital of the Eastern Province, is a young city that was established with the arrival of the *Dawāsir* in 1923. In this respect, Dammam is similar to new cities that did not have a traditional dialect as such.

The present study is a sociolinguistic investigation, and Rbrul was used to analyse the data that were obtained through informal audio-recorded sociolinguistic interviews with 39 participants from the *Dawāsir* that live and reside in Dammam. The two variables that were investigated were (ʤ) and (ɑ:) in word-medial position. Furthermore, Praat was used to analyse the second variable (ɑ:) to confirm the existence of a phonological difference between the two variants. Both variables showed a considerable amount of variation, and the analysis indicates that they are involved in change. The change that affects (ʤ) results in the replacement of traditional [j] by the koiné form [ʤ]; while the outcome of the change from the traditional *Dawāsir* feature [ɒ:] is an unrounded back vowel [ɑ:], which shares the feature 'unrounded' with the common realisation of this vowel in Saudi cities, or what may be described as a koiné form. However, it differs from the form found in, say, Riyadh, in that it is distinctively back. A summary of the main findings is presented below.

Regarding the statistical analysis and correlation between the independent variables and the first variable, (ʤ), the data show that the innovative form [ʤ] is favoured when it occurs in monosyllabic words, when it is preceded by high front vowels

and /j/, and when it is followed by high front vowels and consonants. For gender, the results showed that the old women are the most conservative group, while men are the most innovative in using the supra-local feature [ʤ]. One of the interesting findings to emerge regarding this variable is that men lead the change in all age groups. This result was interpreted with reference to the social stereotype that [j] is a feature of women's speech. This stereotype was analysed on the basis of frequency of usage across the different generations. The use of [ʤ] was also found to correlate significantly with social network, such that speakers who belong to loose networks were found to use the innovative feature more frequently, a finding that is consistent with L. Milroy's principles of the correlation between social network and maintenance of a community's norm of speech. With respect to age, youngsters are the most advanced users of the innovative variant at a rate of 96%, compared with 64% in the case of the older speakers.

The second variable, (ɑ:), has a rounded variant which is considered to be one of the most salient features of the *Dawāsir's* dialect. Praat was used to analyse forty segments. The statistical analysis returned preceding sound (dorsals and coronals), age, gender and SN as significant factors. The total usage of innovative unrounded variant is 86%. In terms of age, youngsters are ahead in the use of the unrounded variant, thus indicating that the variable is undergoing change. Older women were found to be the most conservative group, while the young female and male groups with loos networks were found to use the unrounded variant almost categorically.

The two variables in the current study are both salient features of the *Dawāsir's* dialect and, as noted, they are both undergoing change. The two traditional variants, [j] and [ɒ:], are on their way to being levelled out, perhaps under the pressure of social stigmatisation and koineisation. Given the location of Dammam, viz. geographically very close to Bahrain, where the use of the variants [j] and rounding are considered to be the

norm, (indeed, [j] is more prestigious than [ʤ] in the Gulf States), these developments point to the importance of political borders in sociolinguistic developments. Dammam shows a stronger pull towards the supra-local, prestigious features within Saudi Arabia. The rate of change reported in this study suggests that [j] and [ɒ:] are likely to become obsolete in Dammam. According to Al-Wer (2004: 3) typical of a departing linguistic feature is that its use is "restricted to a small minority of speakers, its markedness increases, and the sound itself is then perceived as obsolete and rustic". As yet, the use of [j] and [ɒ:] cannot be described as being "restricted to a minority of speakers", since the majority of speakers in my study still use tokens of these variants, but the change is clearly progressing and is at an advanced stage, judging by the statistics. If the changes in Dammam go to completion, the result will be divergence from Gulf dialects and convergence to Saudi dialects.

The presence of [j] and [ɒ:] only in the dialect of the group of the *Dawāsir* who migrated to and lived in Bahrain at some stage is proof that the these features were acquired in Bahrain, and brought back to Saudi Arabia with the returnees-who passed it on to successive generations. The developments reported in this thesis can be viewed as 'reversal' of some of the changes that had affected the dialect of the *Dawāsir* in Bahrain. It therefore appears as though the speakers are recycling some of their original Najdi dialectal features.

Limitations of the study

- It is unfortunate that, due to time limitation, the study did not include teenage participants, as it might have been better to include an age group younger than 20 (which was the age of the youngest participant in my sample). Including a second younger group would help us understand possible repercussions of

recent developments in the country, especially those pertaining to sectarian tensions.

- In order to enhance the representativeness of the sample, it might have been better to include more participants in the study. In total 39 participants were interviewed; although this number is adequate for a sociolinguistic investigation, a larger sample, and thus a larger database, might have made it possible to run further and finer statistical analysis.

Further research

The data show considerable amount of variation in the following features:

1- Affrication of /k/ in the stem and the suffix, e.g. *ʧibi:r ~ kibi:r* 'big', *simaʧ ~ simak* 'plural fish' and *ʃlo:niʧ ~ ʃlo:nik* 'how are you?', and *ʕindiʧ ~ ʕindik* 'with you'.

2- Affrication in /g/> OA /q/ *ʤidir ~ gidir* 'pot', and *mʤa:bil ~ mga:bil* 'in front of'.

3- Variation in (q): [q], [ɣ]; and (ɣ): [ɣ], [q], e.g. *taɣri:ban* for *taqri:ban* 'approximately', and *biqe:t* for *biɣe:t* 'I intended to do or say something'.

4- It might be worth trying to investigate participants' attitudes toward some local linguistic features that are, and were, used by their ancestors, and their attitude toward the innovative linguistic features.

5- It would be extremely interesting to carry out a comparative study between the *Dawāsir* older speakers who migrated to Bahrain and now reside in Dammam, and those who did not emigrate and continue to reside in the homeland of the *Dawāsir, wādi adDawāsir.*

References

Abd-el-Jawad, H. (1986). The emergence of an urban dialect in the Jordanian urban centers. *International journal of sociology of language*, *61* 53-63.

Abu Ain, N. (2016). A Sociolinguistic Study in am, Northern Jordan. PhD thesis, University of Essex, UK.

Aeusoes1. (2008). *RP vowel chart (monophthongs)*. Retrieved from http://commons.wikimedia.org/wiki/File:RP_vowel_chart_(monophthongs).gif

AL-Alousi, M. S. (2005). *The history of Najd.* Cairo: AL-Waqfiyya.

Al-Amadidhi, D. (1985). Lexical and Sociolinguistic Variation in Qatari Arabic. PhD thesis.

Al-Ammar, D. (2017). Linguistic variation and change in the dialect of Ha'il, Saudi Arabia: Feminine Suffixes. PhD thesis, University of Essex, UK.

Al-Ansari, J. M. (2013). *Eishat lawwal: Life in the past in Dammam, Khobar, Dhahran,* and Dammam: AL-Turaiki.

AL-Ani, S. H. (1970). *Arabic phonology: An acoustical and physiological investigation.* Hague: Mouton and Co.

AL-Ayaf, A. K. (1995). *Eastern Province: Saudi Arabia.* Dubai: Emirates printing press.

Al-Bohnayyah, M. (2011). Dialect variation and change: The case of al-Hufuf, Saudi Arabia (Master's dissertation), University of Essex, Essex.

Al-Bohnayyah, M. (2018). Dialect Variation and Change in Eastern Arabia: Al-Ahsa Dialect (PhD Thesis). University of Essex, Essex.

AL-Doussari, M. H. (1994). Evolution of urban system in the Eastern Province of Saudi Arabia.Unpublished master's dissertation, University of King Faisal, Dammam, Saudi Arabia.

AL-Ghamdi, K. A. (2008). *Gamid's tribe and its history.* Cairo: al-Mohaddethien.

AL-Hajri, F. M. (1998). *The economic development in the Eastern Province in the Kingdom of Saudi Arabia (A geographical study).* Dammam: Reda Press.

Al-Hawamdeh, A. (2016). A Sociolinguistic investigation of two Hōrāni features in Sūf, Jordan. PhD thesis, University of Essex, UK.

AL-Jaser, H. (1981). *The huddle of the origin of the sedentary families in Najd.* Riyadh: Dar AL-Yamama for research and translation.

AL-Khatrash, F. (1988). *The political history of Bahrain*. Kuwait: Dar that AL-Salasel.

AL-Raihani, A. (1924). *Kings of the Arabs.* Beirut: Dar AL-Jeel.

AL-Asmari, M. (2015) Lenition in the Rijal Alhajir tribal dialect in the Southern region of Saudi Arabia. Master’s dissertation, Southern Illinois University Carbondale, Illinois.

Al-Essa, A. (2009). Najdi speakers in Hijaz: a sociolinguistic investigation of dialect contact in Jeddah. PhD thesis, University of Essex, UK.

Al-Farāhīdi. (1980). Kitāb al-ʿAyn. Baghdad: Wizārat al-Ṯaqāfa wal-Iʿlām, Al-Ǧumhūriyya al-ʿIrāqiyya

Al-Shehri, A. (1993). *Urbanization and Linguistic Variation and Change: a*

sociolinguistic study of the impact of urbanization on the linguistic behaviour of urbanized rural immigrants in Hijaz, Saudi Arabia. PhD. thesis, University of Essex, UK.

Al-Shorfaa, M. A. (1992). *The Eastern Province in the Kingdom of Saudi Arabia: Civilization and History.* Dammam: Almedokel.

Al-Shorafaa, M. A. (1996). *The social life in the Eastern Province in the Kingdom of Saudi Arabia.* Dammam: King Fahad library.

Al-Mubarak, G. (2016). *An investigation of sociolinguistic variation in al-ʾAḥsāʾ Arabic.* PhD thesis. SOAS, University of London.

AL-Nassir, A. A. (1993). *Sibawayh the phonologist: A critical study of the phonetic and phonological theory of Sibawayh as presented in his treatise AL-Kitab.* London: Kegan Paul International.

Al-Wer, E. (1991). Phonological Variation in the Speech of Women from Three Urban Areas in Jordan. PhD thesis, University of Essex, UK.

Al-Wer, E. (1997). Arabic between reality and ideology. *International Journal of Applied Linguistics,* 7 (2): pp. 251-265.

Al-Wer, E. (2002). Education as a speaker variable. In A. Rouchdy (ed), Language contact and language conflict in Arabic: Variations on a sociolinguistic theme (pp. 41-53). London: Routledge Curzon.

Al-Wer, E. (2006). Phonological merger. In *Encyclopedia of Arabic Language and Linguistics*. vol III (pp. 603-605). Leiden: Brill.

Al-Wer, E. (2006). Variation. In *Encyclopedia of Arabic Language and Linguistics*. vol. IV (pp. 627-636). Leiden: Brill.

Al-Wer, E. (2007). The formation of the dialect of Amman: from Chaos to order. In C. Miller,E. AL-Wer, D. Caubet, J. Watson (eds.) *Arabic in the city: Issues in dialect contact and language variation* (pp. 55-76). New York/London: Routledge.

Al-Wer, E. (2013). Language and gender in the Middle East and North Africa. In S. Ehlrich, M. Meyerhof & J. Holmes (Eds.), *The handbook of language, gender and sexuality* (pp. 396- 411). Oxford : Wiley & sons Ltd.

Al-Wer, E. (2013). Sociolinguistics. In J. Owens (ed.), The Oxford Handbook of Arabic Linguistics. Oxford: Oxford University Press, pp.241-263.

Al-Wer, E. & Al-Qahtani, K. (2016). Lateral Fricative ḍād in Tihāmat Qaḥtān: a quantitative sociolinguistic investigation, In S. Davis & U. Soltan (Eds.), *Perspectives on Arabic linguistics XXVII* (pp. 151-169). Amsterdam/ Philadelphia: John Benjamin publishing company.

Alqahtani, K. (2015). A sociolinguistic study of the Tihami Qahtani dialect in Asir, Southern Arabia. PhD thesis, University of Essex, UK

Alqahtani, K. (2015). A sociolinguistic study of the Tihami Qahtani dialect in Asir, Southern Arabia. PhD thesis, University of Essex, UK.

Al-Qenaie, S., D. (2011). Kuwait Arabic: a sociophonological perspective. PhD thesis, Durham University, UK.

Al-Qouz, M. (2009) Dialect Contact: acquisition and change among Manama youth. PhD. Thesis, University of Essex, Colchester.

Anīs, I. (1999). Al-ʾAṣwāt al-luġawiyya [The Linguistic Phonemes]. Cairo: Maktabat Al-Anglo Al-Maṣriyya.

Bailey, G., Wikle, T., Titllery, J. & Sand, L. (1991). The apparent time construct.

Language variation and change, 3, *241-264.*

Bakalla, M. H. (2006). Tafxīm. In *Encyclopedia of Arabic Language and Linguistics*. vol. IV (pp. 421-424). Leiden: Brill.

Baker, G. K. & Wiltshire, C. R. (2002). An OT treatment of palatal fortitiion in Argentinian Spanish. In A. T. Perez-leroux & Y. Roberge (Eds.), *Romance linguistics: Theory and acquisition* (pp. 33-48). Toronto: John Benjamin Publishing Co.

Bhat, D. N. (1978). A general study of palatalization. In J. H. Greenberg *Universals of human language* (pp. 47-92). Stanford: Stanford University Press.

Becker, K. (2013). The Sociolinguistic Interview. In C. Mallinson, B. Childs, & G. Van Herk (Eds.), *Data Collection in Sociolinguistics: Methods and Applications* (pp. 91-100). New York and London: Routledge.

Berruto, G. (2005). Dialect/ standard convergence, mixing, and models of language contact: the case of Italy. In P. Auer, F. Hinskens & P. Kerswill (Eds.), *Dialect change: Convergence and divergence in European languages* (pp. 81-95). Cambridge: Cambridge University Press.

Blanc, H. (1969). The fronting of Semitic g and the Qal-Gal dialect split in Arabic. Proceedings of the international conference on Semitic studies, 7-37. Jerusalem: The Israel academy of sciences and humanities.

Bright, W. (1997). Social factors in language change. In F. Coulmas (Ed.), *The handbook of sociolinguistics* (pp. 81-91). Oxford- Massachusetts: Blackwell Publishers Ltd.

Britain, D. (2010). Supralocal regional dialect levelling. In C. Llamas & D. Watt (Eds.), *Language and identities* (pp. 193-204). Edinburgh: Edinburgh university press.

Bulloch, J. (1984). *The Gulf: A portrait of Kuwait, Qatar, Bahrain and the UAE.* London: Century Publishing Co. Ltd.

Cantineau, J. (1960). Étude de Linguistique Arabe. Paris: Klincksieck.

Campbell, L. (2004). *Historical linguistics.* Edinburgh: Edinburgh university press.

Chambers, J. & Trudgil, P. (1980). *Dialectology*. Cambridge: Cambridge University Press.

Chambers, J. K. (1995). *Sociolinguistic Theory.* Oxford: Blackwell.

Cheshire, J. (1982). Variation in an English Dialect: a sociolinguistic study. Cambridge: Cambridge University Press.

Cheshire, J. (2002). Sex and gender in variationist research. In J. K. Chambers, P. Trudgill, N. Shilling-Estes *The handbook of language variation and change* (pp. 423-443). Oxford: Blackwell Publishing.

Dashti, A. A, Akbar, R. S. & Taqi, H. A. (2015). A Change of a Consonant Status: the Bedouinisation of the [j] Sound in the Speech of Kuwaitis: A Case Study.

International Journal of Applied Linguistics & English Literature, 4 (5), 104-112.

Dale, R. & Vinson, D. W. (2013). The observer's observer's paradox. *Journal of Experimental & Theoretical Artificial Intelligence, 25* (3), 303–322.

Davis, D. (1993). Arabic pharyngealization and phonological features. In M. Eid & C. Holes (Eds.), *Perspectives on Arabic linguistics V: Papers from the fifth annual symposium on Arabic linguistics* (pp. 149-162). Amstrdam/Philadelphia: John Penjamin Publishing Company.

Davis, S. (2006). Velarisation. In *Encyclopedia of Arabic Language and Linguistics*. vol. IV (pp. 636-638). Leiden: Brill.

De Jong, R. (2006). Gahawa-Syndrome. In *Encyclopedia of Arabic Language and Linguistics*. vol. I (pp. 151-153). Leiden: Brill.

De Velde, H. V. & Gerritsen, M. (1996). The devoicing of fricatives in Standard Dutch: A real-time study based on radio recordings. *Language variation and change, 8* 149- 175.

Donegan, P. (1993). On the phonetic basis of phonological change. In C. Jones *Historical Linguistics: Problems and Perspectives* (pp. 98-130). New York: Longman.

Dubois, S. & Horvath, B. (2000). When the music changes, you change too: Gender and language change in Cajun English. *Language variation and change, 11*287-313.

Eckert, P. (1989). *Jocks and burnouts: Social categories and identity in the high school.*

New York: Teachers college, Columbia university.

Eckert, P. (1989). The whole woman: Sex and gender differences in variation. *Language variation and change, 1* 245-267.

Eckert, P. (1997). Age as a Sociolinguistic Variable. In F. Coulmas (ed.), The Handbook of Sociolinguistics. Oxford: Blackwell, pp.151-167.

Eckert, P. (2011). Gender and sociolinguistic variation. In J. Coates & P. Pichler (Eds.), *Language and gender: A reader, 2nd edition* (pp. 57-66). Malden: Wiley-Blackwell.

Edwards, W. F. (1992). Sociolinguistic behavior in a Detroit inner-city black neighborhood. *Language in society, 21* 93-115.

EI-Gindi, A. (1983). Al-lahajaat Al- ýtrabiyyafi itturath. Addaar Alýarabiah lillkitaab: Cairo.

Evans, B. (2004). The role of social network in the acquisition of local dialect norms by Appalachian migrants in Ypsilanti, Michigan. *Language variation and change, 16* 153-167.

Facey, W. (1994). *The story of the Eastern Province of Saudi Arabia.* London: Stacey International.Farwaneh, S. (2006). Epenthesis. In *Encyclopedia of Arabic Language and Linguistics*. vol. II (pp. 35-39). Leiden: Brill.

Ferguson, C. A (1956). The emphatic l in Arabic. *Linguistic society of America, 32* (3), 446-452.

Field, M. (1986). *The merchants: The most famous businessmen in the Gulf.* London: Interprint limited. (vol II).

Gal, S. (1978). Peasant Men Can't Get Wives: Language Change and Sex Roles in a Bilingual Community. *Language in Society, 7* (1), 1-16.

Habib, B. (2007). A report on the urban heat islands in Dammam. Retrieved from http://www.saudigis.org/FCKFiles/File/SaudiGISArchive/2ndGIS/Papers/21_A_BadriaHabib_KSA_F.pdf

Habib, R. (2012). 'Imala and rounding in a rural Syrian variety: Morphophonological and lexical conditioning. *The Canadian Journal of Linguistics, 57* (1), 51-75.

Habib, R. (2014). Vowel variation and reverse acquisition in rural Syrian child and adolescent language. *Language Variation and Change, 26* 45–75.

Haeri, N. (1994). A linguistic innovation of women in Cairo. *Language variation and change, 6* 87-112.

Hellmuth, S. (2013). Phonology. In J. Owens (ed.), The Oxford Handbook of Arabic Linguistics. Oxford: Oxford University Press, pp 45-70.

Herin, B. (2013). Do Jordanians really speak like Palestinians?. *Journal of Arabic and Islamic Studies, 13* 99-114.

Hickey, R. (2017).'language and society',

https://www.undue.de/ELE/LanguageAndSociety.pdf [in online introduction to linguistics intended for students of linguistics at the University of Duisburg and Essen] (Accessed: 2 July 2017).

Holes, C. (1980). Phonological variation in Bahraini Arabic: The [j] and [y] allophones of /j/. *Zeitschrift für Arabische Linguistik, 4* 72-89.

Holes, C. (1983). Patterns of communal language variation in Bahrain. *Language in society, 12* 433-457.

Holes, C. (1986) 'The social motivation for phonological convergence in three Arabic dialects'. *International Journal of the Sociology of Language*, 61 , 33-51.

Holes, C. (1995). Community, Dialect and Urbanisation in the Arabic-Speaking Middle East. *BSOAS, 58* (2), 270-287.

Holes, C. (2001). *Dialect, Culture, and Society in Eastern Arabia: Volume I Glossary* (pp. 470). Brill: Lieden, Boston, Köln.

Holes, C. (2005). The Arabic dialects of Arabia. *Papers from the thirty-ninth meeting of the seminar for Arabian Studies held in London, 36* 25-34.

Holes, C. (2005b). *Dialect, culture and society in Eastern Arabia, Volume two.* Lieden/ Boston: BRILL.

Holes, C. (2006). Bahraini Arabic. In *Encyclopedia of Arabic Language and Linguistics*. vol I (pp. 241-255). Leiden: Brill.

Holes, C. (2007). Kuwaiti Arabic. In *Encyclopedia of Arabic Language and Linguistics*. vol II (pp. 608-620). Leiden: Brill.

Holes, C. (2016). Dialect, Culture & Society in Eastern Arabia Volume III: Phonology, Morphology,Syntax, Style. Leiden, Boston: Brill.

Horvath, B. M. (2013). Ways of Observing: Studying the Interplay of Social and Linguistic Variation. In C. Mallinson, B. Childs, & G. Van Herk (Eds.), *Data Collection in Sociolinguistics: Methods and Applications* (pp. 7-16). New York and London: Routledge.

Hosseinzadeh, N. M., Ehsani, Z., Shariati, M., & Sharifi, G. (2014). The assimilation of consonants in Eghlid, an Iranian dialect. *International Journal of English Language and Linguistics Research, 2* (3), 79-94.

Hume, E. (2006). Metathesis. In *Encyclopedia of Arabic Language and Linguistics*. vol. III (pp. 204-207). Leiden: Brill.

Hussain, A. (2017). The Sociolinguistic Correlates of Dialect Contact and Koineisation in Medini Arabic: Lenition and Resyllabification. PhD thesis, University of Essex, UK.

Husain, M. M. (2008). The system of vowels in the Semitic languages. *NABO for research and studies, 3* 1-18.

Ibn Jinni, O. (2001). *Al-khasa'is*. [The peculiarities]. A. Hindawi (Ed.) Bayrut: Dar alkutub al-'ilmiyya.

Ibrahim, M. H. (1986). Standard and prestige language: A problem in Arabic sociolinguistics. *Anthropological Linguistics, 28* (1), 115-126.

Ingham, B. (1971). Some characteristics of Meccan speech Ingham. *Bulletin of the school of Oriental and African studies, 34* (2), 273-297.

Ingham, B. (1982). Notes on the dialect of the hafr of north-eastern Arabia. *Bulletin of the school of Oriental and African Studies, 45* 245-259.

Ingham, B. (1986). Notes on the dialect of the AlMurra of eastern and southern Arabia. *Bulletin of the school of Oriental and African studies, 49* 271-291.

Ingham, B. (1994). Najdi Arabic: Central Arabian. Amsterdam/Philadelphia: John Benjamins Publishing Company.

Ingham, B. (1997). *Arabian diversions: Studies on the dialects of Arabia.* Reading: Garnet publishing limited.

Ingham, B. (2006). Najdi Arabic. In *Encyclopedia of Arabic Language and Linguistics*. vol III (pp. 326-334). Leiden: Brill.

Irshied, O. (1984). The phonology of Arabic: Bani Hassan, a Bedouin Jordanian dialect (Unpublished doctoral dissertation). University of Illinois at Urbana-Champaign.

Ismail, H. (2008). Suburbia and the Inner-City: patterns of linguistic variation and change in Damascus. PhD thesis, University of Essex, UK.

Jabeur, M. (1987). *A Sociolinguistic study in Rades: Tunisia*. PhD diss., University of

Reading.

Johnstone, B., Andrus, J. & Danielson, A. E. (2006). Mobility, Indexicality, and the Enregisterment of "Pittsburghese". *Journal of English Linguistics, 34* (2), 77-104.

Johnson, D. (2009). Getting off the GoldVarb standard: Introducing Rbrul for mixed-effects variable rule analysis. In *Language and Linguistics Compass. 3*, 359-383.

Johnstone, T. M. (1961). Some characteristics of the Dōsiri dialect of Arabic as spoken in Kuwait. *Bulletin of the school of Oriental and African studies, 24* 249-297.

Johnstone, T. M. (1964). Further studies on the Dosiri dialect of Arabic as spoken in Kuwait. *Bulletin of the school of Oriental and African studies, 27* (1), 77-113.

Johnstone, T. M. (1965). The Sound Change j > y in the Arabic Dialects of Peninsular Arabia. Bulletin of the School of Oriental and African Studies, 28, 2, 233-241.

Johnstone, T. M. (1967). *Eastern Arabian dialect studies.* Oxford: Oxford University Press.

Kasstan, J. (2017). New speakers: Challenges and opportunities for variationist sociolinguistics. *Language and Linguistic Compass, 11* (8), e12249.

Kaye. Alan S. (1970). Arabic /žīm/: A Synchronic and Diachronic Study. Linguistics 79, 31-72.

Kerswill, P. (2002). Koineization and accommodation. In J. K. Chambers, P. Trudgill, N. Schilling-Estes *The handbook of Language variation and change* (pp. 669-702).

Oxford: Blackwell Publishing.

Kerswill, P. (2013). Contact and new varieties. In R. Hickey *The handbook of language contact* (pp. 230-251). Malden: Wily-Blackwell.

Kiesling, S. F. (1998). Men's identities and sociolinguistic variation: The case of fraternity men. *Journal of sociolinguistics, 2* (1), 69-99.

Kochetov, A. (2011). Palatalization. In C. Ewen, E. Hume, M. V. Oostendorp & K. Rice (eds.), *The Blackwell companion to phonology*, 1666-1690. Oxford: Blackwell.

Kopczynski, A. & Meliani, R. (1993). The vowels of Arabic and English. *PSCL, 27* 183-192.

Labov, W. (1963) The Social Motivation of a Sound Change. *WORD, 19* (3), 273-309.

Labov, W. (1966). *The social stratification of English in New York city*. Washington D.C. Centre for applied linguistics.

Labov, W. (1972). Sociolinguistic Patterns. Philadelphia: University of Pennsylvania Press.

Labov, W. (1984). Field methods of the project on linguistic change and variation. In J. Baugh & J. Scherzer (Eds.), *Language in use: Readings in sociolinguistics*, 28-66. Englewood Cliffs, NJ: Prentice Hall.

Labov, W. (1994). Principles of linguistic change, Volume I: Internal factors. Oxford: Blackwell.

Ladefoged, P and Ian, M. (1996). *The Sounds of the World's Languages*. Oxford:

Blackwell.

Ladefoged, P. (2001). *A course in phonetics (4th ed.)*. Boston: Heinle & Heinle.

Ladefoged, P. & Disner, S. F. (2012). *Vowels and consonants.* Chichester: Blackwell.

Lass, R. (1984). *Phonology: An introduction to basic concepts.* Cambridge: Cambridge University Press.

Lass, R. (2004). South African English. In R. Hickey (Ed.), *Legacies of colonial English* (pp. 363-386). Cambridge: Cambridge university press.

Levi, S. V. (2011). Glides. In M. V. Oostendorp, C. J. Ewin, E. Hume, K. Rice *The Blackwell companion to phonology* (pp. 341-366). Oxford: Willey-Blackwell.

Lewis Jr., R. U. (2013). *Complementizer Agreement in Najdi Arabic* (Unpublished doctoral thesis). University of Kansas, USA.

Lodzikowski, K. (2012). Variation in STRUT and BATH in the Stratford-upon-Avon area (Unpublished doctoral dissertation). University of Adama Mickiewicza at Poland.

Loriemer, J. G. (1986). *The Gulf Directory*. London: Cambridge.

Macaulay, R. (2009). Quantitative Methods in Sociolinguistics. London: Palgrave Macmillan.

Miller, C. (2004). Variation and change in Arabic urban vernaculars. In M. Haak, K. Vertseegh & R. Dejong (Eds.), *Approaches to Arabic dialects* (pp. 177-206). Amsterdam: Brill.

Milroy, L. & *Margrain*, S. (1980). Vernacular language loyalty and social network. *Language in society, 9* 43-70.

Milroy, L. (1987a). *Language and social networks* (2nd ed.). Oxford: Blackwell.

Milroy, L. (1987b). *Observing & analysing natural language.* Oxford: Blackwell.

Milroy, L. & Gordon, M. (2003). *Sociolinguistics: Method and interpretation*. Oxford: Blackwell Publishing.

Milroy, L. & Milroy, J. (1980). Social network and social class: Toward an integrated sociolinguistic model. *Language in Society, 21* 1-26.

Milroy, L. & Milroy, J. (1992). Social network and social class: Toward an integrated sociolinguistic model. *Language and society, 21* (1), 1-26.

Milroy, L. & Milroy, J. (1997). Varieties and Variation. In F. Coulmas *The handbook of Sociolinguistics,* (pp. 47-64). Oxford: Blackwell.

Milroy, J. (1993). On the social origins of language change. In C. Jones *Historical linguistics: Problems and perspectives* (pp. 215-236). New York: Longman.

Mustafawi, E. (2006) An optimality theoretic approach to variable consonantal alternations in Qatari. PhD thesis, University of Ottawa, Ottawa.

Oppenheim, Max F., Braunlich, Erich & Caskel, Werner (1952). *Die Beduinestamme in Nord-und Mittelarabian und im Irak.* Wiesbanden: Otto Harrassowitz.

Piercy, C. A (2011). One /a/ or Two?: Observing a Phonemic Split in Progress in the Southwest of England. *U. Penn Working Papers in Linguistics, 17* (2), 153-164.

Procházka, T. (1981). The Šīʿi dialects of Bahrain and their relationship to the eastern Arabian dialect of Muharraq and the Omani dialect of al-Rustaq. In *ZAL, 6* 16-55.

Procházka, T. (1988a). Saudi Arabian Dialects. London: Kegan Paul International.

Procházka, T. Jr. (1988b). The spoken Arabic of Abū Thōr in Al-ḥasa. *Zeitschrift für Arabische Linguistik, 18* 59-76.

Qafisheh, H. A. (1977). *A short reference grammar of Gulf Arabic.* Arizona: The university of Arizona press.

Roca, I. & Johnson, W. (1999). *A course in phonology.* Oxford : Blackwell.

Rogers, H. (2000). *The sounds of language: An introduction to phonetics.* Harlow: Pearson Education Limited.

Sankoff, D. (1982). Sociolinguistic method and linguistic theory. In L. J. Cohen, J. Los, H. Pfeiffer & K. P. Podewski (Eds.), *Logic, methodology, philosophy of Science V* (pp. 677–689). Amsterdam: North Holland.

Sankoff, G. (2005). Cross-sectional and longitudinal studies in sociolinguistics. In U. Ammon, N. Dittmar, K. J. Mattheier & P. Trudgill (Eds.), *An international handbook of the science of language and society, vol. 2* (pp. 1003–13). Berline: Mouton de Gruyter.

Sankoff, G. & Blondeau, H. (2007). Language Change across the Lifespan: /r/ in Montreal French. *Linguistic Society of America, 560-588* (3), 560-588.

Shalabi, A. (1982). *The encyclopedia of the Islamic history and civilisation.*Cairo: AL-Nahda AL-Masria library. Vol. 7.

Sibawayh, A. (1999). *Al-kitab*. [The Book]. E. B. Ya‘qub (Ed.). Beirut: Dār al-kutub al-‘ilmijja.

Siegel, J. (1985). Koines and koineization. *Language in society, 14* (3), 357-378.

Silverstein, M. (2003). Indexical order and the dialectics of sociolinguistic life. *Language & Communication, 23* 93–229.

Smeaton, B. H. (1973). *Lexical Expansion due to Technical Change as Illustrated by the Arabic of Al Hasa, Saudi Arabia.* Indiana: Indiana University Publications.

Spencer, A. (1996). *Phonology.* Oxford: Blackwell.

Tagliamonte, S. A. (2006). *Analysing sociolinguistic variation.* Cambridge : Cambridge

University Press.

Tagliamonte, S. A. (2012). *Variationist Sociolinguistics: Change, observation, interpretation.* Sussex: Willey-Blackwell.

Talbot, M. (2010). *Language and Gender.* Cambridge: Polity.

Taqi, H. (2010). Two ethnisities, three generations: Phonological variation and change in Kuwait. PhD Thesis, Newcastle University, Newcastle.

Thomas, B. (1989). Difference of sex and sects: linguistic variation and social networks in a Welsh mining village. In J. Coats & D. Cameron (Eds.), *Women in their speech communities* (pp. 51-60). London: Longman.

Trask, R. L. (1996). *A Dictionary of Phonetics and Phonology*. London & New York: Routledge.

Trechter, S. (2013). Social Ethics for Sociolinguistics. In C. Mallinson, B. Childs, & G. Van Herk (Eds.), *Data Collection in Sociolinguistics: Methods and Applications* (pp. 33-45). New York and London: Routledge.

Trudgill, P. (1974). *The social differentiation of English in Norwich.* Cambridge: Cambridge University Press.

Trudgill, P. (1986). *Dialect in Contact*. New York: Basil Blackwell.

Trudgill, P. (2011). *Sociolinguistic typology: Social determinants of linguistic complexity.* Oxford: Oxford University Press.

Trudgill, P. (2012). *New-dialect formation: The inevitability of colonial Englishes.* Edinburgh: Edinburgh university press.

TUBS, (2011). Al Shamal in Qatar, Retrieved September , from: http://en.wikipedia.org/wiki/File:Al_Shamal_in_Qatar.svg

TUBS, (2011). *Wadi ad Dawasir* [a map], Retrieved April 23, 2014 from: http://en.wikipedia.org/wiki/File:Ar_Riyad_in_Saudi_Arabia.svg

Unknown, (nd). *Yemen Ma'arib*, [Map] Retrieved July 23, 2014 from: http://www.yemenpost.net/Detail123456789.aspx?ID=3&SubID=8025

Unknown, (nd). *Bahrain* [Map], Retrieved May 3, 2014 from: http://upload.wikimedia.org/wikipedia/commons/e/e7/Bahrain_map.gif

Unknown, (2017). infoplease, Retrieved April 6, 2017 from: http://www.infoplease.com/atlas/country/saudiarabia.html

Unknown, (2006). *AL-Budayyi' and Azzallag* [Map], Retrieved June 13, 2014 from: http://go.hrw.com/atlas/norm_htm/bahrain.htm

Unknown, (2014). *KSA Provinces* [Map], Retrieved July 20, 2014 from: http://www.tvtc.gov.sa/English/TrainingUnits/HigherTechnicalInstitutes/juf/AboutUs/Pages/ Al-JoufProvince.aspx

Unknown, (2009). *Dammam* [Map], Retrieved July 2, 2014 from: http://ds-lands.com/photo/cities/ad-dammam/05/

Vertseegh, K. (1997). *The Arabic language.* Edinburgh: Edinburgh university press. (chapter 9).

Walters, K. (1989). Women, men, and linguistic variation in the Arab world. In B. Comrie & M. Eid (Eds.), *Perspectives on Arabic linguistics III: Papers from the third annual symposium on Arabic linguistics* (pp. 199-229). Amsterdam: John Benjamin publishing company.

Watson, J. C. (1999). Remarks and Replies: The Directionality of Emphasis Spread in Arabic. *Linguistic Inquiry, 30* (2), 289–300.

Watson, J. C. (2002). *The Phonology and Morphology of Arabic.* Oxford: Oxford University Press.

Watson, K. (2006). Phonological resistance and innovation in the North-West of England. *English today*, *22* (2), 55-61.

Wells, J. C. (1982). *Accents of English 2: The British Isles.* Cambridge: Cambridge university press.

Wodack, R. & Benke, G. (1997). Gender as a sociolinguistic variable: New perspectives on variation studies. In F. Coulmas *The Handbook of Sociolinguistics* (pp. 127-150). Oxford: Blackwell.

Woidich, M. and Zack, L. (2009). "The g/ǧ -question inEgyptian Arabic revisited". In: E. Al-Wer, R.E. de Jong (eds.), Arabic Dialectology: In Honour of Clive Holes on the Occasion of His Sixtieth Birthday. Leiden: Brill. 41-62.

Younes, M. A. (1992). On emphasis and /r/ in Arabic. In M. Eid, V. Cantarino & K. Walters (Eds.), *Perspectives on Arabic Linguistics VI: Papers from the Annual Symposium on Arabic Linguistics* (pp. 215-235). Columbus: Ohio.

Younes, M. A. (1993). Emphasis spread in two Arabic dialects. In M. Eid, C. Holes (Eds.), *Perspectives on Arabic Linguistics V: Papers from the Annual Symposium on Arabic Linguistics* (pp. 119-145). Amstrdam/Philadelphia: John Penjamin Publishing Company.

Younes, M. A. (2006). prothetic vowel. In *Encyclopedia of Arabic Language and Linguistics*. vol. III (pp. 728-730). Leiden: Brill.

Zaborski, A. (2006). Jīm. In *Encyclopedia of Arabic Language and Linguistics*. vol II (pp. 494-496). Leiden: Brill.

Zeroual, C. (2006). Affrication. In *Encyclopedia of Arabic Language and Linguistics*. vol. I (pp. 26-28). Leiden: Brill.

Zsiga, E. C. (2013). *The sounds of language: An introduction to phonetic and phonology.* West Sussex: Wiley-Blackwell.

Appendices

Appendix A: Samples of speech

Speaker 1: Old male

Tight Social Network

Old male speakers were speaking about the immigration of the Dawaser and some memories of his study and work experience.

leːʃ ***raːħaw mɒːʕrif*** *ʔubuːʃ yaʕrif, ih liʔanna kɒːn fagir fiː Najd, iːh ʔana inwalt fi iddammam. hum raːħaw ʕalaʃɒn illulu w ʕalaʃɒn ilbaħar.*

hum tˁabʕan ***hɒʤiraw*** *min Naʤd* ***mɒʕrif*** *yaʕni* ***tɒriːx*** *miyya fi ilmiyyah* ***mɒʕindi****. hɒða idduwasir* ***raːħaw*** *ilbaħreən* ***kɒnaw*** *fiː Naʤd w Naʤd kɒnat killaha fagir, yaʕni* ***mɒfi*** *ʕiːʃah faʕrifaw ʕan ilbaħar. Ilmuhim* ***raːħaw*** *ilbaħreən tiʔaqlimaw* ***hnɒk*** *yaʕni, faʔubuːy tˁabʕan yimkin ʔinwilad* ***hnɒk*** *yimkin* ***mɒni*** *mitʔakkid faʕaːʃaw fi ilbaħreən yruːħuːn wiː* ***ʤuːn*** *hum* ***kɒnaw*** *fi ilbdayyiʕ ʕalaʃɒn yruːħuːn ilmanɒma kɒnaw yruːħuːn ʕala ħamiːr fayagʕiduːn luhum ilbaħarna fyitðarbuːn maʕɒhum, yaʕni ysiːr beːnhum miʃaːkil. Kɒn fiːh waːħid ʕaskiri ingiliːzi ismah Deːli, kɒnat ilbaħreːn mustaʕmara ingliːnzyyah, fayaʕni ṣɒːr bʤaːnib ilʤimɒːʕa ðoːli.*

faħɒːwal yinðir idduwɒsir ʕan ilmiʃɒkil wkɒn fiːh ʃiːxhum illi huː izzaʕiːm ħaghum ʔAħmad bin ʕabdaLLa faʔinsiʤan. Deːly gɒl ħag ʔAħmad bin ʕabdaLLa ʔɒna baħrig ilbdayyiʕ fgɒːmaw innas tˁabʕan kɒn mawsim ɣoːṣ, fanaːs dxilaw ilbaħar w nɒːs bɒgyiːn illi bɒgyiːn lħigaw illi dxalaw gɒlaw luhum riʤʕaw tara Deːli yabɣa yaħrig ilbdayyiʕ, ʔawwal byuːthum killaha saʕaf, fardʤaʕaw ilmuhim innah ħabbaw yhɒːʤruːn, farɒsilaw ilmalik ʕabdilʕaziːz ʔALLah yirħimah w ***gɒːl*** *luhum ʕindukum issaːħil ʔiʃʃargi illi tabuːn w weːn mɒ tabuːn, faskinaw, fangasmaw gismeːn naːs gʕadaw fi ilxubar w nɒːs ʤɒːw iddammam, w nɒːs baʕaðˁhum*

rɒːħaw likweːt. fayaʕni hɒði ilmaʕluːmɒt ʔana simʕtha bas, lɒkinnah inni liħagt ʕaleːhum walla ʃay la.

The translation:

I have no idea why they immigrated. There was poverty in Najd. I was born in Dammam. I do not know your father knows. They went there for the pearl industry and for the sea.

They went or emigrated from Najd. I do not know the exact date. The Dawaser went to Bahrain. They were in Najd and Najd was in poor conditions. There was no food, so, they went to Bahrain and they settled there. They lived in Budayyi' and they used to go to Manama. They used donkeys and on their way there were fights with the *Šīʿis* there, and troubles used to happen between them. Bahrain was under the rule of Britain and the Governor's name was Daily. Daily was on the *Šīʿis* side and warned the Dawaser there regarding the troubles. The leader of the Dawaser's name was Ahmad bin Abdullah. He was imprisoned by Daily. Daily informed their leader that he would burn AL-Budayyi', and it was the season for 'ʔalɣoːsʕ' which is the season for pearl finding, so some of the Dawaser were in the sea, and the others were not. So, they went to them to warn them that Daily would burn their area, and they returned. Then, they wanted to immigrate therefore they sent King Abdul Aziz a letter expressing their desire to return. He welcomed them and he let them stay on the Eastern coast. On their return they were divided into two groups. One group stayed in AL-Khobar and the other group in Dammam, and some went to Kuwait. This is the only information I heard.

Speaker 2: middle-aged Female

Tight Social Network

ðikrya:ti *fi ilwaði:fa, siʔalti:ni inni ʔawwal ma towaððaft darrast* ***θa:nawi****, waLLa bida:yatan yimkin iʃʃaxṣyya mawju:da min ṣiɣari bħukum ana ilkibi:ra, falwðiʕ ʕindi* ***ʕadi*** *w sahil* ***la:kin*** *yimkin ill taʕʕabni fi ilmawðu:ʕ ilmiʃwar kint ʔatˁlaʕ* ***issaʕa*** *xams ilfajir maʕa majmu:ʕa min* ***izzami:lat*** *taqri:ban* ***saʕa*** *illa rubiʕ* ***ka:n ʔamtˁa:r*** *w* ***ðˁbab****. Ma: ʔansa faðˁl ʤadditi ʔAłłah jirħamha wagt ittasˁħi:ħ ma: kint ʔagdar ʔadʒi iddammɒ:m.*

The translation:

My memory about when I was working, you asked when I started my job. I taught in a secondary school. At the beginning my character was present since my childhood because I am the eldest so the situation was normal to me and easy, but what was tiring for me was the route. I used to wake up at five a.m. with group with some colleagues for about one hour, sometimes it was raining and foggy in winter. I can not forget my grandmother's gratitude, during correcting the exam time. At that time I could not come to Dammam.

ɒ:na ʔaɣlab ðikraja:ti fi madi:nat ilʕummɒ:l. iddammɒ:m madi:nti, bas fi:ha kaða ħajj, ilħajj ilqadi:m ittɒbiʕ lʔara:mku, hu ħajj madi:nat ilʕummɒ:l, liʔanna ilwa:lid ka:n ʔi:ʃ fi: ʔara:mku. ðikrajat itˁtˁufu:la jaʕni ilwɒ:ħid jɒ:xið rɒ:ħtah ʔakθar min ʔalħi:n min na:ħjat illiʕib. ilʔatˁfa:l ʔalħi:n ma: kaʔanhum ʔatˁfa:l. illi ʔaʃu:fah ɒ:na fi: ilqadi:m kina nilʕab ħatta law ilbana:t jilʕibu:n maʕa ilʔawla:d ma: jxɒ:fu:n ʕale:hum

Most of my memories are in Dammam in madeinat ilummal (a neighbourhood). Dammam is my city and it has many neighbourhoods. The old neighbourhood which is

related to ARAMCO is the neighbourhood of madeinat alummal. My father used to work for ARAMCO. My childhood memories, mmm people used to act more freely than now, especially when it comes to playing. Children now do not seem to be children. When we were children we played even with boys, and nobody was concerned about that.

Speaker 3: young female

Tight Social Network

Young female was speaking about her childood memories, her SN is a tight one.

ʔana inwaladt fi ***iddammam****, tˁabʕan ʔawwal* ***θalaθ sanawa:t*** *min ʕumri kinna fi liʤbe:l baʕde:n ʤi:nna* ***iddammam*** *bas min ʕaħsan* ***iððikrayat*** *lamma tħitˁ lina* ***jadda ilkarati:n*** *bas ʃu:fay ʔiða ʕinduhum* ***barnamaʤ*** *walla ʃay byigtˁiʕu:nah* ***ʕadi*** *yaʕni. Fil wi:kind ʔaxir ilʔisbu:ʕ lamma kinna fi lijbe:l kinna* ***nji*** *jxlli:nna ʿubu:j* ***nba:t*** *liʔannah* ***miʃwar*** *bas lamma nigaḷna* ***iddammam*** *ṣirna* ***niji*** *ilʔarbiʕa ʔaw ilxami:s yaʕni ma* ***nba:t*** *ʕindaha zayy ilʔawwal, tṣi:r zayy* ***ilmuɣamara*** *wi tɣayri:n ʤaw min gaʕdat ilbe:t .*

The translation:

I was born in Dammam, and I spent the first three years from my life in Jubail and then we came to Dammam. One of the best memories was when grandmother let us watch cartoons, but if they had a show that they used to watch or something they would definitely change the channel. At the weekend at the time we were in Jubail my father let us sleep at my grandparents' house but after our move to Dammam we just used to visit on Wednesday or Thursday but we did not spend the night there (in my grandparents' house) we stopped sleeping in her house. It was like an adventure indeed as it was a change from the house routine.

The translation:

ʃu:fi ilʕi:d ʔawwal illi kan ywannis fi:h innah kina nguum min iṣṣibħ maʕa ilfaʤir, tˁabʕan ***ka:n*** *ʔaħla ʃay fil ʕi:d, ma yṣi:r ʕi:d illa ʔiða ħatˁtˁat li ʔummi ħinnah waḷḷa*

yitnakkad ʕi:di ʔiða ʔummi ma ħatˁtˁat li ħinnah. Kinna ngu:m ***ilfaʤir*** *w baʕada nistiʕid,* ***ixwani*** *yru:ħu:n maʕa ʔubu:y iṣṣaḷah baʕde:n nitˁlaʕ nzu:r ilʔahal baʕad hazziyarat nru:ħ nitɣadda* ***ɣada*** *ilʕi:d ʕind yadda baʕde:n nitˁlaʕ* ***ilmalahi ntˁa:liʕ ilʔalʕa:b inna:riyya ,*** *nru:ħ issu:g yiʃtiri lina ʔubu:y* ***ʤiha:z jidi:d*** *lamma kina* ***ṣɣa:r ka:n*** *mutʕa ʔakθar lamma kibarna ʔaɣlab ilħari:m* ***likbar*** *tuwaffaw, awaal le:lat ilʕi:d ma* ***jʤi:ni*** *nu:m bas lamma kibarna ṣar ilʕi:d mumil.*

The translation:

During Eid in the olden days, what was special about it was waking up very early dawn. Of course, the best thing was during Eid and it was not Eid for me unless my mother put Hinna for me, and it was very annoying if she did not. We used to wake at dawn and get ready and my brothers were going with my father to pray then we used to go out to visit the relatives. After these visits we went to have Eid lunch in my grandmother's house. Then we went to the theme park and to watch the fireworks, also we used to go to the market and buy a new device. When we were children it was very interesting for us. When we grow up most of the old women passed away, before in Eid's night I used to be sleepless but when we grow up Eid becomes boring.

Speaker 4: Old male

Loose Social Network

The speaker was speaking about his memories when he was working in ARAMCO (which is the oil company) and about his education.

ʃu:f ʔay ʃayy ħag ***ʔara:mko*** *ma:* ***tinsa:h****, ma: ʕada illi nise:t* ***ħa:ʤa*** *waħda ragim ittalifu:m ħagg ilmaktab liʔanni nigaḷt min maħal le: maħal ʔamma ʔay* ***ʔarqa:m θa:nya tinsa:ha****. Sinat ilʕamal fi: ʕaʃra ʔo:gast ʔalħi:n tisʔalni ʕan* ***wila:dat liʃya:l*** *wala ʔaʕrif wala waħda.*

The translation:

Anything relating to ARAMCO is unforgettable, but the only thing I have forgotten is the office phone number because I moved from one place to another, so any other numbers I forget. Date of work was 10th of August now if you ask me about my children's birthdays I will not be able to tell.

a:na mitxarriʤ min ittiʤa:riyya w dixalt ***ʔara:mko, w*** *ʃu:f ʔaḷḷa yirħam* ***jadditi*** *ma tiʃtigid* ***bħa:ja*** *isimha mtˁawwaʕ, hi illi tˁalliʕatna innah* ***la:zim*** *fi* ***mida:ris****, hi ʕagiḷha yu:zin balad w ma:* ***yiħta:ʤ*** *mtˁawwaʕ. ʕa:d ʔa:na darast fi kali:fo:rnya, i:h darast ilʤa:mʕa. w baʔad ma:* ***ʤi:t*** *dixalt* ***ʔara:mko*** *wi iʃtayaḷt fi il office services liʔanna* ***tiʤa:riyya****, w baʕde:n* ***ʤa:w*** *tˁlibo:ni liʔannah ilqisim ħaggna iða ma:fi:h* ***da:ʔira tiħta:ʤ*** *lʔaħad tintigiḷ. ilmuhim tˁlibo:ni qism ilʤi:lo:ʤya ʃahre:n w* ***ʤa*** *mudi:ri liʔanna xaḷḷas intida:bi w riʤaʕt. baʕaða.*

The translation:

I graduated from the college of commerce and I joined ARAMCO. My grandmother, may she rest in peace, did not believe in something called *mutawwa'a*. She insisted that we have to go to schools and she was very wise. I studied in California; yes, I studied at the university there. After I arrived I joined ARAMCO and I worked in the office there because my major was Commerce. Then other department asked to hire me because the situation was if there was a demand in another department you could be transferred. Then the department of Geology asked me to work there for two months, and after the mission has ended I went back to my old department.

Appendix B: Rbrul results for the preceding consonants

Preceding	ʤ	j	Total	Example	Gloss
ʃ	4	1	5	*ʃja:nna*	what has come to us?
ʕ	1	3	4	*ʕʤila*	rushing out
tˁ	1	0	1	*baʕd ilhubu:tˁ ʤi:t*	after the hypoglycaemia I came
ðˁ	1	0	1	*lirrija:ðˁ ʤa:w*	they came to Riyadh
b	4	4	8	*mub ʤa:jji:n*	they will not come
ʧ	1	0	1	*liʧ ji:t*	for you I came
d	22	3	25	*radd ja:nna*	he came again
f	3	6	9	*tʕarf jahha:l*	you know children
g	2	1	3	*issawwa:g ʤa:j*	the driver has arrived
h	19	5	24	*tawwah ʤa:jbah*	recently he brought it
ħ	3	1	4	*ra:ħ ʤa:b*	he went to bring something
ʤ	30	0	30	*raʤʤa:l*	a man
k	3	1	4	*ilmalik ʤa:j*	the king is coming
l	59	15	74	*ilʤumʕah*	Friday
m	33	16	49	*mja:wir*	close to
n	62	10	72	*ʔinʤi*	we will come
r	20	5	25	*rʤu:li*	my legs
s	12	7	19	*ilmasjad*	the mosque
sˁ	1	0	1	*waħda w nusˁ ʤa:j*	one thirty he came
t	33	42	75	*tji:n*	you will come
w	64	10	74	*wʤi:h*	faces
j	151	44	195	*jju:n*	they will come
z	1	0	1	*ʤa:hiz ʤidi:d*	ready and new
Total	971	301	**1272**		

Table 19: Examples of [ʤ] and [j] preceded by consonants.

Appendix C: Rbrul results for the preceding vowels

Preceding	ʤ	j	Total	Example	Gloss
a	221	83	304	*ʔaʤi*	I will come
ɑ:	67	20	87	*wa:ʤid*	many
i	145	21	166	*tiʤi*	she will come
i:	5	0	5	*tiʤi:b*	she brings
u	2	3	5	*hu ja:j*	he is coming

Table 20: Examples of [ʤ] and [j] preceded by vowels.

Appendix D: Rbrul results for the following consonants

Following	ʤ	j	Total	Example	Gloss
tˤ	0	1	1	*iddija:j tˤa:ziʤ*	the chicken is fresh
b	1	0	1	*iddaraʤ bas ilmuʃkila*	the stair is the only problem
h	6	0	6	*waʤhi*	my face
ħ	1	0	1	*iddaraʤ ħaggna*	our stair
ʤ	31	0	31	raʤʤɑ:l	a man
l	16	8	24	*ilmaʤlis*	the sitting room
m	1	0	1	*diʤa:j ma: ʕindina*	we do not have chicken
t	1	0	1	*daraʤ titˤliʕi:n*	to go up the stairs
w	1	0	1	*iddiʤa:ʤ w illaħam*	chicken and meat
ʤ	0	6	6	*ʔitʤʤi:bi:n*	to bring
z	1	1	2	*jiʤza:ʧ*	to reward you
Total	971	301	**1272**		

Table 21: Examples of [ʤ[with following consonant tokens.

Appendix E: Rbrul results for the following vowels

Following	ʤ	j	total	Example	Gloss
a	131	65	196	*ʕaʤal*	well
a:	221	86	307	*ja:nna*	he came to us
e:	15	1	15	*ʤe:t*	I came
i	254	46	300	*ʤidi:d*	new
i:	224	71	295	*ʕaji:na*	dough
o:	0	1	1	*jo:r*	injustice
u	14	0	14	*jurju:r*	shark
u:	52	14	66	*jʤu:n*	they will come
j	0	6	6	*ijji:nna*	he comes to us
w	1	0	1	*jwa:ʕa*	hungry PL.

Table 22: Examples of (ʤ) with following vowels.

Appendix F: Preceding sounds for the rounded

preceding	coronal	dorsal	emphatic	labial	total
ʃ	47	0	0	0	47
ɣ	0	9	0	0	9
ð	7	0	0	0	7
ʕ	0	124	0	0	124
tˤ	0	0	12	0	12
ðˤ	0	4	6	0	10
b	0	0	0	61	61
d	47	4	0	0	51
f	0	0	0	14	14
g	0	76	0	0	76
h	0	45	0	0	45
ħ	0	43	0	0	43
dʒ	92	0	0	0	92
k	0	73	0	0	73
l	69	0	0	0	69
L	0	0	12	0	12
m	0	0	144	0	144
n	90	0	0	0	90
q	0	10	0	0	10
r	17	0	94	0	111
rˤ	0	0	39	0	39
s	70	0	0	0	70
sˤ	0	0	22	0	22
t	25	0	0	0	25
θ	29	0	0	0	29
w	0	0	0	166	166
x	0	26	0	0	26
j	114	0	0	1	115
z	16	0	0	0	16
Total	623	414	290	242	**1569**

Table 23: Preceding sounds in numbers.

Appendix G: Preceding Consonants

Coronal	**numbers of tokens**	**Example**	**Gloss**
ʃ	47	*ʕalaʃa:n*	because of
ð	9	*ðа:k*	that one
d	51	*insida:d*	blocking out
ʤ	92	*ʤa:w*	they have arrived
l	69	*θala:θa*	three
n	90	*na:s*	people
r	71	*Ilkara:ti:n*	boxes
s	70	*issa:ʕa*	the watch
t	25	*ta:xið*	to take
θ	29	*θa:ni*	second
j	115	*ʔilʔajja:m*	these days
z	16	*za:jid*	extra
dorsal			
ɣ	9	*sʕɣa:r*	children
ʕ	124	*ʕa:di*	normal
Labials			
b	61	*ba:gi*	left/ remain
f	14	*fa:ðʕi:*	empty
w	166	*wa:ʤid*	a lot
emphatic			
ðʕ	10	*iðʕðʕa:hir*	clearly it is
tʕ	12	*tʕa:lib*	a student
m	144	*ma:fi:h*	nothing
rʕ[34]	39	*ra:ħ*	he has gone

[34] Note: From the above table, /r/ appeared in my data as coronal and emphatic: 71 tokens for preceding /r/ behaved as coronal, as in *bra:jik* 'as you wish' and *ilkara:ti:n* 'cartoons', and 39 tokens for preceding /r/ behaved as emphatics, as in *ra:ħat* 'she has gone' and *ilʔara:ðʕi:* 'the lands'.

Table 24: Examples of (ɑ:) with the preceding consonant sounds.

Appendix G: King Abdulaziz's letter to the *Dawāsir*