The Phonology and Morphology of Wadi Mousa Arabic

Anas Ibraheem Al Huneety

Supervisor: Janet Watson

School of Humanites, Languages, and Social Sciences

University of Salford, UK

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Contents

List of Tables

List of Figures

Abbreviations

Adj.	Adjective
Adv.	Adverb
C	Consonant; Countable
CA	Classical Arabic
Conj.	Conjunction
ERR	End Rule Right
F.	Feminine
F	Foot
G	Guttural
JA	Jordanian Arabic
Imp.	Imperative
Intr.	Intransitive
M.	Masculine
MSA	Modern Standard Arabic
N	Noun
OT	Optimality Theory
Pl.	Plural
S.	Singular
Tran.	Transitive
U	Uncountable
V	Vowel; Verb
WM	Wadi Mousa

Abbreviations within Data Examples

>	becomes
*	historical form; ungrammatical form
/	in the environment of
′	stress marker
[ ]	phonetic representation
( )	metrical brackets
A~B	A alternates with B
⟨a⟩	extrametrical or extrasyllabic
C′	unsyllabified Consonant
μ	mora
σ	syllable node

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Declaration

I declare that this thesis was the result of my own work. No portion of the work covered in this thesis has been submitted in support of my application for another degree of qualification as this or any other university of higher learning.

Dedication

This thesis is dedicated to the soul of my late father and my lovely mother

The Phonology and Morphology of Wadi Mousa Arabic

Abstract

This study aims to provide a comprehensive account of the segmental and prosodic phonology and the morphology of Wadi Mousa Arabic, a rural Jordanian dialect spoken in the south of Jordan that has not yet been investigated. The data of the study come from twenty native-speaker participants whose ages ranged from 45 years to 88 years.

WM Arabic has a cluster of linguistic features that distinguish it from its fellow Jordanian dialects. These include the merger of *ḍ and *ḏ̣ into /ḏ̣/; the realisation of the uvular stop *q as /g/; and the retention of the voiceless velar stop /k/ in all contexts. The phonology is divided into melodic and prosodic phonology. Under melodic phonology, I examine assimilation processes (definite article assimilation, assimilation of *t-* to coronal obstruents, sonorant assimilation, non-coronal assimilation, and emphasis spread) and umlaut. Unlike some Jordanian dialects where emphasis is never blocked, rightward emphasis in WM Arabic is blocked by high front segments, /i/, /y/ and /š/. Under prosodic phonology, I examine syllable structure, word stress, and major prosodic processes, including epenthesis, syncope, V-V resolution, degemination, glottal stop prosthesis, shortening of long vowels, and pre-suffix vowel lengthening

The study then examines the morphological aspects of verbs and nouns in WM Arabic. Twelve verb forms are utilised in the dialect, including the first ten verb forms (I-X) plus the first two quadriliteral forms (Q1 and Q2). Under nominal morphology, the study examines substantives, their templatic patterns, and morphological features; adjectives, their templatic patterns, agreement with the head noun in terms of gender, number and definiteness; demonstratives; verbal derivatives; pronouns; quantifiers; numerals and diminutives.

The study provides a short lexicon which aims to document some of the basic terms in the dialect, following Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011). These classes are: man, professions, animals, nature, violence, feelings and states, money, function words, plants, agriculture, verbs, adverbs of time, construction, household, adverbs of time, human qualities and deficits, body parts, cooking, belongings and weddings.

Chapter One

Introduction

1.1 Introduction

Arabic is a member of the Semitic language group, a family of languages which descend from Proto-Semitic and which share some degree of similarity in terms of phonology, morphology, and basic lexical inventory. Traditionally, the Semitic language family is classified into East Semitic and West Semitic on the basis of their geographical and cultural principles (Brockelmann 1961; Moscati 1969; Ullendorff 1970; Bergstrasser 1983). The East Semitic group embraces the long-distinct languages of Akkadian and Eblaite. The West Semitic group comprises Northwest Semitic languages, including Canaanite languages, for example Hebrew, Phoenician and Moabite, Ugaritic and Aramaic; and South Semitic languages, which comprise Arabic and Southeast Semitic, including the Modern South Arabian languages, such as Jibbali and Mehri, and Ethio-Semitic (cf. Moscati 1969). Hetzron (1972; 1976) proposed a new grouping of Semitic languages into East Semitic and West Semitic. Where the East Semitic group comprises the various dialects of Akkadian and Eblaite languages, the West Semitic is subdivided into Central Semitic and South Semitic (Faber 1997: 6). Under this grouping, Arabic is a sibling of the Central Semitic group.

Arabic is the most widespread of the living Semitic languages as it is one of the six official languages of the United Nations (Watson 2002). It is the official language of 22 countries of the Arab world from Mauritania in the west to Oman in the east, and is spoken in parts of Iran, Afghanistan, Somalia, Turkey and Cyprus. Arabic is also the religious language of around one billion Muslims around the world as it is the language of the Holy Quran (Chon and Arzt 2005: 246).

Two standard varieties of Arabic are distinguished: Classical Arabic (CA) and Modern Standard Arabic (MSA). CA is the language of the Holy Quran and the language that is used in literary texts and in religious rituals; it was called by the Arab grammarians *al-ᶜArabiyyah* and regarded as the only correct form. Different views are given concerning the source of CA. Where it is described by some linguists as the spoken of Qurayš tribe, some linguists believe that CA was the form of poetic language that existed before the Islamic era and that was a mixture of different dialects spoken in the Arabian Peninsula (Anīs 1990: 39-42). CA

can thus be defined as the high form of the standard language which was common in pre-Islamic era where Qurayš tribe excelled in using this form because of their known eloquence.

MSA refers to the high form of the language that is essentially based on the CA of medieval times; it is the language that is used in everyday formal situations such as academic lectures, modern texts, radio, TV news, religious ceremonies, magazines, journals, professional meetings, and conferences. CA and MSA are similar in linguistic structure and differ essentially in terms of vocabulary and style (Ryding 2005: 4). Both varieties are referred to as *al-luġah al-fuṣḥā*, the most eloquent language. Badawi (1985: 16) makes a distinction between *fuṣḥā al-turāṯ* (language of heritage), i.e. CA, and *fuṣḥā al-ᶜaṣr* (contemporary language), i.e. MSA. Besides, he recognises three more levels of Arabic: *ᶜāmmiyyat al-muṯaqqafīn* 'the colloquial of the educated', *ᶜāmmiyyat al-mutanawwarīn* 'the colloquial of the semi-educated' and *ᶜāmmiyyat al-ʔummiyyīn* 'the colloquial of the uneducated'.

1.2 Scope of the Study

The present study deals with the dialect spoken in Wadi Mousa (henceforth WM) district in the south of Jordan. According to the records of the Department of Jordanian Statistics (2009), the current population of the WM district is around 17,085. The population of WM belongs to Bani Layṯ[1] tribe, a big Arab tribe that originally came from the Arabian Peninsula. The data of this study come from members of Bani Layṯ tribe who have spent all their life in WM district and who are 45 years or above. The population of the study consists of 20 subjects, 18 males and 2 females.

The analysis tackles the phonological and morphological aspects of the dialect. The study opens with an introduction that presents the history of WM, its social organisation and the customs of the town. The introduction also presents the scope and methodology employed through this study. The phoneme system of the dialect is thereafter examined, giving a detailed description of WM Arabic consonants in terms of their manner and place of articulation, their phonation and their distribution; vowels and the distribution of monophthongs and diphthongs. The discussion also deals with prosodic and melodic aspects of the dialect under investigation. The morphological analysis tackles the verbal and nominal aspects of the dialect. Thereafter, a short lexicon of WM Arabic is provided following Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011). The lexical data cover the

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[1] Members of the tribe are known in Jordan as al-Layāṯna.

following semantic classes: man, professions, animals, nature, violence, feelings and states, money, human qualities and deficits, body parts, function words, objects, weddings, household, verbs, adverbs of time, cooking, constructions, belongings, and agriculture. Through analysis, the researcher attempts to compare the data on WM Arabic with other Jordanian dialects in an effort to highlight how the dialect under investigation differs from and resembles other Jordanian dialects.

1.3 Objectives of the Study

The main objective of this study is to record the salient linguistic features of WM Arabic, a Jordanian dialect that has not yet been investigated. Given that previous literature has focussed on the phonetic and phonological aspects of Jordanian dialects, the present study sets to provide a comprehensive account of the segmental and prosodic phonology and the morphology of WM Arabic. Moreover, the study provides a short lexicon of the dialect in order to document culturally specific terms before they are lost given that many of these terms are only spoken by old people today. The short lexicon could pave the way for a comprehensive dictionary of the key terms of southern rural Jordanian dialects. Finally, the linguistic features of WM Arabic are compared with those of other Jordanian dialects in an effort to situate the facts of WM Arabic within the broader dialect typology of the region.

1.4 Rationale of the Study

A careful look at literature on Jordanian dialects shows that no single study has provided a comprehensive account of the phonology and morphology of a rural Jordanian dialect. Some studies on Jordanian dialects fail to give an accurate description, simply because they generalise the findings of one dialect to other Jordanian dialects artificially neglecting the differences that exist between these dialects. This is true in the case of al Ghazo (1987), who uses Ajloun Arabic as a reference for other dialects of the Levant. Likewise, while Bani Ḥasan tribe is spoken by more than 300000 people living in three different cities in Jordan: al-Mafaq, Jaraš and az-Zarqa, all data in Irshied (1984) were taken from the author as a native speaker of Bani Ḥasan Arabic. By doing so, Irshied neglects the linguistic differences in the speech of each sub-group of Bani Ḥasan Arabic[2].

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[2] As a native speaker of Bani Ḥasan Arabic, I would say that each sub-group of Bani Ḥasan Arabic has some linguistic features that are different from other sub-groups.

Furthermore, the existing literature on Jordanian dialects shows that each Jordanian dialect has its own linguistic features that distinguish it from other Jordanian dialects (Irshied 1984; Sakarnah 1999; Btoosh 2006). With this in mind, no single study to date has investigated the dialect in question as most previous accounts have focused on Bedouin dialects, with only three works on rural Jordanian dialects, only one of these dealing with a rural southern dialect, i.e. Rakhieh (2009) on the dialect of Maᶜān Arabic.

Furthermore, WM has recently undergone several linguistic changes due to a number of socio-economic factors. The announcement of Petra[3] as one of the Seven Wonders of the World is a key factor in motivating the migration of many people to WM district and attracting the attention of millions of people to visit the archaeological site of Petra. This in turn has caused more communication between the locals of WM district with speakers of other Arabic dialects. This has had the largest effect on the language of the younger generation[4] who have been working in tourism, with the result that only old people reliably retain many of the original linguistic features of the dialect. Moreover, radio and television have had a massive impact on WM Arabic. They are both an entertainment source for lots of families in the community who listen to the world news spoken in MSA or watch Bedouin, Egyptian or Syrian TV series. The effect of mass media appears in the speech of some old people whose language has been influenced by MSA. These facts render it necessary for the researcher to provide an accurate description of this dialect in the light of recent linguistic theories and new technologies for language documentation.

1.5 Overview of the Thesis

The thesis is divided into seven chapters. Chapter one is an introduction that presents an overview of Arabic, followed by a discussion of the scope, objectives, rationale, and structure of the thesis. The methodology employed in the study is thereafter described followed by an overview of fieldwork preparation. The chapter also provides a historical and socio-economic background of WM district. Chapter two presents a review of the literature on Levantine phonology and morphology to date, focusing particularly on the research conducted on Jordanian dialects. The chapter opens with an overview of Arabic dialectology, focusing on the typology of Arabic dialects. The linguistic situation in Jordan is examined thereafter and the various classifications of Jordanian dialects are given. The chapter thereafter reviews

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[3] In 2007, Petra won the second place on the new Seven Wonders of the World contest.
[4] Many of the young people I have met in Wādi Mousa are multilingual.

literature on Levantine Arabic, with some focus on Jordanian dialects. The review is presented under the following themes: the phoneme system, vowel system, stress assignment, syllable structure, complex clusters, the major phonological processes, personal pronouns, and demonstratives.

Chapter three describes the WM phoneme system and prosodic and melodic aspects of the dialect. The phoneme system section starts with a description of the CA phoneme system as described by the eighth-century CE grammarian of Arabic, Sibawayh, followed by a detailed description of WM Arabic consonants in terms of their manner and place of articulation, their phonation, their distribution, and their distinctive features. The section also deals with the vocalic system of the dialect, with some attention being given to monophthongisation and diphthongisation and their distribution. Section two examines the melodic and prosodic aspects of the dialect. The melodic processes that are examined in this study are assimilation processes: definite article assimilation, assimilation of prefixal *t-* to coronal obstruents, sonorant assimilation, non-coronal assimilation, and emphasis spread; and umlaut. Prosodic features and processes include the establishment of syllable types, word stress assignment, epenthesis, syncope, V-V resolution, degemination, glottal stop prosthesis, long vowel shortening, and pre-suffix vowel lengthening.

Chapter four deals with aspects of WM Arabic verbal morphology. It starts with an introduction to Arabic morphology, followed by a discussion of the derivation and inflection of verbs in the dialect. Chapter five examines nominal morphology. The chapter is prefaced with an introduction to nominal morphology, followed by an examination of substantives, their templatic patterns, and morphological features, diminutive nouns, and verbal nouns. The chapter then tackles the morphology of adjectives, their templatic patterns, agreement with the head noun in terms of gender, number and definiteness, demonstratives, numerals, personal pronouns, and interrogative pronouns. Chapter six presents a lexicon of WD Arabic, following Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011). Lexical entries are grouped according to the following semantic classes: man, professions, animals, nature, violence, feelings and states, money, human qualities and deficits, body parts, function words, objects, weddings, household, verbs, adverbs of time, cooking, constructions, belongings, and agriculture. The study concludes with the findings and recommendations for future studies.

1.6 Historical and Socio-economic Background of WM

WM district is part of the Hashemite Kingdom of Jordan which lies in the heart of the Middle East, bordered on the north by Syria, on the east by Iraq and Saudi Arabia, on the south by Saudi Arabia and the Gulf of Aqaba, and on the west by Israel and the West Bank. The surface area of the Kingdom is estimated at about 90,000 square kilometres; 7.8 % of which is agricultural and 1% is water. The population of Jordan was estimated at about 6,249,000 at the end of 2012 (Department of Statistics, Jordan, 2012). The annual growth rate recorded between 2011 and 2014 was 2.2%. The currency of Jordan is the Jordanian dinar (JD), which at time of writing equalled around 87.8. GBP. Arabic is the official language, while English is used as a language of education in most Jordanian universities.

Jordan consists of 12 governorates that follow administratively to the Ministry of Interior; these are Irbid, Ajloun, Jaraš and al-Mafraq in the north of Jordan; al-Balqa, Amman, al-Zarqa and Madaba in the central region of Jordan; and al-Karak, al-Tafila, Maʿān and al-Aqaba in the southern region of Jordan.

WM district is located in Maʿān governorate; it is about 250 kilometres south of Amman, the capital of Jordan, and about 150 km north of the Gulf of Aqaba. It lies next to the archaeological site of Petra, one of the Seven Wonders of the World (see figure 1). WM belongs administratively to the province of Petra, which also comprises Umm Ṣayḥūn, al-Bēḍa, aṭ-Ṭayba, ar-Rājif and Dlāġa; WM is the centre of the province which encompasses all governmental institutions. WM and the 5 towns are linked together through a good Highway system. Thus, al-Bēḍa, and Umm Ṣayḥūn in the north of the province are connected to WM through Wadi ʿAraba Highway, while WM, aṭ-Ṭayba and ar-Rājif are located along the King's Highway. Dlāġa, which is located at the southern part of the region, is connected to ar-Rājif through the Masūda Highway.

Figure 1: A map of WM district (the strategic scheme of Petra 2011)

The total area of the province of Petra is 14,343 square kilometres (km^2) distributed as follows: WM 7,360 km^2, aṭ-Ṭayba 3,120 km^2, ar-Rājif 1,880 km^2, Dlāġa 1,630 km^2, Umm Ṣayḥūn 290 km^2, and al-Bēḏa 63 km^2. WM is the administrative centre of the province which encompasses the governmental offices, hotels, big schools and the college of Tourism and Archaeology which follows to the University of Ḥusēn. The population density of WM amounted to 2.3 per donum[5] in 2009, which is slightly higher than the regional average of the province, 2 people per donum.

According to the Department of Jordanian Statistics (2009), the total population of the province of Petra is 27,944, distributed as follows: WM 17,085, Umm Ṣayḥūn 1,631, al-Bēḏa 401, aṭ-Ṭayba 5,719, ar-Rājif 1,674, Dlāġa 1,434. All inhabitants are Sunni Muslims. The majority of these inhabitants work in tourism, agriculture, sheep rearing, or are employed by the military or government.

The name of the town, Wadi Mousa, which literally means 'the valley of Moses', is attributed to the miracle of the Prophet Moses who, when passing through this village, struck a rock with his staff, and water came out as a result. The spring of water is known now as ^{c}ēn Mousa, and it was linked with some channels to provide water to Nabataean.

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[5] Donum is a land measure that is equivalent to one decare (1000m²).

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WM and the area around it, including Petra, were inhabited first by the Edomites in 1200 B.C.E, and it was called Edom. At that time, the Edomites controlled the trade routes from Arabia into Damascus. Edomites were famous for their wisdom, textile industry and their writings. In 312 B.C.E, the Nabataean seized the city of Edom, making it the capital of their kingdom. The city flourished at the time of the Nabataean, especially in business and engineering systems. In addition, the area expanded to embrace new towns, such as Philadelphia and Gericho (Jaraš). The Nabataean had some remarkable achievements, including the building of the 'rose city', Petra, which is viewed as one of the most important archaeological sites in the world.

By 64-63 B.C.E, the Roman general Pompey took over the area; nevertheless, he kept it an independent city, collecting taxes from the Nabataean. It was in 106 C.E that Petra and Nabataea, WM and the surrounding area, became part of the Roman Empire. The area was known at that time as Arabia Petraea; later on, the Roman emperor Hadriane Petra named it after himself. The area declined commercially due to the earthquake that struck the area and the changing of trade routes in 363 C.E. From the mid-7th century till the beginning of the 20th century, the area was under the rule of Arab and Islamic dynasties. The Ottoman Empire ruled the area from 1561until 1929, when al-Ḥusēn Bin ʿAli, Lawrence of Arabia, led Arab forces to restore it from the Turkish and German forces. Petra and the surrounding area became part of Trans-Jordan (1921-1946), and it was administered by Britain under a League of Nations Mandate. In May 1946, it became part of the Independent Hashemite Kingdom of Jordan.

The province of Petra, to which WM belongs, is of significant economic importance to Jordan. This is due to the fact that it has one of the best-known archaeological sites in the world which attracts more than two million tourists annually. The dramatic temples and tombs as well as the water collection systems and storage systems of the Nabataean represent unique achievements that attract the attention of millions of tourists annually to Petra. Most of these tourists stay in WM due to its proximity to Petra, only about 5 minutes by car. Consequently, there are about 50 hotels and over 40 restaurants in WM district, a number that exceeds that of many of the major governorates in Jordan, such as al-Mafraq and Irbid. Tourism has provided more job opportunities for the local population, including taxi drivers and tourist guides.

Agriculture is the second most important economic activity of WM. The most commonly cultivated trees are olives. The agricultural sector has declined since the 2000s, however, due to a scarcity of water in Jordan and the shift of many workers into tourism sector. Very recently, some people have begun to build hotels on their agricultural land.

There are 12 sub-tribes in WM: al-Ḥasanāt, an-Nawāfla, al-Masāᶜda, al-ᶜAmarāt, al-Falaḥāt, al-Farajāt, as-Salamīn, al-Mašāᶜla, al-Hilalāt, al-Ḥamadīn, aṭ-Wisāt and aš-Šamasīn. Al-Ḥasanāt is the largest tribe with a population of about 5000, followed by an-Nawāfla sub-tribe; the smallest sub-tribes are al-Hilalāt, al-Hamadīn, aṭ-Wisāt and aš-Šamasīn. An-Nawāfla, al-Mašāᶜla, and al-ᶜAmarāt sub-tribes all descend from the big family al-ᶜAlāya, the oldest tribe in the WM. Al-Ḥasanāt, al-Hilalāt, and al-Mašāᶜla also belong to Bani Ṣaxar tribe, one of the largest Bedouin tribes in Jordan. Each of these families has its own territory that is known by the family name, as in an-Nawāfla district, and al-Mašāᶜla district, and so on. These families enjoy good relationships between themselves.

Inhabitants of WM maintain a traditional lifestyle. First, in every sub-tribe, there is a *šēx* 'the head of the sub-tribe' whom all members of the sub-tribe obey and respect. These *šēx*s act as authorities to whom people refer in cases of dispute. Secondly, women do not socialise with men outside their own extended family. People are famous for their hospitality, so that when a stranger visits the area, they will provide him with three-day lodging and food. In addition, traditional Arabic coffee, *gahwa*, has special significance in this community, as it is used on all occasions. For example, if you celebrate your marriage or receive condolences on the death of a relative, you will offer your guests a cup of coffee as a sign of hospitality. In addition, the resolution of any problem could be signified with a cup of coffee; for example, if you have taken offence at someone, and you want to become reconciled to him, then you place a cup of coffee in front of you, telling him that you will not drink it unless he forgives you. Fourthly, old men and women continue to wear the traditional Arab garment *ṯōb*, while young men and women follow the current fashion. On some occasions such as *ᶜīd*[6] 'Bairam' men often wear the traditional headband *šmāx,* and the garment *ᶜabāya.*

Mansaf is the most popular dish in WM and other Jordanian cities. It is offered in all occasions, and is considered a sign of generosity to offer your guest a dish of *mansaf*. Mainly, Jordanians enjoy having *mansaf* at least once a week. *Mansaf* consists of layers of bread, rice

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[6] Musilms have two Bairams: Falling Bairam *ᶜīd al-fiṭr* which comes after the month of Ramaḍān and Greater Bairam *ᶜīd al-aḍḥā* approximately 70 days after Falling Bairam.

and meat. It is prepared by boiling yoghurt, then cooking meat with the yoghurt for about an hour. Yoghurt is poured according to taste. Almond and pine nuts are provided with *mansaf*.

Like other Bedouin and rural tribes, customs and traditions play an essential role in regulating life in WM town. They are deemed as unwritten laws highly respected by all members of the society to achieve peace and end conflict. It is the priority of the government to end all conflicts between disputing parties through a tribal jurisdiction system[7]. What helps the success of such system is the strong relationships among all tribes plus the respect of jurisdiction system terms. There are known people *šyūx*[8] who act as judges in blood disputes. The decisions of these *šyūx* are accepted by both parties: nobody may refute them. In some blood disputes, the peace agreement *ṣulḥa* is established by a committee whose function is to prevent more bloodshed by forcing a settlement between the disputants. It is worth noting that all men are treated equally under the tribal law.

The term *jāha* is of great importance in WM; it refers to a group of men whose role is to mediate between disputing parties. Usually, *jāha* consists of more than three members who are over 40 years old. *Jāha* also occurs in marriage arrangements, where a group of people representing the groom come to the bride's house to ask for her hand in marriage. Blood disputes in WM are solved through the tribal judiciary system, where *jāha* plays an essential role in ending the argument.

The educational system of WM district has improved significantly since the mid-1990s. There are 25 schools and a college of Archaeology, Tourism and Hotel Management attached to the University of Husēn Bin Ṭalāl in Maʿān. The current records of WM Directorate of Education show that 99% of students receive basic compulsory education, which lasts for ten years; 84% continue secondary education, which lasts for two years; and around 65% complete higher education. Some graduates complete their higher education in the best schools of UK and USA. Due to direct contact with tourists who come from different countries of the world, most people in WM speak English fluently.

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[7] Tribal law which is set by specially qualified Jordanian judges to solve issues that may surface in everyday life such as revenge, land disputes, robberies, etc.
[8] The plural of the word *šēx* 'the head of the sub-tribe

1.7 Fieldwork Preparation and Methodology

The researcher conducted a six-week fieldwork in WM district during which the researcher recorded the linguistic features of the dialect. Below is a description of the fieldwork and the procedures that the researcher took to prepare for fieldwork. This section also describes the recording equipment and the saving and backing up of sound files.

1.7.1 Preparation

Preparation for fieldwork started from the beginning of my PhD course. First of all, the researcher worked to consider the ethical issues of the research; the researcher prepared an application for ethical approval; after two months, approval to conduct fieldwork was received from the University of Salford. Second, after consulting a number of studies on the phonology and morphology of Arabic, the researcher came up with a checklist of items to be investigated during the fieldwork. Third, the researcher prepared a list of questions and pictures to help discover the salient linguistic features of the dialect. Fourth, I produced a lexicon sample and participant information sheet. Fifth, a number of people from WM were contacted via email to help with accommodation and research assistance. Before going to the field, I learnt how to deal with the recording equipment, how to save sound files in lossless (WAV) format, how to label files, and how to back up and archive files.

1.7.2 Ethical Consent

In order to consider all ethical issues, the researcher consulted a number of references on the ethics of research; then the researcher completed the ethical approval form to inform the University ethics board that the current research accords with the code of ethics employed at Salford University. The researcher committed himself to keeping all data confidential and anonymous, as he showed his participants that they are free to withdraw from the research at any time, without giving any reason. They were also assured that recorded materials would be stored safely and backed up for as long as they are needed. When the researcher believes that these recordings are no longer needed, these recordings will be destroyed.

All participants were given an information sheet which tells them about the research aims and objectives. Those who agreed to participate in the project were given a consent form to sign as proof of their acceptance to take part in the project (see the appendix).

1.7.3 Data Collection Methods

To record the linguistic features of WM Arabic, the researcher recruited 20 ideal participants who are native speakers of WM Arabic plus 4 language consultants. Some of these participants were approached through emails and others through acquaintances who live in WM district. All of these participants are above 45 years old and have spent all of their life in WM to ensure that they speak the original dialect of WM Arabic. Those who have been working in tourism have been excluded because they have had daily contact with speakers of other Arabic dialects. The researcher made sure that participants are healthy, are willing to answer all questions that serve the study, have no speech impediments, and are good storytellers. For a comprehensive description of the dialect, participants were chosen from all tribes of WM town. The following table provides information about the participants of the study.

Table 1: Informants sheet

Code name	Age	Level of education	Tribe
AH	55	High school	al-Ḥasanāt
MI	61	Primary school	al-Ḥasanāt
SA	63	Illiterate	an-Nawāfla
MA	46	BA	an-Nawāfla
KI	47	High school	aš-Šamasīn
IH	49	High school	aṭ-Wisāt
AA	53	BA	al-Masāᶜda
EM	45	BA	al-Masāᶜda
WM	49	High school	al-ᶜAmarāt
WD	53	Primary school	al-ᶜAmarāt
RH	53	High school	al-Ḥamadīn
KS	60	Primary school	al-Mašāᶜla
BM	60	Primary school	al-Mašāᶜla
FK	60	Primary school	al-Farajāt
AMF	108	Primary school	al-Farajāt
ST	88	Primary school	al-Hilalāt
RR	60	High school	as-Salamīn
IK	49	Illiterate	as-Salamīn
IS	52	BA	al-Falaḥāt
AT	66	Primary school	al-Falaḥāt

The table below provides some information about the 4 language consultants[9]:

Code name	Age	Level of education	Tribe
AR	54	High Diploma	al-Ḥasanāt
AA(2)	64	BA	al-ᶜAmarāt
SS	47	Primary school	as-Salamīn
MA(2)	59	BA	an-Nawāfla

Two methods of data collection were employed. The first involved recording conversations with, and the stories of, ten local people to provide a rich and sufficient corpus on which to base the analysis of the phonology and morphology; the second involved asking a further ten subjects to converse spontaneously for between 5-7 minutes on a traditional topic, such as agriculture, life in WM district, origins of tribes, an unforgettable event, or stories of blood disputes. The narrative data were supplemented by a set of data based on direct questions and picture identification to elicit additional linguistic features or test findings revealed by the narrative data. Observation of how people speak the dialect was also employed as a source of data.

Due to the conservative nature of the WM community, women would not agree to talk with a stranger; therefore, the researcher asked his sister, an MA holder of Arabic, to spend two days with me in WM district so that she could ask women some prepared questions to enrich the database of the study. The women subjects allowed her to talk with them, but did not grant her permission to record their voices. The recordings were transcribed analysed to ascertain the phonemic inventory and explore the melodic and prosodic processes and the morphological structure of WM dialect.

1.7.4 Recording Equipment

All oral data of the study were recorded using an Olympus LS-11 voice recorder. The recording machine was kept about 15 cm away from speakers. All sound files were recorded and saved in WAV format with a 44.1 sample rate and 16 bit resolution. All recordings were backed up onto a Toshiba laptop. On transference of data to the computer, the SD card in the recorder was wiped clean. The Olympus LS-11 voice recorder was used due to its unobtrusiveness, its ease of use, and its capacity to record in WAV format.

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[9] Code names were given based on the initials of the first and second name. Where two participants have the same code, I added number '2' to the second participant.

1.7.5 Saving and Backing-up of Data and the Use of Metadata

All sound files were transferred onto a Toshiba laptop as soon as the researcher finished recording. In order to prevent the loss of recorded data, all recording materials were backed up 5 times: 1) on a Toshiba laptop, 2) on a USB flash memory, and 3) on a Dropbox folder shared with my supervisor Prof. Janet Watson. Additionally, all other files including metadata, transcription and lexicon files were backed up regularly on my Toshiba laptop and on my personal account at Salford University. All backed-up copies were original so that in case of the deletion or corruption of any sound file, the original is there.

Data were organised in such a way that makes it easy for me to find later on. That is to say, each recording has been supplied with all relevant information on a metadata sheet; this includes the topic, the speaker's code name, the place where the recording took place, the date of recording, a brief description of the item, and any other comments. A metadata sheet was also made for the language consultants. This provides information about their name, their code name, their occupation, education, social status, gender and age. A code name is given for all speakers.

1.7.6 Type of Data Collected

The researcher conducted a six-week period of fieldwork in WM district to collect data. Interviews were the main source of data for the study; the researcher interviewed 18 participants from WM, and recorded 14 of them. The interviews were conducted face to face. The majority of the participants were interviewed on more than one occasion. Each interview lasted between 7-15 minutes, during which time the researcher gave participants a number of pre-planned questions on a variety of topics, including life in the past, marriage, the history of the tribes, greetings and salutations, occupations, agriculture, marriage and traditional activities. To avoid embarrassment, no personal questions were asked.

The recorded interviews were followed up by direct elicitation. The researcher asked participants a number of carefully prepared questions to uncover some linguistic features that were unexplored of unclear from the recorded materials. A second means of following up unclear aspects of the interviews was to ask 4 language consultants of WM Arabic to listen to some of the recordings with me, and answer questions about the material. Since returning from the field, the researcher has remained in contact with language consultants via email and Skype to check data queries. Another technique for collecting data was to ask 4 participants

to narrate on cultural topics, such as coffee preparation, agriculture in the area, favourite meals, transportation, and houses. Each narrative lasted between 3 to 7 minutes. Finally, direct elicitation using pictures was used to record terms for colours and animals.

1.7.7 Transcription and Translation

The overall number of recordings is 14; of which 5 were transcribed and translated into English. The total duration of the recordings is 120 minutes. The researcher adopted the transcription system of the Journal of Semitic Studies in this study. The transcription of sound files is phonemic, and a list of roman symbols is given at the beginning of the study. All texts were translated into idiomatic English.

1.8 Chapter Summary

This is an introductory chapter of the study. It opens with an overview of Arabic followed by presenting the scope, objectives, rationale and structure of the thesis. The chapter turns to present some socio-historical background about WM district, and presents the methodology used by the researcher to collect the data. The researcher led a six-week period of fieldwork in WM district in order to record the linguistic features of WM Arabic. The data of this study come from 20 native speakers of WM Arabic who have spent all their life in the district and who represent all tribes in the district. Further, the researcher recruited 4 language consultants to double-check the data. The main sources of data were interviews, narration, direct elicitation observation, and checking data with language consultants.

Chapter Two

Theoretical Background

The aim of this chapter is threefold. It first aims to present an overview of Arabic dialectology with a presentation of the various classifications of Arabic dialects. Thereafter, the linguistic situation in Jordan is examined and the various classifications of Jordanian dialects are presented. This will help place WM Arabic in the general typology of Jordanian dialects. The chapter then reviews literature on Levantine Arabic, with some focus on Jordanian dialects. The review is presented under the following themes: the phoneme system, syllable structure, stress assignment, complex clusters, the major phonological processes, personal pronouns, and demonstratives. This will hopefully enrich the discussion of various aspects of WM Arabic and show how WM Arabic differs from, and resembles, other Jordanian dialects.

2.1 Overview of Arabic Dialectology

The term *dialect* refers to a variety of language spoken by a group that is smaller than the total speakers of the language (Francis 1983: 1). Some linguists, e.g. Šafīᶜ al-Dīn (2007), report that if two varieties of one language are mutually comprehensible to a large degree, then both varieties are dialects of the same language. This is true in the case of English which has a number of mutually intelligible dialects in spite of the linguistic differences among them. However, this definition is invalid when we consider Chinese where a number of its dialects are mutually incomprehensible. Further, some languages are considered mutually comprehensible and should, on linguistic grounds, be treated as dialects of one another rather than as separate languages. Although Norwegian, Swedish, and Danish languages share a number of linguistic features, they are considered independent languages rather than dialects of Scandinavian (Chambers and Trudgill 1980: 4). A good definition is provided by Crystal proposing that a dialect is a regionally or socially distinctive variety of a language, defined by a set of words and grammatical structures (Crystal 2008: 142).

Arabic has hundreds of dialects that differ from one another on the phonological, morphological, syntactic, stylistic and lexical levels. These varieties may be comprehensible to other Arab speakers from the same region, but are not always comprehensible to speakers from other regions. According to Palva (2006: 605), Arabic dialects can be classified into Western dialects *Maġribī* and Eastern dialects *Mašriqī*. The Western dialect group *Maġribī* is

spoken in North Africa including Morocco, Libya, Tunisia, Algeria, Mauritania and Algeria, and they are subdivided into pre-Hilāli sedentary dialects and Bedouin dialects. The Western dialect group is mainly characterised by paradigmatically levelled inflection in the first person imperfect, e.g. *niktib* 'we write', *niktibu* 'we write it', a loss of inherited short vowels in medial positions and non-phonemic vowel quantity (Palva 2006). The Eastern dialect group *Mašriqī* is spoken in the Middle Eastern[10] countries and it is characterised by retention of the first person singular and plural inflection in the imperfect, as in: *aktib* 'I write', *niktib* 'we write', and maintenance of distinction between three short vowels. Sociologically, Arabic dialects are classified into sedentary *ħaḍarī* and Bedouin *badawī* (Palva 2006; Rosenhouse 2006). This division is based on the history of settlement and the language shift that has been taking place and applies to dialects in the entire Arabic-speaking world with some degree of variations. Sedentary dialects are sub-divided into urban *madanī* and rural *qarawī*. Based on their way of living, Bedouin dialects are further classified into nomadic and semi-nomadic groups (Rosenhouse 2006). Bedouin dialects are also classified into those which have phonetically conditioned affrication of /g/ and /k/ (many Peninsular dialects) and those which do not have affricated allophones (Northwest Arabian dialects, Egyptian and North African dialects) (Palva 2006: 606). Bedouin dialects are said to be more conservative than sedentary dialects since they have preserved more morpho-phonemic categories than the sedentary dialects (Palva 2006: 606). Palva (2006: 606) presents a number of linguistic features that characterise Bedouin and sedentary Arabic dialects. In the table below, the letter 'A' indicates a feature that pertains to all the dialects of the group and the letter 'P' indicates a feature that characterises a partial part of the group.

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[10] Including Jordan, Palestine, Syria, Lebanon, Iraq, Yemen, Oman, Saudi Arabia, United Arab Emirates, Qatar, Sudan and Egypt.

Table 3: Features of Bedouin and sedentary dialects (Palva 2006: 606)

Bedouin	Sedentary
retention of interdental fricatives 'A'	realisation of interdental fricatives as postdental stops 'P'
partial retention and generalisation of the indefinite marker -*in* 'P'	absence of the indefinite marker -*in*, except in formulaic expressions 'A'
absence of verb modifiers in the imperfect 'P'	the use of different verb modifiers in the imperfect 'P'
retention of gender distinction in plural 'P'	no gender distinction in personal pronouns 'A'
productivity of Form IV 'P'	loss of Form IV 'P'
productivity of internal passive 'P'	absence of internal passive 'P'

Arabic Peninsula dialects are classified into North Arabian dialects spoken in the Syrian desert, eastern Jordan and northern Arabia; Ḥijāzi dialects (West Arabian), including the dialects of Ḥijāz and Tihāma and dialects of urban centres of this area, particularly Mecca and Medina; Southwest Arabian dialects spoken in Yemen, Aden, Ḥadramawt and Dhofar as well as the dialect of Šīᶜa communities in Bahrain (Baḥārna); and the North-west Arabian dialects representing the dialects of the Negev and Sinai plus those spoken in the south of Jordan and in the north-western area of Saudi Arabia (Ingham 1982; Versteegh 2001; Rosenhouse 2006). Cantineau (1936-1937) classifies the North Arabian dialects into three groups: the ᶜAniza dialects (group A), including the dialects of Kuwait, the Sunni dialect of Bahrain and the Gulf State; the Šammari dialects (group B) and the Pre-ᶜAniza (group C), known as Syro-Mesopotamian dialects, spoken mainly in the Syrian desert and in Jordan. A few tribes on the edges of the desert have a mix of B and C elements which Cantineau calls (BC group dialects). Traditionally, speakers of groups A and B are camel breeders while group C speakers are sheep herders.

Versteegh (2001) classifies sedentary dialects in the Syro-Lebanese area into three groups: Lebanese/Central Syrian dialects, comprising the Lebanese dialects, e.g. Beirut Arabic and Central Syrian dialects, e.g. Damascus Arabic, and also the dialect of the Druze; North-Syrian dialects, e.g. Aleppo Arabic and Jordanian/Palestinian dialects, which comprise the

Palestinian town dialects, Central Palestinian village dialects and the south Palestinian dialects and Jordanian dialects, including Ḥōrān[11] dialects. Typical features of most of the Syro-Lebanese dialects are the realisation of *q as a glottal stop and stops for interdentals; the preservation of the three short vowels /i/, /a/ and /u/ with their long counterparts; and the loss of gender distinction in the second and third person plural of verbs and pronouns (ibid). Some of the group dialects have been affected by neighbouring Bedouin dialects as evident in some Jordanian dialects, e.g. Bani Kināna Arabic (al-Damen 2007), Maᶜān Arabic (Rakhieh 2009), which have a voiced realisation of *q.

Within the group, the Lebanese/Central Syrian group is differentiated from the other two groups by the imperfect patterns: *byiktub* 'he writes' and *biktub* 'I write', which are attested in the other two groups respectively as *biktub* 'he writes' and *baktub* 'I write'. Similarly, the North Syrian group is distinguished from the other two groups by the ʔimāla process, a historical process that changes /ā/ into [ē] in the vicinity of the high vowel /i/, e.g. *lisān > lsēn* 'tongue' (Versteegh 2001).

The Lebanese/Central Syrian group dialects are also classified on the basis of the non-past forms of the verb *qāl* 'to say' into: group (1) *bəʔūl* dialects; group (2) *bəqūl* dialects which include North-Syrian dialects except for those spoken in the major cities, and group (3) which is subdivided into *bəʔūl* dialects spoken in large towns and cities of Palestine, *bəkūl* dialects spoken in Central Palestinian rural dialects and *bəgūl* spoken in the north Palestinian rural dialects and north Jordanian rural dialects (Behnstedt 1997, cited in Bellem 2007: 199).

Cantineau (1937) divides Bedouin dialects of the Levant into three main types: the Syro-Mesopotamian group (a semi-nomadic group) which shares some features with sedentary dialects of Syria, e.g. reduction of diphthongs and ʔimāla; the Šammar group of the Mesopotamian and Syrian deserts which share some features with the semi-nomadic dialects in Syria and Jordan; and the ᶜAniza group which has influenced the sedentary Syrian dialects of Palmyra and Soukhne.

A division of Arabic dialects can be made not only geographically or sociologically but following religious affiliations. This is true in the Mesopotamian dialects, where the Arabic spoken in Baghdad is divided into Muslim, Jewish and Christian varieties. Following Blanc (1964), Muslims speak the *gilit* dialect, while Christians and Jewish speak varieties of the

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[11] Ḥōrān dialects extend 12 km south of Damascus until Ajloun governorate in the northwest of Jordan.

qəltu dialect. In Bahrain, Holes (1995: 270-287) points out that there is a clear sectarian division between the Sunni Arabs who speak the ʿAniza Bedouin dialect and the Šīʿa community, the older inhabitants of Bahrain, who speak the rural *Baḥārna* dialect. The most notable example of the variation between the Sunni and Šīʿa Arabic is the realisation of CA *j as /y/ in Sunni Arabic but as /j/ in Šīʿa Arabic. Similarly, in Aleppo, the dialect of Christians exhibits some differences from the Muslim dialect (Palva 2006). Some prominent features of the Christian dialect of Aleppo are the retention of CA diphthongs /aw/ and /ay/ and the application of the ʔimāla process (Behnstedt 1989).

Jastrow (2002: 348) maintains the existence of three zones representing spoken varieties of Arabic: the first zone refers to the Arabian Peninsula in the pre-Islamic period; the second zone exemplifies the territories that have been arabicised as a result of the Islamic conquests namely the southern areas of the Peninsula, the Levant, Egypt, North Africa, Iraq and some parts of Iran; and the last of these zones refers to the geographical peripheries located outside the Arabic language areas, including Cyprus, Malta, Chad, Uzbekistan, Turkey and others. Watson (2011) adopts this division with the exclusion of southern areas of the Peninsula from the first zone.

A number of studies have been concerned with Arabic dialectology in general; among these are Fischer and Jastrow (1980), who describe the structure of Arabic dialects, as well as individual dialect groups, with a collection of texts representing selected dialects. Watson (2011: 851-896) provides an overview of Arabic dialects, with a classification of the dialects given in terms of phonology, morphology and syntax. A number of monographs have focused on specific aspects of Arabic dialects (Versteegh 2001: 169); these include Fischer (1959), who deals with the deictic system; Janssens (1972), who examines stress patterns; Eksell Harning (1980), who examines the genitive construction, Czapkiewicz (1975), who examines the aspectual system, and Retsö (1983), who examines the passive voice.

A number of atlases deal with Arabic dialects (Behnstedt 2006: 583-593). Bergstrasser (1915) is reported to be the first atlas on Arabic dialects, dealing with Syrian and Lebanese dialects. His atlas consists of 43 maps that examine the different aspects of the phonology and morphology of these dialects. A number of atlases deal with Egyptian Arabic; these include Abul-Fadl (1961), where 40 maps are given to classify al-Šarqiyya dialects in Egypt, and Behnstedt and Woidich (1985), who provided 560 maps on the dialects of Egypt. Behnstedt published a number of other atlases on Arabic dialects, including Behnstedt (1985), which

deals with 165 localities in the former North Yemen; Behnstedt (1987), on dialects of far northern Yemen, with a presentation of 27 maps; Arnold and Behnstedt (1993), who examine the dialectology of the Qalamūn area in Syria; and Behnstedt (1997), one of the most comprehensive atlases of Arabic dialects, which deals with Syrian dialects.

2.2 An Overview of the Linguistic Situation in Jordan

Modern Jordan was established in 1921 and it was a princedom (1921-1946) run by Prince Abdallah. The population of Jordan was estimated in 1946 at about 433,659 (Vatikiotis 1967), the vast majority of them were Arab. Ecologically, the population of Jordan can be divided into three groups: nomadic and semi-nomadic tribes 'Bedouins', sedentary villagers *fallaḥīn* and town dwellers *madaniyyīn* (Glubb 1938, Dann 1984). Where the majority of the population were Arab at that time, some non-Arabic speaking Circassian and Chechen refugees settled in and around Amman at the turn of the 19th century and early 20th century (Hourani 1947; Jaimoukha 2001).

The high rates of illiteracy among Trans-Jordanians in the early 20th century plus the lack of effective means of communication caused the divergence of Trans-Jordanian dialects in different localities (Sawaie 2007). Sawaie (2007) further shows that each of the three ecological groups (Bedouins, sedentary villagers and town dwellers) form their own characteristic 'social' dialects. Regional and social dialects intersect to create varieties exhibiting features from both source dialect groups (ibid).

There are a number of reasons that contributed to an increase in the linguistic diversity in the 1st half of the 20th century, namely the migration of around 10,000 Palestinian skilled workers to Amman (Plascov 1981: 33); the movement of many merchants and academicians from Syria into Amman and Irbid in the 1920s and 1930s (Aruri 1972); and the coming of Prince Abdallah with his men from Ḥijāz. The annexation of the West Bank into Jordan in 1949 led to an increase in the ratios of the urban variety and a decrease in the nomadic patterns (Aururi 1972). The demography of many cities, such as Amman, Irbid and al-Karak started to change after receiving many Palestinian refugees. This was followed by the migration of many Jordanians from the countryside to developing towns searching for better life conditions, job opportunities and advanced educational facilities (Sawaie 2007).

Al-Wer (2007) shows that the lack of an urban centre in Jordan caused many Jordanians in the first half of the 20th century to travel to neighbouring cities, e.g. Haifa, Jerusalem and

Beirut in search of cultural refinement and education. The result of this is that the linguistic situation in Jordan has been ill-defined, lacking a metropolis dialect unlike Syria, Lebanon and Palestine where local dialects developed under the influence of the metropolis dialect. The lack of a metropolis dialect in Amman partially accounts for the profound effects of Palestinian on Jordanian dialects.

Jordanian dialects are classified into three types based on people's way of life in the past in the first half of the twentieth century: urban *madanī*, rural *fallāḥī* and Bedouin (Suleiman 1985; Abd-El-Jawad 1986; al-Wer 2007). Although each of these dialects each has its own distinguishing linguistic features, they are mutually comprehensible to speakers of Jordanian dialects (Sulieman 1985; Sakarnah 1999).

Based on their phonological, morphological and syntactic features, Cleveland (1963) divides Jordanian dialects spoken on both banks of the River Jordan into four groups: *yigūl* dialects group I, *bəgūl* dialects group II, *bəkūl* dialects group III, and *bəʔūl* dialects group IV. Group I *yigūl* dialects are spoken by Bedouins in the southern and eastern desert of Jordan and in al-Karak. The group I dialects share many linguistic features with the dialects of Najd and al-Ḥsā, and their most prominent features are the realisation of *q as /g/ and *k as /k/ or /č/ and the use of the simple form of the verb, e.g. *afham* 'I understand'. Where all other groups use the active participle to denote present continuous actions, e.g. *wēn rāyiḥ* 'where are you going?', group I dialects do not. Examples of this group are Bani Ḥasan Arabic (Irshied 1984), ᶜAbbādi Arabic (Sakarnah 1999).

Group II *bəgūl* dialects are spoken by sedentary trans-Jordanian dialects and south of the West Bank and Jordan River. Group II dialects are similar to group I except for some morphological distinctions, the most notable of which is the use of the imperfect *bi-* and the use of the negation prefix *-š*, both of which are absent from group I dialects, e.g. *mā bəhimmiš* 'It does not matter'. An example of group II is Bani KinānaArabic (al-Damen 2007).

Group III *bəkūl* dialects are spoken in rural dialects around Jerusalem and the northern part of central Palestine and their most distinguishing feature is the realisation of *q as /k/. Except for the g~k variation, group II and III dialects are very close and they form the bulk of the population of Jordan.

Group IV *bəʔūl* dialects are spoken in urban cities and they exhibit many differences from the other three groups. According to Cleveland (1963), the most notable features of this group are the realisation of *q as /ʔ/, the merger of *ṯ and *ḏ into /t/ and /d/, and the merger of *ḍ into /ḍ/ into /ḍ/. In her examination of ᶜAmmāni Arabic, al Wer (2007) argues that many speakers, particularly males, alternate use of the plain interdentals /ṯ/ and /ḏ/ with /t/ and /d/. Al-Wer (2007) and Palva (1994) show that realizing *q as /ʔ/ is a typical of the speech of female speakers of ᶜAmmāni Arabic, e.g. *qāl > ʔāl 'to say'. The /g/ ~ /ʔ/ variation thus marks the distinction between male speakers who realise *q as /g/ and female speakers who realise it as /ʔ/.

Suleiman (1985: 44) argues that the *bəʔūl* group dialects are typically spoken by members of the educated, or upper social classes, and can therefore be used to identify class-membership, i.e. the educated vis-a-vis the uneducated, or lower classes. He argues that the urban variety is more elevated than its fellow Bedouin and rural varieties since the majority of its speakers are members of the upper classes, the rate of education is very high amongst its speakers, and most innovations evolve from urban centres.

Cleveland's classification is thus based on two criteria: the use of the imperfect prefix *bi-* to denote indicative mood and the realisation of CA *q. Where sedentary varieties possess the imperfect *bi-* prefix, Bedouin varieties lack it. Where the first two groups represent the spoken dialect of Trans-Jordanians, the other two *bəkūl* and *bəʔūl* dialects were imported into Jordan from Palestine. The /g/ ~ /ʔ/ distinction does not also differentiate urban dialects from Bedouin and rural ones because as al Wer (2007) shows male speakers of the urban variety realise *q as /g/ (cf. 2.3).

Palva (1984) reconsiders Cleveland's classification of Jordanian dialects. He first divides sedentary varieties into urban *madanī* and rural *fallāḥī*. Rural varieties are further divided into five groups; three are spoken in Palestine: *bikūl* dialects spoken in the centre of Palestine, *biqūl* varieties that are free from the influence of Bedouin dialects, and southern Palestinian dialects that share many features with Bedouin varieties. Rural Jordanian dialects are further divided into those spoken in the south of Jordan which lack affrication of *k and those spoken in the north and centre of Jordan with an affricated *k. His classification fails to properly classify rural Jordanian dialects in the south of Jordan because there are some southern dialects, e.g., Maᶜān Arabic (Rakhieh 2009), which affricates *k in back environments (cf. 2.3).

2.3 Literature on Levantine Dialects

Below is an examination of some aspects of studies conducted on Jordanian dialects with reference, where relevant, to Palestinian, Lebanese and Syrian dialects.

2.3.1 Phoneme System

2.3.1.1 Consonants

The consonantal phoneme system across Levantine dialects differs in the realisations of the uvular stop *q, the velar stop *k, the plain interdentals *ṯ and *ḏ and the emphatics *ḏ̣ and *ḍ.

In most sedentary dialects of the Levant, *q is realised as /q/, /k/, and /ʔ/ (Naïm 2011: 923). The realisation of *q as /ʔ/ is found in the major Arab cities of the Levant, e.g. Damascus, Amman, Jerusalem, Haifa (cf. Naïm 2011). Within the Levant, /q/ is attested in the dialect of the Druze (El-Zein 1981), in Palmyra Arabic in Syria and in Swēda Arabic (Cantineau 1934). The reflexes of *q are /q/, /k/ or /ḳ/ in rural dialects, in some dialects showing allophonic variation (Naïm 2011). For example, some central Palestinian dialects have /k/ with the allophones [q] and [ḳ], whereas other dialects in the region have unconditional /q/, /k/ or /ḳ/ (ibid). The realisation of *q as /g/ is found in all positions in the dialects of Ḥōrān Arabic (Cantineau 1946) and Gaza strip in Palestine (de Jong 2000). It is also found in most Bedouin dialects of the Levant (cf. Palva 1976; Irshied 1984; Sakarnah 1999).

Reflexes of *k are crucial in distinguishing between sedentary dialects of the Levant: rural dialects share the affrication of *k into /č/ with Bedouin dialects, while the urban dialects realise *k as /k/ (Naïm 2011). In most Bedouin dialects of Jordan and Syria and in the dialect of Ḥōrān, the affrication of *k is conditioned (Cantineau 1946; Palva 1976). This contrasts with rural central dialects of Palestine where unconditioned /č/ is the reflex of *k (Naïm 2011).

Where rural Palestinian dialects were characterised with a preservation of CA interdentals at the beginning of the 20th century, there is a state of variability now in most rural and Bedouin Palestinian dialects (Naïm 2011). In Jerusalem Arabic, for example, interdentals were preserved in the speech of younger generation and in some rural villages but they shift into their plosive counterparts in other villages (Naïm 1999). In Lebanon, interdentals are maintained in the speech of Šīᶜa and Druze communities, and in south Lebanon (Fleisch 1974; Cantineau 1946). Interdentals develop into their plosive counterparts in the speech of

younger generation in urban dialects of the Levant (Naïm 2011). They are preserved in Bedouin dialects of Jordan (Palva 1976; Sakarnah 1999; Irshied 1984); in Gaza Arabic (de Jong 2000), and in the Syrian desert (Behnstedt 1997).

Based on the realisations of these phonemes, I classify Jordanian dialects into three groups. The first group refers to all Bedouin and rural Jordanian dialects, e.g. Ḥōrān Arabic (Cantineau 1946), Bani Kināna Arabic (al-Damen 2007), Bani Ḥasan Arabic (Irshied 1984), Ṣalṭi Arabic (Herin 2013). Typical features of this group are the realisation of CA *q as a voiced velar /g/, the merger of *ḍ and *ḏ̣ into /ḍ/, the preservation of the CA interdentals, and the split of *k into [k] in back environments and [č] in palatal environments, with /č/ and /k/ also having a minimal phonemic load, as shown in the minimal pair *čēf* 'how' and *kēf* 'pleasure'. This group covers Trans-Jordanians dialects and refer to groups I and II of Cleveland's classification (1963) (cf. 2.2). The second group refers to rural *fallāḥī* Palestinian dialects and they are similar to the first group except for the realisation of the uvular stop *q as /k/ rather than /g/ (Suleiman 1985; al-Wer 2007). This group represents group III of Cleveland's classification (1963) (cf. 2.2). The third group refers to the urban variety spoken in Amman. Al-Wer (2007) shows that the urban variety spoken in Amman exhibits some sociolinguistic variation. Thus, the glottal stop *q has two reflexes: a voiced reflex /g/ realised by male speakers and a glottal stop realised by female speakers. The plain interdentals /ṯ/ and /ḏ/ alternate, particularly in the case of male speakers, with /t/ and /d/. The emphatic interdental /ḏ̣/ is in a state of variability with the dental stop /ḍ/ in the speech of the same speaker. Unlike Bedouin and rural dialects, *k is realised as /k/ in all word positions. This group refers to group IV of Cleveland's classification (1963) (cf. 2.2).

2.3.1.2 Vowel System

The vowel system of many Bedouin and rural dialects, e.g. Ḥōrān Arabic (Cantinue 1946), Ajloun Arabic (al Ghazo 1987[12]), ᶜAbbādi Arabic (Sakarnah 1999), Šūša Arabic in Palestine (Shahin 2002), comprises three short vowels /i/, /a/ and /u/, their long counterparts /ī/, /ā/, /ū/ plus the two mid vowels /ē/ and /ō/, which result from monophthongisation of CA diphthongs *ay and *aw. Al-Wer (2007) shows that ᶜAmmāni Arabic has a set of four short vowels /a/, /i/, /u/, and /o/ and five long ones: /ā/, /ī/, /ū/, /ō/ and /ē/. A contrast between the high back vowel /u/ and the mid back vowel /o/ is exhibited word finally, e.g. *šāfo* 'he saw him' versus

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[12] The data of al Ghazo (1987) come from the speech of the author, his wife and his children; however, he aims to generalise the findings of his study to the whole of Levantine Arabic. By doing so, he ignores the linguistic difference that exists between sub-dialects of this variety.

šāfu 'they saw'. The vowel system of Jerusalem Arabic (Rosenhouse 2007) comprises five short vowels /i/, /a/, /u/, /e/, and /o/ with their long counterparts /ī/, /ā/, /ū/, /ē/ and /ō/. In Beirut Arabic (Naïm 2006), the vowel system includes four short vowels /i/, /a/, /u/ and /ə/ plus five long vowels /ī/, /ā/, /ū/, /ē/ and /ō/.

Only few studies show the contexts in which CA diphthongs *aw and *ay are preserved. Bani Yassin (1980) shows that CA diphthongs *aw and *ay are preserved in Ġawārna Arabic in words specific to the Ġawārna community, e.g. *xayl* 'horses', *ḥaydar* 'proper name', *jaww* 'weather'. However, his analysis of the cases where *aw and *ay are retained is unsystematic because all the examples he cited are used in WM Arabic and in many other Jordanian dialects. In ᶜAjārma Arabic, Palva (1976) argues that CA original diphthongs *ay and *aw undergo a partial monophthongisation process into [ey] and [ow] before back and emphatic consonants, e.g. *ᶜeyla* 'family', *ḥowš* 'yard', and undergo monophthongisation elsewhere into [ē] and [ō]. Cantineau (1960) argues that CA diphthongs are always preserved before /ᶜ/ and /ḥ/ in most Arabic dialects. They have always been maintained in some dialects of Lebanon, Mauritania (Fischer and Jastrow (1980).

Unstressed long vowels are shortened in several Levantine dialects, including rural Palestinian Arabic (Younes 1995), Beirut Arabic (Naïm 2006) and Maᶜān Arabic (Rakhieh 2009). Thus, the output of the word *bē.'tēn* 'two houses', in Maᶜān Arabic is *be.'tēn* with a shortening of the left-most long vowel /ē/.

2.3.2 Syllable Structure

Arabic syllables are made up of two constituents: an obligatory onset and a rhyme that consists of the nucleus element, the most sonorant element, plus an optional marginal element 'coda'. The degree of sonority increases gradually from the onset towards the peak, and then it decreases gradually towards the coda (Hooper 1972; Clements 1990).

Arabic has a restricted set of syllable types (Jesry 2009). The core syllable types in many Arabic dialects are CV, CVV, CVC, CVVC, and CVCC (Palestinian Arabic: Abu Salim 1982; AjlounArabic: al Ghazo 1987; Jerusalem Arabic: Rosenhouse 2007). These types are classified in terms of their weight into light (CV and final CVC syllables), heavy (non-final CVC and CVV syllables) and superheavy (CVVC and CVCC syllables). In addition to the above five core syllables, Rosenhouse (2006) argues that CCV(C) syllables are frequently used in Bedouin and Eastern sedentary dialects.

Kenstowicz (1986) deals with the syllable structure of Bani Ḥasan Arabic and Sudanese Arabic. He shows that the core syllable types in the two dialects are CV, CVV and CVC, with marginal CVCC and CVVC syllables. He argues that core syllable types are formed in the lexical phonology whereas the marginal syllable types are constructed in the postlexical phonology.

Examining the phonological aspects of ꜥAbbādi Arabic, Sakarnah (1999) shows that the dialect has a basic inventory of four syllables that occur in all word positions; these are CV, CVC, CVV and CVVC, Further, the dialect has a set of marginal types, including CCV, CCVV, CCVC and CCVVC, arguing that marginal syllable types are formed as a result of the application of diachronic rules to CA forms (Sakarnah 1999: 26). Thus, historical syncope of the high front vowel in *kitāb 'book' results in the CCVVC form *ktāb* 'book'.

Btoosh (2006) provides an examination of syllable structure of al-Karak within Optimality Theory. The data are grouped into four parts to represent the simple and complex margins of al Karak Arabic. These groups include simple onsets, complex onsets, simple codas and complex codas. The analysis of data shows that the dialect has four types of syllables including 1) light syllables: CV, 2) heavy syllables: CVC, CVV and CCVC, 3) Extra-heavy syllables: CVVC, CVCC and CCVVC, and 4) Ultra-heavy syllable: CVVCC. Al-Karak Arabic differs from many other Arabic dialects in having an uncommon ultra-heavy syllable CVVCC. CVVCC syllables are also attested in Maꜥān Arabic (Rakhieh 2009) and Palestinian Arabic (Abu Salim 1982). Abu Salim (1982) argues that this type should be regarded as part of the underlying syllable inventory of Palestinian Arabic because some phonological processes, particularly vowel shortening, are only explained by reference to this syllable type.

Examining the syllable structure of Bani Kināna Arabic within Moraic Theory (Hayes 1989) shows that the maximum weight of a syllable is bimoraic and the minimum is monomoraic. The core syllables in the dialect are CV, CVV, CVC, CVVC, and CVCC. The syllable inventory of ꜥAmmāni Arabic (al-Wer 2007) is CV, CVV, CVC, CCV, CCVV, CCVC, CVVC, CCVVC and CCVCC. Al-Wer (2007) does not, however, discuss core syllable types or the distribution of each syllable types.

Compared with other Jordanian dialects, Maꜥān Arabic (Rakhieh 2009) has the largest inventory of syllable types. These are CV, CVC, CVV, CVVC, CVCC, CCVVC, CVVCC, CCV, CCVC, CCVV, and CCVCC. Rakhieh further shows that syllables with complex onsets result from the deletion of the unstressed high short vowels in open syllables and from

the process of trisyllabic elision whereby a short low vowel is deleted in an open syllable when followed by a non-final short low vowel in an open syllable.

Some of the literature on Arabic syllable structure has focused on the treatment of superheavy syllables, i.e. CVVC or CVCC. In many Arabic dialects, these syllables cannot occur in non-final position (Jarrah 1993; Ingham 1994; al-Mohanna 1994); where the morphology concatenates a word ending in VVC or VCC with a consonant-initial morpheme, an epenthetic vowel is inserted (al-Mohanna 1994). Thus in Bani Ṣaxar Arabic (Palva 1980) and Najdi Arabic (Ingham 1994) an epenthetic vowel is inserted when consonant-initial suffixes are concatenated to superheavy syllables, e.g. *bēt+hum > bētihum* 'their home' (Najdi Arabic), *widd-na > widdana* 'we want', *bēn+na > bēnana* 'between us' (Bani Ṣaxar Arabic). Some Jordanian dialects, e.g. Maᶜān Arabic (Rakhieh 2009), ᶜAbbādi Arabic (Sakarnah 1999), al-Karak Arabic (Btoosh 2006), however, do allow CVVC syllables in initial position in derived environments, e.g. *bēt+hum* 'their home', *jār-hum* 'their neighbourhood'. The occurrence of CVVC syllables in derived environments in these dialects can be attributed to what Broselow (1992) calls 'adjunction to mora' whereby one mora dominates two segments.

2.3.3 Stress Assignment

A stressed syllable is pronounced with higher pitch levels, longer duration and greater loudness compared to unstressed ones (al-Ani 1992). Arabic stress patterns exhibit features that are crosslinguistically common in stress languages: a word has at least one prominent syllable (cumulative property) and that prominent syllable lies near either edge of the word (Kager 2009:344). Several studies examine stress patterns in Jordanian dialects, e.g. ᶜAjārma Arabic (Palva 1976), Bani Ḥasan Arabic (Irshied 1984), ᶜAbbādi Arabic (Sakarnah 1999), AjlounArabic (al Ghzo 1987; al-Sughayer 1990; Abu Abbas 2003), ᶜAmmāni Arabic (al-Wer 2007). Stress assignment in Jordanian dialects is predictable and subject to two factors: the weight of the syllable, and the distance of that syllable from the right-edge of the word. Stress assignment is governed by a main rule: stress falls on the ultimate syllable if that syllable is superheavy, i.e. CVVC or CVCC; otherwise, stress falls on the right-most heavy syllable in the last three syllables after the last consonant is deemed extrametrical, e.g. *min.'šār* 'saw', *dux.'xān* 'smoke', *ma.'dā.ris* 'schools', *'ᶜal.la.mat* 'she taught'. If none of the last three syllables is heavy, then stress is always assigned to the antepenultimate syllable, e.g. *'ka.tab* 'to write', *'ka.ta.bu* 'they wrote'. In monosyllabic words, stress is assigned on the only syllable, e.g. *'jāb* 'to bring'.

Two accounts analyse stress patterns in light of the metrical account advanced by Hayes (1995): Abu Abbas (2003) on AjlounArabic and al Mashaqbah (2015) on Wadi Ramm Arabic. Abu Abbas (2003) argues that the dialect has a moraic trochee system ('μ μ), thus in a word like *katab* 'he wrote', stress is assigned to the leftmost syllable, and foot parsing works from left to right. The degenerate foot is absolutely forbidden in the dialect, which means that a single mora is not enough to construct a foot; this means that stranded single moras at the word edge are left unfooted. Further, he shows that stress is assigned to the right-most visible foot according to the End Rule Right Principle (ERR). Al Mashaqbah (2015) shows that Wadi Rumm Arabic has an iambic system (μ'μ), thus in a word like *katab* 'he wrote', the rightmost syllable is stressed; the foot inventory in the dialect comprises: (L'L), (L'H) and ('H). Foot parsing works left-to right and degenerate feet are forbidden. The End Rule Right assigns stress to the head of the right-most foot.

2.3.4 Complex Clusters

Arabic dialects exhibit variation in terms of permission of onset and coda clusters. Some Levantine dialects, e.g. AjlounArabic (al-Sughayer 1990), Beirut Arabic (Naïm 2006: 284), allow word-initial onset clusters irrespective of their degree of sonority. Other dialects, e.g. al-Karak Arabic (Btoosh 2006) and Palestinian Arabic (Šahīn 2008: 528) respect the Sonority Hierarchy Principle, a principle which states that C1 in a complex onset should not be more sonorous than C2 (Selkirk 1982; Clements 1990); these dialects allow onset clusters with rising sonority but not with falling sonority. In Jerusalem Arabic, Rosenhouse (2006) shows that onset clusters are allowed only where C2 is either /t/ or /d/, e.g. *štaġal* 'he works'.

Sakarnah (1999) and Rakhieh (2009) argue that complex onsets in ᶜAbbādi Arabic and Maᶜān Arabic result from deletion of unstressed high short vowels in open syllables and trisyllabic elision, whereby a short low vowel is deleted in an open syllable when followed by a non-final short low open syllable.

Levantine Arabic dialects differ in the treatment of complex codas. Some dialects, e.g. Bani Kināna Arabic (al-Damen 2007), al-Karak Arabic (Btoosh 2006), Maᶜān Arabic (Rakhieh 2009) allow CC codas that adhere to the Sonority Hierarchy Principle, which states that C2 in complex codas should not be more sonorous than C1. In these dialects, an epenthetic vowel is inserted to break up complex codas that violate the Sonority Hierarchy Principle. Beirut Arabic (Naïm 2006) disallows final complex clusters before a pause and allows them elsewhere; thus, the word *laḥm* 'meat' is realised before pause as *laḥam*.

Sequences of three consonants resulting from the juxtaposition of consonant-initial morphemes to word-final CC clusters are broken by an epenthetic vowel in most Levantine dialects, as in Bani Ḥasan Arabic (Irshied 1984) and ᶜAbbādi Arabic (Sakarnah 1999) where the epenthetic vowel is inserted to the left of the unsyllabified consonant, e.g. *ḥabs+ha* > *ḥabis-ha* 'her prison'. In his discussion of definite article assimilation, Bani Yasin (1980) cites examples from Ġawārna Arabic highlighting permission of derived medial three-consonant clusters e.g. *abblād* 'the country'.

2.3.5 Phonological processes

Below is an examination of some of phonological processes that characterise Levantine dialects.

2.3.5.1 Assimilation Processes

Assimilation refers to the phonological process whereby one segment influences the articulation of another segment (Trask 1996; Crystal 2008; Pavlík 2009). Arabic exhibits a number of assimilatory processes including assimilation between consonants, assimilation between vowels, assimilation of a consonant to a vowel, and assimilation of a vowel to a consonant. Assimilation processes can be classified in terms of its direction into: regressive, progressive and coalescent. Regressive assimilation, also referred to as anticipatory assimilation, occurs when a sound changes under the influence of a following sound (Pavlík 2009), i.e. in a sequence of A and B sounds, segment B influences segment A and makes it take some or all of its features. Progressive assimilation occurs when a sound acquires some or all of the features of a preceding sound, i.e. sound A affects sound B and makes it takes some or all of its features. Coalescent or reciprocal assimilation occurs when two sounds influence each other. In terms of degree, assimilation is classified into total assimilation and partial assimilation. Total assimilation, on the one hand, occurs when one sound takes all the phonetic features of another sound. The two sounds merge together, resulting in a geminate. Partial assimilation, on the other hand, occurs when one sound takes some, but not all, of the phonetic features of another sound (Pavlík 2009).

Assimilation of the definite article is common across the Arab world. In most Arabic dialects outside the south-west of the Arabian Peninsula, the definite article has six allomorphs: it has the forms [ʔal] or [ʔil] when the defined word is utterance initial and starts with a non-coronal sound; the form /l/ surfaces when the noun or adjective starts with a non-coronal consonant

and follows a word-final vowel; and where the noun or adjective starts with a coronal consonant, usually to the exclusion of /j/, *l-* of the definite article totally assimilates to that coronal consonant, having either /ʔaC/ or /ʔiC/ in utterance-initial positions and /C/ in utterance-medial position following a vowel-final word

In some dialects, e.g. Bani Kināna Arabic (al-Damen 2007), *l-* of the article assimilates to a following palato-alveolar affricate /j/. Ġawārna Arabic (Bani Yasin 1980) assimilates the definite article to any following consonant except for the glottal stop, /ʔ/, which is elided, *al-blād > a-bblād* 'the country', *al-ḥamīr > aḥḥamīr* 'donkeys'. Likewise, dialects of the western Yemeni mountain range and a group of dialects of southern Oman exhibit gemination of the definite article to any nominal-initial consonant, e.g. *ab-bēt* 'the house', *ag-gamar* 'the moon' (Behnstedt 1997). A group of dialects in northern Yemen use an /n/ definite article which exhibits no (total) assimilation to any following consonant, e.g. *in-šams* 'the sun' (Behnstedt 1997). Similarly, some dialects in the south-west of the Arabian Peninsula, e.g. Rijāl Alma (Asiri 2009), exhibits an /m/ ~ /am/ ~ /im/ definite article which does not assimilate to any following consonant.

Herin (2013) provides a comparison between Ṣalṭi Arabic, Ḥōrān Arabic and Jalbūn Arabic, a rural Palestinian dialect spoken in Jenin. Ṣalṭi Arabic and Ḥōrān Arabic exhibit a number of assimilation processes not attested in Jalbūn Arabic, e.g. assimilation of /h/ to a preceding voiceless consonant, e.g. *binit-hum > binittum* 'their daughter', and which has been reported by al-Damen (2007) for Bani Kināna Arabic. Additionally, both Ṣalṭi Arabic and Ḥōrān Arabic exhibit a total assimilation of /l/ to a following /n/ and vice versa; an assimilation of /ᶜ/ to a following /ḥ/, and assimilation of /š/ to a following /t/. This made Herin (2013) shows how Ṣalṭi Arabic relates to Ḥōrān Arabic more than Jalbūn Arabic.

Sakarnah (1999) shows that the *t-* prefix in forms V and VI undergoes a total assimilation to verbal stems with an initial coronal sound in ᶜAbbādi Arabic. No assimilation, however, takes place before non-coronal sounds.

2.3.5.2 Emphasis Spread

Emphasis refers to the phonetic feature which defines the articulation of consonants that involve a primary articulation in the dento-alveolar region and a secondary articulation in the upper region of the pharynx (Kahn 1975). Emphasis spreads both regressively and

progressively in Arabic and is so general that some authors regard emphasis as a prosodic feature (Zemánek 2006: 205).

Dialects differ in the domain of emphasis spread and the extent to which high vocoids may block emphasis spread. Zawaydeh (1998) provides an acoustic analysis of uvularisation spread in ᶜAmmāni Arabic. She considers both the spread of uvularisation from the set of coronal consonants /ḍ/, /ṭ/, /ḏ̣/ and /ṣ/ and from the uvular stop /q/. The analysis shows that rightward spread of uvularisation from the uvular stop /q/ is weak and blocked by /i/, /ī/ and /y/. The spread of uvularisation from the coronal consonants works rightward and leftward without being blocked by any segments.

In ᶜAbbādi Arabic (Sakarnah 1999), emphasis spreads bidirectionally within the phonological word without being blocked by any segments. Al Masri and Jongman (2004) deal with the acoustic correlates of emphasis in what they term Jordanian Arabic. Emphasis spreads bidirectionally in the dialect, with the high vowels /i/ and /u/ blocking rightward spread[13].

In Jerusalem Arabic (Card 1983), emphasis spreads bidirectionally minimally to an adjacent segment and maximally over the entire word. Leftward spread is unbounded, while rightward spread is blocked by the high vowels /i/ and /u/. In Palestinian Arabic, Herzallah (1990) shows that emphasis spreads bidirectinally within the word; where leftward emphasis is absolute, rightward spread is blocked by the set of palatals /i/, /y/ and /š/.

In southern and northern Palestinian Arabic, emphasis spreads bidirectionally, exhibiting, as for most other dialects considered above, a rightward/leftward asymmetry (Davis 1995). Leftward spread is unbounded in both dialects, whereas rightward emphasis is blocked by a set of opaque segments. In southern Palestinian Arabic, the set of opaque segments are the high front segments /i/, /y/, /j/, and /š/, whereas in northern Palestinian Arabic they are the set of the high segments /i/, /u/, /y/, /š/ and /w/. More recently, Al-Omar (2008) accounts for the process of pharyngealisation in Syrian Arabic within Optimality Theory. The study shows that emphasis is bidirectional in Syrian Arabic and that the domain of emphasis is the word that has an emphatic segment. He further shows that emphasis can also spread regressively across word boundaries when a word-initial emphatic segment spreads emphasis to the last segment of the preceding word.

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[13] The effect of /i/ and /u/ has not been tested in leftward emphasis spread.

Adopting element theory, Bellem (2007) provides a comprehensive account of the role of emphatics within the Semitic sound system. Emphasis is examined in four Arabic dialects (Baghdad Arabic, Damascus Arabic, Morrocan Arabic and Ḥōrān Arabic) using psychoacoustically defined features that comprise three resonance features: A (emphasis spreading), I (ʔimāla) and U (labialisation). Bellem shows that A spreading competes in the phonology with I and U spreading.

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2.3.5.3 Ghawa, Gahawa and Bṣala Syndromes

Typical features of many Bedouin dialects include the *gahwa*, *gahawa* and *baṣala* syndromes (cf. Palva 1976; al-Mozainy 1981; Rosenhouse 1982; de Jong 2007).

The *gahawa* syndrome applies in dialects that ban gutturals in coda positions. In this process, an underlying -aGC is realised as -aG[a]C (G = /h/, /ḥ/, /ᶜ/, /x/, /ġ/), changing *gahwa into *gahawa* 'coffee', *naᶜja into *naᶜaja* 'ewe', and *baġla into *baġala* 'female mule'. This process has been reported in many Bedouin dialects, including Negev Arabic (Blanc 1970), Bdūl Arabic (Bani Yassin and Owens 1984) and ᶜAjārma Arabic (Palva 1976). The process has also been found in some sedentary dialects, e.g. the dialects of the Egyptian Nile valley and among many sedentary speakers of Najd. This is interpreted by de Jong as evidence of the influence of Bedouin dialects on neighbouring sedentary ones (de Jong 2007: 151).

A number of Bedouin dialects, e.g. Najdi Arabic (Abboud 1979), Ḥijāzi Arabic (al-Mozainy 1981), Bani Ṣaxar Arabic (Palva 1980), Bani Ḥasan Arabic (Irshied 1984), and ᶜAbbādi Arabic (Sakarnah 1999), exhibits the *ghawa* syndrome whereby underlying /CaGC/ is realised as /CGaC/, thus changing *gahwa into *ghawa* 'coffee', *naᶜja into *nᶜaja* 'ewe', and *baġla into *bġala* 'female mule'.

The *bṣala* syndrome is also typical of many Bedouin dialects. Here an underlying /CaEC/ sequence (where E refers to emphatics) surfaces as /CEaC/ to avoid emphatics in the coda position (Rosenhouse 1982), e.g. *baṣala > *bṣala* 'onions', *maṭra > *mṭara* 'water container'.

The process has been reported in North Israel dialects of Arabic (Rosenhouse 1982), and in ᶜAbbādi Arabic (Sakarnah 1999).

2.3.5.4 ʔimāla and Raising

The term *ʔimāla* is used by medieval Arab grammarians to refer to the fronting and raising of CA /ā/ toward /ī/ and /a/ toward /i/ (Benkirane 2008). Most of the eastern sedentary and Bedouin dialects exhibt a conditioned *ʔimāla* near front consonants (Naïm 2007). The *ʔimāla* process is found in the North Syrian group, wherein /ā/ is raised into [ē] in the vicinity of the high vowel /i/, e.g. *lisān > lsēn* 'tongue' (Versteegh 2001). In several dialects in the Levant /a/ and /a:/ are raised respectively into [e] and [e:], e.g. ᶜUyūn al-Wadi Arabic in Syria (Habib 2012).

Many Bedouin dialects, e.g. Negev Arabic (Blanc 1970), Bani Ḥasan Arabic (Irshied 1984), ᶜAbbādi Arabic (Sakarnah 1999) raise the short low vowel /a/ into a front high vowel [i] in a non-final open syllable. This raising rule is very productive in both Bani Ḥasan Arabic (Irshied 1984), ᶜAbbādi Arabic (Sakarnah 1999) and affects the verbal forms I, IV, VII and VIII, e.g. *katab > kitab* 'to write', *masak > misak* 'he holds'. In ᶜAbbādi Arabic vowel raising is blocked by a preceding or following guttural or emphatic, e.g. *hadam* 'to destroy', *laxam* 'to hit'.

2.3.5.5 Umlaut

Umlaut is a phonological process which raises the short low vowel /a/ toward [i] in an open syllable under the influence of a following front high vowel (Irshied and Kenstowicz 1984). In both Bani Ḥasan Arabic (Irshied 1984) and ᶜAbbadi Arabic (Sakarnah 1999), Form I verbs of the shape CaCiC surface as CiCiC, e.g. *samiᶜ > simiᶜ* 'to hear', *laᶜib > liᶜib* 'to play'. The umlaut process is also operative in the imperfects of forms VII and VIII with an underlying yi-n-CaCiC and yi-C-t-aCiC that surface respectively as yi-n-CiCiC and yi-C-t-iCiC, e.g. *yin-šarib > yin-širib*.

2.3.6 Morphology

2.3.6.1 Personal Pronouns

In ᶜAmmāni Arabic (al-Wer 2007), gender distinction is preserved in the 2nd and 3rd persons singular but neutralised elsewhere. This contrasts with Bedouin and rural Jordanian dialects

where gender neutralisation is exhibited only in 1st person pronouns. The table below presents personal pronouns in ᶜAmmāni Arabic (al-Wer 2007), Bani Ṣaxar Arabic (palva 1980), Ġawārna Arabic (Bani Yasin 1980) and Ḥōrān Arabic (Cantineau 1946).

Table 4: Personal pronouns in ᶜAmmāni Arabic, Bani Ṣaxar Arabic, Ġawārna Arabic and Ḥōrān Arabic

	ᶜAmmāni Arabic		Bani Ṣaxar Arabic		Ġawārna Arabic		Ḥōrān Arabic	
Person-Gender	S	Pl	S	Pl	S	Pl	S	Pl
1	*ana*	*niḥna ~iḥna*	*ana*	*ḥinna*	*ana*	*iḥna ḥinna*	*ani*	*iḥna*
2m	*inta*	*intu*	*int*	*antam*	*inta*	*intu*	*int(e)*	*intu*
2f	*inti*	*intu*	*inti*	*intin*	*inti*	*intin*	*inti*	*intin*
3m	*huwwe*	*humme*	*hu*	*hum*	*hū*	*humma*	*huwwa ~hū*	*humma*
3f	*hiyye*	*humme*	*hi*	*hin*	*hī*	*hinna*	*hiyye ~hī*	*hinne*

The most notable differences between the four dialects are the final ʔimāla observed in the 1st person singular pronoun *ani* 'I' in Ḥōrān Arabic and the use of *niḥna* 'we' for the 1st person plural in ᶜAmmāni Arabic (al-Wer 2007).

2.3.6.2 Demonstrative Pronouns

All Arabic dialects exhibit a two-way deictic contrast: proximal versus distal (Vicente 2006: 369). Proximal demonstratives denote the idea of near deixis with respect to the speaker, distal ones convey the idea of far deixis (Vicente 2006: 369). The form of demonstrative pronouns differs greatly across the Arab world. The table below provides a summary of the set of distal and proximal demonstratives in ᶜAmmāni Arabic (al-Wer 2007), Ġawārna Arabic (Bani Yassin 1980) and Bani Ṣaxar Arabic (Palva 1980) in an attempt to show the variation in the use of demonstrative pronouns.

Table 5: Demonstrative pronouns in Ammāni Arabic, Ġawārna Arabic and Bani Ṣaxar Arabic

	ᶜAmmāni Arabic		Bani Ṣaxar Arabic		Ġawārna Arabic	
Referent	proximal	distal	proximal	distal	proximal	distal
3m.s	*hāḏa(a)*	*hadāk*	*hāḏa ~ hāḏ*	*haḏāk ~ ḏāk*	*hāḏ*	*haḏāk*
3f.s	*hāy ~hāḏi*	*hadīk*	*hāḏi*	*haḏīč*	*hāḏi*	*haḏīk*
3.p	*haḏōl*	*hadolāk*	*haḏolāk ~ haḏōl*	*haḏol-āk*	*haḏōl*	*haḏol-āk*

As seen in the above table, ᶜAmmāni Arabic (al-Wer 2007) is distinguished from Bani Ṣaxar Arabic (Palva 1980) and Ġawārna Arabic (bani Yasin 1980) by the presence of the stop /d/ instead of /ḏ/ in proximal demonstratives and /ḏ/ in distal demonstratives. Bani Ṣaxar Arabic and Ġawārna Arabic use mainly a similar set of demonstratives and differ in the use of *haḏīč* for 3f.s in Bani Ṣaxar Arabic.

2.3.7 Lexicon

Both Bedouin, rural and urban Jordanian dialects exhibit some lexical variation (Abd-El-Jawad 1981). Bani Yassin (1980) provides a short lexicon on the *Ghawarna* Arabic that covers the following semantic categories: sheep rearing, general and social human activity, common phrases, compound phrases and foreign words. He maintains that a large portion of these items is used in neighbouring dialects of the region due to the shared historical and socio-cultural background between all the area tribes as well as the interaction between speakers of other dialects with the Ġawārna community. Qirdin (2011) provides a short lexicon to the spoken of Amman Arabic based on the speech of younger generation. Lexical entries are arranged alphabetically. Al Mashaqba (2015) provides a short lexicon to Wadi Ramm Arabic following Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011).

2.4 Chapter Summary

An examination of the literature reveals that each Jordanian dialect has its own linguistic features that distinguish it from other dialects in the region. With this in mind, none of the linguistic features of WM Arabic have been examined before. While much of the literature on Jordanian dialects focuses on the phonetic and phonological aspects, only few studies have dealt with the morphological categories of Bedouin Jordanian dialects: Palva (1976, 1980), Bani Yasin (1980) and Yasin and Owens (1984). The present study, therefore, aims to fill a gap by providing a description of the phonological and morphological aspects of WM Arabic, and a short lexicon which serves as a reference to the dialect under investigation, following Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011). Since this is the first examination of the morphological features of a rural Jordanian dialect, the study will serve as a reference for other rural dialects in the region.

Chapter Three

The Phonological Aspects of WM Arabic

This chapter deals with the phonological aspects of WM Arabic. It first examines the phoneme system of the dialect and then presents the melodic and prosodic phonological aspects of the dialect.

3.1 The Phoneme Inventory of WM Arabic

This section provides a description of the phoneme system of WM Arabic. It starts with a description of CA consonants as described by the eighth-century CE grammarian of Arabic, Sibawayh, followed by a detailed description of WM Arabic consonants in terms of their manner and place of articulation, their phonation, and their distribution. The inventory of WM Arabic vowels is examined with some attention being given to the distribution of monophthongs and diphthongs. Some comparison is drawn between the phoneme system of WM Arabic and that of other Jordanian dialects.

3.1.1 Classical Arabic Phoneme System

The CA phoneme system consists of twenty-eight phonemes, in nine places of articulation. These phonemes are distributed as follows: seven plosives (/b/, /t/, /d/, /ṭ/, /k/, /g/, and /ʔ/), thirteen fricatives (/f/, /ṯ/, /s/, /š/, /ṣ/, /z/, /ḏ/, /ḏ̣/, /x/, /ġ/, /ᶜ/, /ḥ/, and /h/), one affricate (/j/), two nasals (/m/ and /n/), two laterals (/l/ and /ḍ/), one flap (/r/), and two glides (/y/ and /w/). The table below describes CA consonants in terms of their place and manner of articulation, and phonation (where voiced-voiceless pairs exist, the voiced member is in the right-hand of the column, the voiceless in the left-hand):

Table 6: CA consonant system (after Watson 2002)

Place / Manner	Labial	Labio-dental	Interd-ental	Dental-alveolar	Palatal	Velar	Uvular	Pharyngeal	Laryngeal
plosive	b			t d		k	q		ʔ
Emphatic plosives				ṭ					
Fricative		f	ṯ ḏ	s z	š		x ġ	ḥ ʕ	h
Emphatic fricative			ḏ̣	ṣ					
Affricates					j				
Nasal	m			n					
Lateral				l					
Emphatic lateral				ḍ					
Tap				r					
Glide					y	w			

Modern dialects of Arabic differ in the number and realisation of some of these phonemes. The most notable changes are the merger of *ḍ and *ḏ̣ into /ḏ̣/ and the realisation of the voiceless uvular stop *q as a glottal stop /ʔ/ in some urban dialects, (e.g. Jerusalem Arabic (Rosenhouse 2007; female speakers of ꜥAmmāni Arabic: al-Wer 2007, urban Palestinian Arabic: Ibrahem 1984), or as a voiced velar stop /g/ in some Bedouin and rural dialects (e.g. Ḥōrān Arabic: Cantineau 1946; Bani Ḥasan Arabic: Irshied 1984; ꜥAbbādi Arabic: Sakaranh 1999) (cf. 2.3.1). In urban Palestinian Arabic (Ibrahim 1984; Rosenhouse 2007), the reflex of *ḍ and *ḏ̣ is either [d] or [z]. In some Arabic dialects, including Cairene (Watson 2002), the reflex of the early Arabic voiced palatal stop *j is a voiced velar plosive /g/; it has the reflex /ʒ/ in some Levantine dialects, e.g. younger generation of ꜥAmmāni Arabic (al-Wer 2007). Arabic dialects show some variation in the realisation of *k; in most rural and Bedouin dialects of Syria and Jordan,*k has two reflexes: /k/ in the contiguity of back vowels and /č/ in the contiguity of front vowels. However, the reflex of *k in rural Palestinian dialects is always a palatalised /č/ (cf. Naïm 2011) (cf. 2.3.1).

3.1.2 The Consonant Inventory of WM Arabic

Examining minimal contrast between words is a common procedure to decide the phonemic inventory of the language. Two words with two different meanings are said to be in contrast if they are similar in everything except for one sound in the same environment (Roach 2000). Words that are differentiated solely by the selection of one of two segments are known as minimal pairs (Odden 2005: 44). For example, the fact that the words *tiꜥib* 'to try' and *liꜥib* 'to play' are distinguished by the initial consonants /t/ and /l/ suggests that both /t/ and /l/ are

phonemic in WM Arabic. Identifying words that contrast in one sound only is taken as a procedure to discover the phonemic inventory of the dialect under investigation. In the table below, we insert consonants into the frame *-ād* to examine the phonemic status of the consonants:

Table 7: Minimal pair test of WM Arabic consonants

Phoneme	Example	Gloss
/j/	jād	[proper name]
/k/	kād	'to be about to'
/ᶜ/	ᶜād	'to return'
/b/	bād	'to exterminate'
/ṣ/	ṣād	[the letter ṣād]
/š/	šādd	'tightening'
/m/	mādd	'extending'
/l/	lād	'to gaze'
/ġ/	ġād	'there'
/f/	fād	'to benefit'
/ḥ/	ḥādd	'sharp'
/ḏ/	ḏād	[the letter /ḏ/]
/g/	gād	'to lead'
/x/	xādd	'calm'
/z/	zād	'to add'
/s/	sādd	'to repay'
/r/	rād	'to want'

The frame *-ād* in the table below identifies seventeen phonemes in the dialect. Not all consonants in WM Arabic form meaningful words in this frame, however. In order to ascertain the phonemic status of remaining consonants, we need to consider possible contrasts within different frames. In this dialect, the segments 't', 't̲', 'ṭ', 'n', 'w', 'y', 'h', 'd', 'd̲' and 'ʔ' do not form a meaningful word in the frame *-ād*. Therefore, we examine the segment 't', for example, within a different frame and see if it forms a meaningful contrast with one of the consonants that occurs in the *-ād* frame. If /t/, for example, in a particular frame contrasts with /r/ in the same frame, which we already know contrasts with /g/, /x/, etc., then /t/ contrasts with /g/, /x/, etc.

If A contrasts with B

And B contrasts with C

Then A contrasts with C, even if we have no A x C contrast

In order to test the phonemic status of other phonemes, we will take the *-īn* frame, which ascertains the existence of 3 phonemes in the dialect.

Table 8: Minimal pair test of WM Arabic consonants

Phoneme	example	Gloss
/t/	tīn	'figs'
/d/	dīn	'religion'
/ṭ/	ṭīn	'mud'

We take the phoneme /ḥ/, whose phonemic status we ascertained within the frame *-ād*, and contrast it with /d/ within the frame *-īn*, e.g. *dār* 'home' and *ḥārr* 'hot', then we make sure that all phonemes under the two frames are in contrast. Still, there are other phonemic contrasts between consonants, not captured by the above frames. These segments will be tested in minimal pairs with already tested phonemes; for example, /h/ contrasts with /ḥ/ in *sihir* 'to stay up late' and *siḥir* 'charm'; /ʔ/ contrasts with /ʕ/ in *ʔajjal* 'to postpone' and *ʕajjal* ' to hurry'. The rest of the phonemes are shown in the table below:

Table 9: Minimal pair test of WM Arabic consonants

Phoneme	example	Example
/n/ and /m/	*najdi* 'belonging to Najd'	*majdi* [proper name]
/w/ and /š/	*Wadi* 'valley'	*šādi* [proper name]
/y/ and /g/	*nāyil* [proper name]	*nāgil* 'pregnant'
/ḍ/ and /ḏ/	*ḍall* 'to stay'	*ḏall* 'to humiliate'
/ṯ/ and /ṭ/	*ṯār* 'revenge'	*ṭār* 'to fly'

The minimal pair test reveals the existence of 27 phonemes in WM Arabic. These consonants are distributed as follows: seven plosives (/b/, /t/, /d/, /k/, /g/, /ʔ/, and /ṭ/), thirteen fricatives (/f/, /ṯ/, /s/, /š/, /ṣ/, /z/, /ḏ/, /ḍ/, /x/, /ġ/, /ʕ/, /ḥ/, and /h/), one affricate /j/, two nasals (/m/and /n/), one lateral (/l/), one tap (/r/), and two glides (/y/ and /w/). The table below provides a description of the consonantal system of WM Arabic in terms of their phonation, place and

manner of articulation. Voiceless consonants are located on the left side of the column, and voiced consonants on the right side.

Table 10: Consonant system of WM Arabic

Place / Manner	Labial	Labio-dental	Interd-ental	Apico-dental	Dental-alveolar	Alveo-lar	Palato-alveolar	Palatal	Velar	Phary-ngeal	Glottal
Plosives	b			t d					k g		ʔ
Emphatic Plosives				ṭ							
Fricatives		f	ṯ ḏ			s z	š		x ġ	ḥ ᶜ	h
Emphatic Fricatives			ḏ̣			ṣ					
Affricates							j				
Nasal	m							n			
Lateral								l			
Flap					r						
Glides								y	w[14]		

A careful look at the above table shows that the consonant inventory of WM Arabic exhibits some differences from that of CA. First, the reflex of CA voiceless uvular stop *q is a voiced velar stop /g/ in WM Arabic; thus, the words *qāl 'to say' and *saqā 'to water' are realised respectively as *gāl* and *saga*. The realisation of *q as /g/ is a feature of all Bedouin and rural Jordanian dialects, e.g. Bani Ḥasan (Irshied 1984), Bani Ṣaxar (Palva 1980), Maᶜān Arabic (Rakhieh 2009), ᶜAbbādi Arabic (Sakarnah 1999), Bani Kināna (al-Damen 2007) (cf. 2.3.1). Al-Wer (2007) shows that while female speakers of ᶜAmmāni Arabic realise *q as /ʔ/, e.g. *qāl > ʔāl 'to say', *ṭarīq > ṭarīʔ 'street', male speakers realise it as /g/. Al-Wer (2007) further shows that /g/ ~ /ʔ/ variation labels the distinction between Jordanian *gāl* dialects (Bedouin and rural dialects), and *ʔāl* dialects (urban dialects) (cf. 2.2). It also marks the distinction between male speakers of ᶜAmmāni Arabic who use /g/ and female speakers who use /ʔ/.

Second, the emphatic interdental fricative *ḏ̣ and the emphatic dental plosive *ḍ have merged into /ḏ̣/, e.g. *ḏ̣aww > ḏ̣aww 'light'; *riḍa > riḏ̣a 'satisfaction'. This is a typical feature of rural and Bedouin JA dialects (cf. 23.1). Third, the reflex of *k is /k/ in WM Arabic in all word positions. This distinguishes WM Arabic from other rural Jordanian dialects where *k has two reflexes: /k/ and /č/ (cf. 2.3.1). Thus, while the words *kaḏib 'lie' and *kitābu-ki 'your (f.s.) book' are realised respectively in WM Arabic as *kiḏib* and *ktāb-ik*, they are realised in rural Jordanian dialects, (e.g. Ḥōrān Arabic: Cantineau 1946; Maᶜān Arabic:

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[14] Dickens (2007) shows that /w/ is better described as a labio-velar glide where velarity is a primary articulation and labiality as a secondary articulation.

Rakhieh 2009), as *čiḏib* and *ktāb-ič* (cf. 2.3). To sum up, the phoneme system of WM Arabic is similar to that of other Bedouin and rural Jordanian dialects except for the realisation of *k as /k/ in all word positions. In terms of Cleveland's classification (1963), WM Arabic is similar to group I dialects except for the retention of the velar stop /k/ in all word positions. Below is a description of WM Arabic phonemes in terms of their manner and place of articulation, their phonation, and their distribution.

3.1.2.1 Stops

The class of stops refers to sounds which involve a complete stoppage of airstream in the vocal tract, hindering the airflow from coming out through the mouth (Roach 2000; Ladefoged and Johnson 2011). A plosive consonant undergoes three phases: a) the approach or occlusion phase where the articulators move to perform the blockage of the airstream; b) the hold or closure phase where the articulators carry out the blockage, preventing the air to pass; and c) the release or explosion phase where the articulators move a way permitting the air to pass. The class of stops in WM Arabic comprises: (/b/, /t/, /d/, /ṭ/, /k/, /g/, /ʔ/, /m/ and /n/).

Two types of stops are differentiated: oral stops and nasal stops. The articulation of oral stops, also known as plosives, involves raising the soft palate, which results in blocking off the nasal cavity. This forces the air to come out of the mouth, creating an oral stop. Oral stops belong to the class of obstruents because they are produced with some constriction in the vocal tract that hinders the flow of air. The list of WM Arabic oral stops comprises: (/b/, /t/, /d/, /k/, /ṭ/, /ʔ/ and /g/). Nasal stops, in contrast, are articulated by lowering the velum, allowing the air to pass through the nasal cavity. Nasal stops are sonorant sounds because air flows freely during their articulation. WM Arabic has the following set of nasal stops: (/m/ and /n/). Below is a description of both oral and nasal stops.

Voiced bilabial stop /b/

/b/ is produced by bringing the upper and lower lips together, with the vocal cords vibrating. As in a number of dialects, including Bani Ḥasan Arabic (Irshied 1984), /b/ is realised as [p] in pre-pausal position, i.e. it is devoiced before pause, i.e. *liˤib > liˤip* 'to play', *širib > širip* 'to drink'. /b/ occurs in all word positions, and it can be a geminate. Consider the table below:

Table 11: Distribution of /b/ in WM Arabic

Initially	Medially	Finally	Geminate
baḥaš	*ḥabil*	*jāb*	*kabbaš*
to dig	rope	to bring	to sleep

Voiceless apico-dental stop /t/

/t/ is produced by raising the tip of the tongue behind the upper teeth, with no vibration of the vocal cords. The dental stop /t/ occurs in all word positions, and has a geminate counterpart. Consider the following table:

Table 12: Distribution of /t/ in WM Arabic

Initially	Medially	Finally	Geminate
tēs	*šaᶜtal*	*bēt*	*nattaᶜ*
billy-goat	to cause someone some trouble	house	to make someone carry something

Voiced apico-dental stop /d/

/d/ is the voiced counterpart of /t/. It occurs in all word contexts, and can be realised as geminate. Consider the examples given in the table below:

Table 13: Distribution of /d/ in WM Arabic

Initially	Medially	Finally	Geminate
dalla	*bada*	*jaḥūd*	*šadd*
coffee pot	to start	person claiming poverty	to tighten

Emphatic voiceless apico-dental stop /ṭ/

Emphatics are sounds articulated with a secondary articulation that involves constriction of the upper pharynx, while maintaining their primary place of articulation at the dental/alveolar area (Davis 1995: 465) (cf.3.1.3). /ṭ/ is the emphatic counterpart of /t/, i.e. it is pronounced with the tip of the tongue behind the teeth on the alveolar ridge, as for /t/, but with the back of the tongue moving towards the back wall of the pharynx and constriction of the upper

pharynx. The emphatic consonant /ṭ/ may occur in all word positions and can function as a geminate. Consider the examples in the table below:

Table 14: Distribution of /ṭ/ in WM Arabic

Initially	Medially	Finally	Geminate
ṭāsa cooking pan	*šaṭṭāra* big knife for chopping meat	*zaraṭ* to swallow	*gaṭṭaᶜ* to cut off something into pieces

Voiceless velar stop /k/

The articulation of /k/ involves raising the back of the tongue towards the velum, causing a blockage of the airflow. It is realised in all word contexts, and functions as a geminate, as shown in the table below. *k has two reflexes in all rural and Bedouin Jordanian dialects: a back reflex /k/ and a palatalised front reflex /č/ (cf. 2.3.1).

Table 15: Distribution of /k/ in WM Arabic

Initially	Medially	Finally	Geminate
kassaḥ to prepare land for growing	*šarkan* to bake a type of bread called *šrāk*	*barak* to sit down	*sakkar* to close

Voiced velar stop /g/

/g/ is the voiced counterpart of /k/. The voiced velar stop /g/ occurs in all word positions, and can be a geminate. Consider the table below:

Table 16: Distribution of /g/ in WM Arabic

Initially	Medially	Finally	Geminate
gāl to say	*saga* to water	*ḥalag* to have his hair cut	*saggaṭ* to cause someone to fail

Glottal stop /ʔ/

/ʔ/ is articulated by bringing the vocal cords together, causing some closure in the airstream. The glottal stop /ʔ/ is known in Arabic as *hamzah*, and it is realised word initially, e.g. *ʔasmar* 'black', and word medially, e.g. *saʔalini* 'he asked me', but has not been attested word finally. Unlike other phonemes, the glottal stop is not found as a geminate.

There are some contexts where the glottal stop /ʔ/ is either deleted or added (as [ʔ]) in WM Arabic. First, in connected speech, the glottal stop is omitted when it is preceded by a consonant, e.g. *jibt-ʔilhum > jibt-ilhum* 'I brought to them'. Similarly, in mono-syllable words of the structure /CVʔC/, /ʔ/ has been deleted historically and that loss compensated by lengthening the preceding vowel, e.g. *faʔs > fās* 'axe', *raʔs > rās* 'head, *kaʔs > kās* 'cup'.

The insertion of the glottal stop [ʔ] occurs in vowel-initial utterances, e.g. *il-bint > ʔil-bint* 'the girl' (cf. 3.2.2.5.4).

Alveolar nasal stop /n/

/n/ is articulated by raising the tip of the tongue to touch the alveolar ridge; the soft palate is lowered, which forces the air to go through the nasal cavity. This sound occurs in all word positions, and has a geminate counterpart, as shown in the table below.

Table 17: Distribution of /n/ in WM Arabic

Initially	Medially	Finally	Geminate
nār fire	*manaᶜ* to prevent	*lsān* tongue	*banna* builder

Bilabial nasal stop /m/

The production of /m/ involves bringing up the lower and upper lips together, thus blocking the airflow. The velum is lowered forcing the airflow through the nose. It occurs in all word positions, and has a geminate counterpart. Consider the examples given in the table below:

Table 18: Distribution of /m/ in WM Arabic

Initially	Medially	Finally	Geminate
marmaṭ to assault someone	*samkari* plumber	*laḥam* meat	*samma* to name

3.1.2.2 Fricatives

The class of fricatives refers to sounds whose articulation involves two organs of speech coming close to each other, such that the air that passes between them causes some friction (Roach 2000; Reetz and Jongman 2009). The articulation of fricatives demands some stricture of the air tract, but the stricture is insufficient to lead to a complete blockage of the air. WM Arabic has the following set of fricatives: (/f/, /t̠/, /s/, /š/, /ṣ/, /z/, /ḏ/, /ḏ̣/, /x/, /ġ/, /ᶜ/, /ḥ/ and /h/). Below is a description of each phoneme.

Voiceless labio-dental fricative /f/

The production of /f/ involves a contact between the upper teeth and the lower lip, with no vibrations of the vocal cords. The air that escapes between the two articulators causes some friction, and hence it is a fricative sound. It is realised in all word positions, and has a geminate counterpart. Consider the examples given in the table below:

Table 19: Distribution of /f/ in WM Arabic

Initially	Medially	Finally	Geminate
fāt to come in	*sāfar* to travel	*t-ḥassaf* to regret	*ṭaffar* to make someone run out of money

Voiceless inter-dental fricative /t̠/

/t̠/ is pronounced by inserting the tip of the tongue between the teeth, with the vocal cords apart. It is realised in all word positions and can function as a geminate. Consider the examples shown in the table below:

Table 20: Distribution of /t̲/ in WM Arabic

Initially	Medially	Finally	Geminate
t̲aᶜlab	*mit̲il*	*ḥarat̲*	*gitt̲a*
fox	like	to plough	ridge cucumber

Voiced inter-dental fricative /d̲/

/d̲/ is the voiced counterpart of /t̲/. It occurs in all word contexts, and can be geminate. Consider the following table:

Table 21: Distribution of /d̲/ in WM Arabic

Initially	Medially	Finally	Geminate
d̲bāliyya	*ḥad̲wa*	*muᶜād̲*	*ḥadd̲ar*
dried figs	shoes	[proper name]	to warn

Emphatic voiced inter-dental fricative /ḍ̲/

The emphatic counterpart of /d̲/ is /ḍ̲/, i.e. it is pronounced by inserting the tip of the tongue between the teeth with vibration of the vocal cords, as for /d̲/, but with retraction of the body and root of the tongue towards the pharynx. It represents the two merged phonemes *ḍ̲ and *ḍ. /ḍ̲/ is realised in all word contexts and has a geminate counterpart. Consider the examples shown in the table below:

Table 22: Distribution of /ḍ̲/ in WM Arabic

Initially	Medially	Finally	Geminate
ḍ̲ālim	*haḍ̲am*	*hāḍ̲*	*naḍ̲ḍ̲ar*
oppressive	to digest	this	to instruct

Voiceless alveolar fricative /s/

The articulation of /s/ involves raising the tip of the tongue towards the alveolar ridge, with the tongue grooved, producing a hissing sound. It occurs in all word positions and can function as a geminate. For illustration, consider the examples shown in the table below:

Initially	Medially	Finally	Geminate
sufūf ground herbs	*misfaḥ* black piece of cloth wrapped around woman's head	*ḥabas* to imprison	*kassar* to break something into pieces

Voiced alveolar fricative /z/

/z/ is the voiced counterpart of /s/. It occurs in all word positions, and can function as a geminate. For illustration, consider the table below:

Table 24: Distribution of /z/ in WM Arabic

Initially	Medially	Finally	Geminate
zaᶜg salty	*ḥirza* camels'waste	*dazz* to push	*nazzal* to drop off someone

Emphatic voiceless alveolar fricative /ş/

/ş/ is the emphatic counterpart of /s/, with retraction of the body and root of the tongue into the pharynx. It occurs in all word positions, initially, medially and finally. It can also function as a geminate. Consider the examples given in the table below:

Table 25: Distribution of /ş/ in WM Arabic

Initially	Medially	Finally	Geminate
şalla to pray	*y-şinn* he listens	*bāş* bus	*ḥaşşād* harvester

Voiceless palato-alveolar fricative /š/

/š/ is articulated by raising the blade of the tongue to the area between the tooth ridge and the hard palate. It occurs in all word positions, and can function as a geminate. Consider the examples shown in the table below:

Table 26: Distribution of /š/ in WM Arabic

Initially	Medially	Finally	Geminate
šaᶜar hair	*yšum* he smells	*maᶜāš* salary	*raššaḥ* to catch a cold

Voiceless pharyngeal fricative /ḥ/

/ḥ/ is produced in the pharynx, with some friction caused by narrowing of the pharynx. It occurs in all word positions, and it can function as a geminate. A number of scholars, including Jakobson (1957), Watson (2002) and Heselwood (1992), consider /ḥ/ to be the emphatic counterpart of /h/. Dickins (2007) justifies this by mentioning Gairdner's recommendation (1925: 112) for students who try to master /ḥ/ to articulate it similar to the voiceless glottal fricative /h/ but with tightening of the pharynx. Consider the table below:

Table 27: Distribution of /ḥ/ in WM Arabic

Initially	Medially	Finally	Geminate
ḥattāt olive picker	*laḥam* meat	*misfaḥ* black piece of cloth wrapped around woman's head	*zaḥḥaf* to make someone creep

Voiced pharyngeal fricative /ᶜ/

/ᶜ/ is a pharyngeal fricative which is articulated with narrowing of the pharynx that causes very little friction. It is the voiced counterpart of /ḥ/. It occurs in all word positions, and can function as a geminate. For illustration, consider the examples given in the table below:

Table 28: Distribution of /ᶜ/ in WM Arabic

Initially	Medially	Finally	Geminate
ʔaᶜwar one-eyed	*maᶜaz* goat	*miryāᶜ* the biggest sheep	*saᶜᶜar* to price something

Voiceless glottal fricative /h/

/h/ is produced in the larynx with an open glottis that produces some friction. It occurs in all word positions, and may be geminate. Consider the following table which shows the distribution of /h/ in WM Arabic:

Table 29: Distribution of /h/ in WM Arabic

Initially	Medially	Finally	Geminate
hassaᶜ	*sihir*	*girgaᶜa*	*sahhar*
now	to stay up	turtle	to make someone stay up late

Voiceless velar fricative /x/

The production of /x/ involves raising the back of the tongue towards the velum, with the vocal cords apart. It occurs in all word positions and can be a geminate. Consider the examples shown in the table below:

Table 30: Distribution of /x/ in WM Arabic

Initially	Medially	Finally	Geminate
xūṣah	*laxam*	*nafax*	laxxam
knife	to hit	to puff	to hit

Voiced velar fricative /ġ/

/ġ/ is the voiced counterpart of /x/. It occurs word initially, medially and finally, and can be a geminate as well. For illustration, consider the table below:

Table 31: Distribution of /ġ/ in WM Arabic

Initially	Medially	Finally	Geminate
ġarsa	*mzalġim*	*farraġ*	*šaġġal*
tree	angry	to vacate	to make someone work

3.1.2.3 Affricates

The class of affricates refers to sounds produced with a complete closure in the vocal tract followed by a delayed release. Affricates are regarded as a mix of stops and fricatives, i.e. they start as stops, but are released as fricatives. The dialect under investigation has only one

affricate, i.e. the voiced palato-alveolar affricate /j/, which occurs in all word positions and can function as a geminate. For illustration, consider the examples shown in the table below:

Table 32: Distribution of /j/ in WM Arabic

Initially	Medially	Finally	Geminate
jābya trough	*ᶜajīna* dough	*ḥajj* to perform the pilgrimage	*sajjal* to register

3.1.2.4 Flaps

The class of flaps refers to sounds articulated through a rapid contact between two articulators (Ladefoged and Johnson 2011). This is the case with /r/ whose articulation involves a rapid contact between the tip of the tongue and the alveolar ridge. It occurs in all word positions, and can function as a geminate. Consider the examples shown in the following table:

Table 33: Distribution of /r/ in WM Arabic

Initially	Medially	Finally	Geminate
rama to throw away	*mijrafa* hoe	*kasar* to break	*y-farriḏ* he cuts something into pieces

3.1.2.5 Approximants

Approximants, also known as frictionless continuants, refer to sounds articulated with some constriction in the vocal tract that is greater than the constriction required for the articulation of vowels and insufficient to create any turbulence (Trask 1996: 30). They are also defined as sounds produced where two articulators come close to each other without causing any friction (Ogden 2009: 78). They are basically divided into the non-prolongable semi-vowels and the prolongable laterals (Ball and Rahilly 1999). The class of approximants in WM Arabic comprises the two semi vowels /w/ and /y/, and the lateral /l/.

3.1.2.5.1 Glides

Glides are transitional sounds whose articulation requires moving away or towards the articulator. They are similar to vowels in that both are articulated with no obstruction in the airflow. However, while vowels function as the nucleus of the syllable, glides can't. The sub-class of glides in WM Arabic comprises /y/ and /w/.

Voiced palatal approximant (semi-vowel) /y/

/y/ is articulated by raising the middle of the tongue towards the hard palate. This causes some constriction in the vocal tract but not enough to cause turbulence. It occurs initially, medially, and, rarely, word finally. Additionally, it can function as a geminate. For illustration, consider the examples given in the table below:

Table 34: Distribution of /y/ in WM Arabic

Initially	Medially	Finally	Geminate
yābis	*rāyib*	*ḥayy*	*mayyit*
crusty	yoghurt	district	dead

Voiced labio-velar approximant /w/

/w/ is produced by raising the back of the tongue towards the soft palate, with the lips being rounded. This causes some constriction in the vocal tract but insufficient to cause any turbulence. Similar to /y/, the glide /w/ occurs mainly word initially and medially. It rarely occurs word finally. It can occur as a geminate as well. Consider the following examples in table below:

Table 35: Distribution of /w/ in WM Arabic

Initially	Medially	Finally	Geminate
walad	*ḥwār*	*laww*	*ḥawwaš*
boy	camel's female	if	to collect

3.1.2.5.2 Laterals

The class of laterals refers to sounds whose articulation involves a median closure in the mouth with the air escaping through from one or both sides of the tongue (Trask 1996: 198). WM Arabic has only one lateral sound, i.e. the voiced alveolar lateral /l/. This sound appears in all word positions, and may be geminate counterpart, as shown in table below. It is worth noting that there is a secondary emphatic counterpart of /l/ which is realised in a number of words in the dialect in the vicinity of the back vowels /a/ and /ā/, e.g. *gāḷ* 'to say' and *xāḷ* 'maternal uncle'. This will be further investigated later in section (3.2.1.1.5).

Table 36: Distribution of /l/ in WM Arabic

Initially	Medially	Finally	Geminate
libis	*zilīṭ*	*baddal*	*jallas*
to wear	group of kids	to change	to make someone sit

3.1.3 Overview of Arabic Emphasis

Emphasis involves a primary articulation and a secondary articulation. The primary articulation of these emphatic consonants is the dento-alveolar region, while that of the secondary articulation is the upper region of the pharynx. Emphasis refers to sounds articulated with a secondary articulation in the back of the vocal tract, while keeping their primary place of articulation (Kahn 1975: 39). The result of this is a set of phonemes that contrast phonemically with each other, one being emphatic and the other plain. Emphatic segments and their plain counterparts share the same place and manner of articulation and differ only in the feature [+emphatic] or [-emphatic]. Kahn (ibid) holds that stops and fricatives are the most common emphatics.

McCarthy (1994: 38) holds that emphasis in Arabic dialects is characterised by some kind of constriction in the upper pharynx in addition to a primary constriction in the dento-alveolar region. Similarly, Davis (1995: 465) defines emphasis as the production of sounds 'with a primary articulation at the dento-alveolar region and with a secondary articulation that involves the constriction of the upper pharynx'. In addition to dentals and alveolar, he claims that the class of emphatics comprises bilabials.

Although there is a consensus that the tongue dorsum is the active articulator, there is debate over the actual place of pharyngeal constriction whether it is the upper pharynx-(uvularisation/velarisation), or the lower pharynx. This has led some scholars to use the phonetic label 'pharyngealisation', which refers to the general role of the pharynx in the articulation of emphasis (Bellem 2007), and others to adopt the term "uvularisation" (Zawaideh 1998).

Linguists draw a distinction between pharyngeals and pharyngealised segments, maintaining that while the former refer to sounds whose primary articulator is the pharynx, the latter refer to sounds pronounced with a secondary articulation in the upper region of the pharynx (Ghazeli 1977). In her investigation of emphasis in Ṣanʕāni Arabic, Watson (1999: 289)

argues that the class of emphatics is not restricted to consonants with a primary dento-alveolar articulation, but also embraces pharyngeals.

Two classes of emphatics are differentiated: primary and secondary emphatics, or marginal emphatics (Blanc 1953; Younes 1982; Card 1983). Primary emphatics refer to the set of pharyngealised coronals. They are traditionally viewed as primary or phonemic because they cause spreading of emphasis to other segments (Bellem 2007). These are: /ṭ/, /ṣ/, /ḏ̣/, /ḍ/, and they contrast respectively with the following set of plain coronals /t/, /s/, /ḏ/, and /d/. Secondary or non-phonemic emphatics refer to the set of emphatics which become emphatic under the influence of a primary emphatic, with the exception of /ṛ/ /ḷ/ in few cases (Bellem 2007). Typically, secondary emphatics occur only in a handful of words in the vicinity of the low vowels /a/ and /ā/ (Davis 2009: 637). The most common marginal emphatics in the literature are /ṛ/ /ḷ/, /ṃ/, and /ḅ/. For example, the emphatic segments /ḷ/ and /ṃ/ occur in the words *wa-ḷḷa* 'by God' and *ṃayy* 'water' which both contrast respectively with *walla* 'to appoint him' and *mayy* [proper name]. Youssef (2013: 100-101) argues that all Cairene Arabic surface consonants have emphatic counterparts except for the voiceless uvular stop /q/. He shows that while the set of coronal emphatics ṭ/, /ṣ/, /ḏ̣/, /ḍ/ and /ṛ/ occurs in different vocalic environments, the rest of the emphatics occur only in the vicinity of the low back vowel /a/, e.g. *ʔaḅḅ* 'father', *yaṃṃa* 'mother', *haḷḷa* 'how wonderful'. This leads him to claim that the low back vowel has an underlying emphatic feature.

Similar to many Jordanian dialects (al Ṣughayer 1990; Sakarnah 1999), the set of primary emphatics in WM Arabic comprises the pharyngealised consonants /ṭ/, /ṣ/ and /ḏ̣/ (cf. 3.2.5.2). The set of pharyngealised emphatics /ṭ/, /ṣ/ and /ḏ̣/ contrasts respectively with /t/ and /d/; /s/ and /z/; and /ṯ/ and /ḏ/ as in the following examples.

1- /ṭ/, /t/   *ṭūb* 'block': *tūb* 'repent, imp.'
                ṭaraf 'side': *taraf* 'luxury'

   /ṭ/, /d/   *ᶜaṭṭal* 'deactivate': *ᶜaddal* 'to modify'
               ṭār 'to fly': *dār* 'home'

2- /ṣ/, /s/   *ṣād* [the letter ṣād]: *sād* 'to control'
                ṣabb ' to pour': *sabb* 'to curse'

   /ṣ/, /z/   *ṣār* 'to happen': *zār* 'to visit'

ʔaṣīd 'I hunt': ʔazīd 'I add'

3- /ḏ/, /ḍ/   ḏāᶜ 'to lose': ḍāᶜ 'to broadcast'

                      ḏāwi 'lighting': ḍāwi 'pale'

                      yḏill 'to misguide': yḍill 'to oppress'

   /ḏ/, /ṭ/   ḏār 'hurtful': ṭār 'revenge'

                      ḏāmir 'intending': ṭāmir [proper name]

The primary emphatics occur in different vocalic environments, as shown in the table below:

<p align="center">Table 37: Distribution of emphatic segments in WM Arabic</p>

Word-initially	Word-medially	Word-finally
ṣār 'to happen'	y-ṣawwir 'to build a wall'	xāṣ 'private'
ṭīr 'go away	y-ṭawwir 'he develops'	ḥaṭṭ ' to put'
ḏallat 'she stayed'	gāḍi 'judge'	ḥaḍḍ 'luck'
ṭūb 'block'	xūṣa 'knife'	marbūṭ 'tied'
ḏēm 'oppression'	ḥēṭ-ak 'your wall'	xēṭ 'thread'

The secondary emphatics occur only next to the low vowels /a/ and /ā/. The set comprises the emphatic segment /ṃ/ which exists in the word ṃayy 'water', the flap segment /ṛ/ which occurs in few words, e.g. baṛṛa 'out' and the lateral emphatic /ḷ/ which occurs in a number of words in the dialect, including aḷḷaḥ 'God', xāḷ 'maternal uncle', and gāḷ 'to say'. Where primary emphatics contrast with their plain counterparts and occur unrestrictedly, these secondary emphatics occur only in a handful of words in the vicinity of the low vowels /a/ and /ā/.

3.1.4 Vowel Inventory

CA vowel inventory consists of three short vowels /i/, /u/, and /a/, three long vowels /ā/, /ū/, and /ī/, and two diphthongs /ay/ and /aw/. To decide the vowels of the WM Arabic, we will examine minimal pair contrasts between words (cf. 3.1.2). Consider the table below where each two sounds are in minimal pairs:

Table 38: Minimal pair test of WM Arabic vowels

Phoneme	Examples
/ē/ and /ā/	*sēl* 'stream', *sāl* 'to flow'
/ē/ and /ī/	*dēn* 'debt', *dīn* 'religion'
/ō/ and /ū/	*ṣōm* 'fasting', *ṣūm* 'fast, imp.'
/a/ and /u/	*marr* 'to pass', *murr* 'bitter'
/i/ and /a/	*ʔismaᶜ* 'listen! (m.s.)', *ʔasmaᶜ* 'I listen'

Thus, the vowel inventory of WM Arabic comprises three short vowels: /i/, /u/ and /a/, and five long vowels: the three long vowels of CA plus two long mid vowels, /ē/ and /ō/. Like many Arabic dialects, CA diphthongs *ay and *aw are realised as /ē/ and /ō/ due to a monophthongisation process whereby a diphthong is realised as a monophthong as shown in table 37 (cf. 3.2.1.2). The two long mid vowels /ē/ and /ō/ are shown to be distinctive as is shown in the subsequent section. Besides, the vowel system of WM Arabic comprises two allophones: the short mid vowels [e] and [o]. Both vowels [e] and [o] are regarded as allophones of /i/ and /u/ respectively, because there is no contrast between the sounds. For example, there is free variation in *māhir* and *māher* [proper name] and *kura* and *kora* 'ball'. The table below summarises the vowel inventory of WM Arabic:

Table 39: Vowel inventory of WM Arabic

	Front		Back	
High	i	ī	u	ū
Mid		ē		ō
Low			a	ā

3.1.4.1 The Distribution of Diphthongs and Monophthongs in WM Arabic

The long mid vowels /ē/ and /ō/ are reflexes of CA diphthongs *ay and *aw respectively, as shown in table below:

Table 40: Reflexes of CA diphthongs

CA	WM Arabic	Gloss
ḍayf	ḍēf	guest
ṣayd	ṣēd	hunting
kayf	kēf	how
ṣawm	ṣōm	fasting
nawm	nōm	sleeping
lawm	lōm	blaming

There are four contexts in which *ay and *aw are retained in WM Arabic:

1. Where /w/ or /y/ is the first consonant in the root, e.g. *ʔaysar* 'easier', *ʔawgaḥ*, ruder than'.
2. Where /w/ or /y/ is a geminate, e.g. *sayyāra* 'car', *sawwat* 'she did'.
3. Where a monosyllabic word ends in a glide, e.g. *jaww* 'weather', *ḥayy* 'district'.
4. In quadriliteral verbs and nouns where the second root consonant is a glide, e.g. *t-ḥaywan-at* 'she behaved like an animal', *kawlasa* 'plotting against someone'.

Consonantal roots including a glide are classified into three classes depending on the position of that glide: initial-weak roots where the glide is the first radical, e.g. *w-ᶜ-d* 'to promise', medial-weak- roots where the glide is the second radical, e.g. *s-y-r* 'to walk' and final-weak roots where the glide is the final radical, e.g. *j-l-y* 'to wash' (cf. 4.2). A root can include up to two glides in any position except for initial and medial positions (Ryding 2005: 429). The following is an attempt to adapt Youssef (2013) to explore the distribution of diphthongs and monophthongs in WM Arabic.

3.1.4.1.1 Initial-Weak Roots

CA diphthongs *ay and *aw are realised in derived nouns, adjectives and verbs when a glide is the initial consonant in the root. For illustration, consider the examples provided in table below:

Table 41: Realisation of CA *ay and *aw in WM Arabic

Root	Example	Glossing
w-g-ḫ	ʔawgaḫ	ruder than
w-r-ṯ	mawrūṯ	inherited
y-s-r	maysūr	wealthy
w-n-s	ʔawnas	lovelier
w-ᶜ-d	mawᶜūd	promised
y-s-r	ʔaysar	it is easier
w-r-d	ʔawrida	veins
w-ṣ-l	tawṣīl	delivery
w-j-h	tawjīhi	12th grade examination
y-s-r	taysīr	[proper name]
w-ṣ-l	ʔawṣal	I arrive

3.1.4.1.2 Medial-Weak Roots

Verbs whose medial radical is a glide are called hollow verbs *al-fiᶜl al-ajwaf* (cf. 4.2). The two long mid vowels /ē/ and /ō/ appear in most generic and common nouns derived from medial-weak roots, e.g. *ṣēd* 'hunting', derived from *ṣ-y-d*, *bēᶜ* 'selling', derived from the root *b-y-ᶜ*, *mōt* 'death', derived from *m-w-t*. Geminate glides block the monophthongisation process as shown in table below:

Table 42: Gemination as a blocker of monophthongisation in WM Arabic

Root	Example	Gloss
n-w-ᶜ	tanawwuᶜ	diversity
x-y-ṭ	xayyāṭ	tailor
b-y-ᶜ	bayyāᶜ	shop assistant
ṣ-y-d	ṣayyād	hunter
š-y-l	šayyal	to make someone carry something

Biliteral roots whose C2 and and C3 are glides undergo a degemination process when followed by a consonant-initial suffix (cf. 3.2.2.5.5). The single glide with the preceding short mid vowel makes up a diphthong as shown in the table below.

Table 43: Degemination of glides in WM Arabic

Root	Input	Output
ḥ-y-y	*ḥayy* 'district'	*ḥay-na* 'our district'
j-w-w	*jaww* 'weather'	*jaw-ha* 'its (f.) weather'
z-y-y	*zayy* 'like'	*zay-ha* 'like her'

Both /ay/ and /aw/ are retained in quadriliteral nouns and verbs where the antepenultimate root consonant is a glide, e.g. *ḥawgal-a* 'saying there is no power and no strength save in God', *ḥaywan-a* 'animalistic behaviour'.

Interestingly, /ay/ and /aw/ contrast with the long mid vowels /ē/ and /ō/ in WM adjectives and nouns that are derived from medial-weak verbs and ending in the suffix *-i*. Where *-i* represents the adjectival morpheme, diphthongs are exhibited; where *-i* represents the first singular possessive suffix, monophthongs are exhibited. Consider the examples given in the table below:

Table 44: Contrast between /ay/ and /aw/ and /ē/ and /ō/ in adjectives and nouns

Root	/i/ as an adjectival morpheme	/i/ as a singular possessive suffix
d-w-r	*dawr-i* 'periodic'	*dōr-i* 'my turn'
x-y-r	*xayri* 'charitable'	*xēr-i* 'belonging to my goodness'
y-w-m	*yawm-i* 'daily'	*yōm-i* 'my day'
g-w-m	*gawm-i* 'nationalist'	*gōm-i* 'my tribe'
f-w-g	*fawg-i* 'proud'	*fōg-i* 'above me'

3.1.4.1.1.3 Final-Weak Roots

Verbs whose last radical is a glide are called defective verbs. Defective verbs are treated as vowel-final verbs (Watson 2002: 145). When consonant-initial subject suffixes are concatenated to the stem in the perfect aspect, the short low vowel is omitted and the long vowel /ē/ is inserted before consonant-initial suffixes, e.g. *daᶜ-ē-na* 'we prayed' (cf. 4.4). Consider the examples given in table below:

Table 45: Defective verbs in WM Arabic

Root	Example	Gloss
m-š-y	maš-ē-t	I walked
j-l-y	jal-ē-t	I did the washing
s-w-y	saw-ē-t	I did
d-ᶜ-w	daᶜ-ē-t-i-lhum	I prayed for them
n-s-y	nis-ē-na	we forgot
x-b-y	xabb-ē-t	I hid
ġ-ṭ-y	ġaṭṭ-ē-t	I covered

3.2 The phonological Processes of WM Arabic

The aim of this section is to examine the major phonological aspects of WM Arabic and link them to those exhibited by other Jordanian dialects. The discussion deals with the major melodic and prosodic processes of the dialect under investigation.

3.2.1 Melodic Phonological Processes

Melodic processes are processes that influence the quality of the segment. The melodic processes that are tackled in this study are assimilation processes: definite article assimilation, assimilation of prefixal *t-* to coronal obstruents, sonorant assimilation, non-coronal assimilation and emphasis spread, and umlaut.

3.2.1.1 Assimilation

Assimilation is a phonological process whereby one sound influences the articulation of another segment, so that the two sounds become more alike or identical (Trask 1996; Crystal 2008; Pavlík 2009). Arabic exhibits a number of assimilatory processes including assimilation between consonants, assimilation between vowels, assimilation of a consonant to a vowel, and assimilation of a vowel to a consonant. Assimilation processes can be classified in terms of its direction into: regressive, progressive and coalescent (cf. 2.3.5.1). Below is a discussion of the main assimilation processes of WM Arabic.

3.2.1.1.1 Definite Article Assimilation

Definite article assimilation is the most common type of assimilation in most, but not all, Arabic dialects (Haddad 1984; Hamid 1984; Irshied 1984; Sakarnah 1999; Watson 2002; Elramli 2012; Youssef 2013). The lateral /l/ of the definite article, which is realised in most dialects either as /al/ or /il/, assimilates totally to a following coronal consonant, resulting in a geminate coronal (2.3.5.1). Coronals are sounds produced by raising the tip or blade of the tongue from its neutral position to the roof of the mouth, including alveolars, dentals, and palato-alveolars (Crystal 2008). Coronal sounds are traditionally called in Arabic *al-ḥurūf al-šamsiyyah* because /l/ of the definite article /al/ assimilates totally to the sound /š/ in the word *al-šams 'the sun', producing *aš-šams*. The set of WM Arabic coronal sounds comprises: /t/, /d/, /ḏ/, /š/, /ṯ/, /s/, /ṣ/, /ḍ/, /z/, /ṭ/, /n/, /r/ and /l/. The following table present illustrative examples of this type of assimilation.

Table 46: Definite article assimilation in WM Arabic

Underlying Form	Surface Form	Gloss
il-damas	id-damas	the stone
il-samaga	is-samaga	the mud made of soil and hay
il-rātib	ir-rātib	the salary
il-ṯawra	iṯ-ṯawra	the revolution
il-ṭāwla	iṭ-ṭāwla	the table
il-ḏaha	iḏ-ḏaha	the gold
il-zilīṭ	iz-zilīṭ	the kids of sheep
il-nās	in-nās	the people
il-šiliyya	iš-šiliyya	the herd of sheep

As shown in the above examples, *l-* of the definite article assimilates obligatorily to a following coronal sound, resulting in a geminate. Similar to Bani Kināna Arabic (al-Damen 2007), the *l-* of the definite article assimilates optionally to a following palato-alveolar affricate /j/ in WM Arabic. This can be exemplified by the word *il-jāmᶜa* 'the university', which can be realised either as *il-jāmᶜa ≈ ij-jāmᶜa*, and *il-jēš 'the army' which might be realised as *il-jēš ≈ ij-jēš* (cf. 2.3.5.1).

No assimilation occurs if the word following the article starts with a non-coronal sound, i.e. sounds which are traditionally known in Arabic as *al-ḥurūf al-qamariyyah*. To illustrate this, consider the examples in table below.

Table 47: Definite article assimilation to non-coronal sounds

Underlying Form	Surface Form	Gloss
il-micza	il-micza	the goats
il-bāb	il-bāb	the door
il-galb	il-galb	the heart
il-fazca	il-fazca	the help
il-cēš	il-cēš	the food
il-ġarsa	il-ġarsa	the tree
il-ḥamāṭa	il-ḥamāṭa	the fig tree

Due to a constraint in the dialect which bans three-consonant clusters, *l-* of the definite article undergoes elision when it concatenates to a following consonant cluster, as shown in the examples below (cf. 3.2.2.51).

Table 48: Elision of the definite article in WM Arabic

Underlying Form	Surface Form	Gloss
il-dwār	i-dwār	the turns
il-ṣlēbiyya	i-ṣlēbiyya	the ground wheat
il-mrābci	i-mrābci	the person who works in farming
il-ṣyām	i-ṣyām	the fasting
il-cyāl	i-cyāl	the sons

The definite article assimilation thus differs from cAbbādi Arabic (Sakarnah 1999) where *l-* of the definite article does not assimilate to a following palate-alveolar (cf. 2.3). It also differs from the Ġawārna dialect(Bani Yassin 1980) where *l-* of the definite article tends to assimilate to any following consonant except for the glottal stop /ʔ/ which is elided, *al-blād > a-bblād* 'the country', *al-ḥamīr > aḥḥamīr* 'donkeys' (cf. 2.3.5.1).

3.2.1.1.2 Assimilation of t- to Coronal Obstruents

A common process in WM Arabic occurs where prefixal *t-* assimilates to a following coronal plosive, affricate or fricative. The *t-* prefix can be the imperfect *t-* prefix which marks both the 3rd feminine (singular and plural) or 2nd person. It can also be the detransitivizing prefix *t-* in V and VI verbal forms which indicates passiveness or reflexivity of the verb and which

often forms the passive of Form II, e.g. *kassar-t-ha* 'I broke it (f.)' (Form II) and *t-kassar-at* 'it broke (f.)' (Form V). First, all the informants I interviewed assimilate the prefix *t-* to a following (/t/, /d/, /ṭ/ and /j/). This suggests that assimilation of the prefix *t-* to a following coronal plosive or affricate is obligatory in the dialect. The outcome of this is an impermissible initial geminate that is amended by prosthesis of the high short vowel [i]. For illustration, consider the examples given in the table below:

Table 49: Total assimilation of the prefix *t-* to coronal stops

Underlying Form	Surface Form	Gloss
t-daxxal	id-daxxal	he interfered
t-dallal	id-dallal	he spoiled
t-ṭahhar	iṭ-ṭahhar	he circumcised
t-ṭallaᶜ	iṭ-ṭallaᶜ	he looked
t-dizz	id-dizz	she was pushing
t-daxxin-u	id-daxn-u	you (m.pl.) smoked
t-jawwaz-at	ij-jawwaz-at	she got married
t-dawr-an	id-dawr-an	you (f.pl.) are looking for something

Second, the prefix *t-* assimilates optionally to a following coronal fricative; the set of coronal fricatives are (/ḏ/, /š/, /ṯ/, /s/, /ṣ/, /ḍ/, /z/). Six informants never applied this type of assimilation. For illustration, consider the examples given in the table below:

Table 50: Assimilation of the prefix *t-* to coronal fricatives

Underlying Form	Surface Form	Gloss
t-ḏall	iḏ-ḏall	she stays
t-ṣallu	iṣ-ṣallu	you (m.pl.) are praying
t-šaffi	iš-šaffi	she is taking the meat off bones
t-ḏammar	iḏ-ḏammar	he complains
t-sābag	is-sābag	he races
t-ṣālaḥ	iṣ-ṣālaḥ	he reconciles
t-ṯāwab	iṯ-ṯāwab	he yawns
t-zāwar	iz-zāwar	he makes a visit
t-šāwar	iš-šāwar	he consults

However, no assimilation occurs when the prefix *t-* attaches to a coronal sonorant, a labial, a velar or a guttural. Consider the examples provided in table below:

Table 51: The detransitivizing prefix *t-* with sonorants, labials, velar and gutturals

Underlying Form	Surface Form	Gloss
t-kassar	t-kassar	he broke
t-kabbiš	t-kabbiš	she sleeps
t-gāsam	t-gāsam	he shared
t-lāsan	t-lāsan	he argued
t-ᶜarbaš	t-ᶜarbaš	he climbed
t-nāsa	t-nāsa	he forgot something on purpose
t-raddad	t-raddad	he hesitated
t-ḥassas	t-ḥassas	he touched

Total assimilation also occurs in normal speech where a word ending in /t/ is immediately followed by a coronal obstruent, as shown in the following examples:

1- *grābit ṭāha > grābiṭ ṭāha* 'a relative of Tāha [proper name]'
2- *jābat ṣāliḥ maᶜha > jābaṣ ṣāliḥ maᶜha* 'she brought Sāliḥ [proper name] with her'

3.2.1.1.3 Sonorant Assimilation

WM Arabic has an optional rule which totally assimilates the sonorant sounds (/n/, /r/, and /l/) to each other across morpheme and word boundaries. All instances of sonorant assimilation are common in fast speech. First, the alveolar nasal /n/ assimilates optionally to a following /l/ and /r/, resulting in a geminate. To illustrate this type of assimilation, consider the examples given in the table below:

Table 52: Regressive assimilation of /n/ to /l/, /r/

Underlying Form	Surface Form	Gloss
barhan-luh	barhal-lu	he proved to him
kān lābis banṭalōn	kāl lābis banṭalōn	he was wearing trousers
yin-lām	yil-lām	he is to be blamed
bayyan-l-hum	bayyal-l-hum	he showed them
wēn liṣtu?	wēl liṣtu	where did you (m.pl.) go?
min rās mnīf	mir rās mnīf	from rās Mnīf [city name]
wēn riḥit?	wēr riḥit	where did you go?
ᶜēn rāmi	ᶜēr rāmi	Rami's eye

/l/ assimilates optionally to a following /r/, but fails to assimilate to the nasal coronal /n/. Six out of ten informants assimilated the lateral /l/ to a following /r/; however, none of them assimilated /l/ to following nasal /n/. Consider the examples provided in the table below:

Table 53: Assimilation of /l/ to /r/

Underlying Form	Surface Form	Gloss
rajul rākiz	rajur rākiz	a wise man
jamal rasmi	jamar rasmi	the camel of Rasmi [proper name]
il kul rāḥ	il kur rāḥ	all have gone
ᶜāmil rasmi	ᶜāmir rasmi	an official worker
ṭubal rāsi	ṭubar rāsi	he did my head in

Assimilation of /r/ to a following /l/ is common, whereas assimilation of /r/ to /n/ is very rare. Consider the examples given in the table below:

Underlying Form	Surface Form	Gloss
ᶜumur nāyif	ᶜumun nāyif	the age of Nāyif [proper name]
ṣār lābis	ṣāl lābis	he finished wearing
šajar laymūn	šajal laymūn	a lemon's tree
fakkar lēlitha bil-mawḏūᶜ	fakkal lēlitha bil-mawḏūᶜ	he was thinking about it that night

3.2.1.1.4 Non-Coronal Assimilation

The process of non-coronal assimilation occurs across word-boundaries in WM Arabic when a non-coronal stop is followed by its homorganic fricative. That is to say, the voiced bilabial stop /b/ assimilates to a following /f/; the voiceless velar stop /k/ assimilates to a following /x/; and the voiced velar stop /g/ assimilates to a following /ġ/. The process occurs optionally in the dialect; only seven out of 15 informants applied non-coronal assimilation in fast speech. The process of non-coronal assimilation applies even when a geminate is followed by its homorganic fricative. Consider the examples provided in table below:

Table 55: Non-coronal assimilation

Underlying Form	Surface Form	Gloss
ʔajīb faḥam	ʔajīf faḥam	I brought charcoal
ḥabb fāṭmah	ḥaf fāṭmah	he loves Fāṭma [proper name]
jāb flūs	jāf flūs	he brought money
jāb-lak xubiz	jāb-lax xubiz	he brought you some bread
il-bank xisir	il-banx xisir	the bank lost
ḥagg ġadāy moš maᶜi	ḥaġ ġadāy moš maᶜi	I don't have the price of my lunch
il-ḥallāg ġāli	il-ḥallāġ ġāli	the barber is expensive

The process of non-coronal assimilation fails to apply if the order is reverse, i.e. where the non-coronal fricative is followed by its homorganic stop. Thus, no assimilation occurs between the labio-dental fricative /f/ and its homorganic /b/ in the form *ᶜāf badanu* 'he hates

himself'; between /x/ and a following /k/, e.g. *ʔijlax kwayyis is-sikkīna* 'wet the knife well'; and between /ġ/ and a following /g/, e.g. *ṣāyyiġ gadīm* 'an old jeweller'.

3.2.1.1.5. Emphasis Spread

Emphasis refers to the phonetic feature which characterises the articulation of consonants that involve a primary articulation and a secondary articulation (Kahn 1975). The primary articulation of these emphatic consonants is the dento-alveolar region, while that of the secondary articulation is the upper region of the pharynx (cf. 3.1.3 and 3.2.5.2). The general consensus is that the set of CA primary emphatics comprises /ṭ/, /ṣ/, /ḍ/ and /ḏ̣/ whereas current dialects have /ṣ/, /ṭ/ alongside either /ḍ/ ~ /ẓ/ or /ḏ̣/, less commonly /ḷ/ and /ṛ/ and occasionally /ṃ/ and /ḅ/ (Bellem 2007: 22).

Emphasis spread, *tafxīm*, is an assimilation process whereby an emphatic segment spreads tongue root retraction [+RTR] to neighbouring segments (al Khatib 2008: 1). As a result, high-mid front vowels are centralised, back vowels are lowered, and low vowels are backed (Abdel-Massih et al 1979: 77). While other assimilation processes requires that a segment spreads a portion or all features of a trigger to an adjacent target, emphasis spreads to all consonants and vowels minimally in the syllable and maximally in the phonological word (Watson 2002: 268).

A number of studies have examined emphasis spread both theoretically and instrumentally, including Blanc (1964; 1970), al Ani (1970), Ghazeli (1977), Card (1983), Younes (1993), Davis (1995), Zawaydeh (1998; 1999), Watson (1999; 2002), de Jong (2000), Sakarnah (1999), al Masri and Jongman (2004), Bellem (2007). Below is an examination of emphasis spread in WM Arabic, its source, domain, and directionality.

The source that triggers emphasis is still controversial among phonologists. Most phonologists attribute the source of emphasis to the set of pharyngealised consonants, including /ṭ/, /ṣ/, /ḏ̣/, and /ḍ/ (Ghazeli 1977, Younes 1982, Card 1983, Davis 1993; Sakarnah 1999). In some dialects, there are sonorant emphatics, including the emphatic flap /ṛ/ (Cairene Arabic: Broselow 1976, Youssef 2013; Palestinian Arabic: Younes 1994); the emphatic lateral /ḷ/ (Classical Arabic: Ferguson 1956; Cairene Arabic: Broselow 1976, Youssef 2013; Baghdadi Arabic: Youssef 2013), and the emphatic nasal /ṃ/ (North Palestinian Arabic: Blanc 1953). Moreover, some phonologists maintain that emphasis is a suprasegmental feature whose influence reaches all consonants and vowels in the word (Ferguson 1956). Youssef (2013) claims that the low back vowel /a/ may function as a trigger of emphasis in

the absence of the coronal emphatics (/ṭ/, /ṣ/, /ḏ̣/, /ḍ/ and /ṛ/). He justifies this by arguing that all consonants in Cairene Arabic, except for the emphatic coronals /ṭ/, /ṣ/, /ḏ̣/, /ḍ/ and /ṛ/, are emphatic only in words that contain the low back vowels /a/ or /ā/. Additionally, he shows that a foreign word with a back low vowel is pronounced with emphasis in Cairene Arabic, e.g. the Italian word *lampa* 'light' is realised *ḷaṃḅa*.

The set of emphatics in WM Arabic comprises two stops: /ṭ/ and /ṃ/, two fricatives /ṣ/ and /ḏ̣/, one flap /ṛ/ and one lateral /ḷ/; of these, /ṃ/, /ṛ/ and /ḷ/ are not frequent. They can be classified into two classes: a primary set of /ṭ/, /ṣ/ and /ḏ̣/ which exhibit phonemic contrast with their plain counterparts in all vocalic environments and a secondary set of /ṃ/, /ṛ/, and /ḷ/ which exhibit phonemic contrast in a few words only in the vicinity of the low vowels /a/ and /ā/ (Cf. 3.1.3). /ṛ/ has the widest occurrence among the secondary emphatics. The following table shows examples of emphatic/nonemphatic contrasts in WM Arabic:

Plain	Emphatic
tāb 'to repent'	*ṭāb* 'to recover'
ṭīn 'mud'	*tīn* 'figs'
ḥatt 'to erode' 'to (leaf) fall'	*ḥaṭṭ* 'to put'
natt 'to take a decision'	*naṭṭ* 'to jump'
sēf 'sword'	*ṣēf* 'summer'
sabb 'to curse'	*ṣabb* 'to pour'
ḏill 'humiliation	*ḏ̣ill* 'shadow'
yiḏwi 'he withers'	*yiḏ̣wi* 'he turns the light on'
ḏamm 'to gossip'	*ḏ̣amm* 'to hug'
daxal 'to go inside'	*daxaḷ* 'to ask for protection'
daxla 'by-street'	*daxḷa* 'marriage day'
mayy [proper name]	*ṃayy* 'water'
barra 'to exonerate'	*baṛṛa* 'outside'

Arabic dialects vary in terms of the directionality of emphasis (leftwards or rightwards), and the domain of emphasis spread. For example, emphasis can affect the syllable as in Lebanese Arabic (Obrecht 1968) and Egyptian Arabic (Broselow 1979); it may affect the whole phonological word, as in Palestinian Arabic (Herzallah 1990) and Qatari Arabic (Bukshaisha 1985); and sometimes it does not proceed further than the adjacent vowel, as in the dialect of Abha spoken in Saudi Arabia (Younes 1991). Blanc (1970) shows that the domain of emphasis in Negev Arabic is maximally the word and minimally the syllable, arguing that an emphatic trigger spreads emphasis into suffixes when they are adjacent. Sometimes, emphasis spreads bidirectionally over the whole word; for example, in the southern and northern Palestinian dialects investigated by Davis (1995), emphasis spreads bidirectionally

with some restrictions on rightward spread, i.e. there are some segments which impede the rightward spread of emphasis in each dialect. This includes the set of high front segments in southern Palestinian Arabic (/i/, /y/, /j/, /š/), e.g. *ṭannašt-hum* 'I ignored them' is realised as *ṭannašt-hum,* and the set of high segments in Northern Palestinian Arabic (/i/, /u/, /y/, /š/ and /w/) (cf. 2.3.5.2). Al Masri and Jongman (2004: 104) show that emphasis works bidirectionally in Jordanian Arabic, claiming that 'the degree of emphasis decreases as the distance from the target syllable increases' (cf. 2.3.5.2). They further add that emphasis is bidirectional in the dialect, claiming that the opaque segments /i/ and /u/ reduce the effect of emphasis to the minimum. Broselow (1976) and Youssef (2013) maintain that the four pharyngealised emphatics (/ṭ/, /ṣ/, /ḏ̣/, /ḍ/) spread emphasis bidirectionally in Cairene Arabic without being blocked by any segment.

An examination of WM Arabic shows that an emphatic segment spreads emphasis bidirectionally in the dialect, i.e. leftward and rightward; emphasis spreads maximally over the word and minimally over the syllable. In the table below, a set of minimal pairs distinguished solely by the ± emphasis feature are given to show the domain of emphasis in WM Arabic. The spread of emphasis is indicated by an underline.

Table 57: Domain of emphasis in WM Arabic

Emphatic	Plain
balaṣ 'to flee'	*balas* 'to tell a secret'
maṣṣ 'to suck'	*mass* 'touch'
ṣalla 'to pray'	*salla* 'to entertain'
ṣabb 'to pour'	*sabb* 'to curse'
ḥaṭṭ 'to put'	*ḥatt* 'to erode' 'to (leaf) fall'
ṭall 'to appear'	*tall* 'hill'
ṭamm 'to fill a dig with soil'	*tamm* 'done'
ḏ̣all 'to stay'	*ḏall* 'to humiliate'
ḏ̣allal 'to misguide'	*ḏallal* 'to humiliate'

An emphatic trigger spreads emphasis into affixes that are adjacent to that emphatic trigger. Consider the examples given in the table below:

Emphatic	Plain
ḥaṭ-lu 'he put to him'	_ḥat-lu_ 'he caused the leaves to fall down for him'
balaṣ-lu 'he stole from someone on his request'	_balas-lu_ 'he told him a secret about someone'
ḍallal-ni 'he misguided me'	_ḏallal-ni_ 'he humiliated me'
ṣallā-li 'he prayed to me'	_sallā-li_ 'he entertained someone on my request'
saṭṭar-ha 'he lined it up'	_satar-ha_ 'he married her'
ḍar-ha 'he hurt her'	_ḏar-ha_ ' her small insects'
ṣfūf-hum 'classes'	_sufūf-hum_ 'ground powder'

Leftward emphasis spread occurs when an emphatic consonant at the right edge of the word targets preceding segments. As in many other Arabic dialects (Cairene Arabic: Youssef 2013; ᶜAbbādi Arabic: Sakarnah 1999; PalestinianArabic: Herzallah1990; Jerusalem Arabic: Card 1983), leftward spread of emphasis is unrestricted in the dialect and spreads over the word (cf. 2.3.5.2). Consider the examples given in the table below:

Table 59: Leftward emphasis spread in WM Arabic

Emphatic	Plain
fāyiḍ 'overfilled'	_fāyid_ 'useful'
ḥafīḍ [proper name]	_ḥafīd_ 'grandson'
xāṣ 'private'	_xās_ 'to lose weight'
mallaṣ 'to let someone escape'	_mallas_ 'to touch something softly'
rabbaṭ 'to tie'	_rabbat_ 'she brought up'
bāṣ 'bus'	_bās_ 'to kiss'

Affixes become emphatic through rightward spread when they are adjacent to the emphatic trigger, as shown in the following table:

Table 60: Spread of emphasis into affixes

Emphatic segments	Plain segments
bāḍ-at 'she laid eggs'	_bād-at_ 'she exterminated'
ḥafīḍ-ha [non-word]	_ḥafīd-ha_ 'her grandson'
y-xaṣiṣ-u 'they specialise'	_y-xasis-u_ 'they lose weight'
mallaṣ-ha 'he let her escape'	_mallas-ha_ 'he touched her softly'
rabbaṭ-ha 'he tied her'	_rabbat-ha_ 'she brought her up'
y-ṣalliḥ 'he arms'	_y-salliḥ_ 'he fixes'

While leftward emphasis is unbounded in the dialect, there are a set of segments that impede rightward emphasis. These are the set of palatal segments /i/, /y/ and /š/. This matches with

Herzallah (1990) who shows that rightward emphasis in Palestinian Arabic is blocked by the set of palatals /i/, /y/ and /š/ (cf. 3.2.5.2). By contrast, Zawaydeh (1998) which shows that rightward emphasis is blocked in ᶜAmmāni Arabic by the set of vocoids /i/, /ī/ and /y/ whereas al-Masri and Jongman (2004) which rightward emphasis is blocked by the high vowels /i/ and /u/ (cf. 3.2.5.2). Consider the table below which shows how the opaque segments /i/, /y/ and /š/ impede the rightward spread of emphasis in WM Arabic. Consider the examples given in the table below:

Table 61: Rightward emphasis spread in WM Arabic

Emphatic	Plain
ṣayyar 'to let something grow'	sayyar 'to let someone walk'
ṭayyar 'to let something fly'	tayyar 'to sleep'
ḏ̣ill 'shadow'	ḏill 'humiliation'
ᶜaṭšān 'thirsty'	ᶜatšān [non-word]
ḏ̣ayyaᶜ 'to lose'	ḏayyaᶜ 'to let the news out'
ṭannaš-hum 'he ignored hem'	tannaš-hum [non-word]
ṭašša 'outing'	tašša [non-word]

In some dialects such as ᶜAbbādi Arabic (Sakarnah 1999) and Cairene Arabic (Youssef 2013), emphasis appears to work bidirectionally without being blocked by any segment. The table below compares the impact of the opaque segments in both WM Arabic and ᶜAbbādi Arabic (Sakarnah 1999).

Table 62: Rightward emphasis spread in WM Arabic and ᶜAbbādi Arabic

ᶜAbbādi Arabic	WM Arabic	Gloss
ṣāyim	ṣāyim	fasting
ṭilᶜ-at	ṭilᶜ-at	she came out
ṭašša	ṭašša	outing
ḏ̣ayyaᶜ	ḏ̣ayyaᶜ	to lose
ṭili	ṭili	kid (f.)

As seen in the above table, while the spread of emphasis in ᶜAbbādi Arabic (Sakarnah 1999) is absolute, it is blocked in WM Arabic rightward by the set of palatals: /i/, /y/ and /š/.

Watson (2002) shows that emphasis in Ṣanᶜāni Arabic reaches the preceding word, particularly where word-final stop is immediately followed by a pharyngealised coronal and in phrases invoking God. To check the spread of emphasis to preceding words, minimal pair tests of phrases that differ in the emphasis feature were examined. The analysis of data shows that emphasis spreads optionally to a preceding word in phrases invoking God, e.g. *in šāḷḷa* 'God willing', *wa ḷḷah* 'by God's name', *ya ḷḷah* 'let's go' which consists of the vocative particle *ya* plus the name of Allah. However, spread of emphasis fails to reach a preceding word in other cases.

3.2.1.2 Umlaut

Umlaut involves the change of one vowel under the influence of a following vowel (Trask 1996; Crystal 2008). It can be described as a historical process whereby V1 assimilates the features of V2. An examination of the speech of WM speakers shows that Form I perfect verbs whose historical structure is CaCiC are realised as CiCiC due to the existence of the high vowel /i/ in the following syllable. Consider the examples given in table (58).

Table 63: Umlaut Process in WM Arabic

Historical Form	WM Arabic	Gloss
ᶜarif	ᶜirif	to know
	ᶜrif-ti	you (f.s.) know
	ᶜrif-tu	you (m.pl.) know
	ᶜrif-tan	you (f.pl.) know
xasir	xisir	to lose
	xsir-na	we lost
	xsir-tu	you (m.pl.) lost
	xsir-tan	you (f.pl.) lost
	xisir	he lost
sahir	sihir	to stay up
	shir-it	I stayed up
	shir-tu	you (m.pl.) stayed up
	shir-ti	you (f.s.) stayed up
	shir-na	we stayed up

In each of the above examples, the low central vowel is raised under the influence of the following high front short vowel. The umlaut process is more productive in Bani Ḥasan Arabic (Irshied 1984) and ᶜAbbādi Arabic (1999) than in WM Arabic (cf. 2.3.5.5). For example, the imperfects of VII and VIII forms with an underlying yi-n-CaCiC and yi-C-t-aCiC are realised respectively as yi-n-CiCiC and yi-C-t-iCiC in both dialects. The raising of the low vowel in the two forms is influenced by the high vowel in the following syllable. The following table shows how WM Arabic differs from Bani Ḥasan Arabic and ᶜAbbādi Arabic in this respect.

Table 64: Domain of the umlaut rule in WM Arabic, Bani Ḥasan Arabic and ᶜAbbādi Arabic

WM Arabic	Bani Ḥasan Arabic and ᶜAbbādi Arabic	Gloss
yin-šarib	yin-širib	it is drunk
yin-samiᶜ	yin-simiᶜ	it is heard
yi-r-tafiᶜ	yi-r-tifiᶜ	it goes up
yin-tagil	yin-tigil	he moves
yi-štari	yi-štiri	he buys

As shown in the table above, the raising of the short vowel /i/ into [i] does not operate in WM Arabic imperfect verbs although it is operating in Bani Ḥasan Arabic (Irshied 1984) and ᶜAbbādi Arabic (Sakarnah 1999).

3.2.2 Prosodic Processes

In section 3.2.1 we examined melodic phonological processes. In this section, we consider the prosody of the dialect. Prosodic processes are processes which affect syllable structure and word stress. The following discussion on prosodic processes tackles syllable types, word stress, and major prosodic phonological processes, including epenthesis, syncope, V-V resolution, degemination, long vowel shortening, pre-suffix vowel lengthening and glottal stop prosthesis.

3.2.2.1 Syllable Structure

The syllable is a complex unit that comprises two elements: nucleus or peak elements, which comprise vowels and syllabic segments, and marginal elements, which include consonants or non-syllabic segments (Laver 1994: 517). The syllable is further defined as a basic phonological unit which typically comprises an obligatory nucleus and optional onset and

coda (Trask 1996). Thus, hierarchically, a syllable consists of an onset, an obligatory component of Arabic syllables, and a rhyme which comprises a nucleus, the most sonorant element of the syllable, and an optional coda. The degree of sonority increases gradually from the onset towards the peak, and then it decreases gradually towards the coda (Hooper 1972; Clements 1990).

Syllables are typically classified in terms of their weight into: light, heavy, and superheavy. The rhyme of a light syllable is a short vowel functioning as a nucleus with no coda, i.e. CV, e.g. *wa* 'and'; the rhyme of a heavy syllable is either a long vowel with no coda, i.e. CVV, or a short vowel with a coda, i.e. CVC; while that of a superheavy syllable is made up of a long vowel plus a coda, i.e. CVVC, or a short vowel with more than one coda segment, i.e. CVCC.

Like many Arabic dialects, the core syllables of WM Arabic are: light open syllables CV, heavy closed syllables CVC, heavy open syllables CVV, and superheavy closed and doubly closed syllables CVCC and CVVC respectively (cf. 2.3.2). In WM Arabic, the weight of a CVC syllable depends on its position in the word, i.e. it is light in word-final position and heavy elsewhere. This is attributed to the fact that a final-word C in many Arabic dialects does not count for word stress, and is considered extrametrical (McCarthy 1979). The following table summarises the major syllable types of WM Arabic along with examples on each syllable type.

Table 65: The major syllable types of WM Arabic

Syllable Type	Syllable Weight	Example
light open syllable	CV	*wa* 'and'
heavy closed syllables	CVC	*ᶜal.lam* 'teach'
heavy open syllables	CVV	*gā.bal* 'meet'
superheavy closed syllables	CVVC	*rāḥ* 'to go'
superheavy doubly closed syllables	CVCC	*ḥarb* 'war'

Three of these types can occur in all word positions with no restrictions: CV, CVC, and CVVC; CVV is restricted to initial and medial positions. For illustration, consider the examples given below:

Table 66: Distribution of syllable types of WM Arabic

Syllable Type	Initially	Medially	Finally
CV	*fi.him* 'to understand'	*yix.ta.riᶜ* 'he invents'	*ktā.bi* 'my book'
CVC	*ᶜal.lam.ha* 'he taught her'	*sal.lam.ha* 'he handed her him'	*yiᶜ.ta.riḍ* 'to object'
CVVC	*ᶜām.lu* 'treat, imp. him'	bit.*ᶜām*.lu 'she treats him'	*ʔit.ti.hām* 'accusation'
CVV	*sā.bir* 'patient'	*ʔaᶜ.lā.kum* 'the highest of you'	does not occur

The fifth syllable type, CVCC, occurs word finally, e.g. *ᶜaṣ.ṣubḥ* 'in the morning', and in monosyllabic words, e.g. *šadd* 'to tighten', *ʔalf* 'one thousand', *ḥarb* 'war'.

In addition, the dialect has a peripheral set of syllables which are more restricted in occurrence. These are: the superheavy syllable CCVVC, which occurs either initially, e.g. *kbīr-hum* 'their boss', or in monosyllabic words, e.g. *ṭwīl* 'tall', *flān* 'unnamed person'; the heavy syllable CCVC and CCVV, which both occur only word initially, e.g. *bniᶜ.ṭi* 'we give', *zbā.la* 'litter'.

An examination of the syllable types of WM Arabic shows that the onset is an obligatory component of syllable, i.e. a syllable can have the structure (C) CV, but never the structure *VC. Thus, similar to many Arabic dialects (Sakarnah 1999; Bamakhramah 2009), where an initial-vowel morpheme is used in utterance-initial positions, e.g. the definite article (il), a glottal stop [ʔ] is inserted to meet the requirement for the syllable to start with a consonant (cf. 3.2.2.5.4). For illustration, consider the examples given in the table below:

Underlying Form	Surface Form	Gloss
il-saḥu	ʔis-saḥu	the soft pieces of soil
il-giṯṯa	ʔil-giṯṯa	the ridge cucumber
il-maḥal	ʔil-maḥal	the shop
il-ġarsa	ʔil-ġarsa	the tree
il-faggūᶜ	ʔil-faggūᶜ	the pumpkin
il-ṭāwla	ʔiṭ-ṭāwla	the table
il-maᶜāš	ʔil-maᶜāš	the salary
il-šiliyya	ʔiš-šiliyya	herd of sheep

By contrast, the coda is an optional component of the syllable, as seen in the examples: *ma* 'no', *jāb.ha* 'to bring', which lack a final consonant. Further, a syllable can have maximally up to two coda consonants, e.g. *dars*. 'a lesson'.

In terms of moraic theory (Hyman 1985; Hayes 1989), vowels have weight because they are underlyingly moraic; a short vowel is assigned one mora whereas long vowels are assigned two moras. Onsets make no contribution to the weight of the syllable and thus are non-moraic, while codas are assigned a mora through the Weight-by-Position condition (Hayes 1995; Watson 2002). Geminates differ from singleton consonants in that they are assigned a mora (Hayes 1989; Watson 2002; Davis 2011).

A moraic analysis of WM syllable structure reveals that the minimum size of syllable is monomoraic, and the maximum is bimoraic. For example, the word *ʔil.ha* 'for her' consists of two syllables; in the first syllable, the onset is weightless while the short vowel /i/ and the coda /l/ each contributes one mora to the weight of the syllable, rendering it bimoraic; the second syllable is monomoraic because it is made up of a short vowel with no coda.
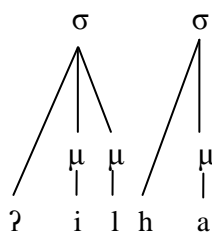
Though CV syllables are universally monomoraic, and hence light, the weight of CVC syllables is language-specific, and is controlled by extrametricality rules (cf. 3.2.2.4.1). In

analysing stress patterns in WM Arabic, we see that a CVC syllable can receive stress in penultimate and antepenultimate positions but fails to be stressed in final position. This fact can be accounted by assuming that the final C in word-final CVC syllables is extrametrical, which renders CVC syllables as light in word-final position and heavy elsewhere. This means there is no weight contrast between word-final CVC and CV syllables, i.e. both of them are light. Consider the moraic stricture of the word *fi.him* 'to understand; below:

$$\sigma \qquad \sigma$$

$$\mu \qquad \mu$$
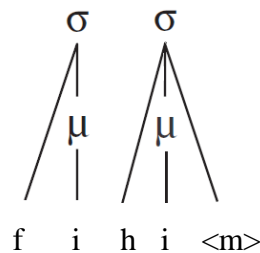
$$f \quad i \quad h \quad i \quad <m>$$

The word *fihim* 'to understand' is made up of two syllables; the first one *fi-* is light because it has got one mora associated to the short vowel /i/, and likewise the second syllable *him* is also monomoraic, and therefore light, after the last consonant is deemed extrametrical.

While superheavy syllables are restricted to word-final positions in San^{c}āni Arabic (Watson 2002), they might occur initially, medially and finally in WM Arabic. Given that the maximum weight of syllable is bimoraic in WM Arabic, the bimoraicity of superheavy syllables is accounted for by the fact that the final consonant in CVCC and CVVC syllables is deemed extrasyllabic rather than extrametrical. Whereas an extrametrical consonant is linked directly to the syllable node, an extrasyllabic consonant is not parsed within the syllable at any stage of the derivation (cf. 3.2.2.2.1) (Watson 2002). Below is a moraic representation of the word *bā^c* 'to sell'.

$$\sigma \qquad <\sigma>$$

$$\mu \; \mu$$

$$b \qquad a \qquad <^{c\prime}>$$
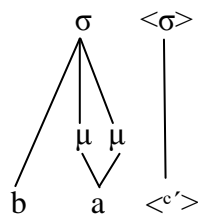
As shown above, the long syllable /ā/ contributes two moras to the weight of the word. The last consonant is deemed extrasyllabic and therefore it is parsed outside the syllable node. The following is a moraic presentation of the major syllable types in WM Arabic:

```
    μ                    μ μ                      μ
    |                    | |                      |
  C V  (light)    (non-final)C VC  (heavy)   (final) CV‹C› (light)


    μ μ                    μμ <σ>                  μμ <σ>
    | |                    | | |                  | | |
   CV V  (heavy)          CVC‹C›                  CVV‹C´›
```
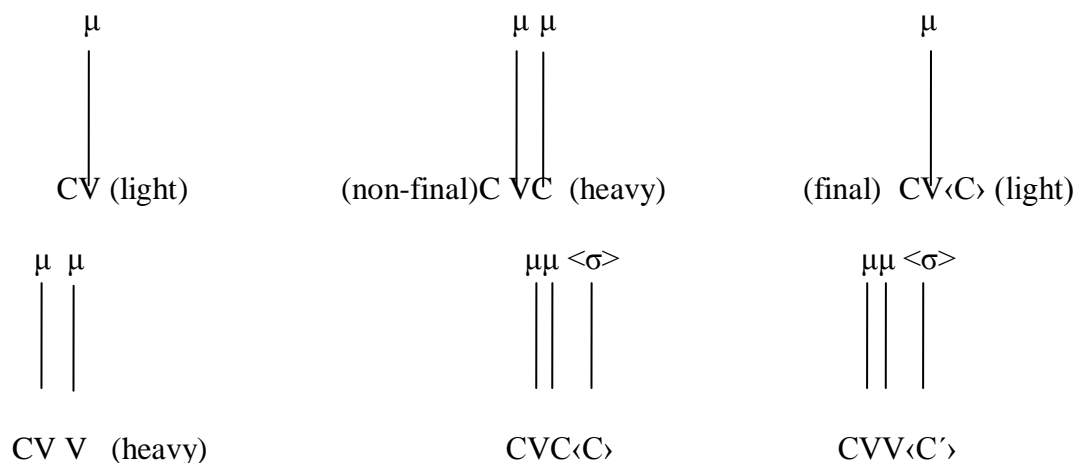
3.2.2.2 Phonotactics

An examination of the structure of WM Arabic reveals that the onset is an obligatory component of a syllable. Thus, where a vowel-initial morpheme surfaces phrase initially, the glottal stop is inserted to avoid the surfacing of onsetless syllables, e.g. *il-xiwas* 'the knives' > *ʔil-xiwas* (cf. 3.2.2.1). The onset can have maximally up to two consonants and they are classified into those that adhere to the Sonority Hierarchy Principle (Clements 1990: 290), where the initial consonant is either equal or lower in sonority than the second consonant, as in: *kbīr* 'big', *kwān* 'fight', *grūš* 'money', and those which fail to abide by it, where the initial consonant is more sonorous than the following consonant, as in: *n-ṣalli* 'we pray', *y-kabbiš* 'he sleeps'. This is similar to AjlounArabic (al-Sughayer 1990) and Beirut Arabic (Naïm 2006: 284) where onset clusters occur irrespective of their degree of sonority (cf. 2.3.4).

The vast majority of words appear with a single onset, but there are two occasions that lead to the surfacing of two-consonant clusters word initially: namely, syncope and concatenation of imperfect prefixes. Syncope targets unstressed high vowels in initial monomoraic syllables, resulting in a word-initial consonant cluster: e.g. *bi.'ḥār > 'bḥār* 'seas', *ri.jāl > rjāl* 'men' (cf.3.2.2.5.2).

The second way of making up consonant clusters is the concatenation of verbal prefixes to verb stems with no more than one initial consonant. The set of imperfect prefixes in WM Arabic are: *y-*, e.g. *y-sallim* 'he hands', *t-*, e.g. *t-wazziᶜ* 'she distributes', *n-*, e.g. *n-xalli* 'we let', and the habitual/continuous marker *b-*, e.g. *b-nimši* 'we walk'. When any of these prefixes concatenates to a consonant cluster, an epenthetic vowel is inserted to break up an impermissible cluster of three consonants, e.g. *ti-ḥki* 'she speaks'. Similarly, the detransitivizing prefix *t-* produces initial clusters when attached to any of the following

81

sounds: /b/, /ṯ /, /ḥ/, /x/, /r/, /z/, /s/, /š/, /ṣ/, /ᶜ/, /ġ/, /f/, /k/, /l/, /m/, /h/, /y/ and /w/, e.g. *t-sarraᶜat* 'she hurried up', *t-sawwi* 'she did'.

Final two-consonant coda clusters are allowed in the dialect when they accord with the Sonority Hierarchy Principle, i.e. when the right-most segment is less sonorous than the preceding one, e.g. *samᶜ* 'hearing', *dars* 'lesson' (cf. 2.3.4). However, if the consonant cluster disobeys the Sonority Hierarchy Principle, an epenthetic vowel, either [i] or [a], is inserted to break up that impermissible cluster. The low vowel is inserted in the environment CVGC, where G refers to gutturals e.g. *laḥm > laḥam* 'meat'. In all other cases, the high vowel [i] is epenthesised to break up a final sonority-defying -CC cluster Three-consonant clusters are forbidden in the dialect and they are always broken up by an epenthetic vowel between the second and third consonant, e.g. *gabl+ha > gabil-ha* 'before her' (cf. 3.2.2.5.1).

We know that the realisation of *laḥm* as *laḥam* relates to the Sonority Hierarchy Principle, and not to the *gahawa* syndrome (Blanc 1970; Palva 1976; Bani Yassin and Owens 1984) (cf. 2.3.5.3). This is because the sequence /aGC/ is permitted in word-medial position, e.g. *gahwa* 'coffee', *aᶜraj* 'lame', *maᶜna* 'with us', *aḥla* 'more beautiful', *naxla* 'a palm tree', *naᶜja*. Secondly, the insertion of the epenthetic vowel fails in several instances where final coda clusters accord with the Sonority Hierarchy Principle, e.g. *naxb* 'first class', *šaᶜṭ* 'burning',

3.2.2.3 Stress Assignment

Stress is a suprasegmental feature whereby a stressed syllable is pronounced more prominently than unstressed syllables (Roach 2000). Essentially, there are four factors which make a syllable prominent: loudness, length, pitch, and quality, with pitch and length having the strongest effect (Roach 2000). In terms of production, a stressed syllable is pronounced with greater amount of energy than an unstressed syllable. Stetson (1928) claims that every syllable in an utterance is articulated with a breath pulse, where the peak of the syllable has greater amount of sonority than remaining segments of the syllable. He further points that a stressed syllable is pronounced with 'an extra breath pulse'.

As in the case of many Jordanian dialects (al Ghazo 1987; Sakarnah 1999; Rakhieh 2009), the assignment of stress in WM Arabic largely depends on two factors: the weight of the syllable and the distance of the syllable from the right edge of the word (cf. 2.3.3). Thus, essentially stress is assigned to the right-most heavy syllable after the last consonant deemed

extrametrical, and in the absence of a heavy syllable, stress goes to a light syllable (cf. 3.2.2.1).Below is a discussion of stress assignment rules in WM Arabic:

Rule 1) In monosyllabic words, stress falls on the only syllable, as shown in table (63) below.

Table 68: Stress on monosyllable words

Example Word	Gloss
'jāb	to bring
'bēᶜ	selling
'ᶜām	year
'ṣōm	fasting
'dār	house

Rule 2) Stress is assigned to a final superheavy syllable. Consider the examples given in the table (64):

Table 69: Stress on the ultimate syllable

Example	Gloss
fal.'lāḥ	farmer
ʔaṭ.'fāl	children
zaᶜ.'lān	angry
bil.'bēt	at home
ḥu.'lūl	answers

Rule 3) in the absence of a final superheavy syllable, stress falls on the right-most heavy syllable. Consider the examples given in the table below:

Table 70: Stress on the penultimate syllable

Example	Gloss
'jāb.li	he brought me
mu.'nā.sib	suitable
mus.'taš.fa	hospital
'jā.miᶜ	mosque
'ʔax.xar	to delay
sa.'rag.ni	he robbed me
'mal.ḥa.ma	butcher's
'mad.ra.sa	school
'maw.ᶜi.di	my appointment

Rule 4) If the word lacks any heavy syllables, then stress is assigned to the antepenultimate syllable in words of three syllables or more and to the penultimate in words of two syllables. Consider the examples provided in the table below:

Table 71: Stress in words lacking any heavy syllable

Example	Gloss
'nka.sa.rit	I was broken
'jta.ma.ᶜu	they met
'ka.ta.bit	I wrote
'walad	boy
'fi.him	he understood
'sa.hil	easy
'zi.ᶜil	he got angry

Rule5) In words of more than three syllables, stress never falls on any syllable before the antepenultimate. Consider the examples given in the table below:

Table 72: Stress in words of more than three syllables

Example	Gloss
mak.ta.'bit.ha	her library
ʔis.taᶜ.'mal.ha	he used it
mad.ra.'sit.ha	her school
jar.ra.'bit.hum	I tried them

The following section provides a theoretical analysis of stress in WM Arabic within metrical theory.

3.2.2.4 Theoretical Account of Stress in WM Arabic

Metrical Theory was introduced by Liberman (1975) and developed by Liberman and Prince (1977), Halle and Vergnaud (1978), Hayes (1980; 1984; 1995) and others. The basic assumption of the theory is that word-stress patterns universally depend on the underlying organisation of words into a hierarchal structure of metrical constituents and that word stress is the linguistic manifestation of this metrical structure. Liberman and Prince (1977) maintain that stress is a hierarchy of rhythmic units in which syllables are arranged to form feet and feet to form words. The foot is the smallest metrical unit that consists of a group of syllables, one of which bears the main stress. Thus, metrical phonology treats stress as a matter of relative prominence of the syllable rather than a phonetic feature of particular segments.

The following is an examination of stress assignment rules in WM Arabic within the metrical account advanced by Hayes (1995). Below is a summary of the parameters of metrical stress as proposed by Hayes (1995).

1-Metrical structure is represented using the metrical grid, a graphical style which replaces metrical trees and which exhibits a hierarchy of rhythmic beats grouped into a hierarchy of constituents. The metrical grid shows the representation of four levels above the segmental level: the moraic layer, the syllable layer, the foot layer and the word layer. For illustration, consider the representation of the words *gaᶜad* 'to sit' below. (Note: the mark x indicates a stressed syllable while (.) refers to an unstressed syllable.)


```
(   x            )        Word layer

 (x        . )           Foot layer

   σ        σ            Syllable layer


   μ       μ             Moraic layer
   |       |

 g   a  ᶜ  a  <d>         Segmental layer
```
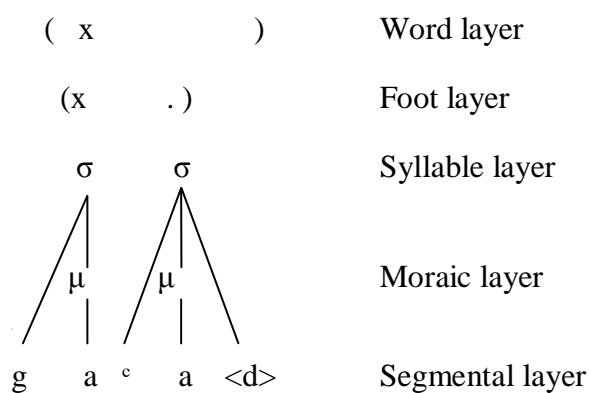
Bracketed grids obey the Continuous Column Constraint according to which a mark on a word layer for a column will have marks on all lower levels, i.e. the foot layer, the syllable layer and the moraic layer, as in the previous example.

2- The foot is the smallest metrical unit that consists of a group of syllables, one of which bears main stress. Depending on the language, a foot can be either unbounded where the parameters of the metrical foot is the whole phonological word, or bounded where the stress should 'fall within a particular distance from a boundary or another stress' (Hayes 1995: 32). Hayes (1995) identifies three types of bounded feet: the moraic trochee, the syllabic trochee, and the iamb, the most common of these being the moraic trochee and the iamb. A moraic trochee consists maximally of two syllables with prominence on the initial syllable (x .). A moraic trochaic foot can embrace either two light syllables ('L L) or a single heavy syllable ('H). The syllabic trochee consists of a stressed syllable followed by an unstressed syllable ('σ σ), and can comprise either two light syllables ('L L), a heavy syllable followed by a light syllable ('H L) or two heavy syllables ('H H). The main point of difference between the two trochaic types is that the moraic trochee is sensitive to weight while the syllabic trochee is

not, i.e. the construction of feet is based on the number of syllables regardless their weight. The iambic foot comprises a stressed syllable preceded by an unstressed one (σ 'σ). It may include two light syllables (L 'L), a light syllable and a heavy syllable (L 'H) or a single heavy syllable ('H). See below a summary of the three types of bounded foot:

a) Syllabic Trochee: 'σ σ

('L L)

('H L)

('H H)

b) Moraic Trochee: 'μ μ   ('L L)

('H)

c) Iamb: σ 'σ   (L 'L)

(L'H)

'σ   ('H)

3- The foot inventory is based on a principle called the iambic/trochaic law which selects the set of possible feet and motivates segmental rules to modify the metrical structure.

4- Metrical structure creation is non-exhaustive. In other words, it does not necessarily exhaust the string of syllables in a word and some syllables may be left unfooted.

5- Degenerate feet are elements which fail to be binary branching. Some languages impose a ban on degenerate feet, i.e. feet consisting of one mora are not allowed in languages that respect quantity and feet consisting of one syllable are not allowed in languages that do not respect quantity. Hayes (1995) mentions two conditions for the creation of degenerate feet: a) a strong prohibition where degenerate feet are absolutely disallowed, and b) a weak prohibition where degenerate feet are allowed only in strong positions.

The majority of Arabic dialects, including the dialect under investigation, have a strong prohibition against degenerate feet, e.g. Cairene Arabic (Watson 2002), Maᶜān Arabic (Rakhieh 2009). However, Watson (2002) shows that Sanᶜani Arabic has a weak prohibition against degenerate feet, i.e. there are a number of monomoraic words in Sanᶜani Arabic which

construct degenerate feet and thus are eligible to receive stress, e.g. *yad* 'hand', *dam* 'blood'. This will be explored later in the discussion.

6- Hayes (1995: 3) claims that 'Syllable weight is not a unitary phenomenon; rather, languages distinguish between syllable quantity and syllable prominence. Quantity is represented by mora count, while prominence may be based on a number of other properties of the syllable, and is represented formally with grid columns of varying height. Quantity may be referred to by rules of foot construction while prominence may be referred to by other metrical rule types, as in end rules and destressing'.

3.2.2.4.1 Word Stress in WM Arabic within Metrical Theory

Analysing stress assignment in WM Arabic within the metrical account advanced by Hayes (1995) shows that WM Arabic has a moraic trochee system ('μ μ) and that foot parsing goes from left to right. The degenerate foot is absolutely forbidden in the dialect, i.e. a single mora is not enough to construct a foot; therefore stranded single moras at the word edge are left unfooted. Subject to the Nonexhaustivity Principle, which states 'an extrametricality rule is blocked if it would render the entire domain of stress rules extrametrical' (Hayes 1995: 58), foot extrametricality works to account for the selection of a non-final foot for the main stress. Stress is assigned to the right-most visible foot according to the End Rule Right Principle (ERR). Below is a summary of stress assignment rules in WM Arabic:

(a) Consonant Extrametricality: C → ⟨C⟩ /___] word

(b) Foot Construction: Form moraic trochees from left to right.

(c) Degenerate feet: Forbidden absolutely.

(c) Foot Extrametricality: Foot → ⟨Foot⟩ /___] word

(d) Word Layer Construction: End Rule Right

The foot inventory comprises either two light syllables ('L L), e.g. *masak* 'to hold', or one heavy syllable ('H), e.g. *jāb* 'to bring'. For illustration, consider the metrical representation of the examples given below:

```
(    x              )          Word layer

  ( x        .)                 Foot layer

  σ           σ                Syllable layer


  μ        μ                    Moraic layer


m   a   s   a  <k>Segmental layer
```

```
(    x        )               Word layer

     (x)                       Foot layer

  σ      <σ>                  Syllable layer



  μ   μ                        Moraic layer

b      a   <b>                Segmental layer
```
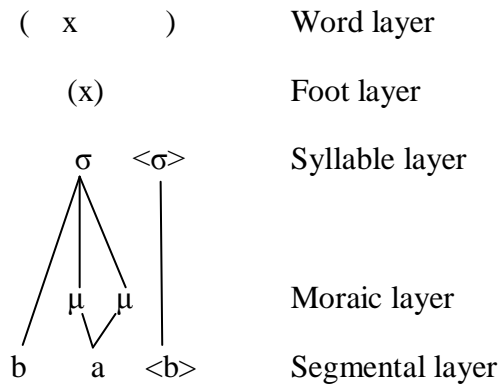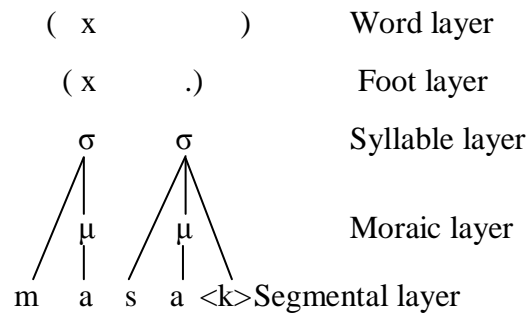
In the word *masak* 'to hold', the direction of parsing goes from left to right from the light syllable *ma* towards the second syllable *sak* which is considered light after the last consonant ‹k› is deemed extrametrical. The two light syllables construct a foot, with the initial syllable being the head of that foot. In the word *bāb* 'door', the bimoraic syllable *bā* constructs a foot that receives main stress. The last consonant falls outside the syllable because it is deemed extrasyllabic.

3.2.2.4.1.1 Extrametricality and Extrasyllabicity

A central notion in metrical stress is extrametricality. It was first provoked by Liberman and Prince (1979) and a set of rules were later proposed by Hayes (1979). Hayes (1995: 57) states that 'an extrametricality rule designates a particular prosodic constituent as invisible for purposes of rule application: the rule analyzes the form as if the extrametrical entity were not there'. Extrametricality obeys the Peripherality Condition which states that a constituent might be rendered extrametrical only if it is at a designated edge (left or right) of its domain.

As noted above, the application of extrametricality rule results in demoting a final CVC syllable as a light CV after the last consonant is deemed extrametrical. Thus, both final CVC and CV syllables are equal in weight and hence can't attract stress. For illustration, consider

the representation of the following word where an extrametrical consonant is placed between two brackets ‹C›.

```
    (  x              )       Word layer

      (x       . )             Foot layer

       σ        σ              Syllable layer
      /|       /|
     / μ      / μ              Moraic layer
    /  |     /  |
   z   i    ᶜ i  <l>           Segmental layer
```
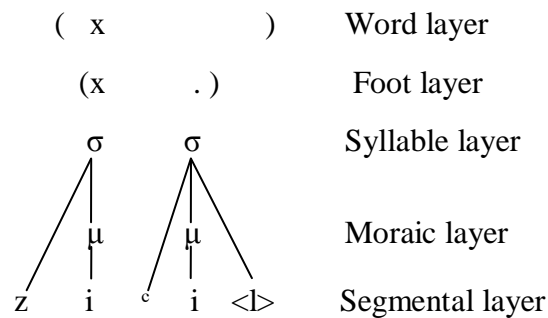
In the word *ziᶜi‹l›* 'to get angry', the final consonant is deemed extrametrical and ‹l› is syllabified directly to the node of the final syllable. Due to its extrametrical status, it fails to be assigned a mora. This demotes the final syllable *ᶜi‹l›* to monomoraic and it constitutes a trochaic foot with the previous light syllable. The foot is peripheral, but cannot be deemed extrametrical according to the Exhaustivity Principle since this would exhaust the stress domain.

In addition to consonant extrametricality, metrical theory raises the issue of foot extrametricality to account for the selection of a non-final foot to bear the main stress. In such cases, the peripheral foot is considered extrametrical and stress goes to the previous foot. This is the case in WM Arabic where stress is assigned to the penultimate foot in words comprising two or more feet. For illustration, consider the example given below:

```
    (  x                     )       Word layer

      (x)      <(  x      .)>        Foot layer

       σ         σ         σ          Syllable layer
      /|\       /|        /|
     / μ μ     / μ       / μ          Moraic layer
    /  | |    /  |      /  |
   m   a k   t   a     b   a          Segmental layer
```
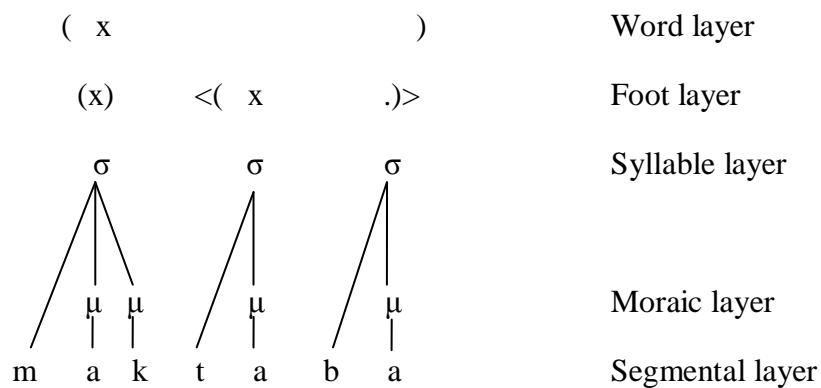
In the word, *maktaba* 'library', the foot parse goes from left to right, constructing a foot over the heavy syllable *mak*. The last two syllables are both light *ta.ba*, and constitute a trochaic foot. The peripheral foot is rendered extrametrical since it does not violate the Exhaustivity Principle, i.e. it is not the only foot in the stress domain. The extrametricality of the peripheral foot results in stress being assigned to the head of the penultimate foot by ERR.

Another important notion of metrical theory is extrasyllabicity which claims that the final consonant of word-final superheavy syllables, i.e. CVCC and CVVC, falls outside the domain of the syllable and is left unsyllabified until a later stage in the derivation (Watson 2002). The common feature between extrametricality and extrasyllabicity is that both are restricted to domain edges. The main point of difference, however, between them is that while an extrametrical consonant is directly linked with the syllable node, an extrasyllabic consonant falls outside the domain of the syllable.

Accordingly, a final superheavy syllable consists of a canonical syllable plus an extrasyllabic consonant. The canonical syllable constructs a foot that attracts the main stress in conformity with ERR, while the extrasyllabic syllable is left unsyllabified. The position of an extrasyllabic consonant between the foot and the right edge of the word blocks foot extrametricality, since it deprives the foot of peripherality. Consider the metrical representation of the word *ji^cān* 'hungry' below:

```
(       x    )          Word layer

     (x)                 Foot layer

 σ     σ    <σ>         Syllable layer



       μ   μ  μ         Moraic layer

 j   i  c   a   <n´>    Segmental layer
```
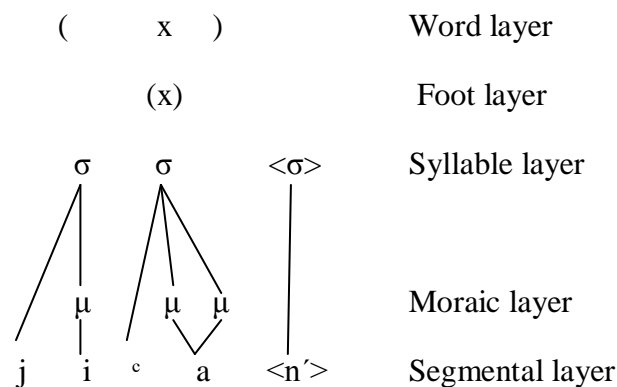
Here the initial syllable is light, and thus it fails to form a foot by itself and cannot form a foot with the following bimoraic syllable; this leaves it unfooted. The final syllable of the word *ji^cān* 'hungry' comprises a canonical syllable *^cā* plus an extrasyllabic *<n>*. The canonical syllable is heavy and therefore constructs a foot. The existence of the extrametrical *<n>* between the foot *^cā* and the right edge of the word deprives the right-most foot of peripherality, and thus prevents it from being deemed extrametrical.

3.2.2. 4.1.2 Minimal Words

The minimal size for a word to receive stress is bimoraic, e.g. *katab* 'to write', *šāl* 'to carry'. Hence, sub-minimal words, i.e. words which consist of one mora, are unstressable because a single mora is not enough to construct a foot given that WM Arabic has a strong ban against

degenerate foot. The majority of sub-minimal words belong to the category of function words, e.g. *min* 'from', *ᶜan* 'about', *fi* 'in'.

There are some cases where sub-minimal words are modified to conform to the minimality condition. The list comprises some loan words which are monomoraic in the source language and become bimoraic in the target language by lengthening their short vowel. For example, when borrowing the English words *bus* and *gas* into WM Arabic, the short vowel is lengthened and they are pronounced respectively as *bāṣ* 'bus' and *ġāz* 'gas'. Once the vowel is lengthened, they become bimoraic and are eligible to receive stress. For illustration, consider the metrical representation of the word *bāṣ* 'bus':

(x)	Word layer
(x)	Foot layer
σ <σ>	Syllable layer
μ μ	Moraic layer
b a <ṣ>	Segmental layer
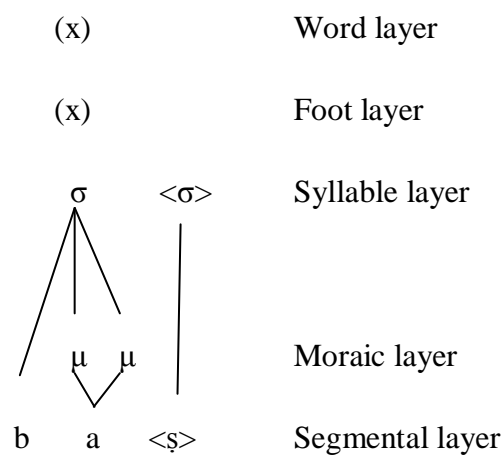
The word *bāṣ* 'bus' is heavy after the last consonant is deemed extrasyllabic. It consists of two moras which construct a trochaic foot that receives the main stress. Moreover, some sub-minimal words meet the minimality condition by geminating their last consonant. Since geminate consonants are moraic (Hayes 1989; Watson 2002; Davis 2011), the words construct a bimoraic foot, e.g. *ʔab > ʔabb* 'father', *ʔax > ʔaxx* 'brother'. Consider the metrical representation of the words *ʔax* and *ʔaxx* below:

```
              (    x       )              Word level

                (x)                       Foot level

              σ        <σ>                Syllable level


              μ  μ                         Moraic level
              |  |
          ʔ    a  x    <x>                 Segmental level


              -                           Word level

              -                           Foot level

              σ                           Syllable level


                 μ                         Moraic level
                 |
          ʔ    a    <x>                    Segmental level
```
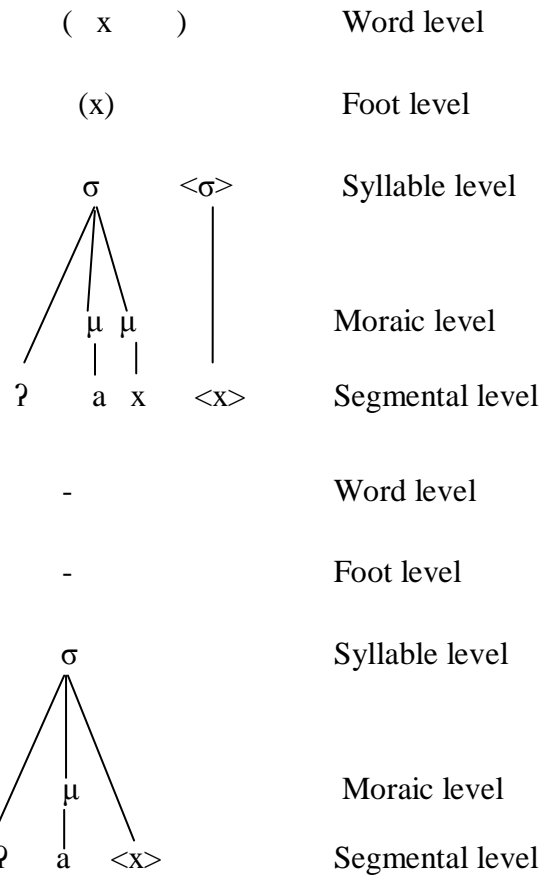
The word *ʔaxx* 'brother' in the first representation is bimoraic given that geminate consonants are moraic. The heavy syllable constructs a foot that attracts the main stress according to ERR. However, the word *ʔax* 'brother' in the second example is light after the last consonant is deemed extrametrical. Thus, it fails to constitute a foot given that WM Arabic absolutely bans degenerate foot.

Some sub-minimal function words are stressable when a pronoun suffix is added. For example, the concatenation of the suffixes *-ni* and *-ha* respectively to the monomoraic function words *min* 'from' and *ᶜan* 'about' results in the bimoraic words *minni* 'from me' and *ᶜanha* 'about it', which are both eligible to receive stress. Consider the metrical representation of the word *ᶜanha* 'about it'.

```
(      x           )          Word layer

    (x)                        Foot layer

 σ          σ                  Syllable layer


   μ  μ      μ                 Moraic layer

 ᶜ   a  n  h  a                Segmental layer
```
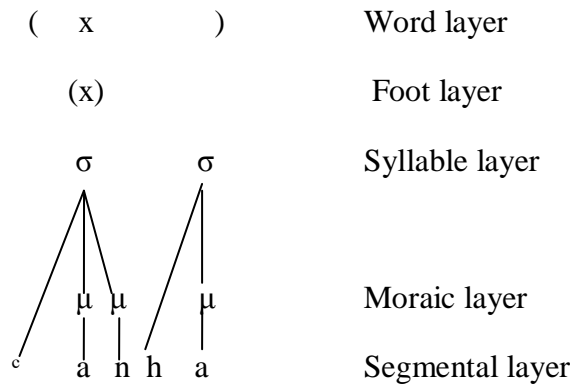
The foot parse goes from left to right over the heavy syllable *ᶜan* which successfully constructs a foot. The following syllable *ha* is light and it fails to construct a foot by itself nor does it form a foot with the previous heavy syllable; it is left unfooted as a result. Stress goes to the second syllable from the right following the End Right Rule. Without the concatenation of the prefix *ha*, the word wouldn't receive stress because it would be light due to extrametricality of the last consonant.

3.2. 2.4.1.3 Degenerate Feet

The fact that WM Arabic absolutely bans degenerate foot means that a single mora either at the beginning or the end of a string is left unfooted because it can't construct a foot by itself. For illustration, consider the examples given below:

```
(        x          )        Word layer

      (x)                     Foot layer

 σ       σ         σ          Syllable layer


    μ   μ  μ        μ         Moraic layer

 g    a ᶜ  a  d  t  i          Segmental layer
```
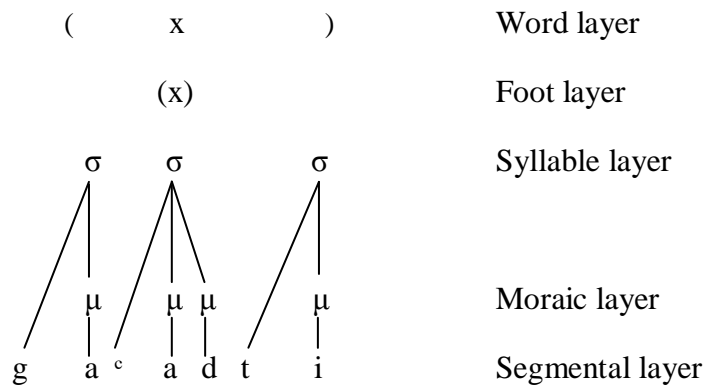
In the word *gaᶜadti* 'you (f.s.) sat down', the foot parse works from left to right. The sequence *ga* is light and can't construct a foot by itself nor can it form a foot with the following heavy syllable because the maximum foot weight is bimoraic. The initial syllable is therefore left unfooted. Similarly, the right-most light syllable *ti* is left unfooted at the right-end of the word. The second syllable is heavy and it constructs a foot that is assigned main stress according to the End Right Rule.

3.2.2.4.1.4 Stress Assignment Rules

First, a final superheavy syllable, i.e. CVCC or CVVC, attracts stress following End Right Rule which assigns stress to the right-most foot. As mentioned earlier, a superheavy syllable consists of a heavy syllable (bimoraic) and an extrasyllabic consonant. For illustration, consider the metrical representation of the word *sarḥān* 'absent minded':

```
     (        x)              Word layer

    ( x )    (x)              Foot layer

     σ        σ      <σ>       Syllable layer



     μ μ    / μ μ             Moraic layer
     | |    | |
     s  a r  ḥ  a   <n>        Segmental layer
```
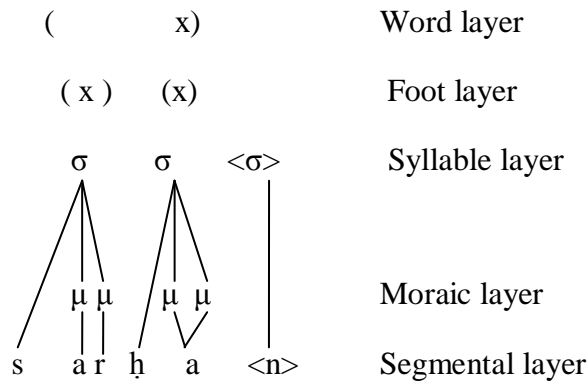
The foot parse of the word *sarḥā‹n›* 'absent minded' goes from left to right constructing a bimoraic trochee over the sequence *sar*. The final syllable comprises the canonical syllable *ḥā* plus an extrasyllabic *‹n›*. The canonical syllable is heavy and therefore it constructs a foot that receives main stress following the End Right Rule.

Second, in the absence of a final superheavy syllable, stress is assigned to the right-most heavy syllable according to the End Right Rule. Consider the examples below:

```
     (        x        )      Word layer

     (x)      (x)             Foot layer

      σ        σ        σ      Syllable layer



     / μ μ   / μ μ    / μ      Moraic layer
     |  |    |  |     |
     ʔ  a ˤ   ṭ  e    t  u      Segmental layer
```
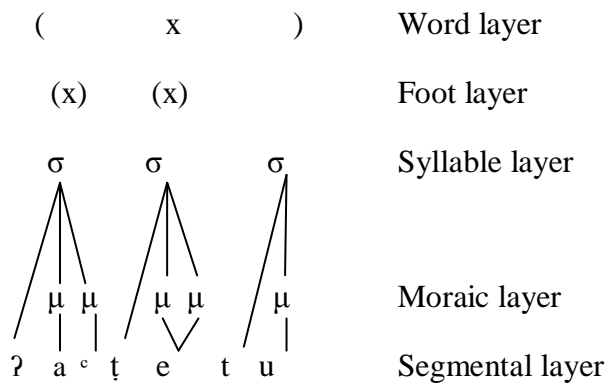
In the word *ʔaˤṭētu* 'I gave him', the foot parse goes from left to right constructing a foot over the heavy syllable *ʔaˤ*. The second syllable *ṭē* is heavy and it constitutes a foot. The final syllable is light CV and cannot constitute a foot by itself given that WM Arabic absolutely bans degenerate foot. Following End Right Rule, stress is assigned to the head of the right-most visible foot, the penultimate syllable.

Where the word does not have a superheavy ultimate or a heavy penult, stress is assigned to an antepenultimate heavy syllable. The right-most foot is rendered extrametrical since it does not exhaust the domain, resulting in stress being assigned to the antepenult by the End Right Rule. For illustration, consider the example given below:

```
     (  x                    )        Word layer

      (x)     <(x        .) >         Foot layer

       σ        σ         σ           Syllable layer



       μ μ       μ         μ          Moraic layer
       | |       |         |
     m  a d  r   a     s   a          Segmental layer
```
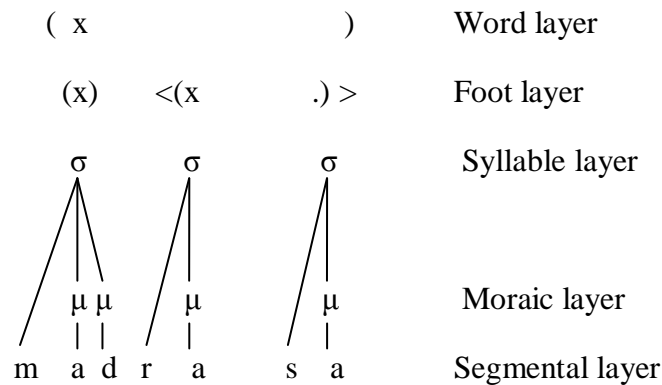
In the word, *madrasa* 'library', a foot is constructed over the initial heavy syllable *mad*. The last two syllables are light *ra.sa*, and they constitute a trochaic foot which fails to receive stress because it is extrametrical. The extrametricality of the peripheral foot results in stress being assigned to the antepenultimate syllable by the End Right Rule.

3.2.2.5 Major Prosodic Processes

An examination of WM Arabic reveals the following prosodic processes: epenthesis, syncope, V-V resolution, degemination, glottal stop prosthesis, long vowel shortening, and pre-suffix vowel lengthening. Here I examine these in turn.

3.2.2.5.1 Epenthesis

Epenthesis refers to the process whereby an intervening segment is added to separate ill-formed consonant clusters in order to meet the syllable requirements of the language (Hall 2006; Matthews 2007). Watson (2002) draws a distinction between epenthesis and prosthesis. The latter refers to the insertion of a vowel word or utterance initially, whereas the former refers to the insertion of a vowel in any other position.

Kiparsky (2003) classifies Arabic dialects in terms of their syllabification patterns into those in which CCC clusters are syllabified as CVCC (VC dialects), CCVC (CV dialects), and CCC (C dialects). For example, the word *ḥalgha* 'her throat' is syllabified as *ḥaligha* in VC dialects, *ḥalgiha* in CV dialects, and remains as *ḥalgha* in C dialects. WM Arabic can be

described as a VC dialect because in CCC clusters, an epenthetic vowel is inserted to the left of the unsyllabified consonant, e.g. *gilt-lak > gilitlak* 'I said to you' (cf. 2.3.4).

As is common in VC-dialects (Kiparsky 2003), WM Arabic applies [i] epenthesis to nouns that have the underlying shape CVCC, where the sonority of the right-most consonant is greater than the sonority of the preceding consonant. Trask (1996: 327) defines sonority as 'the sort of prominence associated with a segment by virtue of the way in which that segment is intrinsically articulated'. The basic notion of sonority is that segments are ranked according to their degree of sonority; thus, consonants increase in sonority towards the nucleus, while they decrease towards the coda. Accordingly, the most sonorous sounds are vowels followed by glides, liquids, nasals and fricatives and stops. Selkirk (1984) makes a further distinction between stops, showing that voiceless stops are less sonorous than voiced ones. The epenthesis of [i] comes as a response to the Sonority Hierarchy Principle whereby C1 in complex codas should be less sonorous than C2 (Selkirk 1982; Clements 1990). For illustration, consider the examples given in the table below:

Table 73: Final epenthesis in WM Arabic

Underlying Form	Surface Form	Gloss
ḥagl	ḥagil	field
ʔakl	ʔakil	eating
dabr	dabir	bee
ḥabl	ḥabil	rope
ḥafr	ḥafir	digging
šakl	šakil	appearance

As shown in the above examples, the right-most consonant in the coda is more sonorous than the preceding one, and this violates the Sonority Hierarchy Principle. As a result, the high front vowel [i] is inserted between C1 and C2 to produce phonotactically correct outputs. The epenthetic vowel fails to be inserted in clusters that obey the Sonority Hierarchy Principle, e.g. *ḥarb* 'war', *galb* 'heart', *samᶜ* 'hearing'. By contrast, the high front vowel [i] is inserted between the final two consonants of CVCC nouns irrespective of the Sonority Hierarchy Principle in ᶜAbbādi Arabic (Sakarnah 1999). Therefore, the nouns *samᶜ* 'hearing' and *dars* 'lesson' are realised respectively in ᶜAbbādi Arabic as *samiᶜ* and *daris*, although the consonants involved do adhere to the Sonority Hierarchy Principle (cf. 2.3.4).

Another epenthesis rule in WM Arabic involves insertion of the low back vowel [a] between the final two consonants in /CVGC/ forms, where G refers to the class of gutturals. The rule applies when the right-most consonant is more sonorous than the preceding guttural. The insertion of the epenthetic [a] is a response to the Sonority Hierarchy Principle which assumes that C1 in complex codas should be more sonorous than C2. For illustration, consider the examples shown in the table below:

Table 74: Insertion of [a] in CVGC forms

Underlying Form	Surface Form	Gloss
laḥm	laḥam	meat
sahm	saham	arrow
maḥl	maḥal	shortage
naᶜl	naᶜal	insole
ʔahl	ʔahal	family

The fact that the most-right consonant in the above examples is more sonorous that the preceding guttural leads to the insertion of the low vowel to avoid an impermissible structure.

Medial epenthesis occurs when the morphology concatenates a cluster of three consonants within the phonological word. Arabic dialects differ in the placement of the epenthetic vowel to produce a phonotactically correct output. A group of dialects like Egyptian Arabic insert the epenthetic vowel between C2 and C3, syllabifying the second consonant as an onset 'onset dialects' (Kiparsky's CV-dialects), e.g. *ʔul-t-l-alk > ʔul-ti-lak* 'I said to you'. Another group of dialects insert the epenthetic vowel between C1 and C2, syllabifying C2 as the coda of that syllable (Kiparsky's VC-dialects) (Hall 2011). WM Arabic can be classified as a coda or VC-dialect dialect since the epenthetic vowel [i] is inserted between C1 and C2 in three-consonant clusters. Consider the examples given in the table below:

Table 75: The insertion of [i] in three-consonant clusters

Underlying Form	Surface Form	Gloss
gilt+lak	gilitlak	I told you
dars+ha	darisha	her lesson
ḥalg+ha	ḥaligha	her throat
šarṭ+hum	šariṭhum	their condition
samᶜ+hum	samiᶜhum	their hearing
ḥarb+hum	ḥaribhum	their war
galb+ha	galibha	her heart

Epenthesis may also take place across words within the phonological phrase where a word-final consonant or consonant cluster is followed by a word with an onset cluster, as shown in the following examples:

3- *il-bint [i] kbīra* 'the girl is big'.

4- *dars [i] kwayyis l-kul wāḥid* 'it is a good lesson for everybody'.

5- *fi šarx [i] ṣġīr b-il-ḥēṭ* 'there is a little crack in the wall'.

6- *ḥajar [i] kbīra wigᶜat ᶜala bēt-na* 'a big piece of stone fell on our home'.

The short high vowel is also inserted where the morphology concatenates any of the imperfect aspect markers *y-*, *n-* and *t-* to stems with an initial two-consonant cluster, thus avoiding an impermissible structure of three consonant clusters, e.g. *yi-lᶜab* 'he plays', *ni-smaᶜ* 'we hear' (cf. 3.2.2.5.1).

3.2.2.5.2 Syncope

Syncope is the process of deleting a syllable from some part of the word other than word-final position (Sloat et al 1978). Syncope functions in WM Arabic, as in many other Arabic dialects, in order to minimise the number of monomoraic syllables and increase the number of optimal bimoraic syllables (Broselow 1992). According to Watson (2002), syncope occurs when the application of syncope does not lead to an impermissible syllable structure in the language. The vowels affected by the syncope process are the high vowels /i/ and /u/ plus the low vowel /a/.

An examination of the data shows that the dialect under investigation syncopates a high front short vowel in open unstressed syllables. This applies to Form I verbs of the stem CiCiC which surface as CiCC before vowel-initial subject suffixes and as CCiC before consonant-initial subject suffixes. Consider the examples given in the table below:

Table 76: The inflectional paradigm of the verb *fihim* 'to understand'

fihim 'to understand'	Perfect	Gloss
1s.	'fhim-it	I understood
1pl.	'fhim-na	we understood
2m.s.	'fhim-it	you (m.s.) understood
2m.pl.	'fhim-tu	you (m.pl.) understood
2f.s.	'fhim-ti	you (f.s.) understood
2f.pl.	'fhim-tan	you (f.pl.) understood
3m.s.	'fihim	he understood
3m.pl.	'fihm-u	they (m.) understood
3f.s.	'fihm-at	she understood
3f.pl.	'fihm-an	they (f.) understood

By contrast, Form I CiCiC verbs surface in Bani Ḥasan Arabic (Irshied 1984) as CiCC before vowel-initial subject suffixes and CiCiC elsewhere. The table below compares the inflectional paradigm of the verb *firiḥ* 'to be glad' in WM Arabic and Bani Ḥasan Arabic.

Table 77: Syncope in WM Arabic and Bani Ḥasan Arabic

firiḥ 'to become glad'	WM Arabic	Bani Ḥasan Arabic	Gloss
1s.	'friḥ-it	fi'riḥ-it	I became glad
1pl.	'friḥ-na	fi'riḥ-na	I became glad
2m.s.	'friḥ-it	fi'riḥ-it	you (m.s.) became glad
2m.pl.	'friḥ-tu	fi'riḥ-tu	you (m.pl.) became glad
2f.s.	'friḥ-ti	fi'riḥ-ti	you (f.s.) became glad
2f.pl.	'friḥ-tan	fi'riḥ-tan	you (f.pl.) became glad
3m.s.	'firiḥ	'firiḥ	he became glad
3m.pl.	'firḥ-u	'firḥ-u	they (m.) became glad
3f.s.	'firḥ-at	'firḥ-at	she became glad
3f.pl.	'firḥ-an	'firḥ-an	they (f.) became glad

Similarly, the unstressed short high vowel undergoes syncope in the imperfect of forms II, VII and VIII when a vowel-initial morpheme is concatenated to the stem. Consider the examples given in the table below:

Table 78: Syncope of the short high vowel in forms II, VII and VIII

Example	Gloss
'yᶜal.lim	he teaches
'yᶜal.man	they (f.) teach
'yᶜal.mu	they (m.) teach
'yin.ka.sir	he is broken
yin.'kas.ru	they (m.) are broken
yin.'kas.ran	they (f.) are broken
'yir.ta.fiᶜ	he goes up
yir.'taf.ᶜu	they (m.) go up
yir.'taf.ᶜan	they (f.) go up
'yij.ta.miᶜ	he meets
yij-'tam.ᶜan	they (f.) meet
yij.'tam.ᶜu	they (m.) meet

The syncope process fails to target the unstressed high vowel in final closed syllables. Thus, while the unstressed stem vowel /i/ is syncopated in the verb '*ykas.ran* 'they (f.) break', it is retained in '*ykas.sir* 'he break', *tkas.sir* 'she breaks'.

Other instances of syncope include that where a monomoraic initial syllable with a high vowel, either /i/ or /u/, is followed by a bimoraic syllable. For illustration, consider the examples given below:

Table 79: Syncope of the short high vowel /i/ and /u/

Underlying Form	Surface Form	Gloss
bi.'ḥār	'bḥār	seas
ki.'lāb	'klāb	dogs
mu.'lūk	'mlūk	kings
ju.sūr	'jsūr	bridges
gu.ṣūr	'gṣūr	palaces

In each of the above instances, the short high vowel is deleted in the environment of a following bimoraic syllable. The reason for this is that the dialect prefers to minimize the number of monomoraic syllables. Additionally, the unstressed high front vowel is also subject to syncope where a vowel-initial morpheme is suffixed to a nominal stem, as shown in the examples below:

Table 80: Syncope of /i/ in nominal stems followed by a vowel-initial morpheme

Underlying Form	Surface Form	Gloss
ᶜāmil+ēn	ᶜaml-ēn	two workers
jāmiᶜ+ēn	jamᶜ-ēn	two mosques
ṣāḥib+ēn	ṣaḥb-ēn	two friends
ṣāḥib+āt	ṣaḥb-āt	friends (f.pl.)

The syncope process affects the short low vowel /a/ only in case it occurs in open unstressed syllables of forms VII (n-CaCaC) and VIII (C-taCaC) before vowel-initial subject suffixes, as seen in the examples given below:

Table 81: Syncope of /a/ in forms VII and VIII

Example	Gloss
'nka.sar	he was broken
'nkas.rat	she was broken
'nkas.ran	they (m.) were broken
'nkas.ru	they (m.) were broken
'rtaf.ᶜa	he went up
'rtaf.ᶜat	she went up
'rtaf.ᶜan	they (f.) went up
'rtaf.ᶜu	they (m.) went up

Interestingly, the short low vowel /a/ is retained in other forms of the verb though it occurs in open unstressed syllables, e.g. *'tif.ha.mi* 'you (f.s.) understand', *'yif.ha.m-u* 'they (f.) understand', *'ga.ᶜa.du* 'they (m.) sat'.

101

3.2.2.5.3 V-V Resolution

Where a vowel-final morpheme is concatenated with a vowel-initial morpheme, deletion of the left-most vowel occurs to ensure that onsetless syllables do not surface. For example, where a vowel-initial subject suffix attaches to the perfect of defective verbs which always end with a vowel, deletion of the left-most vowel occurs to avoid the surfacing of two adjacent vowels. Consider the examples given below:

Table 82: V-V resolution in WM Arabic

Underlying Form	Surface Form	Gloss
maša-u	mašu	they (m.) walked
daᶜa-an	daᶜan	they (m.) prayed
nāda-at	nād-at	she called
sawwa+an	saww-an	they (f.) did
gala+an	gal-an	they (f.) fried
xalla+u	xall-u	they (m.) let

Moreover, where the *bi-* prefix attaches to a verb with an initial /i/ as a subject marker, the high front vowel /i/ of the *bi-* prefix is dropped to avoid an impermissible structure of two adjacent vowels. For illustration, consider the examples in the table below:

Table 83: The syncope of the high front vowel of the *bi-* prefix

Input	Output	Gloss
bi-ištaġil	b-ištaġil	he works
bi-inām	b-inām	he sleeps
bi-itrik	b-itrik	he leaves
bi-iksir	b-iksir	he breaks

Vowel deletion also occurs across words within phonological phrases, where a word-final vowel is followed by a morpheme-initial vowel. For illustration, consider the examples given in the table given below:

Table 84: Syncope within the phonological phrase

Underlying Form	Surface Form	Gloss
xallīni arūḥ	xallīn arūḥ	let me go
ᶜṭīni awāᶜiyya	ᶜṭīn awāᶜiyya	give me my clothes
jībli awāᶜiyya	jībl awāᶜiyya	fetch my clothes
bayyaᶜni arḏi	bayyaᶜn arḏi	he made me sell my land
jībli arbaᶜ zulum	jībl arbaᶜ zulum	bring me four men

3.2.2.5.4 Glottal Stop Prosthesis

Prosthesis refers to the process of inserting a sound word-initially (Crystal 2008). As mentioned in section (3.2.2.1), all syllables in Arabic start with an onset. However, there are some vowel-initial morphemes in the dialect which may appear utterance initially. These morphemes include the definite article *il* 'the', the relative pronoun *illi* 'that', the 1st and 2nd person pronouns *ana* 'I', *inti* 'you (f.s.)', *intu* 'you (m.pl.)', *intan* 'you (f.pl.)'. Where an utterance starts with any of these morphemes, a glottal stop is inserted to meet the requirement for a syllable to start with an onset. Consider the examples given below:

7- *illi mar min hōn ṣāḥbi > ʔilli mar min hōn ṣāḥbi* 'the one who passed from here is my friend'

8- *il-madrasa b-tiftaḥ is-sāᶜa sabᶜa > ʔil-madrasa b-tiftaḥ is-sāᶜa sabᶜa* 'the school opens at seven o'clock'.

9- *inta lēš b-timguṭ il-ḥabil zay hēk > ʔinta lēš b-timguṭ il-ḥabil zay hēk* 'why did you (m.) tie the rope this way'.

10- *inti illi sawwē-ti il-akil kāmil > ʔinti illi sawwē-t il-akil kāmil* 'did you (f.s.) make all the food?'

3.2.2.5.5 Degemination

Degemination works as a repair process within and across words to break up a consonant cluster of three consonants. In Form II, the right-most stem vowel /i/ is subject to syncope when a vowel-initial suffix attaches to the stem, since it occurs in a non-final light unstressed

syllable. The outcome of this is an impermissible cluster of three consonants which is broken by a process of degemination, as shown in the examples given below:

11- *y-ᶜallim-an > y-ᶜallm-an > y-ᶜalm-an* 'they (f.) teach'.
12- *y-jahhiz-u > y-jahhz-u > y-jahz-u* 'they (m.) prepare'
13- *y-wassiᶜ-an > y-wassᶜ-an > y-wasᶜ-an* 'they (f.) enlarge'
14- *y-ʔaxxir-an > y-ʔaxxr-an > y-ʔaxr-an* 'they (f.) delay'

Further, where a consonant-initial subject suffix is concatenated to a word-final geminate, degemination applies to avoid a cluster of three consonants, e.g. *kabb-ha > kab-ha* 'he threw it', *ḥaṭṭ-hum > ḥaṭ-hum* 'he put them'. Degemination occurs within the phonological phrase where a word ending with a geminate is followed by a consonant, as shown in the examples given below:

15- *ḥaṭṭ kīsu hān > ḥaṭ kīsu hān* 'he put his bag here'.
16- *il-jaww bārid > il-jaw bārid* 'the weather is cold'.

5.2.2.5.6 Long Vowel shortening

Long vowels are shortened in the dialect in two cases:

(a) In case an underlying long vowel is unstressed, since unstressed long vowels are not attested in the dialect;
(b) In case a hollow verb takes a consonant-initial subject suffix.

In all other cases underlyingly long vowels maintain their length. I examine (a) and (b) in turn. WM Arabic does not permit unstressed long vowels. Thus, where a word has a long vowel followed by a final superheavy syllable (CVVC or CVCC), the right-most syllable will attract stress according to End Rule Right (cf. 3.2.2.4), and the unstressed long syllable will be shortened. For example, in the word **ṭā.būn* 'kiln', stress is assigned to the right-most CVVC syllable *būn* following End Right Rule and the unstressed long vowel /ā/ is reduced to its short counterpart, [a], resulting in *ṭa'būn*. Where the underlying vowel is /ā/, /ī/, or /ū/, it shortens respectively into [a], [i] or [u]. Where the unstressed long vowel is a mid vowel, /ō/ or /ē/, it shortens respectively into [o] < /ō/ and [e] < /ē/ (cf. 3.1.4). Consider the examples given in the table below:

Underlying Form	Surface Form	Gloss
bē.tēn	be.'tēn	two houses
ḏē.fēn	ḏe.'fēn	two guests
jī.lēn	ji.lēn	two generations
mis.kīn-āt	mis.ki.'nāt	poor (f.pl.)
ṭūb.'tēn	ṭub.'tēn	two blocks
jaḥū.dīn	jaḥu.'dīn	people claiming poverty
kwā.rāt	kwa.'rāt	substance used for storing grains particularly wheat
gal.lā.yāt	gal.la.'yāt	frying pans
gaṭ.ṭā.ᶜāt	gaṭ.ṭa.'ᶜāt	big knife used for chopping meat
ṣō.tēn	ṣo.'tēn	two voices
bō.tēn	bo.'tēn	boots

Unstressed long vowel shortening can be diagrammed as deletion of the right-most mora of an unstressed long vowel, as shown in below.

```
(        x        )        Word layer

σ        σ      <σ>        Syllable layer



μ μ    μ μ                 Moraic layer

s   o   t  e   <n>         Segmental layer
```
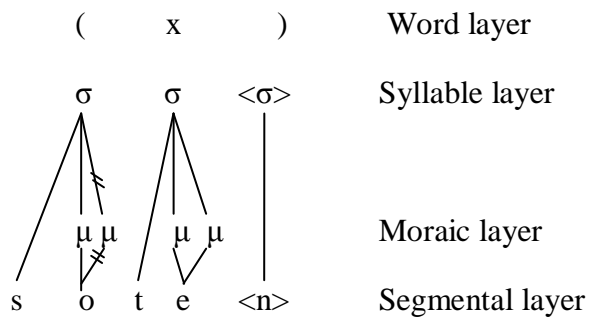
As in all Arabic dialects, to the best of my knowledge, long vowel shortening takes place before a consonant where a hollow verb takes a consonant-initial subject suffix (cf. 4.4.1.7). In WM Arabic, it also takes place where the interrogative pronoun *mīn* 'who' takes a consonant-initial suffix. Thus, long-vowel shortening does not take place when syncope results in juxtaposition of a long vowel to two consonants (as in, for example, Cairene Arabic (Watson 2002) *kātib-ah > kātbah > katbah* 'writer f.'). The following tables show how the long vowel shortens when a hollow verb takes a consonant-initial subject suffix.

Table 86: The inflectional paradigm of the VII verb *n-ḫāz* 'to take sides'

n-ḫāz 'to take sides'	Perfect	Gloss
1s.	n-ḥaz-[15]it	I took sides
1pl.	n-ḥaz-na	we took sides
2m.s.	n-ḥaz-it	you (m.s.) took sides
2m.pl.	n-ḥaz-tu	you (m.pl.) took sides
2f.s.	n-ḥaz-ti	you (f.s.) took sides
2f.pl.	n-ḥaz-tan	you (f.pl.) took sides
3m.s.	n-ḫāz	he took sides
3m.pl.	n-ḫāz-u	they (m.) inclined
3f.s.	n-ḫāz-at	she took sides
3f.pl.	n-ḫāz-an	they (f.) took sides

Table 87: The inflectional paradigm of the Form VIII verb *ḥ-t-āj* 'to need'

ḥ-t-āj 'to need'	Perfect	Gloss
1s.	ḥ-t-aj-it	I needed
1pl.	ḥ-t-aj-na	we needed
2m.s.	ḥ-t-aj-it	You (m.s.) needed
2m.pl.	ḥ-t-aj-tu	you (m.pl.) needed
2f.s.	ḥ-t-aj-ti	you (f.s.) needed
2f.pl.	ḥ-t-aj-tan	you (f.pl.) needed
3m.s.	ḥ-t-āj	he needed
3m.pl.	ḥ-t-āj-u	they (m.) needed
3f.s.	ḥ-t-āj-at	she needed
3f.pl.	ḥ-t-āj-an	they (f.) needed

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[15] The [i] here is due to epenthesis to avoid a final -CC sequence. If the suffix were vowel initial, then the long vowel of the stem would be shortened, as for the other vowel-initial suffixes. Kiparsky (2003) shows that many Levantine dialects (VC dialects) insert an epenthetic vowel before /t/ of the 1s and 2ms perfect inflection. Interestingly, in WM Arabic this type of epenthesis is not exhibited in nominal forms, e.g. *naḥt* 'carving', *mart* 'the wife of'.

st-afād 'to benefit'	Perfect	Gloss
1s.	st-afad-it	I benefited
1pl.	st-afad-na	we benefited
2m.s.	st-afad-it	you (m.s.) benefited
2m.pl.	st-afad-tu	you (m.pl.) benefited
2f.s.	st-afad-ti	you (f.s.) benefited
2f.pl.	st-afad-tan	you (f.pl.) benefited
3m.s.	st-afād	he benefited
3m.pl.	st-afād-u	they (m.) benefited
3f.s.	st-afād-at	she benefited
3f.pl.	st-afād-an	they (f.) benefited

5.2.2.5.7 Pre-suffix Vowel lengthening

WM Arabic has a group of words that end in short vowels, e.g. *abu* 'father', *fi* 'in', *ᶜala* 'about', *bi* 'in', *maša* 'to walk', *samma* 'to name'. Where a consonant-initial morpheme is suffixed to a word-final short vowel, the short vowel lengthens.[16] Consider the examples given below:

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[16] Also attested in some other Arabic dialects, including Cairene (Broselow 1976; Watson 2002).

Table 89: Pre-suffix vowel lengthening

Underlying Form	Surface Form	Gloss
fi+ha	fī-ha	in it (f.)
bi-ha	bī-ha	about it (f.), in it (f.)
abu-hum	abū-hum	their (m.) father
mašša+ha	maššā-ha	he caused her to walk
jabu+hum	jabū-hum	they (m.) brought them
samma+h	sammā-h	he named him
y-ġaṭṭi-ha	y-ġaṭṭī-ha	he covered her

In each of the above examples, a short vowel lengthens into its long counterpart when followed by a consonant-initial suffix.

3.3 Chapter Summary

This chapter examines the phoneme system of WM Arabic, and it has been shown that the consonantal inventory of WM Arabic is similar in many aspects to CA except for the merge of *ḍ and *ḏ̣ into /ḏ̣/ and the realisation of the uvular stop *q as /g/. The vowel inventory of WM Arabic consists of three short vowels: /a/, /u/ and /i/, their long counterparts /ā/, /ū/, and /ī/ plus the two long mid vowels: /ē/ and /ō/, which are reflexes of CA diphthongs *ay and *aw. There are four contexts in which /ay/ /aw/ are attested: where C1 is a glide, where /w/ or /y/ is a geminate, where a monosyllabic word has a final glide, and finally where a quadriliteral verb has an antepenultimate glide. Five assimilation processes are examined in the dialect: definite article assimilation, assimilation of *t-* to coronal obstruents, sonorant assimilation, non-coronal assimilation, and emphasis spread. Emphasis spreads bidirectionally minimally in the syllable and maximally in the phonological word. Where lefward emphasis is absolute, rightward emphasis is blocked by the set of palatals: /i/, /y/ and /š/. Stress is predictable in the dialect and it obeys the End Rule Right which assigns stress to the head of the right-most visible foot.

The dialect exhibits a set of prosodic processes whose function is to repair syllable structure, including epenthesis, V-V resolution, glottal stop prosthesis, degemination, shortening of

long vowels, and pre-suffix vowel lengthening. Syncope targets short vowels /i/, /u/ and /a/ in non-final unstressed open syllables in order to reduce the number of monomoraic syllables. Epenthesis treats some syllabification violations in the dialect resulting from disfavoured consonant clusters. To avoid the surfacing of two adjacent vowels next to each other, deletion of the left-most vowel takes place to avoid the surfacing of onsetless syllables, as for example in the case where a vowel-initial morpheme is concatenated to the stem of a defective verb, e.g. *daᶜa+at > daᶜat* 'she prayed'.

Verbal Morphology

The goal of this chapter is to examine the morphological aspects of verbs in WM Arabic. The chapter starts with a preface to Arabic morphology followed by an overview of verbal morphology. The study then turns to analyze the derivation of verb forms in the dialect, where the morphological pattern of each verb form is examined in strong and weak positions. Thereafter, the study deals with the inflection of sounds verbs, doubled verbs, hamzated verbs, assimilated verbs, hollow verbs and defective verbs in both perfect and imperfect aspects.

4.1 Preface to Arabic Morphology

Morphology is the branch of grammar which deals with the structure and rules of word formation. A central notion in morphology is the morpheme which refers to the smallest meaningful unit that can't be further divided. For example, the English word 'believable' consists of two morphemes: the root 'believe' and the affix 'able'. Morphemes are classified into two categories: free morphemes and bound morphemes. Free morphemes refer to morphemes which can stand alone as a separate unit, e.g. *ġarsa* 'tree', *grah* 'food on wedding day', *sēr* 'belt', *zarb* 'henhouse', whereas bound morphemes are morphemes which cannot stand by themselves, i.e. they must be attached to other free morphemes to be meaningful[17]. For example, the WM Arabic word *bēt-hum* 'their home' consists of two morphemes: the free morpheme *bēt* 'home' which can stand by itself, and the 3m.pl. bound morpheme *-hum*, which cannot stand alone. Most languages have a large inventory of free morphemes with a fixed number of bound morphemes (Shdaifat 2014).

There are two basic morphological types: concatenative morphology and nonconcatenative morphology. Many of the languages of the world appear to exhibit a concatenative structure that involves either prefixation or suffixation. In this form of morphology, morphemes are seen as discrete units which are concatenated linearly to either edge of the word, right or left, to form a word (McCarthy 1981: 373). For instance, the English word 'undividable' comprises three discrete morphemes: the negative prefix *un-*, the stem morpheme *divide* and the adjectival suffix *-able*. The formation of this word involves the concatenation of the

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[17] All instances are taken from WM Arabic.

bound morphemes *un-* and *-able* respectively to the left and right edge of the stem, and it thus exhibits a concatenative structure that involves prefixation and suffixation.

Although English is a predominantly concatenative language, there are a number of nouns and verbs that are formed nonconcatenatively, i.e. through word formation processes which involve some modification within the stem. For example, the plural of some nouns is formed by an umlaut rule which involves a change in the stem vowel, e.g. *man > men; woman > women*. Likewise, the inflection of some English verbs involves a change in the stem vowel. For example, the verb *sang* comprises the verb [sing] plus the vowel [a] to denote the past tense.

Arabic has a nonconcatenative morphological system that is characterised by several morphological processes including: infixation, melodic overwriting, templatic change and reduplication. Infixation refers to the insertion of a bound morpheme between the root consonants. For example, Form VIII is derived from Form I by infixing the bound morpheme *-t-* after the first root consonant, e.g. *k-t-asab* 'to earn' that is derived from the Form I verb *kasab* 'to earn'. Gemination refers to the doubling of a root consonant. Gemination is used in the formation of Form II verbs where the second medial consonant of the Form I verb is duplicated. For example, the Form II verb *ga^ccad* 'to make someone sit down' is formed by doubling the second root consonant of the Form I verb *ga^cad* 'to sit down'. Melodic overwriting is a morphological process affecting the formation of passive structures whereby the vocalic melody of a transitive verb is overwritten by *u-i* in the perfect and *u-a* in the imperfect. For example, the passive of the CA Form I verb *daras* 'to study' is formed by overwriting the vocalic melody *a-a* to *u-i*, forming *duris* 'it (m.) was studied'.

Arabic has also concatenative morphology in the formation of some words. Some morphemes in WM Arabic such as the definite article *il-* 'the', the feminine marker *-a*, the dual marker *-ēn* and the habitual morpheme *bi-* attach to the stem of the word. For example, the word *b-i-nām-u* comprises four morphemes: the stem of the word *nām* 'to sleep', the habitual morpheme *b-*, the third person masculine imperfect morpheme *i-* (*y-*) and the masculine plural morpheme *-u*. Thus, the formation of this word involves the concatenation of the bound morphemes *bi-*, *i-* and *-u* respectively to the left and right edges of the stem. Additionally, case endings in CA, i.e. nominative, accusative and genitive, are attached to stem nominals, and are examples of concatenative morphology. The CA word *bayt-u-n*

'house', for example, consists of three morphemes: the stem morpheme *bayt* 'house', the nominative morpheme *-u* and nunation *-n* which indicates absolute state.

Morphological processes are traditionally classified into inflectional and derivational. Inflectional morphology inflects words to provide grammatical contrasts, e.g. singular and plural, but never changes the class category of a word or its meaning. For example, the inflectional suffix *-a* can be added to the stem *mᶜallim* 'teacher' to obtain the feminine form *mᶜalm-a* 'female teacher' without changing the class of the word. By contrast, derivational morphology refers to the process of forming new words; it marks either lexical distinctions or changes in the class of a word. For instance, the active participle *lāᶜib* 'player' derived through a different template from the Form I verb *liᶜib* 'to play' changes the class of word from verb to noun.

Arabic has a root and pattern system that it shares with other Semitic languages, based on discontinuous morphemes. The stem of content words consists of three discontinuous morphemes (e.g. Watson 2002: 126): the consonantal root which bears lexical meaning, the templatic pattern and the vocalic melody which both convey syntactic information. For example, the CA verb *kusir* 'it (m.) was broken' comprises: the consonantal root *k-s-r* which denotes the act of breaking, the templatic pattern CVCVC which conveys perfect aspect, and the vocalic melody *u-i* which denotes passive voice. The combination of the three morphemes results in the form *kusir* 'it (m.) was broken'.

Arabic verbs can be classified according to the number of consonants that each verbal root has. They could be biconsonantal, e.g. *m-d* 'stretch', triconsonantal, e.g. *k-t-b* 'write', or quadriconsonantal, e.g. *s-y-ṭ-r* 'control'. The majority of Arabic verbs are triconsonantal. Verbs exhibit a number of templates known by the morphological pattern that characterises them. They are usually referred to as measures of the verbs (the Arabic term is *ʔawzān*). Arab grammarians chose the model root *f-ᶜ-l* to exemplify the different prosodic templates of Arabic verbs.

4.2 An Overview of Verbal Morphology

A verb can have one of two aspects: perfect and imperfect. The perfect aspect refers to finished events while the imperfect describes unfinished actions or processes. The perfect aspect is the basic one because it has fewer affixes, and most dictionaries use the uninflected 3m.s. form of the perfect as the citation form (Watson 1993: 55). The perfect-imperfect

distinction is denoted morphologically through the difference in the position of the subject pronoun. Thus, while the perfect aspect is denoted through subject suffixes, the imperfect is expressed through suffixes and/or prefixes.

Traditionally, Arabic verbs are divided into: *māḍi* 'past', *muḍāriᶜ* 'present' and *ʔamr* 'imperative'. Modern linguists still use the same division with both *māḍi* 'past' and *muḍāriᶜ* 'present' being renamed respectively into perfect and imperfect. Arabic verbs are also classified into strong and weak verbs. A weak verb, *al-fiᶜl al-muᶜtall*, has either /w/ or /y/ as one of its radicals whereas a strong verb, *al-fiᶜl al-ṣaḥīḥ,* comprises any radical other than */w/* or */y/.* Strong verbs are further subclassified into: sound triliteral roots, doubled verb roots and hamzated verb roots.

A sound triliteral root, *al-fiᶜl al-ṣaḥīḥ al sālim*, comprises three radicals, all of which are different and none of them are /w/, /y/, or *hamzah* /ʔ/, e.g. *zagaṭ* 'to catch' from *z-g-ṭ*, *zamaṭ* 'to swallow' from *z-m-ṭ*, *jamaᶜ* 'to collect' from the root *j-m-ᶜ*. A doubled verb root, *al-fiᶜl al muḍaᶜᶜaf*, is one in which the second and third radicals are the same, e.g. the verbs *ᶜadd* 'to count' and *ṣann* 'to listen' are taken respectively from the roots *ᶜ-d* and from *ṣ-n*. A hamzated verb root, *al-fiᶜl al-mahmūz*, contains a historical *hamzah* /ʔ/ as one of its radicals, e.g. *xaḏa* 'to take' from the root *ʔ-x-ḏ*.

Weak verbs are also subclassified into: assimilated verb roots *(al-fiᶜl al-miṯāl)*, hollow verbs (*al-fiᶜl al-ajwaf*) and defective verbs *(al-fiᶜl al-nāqiṣ)*. The classification is largely based on the position of /w/ and /y/ within the root; a verb is said to be assimilated if the first radical is either /w/ or /y/, e.g. the Arabic verb *waᶜad* 'to promise' from the root *w-ᶜ-d*; a hollow verb refers to roots with medial /w/ or /y/, e.g. *bāᶜ* 'to sell' from the root *b-y-ᶜ*; and a defective root verb is the one where the final radical is either /w/ or /y/, e.g. *maša* 'to walk' from the root *m-š-y*, *daᶜa* 'to pray' from *d-ᶜ-w*. Below is a presentation of verbs in WM Arabic in terms of their derivation and then their inflection.

4.3 Verbal Derivation

WM Arabic has twelve verb forms *(ʔawzān al-fiᶜl)*, including the first ten verb forms known from CA (I-X) plus the first two quadriliteral forms (QI and QII). The Form I is the base form from which the other nine forms (forms II-X) are derived. The root consonants interlock with different templatic patterns, producing a number of variants that share some of the lexical sense of the Form I verb, but differ in aspects such as transitivity and causativity. For

example, the lexical root *k-t-b* interlocks with different patterns to produce variants related to writing, e.g. *katab* 'to wtite', *kattab* 'to make someone write', *kātab* 'to correspond with', *t-kātab* 'to correspond', *n-katab* 'to subscribe'. No single consonantal root occurs with all ten forms. Below is an examination of the major verb forms in WM Arabic.

4.3.1 Form I (the basic form) CVCVC

Form I is known in Arabic as *al-fiᶜl al-mujarrad* 'the simple form' because the majority of other verb forms are derived from this basic form. The basic pattern of Form I verbs is CaCaC or CiCiC in WM Arabic. Examples of CaCaC verbs are *kamaš* 'to grasp', which is realised in the imperfect as CCuC, e.g. *kamaš > yi-kmuš* 'he grasps', and *madaḥ* 'to praise', which is realised in the imperfect as CCaC, e.g. *yi-mdaḥ* 'he praises', depending on the verb. Sometimes, the imperfect of CaCaC verbs is CCiC, e.g. *dawaš* 'to annoy' > *yidwiš* 'he annoys'. Holes (2004: 101) argues that the *a-a* vocalic melody typically expresses an action that is performed by the agent, e.g. *marag* 'to pass', *ḍarab* 'to hit', *ḥalag* 'to cut hair'.

An example of a CiCiC verb is *kibir* 'to grow', which is realised invariably in the imperfect as yi-CCaC, as in *yi-kbar* 'he grows'. This pattern, i.e. the *i-i* pattern, typically denotes actions where the agent affects itself in some way by the performance of its action, e.g. *xisir* 'to lose'. Mental and emotional verbs typically have this pattern, e.g. *fihim* 'to understand', *simiᶜ* 'to hear', *firiḥ* 'to feel happy'. Where the stem pattern of the imperfect of Form I sound verbs is always CCVC, the stem vowel can sometimes be predictable from the root consonants. This is true for most verbs whose perfect pattern is CiCiC and which always surface with the stem vowel /a/, e.g. *simiᶜ* 'to hear' > *yi-smaᶜ* 'he hears'. Similarly, where C2 or C3 is either /ḥ/ or /ᶜ/, the stem vowel is always /a/, e.g. *yi-ṭlaᶜ* 'he comes out', *yi-bḥaš* 'he digs', *yi-zᶜal* 'he gets angry'.

Doubled or geminated verbs of Form I are realised in the perfect as CaCC, e.g. *ḥaṭṭ* 'to put, from the root *ḥ-ṭ*; *madd* 'to stretch' from *m-d*, and as y-CiCC in the imperfect, e.g. *y-ḥiṭṭ* 'he puts', and *y-ṣinn* 'he listens', and less frequently as y-CaCC, e.g. *y-ḍall* 'he stays'. In cognates of CA verbs with initial *hamzah*, *hamzah* is not attested in the perfect, and the verb is realised as CaCa, e.g. *kala* 'to eat' from *ʔ-k-l*, but there is evidence that *hamzah* at some level exists in initial position, because it undergoes vocalisation to *ā* in the imperfect, e.g. *y-ākil* 'he is eating', *y-āxiḏ* 'he is taking', and appears as *hamzah* in derived verbal forms, *ʔakil* 'eating'. Medial *hamzah* is realised in a limited number of verbs as CaʔaC in the perfect and

as yi-CʔaC in the imperfect, e.g. *saʔal* 'to ask', *yi-sʔal* 'he asks'. Cognates of CA verbs with word-final *hamzah* are never realised with final *hamzah* in WM Arabic; for example, the verbs *bada* 'to start' and *yi-bda* 'he starts' compare with CA verbs *badaʔ* 'to start' and *yabdaʔ* 'he starts'. The table below summarises Form I strong verbs in WM Arabic.

Table 90: Form I strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	CaCaC	*ḏarab* 'to hit'	yi-CCuC	*yi-ḏrub* 'he hits'
		madaḥ 'to praise'	yi-CCaC	*yi-mdaḥ* 'he praises'
		dawaš 'to annoy'	yi-CCiC	*yidwiš* 'he annoys'
	CiCiC	*fihim* 'to understand'	yi-CCaC	*yi-fham* 'he understands'
Doubled verbs	CaCC	*ṣann* 'to listen'	y-CiCC or	*y-ṣinn* 'he listens'
		ḏall 'to stay'	y-CaCC	*y-ḏall* 'he stays'
Initial hamzah	CaCa	*xaḏa* 'to take'	y-āCiC	*y-āxiḏ* ' he takes'
Medial hamzah	CaʔaC	*saʔal* 'to ask'	yi-CʔaC	*yi-sʔal* 'he asks'
Final hamzah	CaCa	*bada* 'to start'	yi-CCa	*yi-bda* 'he starts'

Regarding weak verbs, Form I assimilated verbs act like strong verbs in the perfect, i.e. they either have the pattern CaCaC, e.g. *waᶜad* 'to promise' from *w-ᶜ-d*, or CiCiC, e.g. *yibis* 'to dry' from *y-b-s*, *wiriṯ* 'to inherit' from *w-r-ṯ*. However, the weak segments /w/ and /y/ are vocalised in the imperfect and are realised respectively as /ū/ and /ī/, e.g. *y-ūgaf* 'he stands', *y-ības* 'it dries'. The weak segments */w/* and */y/* are not realised in the perfect of hollow verbs, and the verb stem is realised as CāC, as in: *gāl* 'to say' from *g-w-l*, *bāᶜ* 'to sell' from *b-y-ᶜ*. Where Form I has a medial /w/, it shifts into /ī/, /ā/, or /ū/ in the imperfect, e.g. *y-nām* 'to sell' from *n-w-m*, *y-ṣīm* 'he fasts' from *ṣ-w-m*, and *y-ḏūg* 'he tastes' from *ḏ-w-g*, with the quality of the long vowel lexically determined. By contrast, the weak segment */y/* always vocalises

into /ī/, e.g. *y-bīᶜ* 'he sells' from *b-y-ᶜ*, *y-šīl* 'he carries' from *š-y-l*. As for defective verbs, the weak segments /w/ and /y/ are not realised in either aspect, and as a result, these verbs appear in the perfect as CaCa and as yi-CCi in the imperfect, e.g. *maša* 'to walk' > *yi-mši* 'he walks' from *m-š-y*; *daᶜa* 'to pray' > *yi-dᶜi* 'he prays' from *d-ᶜ-w*. The weak segments, however, appear in other derivatives of the root, e.g. *daᶜwa* 'a pray', *mašya* 'a walk'.

4.3. 2 Derived Forms (II to XI)

For triliteral verbs, the following derivatives are observed in WM Arabic:

<u>Form II CaCCaC</u>

Form II verbs are derived from Form I verbs by doubling the second radical of the root. The general meaning that this pattern denotes is causative, i.e. it indicates that another agent caused it to happen. For example, the verb *rassab* 'to cause someone to fail' is derived from the Form I verb *rasab* 'to fail' by doubling the second radical /s/, and thus denotes a causative meaning of Form I. It may also express a repeated action of Form I verbs, e.g. the verb *kassar* 'to break' denotes that the act of breaking has been done several times. The pattern may also give an estimative or declarative meaning, e.g. *ṣaddag* 'to believe'. The general pattern for the perfect of this Form is CaCCaC, e.g. *rattab* 'to tidy up', *kabbaš* 'to sleep' and as y-CaCCiC in the imperfect, e.g. *y-rattib* 'he tidies', *y-kabbiš* 'he sleeps'.

Doubled verbs show up like strong verbs, i.e. they appear in the perfect as CaCCaC and as y-CaCCiC in the imperfect, e.g. *sabbab* 'to cause' > *y-sabbib* 'he causes'. In initial-hamzated verbs, the Form II verb is realised as ʔaCCaC in the perfect and y-ʔaCCiC in the imperfect, e.g. *ʔajjal* 'to postpone' > *y-ʔajjil* 'he delays', *ʔakkad* 'to asserts' > *y-ʔakkid* 'he asserts'. Medial *hamzah* is rare and is realised in the perfect as CaʔʔaC, e.g. *raʔʔas* 'to appoint someone the head' and y-CaʔʔiC in the imperfect, e.g. *y-raʔʔis* 'he appoints someone the head'. Cognates of CA verbs with final *hamzah* are never realised as such in WM Arabic, surfacing in the perfect as CaCCa and y-CaCCi in the imperfect, e.g. *hanna* 'to congratulate' > *y-hanni* from **h-n-ʔ*; and *xabba* 'to hide' > *y-xabbi* 'he hides' from **x-b-ʔ*. The table below summarises Form II strong verbs in WM Arabic:

Table 91: Form II strong verbs in WM Arabic

	Perfect Pattern	Example	Imperfect Pattern	Example
Sound verbs	CaCCaC	*xassar* 'to cause someone to lose' money'	y-CaCCiC	*y-xassir* 'he causes someone to lose'
Doubled verbs	CaCCaC	*ḍarrar* 'to cause harm '	y-CaCCiC	*y-ḍarrir* 'he causes harm'
Initial hamzah	ʔaCCaC	*ʔaxxar* 'to delay someone'	y-ʔaCCiC	*y-ʔaxxir* 'he delays someone'
Medial hamzah	CaʔʔaC	*saʔʔal* 'to ask questions repeatedly'	y-CaʔʔiC	*y-saʔʔil* 'he asks questions repeatedly'
Final hamzah	CaCCa	*xabba* 'to hide'	y-CaCCi	*y-xabbi* 'he hides'

Both assimilated and hollow verbs of Form II behave like strong verbs, i.e. they appear in the perfect as CaCCaC, e.g. *waggaf* 'to stop someone' from *w-g-f*, *hawwan* 'to facilitate' from *h-w-n* and as y-CaCCiC in the imperfect, e.g. *y-waggif* 'he stops someone' and *y-hawwin* 'he facilitates'. The weak segments disappear in defective verbs, and they have the pattern CaCCa in the perfect and y-CaCCi in the imperfect, e.g. *ġaṭṭa* 'to cover' > *y-ġaṭṭi* 'he covers' from *ġ-ṭ-y*; *ḥalla* 'to treat' > *y-ḥalli* 'he treats' from *ḥ-l-w*.

Form III CāCaC

Form III is derived from Form I by inserting the long vowel /ā/ after the first radical of the root. It has the basic pattern CāCaC in the perfect, e.g. *ṭārad* 'to chase', and y-CāCiC in the imperfect, e.g. *y-ṭārid* 'he chases'. The basic meaning of this pattern is associative, i.e. the involvement of another person in the action where the subject is mostly implied. Hamzated verbs are only attested with final *hamzah* where the verb appears in the perfect as CāCaʔ and *y*-CāCiʔ in the imperfect, e.g. *kāfaʔ* 'to reward' > *y-kāfiʔ* 'he rewards'. Initial and medial *hamzah* has not been attested. The table below summarises Form III strong verbs in WM Arabic:

Table 92: Form III strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	CāCaC	*sāᶜad* 'to help'	y-CāCiC	*y-sāᶜid* 'he helps'
Doubled verbs				
Initial hamzah				
Medial hamzah				
Final hamzah	CāCaʔ	*kāfaʔ* 'to reward'	y-CāCiʔ	*y-kāfiʔ* 'he rewards'

Form III assimilated and hollow verbs behave like sound verbs, i.e. they have the pattern CāCaC in the perfect, e.g. *wājah* 'to meet', *ḥāwal* 'to try', and y-CāCiC in the imperfect, e.g. *y-wājih* 'he meets' and *y-ḥāwil* 'he tries'. As for defective verbs, the weak segments disappear in both the perfect and imperfect and the verb is realised as CāCa in the perfect and y-CāCi in the imperfect, e.g. *nāda* 'to call' > *y-nādi* 'he is calling'; *jāfa* 'to lose contact with someone' > *y-jāfi* 'he loses contact with someone'.

Form IV ʔa-CCaC

Form IV often conveys a causative meaning of Form I. This pattern is not very frequent in the dialect and is limited to a few verbs such as *ʔafraj* 'to solve someone's problem', *ʔajram* 'to commit a crime', *ʔamhal* 'to give time', *ʔarsal* 'to send', *ʔaᶜṭa* 'to give', *ʔašraf* 'to supervise'. The perfect of Form IV is derived by prefixing *hamzah* and the short vowel /a/ to Form I verbs, realised as ʔa-CCaC, e.g. *ʔarsal* 'to send'. The imperfect of Form IV verb is realised as yi-CCiC, e.g. *yi-rsil* 'he sends'. No doubled verbs of this Form are found in the dialect.

To form the perfect of initial-hamzated verbs, *hamzah* of the root merges with the prefix *hamzah* into an *alif mamdūdah* 'a lengthened alif', appearing as ʔāCaC, e.g. *ʔāman* 'to believe' from the triliteral root *ʔ-m-n*. The imperfect is realised as y-ʔāCiC, e.g. *y-ʔāmin* 'he believes'. Medial and final hamzated verbs are not attested in the dialect.

Table 93: Form IV strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	ʔaCCaC	*ʔamhal* 'to give someone time'	yi-CCiC	*yi-mhil* 'he gives time'
Doubled verbs				
Initial hamzah	ʔāCaC	*ʔāman* 'to believe'	y-ʔāCiC	*y-ʔāmin* 'he believes'
Medial hamzah				
Final hamzah				

Assimilated verbs with the /w/ radical are realised in the perfect as ʔōCaC and as y-ōCiC in the imperfect, e.g. *ʔōjaᶜ* 'to hurt' and *y-ōjiᶜ* 'he hurts'. No instances of assimilated verbs with the */y/* radical or of hollow verbs have been found in the dialect. Defective verbs with the /y/ radical appear in the perfect as ʔaCCa and as yi-CCi in the imperfect, e.g. *ʔa-ᶜta* 'to give' and *yi-ᶜti* 'he gives'. No defective verbs with final /w/ are found in the dialect.

Form V t-CaCCaC

Form V verbs are derived from Form II verbs with a prefixed *t-*. The basic pattern of Form V is t-CaCCaC in the perfect and yi-t-CaCCaC in the imperfect, e.g. *t-maggal* 'to keep looking at someone' and *yi-t-maggal* 'he keeps looking at someone'. Basically, Form V verbs denote a reflexive or causative sense of Form II. For example, the verb *t-kassar* 'it (m.) was broken' indicates that the act of breaking has been achieved and the subject of the Form V verb is the object of the Form II verb.

Doubled Form V verbs are derived the same way as strong verbs, i.e. they have the pattern t-CaCCaC in the perfect and yi-t-CCaC in the imperfect, e.g. *t-raddad* 'to hesitate' and *yi-t-raddad* 'he hesitates' from the root *r-d-*. Similarly, hamzated verbs act like strong verbs initially, medially and finally, i.e. they appear as t-CaCCaC in the perfect and yi-t-CaCCaC in the imperfect, e.g. *t-ʔaxxar* 'to delay' > *yi-t-ʔaxxar* 'he delays', *t-raʔʔas* 'to chair' > *yi-t-raʔʔas* 'he chairs', and *t-hayyaʔ* 'to prepare' > *yi-t-hayyaʔ* 'he prepares'.

Table 94: Form V strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	t-CaCCaC	*t-naṣṣal* 'to escape'	yi-t-CaCCaC	*yi-t-naṣṣal* 'he escapes'
Doubled verbs	t-CaCCaC	*t-ḥassas* 'to get allergy'	yi-t-CCaC	*yi-t-ḥassas* 'he is getting allergy'
Initial hamzah	t-CaCCar	*t-ʔaxxar* 'to delay'	yi-t-CaCCaC	*yi-t-ʔaxxar* 'he delays'
Medial hamzah	t-CaCCar	*t-raʔʔas* 'to chair'	yi-t-CaCCaC	*yi-t-raʔʔas* 'he chairs'
Final hamzah	t-CaCCar	*t-hayyaʔ* 'to prepare'	yi-t-CaCCaC	*yi-t-hayyaʔ* 'he is preparing'

As for weak verbs, both assimilated and hollow verbs behave as strong verbs, e.g. *t-waggaᶜ* 'to expect' > *yi-t-waggaᶜ* 'he expects'. In defective verbs, both the /w/ and /y/ disappear, and therefore the verb is realised t-CaCCa in the perfect and yi-t-CaCCa in the imperfect, e.g. *t-banna* 'to adopt' > *yi-t-banna* 'he adopts' from the root *b-n-y*, *t-ᶜadda* 'to go past' > *yi-t-ᶜadda* 'he goes past' from the root *ᶜ-d-y*, and *t-rajja* 'to appeal' *yi-t-rajja* 'he appeals' from the root *r-j-w*.

Form VI t-CāCaC

Form VI is derived from Form III by prefixing *t-*. The basic meaning of this form is usually reciprocal, i.e. it expresses a mutual action between two parties. For example, the verb *t-bāwas* 'to kiss' involves a mutual act of kissing between two persons. The perfect of Form VI is realised in WM Arabic as t-CāCaC, e.g. *t-nāgaš* 'to discuss', while the imperfect is realised as yi-t-CāCaC, e.g. *yi-t-bāwas* 'he kisses'. Doubled verbs behave like strong verbs in the dialect, e.g. *t-rādad* 'to argue' > *yi-t-rādad* 'he argues', from the root *r-d*.

In initial-hamzated verbs, *hamzah* with the long vowel *ā* forms an *alif mamdūdah*. Basically, these verbs appear in the perfect as t-ʔāCaC and as *yi-t-ʔāCaC* in the imperfect, e.g. *t-ʔāmar* 'to conspire' > *yi-t-ʔāmar* 'he conspires'. Medial-hamzated verbs behave similar to strong verbs, so they have the pattern t-Cāʔac in the perfect and yi-t-Cāʔac in the imperfect, e.g.

t-šāʔam 'to be pessimistic' and *yi-t-šāʔam* 'he becomes pessimistic'. No instances of final hamzated verbs have been found in the dialect.

Table 95: Form VI strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	t-CāCaC	*t-ṣālaḥ* 'to reconcile'	yi-t-CāCaC	*yi-t-ṣālaḥ* 'he reconciles'
Doubled verbs	t-CāCaC	*t-rādad* 'to argue'	yi-t-CāCaC	*yi-t-rādad* 'he is arguing'
Initial hamzah	t-ʔāCaC	*t-ʔāmar* 'to conspire'	yi-t-ʔāCaC	*yi-t-ʔāmar* 'he conspires'
Medial hamzah	t-Cāʔac	*t-fāʔal* 'to be optimistic'	yi-t-Cāʔac	*yi-t-fāʔal* 'he is optimistic'
Final hamzah				

Assimilated and hollow verbs do not differ from strong verbs in this derived Form, i.e. they appear in the perfect as t-CāCaC and as yi-t-CāCaC in the imperfect, e.g. *t-wājah* 'to confront' > *yi-t-wājah* 'he confronts' and *t-šāwar* 'to consult' and *yi-t-šāwar* 'he consults'. In defective verbs, the final weak consonants disappear and vocalise into *ā,* appearing as t-CāCa in the perfect and yi-t-CāCa in the imperfect, e.g. *t-sāwa* 'to be equivalent' > *yi-t-sāwa* 'he is equivalent'.

Form VII n-CaCaC

Form VII is derived from Form I by adding the prefix *n-*. Essentially, this form expresses the passive of Form I. For example, whereas the verb *kasar* 'to break' denotes the act of breaking, the verb *n-kasar* 'it (m.) was broken' shows the passive of that verb. The basic perfect pattern for this Form is n-CaCaC, e.g. *n-kasar* 'to be broken', while the imperfect is realised in WM Arabic as yi-n-CaCiC, e.g. *yi-n-kasir* 'it (m.) is broken'. Doubled verbs show in the perfect as n-CaCC and as yi-n-CaCC in the imperfect, e.g. *n-ḍarr* 'to be harmed' > *yi-n-ḍarr* 'he is harmed' from the root *ḍ-r*. Cognates of CA final hamzated verbs don't exhibt *hamzah* word finally. Thus, the WM Arabic verb *n-ṭafa* 'to be extinguished' > *yi-n-ṭafi* 'it is extinguished' with a final historical *hamzah* compares respectively with CA verbs **n-ṭafaʔ*

'to be extinguished' >* ya-n-ṭafiʔ 'it is extinguished'. The table below summarises Form VII strong verbs in WM Arabic:

Table 96: Form VII strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	n-CaCaC	*n-ḥabas* 'to be jailed'	yi-n-CaCiC	*yi-n-ḥabis* 'he is jailed'
Doubled verbs	n-CaCC	*n-sabb* 'to be cursed'	yi-n-CaCC	*yi-n-sabb* 'he is cursed'
Initial hamzah				
Medial hamzah				
Final hamzah	n-CaCa	*n-ṭafa* 'to be extinguished'	yi-n-CaCi	*yi-n-ṭafi* 'it is extinguished'

Assimilated verbs do not occur in the dialect in Form VII, while hollow and defective Form VII verbs are frequently found. In hollow verbs, the weak segments are not realised and the verb is attested in the perfect as n-CāC and as yi-n-CāC in the imperfect, e.g. *nhār* 'to decline' > *yi-n-hār* 'he declines'. In defective verbs, the weak segments /w/ and /y/ disappear, and the verbs have the pattern n-CaCa in the perfect and yi-n-CaCi in the imperfect e.g. *n-ᶜada* 'to be infected' and *yi-n-ᶜadi* 'he is infected' from the root *ᶜ-d-w*.

Form VIII C-t-aCaC

Form VIII verbs are derived from Form I by infixing *-t-* after the first radical. They generally express a reflexive or medio-passive meaning. They surface as C-t-aCaC in the perfect and as yi-C-ta-CiC in the imperfect, e.g. *r-t-afaᶜ* 'to go up' > *yi-r-t-afiᶜ* 'it (m.) goes up'. Doubled root Form VIII verbs appear in the perfect as C-t-aCC and as yi-C-t-aCC in the imperfect, e.g. *h-t-amm* 'to be concerned' > *yi-h-t-amm* 'he is concerned' from the root *h-m*. Cognates of CA verbs with final *hamzah* are never realised with final *hamzah* in WM Arabic, e.g. the verbs *m-t-ala* 'to be filled' > *yi-m-t-ali* 'it (m.) is filling' compare respectively with CA verbs *m-t-alaʔ* and *ya-m-t-aliʔ*. The table below summarises Form VIII strong verbs in WM Arabic:

Table 97: Form VIII strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	C-t-aCaC	*j-t-ama^c* 'to meet'	yi-C-ta-CiC	*yi-j-t-ami^c* 'he is meeting'
Doubled verbs	C-t-aCC	*h-t-amm* 'to be concerned'	yi-C-t-aCC	*yi-h-t-amm* 'he is concerned'
Initial hamzah				
Medial hamzah				
Final hamzah	C-t-aCa	*m-t-ala* 'to be filled up'	yi-C-t-aCi	*yi-m-t-ali* 'it is filling'

In assimilated verbs, the weak segments /w/ and /y/ assimilate totally to the infix *-t-*, resulting in the pattern tt-aCaC. For example, the verb *tt-aham* 'to accuse', derived from the triliteral root *w-h-m*, is formed by assimilating the weak segment /w/ into the infix *-t-*, forming *tt-aham* rather than *i-w-t-aham*. Concerning hollow verbs, the weak segments /w/ and /y/ shift into long ā, so they are realised in the perfect as C-t-āC and as yi-C-t-āC in the imperfect, e.g. *ḥ-t-āj* 'to need' > *yi-ḥ-t-āj* 'he needs'. As for defective verbs, the weak segments /w/ and /y/ shift into *a* in the perfect and *i* in the imperfect, e.g. *n-ram-a* 'to be thrown down' > *yi-n-rami* 'he is being thrown down'.

<u>Form IX CCaCC</u>

Form IX is very limited in the dialect under investigation. It is derived from Form I verbs by doubling the final root consonant. The basic meaning ththat For, IX verbs denote is the acquisition of colour, e.g. *smarr* 'to become dark'. The perfect of Form IX appears in WM Arabic as CCaCC, e.g. *ḥmarr* 'to become red', while the imperfect is realised as yi-CCaCC, e.g. *yi-ḥmarr* 'it (m.) becomes red'. In many cases, the Form IX verb is not used and its meaning is expressed periphrastically by the phrase *ṣār* 'to become' followed by the colour or defect adjective, e.g. *ṣār aswad* 'to become black' instead of *swadd* 'to become black'. Hamzated and weak Form IX verbs have not been found in the dialect.

Form X st-aCCaC

Form X is derived from Form I by adding the prefix *st-* to Form I verbs. They might denote the meaning of request, e.g. *st-afsar* 'to inquire', which implies that someone is seeking an answer. Form X verbs surface in the perfect as st-aCCaC and in the imperfect as yi-st-aCCiC, e.g. *st-aġrab* 'to wonder' > *yi-st-aġrib* 'he wonders '. Doubled verbs surface in the perfect as st-aCaCC and in the imperfect as yi-st-aCiCC, e.g. *st-amarr* 'to continue' > *yi-st-amirr* 'he continues' from the root *m-r*. Cognates of CA initial-hamzated verbs are attested in WM Arabic only word-initially in which case they appear in the perfect as st-āCaC and in the imperfect as yi-st-āCiC, e.g. *st-ājar* 'to rent' > *yi-st-ājir* 'he rents'. Below is a summary of Form X strong verbs in WM Arabic.

Table 98: Form X strong verbs in WM Arabic

	Perfect	Example	Imperfect	Example
Sound verbs	st-aCCaC	*st-aᶜjal* 'to hurry up'	yi-st-aCCiC	*yi-st-aᶜjil* 'he hurries up'
Doubled verbs	st-aCaCC	*st-amarr* 'to continue'	yi-st-aCiCC	*yi-st-amirr* 'he continues'
Initial hamzah	st-āCaC	*st-ājar* 'to rent'	yi-st-āCiC	*yi-st-ājir* 'he rents'
Medial hamzah				
Final hamzah				

As for weak verbs, assimilated verbs in the perfect have the form st-aCCaC and in the imperfect the form yi-st-aCCiC, e.g. *st-awrad* 'to import' > *yi-st-awrid* 'he imports', from the root *w-r-d* and *st-aysar* 'to find something easier' > *yi-st-aysir* 'he finds something easier'. Hollow verbs show up in the perfect as st-aCāC and in the imperfect as yi-st-aCīC, e.g. *stafād* 'to benefit' > *yi-st-afīd* 'he benefits' from the root *f-y-d*. Defective verbs are realised only in the case of final */y/* in which case they are realised in the perfect as st-aCCa and yi-st-aCCi in the imperfect, e.g. *st-amša* 'to have a desire to walk' > *yi-st-amši* 'he has a desire to walk', from the root *m-š-y*, *st-abka* 'to pretend crying' > *yi-st-abki* 'he pretends to cry'.

Quadriliteral Verbs

Two forms of CA quadriliteral verbs are attested in WM Arabic: QI and QII. QI mirrors Form II triliteral verbs by exhibiting the pattern CVCCVC. It is realised in the perfect as CaCCaC and as y-CaCCiC in the imperfect, e.g. *zalgam* 'to get angry' > *y-zalgim* 'he gets angry'. QII most frequently functions as the passive of QI; it is formed by inserting the prefix *t-* to QI Form, surfacing as t-CaCCaC in the perfect and yi-t-CaCCaC in the imperfect .e.g. *t-dahwar* 'to decline' and *yi-t-dahwar* 'he declines' in the imperfect.

4.4 Inflection of Verbs

The inflectional verbal morphology has three morphological categories: person (first, second and third), gender (masculine and feminine) and number (singular and plural). A verb inflects for gender, number and person to ensure subject-verb agreement. Verbs have two aspects: the perfect, referring to finished actions or states, and the imperfect, referring to incomplete actions or states. The perfect is known as the suffixal conjugation because a set of suffixes are used to mark its agreement with the subject, while the imperfect is also known as the prefixal conjugation because a mix of prefixes and suffixes mark subject-verb agreement (Watson 1993). The discussion below deals with the inflectional morphology of perfect and imperfect verbs.

4.4.1 The Perfect Aspect

The perfect aspect in Arabic generally corresponds to the simple past and past perfect tenses in English. Subject-verb agreement of perfect verbs involves the following suffixes: *-t* which marks 1s. and 2m.s., e.g. *ṭabax-it* 'I/you (m.s.) cooked'; *-na* for the 1pl., e.g. *ṭabax-na* 'we cooked'; *-ti* for 2f.s., e.g. *ṭabax-ti* 'you (f.s.) cooked'; *-tu* for 2m.pl., e.g. *ṭabax-tu* 'you (m.pl.) cooked'; *-tan* for 2f.pl., e.g. *ṭabax-tan* 'you (f.pl.) cooked'; *-at* for 3f.s., e.g. *kal-at* 'she ate'; *-u* for 3m.pl., e.g. *liᶜb-u* 'they (m.) played'; and *-an* for 3f.pl., e.g. *saww-an* 'they (f.) did'. The 3m.s. verb is the simple form of the verb and is isomorphic with the stem, e.g. *fihim* 'to understand'. The table below summarises the inflectional suffixes of the perfect aspect in WM Arabic.

Table 99: Inflectional suffixes for the perfect aspect in WM Arabic

Person-Gender	Number	
	S	Pl
1	-t	-na
2m	-t	-tu
2f	-ti	-tan
3m	-0	-u
3f	-at	-an

As seen above, 1s. is neutral with respect to gender, i.e. both genders are marked by the same suffix. Moreover, there is no morphological distinction between the 1s. and the 2m.s. suffix, i.e. both are realised by the suffix *-t* after vowel-final stems, e.g. *mišē-t* 'I/you (m.s.) walked', and *-it* after consonant-final stems e.g. *fhim-it* 'I/you (m.s.) understand'. Like many Levantine dialects, the epenthetic vowel is inserted to the 1st and 2ms suffix -t to avoid final -CC sequence (Kiparsky2003). Interestingly, this type of epenthesis is not exhibited in nominal forms in WM Arabic and is not subject to the Sonority Hierarchy Principle (Clements 1990), e.g. *naḥt* 'carving' (cf. 3.2.2.2). While some Jordanian dialects, for example ᶜAmmāni Arabic (Al-Wer 2007), mark both 2m.pl. and 2f.pl. by the morpheme suffix *-tu*, WM Arabic makes a gender distinction between the two, having *-tu* for the 2m.pl. and *-tan* for the 2f.pl.. The table below gives the perfect inflectional paradigm of the verb *gaᶜad* 'to sit'.

Table 100: Inflectional paradigm of the Form I verb *gaᶜad* 'to sit'

Person-Gender	Number	
	S	Pl
1	*gaᶜad-it* 'I sat'	*gaᶜad-na* 'we sat'
2m.	*gaᶜad-it* 'you (m.s.) sat'	*gaᶜad-tu* 'you (m.pl.) sat'
2f.	*gaᶜad-ti* 'you (f.s.) sat'	*gaᶜad-tan* 'you (f.pl.) sat'
3m.	*gaᶜad* 'he sat'	*gaᶜad-u* 'they (m.) sat'
3f.	*gaᶜad-at* 'she sat'	*gaᶜad-an* 'they (f.) sat'

The set of subject-verb agreement suffixes utilised in WM Arabic exhibit some differences from those utilised in other Jordanian dialects. While WM Arabic marks 2f.pl. and 3f.pl.

respectively using the suffixes *-tan* and *-an*, Ġawārna Arabic (Bani Yassin 1980) and Bdūl Arabic (Bani Yassin and Owens 1984) have *-tin* for 2f.pl. and *-in* for 3f.pl.. In the following, I examine the inflectional morphology of strong verbs, doubled verbs, hamzated verbs and weak verbs in WM Arabic.

4.4.1.1 Sound Verbs

<u>**Form I CiCiC and CaCaC**</u>

Form I sound verbs in WM Arabic have two basic patterns: CiCiC and CaCaC. Examining the inflectional morphology of CiCiC pattern shows that it has two allomorphs: CCiC- before consonant-initial subject suffixes and CiCC- before vowel-initial subject suffixes. The syncope of the stem vowel is motivated by the fact that unstressed CV syllables with the high front vowel /i/ are reduced to C in WM Arabic (cf. 3.2.2.5.2). By way of illustration, see below the inflectional paradigm of the verb *xisir* 'to lose'.

Table 101: The inflectional paradigm of the Form I verb *xisir* 'to lose'

xisir 'to lose'	Perfect	Gloss
1s.	xsir-it	I lost
1pl.	xsir-na	we lost
2m.s.	xsir-it	you (m.s.) lost
2m.pl.	xsir-tu	you (m.pl.) lost
2f.s.	xsir-ti	you (f.s.) lost
2f.pl.	xsir-tan	you (f.pl.) lost
3m.s.	xisir	he lost
3m.pl.	xisr-u	they (m.) lost
3f.s.	xisr-at	she lost
3f.pl.	xisr-an	they (f.) lost

The CaCaC pattern conjugates regularly with all inflectional suffixes since /a/ is not subject to syncope in this Form as shown in the inflectional paradigm of the verbs *gaᶜad* 'to sit' and *madaḥ* 'to praise' below (cf. 3.2.2.5.2.2).

Table 102: The inflectional paradigm of the Form I verb *gaᶜad* 'to sit'

gaᶜad 'to sit'	Perfect	Gloss
1s.	gaᶜad-it	I sat
1pl.	gaᶜad-na	we sat
2m.s.	gaᶜad-it	you (m.s.) sat
2m.pl.	gaᶜad-tu	you (m.pl.) sat
2f.s.	gaᶜad-ti	you (f.s.) sat
2f.pl.	gaᶜad-tan	you (f.pl.) sat
3m.s.	gaᶜad	he sat
3m.pl.	gaᶜad-u	they (m.) sat
3f.s.	gaᶜad-at	she sat
3f.pl.	gaᶜad-an	they (f.) sat

Table 103: The inflectional paradigm of the Form I verb *madaḥ* 'to praise'

madaḥ 'to praise'	Perfect	Gloss
1s.	madaḥ-it	I praised
1pl.	madaḥ-na	we praised
2m.s.	madaḥ-it	you (m.s.) praised
2m.pl.	madaḥ-tu	you (m.pl.) praised
2f.s.	madaḥ-ti	you (f.s.) praised
2f.pl.	madaḥ-tan	you (f.pl.) praised
3m.s.	madaḥ	he praised
3m.pl.	madaḥ-u	they (m.) praised
3f.s.	madaḥ-at	she praised
3f.pl.	madaḥ-an	they (f.) praised

Forms (II - X) CaCCaC

All sound derived verbs (forms II - QII) inflect regularly with subject inflectional suffixes except for some cases. First, the stem vowel /a/ drops out in forms VII (n-CaCaC) and VIII (C-taCaC) before vowel-initial suffixes, e.g. *n-kasr-at* 'she was broken', *r-taf ͨ-at* 'she goes up'. Moreover, the long vowel /ē/ is inserted in Form IX verbs before consonant-initial subject suffixes, where the verb stem ends in a geminate, e.g. *smarr-ē-na* 'we became dark'. The conjugation of the rest of sound verbs is regular and there is no change in the stem vowel. Below is a presentation of the inflectional paradigms of forms II - X verbs in the perfect in WM Arabic:

Table 104: The inflectional paradigm of the Form II verb ͨ*allam* 'to teach'

ͨ*allam* 'to teach'	Perfect	Gloss
1s.	ͨallam-it	I taught
1pl.	ͨallam-na	we taught
2m.s.	ͨallam-it	you (m.s.) taught
2m.pl.	ͨallam-tu	you (m.pl.) taught
2f.s.	ͨallam-ti	you (f.s.) taught
2f.pl.	ͨallam-tan	you (f.pl.) taught
3m.s.	ͨallam	he taught
3m.pl.	ͨallam-u	they (m.) taught
3f.s.	ͨallam-at	she taught
3f.pl.	ͨallam-an	they (f.) taught

Table 105: The inflectional paradigm of the Form III verb *bārak* 'to congratulate'

bārak 'to congratulate'	Perfect	Gloss
1s.	bārak-it	I congratulated
1pl.	bārak-na	we congratulated
2m.s.	bārak-it	you (m.s.) congratulated
2m.pl.	bārak-tu	you (m.pl.) congratulated
2f.s.	bārak-ti	you (f.s.) congratulated
2f.pl.	bārak-tan	you (f.pl.) congratulated
3m.s.	bārak	he congratulated
3m.pl.	bārak-u	they (m.) congratulated
3f.s.	bārak-at	she congratulated
3f.pl.	bārak-an	they (f.) congratulated

Table 106: The inflectional paradigm of the Form IV verb *ʔarsal* 'to send'

ʔarsal 'to send'	Perfect	Gloss
1s.	ʔarsal-it	I sent
1pl.	ʔarsal-na	we sent
2m.s.	ʔarsal-it	you (m.s.) sent
2m.pl.	ʔarsal-tu	you (m.pl.) sent
2f.s.	ʔarsal-ti	you (f.s.) sent
2f.pl.	ʔarsal-tan	you (f.pl.) sent
3m.s.	ʔarsal	he sent
3m.pl.	ʔarsal-u	they (m.) sent
3f.s.	ʔarsal-at	she sent
3f.pl.	ʔarsal-an	they (f.) sent

Table 107: The inflectional paradigm of the Form V verb *t-naffas* 'to breathe'

t-naffas 'to breathe'	Perfect	Gloss
1s.	t-naffas-it	I breathed
1pl.	t-naffas-na	we breathed
2m.s.	t-naffas-it	you (m.s.) breathed
2m.pl.	t-naffas-tu	you (m.pl.) breathed
2f.s.	t-naffas-ti	you (f.s.) breathed
2f.pl.	t-naffas-tan	you (f.pl.) breathed
3m.s.	t-naffas	he breathed
3m.pl.	t-naffas-u	they (m.) breathed
3f.s.	t-naffas-at	she breathed
3f.pl.	t-naffas-an	they (f.) breathed

Table 108: The inflectional paradigm of the Form VI verb *t-bāwas* 'to kiss'

t-bāwas 'to kiss'	Perfect	Gloss
1s.	t-bāwas-it	I kissed
1pl.	t-bāwas-na	we kissed
2m.s.	t-bāwas-it	you (m.s.) kissed
2m.pl.	t-bāwas-tu	you (m.pl.) kissed
2f.s.	t-bāwas-ti	you (f.s.) kissed
2f.pl.	t-bāwas-tan	you (f.pl.) kissed
3m.s.	t-bāwas	he kissed
3m.pl.	t-bāwas-u	they (m.) kissed
3f.s.	t-bāwas-at	she kissed
3f.pl.	t-bāwas-an	they (f.) kissed

n-kasar 'to be broken'	Perfect	Gloss
1s.	n-kasar-it	I was broken
1pl.	n-kasar-na	we were broken
2m.s.	n-kasar-it	you (m.s.) were broken
2m.pl.	n-kasar-tu	you (m.pl.) were broken
2f.s.	n-kasar-ti	you (f.s.) were broken
2f.pl.	n-kasar-tan	you (f.pl.) were broken
3m.s.	n-kasar	he was broken
3m.pl.	n-kasr-u	they (m.) were broken
3f.s.	n-kasr-at	she was broken
3f.pl.	n-kasr-an	they (f.) were broken

Table 110: The inflectional paradigm of the Form VIII verb *r-t-afaᶜ* 'to go up'

r-t-afaᶜ 'to go up'	Perfect	Gloss
1s.	r-t-afaᶜ-it	I went up
1pl.	r-t-afaᶜ-na	we went up
2m.s.	r-t-afaᶜ-it	you (m.s.) went up
2m.pl.	r-t-afaᶜ-tu	you (m.pl.) went up
2f.s.	r-t-afaᶜ-ti	you (f.s.) went up
2f.pl.	r-t-afaᶜ-tan	you (f.pl.) went up
3m.s.	r-t-afaᶜ	he went up
3m.pl.	r-t-afᶜ-u	they (m.) went up
3f.s.	r-t-afᶜ-at	she went up
3f.pl.	r-t-afᶜ-an	they (f.) went up

Table 111: The inflectional paradigm of the Form IX verb *smarr* 'to become dark'

smarr 'to become dark'	Perfect	Gloss
1s.	smarr-ē-t	I became dark
1pl.	smarr-ē-na	we became dark
2m.s.	smarr-ē-t	you (m.s.) became dark
2m.pl.	smarr-ē-tu	you (m.pl.) became dark
2f.s.	smarr-ē-ti	you (f.s.) became dark
2f.pl.	smarr-ē-tan	you (f.pl.) became dark
3m.s.	smarr	he became dark
3m.pl.	smarr-u	they (m.) became dark
3f.s.	smarr-at	she became dark
3f.pl.	smarr-an	they (f.) became dark

Table 112: The inflectional paradigm of the Form X verb *st-aġrab* 'to wonder'

st-aġrab 'to wonder'	Perfect	Gloss
1s.	st-aġrab-it	I wondered
1pl.	st-aġrab-na	we wondered
2m.s.	st-aġrab-it	you (m.s.) wondered
2m.pl.	st-aġrab-tu	you (m.pl.) wondered
2f.s.	st-aġrab-ti	you (f.s.) wondered
2f.pl.	st-aġrab-tan	you (f.pl.) wondered
3m.s.	st-aġrab	he wondered
3m.pl.	st-aġrab-u	they (m.) wondered
3f.s.	st-aġrab-at	she wondered
3f.pl.	st-aġrab-an	they (f.) wondered

4.4.1.2 Doubled Verbs

Where consonant-initial subject suffixes are concatenated to stems ending in a geminate, the long vowel /ē/ is inserted between the geminate and the subject suffix. This is the case in forms I, VII, VIII and X, e.g. *ḥaṭṭ-ē-na* 'we put'; *n-jarr-ē-tu* 'you (m.pl.) were pulled'. In all

other forms, the doubled verb conjugates similar to sound verbs. The tables below show the inflectional paradigms of perfect doubled verbs in WM Arabic:

Table 113: The inflectional paradigm of the Form I verb ᶜadd 'to count'

ᶜadd 'to count'	Perfect	Gloss
1s.	ᶜadd-ē-t	I counted
1pl.	ᶜadd-ē-na	we counted
2m.s.	ᶜadd-ē-t	you (m.s.) counted
2m.pl.	ᶜadd-ē-tu	you (m.pl.) counted
2f.s.	ᶜadd-ē-ti	you (f.s.) counted
2f.pl.	ᶜadd-ē-tan	you (f.pl.) counted
3m.s.	ᶜadd	he counted
3m.pl.	ᶜadd-u	they (m.) counted
3f.s.	ᶜadd-at	she counted
3f.pl.	ᶜadd-an	they (f.) counted

Table 114: The inflectional paradigm of the Form II verb sabbab 'to cause'

sabbab 'to cause'	Perfect	Gloss
1s.	sabbab-it	I caused
1pl.	sabbab-na	we caused
2m.s.	sabbab-it	you (m.s.) caused
2m.pl.	sabbab-tu	you (m.pl.) caused
2f.s.	sabbab-ti	you (f.s.) caused
2f.pl.	sabbab-tan	you (f.pl.) caused
3m.s.	sabbab	he caused
3m.pl.	sabbab-u	they (m.) caused
3f.s.	sabbab-at	she caused
3f.pl.	sabbab-an	they (f.) caused

Table 115: The inflectional paradigm of the Form V verb *t-raddad* 'to hesitate'

t-raddad 'to hesitate'	Perfect	Gloss
1s.	t-raddad-it	I hesitated
1pl.	t-raddad-na	we hesitated
2m.s.	t-raddad-it	you (m.s.) hesitated
2m.pl.	t-raddad-tu	you (m.pl.) hesitated
2f.s.	t-raddad-ti	you (f.s.) hesitated
2f.pl.	t-raddad-tan	you (f.pl.) hesitated
3m.s.	t-raddad	he hesitated
3m.pl.	t-raddad-u	they (m.) hesitated
3f.s.	t-raddad-at	she hesitated
3f.pl.	t-raddad-an	they (f.) hesitated

Table 116: The inflectional paradigm of the Form VI verb *t-rādad* 'to argue'

t-rādad 'to argue'	Perfect	Gloss
1s.	t-rādad-it	I argued
1pl.	t-rādad-na	we argued
2m.s.	t-rādad-it	you (m.s.) argued
2m.pl.	t-rādad-tu	you (m.pl.) argued
2f.s.	t-rādad-ti	you (f.s.) argued
2f.pl.	t-rādad-tan	you (f.pl.) argued
3m.s.	t-rādad	he argued
3m.pl.	t-rādad-u	they (m.) argued
3f.s.	t-rādad-at	she argued
3f.pl.	t-rādad-an	they (f.) argued

Table 117: The inflectional paradigm of the Form VII verb *n-ḍarr* 'to be harmed'

n-ḍarr 'to be harmed'	Perfect	Gloss
1s.	n-ḍarr-ē-t	I was harmed
1pl.	n-ḍarr-ē-na	we were harmed
2m.s.	n-ḍarr-ē-t	you (m.s.) were harmed
2m.pl.	n-ḍarr-ē-tu	you (m.pl.) were harmed
2f.s.	n-ḍarr-ē-ti	you (f.s.) were harmed
2f.pl.	n-ḍarr-ē-tan	you (f.pl.) were harmed
3m.s.	n-ḍarr	he was harmed
3m.pl.	n-ḍarr-u	they (m.) were harmed
3f.s.	n-ḍarr-at	she was harmed
3f.pl.	n-ḍarr-an	they (f.) were harmed

Table 118: The inflectional paradigm of the Form VIII verb *h-t-amm* 'to be concerned'

h-t-amm 'to be concerned'	Perfect	Gloss
1s.	h-t-amm-ē-t	I was concerned
1pl.	h-t-amm-ē-na	we were concerned
2m.s.	h-t-amm-ē-t	you (m.s.) were concerned
2m.pl.	h-t-amm-ē-tu	you (m.pl.) were concerned
2f.s.	h-t-amm-ē-ti	you (f.s.) were concerned
2f.pl.	h-t-amm-ē-tan	you (f.pl.) were concerned
3m.s.	h-t-amm	he was concerned
3m.pl.	h-t-amm-u	they (m.) were concerned
3f.s.	h-t-amm-at	she was concerned
3f.pl.	h-t-amm-an	they (f.) were concerned

st-amarr 'to continue'	Perfect	Gloss
1s.	st-amarr-ē-t	I continued
1pl.	st-amarr-ē-na	we continued
2m.s.	st-amarr-ē-t	you (m.s.) continued
2m.pl.	st-amarr-ē-tu	you (m.pl.) continued
2f.s.	stamarr-ē-ti	you (f.s.) continued
2f.pl.	st-amarr-ē-tan	you (f.pl.) continued
3m.s.	st-amarr	he continued
3m.pl.	st-amarr-u	they (m.) continued
3f.s.	st-amarr-at	she continued
3f.pl.	st-amarr-an	they (f.) continued

4.4.1.3 Initial-Hamzated Verbs

Historical *hamzah* has not been attested in the perfect of forms I, VII and VIII. Cognates of CA Form I verbs with an initial *hamzah* are attested in WM Arabic as CaCa without *hamzah*, where the stem vowel /a/ is omitted when a subject suffix is concatenated to the verb, having the pattern CaC. Additionally, the mid long vowel /ē/ surfaces before consonant-initial subject suffixes. For illustration, consider the inflection of the verb *xaḏa* 'to take'.

Table 120: The inflectional paradigm of the Form I verb *xaḏa* 'to take'

xaḏa 'to take'	Perfect	Gloss
1s.	xaḏ-ē-t	I took
1pl.	xaḏ-ē-na	we took
2m.s.	xaḏ-ē-t	you (m.s.) took
2m.pl.	xaḏ-ē-tu	you (m.pl.) took
2f.s.	xaḏ-ē-ti	you (f.s.) took
2f.pl.	xaḏ-ē-tan	you (f.pl.) took
3m.s.	xaḏa	he took
3m.pl.	xaḏ-u	they (m.) took
3f.s.	xaḏ-at	she took
3f.pl.	xaḏ-an	they (f.) took

Cognates of CA Form X verbs with initial *hamzah* are attested in WM Arabic as st-āCaC; for example, the verb *st-āja*r 'to rent' compares with CA verb *st-aʔjar. The following table gives the inflectional paradigm of WM Arabic verb *st-ājar* 'to rent.

Table 121: The inflectional paradigm of the Form X verb *st-ājar* 'to rent'

st-ājar 'to rent'	Perfect	Gloss
1s.	st-ājar-it	I rented
1pl.	st-ājar-na	we rented
2m.s.	st-ājar-it	you (m.s.) rented
2m.pl.	st-ājar-tu	you (m.pl.) rented
2f.s.	st-ājar-ti	you (f.s.) rented
2f.pl.	st-ājar-tan	you (f.pl.) rented
3m.s.	st-ājar	he rented
3m.pl.	st-ājar-u	they (m.) rented
3f.s.	st-ājar-at	she rented
3f.pl.	st-ājar-an	they (f.) rented

In forms II, IV and VI, the initial *hamzah* is retained and the verb conjugates regularly with no change. The tables below give the inflectional paradigm of the verbs *ʔaxxar* 'to delay' from *ʔ-x-r*, *ʔāman* 'to believe' from *ʔ-m-n*, and *t-ʔāmar* 'to conspire' from *ʔ-m-r*.

Table 122: The inflectional paradigm of the Form II verb *ʔaxxar* 'to delay'

ʔaxxar 'to delay'	Perfect	Gloss
1s.	ʔaxxar-it	I delayed
1pl.	ʔaxxar-na	we delayed
2m.s.	ʔaxxar-it	you (m.s.) delayed
2m.pl.	ʔaxxar-tu	you (m.pl.) delayed
2f.s.	ʔaxxar-ti	you (f.s.) delayed
2f.pl.	ʔaxxar-tan	you (f.pl.) delayed
3m.s.	ʔaxxar	he delayed
3m.pl.	ʔaxxar-u	they (m.) delayed
3f.s.	ʔaxxar-at	she delayed
3f.pl.	ʔaxxar-an	they (f.) delayed

Table 123: The inflectional paradigm of the Form IV verb *ʔāman* 'to believe'

ʔāman 'to believe'	Perfect	Gloss
1s.	ʔāman-it	I believed
1pl.	ʔāman-na	we believed
2m.s.	ʔāman-it	you (m.s.) believed
2m.pl.	ʔāman-tu	you (m.pl.) believed
2f.s.	ʔāman-ti	you (f.s.) believed
2f.pl.	ʔāman-tan	you (f.pl.) believed
3m.s.	ʔāman	he believed
3m.pl.	ʔāman-u	they (m.) believed
3f.s.	ʔāman-at	she believed
3f.pl.	ʔāman-an	they (f.) believed

Table 124: The inflectional paradigm of the Form VI verb *t-ʔāmar* 'to conspire'

t-ʔāmar 'to conspire'	Perfect	Gloss
1s.	t-ʔāmar-it	I conspired
1pl.	t-ʔāmar-na	we conspired
2m.s.	t-ʔāmar-it	you (m.s.) conspired
2m.pl.	t-ʔāmar-tu	you (m.pl.) conspired
2f.s.	t-ʔāmar-ti	you (f.s.) conspired
2f.pl.	t-ʔāmar-tan	you (f.pl.) conspired
3m.s.	t-ʔāmar	he conspired
3m.pl.	t-ʔāmar-u	they (m.) conspired
3f.s.	t-ʔāmar-at	she conspired
3f.pl.	t-ʔāmar-an	they (f.) conspired

4.4.1.4 Medial-Hamzated Verbs

The *hamzah* is always retained when it is the second root consonant. For illustration, consider the conjugation of the verbs *saʔal* 'to ask', *raʔʔas* 'to appoint someone the head', *t-f-āʔal* 'to be optimistic' and *t-šāʔam* 'to be pessimistic' below.

Table 125:The inflectional paradigm of the Form I verb *saʔal* **'to ask'**

saʔal 'to ask'	Perfect	Gloss
1s.	saʔal-it	I asked
1pl.	saʔal-na	we asked
2m.s.	saʔal-it	you (m.s.) asked
2m.pl.	saʔal-tu	you (m.pl.) asked
2f.s.	saʔal-ti	you (f.s.) asked
2f.pl.	saʔal-tan	you (f.pl.) asked
3m.s.	saʔal	he asked
3m.pl.	saʔal-u	they (m.) asked
3f.s.	saʔal-at	she asked
3f.pl.	saʔal-an	they (f.) asked

Table 126: The inflectional paradigm of the Form III verb *raʔʔas* **'to appoint someone the head'**

raʔʔas 'to appoint someone as chair'	Perfect	Gloss
1s.	raʔʔas-it	I appointed someone the head
1pl.	raʔʔas-na	we appointed someone the head
2m.s.	raʔʔas-it	you (m.s.) someone appointed the head
2m.pl.	raʔʔas-tu	you (m.pl.) appointed someone the head
2f.s.	raʔʔas-ti	you (f.s.) appointed someone the head
2f.pl.	raʔʔas-tan	you (f.pl.) appointed someone the head
3m.s.	raʔʔas	he appointed someone the head
3m.pl.	raʔʔas-u	they (m.) appointed someone the head
3f.s.	raʔʔas-at	she appointed someone the head
3f.pl.	raʔʔas-an	they (f.) appointed someone the head

Table 127: The inflectional paradigm of the Form VI verb *t-fāʔal* 'to be optimistic'

t-fāʔal 'to be optimistic'	Perfect	Gloss
1s.	t-fāʔal-it	I was optimistic
1pl.	t-fāʔal-na	we were optimistic
2m.s.	t-fāʔal-it	you (m.s.) were optimistic
2m.pl.	t-fāʔal-tu	you (m.pl.) were optimistic
2f.s.	t-fāʔal-ti	you (f.s.) were optimistic
2f.pl.	t-fāʔal-tan	you (f.pl.) were optimistic
3m.s.	t-fāʔal	he was optimistic
3m.pl.	t-fāʔal-u	they (m.) were optimistic
3f.s.	t-fāʔal-at	she was optimistic
3f.pl.	t-fāʔal-an	they (f.) were optimistic

Table 128: The inflectional paradigm of the Form VI verb *t-šāʔam* 'to be pessimistic'

t-šāʔam 'to be pessimistic'	Perfect	Gloss
1s.	t-šāʔam-it	I was pessimistic
1pl.	t-šāʔam-na	we were pessimistic
2m.s.	t-šāʔam-it	you (m.s.) were pessimistic
2m.pl.	t-šāʔam-tu	you (m.pl.) were pessimistic
2f.s.	t-šāʔam-ti	you (f.s.) were pessimistic
2f.pl.	t-šāʔam-tan	you (f.pl.) were pessimistic
3m.s.	t-šāʔam	he was pessimistic
3m.pl.	t-šāʔam-u	they (m.) were pessimistic
3f.s.	t-šāʔam-at	she was pessimistic
3f.pl.	t-šāʔam-an	they (f.) were pessimistic

4.4.1.5 Final-Hamzated Verbs

Where C3 is a *hamzah*, it is realised in forms III and V[18], with no change in the conjugations of the verb. For illustration, consider the inflectional paradigms of the verbs *kāfaʔ* 'to reward' and *t-hayyaʔ* 'to prepare' below.

Table 129: The inflectional paradigm of the Form III verb *kāfaʔ* 'to reward'

kāfaʔ 'to reward'	Perfect	Gloss
1s.	kāfaʔ-it	I rewarded
1pl.	kāfaʔ-na	we rewarded
2m.s.	kāfaʔ-it	you (m.s.) rewarded
2m.pl.	kāfaʔ-tu	you (m.pl.) rewarded
2f.s.	kāfaʔ-ti	you (f.s.) rewarded
2f.pl.	kāfaʔ-tan	you (f.pl.) rewarded
3m.s.	kāfaʔ	he rewarded
3m.pl.	kāfaʔ-u	they (m.) rewarded
3f.s.	kāfaʔ-at	she rewarded
3f.pl.	kāfaʔ-an	they (f.) rewarded

Table 130: The inflectional paradigm of the Form V verb *t-hayyaʔ* 'to prepare'

t-hayyaʔ 'to prepare'	Perfect	Gloss
1s.	t-hayyaʔ-it	I prepared
1pl.	t-hayyaʔ-na	We prepared
2m.s.	t-hayyaʔ-it	you (m.s.) prepared
2m.pl.	t-hayyaʔ-tu	you (m.pl.) prepared
2f.s.	t-hayyaʔ-ti	you (f.s.) prepared
2f.pl.	t-hayyaʔ-tan	you (f.pl.) prepared
3m.s.	t-hayyaʔ	he prepared
3m.pl.	t-hayyaʔ-u	they (m.) prepared
3f.s.	t-hayyaʔ-at	she prepared
3f.pl.	t-hayyaʔ-an	they (f.) prepared

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[18] Form III and V verbs with final *hamzah* are attested in few verbs in WM Arabic.

142

Cognates of CA verbs with final *hamzah* are attested in forms I, II, VII and VIII without hamzah. The stem vowel /a/ drops out when a morpheme suffix is concatenated to the stem verb, and the long vowel /ē/ is inserted before consonant-initial morphemes. The table below provides the inflectional paradigms of the verbs *bada* 'to start', *xabba* 'to hide' and *m-t-ala* 'to be filled up'.

Table 131: The inflectional paradigm of the Form I verb *bada* 'to start'

bada 'to start'	Perfect	Gloss
1s.	bad-ē-t	I started
1pl.	bad-ē-na	we started
2m.s.	bad-ē-t	you (m.s.) started
2m.pl.	bad-ē-tu	you (m.pl.) started
2f.s.	bad-ē-ti	you (f.s.) started
2f.pl.	bad-ē-tan	you (f.pl.) started
3m.s.	bada	he started
3m.pl.	bad-u	they (m.) started
3f.s.	bad-at	she started
3f.pl.	bad-an	they (f.) started

Table 132: The inflectional paradigms of the Form II verb *xabba* 'to hide'

xabba 'to hide'	Perfect	Gloss
1s.	xabb-ē-t	I hid
1pl.	xabb-ē-na	we hid
2m.s.	xabb-ē-t	you (m.s.) hid
2m.pl.	xabb-ē-tu	you (m.pl.) hid
2f.s.	xabb-ē-ti	you (f.s.) hid
2f.pl.	xabb-ē-tan	you (f.pl.) hid
3m.s.	xabba	he hid
3m.pl.	xabb-u	they (m.) hid
3f.s.	xabb-at	she hid
3f.pl.	xabb-an	they (f.) hid

m-t-ala 'to be filled up'	Perfect	Gloss
1s.	m-t-al-ē-t	I was filled up
1pl.	m-t-al-ē-na	we were filled up
2m.s.	m-t-al-ē-t	you (m.s.) were filled up
2m.pl.	m-t-al-ē-tu	you (m.pl.) were filled up
2f.s.	m-t-al-ē-ti	you (f.s.) were filled up
2f.pl.	m-t-al-ē-tan	you (f.pl.) were filled up
3m.s.	m-t-ala	he was filled up
3m.pl.	m-t-al-u	they (m.) were filled up
3f.s.	m-t-al-at	she was filled up
3f.pl.	m-t-al-an	they (f.) were filled up

4.4.1.6 Assimilated Verbs

Where C1 is /w/ in Form VIII verbs, it assimilates totally to the infix *-t-*, resulting in the pattern itt-aCaC. For example, the verb *itt-aṣal* 'to call', derived from the triliteral root *w-ṣ-l*, is formed by assimilating the weak segment /w/ into the infix *-t-*, forming *itt-aṣal* rather than *i-w-t-aṣal*. For illustration, consider the inflectional paradigm of the verbs *itt-aham* 'to accuse' and *itt-aṣal* 'to phone' derived respectively from the roots *w-h-m* and *w-ṣ-l*.

Table 134: The inflectional paradigm of the Form VIII verb *i-tt-aham* 'to accuse'

itt-aham 'to accuse'	Perfect	Gloss
1s.	itt-aham-it	I accused
1pl.	itt-aham-na	we accused
2m.s.	itt-aham-it	you (m.s.) accused
2m.pl.	itt-aham-tu	you (m.pl.) accused
2f.s.	itt-aham-ti	you (f.s.) accused
2f.pl.	itt-aham-tan	you (f.pl.) accused
3m.s.	itt-aham	he accused
3m.pl.	itt-aham-u	they (m.) accused
3f.s.	itt-aham-at	she accused
3f.pl.	itt-aham-an	they (f.) accused

Table 135: The inflectional paradigm of the Form VIII verb *itt-aṣal* 'to phone'

itt-aṣal 'to phone'	Perfect	Gloss
1s.	itt-aṣal-it	I phoned
1pl.	itt-aṣal-na	we phoned
2m.s.	itt-aṣal-it	you (m.s.) phoned
2m.pl.	itt-aṣal-tu	you (m.pl.) phoned
2f.s.	itt-aṣal-ti	you (f.s.) phoned
2f.pl.	itt-aṣal-tan	you (f.pl.) phoned
3m.s.	itt-aṣal	he phoned
3m.pl.	itt-aṣal-u	they (m.) phoned
3f.s.	itt-aṣal-at	she phoned
3f.pl.	itt-aṣal-an	they (f.) phoned

Moreover, where C1 is /w/ in Form IV verbs, it merges with the initial vowel to be realised as /ō/, e.g. *ʔōjaᶜ* 'to hurt'. A glide is retained elsewhere where it is C1. The following tables give the inflectional paradigm of the verbs *waᶜad* 'to promise', *yibis* 'to dry', *yassar* 'to make something easy', *wājah* 'to meet', *ʔōjaᶜ* 'to hurt', and *st-aysar* 'to take something easy'.

Table 136: The inflectional paradigms of the Form I verb *waᶜad* 'to promise'

waᶜad 'to promise'	Perfect	Gloss
1s.	waᶜad-it	I promised
1pl.	waᶜad-na	we promised
2m.s.	waᶜad-it	you (m.s.) promised
2m.pl.	waᶜad-tu	you (m.pl.) promised
2f.s.	waᶜad-ti	you (f.s.) promised
2f.pl.	waᶜad-tan	you (f.pl.) promised
3m.s.	waᶜad	he promised
3m.pl.	waᶜad-u	they (m.) promised
3f.s.	waᶜad-at	she promised
3f.pl.	waᶜd-an	they (f.) promised

Table 137: The inflectional paradigm of the Form I verb *yibis* 'to dry'

yibis 'to dry'	Perfect	Gloss
1s.	ybis-it	I dried
1pl.	ybis-na	we dried
2m.s.	ybis-it	you (m.s.) dried
2m.pl.	ybis-tu	you (m.pl.) dried
2f.s.	ybis-ti	you (f.s.) dried
2f.pl.	ybis-tan	you (f.pl.) dried
3m.s.	yibis	he dried
3m.pl.	yibs-u	they (m.) dried
3f.s.	yibs-at	she dried
3f.pl.	yibs-an	they (f.) dried

Table 138: The inflectional paradigm of the Form II verb *yassar* 'to make something easy'

yassar 'to make something easy'	Perfect	Gloss
1s.	yassar-it	I made something easy
1pl.	yassar-na	we made something easy
2m.s.	yassar-it	you (m.s.) made something easy
2m.pl.	yassar-tu	you (m.pl.) made something easy
2f.s.	yassar-ti	you (f.s.) made something easy
2f.pl.	yassar-tan	you (f.pl.) made something easy
3m.s.	yassar	he made something easy
3m.pl.	yassar-u	they (m.) made something easy
3f.s.	yassar-at	she made something easy
3f.pl.	yassar-an	they (f.) made something easy

Table 139: The inflectional paradigm of the Form III verb *wājah* 'to meet'

wājah 'to meet'	Perfect	Gloss
1s.	wājah-it	I met
1pl.	wājah-na	we met
2m.s.	wājah-it	you (m.s.) met
2m.pl.	wājah-tu	you (m.pl.) met
2f.s.	wājah-ti	you (f.s.) met
2f.pl.	wājah-tan	you (f.pl.) met
3m.s.	wājah	he met
3m.pl.	wājah-u	they (m.) met
3f.s.	wājah-at	she met
3f.pl.	wājah-an	they (f.) met

Table 140: The inflectional paradigm of the Form IV verb *ʔōjaᶜ* 'to hurt'

ʔōjaᶜ 'to hurt'	Perfect	Gloss
1s.	ʔōjaᶜ-it	I hurt
1pl.	ʔōjaᶜ-na	we hurt
2m.s.	ʔōjaᶜ-it	you (m.s.) hurt
2m.pl.	ʔōjaᶜ-tu	you (m.pl.) hurt
2f.s.	ʔōjaᶜ-ti	you (f.s.) hurt
2f.pl.	ʔōjaᶜ-tan	you (f.pl.) hurt
3m.s.	ʔōjaᶜ	he hurt
3m.pl.	ʔōjaᶜ-u	they (m.) hurt
3f.s.	ʔōjaᶜ-at	she hurt
3f.pl.	ʔōjaᶜ-an	they (f.) hurt

Table 141: The inflectional paradigm of the Form X verb *st-aysar* 'to take something easy'

st-aysar 'to take something easy'	Perfect	Gloss
1s.	st-aysar-it	I took something easy
1pl.	st-aysar-na	we took something easy
2m.s.	st-aysar-it	you (m.s.) took something easy
2m.pl.	st-aysar-tu	you (m.pl.) took something easy
2f.s.	st-aysar-ti	you (f.s.) took something easy
2f.pl.	st-aysar-tan	you (f.pl.) took something easy
3m.s.	st-aysar	he took something easy
3m.pl.	st-aysar-u	they (m.) took something easy
3f.s.	st-aysar-at	she took something easy
3f.pl.	st-aysar-an	they (f.) took something easy

4.4.1.7 Hollow Verbs

For Form I hollow verbs, the weak segments are always realised as /i/ before consonant-initial subject suffixes, while they are realised as long /ā/ before vowel-initial subject suffixes. The tables below give the inflectional paradigms of the verbs *bāᶜ* 'to sell' and *nām* 'to sleep' below.

Table 142: The inflectional paradigm of the verb *bāᶜ* 'to sell'

bāᶜ 'to sell'	Perfect	Gloss
1s.	biᶜ-it	I sold
1pl.	biᶜ-na	we sold
2m.s.	biᶜ-it	you (m.s.) sold
2m.pl.	biᶜ-tu	you (m.pl.) sold
2f.s.	biᶜ-ti	you (f.s.) sold
2f.pl.	biᶜ-tan	you (f.pl.) sold
3m.s.	bāᶜ	he sold
3m.pl.	bāᶜ-u	they (m.) sold
3f.s.	bāᶜ-at	she sold
3f.pl.	bāᶜ-an	they (f.) sold

Table 143: The inflectional paradigm of the verb *nām* 'to sleep'

nām 'to sleep'	Perfect	Gloss
1s.	nim-it	I slept
1pl.	nim-na	we slept
2m.s.	nim-it	you (m.s.) slept
2m.pl.	nim-tu	you (m.pl.) slept
2f.s.	nim-ti	you (f.s.) slept
2f.pl.	nim-tan	you (f.pl.) slept
3m.s.	nām	he slept
3m.pl.	nām-u	they (m.) slept
3f.s.	nām-at	she slept
3f.pl.	nām-an	they (f.) slept

In forms VII, VIII and X, the weak segments are realised as long /ā/, surfacing in the perfect as CāC (cf. 5.2.2.5.6). As in other Arabic dialects, where consonant-initial subject suffixes are concatenated to the stem verb, the long vowel is shortened to [a]. Consider the following inflectional paradigms:

Table 144: The inflectional paradigm of the Form VII verb *n-hār* 'to decline'

n-hār 'to decline'	Perfect	Gloss
1s.	n-har-it	I declined
1pl.	n-har-na	we declined
2m.s.	n-har-it	you (m.s.) declined
2m.pl.	n-har-tu	you (m.pl.) declined
2f.s.	n-har-ti	you (f.s.) declined
2f.pl.	n-har-tan	you (f.pl.) declined
3m.s.	n-hār	he declined
3m.pl.	n-hār-u	they (m.) declined
3f.s.	n-hār-at	she declined
3f.pl.	n-hār-an	they (f.) declined

Table 145: The inflectional paradigm of the Form VIII verb *x-t-ār* 'to choose'

x-t-ār 'to choose'	Perfect	Gloss
1s.	x-t-ar-it	I chose
1pl.	x-t-ar-na	we chose
2m.s.	x-t-ar-it	You (m.s.) chose
2m.pl.	x-t-ar-tu	you (m.pl.) chose
2f.s.	x-t-ar-ti	you (f.s.) chose
2f.pl.	x-t-ar-tan	you (f.pl.) chose
3m.s.	x-t-ār	he chose
3m.pl.	x-t-ār-u	they (m.) chose
3f.s.	x-t-ār-at	she chose
3f.pl.	x-t-ār-an	they (f.) chose

Table 146: The inflectional paradigm of the Form X verb *st-afād* 'to benefit'

st-afād 'to benefit'	Perfect	Gloss
1s.	st-afad-it	I benefited
1pl.	st-afad-na	we benefited
2m.s.	st-afad-it	you (m.s.) benefited
2m.pl.	st-afad-tu	you (m.pl.) benefited
2f.s.	st-afad-ti	you (f.s.) benefited
2f.pl.	st-afad-tan	you (f.pl.) benefited
3m.s.	st-afād	he benefited
3m.pl.	st-afād-u	they (m.) benefited
3f.s.	st-afād-at	she benefited
3f.pl.	st-afād-an	they (f.) benefited

The weak segments are retained in the rest of forms as shown in the inflectional paradigms of the Form II verb *xayyar* 'to give choice', the Form III verb *ḥāwal* 'to try' and the Form V verb *t-ḥawwal* 'to change'.

Table 147: The inflectional paradigm of the Form II verb *xayyar* 'to give choice'

xayyar 'to give choice'	Perfect	Gloss
1s.	xayyar-it	I gave choice
1pl.	xayyar-na	we gave choice
2m.s.	xayyar-it	you (m.s.) gave choice
2m.pl.	xayyar-tu	you (m.pl.) gave choice
2f.s.	xayyar-ti	you (f.s.) gave choice
2f.pl.	xayyar-tan	you (f.pl.) gave choice
3m.s.	xayyar	he gave choice
3m.pl.	xayyar-u	they (m.) gave choice
3f.s.	xayyar-at	she gave choice
3f.pl.	xayyar-an	they (f.) gave choice

Table 148: The inflectional paradigm of the Form III verb *ḥāwal* 'to try'

ḥāwal 'to try'	Perfect	Gloss
1s.	ḥāwal-it	I tried
1pl.	ḥāwal-na	we tried
2m.s.	ḥāwal-it	you (m.s.) tried
2m.pl.	ḥāwal-tu	you (m.pl.) tried
2f.s.	ḥāwal-ti	you (f.s.) tried
2f.pl.	ḥāwal-tan	you (f.pl.) tried
3m.s.	ḥāwal	he tried
3m.pl.	ḥāwal-u	they (m.) tried
3f.s.	ḥāwal-at	she tried
3f.pl.	ḥāwal-an	they (f.) tried

Table 149: The inflectional paradigm of the Form V verb *t-ḥawwal* 'to change'

t-ḥawwal 'to change'	Perfect	Gloss
1s.	t-ḥawwal-it	I changed
1pl.	t-ḥawwal-na	We changed
2m.s.	t-ḥawwal-it	you (m.s.) changed
2m.pl.	t-ḥawwal-tu	you (m.pl.) changed
2f.s.	t-ḥawwal-ti	you (f.s.) changed
2f.pl.	t-ḥawwal-tan	you (f.pl.) changed
3m.s.	t-ḥawwal	he changed
3m.pl.	t-ḥawwal-u	they (m.) changed
3f.s.	t-ḥawwal-at	she changed
3f.pl.	t-ḥawwal-an	they (f.) changed

4.4.1.8 Defective Verbs

The basic pattern of Form I defective verbs in the dialect is CaCa, e.g. *maša* 'to walk', *daᶜa* 'to pray'. When subject suffixes are concatenated to the stem of a defective verb, the short low vowel is omitted, as in *daᶜa+u > daᶜ-u* 'they (m.) prayed', and the long vowel /ē/ surfaces before consonant-initial subject suffixes, e.g. *daᶜ-ē-na* 'we prayed'. Below are the inflectional paradigms of the verbs *daᶜa* 'to pray', *maša* 'to walk', *ġaṭṭa* 'to cover', *t-rajja* 'to appeal' and *š-t-ara* 'to buy'.

Table 150: The inflectional paradigm of the Form I verb *daᶜa* 'to pray'

daᶜa 'to pray'	Perfect	Gloss
1s.	daᶜ-ē-t	I prayed
1pl.	daᶜ-ē-na	we prayed
2m.s.	daᶜ-ē-t	you (m.s.) prayed
2m.pl.	daᶜ-ē-tu	you (m.pl.) prayed
2f.s.	daᶜ-ē-ti	you (f.s.) prayed
2f.pl.	daᶜ-ē-tan	you (f.pl.) prayed
3m.s.	daᶜa	he prayed
3m.pl.	daᶜ-u	they (m.) prayed
3f.s.	daᶜ-at	she prayed
3f.pl.	daᶜ-an	they (f.) prayed

Table 151: The inflectional paradigm of the Form I verb *maša* 'to walk'

maša 'to walk'	Perfect	Gloss
1s.	maš-ē-t	I walked
1pl.	maš-ē-na	we walked
2m.s.	maš-ē-t	you (m.s.) walked
2m.pl.	maš-ē-tu	you (m.pl.) walked
2f.s.	maš-ē-ti	you (f.s.) walked
2f.pl.	maš-ē-tan	you (f.pl.) walked
3m.s.	maša	he walked
3m.pl.	maš-u	they (m.) walked
3f.s.	maš-at	she walked
3f.pl.	maš-an	they (f.) walked

Table 152: The inflectional paradigm of the Form II verb *ġaṭṭa* 'to cover'

ġaṭṭa 'to cover'	Perfect	Gloss
1s.	ġaṭṭ-ē-t	I covered
1pl.	ġaṭṭ-ē-na	we covered
2m.s.	ġaṭṭ-ē-t	you (m.s.) covered
2m.pl.	ġaṭṭ-ē-tu	you (m.pl.) covered
2f.s.	ġaṭṭ-ē-ti	you (f.s.) covered
2f.pl.	ġaṭṭ-ē-tan	you (f.pl.) covered
3m.s.	ġaṭṭa	he covered
3m.pl.	ġaṭṭ-u	they (m.) covered
3f.s.	ġaṭṭ-at	she covered
3f.pl.	ġaṭṭ-an	they (f.) covered

Table 153: The inflectional paradigm of the Form V verb *t-rajja* 'to appeal'

t-rajja 'to appeal'	Perfect	Gloss
1s.	t-rajj-ē-t	I appealed
1pl.	t-rajj-ē-na	we appealed
2m.s.	t-rajj-ē-t	you (m.s.) appealed
2m.pl.	t-rajj-ē-tu	you (m.pl.) appealed
2f.s.	t-rajj-ē-ti	you (f.s.) appealed
2f.pl.	t-rajj-ē-tan	you (f.pl.) appealed
3m.s.	t-rajja	he appealed
3m.pl.	t-rajj-u	they (m.) appealed
3f.s.	t-rajj-at	she appealed
3f.pl.	t-rajj-an	they (f.) appealed

š-t-ara 'to buy'	Perfect	Gloss
1s.	š-t-ar-ē-t	I bought
1pl.	š-t-ar-ē-na	we bought
2m.s.	š-t-ar-ē-t	you (m.s.) bought
2m.pl.	š-t-ar-ē-tu	you (m.pl.) bought
2f.s.	š-t-ar-ē-ti	you (f.s.) bought
2f.pl.	š-t-ar-ē-tan	you (f.pl.) bought
3m.s.	š-t-ara	he bought
3m.pl.	š-t-ar-u	they (m.) bought
3f.s.	š-t-ar-at	she bought
3f.pl.	š-t-ar-an	they (f.) bought

4.4.2 Imperfect Aspect

The imperfect is denoted through prefixation in the case of singular and first person inflections, and through circumfixation of prefixes and suffixes in second and third plural and second feminine singular, resulting in discontinuous morphemes. For example, the word *yi-bḥaš-an* 'they (f.) are digging' consists of the stem root *baḥaš* 'to dig', the prefix *yi-* and the suffix *-an* which combine to mark the subject as the 3f.pl. Basically, the prefix marks person (1st, 2nd and 3rd) whereas the suffix marks number (singular or plural). Gender, masculine or feminine, is encoded in the prefix. For subject-verb agreement of the 1st person inflection, the prefixes *a-* and *ni-* are used respectively for the singular and the plural, e.g. *ʔ-alᶜab* 'I play' and *ni-lᶜab* 'we play'. Similarly, the prefix *y-* marks the 3m., whereas *t-* marks both the 3f.s. and the 2m.. The table below summarises the inflectional markers of the imperfect verbs.

Table 155: The inflectional markers of the imperfect verbs

	Number	
Person-Gender	S	Pl
1	a-	n-
2m.	t-	t-…..-u
2f.	t-….i	t-… -an
3m.	y-	y-…. -u
3f.	t-	y-….-an

Where the imperfect aspect markers *y-*, *n-* and *t-* are concatenated to stems with an initial two-consonant cluster, the short high vowel [i] is inserted to break up the cluster, because WM Arabic does not allow a cluster of more than two consonants, e.g. *yi-lᶜab* 'he plays', *ni-smaᶜ* 'we hear' (cf. 3.2.2.5.1). Similarly, to avoid the surfacing of onsetless syllables utterance-initially, a glottal stop is prosthesised before the 1s. prefix *a-* (3.2.2.5.4). The following table gives the inflectional paradigm of the imperfect verbs *yi-gᶜud* 'to sit' and *y-kabbiš* 'to sleep'.

Table 156: The imperfect inflectional paradigm of the Form I verb yi-*gᶜud* 'he sits'

yi-gᶜud 'he sits'	Imperfect	Gloss
1s.	ʔa-gᶜud	I sit
1pl.	ni-gᶜud	we sit
2m.s.	ti-gᶜud	you (m.s.) sit
2m.pl.	ti-gᶜud-u	you (f.s.) sit
2f.s.	ti-gᶜud-i	you (f.s.) sit
2f.pl.	ti-gᶜud-an	you (f.pl.) sit
3m.s.	yi-gᶜud	he sits
3m.pl.	yi-gᶜud-u	they (m.) sit
3f.s.	ti-gᶜud	she sits
3f.pl.	yi-gᶜud-an	they (f.) sit

y-kabbiš 'he sleeps'	Imperfect	Gloss
1s.	ʔa-kabbiš	I sleep
1pl.	n-kabbiš	we sleep
2m.s.	t-kabbiš	you (m.s.) sleep
2m.pl.	t-kabš-u	you (f.s.) sleep
2f.s.	t-kabš-i	you (f.s.) sleep
2f.pl.	t-kabš-an	you (f.pl.) sleep
3m.s.	y-kabbiš	he sleeps
3m.pl.	y-kabš-u	they (m.) sleep
3f.s.	t-kabbiš	she sleeps
3f.pl.	y-kabš-an	they (f.) sleep

The following is a detailed examination of the inflectional morphology of imperfect sound verbs, doubled verbs, *hamzated* verbs and weak verbs in WM Arabic.

4.4.2.1 Sound Verbs

The stem of Form I sound verbs always appears in the imperfect as CCVC, where V is either /u/ or /a/ (cf. 4.3.1). An examination of the imperfect of Form I sound verbs shows that the inflectional morphology has not affected any of the stem vowels of these verbs. Similarly, the inflectional morphology of derived verbs is straightforward; the stem vowel is always /i/ for forms II, III, VII, VIII, X and QI while it is /a/ for forms V, VI, IX, X and QII. All these forms are inflected regularly except for forms II, III, VII and VIII, where the stem vowel /i/ is syncopated when a vowel-initial subject suffix attaches to the verb, e.g. *yi-n-kasr-u* 'they (m.) are broken' and *yi-r-t-afᶜ-an* 'they (f.) go up'. In Form II, when the stem vowel is syncopated, degemination takes place to avoid a three-consonant cluster, e.g. *y-ᶜalm-an* 'they (f.) teach' (cf. 3.2.2.5.5). The following are the inflectional paradigms of the Form I verbs *yi-gᶜud* 'to sit' *yi-fham* 'he understands', the Form II verb *y-ᶜallim* 'he teaches', the Form III verb *y-bārik* 'he congratulates', the Form IV verb *yi-rsil* 'to send', the Form V verb *yi-t-naffas* 'he breathes', the Form VI verb *yi-t-sāmaḥ* 'he forgives', the Form VII verb *yi-n-kasir* 'he is broken', the Form VIII verb *yi-rtafiᶜ* 'he goes up', the Form IX verb *yi-smarr* 'he becomes dark', and the Form X verb *yi-staġrib* 'he wonders'

Table 158: The inflectional paradigm of the Form I verb *yi-gᶜud* 'he sits'

yi-gᶜud 'he sits'	Imperfect	Gloss
1s.	ʔa-gᶜud	I sit
1pl.	ni-gᶜud	we sit
2m.s.	ti-gᶜud	you (m.s.) sit
2m.pl.	ti-gᶜud-u	you (m.pl.) sit
2f.s.	ti-gᶜud-i	you (f.s.) sit
2f.pl.	ti-gᶜud-an	you (f.pl.) sit
3m.s.	yi-gᶜud	he sits
3m.pl.	yi-gᶜud-u	they (m.) sit
3f.s.	ti-gᶜud	she sits
3f.pl.	yi-gᶜud-an	they (f.) sit

Table 159: The inflectional paradigm of theForm I verb *yi-fham* 'he understands'

yi-fham 'he understands'	Imperfect	Gloss
1s.	ʔa-fham	I understand
1pl.	ni-fham	we understand
2m.s.	ti-fham	you (m.s.) understand
2m.pl.	ti-fham-u	you (m.pl.) understand
2f.s.	ti-fham-i	you (f.s.) understand
2f.pl.	ti-fham-an	you (f.pl.) understand
3m.s.	yi-fham	he understands
3m.pl.	yi-fham-u	they (m.) understand
3f.s.	ti-fham	she understands
3f.pl.	yi-fham-an	they (f.)understand

Table 160: The inflectional paradigm of the Form II verb *y-ᶜallim* 'he teaches'

y-ᶜallim 'he teaches'	Imperfect	Gloss
1s.	ʔa-ᶜallim	I teach
1pl.	n-ᶜallim	we teach
2m.s.	t-ᶜallim	you (m.s.) teach
2m.pl.	t-ᶜalm-u	you (m.pl.) teach
2f.s.	t-ᶜalm-i	you (f.s.) teach
2f.pl.	t-ᶜalm-an	you (f.pl.) teach
3m.s.	y-ᶜallim	he teaches
3m.pl.	y-ᶜalm-u	they (m.) teach
3f.s.	t-ᶜallim	she teaches
3f.pl.	y-ᶜalm-an	they (f.) teach

Table 161: The inflectional paradigm of the Form III verb *y-bārik* 'he congratulates'

y-bārik 'he congratulates'	Imperfect	Gloss
1s.	ʔa-bārik	I congratulate
1pl.	n-bārik	we congratulate
2m.s.	t-bārik	you (m.s.) congratulate
2m.pl.	t-bārk-u	you (m.pl.) congratulate
2f.s.	t-bārk-i	you (f.s.) congratulate
2f.pl.	t-bārk-an	you (f.pl.) congratulate
3m.s.	y-bārik	he congratulates
3m.pl.	y-bārk-u	they (m.) congratulate
3f.s.	t-bārik	she congratulates
3f.pl.	y-bārk-an	they (f.) congratulate

Table 162: The inflectional paradigm of the Form IV verb *yi-rsil* 'he sends'

yi-rsil 'he sends'	Imperfect	Gloss
1s.	ʔa-rsil	I send
1pl.	ni-rsil	we send
2m.s.	ti-rsil	you (m.s.) send
2m.pl.	ti-rsil-u	you (m.pl.) send
2f.s.	ti-rsil-i	you (f.s.) send
2f.pl.	ti-rsil-an	you (f.pl.) send
3m.s.	yi-rsil	he sends
3m.pl.	yi-rsil-u	they (m.) send
3f.s.	ti-rsil	she sends
3f.pl.	yi-rsil-an	they (f.) send

Table 163: The inflectional paradigm of the Form V verb *yi-t-naffas* 'he breathes'

yi-t-naffas 'he breathes'	Imperfect	Gloss
1s.	ʔa-t-naffas	I breathe
1pl.	ni-t-naffas	we breathe
2m.s.	ti-t-naffas	you (m.s.) breathe
2m.pl.	ti-t-naffas-u	you (m.pl.) breathe
2f.s.	ti-t-naffas-i	you (f.s.) breathe
2f.pl.	ti-t-naffas-an	you (f.pl.) breathe
3m.s.	yi-t-naffas	he breathes
3m.pl.	yi-t-naffas-u	they (m.) breathe
3f.s.	ti-t-naffas	she breathes
3f.pl.	yi-t-naffas-an	they (f.) breathe

Table 164: The inflectional paradigm of the Form VI verb *yi-t-sāmaḥ* 'he forgives'

yi-t-sāmaḥ 'he forgives'	Imperfect	Gloss
1s.	ʔa-t-sāmaḥ	I forgive
1pl.	ni-t-sāmaḥ	we forgive
2m.s.	ti-t-sāmaḥ	you (m.s.) forgive
2m.pl.	ti-t-sāmaḥ-u	you (m.pl.) forgive
2f.s.	ti-t-sāmaḥ-i	you (f.s.) forgive
2f.pl.	ti-t-sāmaḥ-an	you (f.pl.) forgive
3m.s.	yi-t-sāmaḥ	he forgives
3m.pl.	yi-t-sāmaḥ-u	they (m.) forgive
3f.s.	ti-t-sāmaḥ	she forgives
3f.pl.	yi-t-sāmaḥ-an	they (f.) forgive

Table 165: The inflectional paradigm of the Form VII verb *yi-n-kasir* 'he is broken'

yi-n-kasir 'he is broken'	Imperfect	Gloss
1s.	ʔa-n-kasir	I am broken
1pl.	ni-n-kasir	we are broken
2m.s.	ti-n-kasir	you (m.s.) are broken
2m.pl.	ti-n-kasr-u	you (m.pl.) are broken
2f.s.	ti-n-kasr-i	you (f.s.) are broken
2f.pl.	ti-n-kasr-an	you (f.pl.) are broken
3m.s.	yi-n-kasir	he is broken
3m.pl.	yi-n-kasr-u	they (m.) are broken
3f.s.	ti-n-kasir	she is broken
3f.pl.	yi-n-kasr-an	they (f.) are broken

Table 166: The inflectional paradigm of the Form VIII verb *yi-rtafi^c* 'he goes up'

yi-r-t-afi^c 'he goes up'	Imperfect	Gloss
1s.	ʔa-r-t-afi^c	I go up
1pl.	ni-r-t-afi^c	we go up
2m.s.	ti-r-t-afi^c	you (m.s.) go up
2m.pl.	ti-r-t-af^c-u	you (m.pl.) go up
2f.s.	ti-r-t-af^c-i	you (f.s.) go up
2f.pl.	ti-r-t-af^c-an	you (f.pl.) go up
3m.s.	yi-r-t-afi^c	he goes up
3m.pl.	yi-r-t-af^c-u	they (m.) go up
3f.s.	ti-r-t-afi^c	she goes up
3f.pl.	yi-r-t-af^c-an	they (f.) go up

Table 167: The inflectional paradigm of the Form IX verb *yi-smarr* 'he becomes dark'

yi-smarr 'he becomes dark'	Imperfect	Gloss
1s.	ʔa-smarr	I become dark
1pl.	ni-smarr	we become dark
2m.s.	ti-smarr	you (m.s.) become dark
2m.pl.	ti-smarr-u	you (m.pl.) become dark
2f.s.	ti-smarr-i	you (f.s.) become dark
2f.pl.	ti-smarr-an	you (f.pl.) become dark
3m.s.	yi-smarr	he becomes dark
3m.pl.	yi-smarr-u	they (m.) become dark
3f.s.	ti-smarr	she becomes dark
3f.pl.	yi-smarr-an	they (f.) become dark

Table 168: The inflectional paradigm of the Form X verb *yi-staġrib* 'he wonders'

yi-staġrib 'he wonders'	Imperfect	Gloss
1s.	ʔa-staġrib	I wonder
1pl.	ni-st-aġrib	we wonder
2m.s.	ti-st-aġrib	you (m.s.) wonder
2m.pl.	ti-st-aġrib-u	you (m.pl.) wonder
2f.s.	ti-st-aġrib-i	you (f.s.) wonder
2f.pl.	ti-st-aġrib-an	you (f.pl.) wonder
3m.s.	yi-st-aġrib	he wonders
3m.pl.	yi-st-aġrib-u	they (m.) wonder
3f.s.	ti-st-aġrib	she wonders
3f.pl.	yi-st-aġrib-an	they (f.) wonder

4.4.2.2 Doubled Verbs

All doubled verbs inflect regularly in the imperfect with no modifications in the verb pattern. The following tables provide the inflectional paradigms of imperfect doubled verbs in WM Arabic:

Table 169: The inflectional paradigm of the Form I verb *y-ḥiṭṭ* 'he puts'

y-ḥiṭṭ 'he puts'	Imperfect	Gloss
1s.	ʔa-ḥiṭṭ	I put
1pl.	n-ḥiṭṭ	we put
2m.s.	t-ḥiṭṭ	you (m.s.) put
2m.pl.	t-ḥiṭṭ-u	you (m.pl.) put
2f.s.	t-ḥiṭṭ-i	you (f.s.) put
2f.pl.	t-ḥiṭṭ-an	you (f.pl.) put
3m.s.	y-ḥiṭṭ	he puts
3m.pl.	y-ḥiṭṭ-u	they (m.) put
3f.s.	t-ḥiṭṭ	she puts
3f.pl.	y-ḥiṭṭ-an	they (f.)put

Table 170: The inflectional paradigm of the Form II verb *y-sabbib* 'he causes'

y-sabbib 'he causes'	Imperfect	Gloss
1s.	ʔa-sabbib	I cause
1pl.	n-sabbib	we cause
2m.s.	t-sabbib	you (m.s.) cause
2m.pl.	t-sabbib-u	you (m.pl.) cause
2f.s.	t-sabbib-i	you (f.s.) cause
2f.pl.	t-sabbib-an	you (f.pl.) cause
3m.s.	y-sabbib	he causes
3m.pl.	y-sabbib-u	they (m.) cause
3f.s.	t-sabbib	she causes
3f.pl.	y-sabbib-an	they (f.) cause

Table 171: The inflectional paradigm of the Form V verb *yi-t-raddad* 'he hesitates'

yi-t-raddad 'he hesitates'	Imperfect	Gloss
1s.	ʔa-t-raddad	I hesitate
1pl.	ni-t-raddad	we hesitate
2m.s.	ti-t-raddad	you (m.s.) hesitate
2m.pl.	ti-t-raddad-u	you (m.pl.) hesitate
2f.s.	ti-t-raddad-i	you (f.s.) hesitate
2f.pl.	ti-t-raddad-an	you (f.pl.) hesitate
3m.s.	yi-t-raddad	he hesitates
3m.pl.	yi-t-raddad-u	they (m.) hesitate
3f.s.	ti-t-raddad	she hesitates
3f.pl.	yi-t-raddad-an	they (f.) hesitate

Table 172: The inflectional paradigm of the Form VI verb _yi-t-rādad_ 'he argues'

yi-t-rādad 'he argues'	Imperfect	Gloss
1s.	ʔa-t-rādad	I argue
1pl.	ni-t-rādad	we argue
2m.s.	ti-t-rādad	you (m.s.) argue
2m.pl.	ti-t-rādad-u	you (m.pl.) argue
2f.s.	ti-t-rādad-i	you (f.s.) argue
2f.pl.	ti-t-rādad-an	you (f.pl.) argue
3m.s.	yi-t-rādad	he argues
3m.pl.	yi-t-rādad-u	they (m.) argue
3f.s.	ti-t-rādad	she argues
3f.pl.	yi-t-rādad-an	they (f.) argue

Table 173: The inflectional paradigm of the Form VII verb _yi-n-sabb_ 'he is cursed'

yi-n-sabb 'he is cursed'	Imperfect	Gloss
1s.	ʔa-n-sabb	I am cursed
1pl.	ni-n-sabb	we are cursed
2m.s.	ti-n-sabb	you (m.s.) are cursed
2m.pl.	ti-n-sabb-u	you (m.pl.) are cursed
2f.s.	ti-n-sabb-i	you (f.s.) are cursed
2f.pl.	ti-n-sabb-an	you (f.pl.) are cursed
3m.s.	yi-n-sabb	he is cursed
3m.pl.	yi-n-sabb-u	they (m.) argue
3f.s.	ti-n-sabb	she is cursed
3f.pl.	yi-n-sabb-an	they (f.) are cursed

yi-h-t-amm 'he is concerned'	Imperfect	Gloss
1s.	ʔa-h-t-amm	I am concerned
1pl.	ni-h-t-amm	we are concerned
2m.s.	ti-h-t-amm	you (m.s.) are concerned
2m.pl.	ti-h-t-amm-u	you (m.pl.) are concerned
2f.s.	ti-h-t-amm-i	you (f.s.) are concerned
2f.pl.	ti-h-t-amm-an	you (f.pl.) are concerned
3m.s.	yi-h-t-amm	he is concerned
3m.pl.	yi-h-t-amm-u	they (m.) are concerned
3f.s.	ti-h-t-amm	she is concerned
3f.pl.	yi-h-t-amm-an	they (f.) are concerned

Table 175: The inflectional paradigm of the Form X verb *yi-st-amirr* **'he continues'**

yi-st-amirr 'he continues'	Imperfect	Gloss
1s.	ʔa-st-amirr	I continue
1pl.	ni-st-amirr	we continue
2m.s.	ti-st-amirr	you (m.s.) continue
2m.pl.	ti-st-amirr-u	you (m.pl.) continue
2f.s.	ti-st-amirr-i	you (f.s.) continue
2f.pl.	ti-st-amirr-an	you (f.pl.) continue
3m.s.	yi-st-amirr	he continues
3m.pl.	yi-st-amirr-u	they (m.) continue
3f.s.	ti-st-amirr	she continues
3f.pl.	yi-st-amirr-an	they (f.) continue

4.4.2.3 Initial-Hamzated Verbs

In cognates of CA verbs with initial *hamzah*, *hamzah* is not attested in forms I and X but has been realised in forms II, IV and VI (cf.4.4.1.3). The stem vowel is syncopated in forms I, II, IV and X before vowel-initial subject suffixes. Below is an analysis of the inflectional

paradigm of the verbs *y-āxiḏ* 'he takes', *y-ʔaxxir* 'he delays', *y-ʔāmin* 'he believes', the *yi-t-ʔaxxar* 'he is late', and *yi-s-tājir* 'he rents'

Table 176: The inflectional paradigm of the Form I verb *y-āxiḏ* 'he takes'

y-āxiḏ 'he takes'	Imperfect	Gloss
1s.	ʔā-xiḏ	I take
1pl.	n-āxiḏ	we take
2m.s.	t-āxiḏ	you (m.s.) take
2m.pl.	t-āxḏ-u	you (m.pl.).take
2f.s.	t-āxḏ-i	you (f.s.) take
2f.pl.	t-āxḏ-an	you (f.pl.) take
3m.s.	y-āxiḏ	he takes
3m.pl.	y-āxḏ-u	they (m.) take
3f.s.	t-āxiḏ	she takes
3f.pl.	y-āxḏ-an	they (f.) take

Table 177: The inflectional paradigm of the Form II verb *y-ʔaxxir* 'he delays'

y-ʔaxxir 'he delays'	Imperfect	Gloss
1s.	ʔa-ʔaxxir	I delay
1pl.	n-ʔaxxir	we delay
2m.s.	t-ʔaxxir	you (m.s.) delay
2m.pl.	t-ʔaxr-u	you (m.pl.).delay
2f.s.	t-ʔaxr-i	you (f.s.) delay
2f.pl.	t-ʔaxr-an	you (f.pl.) delay
3m.s.	y-ʔaxxir	he delay
3m.pl.	y-ʔaxr-u	they (m.) delay
3f.s.	t-ʔaxxir	she delays
3f.pl.	y-ʔaxr-an	they (f.) delay

Table 178: The inflectional paradigm of the Form IV verb *y-ʔāmin* 'he believes'

y-ʔāmin 'he belives'	Imperfect	Gloss
1s.	ʔ-āmin	I believe
1pl.	n-ʔāmin	we believe
2m.s.	t-ʔāmin	you (m.s.) believe
2m.pl.	t-ʔāmn-u	you (m.pl.) believe
2f.s.	t-ʔāmn-i	you (f.s.) believe
2f.pl.	t-ʔāmn-an	you (f.pl.) believe
3m.s.	y-ʔāmin	he believes
3m.pl.	y-ʔāmn-u	they (m.) believe
3f.s.	t-ʔāmin	she believes
3f.pl.	y-ʔāmn-an	they (f.) believe

Table 179: The inflectional paradigm of the Form V verb *yi-t-ʔaxxar* 'he gets late'

yi-t-ʔaxxar 'he gest late'	Imperfect	Gloss
1s.	ʔa-t-ʔaxxar	I get late
1pl.	ni-t-ʔaxxar	we get late
2m.s.	t-ʔaxxar	you (m.s.) get late
2m.pl.	t-ʔaxxar-u	you (m.pl.) get late
2f.s.	ti-t-ʔaxxar-i	you (f.s.) get late
2f.pl.	ti-t-ʔaxxar-an	you (f.pl.) get late
3m.s.	yi-t-ʔaxxar	he gets late
3m.pl.	yi-t-ʔaxxar-u	they (m.) get late
3f.s.	ti-t-ʔaxxar	she gets late
3f.pl.	yi-t-ʔaxxar-an	they (f.) get late

Table 180: The inflectional paradigm of the Form X verb *yi-s-tājir* 'he rents'

yi-st-ājir 'he rents'	Imperfect	Gloss
1s.	ʔa-stājir	I rent
1pl.	ni-st-ājir	we rent
2m.s.	ti-st-ājir	you (m.s.) rent
2m.pl.	ti-st-ājr-u	you (m.pl.) rent
2f.s.	ti-st-ājr-i	you (f.s.) rent
2f.pl.	ti-st-ājr-an	you (f.pl.) rent
3m.s.	yi-st-ājir	he rents
3m.pl.	yi-st-ājr-u	they (m.) rent
3f.s.	ti-st-ājir	she rents
3f.pl.	yi-st-ājr-an	they (f.) rent

4.4.2.4 Medial-Hamzated Verbs

The *hamzah* is retained in all medial-hamzated verbs. Specifically, the inflection of forms I, V and VI is regular and no modifications occur to the stem. Form II has the basic pattern CaʔʔiC. However, where a vowel-initial subject suffix attaches to the stem verb, the stem vowel /i/ drops out. The result of this is a cluster of three consonants which is broken by degemination of *hamzah*, surfacing as -CaʔC-, e.g. *y-raʔs-an* 'they (f.) appoint someone the head'. Below are the inflectional paradigms of the Form I verb *yi-sʔal* 'he asks', the Form II verb *y-raʔʔis* 'he appoints someone the head', the Form V verb *yi-t-raʔʔas* 'he chairs', and the Form VI verb *yi-t-šāʔam* 'he is pessimistic',

Table 181: The inflectional paradigm of the Form I verb *yi-sʔal* 'he asks'

yi-sʔal 'he asks'	Imperfect	Gloss
1s.	ʔa-sʔal	I ask
1pl.	ni-sʔal	we ask
2m.s.	ti-sʔal	you (m.s.) ask
2m.pl.	ti-sʔal-u	you (m.pl.) ask
2f.s.	ti-sʔal-i	you (f.s.) ask
2f.pl.	ti-sʔal-an	you (f.pl.) ask
3m.s.	yi-sʔal	he asks
3m.pl.	yi-sʔal-u	they (m.) ask
3f.s.	ti-sʔal	she asks
3f.pl.	yi-sʔal-an	they (f.) ask

Table 182: The inflectional paradigm of the Form II verb *y-raʔʔis* 'he appoints someone the head'

y-raʔʔis 'he appoints someone the head'	Imperfect	Gloss
1s.	ʔa-raʔʔis	I appoint someone the head
1pl.	n-raʔʔis	we appoint someone the head
2m.s.	t-raʔʔis	you (m.s.) appoint someone the head
2m.pl.	t-raʔs-u	you (m.pl.) appoint someone the head
2f.s.	t-raʔs-i	you (f.s.) appoint someone the head
2f.pl.	t-raʔs-an	you (f.pl.) appoint someone the head
3m.s.	y-raʔʔis	he appoints someone the head
3m.pl.	y-raʔs-u	they (m.) appoint someone the head
3f.s.	t-raʔʔis	she appoints someone the head
3f.pl.	y-raʔs-an	they (f.) appoint someone the head

yi-t-raʕʕas 'he chairs'	Imperfect	Gloss
1s.	ʔa-t-raʕʕas	I chair
1pl.	ni-t-raʕʕas	we chair
2m.s.	ti-t-raʕʕas	you (m.s.) chair
2m.pl.	ti-t-raʕʕas-u	you (m.pl.) chair
2f.s.	ti-t-raʕʕas-i	you (f.s.) chair
2f.pl.	ti-t-raʕʕas-an	you (f.pl.) chair
3m.s.	yi-t-raʕʕas	he chairs
3m.pl.	yi-t-raʕʕas-u	they (m.) chair
3f.s.	ti-t-raʕʕas	she chairs
3f.pl.	yi-t-raʕʕas-an	they (f.) chair

Table 184: The inflectional paradigm of the Form VI verb *yi-t-šāʔam* 'he is pessimistic'

yi-t-šāʔam 'he is pessimistic'	Imperfect	Gloss
1s.	ʔa-t-šāʔam	I am pessimistic
1pl.	ni-t-šāʔam	we are pessimistic
2m.s.	ti-t-šāʔam	you (m.s.) are pessimistic
2m.pl.	ti-t-šāʔam-u	you (m.pl.) are pessimistic
2f.s.	ti-t-šāʔam-i	you (f.s.) are pessimistic
2f.pl.	ti-t-šāʔam-an	you (f.pl.) are pessimistic
3m.s.	yi-t-šāʔam	he is pessimistic
3m.pl.	yi-t-šāʔam-u	they (m.) are pessimistic
3f.s.	ti-t-šāʔam	she is pessimistic
3f.pl.	yi-tšāʔam-an	they (f.) are pessimistic

4.4.2.5 Final-Hamzated Verbs

Historical final *hamzah* is not attested in forms I, II, VII and VIII. Additionally, where a vowel-initial subject suffix is concatenated to the stem verb, the stem vowel /i/ is deleted because WM Arabic does not allow two adjacent vowels, e.g. *yi-bd-an* 'they (f.) start' (cf. 3.2.2.5.3). By contrast, *hamzah* is attested in forms III and V. In Form III, the stem vowel /i/ is subject to syncope when a vowel-initial subject suffix is concatenated (3.2.2.5.2). Below is

a presentation of the inflectional paradigms of the verbs *yi-bda* 'he starts', *y-xabbi* 'he hides', *y-fājiʔ* 'he surprises', *yi-t-fājaʔ* 'he is surprised', *yi-n-ḥani* 'he bends', and *yi-m-t-ali* 'he becomes full'

Table 185: The inflectional paradigm of the Form I verb *yi-bda* 'he starts'

yi-bda 'he starts'	Imperfect	Gloss
1s.	ʔa-bda	I start
1pl.	ni-bda	we start
2m.s.	ti-bda	you (m.s.) start
2m.pl.	ti-bd-u	you (m.pl.) start
2f.s.	ti-bd-i	you (f.s.) start
2f.pl.	ti-bd-an	you (f.pl.) start
3m.s.	yi-bda	he starts
3m.pl.	yi-bd-u	they (m.) start
3f.s.	ti-bda	she starts
3f.pl.	yi-bd-an	they (f.) start

Table 186: The inflectional paradigm of the Form II verb *y-xabbi* 'he hides'

y-xabbi 'he hides'	Imperfect	Gloss
1s.	ʔa-xabbi	I hide
1pl.	n-xabbi	we hide
2m.s.	t-xabbi	you (m.s.) hide
2m.pl.	t-xabb-u	you (m.pl.) hide
2f.s.	t-xabb-i	you (f.s.) hide
2f.pl.	t-xabb-an	you (f.pl.) hide
3m.s.	y-xabbi	he hides
3m.pl.	y-xabb-u	they (m.) hide
3f.s.	t-xabb-i	she hides
3f.pl.	y-xabb-an	they (f.) hide

Table 187: The inflectional paradigm of the Form III verb *y-fāji?* 'he surprises'

y-fāji? 'he surprises'	Imperfect	Gloss
1s.	?a-fãji?	I surprise
1pl.	n-fãji?	we surprise
2m.s.	t-fãji?	you (m.s.) surprise
2m.pl.	t-fãj?-u	you (f.s.) surprise
2f.s.	t-fãj?-i	you (m.pl.) surprise
2f.pl.	t-fãj?-an	you (f.pl.) surprise
3m.s.	y-fãji?	he surprises
3m.pl.	y-fãj?-u	they (m.) surprises
3f.s.	t-fãji?	she surprises
3f.pl.	y-fãj?-an	they (f.) surprise

Table 188: The inflectional paradigm of the Form V verb *yi-t-fāja?* 'he is surprised'

yi-t-fāja? 'he is surprised'	Imperfect	Gloss
1s.	?a-t-fãja?	I am surprised
1pl.	ni-t-fãja?	we are surprised
2m.s.	ti-t-fãja?	you (m.s.) are surprised
2m.pl.	ti-t-fãja?	you (m.pl.) are surprised
2f.s.	ti-t-fãja?-i	you (f.s.) are surprised
2f.pl.	ti-t-fãja?-an	you (f.pl.) are surprised
3m.s.	yi-t-fãja?	he is surprised
3m.pl.	yi-t-fãja?-u	they (m.) are surprised
3f.s.	ti-t-fãja?	she is surprised
3f.pl.	yi-t-fãja?-an	they (f.) are surprised

Table 189: The inflectional paradigm of the Form VII verb *yi-n-ḥani* 'he bends'

yi-n-ḥani 'he bends'	Imperfect	Gloss
1s.	ʔa-n-ḥani	I bend
1pl.	ni-n-ḥani	we bend
2m.s.	ti-n-ḥani	you (m.s.) bend
2m.pl.	ti-n-ḥan-u	you (m.pl.) bend
2f.s.	ti-n-ḥan-i	you (f.s.) bend
2f.pl.	ti-n-ḥan-an	you (f.pl.) bend
3m.s.	yi-n-ḥani	he bends
3m.pl.	yi-n-ḥan-u	they (m.) bend
3f.s.	ti-n-ḥani	she bends
3f.pl.	yi-n-ḥan-an	they (f.) bend

Table 190: The inflectional paradigm of the Form VIII verb *yi-m-t-ali* 'he becomes full'

yi-m-t-ali 'he becomes full'	Imperfect	Gloss
1s.	ʔa-m-t-ali	I become full
1pl.	ni-m-t-ali	we become full
2m.s.	ti-m-t-ali	you (m.s.) become full
2m.pl.	ti-m-t-al-u	you (m.pl.) become full
2f.s.	ti-m-t-al-i	you (f.s.) become full
2f.pl.	ti-m-t-al-an	you (f.pl.) become full
3m.s.	yi-m-t-ali	he becomes full
3m.pl.	yi-m-t-al-u	they (m.) become full
3f.s.	ti-m-t-ali	she becomes full
3f.pl.	yi-m-t-al-an	they (f.) become full

4.4.2.6 Assimilated Verbs

Form I ūCiC/īCiC

Where C1 is either /w/ or /y/, it is realised respectively as /ū/ or /ī/ in all imperfect conjugations apart from the 1s., where it is retained as a glide. For illustration, consider the inflectional paradigm of the verb *y-ūᶜid* 'he promises' below:

Table 191: The inflectional paradigm of the Form I verb *y-ūᶜid* 'he promises'

y-ūᶜid 'he promises'	Imperfect	Gloss
1s.	ʔa-wᶜid	I promise
1pl.	n-ūᶜid	we promise
2m.s.	t-ūᶜid	you (m.s.) promise
2m.pl.	t-ūᶜd-u	you (m.pl.) promise
2f.s.	t-ūᶜd-i	you (f.s.) promise
2f.pl.	t-ūᶜd-an	you (f.pl.) promise
3m.s.	y-ūᶜid	he promises
3m.pl.	y-ūᶜd-u	they (m.) promise
3f.s.	t-ūᶜid	she promises
3f.pl.	y-ūᶜd-an	they (f.) promise

The weak segments are retained in all conjugations of forms II, III, V, VI and X. In */y/* assimilated verbs, the prefix *ʔi-* is inserted before the prefix *y-* to avoid an impermissible initial-geminate, *ʔiy-y-assir* 'he makes it easy'. Syncope of the stem vowel occurs in forms II and III before vowel-nitial subject suffixes. Consider the inflecional paradigms of the Form II verb *y-waggif* 'he stops', the Form II verb *ʔi-yassir* 'he makes it easy', the Form III verb *y-wājih* 'he meets', the Form V verb *yi-t-waggaᶜ* 'he expects', the Form VI verb *yi-t-wājah* 'he confronts', and the Form X verb *yi-st-aysir* 'he finds something easy'.

Table 192: The inflectional paradigm of the Form II verb *y-waggif* 'he stops'

y-waggif 'he stops'	Imperfect	Gloss
1s.	ʔa-waggif	I stop
1pl.	n-waggif	we stop
2m.s.	t-waggif	you (m.s.) stop
2m.pl.	t-wagf-u	you (m.pl.) stop
2f.s.	t-wagf-i	you (f.s.) stop
2f.pl.	t-wagf-an	you (f.pl.) stop
3m.s.	y-waggif	he stops
3m.pl.	y-wagf-u	they (m.) stop
3f.s.	t-waggif	she stops
3f.pl.	y-wagf-an	they (f.) stop

Table 193: The inflectional paradigm of the Form II verb *ʔi-yassir* 'he makes something easy'

ʔi-yassir 'to make something easy'	Imperfect	Gloss
1s.	ʔa-yassir	I make something easy
1pl.	n-yassir	we make something easy
2m.s.	t-yassir	you (m.s.) something easy
2m.pl.	t-yasr-u	you (m.pl.) make something easy
2f.s.	t-yasr-i	you (f.s.) make something easy
2f.pl.	t-yasr-an	you (f.pl.) make something easy
3m.s.	ʔi-y-yassir	he makes something easy
3m.pl.	ʔi-y-yasr-u	they (m.) makes something easy
3f.s.	t-yassir	she makes it easy
3f.pl.	ʔi-y-yassr-an	they (f.) makes it easy

Table 194: The inflectional paradigm of the Form III verb *y-wājih* 'he meets'

y-wājih 'he meets'	Imperfect	Gloss
1s.	ʔa-wājih	I meet
1pl.	n-wājih	we meet
2m.s.	t-wājih	you (m.s.) meet
2m.pl.	t-wājh-u	you (m.pl.) meet
2f.s.	t-wājh-i	you (f.s.) meet
2f.pl.	t-wājh-an	you (f.pl.) meet
3m.s.	y-wājih	he meets
3m.pl.	y-wājh-u	they (m.) meet
3f.s.	t-wājih	she meets
3f.pl.	y-wājh-an	they (f.) meet

Table 195: The inflectional paradigm of the Form V verb *yi-t-wagga^c* 'he expects'

yi-t-wagga^c 'he expects'	Imperfect	Gloss
1s.	ʔa-t-wagga^c	I expect
1pl.	ni-t-wagga^c	we expect
2m.s.	ti-t-wagga^c	you (m.s.) expect
2m.pl.	t-it-wagga^c-u	you (m.pl.) expect
2f.s.	ti-t-wagga^c-i	you (f.s.) expect
2f.pl.	ti-t-wagga^c-an	you (f.pl.) expect
3m.s.	yi-t-wagga^c	he expects
3m.pl.	yi-t-wagga^c-u	they (m.) expect
3f.s.	ti-t-wagga^c	she expects
3f.pl.	yi-t-wagga^c-an	they (f.) expect

Table 196: The inflectional paradigm of the Form VI verb *yi-t-wājah* 'he confronts'

yi-t-wājah 'he confronts'	Imperfect	Gloss
1s.	ʔa-t-wājah	I confront
1pl.	ni-t-wājah	we confront
2m.s.	ti-t-wājah	you (m.s.) confront
2m.pl.	ti-t-wājah-u	you (m.pl.) confront
2f.s.	ti-t-wājah-i	you (f.s.) confront
2f.pl.	ti-t-wājah-an	you (f.pl.) confront
3m.s.	yi-t-wājah	he confronts
3m.pl.	yi-t-wājah-u	they (m.) confront
3f.s.	ti-t-wājah	she confronts
3f.pl.	yi-t-wājah-an	they (f.) confront

yi-st-aysir 'he finds something easy'	Imperfect	Gloss
1s.	ʔa-st-aysir	I find something easy
1pl.	ni-st-aysir	we find something easy
2m.s.	ti-st-aysir	you (m.s.) find something easy
2m.pl.	ti-st-aysir-u	you (m.pl.) find something easy
2f.s.	ti-st-aysir-i	you (f.s.) find something easy
2f.pl.	ti-st-aysir-an	you (f.pl.) find something easy
3m.s.	yi-st-aysir	he finds something easy
3m.pl.	yi-st-aysir-u	they (m.) find something easy
3f.s.	ti-st-aysir	she finds something easy
3f.pl.	yi-st-aysir-an	they (f.) find something easy

In Form IV assimilated verbs, the /w/ radical is realised as long /ō/. The 1s. subject prefix *a-* is omitted when it concatenates to Form IV assimilated verbs because WM Arabic bans two adjacent vowels (3.2.2.5.3). The short high vowel is sycapated before vowel-initial subject suffixes. No instances of assimilated verbs with the */y/* radical are found in the dialect. The following is the inflectional paradigm of the Form IV verb *y-ōjiᶜ* 'he hurts'.

Table 198: The inflectional paradigm of the Form IV verb *y-ōjiᶜ* 'he hurts'

y-ōjiᶜ 'he hurts'	Imperfect	Gloss
1s.	ʔ-ōjaᶜ	I hurt
1pl.	n-ōjiᶜ	we hurt
2m.s.	t-ōjiᶜ	you (m.s.) hurt
2m.pl.	t-ōjᶜ-u	you (m.pl.) hurt
2f.s.	t-ōjᶜ-i	you (f.s.) hurt
2f.pl.	t-ōjᶜ-an	you (f.pl.) hurt
3m.s.	y-ōjiᶜ	he hurts
3m.pl.	y-ōjᶜ-u	they (m.) hurt
3f.s.	t-ōjiᶜ	she hurts
3f.pl.	y-ōjᶜ-an	they (f.) hurt

Where C1 is */w/* in Form VIII, it assimilates totally to the *-t-* infix, resulting in a geminate. For example, the verb *yi-ttaṣil* is formed from the triliteral root *w-ṣ-l* by assimilating the weak segment */w/* to the infix *-t-*, forming the pattern *tt-aṣal* rather than *w-t-aṣal. Also, syncope of the stem vowel occurs before vowel-initial subject suffixes. Below is the inflectional paradigm of the verb *yi-ttaṣil* 'he phones'.

Table 199: The inflectional paradigm of the Form VIII verb *yi-ttaṣil* 'he phones'

yi-ttaṣil 'he phones'	Imperfect	Gloss
1s.	ʔa-ttaṣil	I phone
1pl.	ni-ttaṣil	we phone
2m.s.	ti-ttaṣil	you (m.s.) phone
2m.pl.	ti-ttaṣl-u	you (m.pl.) phone
2f.s.	ti-ttaṣl-i	you (f.s.) phone
2f.pl.	ti-ttaṣl-an	you (f.pl.) phone
3m.s.	yi-ttaṣil	he phones
3m.pl.	yi-ttaṣl-u	they (m.) phone
3f.s.	ti-ttaṣil	she phones
3f.pl.	yi-ttaṣl-an	they (f.) phone

4.4.2.7 Hollow Verbs

In Form I hollow verbs, the realisation of the weak segment /w/ is lexically determined as /ī/, /ā/, or /ū/. By contrast, medial /y/ is always vocalised as /ī/. The tables below give the inflectional paradigms of the Form I verbs *y-bīᶜ* 'he sells', *y-nām* 'he sleeps', *y-ṣīm* 'he fasts', and *y-ḏūg* 'he tastes'.

Table 200: The inflectional paradigm of the Form I verb *y-bīᶜ* 'he sells'

y-bīᶜ 'he sells'	Imperfect	Gloss
1s.	ʔa-bīᶜ	I sell
1pl.	n-bīᶜ	we sell
2m.s.	t-bīᶜ	you (m.s.) sell
2m.pl.	t-bīᶜ-u	you (m.pl.) sell
2f.s.	t-bīᶜ-i	you (f.s.) sell
2f.pl.	t-bīᶜ-an	you (f.pl.) sell
3m.s.	y-bīᶜ	he sells
3m.pl.	y-bīᶜ-u	they (m.) sell
3f.s.	t-bīᶜ	she sells
3f.pl.	y-bīᶜ-an	they (f.) sell

Table 201: The inflectional paradigm of the Form I verb *y-nām* 'he sleeps'

y-nām 'he sleeps'	Imperfect	Gloss
1s.	ʔa-nām	I sleep
1pl.	ʔin-nām	we sleep
2m.s.	t-nām	you (m.s.) sleep
2m.pl.	t-nām-u	you (m.pl.) sleep
2f.s.	t-nām-i	you (f.s.) sleep
2f.pl.	t-nām-an	you (f.pl.) sleep
3m.s.	y-nām	he sleeps
3m.pl.	y-nām-u	they (m.) sleep
3f.s.	t-nām	she sleeps
3f.pl.	y-nām-an	they (f.) sleep

y-ṣīm 'he fasts'	Imperfect	Gloss
1s.	ʔa-ṣīm	I fast
1pl.	n-ṣīm	we fast
2m.s.	t-ṣīm	you (m.s.) fast
2m.pl.	t-ṣīm-u	you (m.pl.) fast
2f.s.	t-ṣīm-i	you (f.s.) fast
2f.pl.	t-ṣīm-an	you (f.pl.) fast
3m.s.	y-ṣīm	he fasts
3m.pl.	y-ṣīm-u	they (m.) fast
3f.s.	t-ṣīm	she fasts
3f.pl.	y-ṣīm-an	they (f.) fast

Table 203: The inflectional paradigm of the Form I verb *y-ḏūg* 'he tastes'

y-ḏūg 'he tastes'	Imperfect	Gloss
1s.	ʔa-ḏūg	I taste
1pl.	n-ḏūg	we taste
2m.s.	t-ḏūg	you (m.s.) taste
2m.pl.	t-ḏūg-u	you (m.pl.) taste
2f.s.	t-ḏūg-i	you (f.s.) taste
2f.pl.	t-ḏūg-an	you (f.pl.) taste
3m.s.	y-ḏūg	he tastes
3m.pl.	y-ḏūg-u	they (m.) taste
3f.s.	t-ḏūg	she tastes
3f.pl.	y-ḏūg-an	they (f.) taste

In forms VII, VIII and X, the medial weak segments are realised as /ā/, surfacing in the imperfect as CāC. For illustration, consider the inflectional paradigms of the Form VII verb *yi-n-hār* 'he declines' and the Form VIII verb *yi-xtār* 'he chooses'.

yi-n-hār 'to declines'	Imperfect	Gloss
1s.	ʔa-n-hār	I decline
1pl.	ni-n-hār	we decline
2m.s.	ti-n-hār	you (m.s.) decline
2m.pl.	ti-n-hār-u	you (m.pl.) decline
2f.s.	ti-n-hār-i	you (f.s.) decline
2f.pl.	ti-n-hār-an	you (f.pl.) decline
3m.s.	yi-n-hār	he declines
3m.pl.	yi-n-hār-u	they (m.) decline
3f.s.	ti-n-hār	she declines
3f.pl.	yi-n-hār-an	they (f.) decline

Table 205: The inflectional paradigm of the Form VIII verb *yi-xtār* 'he chooses'

yi-x-t-ār 'he chooses' from x-y-r	Imperfect	Gloss
1s.	ʔa-x-t-ār	I choose
1pl.	ni-x-t-ār	we choose
2m.s.	ti-x-t-ār	you (m.s.) choose
2m.pl.	ti-x-t-ār-u	you (m.pl.) choose
2f.s.	ti-x-t-ār-i	you (f.s.) choose
2f.pl.	ti-x-t-ār-an	you (f.pl.) choose
3m.s.	yi-x-t-ār	he chooses
3m.pl.	yi-x-t-ār-u	they (m.) choose
3f.s.	ti-x-t-ār	she chooses
3f.pl.	yi-x-t-ār-an	they (f.) choose

The weak segments are retained in forms III and V, as shown in the inflectional paradigms of the verbs *y-ḥāwil* 'he tries' and *yi-t-ġayyar* 'he changes'.

Table 206: The inflectional paradigm of the Form III verb *y-ḥāwil* 'he tries'

y-ḥāwil 'he tries'	Imperfect	Gloss
1s.	ʔa-ḥāwil	I try
1pl.	n-ḥāwil	we try
2m.s.	t-ḥāwil	you (m.s.) try
2m.pl.	t-ḥāwl-u	you (m.pl.) try
2f.s.	t-ḥāwl-i	you (f.s.) try
2f.pl.	t-ḥāwl-an	you (f.pl.) try
3m.s.	y-ḥāwil	he tries
3m.pl.	y-ḥāwl-u	they (m.) try
3f.s.	t-ḥāwil	she tries
3f.pl.	y-ḥāwl-an	they (f.) try

Table 207: The inflectional paradigm of the Form V verb *yi-t-ġayyar* 'he changes'

yi-t-ġayyar 'he changes'	Imperfect	Gloss
1s.	ʔa-t-ġayyar	I change
1pl.	ni-t-ġayyar	we change
2m.s.	ti-t-ġayyar	you (m.s.) change
2m.pl.	ti-t-ġayyar-u	you (m.pl.) change
2f.s.	ti-t-ġayyar-i	you (f.s.) change
2f.pl.	ti-t-ġayyar-an	you (f.pl.) change
3m.s.	yi-t-ġayyar	he changes
3m.pl.	yi-t-ġayyar-u	they (m.) change
3f.s.	ti-t-ġayyar	she changes
3f.pl.	yi-t-ġayyar-an	they (f.) chang

4.4.2.8 Defective Verbs

Where C3 is a glide, it is realised as /i/ in the imperfect, e.g. *yi-mši* 'he walks', *yi-dˤi* 'he prays'. Additionally, where a vowel-initial subject suffix is concatenated to the stem, the stem vowel /i/ is deleted since WM Arabic does not allow two adjacent vowels (cf. 3.2.2.5.3).

Below are the inflectional paradigms of the verbs *yi-dˤi* 'he prays', *yi-mši* 'he walks', *y-ġaṭṭi* 'he covers', *y-nādi* 'he calls' *ʔa-ˤṭa* 'he gives', and *yi-t-ˤadda* 'he goes past'

Table 208: The inflectional paradigm of the Form I verb *yi-dˤi* 'he prays'

yi-dˤi 'he prays' from *d-ˤ-w*	Imperfect	Gloss
1s.	ʔa-dˤi	I pray
1pl.	ni-dˤi	we pray
2m.s.	ti-dˤi	you (m.s.) pray
2m.pl.	ti-dˤ -u	you (m.pl.) pray
2f.s.	ti-dˤ-i	you (f.s.) pray
2f.pl.	ti-dˤ-an	you (f.pl.) pray
3m.s.	yi-dˤi	he prays
3m.pl.	yi-dˤ-u	they (m.) pray
3f.s.	ti-dˤi	she prays
3f.pl.	yi-dˤ-an	they (f.) pray

Table 209: The inflectional paradigm of the Form I verb *yi-mši* 'he walks'

yi-mši 'he walks' from *m-š-y*	Imperfect	Gloss
1s.	ʔa-mši	I walk
1pl.	ni-mši	we walk
2m.s.	ti-mši	you (m.s.) walk
2m.pl.	t-mš-u	you (m.pl.) walk
2f.s.	ti-mš-i	you (f.s.) walk
2f.pl.	ti-mš-an	you (f.pl.) walk
3m.s.	yi-mši	he walks
3m.pl.	yi-mš-u	they (m.) walk
3f.s.	ti-mši	she walks
3f.pl.	yi-mš-an	they (f.) walk

Table 210: The inflectional paradigm of the Form II verb *y-ġaṭṭi* 'he covers'

y-ġaṭṭi 'he covers'	Imperfect	Gloss
1s.	ʔa-ġaṭṭi	I cover
1pl.	n-ġaṭṭi	we cover
2m.s.	t-ġaṭṭ-i	you (m.s.) cover
2m.pl.	t-ġaṭṭ-u	you (m.pl.) cover
2f.s.	t-ġaṭṭ-i	you (f.s.) cover
2f.pl.	t-ġaṭṭ-an	you (f.pl.) cover
3m.s.	y-ġaṭṭi	he covers
3m.pl.	y-ġaṭṭ-u	they (m.) cover
3f.s.	t-ġaṭṭ-i	she covers
3f.pl.	y-ġaṭṭ-an	they (f.) cover

Table 211: The inflectional paradigm of the Form III verb *y-nādi* 'he calls'

y-nādi 'he calls'	Imperfect	Gloss
1s.	ʔa-nādi	I call
1pl.	ʔin-nādi	we call
2m.s.	t-nād-i	you (m.s.) call
2m.pl.	t-nād-u	you (m.pl.) call
2f.s.	t-nād-i	you (f.s.) call
2f.pl.	t-nād-an	you (f.pl.) call
3m.s.	y-nādi	he calls
3m.pl.	y-nād-u	they (m.) call
3f.s.	t-nād-i	she calls
3f.pl.	y-nād-an	they (f.) call

Table 212: The inflectional paradigm of the Form IV verb *ʔa-ˤṭa* 'he gives'

ʔa-ˤṭa 'he gives'	Imperfect	Gloss
1s.	ʔa-ˤṭi	I give
1pl.	ni-ˤṭi	we give
2m.s.	ti-ˤṭ-i	you (m.s.) give
2m.pl.	ti-ˤṭ-u	you (m.pl.) give
2f.s.	ti-ˤṭ-i	you (f.s.) give
2f.pl.	ti-ˤṭ-an	you (f.pl.) give
3m.s.	yi-ˤṭi	he gives
3m.pl.	yi-ˤṭ-u	they (m.) give
3f.s.	ti-ˤṭ-i	she gives
3f.pl.	yi-ˤṭ-an	they (f.) give

Table 213: The inflectional paradigm of the Form V verb *yi-t-ˤadda* 'he goes past'

yi-t-ˤadda 'he goes past'	Imperfect	Gloss
1s.	ʔa-t-ˤadda	I go past
1pl.	ni-t-ˤadda	we go past
2m.s.	ti-t-ˤadd-i	you (m.s.) go past
2m.pl.	ti-t-ˤadd-u	you (m.pl.) go past
2f.s.	ti-t-ˤadd-i	you (f.s.) go past
2f.pl.	ti-t-ˤadd-an	you (f.pl.) go past
3m.s.	yi-t-ˤadda	he goes past
3m.pl.	yi-t-ˤadd-u	they (m.) go past
3f.s.	ti-t-ˤadd-i	she goes past
3f.pl.	yi-t-ˤadd-an	they (f.) go past

4.5 Chapter Summary

The chapter presents an introduction to Arabic morphology followed by an examination of the morphological aspects of WM Arabic verb. There are ten verb forms in the dialect (I-X), plus two quadriliteral forms (QI and QII). In this respect, the dialect exhibits some differences from other Jordanian dialects, particularly the use of Form IX which is mainly

unused in other Jordanian dialects (Sakarnah 1999; Palva 1984). Verbs have two aspects: perfect and imperfect, and they inflect for the morphological categories of gender (masculine and feminine), number (singular and plural) and person (first, second and third). The inflection of perfect verbs involves certain morphophonological processes, the most prominent of which are the insertion of the long vowel /ē/ before consonant-initial subject suffixes where the stem verb ends in a geminate or a vowel, the syncope of the high front vowel in open unstressed syllables, syncope of the short low vowel when it occurs in open unstressed syllables of forms VII (n-CaCaC) and VIII (C-taCaC) before vowel-initial subject suffixes. Similarly, the inflection of imperfect verbs involves the syncope of the unstressed high vowel /a/ in forms IV, VII and VIII before vowel-initial subject suffixes and the degemination of C2 in Form II to avoid an impermissible sequence of three consonants.

Chapter Five

Nominal Morphology

The objective of this chapter is to provide an examination of the morphological categories of nominals in WM Arabic. The analysis starts with an overview of the nominal morphology followed by an examination of the derivation and inflection of nominal categories.

5.1 Introduction

The term *ism* 'noun' covers all nominal parts that give meaning with no reference to time, and which can denote something tangible or intangible. It is described by Arab grammarians as the basic part of speech which, unlike other parts of speech, can give meaning even when it occurs in isolation. Thus, while a noun such as *walad* 'boy' can give meaning in isolation, the verb should have a subject, explicit or implicit, in order to be meaningful, e.g. *nām al-walad* 'the boy slept', *daras* 'to study' (Zamaxšarī 1859 cited in Watson 1993: 23). Traditionally, two criteria define CA nominals: the definite article and/or the nunation, a marker of indefiniteness that appears on nouns, adjectives and adverbs. The category of nouns falls in six categories: substantives, adjectives, verbal derivatives, pronouns, quantifiers and numerals.

Nouns have traditionally been classified according to two broad categories: basic nouns *asmāʔ jāmidah* and derived nouns *asmāʔ muštaqqah*. The basic class refers to solid forms that can not be analyzed in terms of root and pattern and which always function syntactically as substantives. Examples of this class include *faggūᶜ* 'pumpkin', *bēt* 'house', *gitta* 'ridge cucumber', *ḥirza* 'camel dung', *ᶜali* [proper name]. The majority of basic nouns are underlyingly masculine, with some nouns being feminine either by form, e.g. *luġa* 'language', by meaning, e.g. *ʔumm* 'mother', or by convention, e.g. *šams* 'sun', *rīḥ* 'wind' (Holes 2004: 155).

A derived noun is essentially derived from another noun or verb. The majority of these nouns are derived from words with triliteral or quadriliteral roots. A noun that is derived from a noun is denominal, e.g. *malbana* 'shop for selling milk products', *malḥama* 'butcher's shop', *mijbana* 'cheese shop'; a noun derived from a verb is deverbal, e.g. *gatil* 'killing', *masjid* 'mosque', *ḥrāṯa* 'ploughing'. As for derived verbs, Arabic derived nouns are formed through the interlocking of root consonants with the vocalic patterns to produce forms whose meaning

is decided by their root consonants, their vocalic melody and their templatic pattern. For example, the word *lāᶜib* 'player' is derived from the triliteral root *l-ᶜ-b* which interlocks with the vocalic pattern *ā-i* to produce the pattern CāCiC, giving a noun that denotes the doer of the action, known in Arabic as *ism al-fāᶜil*.

Derived nouns include nouns of instance, where the morpheme suffix *-a* is concatenated to the stem, e.g. *jamᶜa* 'gathering', nouns of location, e.g. *maṣlax* 'slaughtering place', *mijbana* 'cheese shop'; nouns of instrument, e.g. *miftāḥ* 'a key'; and nouns of profession, e.g. *laḥḥām* 'butcher', *ḥattāt* 'olive picker'. Other derivatives may function substantively or adjectivally. Where the definite article *il-* is concatenated to nominals that typically function adjectivally, and the word surfaces independently, the nominal functions as a substantive, e.g. *il-kaḏḏāb* 'the liar', *il-kbār* 'the adults'. The following examines substantives, noun modifiers and pronouns in WM Arabic.

5.2 Substantives

The class of substantives comprises proper nouns, known in Arabic as *ism al-ᶜalam,* and common nouns.

5.2.1 Proper Nouns

Proper names can be names of people, tribes, days and months of the year, places, titles, etc. The discussion below examines each of these categories with reference to WM Arabic.

5.2.1.1 Personal Names

Personal nouns can be masculine or feminine depending on the referent of the noun. The majority of these nouns have a religious reference, i.e. they are frequently either the names of prophets or the names of followers of the prophet Muhammad, e.g. *mḥammad*, *ᶜumar*, *xālid*, *ᶜabdalla* (masculine nouns), *fāṭma*, *xadīja* and *ᶜāyša* (feminine nouns). These nouns are inherently definite but can be contextually made indefinite, e.g. *ma fi wa la wāḥad b-i-xwāni ismu xālid* 'none of my brothers is called Khalid' (cf. 5.2.6).

5.2.1.2 Tribes

Tribe names are very important in WM Arabic because people are almost known by their first name followed by the tribe name, e.g. *ᶜali is-salamīn*. Most, but not all, tribe names are feminine by form because they end with the feminine singular morpheme *-a* and the sound

feminine plural morpheme *-āt*, e.g., *il-ḥasanāt*, *il-ᶜamarāt*, *il-hilalāt*, *in-nawāfla* (cf.5.2.5). They are usually plural because they refer to all members of the tribe.

5.2.1.3 Place Names

Most place names have feminine gender, e.g. *iṭ-ṭayba*, *dlāġa*, *ʔumm ṣayḥūn*, *il-bēḏa*, particularly where they refer to settlements. The majority of local place nouns in WM Arabic are Aramaic in origin. For example, Falahāt (2014) argues that *il-bēḏa* is an Aramaic name, referring to the area which produces white grapes used in the making of wine at that time.

5.2.1.4 Days of the Week

Days of the week have masculine gender except for the day Friday, *jumᶜa*, which is feminine by form. They are inherently definite but they can be indefinite contextually, e.g. *taᶜāl ay yōm sabt* 'come any Saturday'. The table below presents the days of the weeks with their plural counterparts in WM Arabic:

Table 214: Days of the week

Singular	Plural	Gloss
is-sabt	sabt-āt	Saturday
il-ʔaḥad	ʔaḥad-āt	Sunday
il-ʔiṯnēn	ʔiṯnen-āt	Monday
iṯ-ṯalāṯa	ṯalaṯ-āt	Tuesday
il-arbaᶜa	ʔarbaᶜ-āt	Wednesday
il-xamīs	xamis-āt	Thursday
il-jumᶜa	jumaᶜ~ jumᶜ-āt	Friday

5.2.1.5 Titles

WM Arabic has a set of titles which have a basic masculine gender, e.g. *šēx* 'the head of tribe or religious man', *ḥajji* 'pilgrim; old man'. The feminine of these titles is derived by concatenating the suffix *-a*, e.g. *ḥajja* 'pilgrim (f.)', *šēxa* 'a religious woman'.

5.2.1.6 Teknonyms

Most parents have teknonyms, formed from the name of their elder son preceded by *ʔabu* for men and *ʔumm* for women, e.g. *ʔabu ᶜali* 'father of Ali', *ʔum salmān* 'the mother of Salman'. Men who do not yet have a child may have a made-up teknonym, such as *ʔabu ḥsēn*.

5.2.2 Common Nouns

Common nouns are subdivided into concrete nouns and abstract nouns. Concrete nouns denote objects which people can interact with, e.g. *ṭili* 'kid (f.)', *faras* 'horse', *girgaᶜa* 'turtle', *zulum* 'men', and they are either count nouns, e.g. *sayyāra* 'car', or collective nouns, e.g. *jāj* 'chickens', *baṭṭīx* 'watermelons'. Count nouns are inherently singular and may inflect for dual and plural, e.g. *girgaᶜt-ēn* 'two turtles' and *garagīᶜ* 'turtles'. While collectives refer to nouns that denote the meaning of plurality, i.e. a group of things, they are grammatically singular nouns in the sense they refer to these beings as one unit. Furthermore, collectives have a typical masculine gender, e.g. *jāj* 'chicken', *samak* 'fish', *bagar* 'cows'. Abstract nouns denote abstract notions such as *šaraf* 'honour', *rujūla* 'manhood' and they may be masculine or feminine depending on their morphological form. Proper nouns and common nouns do not inflect for gender because they have inherent gender (masculine or feminine) that is indicated by biological gender, e.g. *ʔaxx* 'brother' and *ʔuxt* 'sister', by convention, *waṭāh* (f.) 'land', or by form in nouns ending with the morpheme *-a*, e.g. *malḥama* (f.) 'butcher's shop'.

5.2.3 Substantive Patterns

Arabic nouns are classified according to their stems into canonical and non-canonical stems (McCarthy 2008: 303). Canonical stems do not exceed two syllables and always start with CV, CVC or CVV, e.g. *wa.lad* 'boy', *ᶜay.yil* 'child', *xātim* 'ring'. The class comprises most native words of the dialect along with some borrowed and coined words. Non-canonical stems are frequently borrowed words that don't meet the bi-syllable condition above, e.g. *til.fiz.yōn* 'television', *ta.la.fōn* 'telephone'.

In terms of the number of root consonants, nouns can be biliteral, e.g. *ʔumm* 'mother', *ʔaxx* 'brother', *ʔīd* 'hand', *biss* 'cat', triliteral, as in the majority of cases, e.g. *ḥarrūš* 'melon', *raṣīṣ* 'picked olives', *jābya* 'trough', *laḥam* 'meat', quadriliteral, e.g. *ṣandūg* 'a box', *jawlag* 'bag of hay put on back of donkey', *ᶜagrab* 'scorpion' and, in a very few cases, quinquiliteral, e.g.

bagdōnis 'parsley', *ᶜankabūt* 'spider'. A wide range of consonant-vowel patterns are found in non-derived substantives. The table below presents the basic patterns of substantives in WM Arabic.

Table 215: The basic patterns of non-derived substantive stems in WM Arabic

Morphological Pattern	Examples
CVVC	*dār* 'home', *nār* 'fire', *jār* 'neighbour', *bīr* 'well', *ṭēr* 'bird', *ṣōt* 'voice', *sūg* 'market', *gōd* 'sheep gifted to groom in his wedding day'
CVCC	*zarb* 'henhouse', *damm* 'blood', *xirj* 'box used for keeping/storing stuff', *xumm* 'henhouse'
CVCVC	*ᶜušub* 'grass', *ᶜinab* 'grapes', *rajul* 'man', *wijib* 'turn to fill water', *siᶜin* 'container made of leather for storing yoghurt'
CVCC-a	*xišša* 'room made of mud and stones', *jarra* 'water jar', *girba* 'container of goatskin for keeping and cooling water', *namla* 'ant', *dalla* 'coffee pot'
CVVC-a	*xūṣa* 'knife', *ṣīra* 'wall to keep livestock inside spot of land, *lēra* 'dinar'
CVVCVC	*nāgil* 'pregnant', *ḥāmil* 'pregnant', *xātim* 'ring'
CVCVVC	*jamīd* 'dry yoghurt', *ḥawūz* 'water tank', *ṭabūn* 'oven for making bread made of mud and hay', *ṭalūl* 'piece of *jamīd* 'dried yoghurt'
CVCCVC	*mišmiš* 'apricot', *banšar* 'puncture', *šibšub* 'slippers'
CVCCVVC	*ḥabbūl* 'vertical piece of land', *girgāᶜ* 'series of metal rings put round sheep's neck to make sound', *kullāb* 'ring used to hang slaughtered sheep'
CVCCVVC-a	*ḥayyāṣa* 'cover of sackcloth put on back of donkey', *zuwwāda* 'bag of food prepared for shepherds when they tend sheep', *maššāya* 'shoes'

CCVVC-a	*frāṭa* 'change', *zbāla* 'rubbish', *ṣlība* 'harvested crops', *kwāra* 'substance made of mud used for storing grains particularly wheat'
CCVVC	*mgāṭ* 'rope', *lsān* 'tongue', *ḥṣān* 'horse', *mrāḥ* 'land where sheep sleep', *brīg* 'jug', *šrāk* 'a type of bread', *frāg* 'parting'

Along with these basic patterns, a set of derived substantives are frequently used in the dialect. The most common of these are outlined below:

1-Nouns of Location (*ism al-makān*)

Nouns of location denote the place in which the action of the verb occurs. They take the pattern ma-CCaC, e.g. *maṭbax* 'kitchen', *maṣlax* 'slaughtering place', *ma*-CCiC, *masjid* 'mosque', or m-CāC, e.g. e.g. *mrāḥ* 'place where sheep sleep'.

2-Nouns of Instrument (*ism al-ʔālah)*

Nouns of instrument denote the tool, device or machine by which the action of the verb is performed. They take the patterns mi-CCāC, e.g. *miftāḥ* 'key', *minšār* 'saw', or mi-CCaC(-a), e.g. *minjal* 'sickle', *miknasa* 'broom'

3-Nouns of Instance (*ism al-marrah*)

Nouns of instance denote a single occurrence of the action of a verb. They are formed by the prefixation of the feminine morpheme *-a* to verbal stems, e.g. *šurba* 'drink', *šarwa* 'purchase'.

In addition to simple substantives, WM Arabic has several compound substantives, e.g. *tamir hindi* 'tamarind', *ᶜēn iš-šams* 'sunflower', *jōz hind* 'coconut', *šāy ʔaxḍar* 'green tea'.

5.2.4 Gender

Arabic nouns have one of two genders: masculine or feminine. In general, the masculine singular is the unmarked form, whereas the feminine noun is marked through the morpheme suffix *-a,* e.g. *mᶜallim* 'teacher' and *mᶜalma* 'female teacher', *ḥajji* 'pilgrim' and *ḥajja* (f.) 'pilgrim'. For most nouns, a noun is morphologically masculine if it does not have the feminine suffix *-a*, e.g. *bēt* 'house', *šēx* 'sheikh', *mgāṭ* 'rope', *ᶜaskari* 'solider', *minjal*

'sickle'. There are, however, some nouns which are masculine though they end with the feminine suffix *–a*, e.g. *zalama* 'man', *salāma* [proper name].

In nouns denoting animates, gender agrees with the biological sex of the noun referent; thus, nouns denoting female animals have inherent feminine gender, while nouns denoting masculine animals have inherent masculine gender, e.g. *rajul* (m.) 'man', *ʔumm* (f.) 'mother', *ᶜanz* (f.) 'goat' and *tēs* (m.) 'billy goat'. In such nouns, gender is covertly marked and can be determined by agreement patterns, e.g. *rajul ḥašim* 'a good man', *ʔum kwaysa* 'a good mother'. Other nouns with covert feminine gender are those that denote parts of the body that come in pairs, e.g. *ʔīd* 'hand', *ʔiḏin* 'ear', *ᶜēn* 'eye', *rijil* 'leg'. In other cases, feminine nouns are marked morphologically by the presence of -*a*, as in: *kfara* 'container lid', *ġarsa* 'tree', *ṭalᶜa* 'an outing', *ʔakla* 'a cuisine'.

The plural of nouns that do not refer to human beings takes feminine gender agreement in attributive and predicative adjectives, demonstratives and anaphoric pronouns, irrespective of the gender of their singular counterparts, e.g. *snīn ṭwīla* ' long years', *tilfizyon-āt xarbāna* 'out of order televisions', *bašakīr waṣxa* 'dirty towels'.

5.2.5 Number

The morphological category of number has three values: singular *mufrad* denoting one entity, dual *muṯanna* denoting two items, and plural *jamᶜ* denoting three items or more. Singular is the unmarked number value in nouns, e.g. *walad* 'boy', *gšāṭ* 'belt', *fēd* 'dowry'. The dual is always marked by the suffixation of the morpheme *-ēn* to unmarked nominal stems, as shown in the table below:

Singular	Dual
mijbana 'graveyard'	*mijbant-ēn* 'two graveyards'
jarra 'water jar'	*jart-ēn* 'two water jars'
ᶜāmil 'worker'	*ᶜāml-ēn* 'two workers'
ġurfa 'room'	*ġurft-ēn* 'two rooms'
ṣḥala 'metal cup of water'	*ṣḥalt-ēn* 'two metal cups of water'
girba 'container made of goatskin used for keeping and cooling water'	*giribt-ēn* 'two containers made of goatskin used for keeping and cooling water'

Two main types of plural exist in Arabic: sound plurals and broken plurals. The former involves the suffixation of the morpheme *-īn* to masculine nouns and *-āt* to feminine nouns, e.g. *mᶜalm-īn* 'male teachers' and *mᶜalm-āt* 'female teachers'. The sound masculine plural is restricted to nouns denoting male humans, and tends to be suffixed to participles, nouns denoting profession, and adjectives (cf. Abu Haidar 1993: 74). Where nouns with the pattern CaCCāC take the sound plural, the long stem vowel /ā/ is shortened into [a], e.g. *massāḥ > massaḥ-īn* 'land surveyor' because WM Arabic has a rule which shortens unstressed long vowels (cf.5.2.2.5.6). The following table give some examples of the sound plural in WM Arabic:

Masculine Singular	Masculine Sound Pl.	Feminine Sound Pl.	Gloss
ḥattāt	ḥattat-īn	ḥattat-āt	olive picker
ṭawwāf	ṭawwaf-īn	ṭawwaf-āt	person watching forest
kassāḥ	kassaḥ-īn	kassaḥ-āt	person who prepares land before ploughing
ḥarrāṯ	ḥarraṯ-īn	ḥarraṯ-āt	ploughman
fallāḥ	fallaḥ-īn	fallaḥ-āt	peasant
ṭabbāx	ṭabbax-īn	ṭabbax-āt	cook
darrās	darras-īn	darras-āt	thresher

Some sound masculine plural adjectives can be used to modify feminine nouns, e.g. either *banāt muʔaddabīn* or *banāt muʔaddabāt* 'polite girls' can be used. An examination of loanwords in the dialect shows that many of them take the feminine plural morpheme, e.g. *tilfizyon-āt* 'televisions', *lamb-āt* 'bulbs'.

The second type of plural is known as the broken plural, in Arabic *jamᶜ at-taksīr,* and it represents a morphological phenomenon typical of Arabic and other Semitic languages. In this case, a plural noun is distinguished from its singular counterpart by a change in the syllable structure and the vocalism, e.g. *ṭāsa* 'cooking pan' > *ṭūs* 'cooking pans', *rajul* 'man' > *rjāl* 'men', *girba* > *girab* 'container made of goatskin used for keeping and cooling water'. Broken plural formation involves phonological processes such as long vowel insertion, gemination, glide insertion and the affixation of consonants to the nominal stem (cf. Wright 1967). For MSA, McCarthy and Prince (1990) argue that the broken plural is restricted to nouns and adjectives with the following canonical forms: CVCC, CVCVC, CVVCVC, CVCVVC, and CVCCVC. Several broken plural patterns exist in WM Arabic. The table below presents the most common of these:

Table 218: The most common patterns of broken plural in WM Arabic

Singular Template	Plural Template	Singular	Plural
CVCVC or CVCC	CCVVC	*walad* 'boy'	*wlād* 'boys'
		baġal 'mule	*bġāl* 'mules'
		malik 'king'	*mlūk* 'kings'
		bank 'bank'	*bnūk* 'banks'
		ḥagg 'right'	*ḥgūg* 'rights'
		šakk 'doubt'	*škūk* 'doubts'
CāCiC	CuCCāC or CawāCiC	*ṭālib* 'student'	*ṭullāb* 'students'
		ḥāfiḏ 'Quran memoriser'	*ḥuffāḏ* 'Quran memorisers'
		rākib 'rider'	*rukkāb* 'riders'
		šāriᶜ 'street'	*šawāriᶜ* 'streets'
		ḥājiz 'partition'	*ḥawājiz* 'partitions'
		māniᶜ 'barrier'	*mawāniᶜ* 'barriers'
		kātib 'writer'	*kuttāb* 'writers'
CVCC-a	CVCaC	*ġurfa* 'room'	*ġuraf* 'rooms'
		xirga 'rag'	*xirag* 'rags'
		jumᶜa 'Friday'	*jumaᶜ* 'Fridays'
		ᶜulba 'can'	*ᶜulab* 'cans'
CaCCVC	CaCāCiC	*masjid* 'mosque'	*masājid* 'mosques'
		maṣnaᶜ 'factory'	*maṣāniᶜ* 'factories'
		maktab 'office'	*makātib* 'offices'
		mansaf 'plate of *mansaf*'	*manāsif* 'plates of *mansaf*'
		ᶜagrab 'scorpion'	*ᶜagārib* 'scorpions'
		ṯaᶜlab 'fox'	*ṯaᶜālib* 'foxes'
		mawrid 'resource'	*mawārid* 'resources'

CCāC	CuCuC	*ktāb* 'book'	*kutub* 'books'
		lḥāf 'counterpane'	*luḥuf* 'quilts'
CaCīC-a	CaCāyiC	*jarīda* 'newspaper'	*jarāyid* 'newspapers'
		ḥarīga 'fire'	*ḥarāyig* 'fires'
CVCC(-a)	CVCaC	*giṣṣa* 'story'	*giṣaṣ* 'stories'
		ḥiṣṣa 'share'	*ḥiṣaṣ* 'shares'
CVCCV	CVCāCi	*kursi* 'chair'	*karāsi* 'chairs'
		burġi 'screw'	*barāġi* 'screws'
CVCCVVC	CVCVCīC	*šubbāk* 'window'	*šababīk* 'windows'
		sikkīn 'knife'	*sakakīn* 'knives'
CVVC	CiC-ān or CwāC	*jār* 'neighbour'	*jirān* 'neighbours'
		fār 'mouse'	*firān* 'mice'
		ṯōr 'ox'	*ṯirān* 'oxen'
		bāb 'door'	*bwāb* 'doors'
		sūg 'market'	*swāg* 'markets'

Number neutralisation occurs when a noun is modified by a number that is above the value of ten, in which case the noun is given in the singular, e.g. *xamisṭaᶜiš walad* '15 boys', *xamsa w-ᶜišrīn zalama* '25 men'.

5.2.6 Definiteness and Indefiniteness

Nouns are marked for definiteness or indefiniteness. Definiteness is an inflectional category whereby a noun becomes identifiable and specific. Proper nouns such as *sāmi* and *xālid*, personal pronouns, such as *huwwa* 'he', *hinna* 'they (f.)', and demonstrative pronouns, such as *hāḏ* 'this (m.)', *haḏāk* 'that (m.)', are inherently definite.

Common nouns are basically indefinite and can be defined either morphologically or syntactically. Morphologically, an indefinite noun can be made definite by the prefixation of the definite article *il-* which has no lexical meaning by itself but adds definiteness and

specification to the noun it concatenates to, e.g. *il-garya* 'the village', *il-bēt* 'the house'. The definite article assimilates to any following coronal, resulting in a geminate, e.g. *it-tamir* 'the dates', *iz-zulum* 'the men' (cf. 3.2.1.1.1).

A noun becomes definite when annexed to a definite noun. The process is known in Arabic as *iḍāfah* 'annexation' and it occurs when two words are linked together: so if the second term is definite, then the first one is definite by virtue of the definiteness of the second term. For example, in the genitive construct *bēt il-ᶜēla* 'the tribe's divan', the annexed noun *bēt* 'divan' is definite by virtue of its annexation to *il-ᶜēla* 'the tribe' which is defined through the definite article *il-*. This contrasts with the genitive construct *mᶜallim tarīx* 'a history teacher', where the annexed noun *mᶜallim* is indefinite by virtue of its annexation to the indefinite noun *tarīx* 'history'. Another way of making nouns definite is through the suffixation of a possessive pronoun, e.g. *dār-hum* 'their (m.) home', *maᶜāš-na* 'our salary'. Thus, where a noun with a possessive pronoun is modified by an adjective, the adjective is defined to agree in definiteness with the noun, e.g. *sayyārit-hum il-kbīra* 'their (m.) big car'.

WM Arabic has a number of inherently indefinite words that denote non-specific referents. Some of the indefinite words attested in WM Arabic are *wāḥad* 'someone (m.), *wiḥda* 'someone (f.)', *ʔādami* 'a human (m.)', *ʔādamiyya* 'human (f.)', *ʔayy* 'any', and *flān* 'someone'. Proper nouns may, however, be contextually indefinite where they don't refer to a specific referent in the real world, as shown in the examples below:

1- *mīn xālid illi b-tiḥki ᶜannu* 'which Khalid are you talking about?
2- *ma fi wa-la wāḥad ismu ᶜali b-il-ḥayy* 'no one is named Ali in the neighbourhood'.

5.2.7 Diminutives

The diminutive, referred to in Arabic as *al-taṣġīr*, is a morphological pattern which has the basic denotative meaning of smallness, diminution and reduction, as in: *štarēt ᶜlibāt ṭōn* 'I bought little tuna cans' and a few connotative meanings, particularly pejorative attitude, e.g. *kān fi šwayyit zlimāt* 'there were only very few men'; or affection and endearment, as in a mother addressing her baby *y-xallī-li snīnatak* 'may Allah keep your (m.s.) teeth'.

The formation of diminutive nouns in WM Arabic depends on the gender, number and the number of root consonants of the non-diminutive lexeme. Typically, a triliteral masculine singular noun has the basic pattern CCēC, e.g. *xašim > xšēm* 'nose', *walad > wlēd* 'a boy', whereas its corresponding plural noun has the pattern CCiC-āt, e.g. *griš-āt* 'money', *xwiṭ-āt*

'threads'. A triliteral feminine singular noun has the pattern CCēC-a, e.g. *šams > šmēsa* 'sun', *šajara > šjēra* 'tree', *ᶜulba > ᶜlēba* 'can', and its corresponding plural noun appears as CCiC-āt, e.g. *ᶜulba > ᶜlibāt* 'cans'. For quadiliteral nouns, the basic pattern for masculine singular is CCiCīC, e.g. *snidīg* 'a box', *bšikīr* 'towel', and sometimes CCēCiC, *mnēsif* 'dish of *mansaf*', while their corresponding feminine nouns appear as CCiCīC-a, e.g. *dkikīna* 'shop', *swiwīra* 'car'. The plural for both genders involves the pattern CCiCiC-āt, e.g. *snidigāt* 'a box', *bšikirāt* 'towel', *dkikināt* 'shop'. The typical diminutive pattern for uncountable nouns is CVCVC-āt, e.g. *ḥalibāt* 'some milk', *šarabāt* 'some juice'.

The diminutive in WM Arabic is often used in the formation of hypocoristics for the purpose of endearment and showing affection. Basically, it works by geminating C2 of the stem noun and infixing the long vowel *ū* immediately after that geminate, e.g. *ᶜAli > ᶜAllūy*, *Sālim > Sallūm*. For nouns starting with the morpheme *ᶜAbd*, e.g. *ᶜAbd il-ᶜAzīz*, the hypocristic form is mostly *ᶜabbūd*.

5.2.8 Verbal Nouns (*al-maṣdar*)

Most verbs have a corresponding verbal noun that names the action expressed by that verb with no reference to time, e.g. *ʔakil* 'eating', *taksīr* 'breaking', *taksīḥ* 'preparing land before ploughing'. The formation of Arabic verbal nouns involves several consonant-vowel patterns, some of which carry particular meanings. A wide range of patterns are found in Form I verbal nouns, most of which are lexically determined. For CA, Wright (1967: 110) cites 45 patterns for Form I verbal nouns. WM Arabic has nine basic patterns given in the table below:

Morphological Pattern	Example
CCāC-a	*grāya* 'studying', *srāḥa* 'tending sheep', *njāra* 'carpentry', *xyāṭa* 'sewing', *drāsa* 'threshing'
CVCC-a	*xidma* 'service', *sirga* 'robbery', *xuṭba* 'engagement'
CVCC	*mazḥ* 'kidding' *ḍarb* 'hitting', *daḥš* 'inserting something by force', *dazz* 'pushing'
CVVC	*šēl* 'carrying', *nōm* 'sleeping', *bōs* 'kissing'
CVCVC	*karam* 'generosity', *faraḥ* 'happiness', *ḍiḥik* 'laughter', *ṭabix* 'cooking'
CaCāC	*najāḥ* 'success', *fasād* 'corruption'
CuCūC-a	*suhūla* 'easiness', *rujūla* 'manhood'
CCūC	*nzūl* 'going down', *rjūᶜ* 'getting back', *ṭlūᶜ* 'going up'
CVCVVC(-a)	*ᶜazīma* 'invitation', *xasāra* 'loss', *raḥīl* 'departure'

Some of these patterns are associated with particular kinds of meaning. For example, the pattern CCūC is most often associated with intransitive verbs of motion, as in: *ṭlūᶜ* 'going up', *nzūl* 'going down', *rjūᶜ* 'returning', while the pattern CCāC-a is mostly associated with professions and crafts, as in: *njāra* 'carpentry', *xyāṭa* 'sewing'.

When we turn to examine the verbal nouns of derived nouns, we find that they are fully predictable in forms III, IV, V, VII, X, Q1 and QII. In forms II and VI, there are two or three lexically determined patterns. No verbal nouns are derived From IX. The table below gives the pattern of each verb form in WM Arabic.

Verbal Nouns

Table 220: Derivation of verbal nouns from derived verbs in WM Arabic

Verb Form	Pattern	Example
Form II	ta-CCīC ti-CCāC ta-CCīC-a	*ta-ksīr* 'breaking' *ti-krār* 'repeating' *tašrīka* 'slaughtering a goat or sheep and distributing it evenly amongst people'
Form III	m(u)-CāCaC-a	*m(u)-ḥāwala* 'attempt' *m(u)-sāʿada* 'helping'
Form IV	ʔiCCāC	*ʔirsāl* 'sending'
Form V	ta-CaCCuC	*ta-naffus* 'breathing'
Form VI	m(u)-CāCaC-a ta-CāCuC	*m(u)-jādala* 'arguing' *ta-fāhum* 'understanding'
Form VII	n-CiCāC	*n-šiġāl* 'being busy' *n-fijār* explosion'
Form VIII	C-t-iCāC	*j-t-imāʿ* 'meeting'
Form X	sti-CCāC	*sti-ʿdād* 'preparing'
Form QI	CaCCaC-a	*tarjama* 'translation'
Form QII	t-CiCCiC	*t-filsif* 'acting like a philosopher'

5.3 Noun Modifiers

5.3.1 Adjectival Morphology

In terms of function, adjectives are divided into attributive and predicative adjectives. In the former type, an adjective follows the noun it modifies, agreeing with it in number, gender and definiteness. For example, in the noun phrase *il-jamᶜiyya il-xayriyya* 'the charitable association', the adjective *xayriyya* 'charitable' agrees with the head noun *il-jamᶜiyya* in number (s.), gender (f.) and definiteness (through the definite article *il-*). Predicative adjectives agree with the head noun in number and gender, but not in definiteness, as in *iz-zalama baxīl* 'the man is mean'. In addition to adjectival use, adjectives can function as substantives only where the definite article *il-* is concatenated to them, e.g. *il-kbīr* 'the big one', *il-gdīm* 'the old one'.

5.3.1.1 Adjective Patterns

A variety of patterns are found in the formation of adjectives in WM Arabic, some of which bear particular meanings. The majority of these patterns are similar to their cognates of CA, while some have undergone some phonological processes. The table below presents the basic adjectival patterns in the dialect under investigation, followed by a description of the phonological changes that have affected some of them.

Adjectival Pattern	Examples
CVCC	*murr* 'bitter', *ḥayy* 'alive', *nayy* 'raw', *ṣaᶜb* 'difficult'
CVCVC	*najis* 'wicked', *nikid* 'gloomy', *bišiᶜ* 'ugly', *xašin* 'coarse'
CVCV	*ḏaki* 'clever', *ġabi* 'stupid', *ḥilu* 'nice', *ġani* 'rich'
CVCVVC	*jabān* 'coward', *karīm* 'generous', *jaḥūd* 'person claiming poverty', *ḥamūl* 'content', *ṣabūr* 'patient', *jarīʔ* 'bold', *barīʔ* 'innocent', *baṭīʔ* 'slow'
CVVCVC	*ḏālim* 'oppressive', *nāṣiḥ* 'fat', *māliḥ* 'salty', *wāsiᶜ* 'wide', *ḥāmi* 'hot', *ġāli* 'expensive'
CVCCVC	*ṭayyib* 'generous', *layyin* 'flexible', *ḏayyig* 'narrow'
CCVVC	*rxīṣ* 'cheap', *ṯgīl* 'heavy', *ḍᶜīf* 'thin'
CaCCāC	*fassād* 'corrupt', *ṭammāᶜ* 'greedy', *naṣṣāb* 'swindler'
CiCCīC	*sikkīr* 'alcoholic', *širrīb* 'drunk'
ʔaCCaC	*ʔabyaḏ* 'white' *ʔazrag* 'blue'

Some adjectival patterns exhibit some phonological differences from their cognates in CA. In feminine adjectives of colour of the form CaCCāʔ, the final glottal stop disappears along with a shortening of the preceding vowel and addition of /h/, realised in WM Arabic as CaCC-a, e.g. *ḥamra* 'red', *zarga* 'blue'. Besides, a vocalisation process occurs for adjectives of colour whose C2 is a glide, e.g. *sōda* 'black', *bēḏa* 'white'. CA adjectival patterns of the form CāʔiC are attested in WM Arabic as CāyiC, e.g. *ġāʔib > ġāyib* 'absent'. Additionally, CA adjectives of the pattern CaCiyy are attested in WM Arabic as CaCi with a deletion of the final geminate glide, e.g. *ġabiyy > ġabi* 'stupid'.

As in all modern Arabic dialects, WM morphology allows the productive derivative of relational adjectives, termed *al-nisbah* in Arabic, which are frequently formed from proper

nouns denoting places or tribes, or from other substantives. The masculine form of these adjectives is formed by the suffixation of the morpheme suffix -i, as in *mᶜān-i* 'belonging to Maᶜān city', *ṭwīs-i* 'belonging to aṭ-Ṭwisāt tribe', *salamīn-i* 'belonging to as-Salamīn tribe', *sukkar-i* 'with sugar, sugary', *ziṭṭi* 'ignorant', *jaddi* 'serious'. The feminine form is made through additional suffixation of *-a*, e.g. *mᶜān-iyya* 'female belonging to Maᶜān city', *ṭwīs-iyy-a* 'female belonging to aṭ-Ṭwisāt tribe'.

5.3.1.2 Inflection for Number, Gender and Definiteness

Adjectives agree with the noun they modify in gender and number. They may inflect for genders: masculine and feminine. The masculine singular is in the vast majority of cases the unmarked form of the adjective, e.g. *ṭayyib* 'generous', *layyin* 'flexible', whereas the feminine form is marked by the suffix *-a*, e.g. *ṭayyib > ṭayba* 'generous', *layyin > layna* 'flexible', *kwayyis > kwaysa* 'good', *ṣabūr > ṣabūra* 'patient'. There are some adjectives, however, which only exhibit a feminine gender, e.g. *ḥāmil* 'pregnant', *nāgil* 'pregnant'.

Unlike substantives which have a three-way number distinction: singular, dual and plural, adjectives have a two-way number distinction: singular and plural. The singular is the unmarked form whereas the plural is marked through the morpheme suffix *-īn* for masculine adjectives and *-āt* for feminine adjectives. Where an adjective modifies a dual noun, it takes the plural morpheme suffix, e.g. *walad-ēn mabjūd-īn* 'two weak boys'. Consider the examples given in the table below:

Table 222: Sound plural of adjectives

Singular Adjective	Masculine Pl.	Feminine Pl.	Gloss
mabjūd	mabjud-īn	mabjud-āt	weak
ṣaᶜb	ṣaᶜb-īn	ṣaᶜb-āt	difficult
mšalhib	mšalhib-īn	mšalhib-āt	person who does things quickly
zaᶜlān	zaᶜlan-īn	zaᶜlan-āt	upset
layyin	layn-īn	layn-āt	flexible
ḏālim	ḏalm-īn	ḏalm-āt	oppressive

There are a set of adjectives whose plural is formed through template change. The most common adjectives that undergo templatic change in the plural are those with the singular template CCīC, which has the plural template CCāC, *kbīr > kbār* 'big', *ṣġīr > ṣġār* 'young', *glīl > glāl* 'little', and *ʔaCCaC* which has the plural template CVCVC, e.g. *ʔaᶜraj > ᶜuruj* 'lame', *ʔaxras > xurus* 'deaf'. Some adjectives of colours have an irregular plural, e.g. *ʔabyaḍ > bīḍ* 'white', *ʔasmar > sumur* 'dark'.

5.3.2 Demonstratives

Arabic has a set of demonstratives that can be categorised according to distance from the speaker into: proximal and distal. Proximal demonstratives indicate relative closeness to the speaker, while distal demonstratives denote relative distance from the speaker. Like many Arabic dialects, WM Arabic has a basic set of three proximal pronouns and three distal pronouns that exhibit two-way gender distinction (masculine and feminine) and two-way number distinction (singular and plural) (cf. 2.3.6.2). The typical position of demonstratives is before the noun, i.e. demonstrative plus noun, e.g. *hāḏ il-walad* 'this boy', but the reverse order is also possible, e.g. *il-masjid hāḏ* 'this mosque'. The table below presents both types of demonstratives in WM Arabic.

Table 223: Demonstrative pronouns in WM Arabic

Referent	Proximal	Distal
3m.s	*hāḏ* 'this'	*haḏāk* 'that'
3f.s	*hāḏi* 'this'	*haḏīk* 'that'
3.p	*haḏōl* 'these'	*haḏol-āk* 'those'

Examining the table below shows that *-k* indicates relative distance from the speaker, e.g. *haḏāk* 'that'. In addition, a high front vowel in the final syllable, -i and -ī, denotes feminine gender, e.g. *haḏīk il-mara* 'that woman'. Where it denotes proximity, *ha-* features in both proximal and distal pronouns in WM Arabic. WM Arabic is thus distinguished from ᶜAmmāni Arabic (al-Wer 2007) by the presence of the stop /ḏ/ instead of /d/ in proximal demonstratives and /ḏ/ in distal demonstratives (cf. 3.2.6.2). It is also distinguished from Bani Ṣaxar Arabic (Palva 1980) and Ġawārna Arabic (Bani Yassin 1980) by the use of -k rather than -č for the 3f.s distal demonstrative, i.e. *haḏīk* 'that (f.)' in WM Arabic versus *haḏīč* Bani Ṣaxar Arabic and Ġawārna Arabic (cf. 3.2.6.2).

WM Arabic has a secondary set of proximal demonstratives, including the free morpheme *hāy* 'this (f)' and the bound morpheme *hal-* 'this'. The former is a variant of the 3f.s demonstrative *hāḏi* 'this', e.g. *il-bint hāy* 'this girl', whereas the latter can substitute any of the proximal pronouns when it adjoins directly to a substantive, e.g. *hal-walad* 'this boy', *hal-mara* 'this woman', *haz-zulum* 'these men'. Note that the /l/ of *hal-* assimilates totally to a following coronal consonant, as for /l/ of the definite article.

In terms of agreement, demonstratives agree with the noun they modify in number and gender in the singular, e.g. *hāy il-bint* 'this girl', and *hāḏ il-walad* 'this boy'. In the plural the pronouns *haḏōl* 'these' and *haḏo-lāk* 'those' are used for both genders, e.g. *haḏōl il-banāt* 'these girls', *haḏōl iz-zulum* 'these men'. A typical characteristic of Arabic is the absence of dual number in demonstrative pronouns, which is expressed through plural forms, e.g. *haḏōl il-waldēn* 'these two boys'.

In addition to their typical use as noun modifier, demonstrative pronouns can be used substantively in which case they add shades of proximity or farness to the entities they replace. Thus, the pronoun *haḏāk* 'that' in the nominal sentence *haḏāk rawwaḥ* 'he went' implies that the person referred to is physically far from the speaker, while the use of *haḏa* 'this' would mean a relative closeness of the person being referred to.

5.3.3 Elatives

Elatives are derived from positive adjectives, i.e. the unmarked form of the adjective, by applying the pattern ?aCCaC, as illustrated in the examples below:

Table 224: Examples of comparative degree in WM Arabic

Positive Adjective	Comparative Degree
kbīr 'big'	*?akbar min* 'bigger than'
ṣaᶜb 'difficult'	*?aṣᶜab min* 'more difficult than'
jarī? 'bold'	*?ajra? min* 'bolder than'
karīm 'generous'	*?akram min* 'more generous than'
baxīl 'mean'	*?abxal* 'more mean than'

The process of deriving elative adjectives involves some morphophonemic changes, namely deletion of V1 and the replacement of V2 with *a*, e.g. *ḏaki > ?aḏka* 'cleverer', *wāsiᶜ* 'wide' >

ʔawsaᶜ 'wider'. Degemination occurs where the positive adjective has a medial geminate, e.g. *layyin* 'flexible' > *ʔalyan* 'more flexible', *ṭayyib* 'generous' > *ʔaṭyab* 'more generous'.

Elatives function syntactially as comparatives and as superlatives. As comparatives, they are undefined and followed by a prepositional phrase headed by *min* 'than'. As superlatives they are defined, either through the definite article or through annexation of the indefinite pronoun *wāḥad* 'one', e.g. *ʔaḥsan wāḥad* 'the beast one', an indefinite singular noun, e.g. *ʔabšaᶜ bint* 'the ugliest girl', or a definite plural noun, e.g. *ʔabrak is-saᶜāt* 'the best hours'. The following sentences further illustrate this:

3- *xālid il-aḏka b-kul xwānu* 'Khalid is the cleverest of his brothers'.
4- *ʔanṣaḥ wāḥad kān xityār* 'the fattest one was an old man'.
5- *ištarēt ʔaḥla kundara bi-s-sūg* 'I bought the most beautiful shoes'.
6- *iz-zalama hāḏ ʔaḥsan iz-zulum illi gabalit-hum* 'this is the best man I have ever met'.

5.3.4 Colour

WM Arabic has a set of colour adjectives which exhibit two-way gender (masculine and singular) and two-way number (singular and masculine) distinctions. The basic form of colours in WM Arabic is the masculine singular with the form ʔaCCaC, e.g. *ʔaḥmar* 'red', *ʔazrag* 'blue'. Feminine colours are derived from masculine ones through the patterns CaCC-a in strong roots, e.g. *ʔazrag* > *zarga*, and CVVC-a in hollow-root forms, e.g. *ʔabyaḏ* > *bēḏa* 'white'. The plural forms of colour adjectives have the pattern CVCVC for strong roots, e.g. *ʔaḥmar* > *ḥumur* 'red', *ʔazrag* > *zurug* 'blue', and CVVC for hollow roots, e.g. *ʔaswad* > *sōd* 'black'. The table below presents the basic colour adjectives in WM Arabic:

Table 225: Masculine and feminine forms of colours in WM Arabic

Masculine Singular	Feminine Singular	Plural	Gloss
ʔaswad	sōda	sōd	black
ʔabyaḏ	bēḏa	bīḏ	white
ʔazrag	zarga	zurug	blue
ʔaḥmar	ḥamra	ḥumur	red
ʔaxḏar	xaḏra	xuḏur	green
ʔasmar	samra	sumur	dark
ʔaṣfar	ṣafra	ṣufur	yellow

210

5.3.5 Numerals

Below I discuss the cardinal and ordinal numerals in WM Arabic:

5.3.5.1 Cardinal Numbers

WM Arabic has a set of cardinals from 1-10 that exhibit a two-way gender distinction: masculine and feminine. The masculine is the unmarked form whereas the feminine form is marked by the suffix -*a*. A summary of the set of cardinals in WM Arabic is given below:

Table 226: The set of cardinals in WM Arabic

Masculine	Feminine	Gloss
wāḥad	wiḥda	one
ṯnēn	ṯintēn	two
ṯalaṯ	ṯalaṯa	three
ʔarbaᶜ	ʔarbaᶜa	four
xamis	xamsa	five
sitt	sitta	six
sabiᶜ	sabᶜa	seven
ṯaman	ṯamanya	eight
tisiᶜ	tisᶜa	nine
ᶜašar	ᶜašra	ten

One and Two

The numeral one has two forms: *wāḥad* for masculine nouns and *wiḥda* for feminine nouns. Most commonly, the numeral one follows the singular noun it modifies, agreeing with its gender (masculine or feminine), e.g. *ẓalama wāḥad* 'one man', *dukkāna wiḥda* 'one shop'. The numeral one can also function substantively in which case the numeral *wāḥad* is used as an indefinite masculine pronoun and *wiḥda* as an indefinite feminine pronoun, e.g. *wāḥad māt* 'someone (m.) died', *wiḥda mātat* 'someone (f.) died'.

The numeral two has two forms: *ṯnēn* for masculine nouns and *ṯintēn* for feminine ones. They typically modify plural nouns, as in: *zulum ṯnēn* 'two men', or dual nouns, as in: *siyyart-ēn ṯintēn* 'two cars'. Most frequently, 'two' is expressed solely through the dual morpheme -*ēn*, as in: *siyyart-ēn* 'two cars'.

Three to Ten

While the first two numerals agree with the noun they modify in terms of gender, the form the numbers from 3-10 take depends on the syntax. When a cardinal postmodifies a plural head noun, it appears in its feminine form irrespective of the gender of the noun, as in: *il-banāt il-xamsa* 'the five girls', *il-kutub il-ᶜašra* 'the ten books'. When a cardinal premodifies a plural head noun, it takes the masculine form irrespective of the gender of the modified noun, as in: *ṯalaṯ banāt* 'three girls', *ṯalaṯ zulum* 'three men', *xamis kutub* 'five books', *xamis ġuraf* 'five rooms'. The one exception to this rule is where the head noun refers to weights and measures, in which case the feminine form is used, as in: *xamsa mitir* 'five metres', *sitta kīlu* 'six kilograms'.

Where these cardinals function as independent substantives, they always take the feminine form irrespective of the gender of the noun they replace. Consider the examples below where the feminine cardinal stands for masculine entities in the first instance and feminine entities in the second instance:

7- *kam kān fi zalama mbāriḥ?* 'how many men came yesterday?'
   xamsa iju 'five men came'
8- *xamsa min niswān il-garya t-waffan* 'five women from the village died'

When any of the numerals from 3-10 is followed by words with an initial vowel, the voiceless stop [t] is inserted between the two forms, e.g. *ʔarbaᶜ t-išhur* 'four months', *xamis t-iyyām* 'six days', *sabiᶜ t-alāf* 'seven thousands'.

Eleven to Nineteen

The cardinals from 11-19 are fixed forms in WM Arabic. These numerals have historically undergone a coalescence process whereby they are realised in WM Arabic as one word. The table below presents the numerals from 11-19 WM Arabic:

Table 227: Numerals from 11-99 in WM Arabic

Cardinal	Gloss
ʔiḥdaᶜiš	eleven
ʔiṯnaᶜiš	twelve
ṯalaṭṭaᶜiš	thirteen
ʔarbaᶜṭaᶜiš	fourteen
xamisṭaᶜiš	fifteen
siṭṭaᶜiš	sixteen
sabiᶜṭaᶜiš	seventeen
ṯamanṭaᶜiš	eighteen
tisiᶜṭaᶜiš	nineteen

These cardinals are always followed by a singular noun and exhibit no gender contrast, i.e. the fixed form of the numeral modifies both masculine and feminine nouns, as in: *ʔiḥdaᶜiš ktāb* 'eleven books', *xamisṭaᶜiš bint* 'fifteen girls'.

Multiples of tens

The multiples of ten have a fixed shape with the sound masculine plural suffix -īn. They modify following singular nouns of both genders, as in: *ᶜišrīn ᶜayyil* 'twenty boys', *ᶜišrīn mara* 'twenty women'. The table below presents the multiple of tens 20-90 in WM Arabic:

Table 228: Multiples of ten 20-90 in WM Arabic

Cardinal	Gloss
ᶜišrīn	twenty
ṯalaṯīn	thirty
ʔarbiᶜīn	forty
xamsīn	fifty
sittīn	sixty
sabᶜīn	seventy
ṯamanīn	eighty
tisᶜīn	ninety

Compound numbers comprise any of the numbers from 1-9 plus any if the multiple of ten coordinated by the conjunction *aw*. The numbers 1-2 are used in their masculine forms, e.g. *wāḥad aw ṯalaṯīn* 'thirty one', whereas those from 3-9 are used in their feminine forms, e.g. *xam aw sittīn* 'sixty five', *sitt aw ṯalaṯīn* 'sixty three'. The table below presents the compound numbers from 21-99 in WM Arabic.

Table 229: Compound numbers from 21-99 in WM Arabic

Cardinals	Gloss	Cardinals	Gloss
21-29		41-49	
wāḥad aw ᶜišrīn	twenty one	wāḥad aw arbiᶜīn	forty one
ṯnēn aw ᶜišrīn	twenty two	ṯnēn aw arbiᶜīn	forty two
ṯalaṯ aw ᶜišrīn	twenty three	ṯalaṯ aw arbiᶜīn	forty three
ʔarbaᶜ aw ᶜišrīn	twenty four	ʔarbaᶜ aw arbiᶜīn	forty four
xams aw ᶜišrīn	twenty five	xams aw arbiᶜīn	forty five
sitt aw ᶜišrīn	twenty six	sitt aw arbiᶜīn	forty six
sabᶜ aw ᶜišrīn	twenty seven	sabᶜ aw arbiᶜīn	forty seven
ṯamany aw ᶜišrīn	twenty eight	ṯamany aw arbiᶜīn	forty eight
tisᶜ aw ᶜišrīn	twenty nine	tisᶜ aw arbiᶜīn	forty nine
31-39		51-59	
wāḥad aw ṯalaṯīn	thirty one	wāḥad aw xamsīn	fifty one
ṯnēn aw ṯalaṯīn	thirty two	ṯnēn aw xamsīn	fifty two
ṯalaṯ aw ṯalaṯīn	thirty three	ṯalaṯ aw xamsīn	fifty three
ʔarbaᶜ aw ṯalaṯīn	thirty four	ʔarbaᶜ aw xamsīn	fifty four
xams aw ṯalaṯīn	thirty five	xams aw xamsīn	fifty five
sitt aw ṯalaṯīn	thirty six	sitt aw xamsīn	fifty six
sabᶜ aw ṯalaṯīn	thirty seven	sabᶜ aw xamsīn	fifty seven
ṯamany aw ṯalaṯīn	thirty eight	ṯamany aw xamsīn	fifty eight
tisᶜ aw ṯalaṯīn	thirty nine	tisᶜ aw xamsīn	fifty nine
Cardinals	Gloss	Cardinals	Gloss
61-69		81-89	

wāḥad aw sittīn	sixty one	wāḥad aw ṯamanīn	eighty one
tnēn aw sittīn	sixty two	tnēn aw ṯamanīn	eighty two
talaṯ aw sittīn	sixty three	talaṯ aw ṯamanīn	eighty three
ʔarbaᶜ aw sittīn	sixty four	ʔarbaᶜ aw ṯamanīn	eighty four
xams aw sittīn	sixty five	xams aw ṯamanīn	eighty five
sitt aw sittīn	sixty six	sitt aw ṯamanīn	eighty six
sabᶜ aw sittīn	sixty seven	sabᶜ aw ṯamanīn	eighty seven
ṯamany aw sittīn	sixty eight	ṯamany aw ṯamanīn	eighty eight
tisᶜ aw sittīn	sixty nine	tisᶜ aw ṯamanīn	eighty nine
71-79		91-99	
wāḥad aw sabᶜīn	seventy one	wāḥad aw tisᶜīn	ninety one
tnēn aw sabᶜīn	seventy two	tnēn aw tisᶜīn	ninety two
talaṯ aw sabᶜīn	seventy three	talaṯ aw tisᶜīn	ninety three
ʔarbaᶜ aw sabᶜīn	seventy four	ʔarbaᶜ aw tisᶜīn	ninety four
xams aw sabᶜīn	seventy five	xams aw tisᶜīn	ninety five
sitt aw sabᶜīn	seventy six	sitt aw tisᶜīn	ninety six
sabᶜ aw sabᶜīn	seventy seven	sabᶜ aw tisᶜīn	ninety seven
ṯamany aw sabᶜīn	seventy eight	ṯamany aw tisᶜīn	ninety eight
tisᶜ aw sabᶜīn	seventy nine	tisᶜ aw tisᶜīn	ninety nine

5.3.5.2 Ordinals

WM Arabic has a set of ordinals which exhibit two genders: masculine and feminine. The masculine is the unmarked form, with the pattern CāCiC for ordinals from 3-9, e.g. ṯāliṯ 'third', xāmis 'fifth'. The feminine form is marked through the morpheme suffix -a with predictable syncope of the last stem vowel, surfacing as CāCCa, e.g. ṯāliṯ 'third (m.)' > ṯālṯa 'third (f.)'. The ordinals one and two are an exception to this rule, with ʔawwal as the masculine form and ʔūla as the feminine. The table below presents the ordinals from 1-10 in WM Arabic.

Table 230: Ordinals from 1-10 in WM Arabic

Masculine Shape	Feminine Shape	Gloss
ʔawwal	ʔūla	first
ṯāni	ṯānya	second
ṯāliṯ	ṯālṯa	third
rābiᶜ	rābᶜa	fourth
xāmis	xāmsa	fifth
sādis	sādsa	sixth
sābiᶜ	sābᶜa	seventh
ṯāmin	ṯāmna	eighth
tāsiᶜ	tāsᶜa	ninth
ᶜāšir	ᶜāšra	tenth

Ordinal numbers can function substantively and adjectivally. As a substantive, the ordinal either takes the definite article, as in: *is-sābiᶜ* 'the first', *il-ᶜāšir* 'the tenth', *it-tāsᶜa* 'the ninth (f.)', or is annexed to a noun, as in: *xāmis yōm* 'day five', *rābiᶜ marra* 'the fourth time', *awwal walad* 'first son'. Note that where it is annexed to a noun, it takes the masculine form irrespective of the gender of the following noun. As a modifier, the ordinal follows the singular noun it modifies, agreeing with it in gender and definiteness, as in: *il-yōm it-tāsiᶜ* 'the ninth day', *bint iṯ-ṯālṯa* 'my third daughter'.

5.4 Personal Pronouns

Personal pronouns have the inherent features of gender (masculine or feminine), number (singular or plural), person (first, second or third), and definiteness. There are two sets of personal pronouns: independent and dependent forms. The set of independent personal pronouns in WM Arabic is given below:

Table 231: Personal pronouns in WM Arabic

Person-Gender	Number	
	S	Pl
1	*ana* 'I'	*iḥna* 'we'
2m	*inta* 'you'	*intu* 'you'
2f	*inti* 'you'	*intan* 'you'
3m	*huwwa* 'he'	*humma* 'they'
3f	*hiyya* 'she'	*hinna* 'they'

The main function of personal pronouns is as substantives, e.g. *hiyya mawjūda* 'she is there', but they may also be postposed to a noun for emphasis, e.g. *il-walad huwwa jāb il-maṣāri* 'it was the boy who brought the money'.

Dependent pronouns fall into two types: object and possessive pronouns. Object pronouns, on the one hand, are attached to verbs, e.g. *jāb-u* 'he brought him', or to prepositions, e.g. *min-hum* 'from them'. The following table lists the object pronouns in WM Arabic.

Table 232: Object pronouns in WM Arabic

Person-Gender	Number	
	S	Pl
1	*-ni* 'me'	*-na* 'us'
2m	*-ak* 'you'	*-ku* 'you'
2f	*-ik* 'you'	*-ku* 'you'
3m	*-ah* 'him'	*-hum* 'them'
3f	*-ha* 'her'	*-hin* 'them'

Possessive pronouns are suffixed to nouns. They are identical to object pronouns except for the 1s. pronoun which appears as *-i* instead of *-ni*, e.g. *ktābi* 'my book'. Sometimes, possessive pronouns attach to the word *tabaᶜit* rather than to the following noun, as shown in the examples below:

9- *min šāf iš-šanta tabaᶜt-i* 'who saw my bag?'
10- *ma šifit is-sayyāra tabaᶜt-ak hān* 'I did not see you car here'

5.5 Interrogative Pronouns and Adverbs

Different strategies are used to form yes/no questions in the dialect. The most common way is to keep the same order of the sentence but with a rising intonation. Consider the examples below:

11- *jibit il-maṣāri maᶜak* 'did you (m.s.) bring the money?'

12- *štarēt is-sayyāra illi ḥakētli ᶜanha* 'did you (m.s.) buy the car you told me about?'

Yes/no questions may also be marked by some words, including *ᶜumrak* 'have you ever been', *Ɂiddak* 'will you', *nāwi* 'are you going to' at the front of the sentence, or *māši* 'is this okay' or *walla laɁ* 'or not' at the end of the sentence. Consider the examples given below:

13- *ᶜumrak xadamit b-manṭigit ᶜajlūn* 'have you ever worked in Ajloun area?'

14- *Ɂiddak bi-trūḥ maᶜna ᶜala mᶜān* 'will you go with us to Maᶜān?'

15- *nāwi trūḥ ᶜal-ᶜurs* 'are you going to the wedding?'

16- *ruḥit ᶜas-sūg walla laɁ* 'did you go shopping or not?'

17- *Ɂidna Ɂiyyāk b-titᶜašša maᶜna māši* 'will you have dinner with us?'

In wh-questions, an interrogative pronoun or adverb is placed in initial position. The table below presents the basic interrogative pronouns and adverbs in WM Arabic.

Table 233: Basic interrogatives in WM Arabic

Interrogative	Gloss
mīn	who
wēn	where
Ɂēš	what
kēf/šlōn	how
gaddīh	how much
mata/Ɂamēt	when

a) *mīn* 'who'

The interrogative *mīn* 'who' is used to ask about a person. Some prepositions can precede the interrogative word, e.g. *min mīn* 'from whom', *ᶜala mīn* 'on whom'. Some prepositions merge with the interrogative *mīn* into one word, e.g. *ᶜa-mīn* 'on whom', *l-mīn* 'to whom'. Consider the examples below:

18- *mīn jāblak il-aġrāḏ* 'who brought you the stuff?'

19- *ᶜa-mīn miᶜtamid* 'on whom do you depend?'

20- *lmīn il-bēt hāḏ* 'whose home is this?'

21- *mīn ṣāḥib is-sayyāra il-ḥamra* 'who is the owner of the red car?'

Subject suffixes can merge with the interrogative *mīn* 'who' to form phrasal interrogatives (Versteegh 2007: 388). These include *min-hu* 'who is he?', *min-hi* 'who is she?', *min-hum* 'who are they (m.)?', and *min-hin* 'who are they (f.)?'. Consider the examples given below:

22- *min-hi illi kānat wāgfa maᶜak* 'who was standing with you?'

23- *min-hum illi kānu gāᶜdīn maᶜak* 'who were waiting with you?'

Phonologically, when a subject suffix is attached to the interrogative word *mīn* 'who', its long vowel shortens into [i], *mīn+hu > min-hu* 'who is it (m.)?' (cf. 5.2.2.5.6).

b) *wēn* 'where'

The interrogative *wēn* 'where' is used to ask about place. Some prepositions can precede the interrogative *wēn* 'where', e.g. *min-wēn* 'from where' or *l-wēn* 'to where', *ᶜala wēn* 'to where'. Some of them might merge with the interrogative into one word, e.g. *ᶜa-wēn* 'to where', *l-wēn* 'to where'. Consider the examples given below:

24- *wēn rāḥ il-walad* 'where did the boy go?'

25- *l-wēn xaḏīt ᶜyāl-ak mbāriḥ?* 'where did you take your sons yesterday?'

Additionally, subject suffixes may be suffixed into *wēn* 'where' to produce phrasal interrogatives, as in: *wēn-u* 'where is he?', *wēn-ha* 'where is she?', *wēn-hum* 'where are they (m.)?' and *wēn-hin* 'where are they (f.)?'.

c) *ʔēš/šu* 'what'

The interrogatives *ʔēš* and *šu* 'what' are used to ask about things. Consider the examples given below:

26- *ʔēš jabūlak maᶜ-hum* 'what did they bring you?'

27- *šu iddak tsāwi baᶜd ma ti-t-gāᶜad* 'what will you do after you retire?'

When these interrogatives are headed by the preposition *ᶜala*, they ask for reason, as shown in the examples below.

28- *ᶜala šu ṣārat il-muškila* 'why did the trouble happen?'

29- *ᶜala ʔēš kān ṣāḥbak zaᶜlān* 'why was your friend upset?'

d) *kēf /šlōn* 'how'

The interrogatives *kēf* and *šlōn* 'how' are both used to ask about manner, condition or quality. Consider the examples given below:

30- *šlōn ṣirit il-yōm* 'how do you feel today?'
31- *šlōn tsawwi il-mansaf* 'how do you cook Mansaf ?'
32- *kēf zabbaṭit sayyārtak* 'how did you fix your car?'

e) *gaddīh/kamm* 'how much/how many'

The interrogatives *gaddīh* and *kamm* are used interchangeably to ask about quantity, as shown in the examples below.

33- *gaddīh biddak minni maṣāri* 'how much money do you want from me?'
34- *kam kān fi b-il-masjid zulum* 'how many men were in the mosque?'

f) *mata/ʔamēt* 'when'

The interrogatives *mata* and *ʔamēt* are used interchangeably by WM speakers to ask about time, as shown in the examples given below.

35- *mata tgāᶜadit min il-jēš* 'when did you retire from the army?'
36- *ʔamēt wṣilit il-bēt* 'what time will you get home?'

5.6 Chapter Summary

This chapter examines the nominal morphology and nominal categories in WM Arabic. Examining the inflection of substantives shows singular to be the unmarked number value of the noun, e.g. *zalama* 'man', which is made dual through the suffixation of the morpheme *-ēn*, e.g. *walad-ēn* 'two boys'. The plural is formed either through the concatenation of the suffix *-īn* to masculine nouns and *-āt* to feminine nouns, e.g. *xabbaz-īn* 'male bakers' and *xabbaz-āt* 'female bakers', or through a change in the syllable structure and the vocalism, e.g. *xirga* 'rag' > *xirag* 'rags'. The plural for many loanwords in the dialect is formed by taking the feminine plural morpheme *-āt*, e.g. *ḷaṃb-āt* 'bulbs', *krim-āt* 'cream'.

Gender is an inherent property in proper and common nouns (masculine or feminine) that is denoted by the biological sex of the noun referent, e.g. *walad* 'boy', by convention, e.g. *mrāḥ*

(f.) 'land where sheep sleep', or by form in nouns morphologically marked by the morpheme suffix -a, e.g. *srāḥa* (f.) 'sheep rearing'. Personal names, personal pronouns and demonstratives are inherently definite whereas common nouns are made definite either through the prefixation of the definite article *il-*, the annexation to a definite noun or the suffixation of possessive pronouns to nominal stems, e.g. *ṭūs-hum* 'their cooking pans'.

The formation of non-derived substantives involves different consonant-vowel patterns; the most common of which are: CVVC, CCVVC, CVCC, CVCVC, CVVC-a, CVCC-a, CVCCVC, CVCCVVC, CVCCVVC-a, CVVCVC, CVCVVC, CCVVC-a. The majority of these nouns are derived from triliteral roots, e.g. *wijib* 'turn to fill water', *raṣīṣ* 'picked olives'.

While adjectives have two numbers: singular and plural, the plural is morphologically marked through the concatenation of the suffix *-īn* to masculine adjectives and *-āt* to feminine adjectives. An adjective takes the plural morpheme suffix when modifying a dual noun, e.g. *bint-ēn naṣḥ-āt* 'two fat girls'. The plural of some adjectives, however, is made through some change in the syllable structure and the vocalism, e.g. *ṣġīr > ṣġār* 'young', *ʔaxras > xurus* 'deaf'. A range of patterns are used in the formation of underived adjectives, the most common of which are: CVCC, CVCVC, CVCV, CVCVVC, CVVCVC, CVCCVC, CVCCVVC, CVVCV, and CaCCāC.

WM Arabic has a set of demonstrative pronouns that exhibit two-way gender (masculine and feminine) and two-way number (singular and plural). They are categorised according to their distance from the speaker into proximal pronouns, including *hāḏ* 'this', *hāḏi* 'this (f.)', and *haḏōl* 'these', and distal pronouns, including *haḏāk* 'that', *haḏīk* 'that (f.)', and *haḏol-āk* 'those'.

Derived from the unmarked adjectives by applying the pattern ʔaCCaC, elatives can function as comparatives in which case they are undefined and followed by a prepositional phrase headed by *min* 'than', or as superlatives where they are defined through the definite article or through annexation of the indefinite pronoun *wāḥad* 'one', an indefinite singular noun or a definite plural noun.

Chapter Six

A Short Lexicon of WM Arabic

This chapter presents a short lexicon of the spoken of WM Arabic, following with some modifications Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011). Specifically, this chapter aims to document the key terms of the dialect of WM Arabic taking into consideration that some of the recorded terms in this lexicon are different from those of other Jordanian dialects. A great deal of these terms is spoken by old people, so they need to be recorded while these people are alive. One more contribution of this lexicon is that it can be compared with dialects already recorded in Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011).

Lexicon entries are classified according to their semantic categories. The set of semantic categories comprises: man, professions, animals, nature, violence, feelings and states, money, function words, plants, house stuff, verbs, adverbs of time and agriculture. Below is a presentation of the lexicon where each lexicon entry is provided with its root, lexeme, inflected form, semantic field and grammatical category.

(a) * is used when the lexeme does not have an inflected form.

(b) NE (not exising) is used where the lexeme does not have a root, as in the case of many function words.

(c) Where a lexeme can function as a noun and an adjective, then N and Adj.will be separated by a semicolon.

d) For historical roots, * is used before the given root.

Root	Lexeme	Inflected Form	English Gloss	Semantic Category	Grammatical Category	Cf.
ʔ-b-w	ʔabb	ʔubbah-āt	father	Man	N, C	
ʔ-x-w	ʔaxx	xwān	brother	Man	N, C	
ʔ-x-w	ʔuxt	xaw-āt	sister	Man	N, C	
ʔ-d-m	ʔādami	ʔaWadim	person	Man	N, C	
ʔ-m-w	ʔumm	ʔummah-āt	mother	Man	N, C	
b-k-r	bikir	bkūra	virgin	Man	N, C	
b-n-t	bint	ban-āt	girl	Man	N, C	
b-w-g	bawwāg	bawwag-īn	thief	Man	N, C	Cf. ḥarāmi
j-d-d	jidd	jdūd	grandfather	Man	N, C	
j-w-z	jōz	jizān	husband	Man	N, C	
ḥ-j-j	ḥajji	ḥijjāj	old man; pilgrim	Man	N, C	
ḥ-r-m	ḥurma	ḥarīm	wife	Man	N, C	
ḥ-r-m	ḥarāmi	ḥarāmiyya	thief	Man	N, C	Cf. bawwāg
ḥ-r-m	maḥram	maḥārim	man who can't marry woman, e.g., bother, son, father, uncle	Man	N, C	
ḥ-f-d	ḥafīd	ʔaḥfād	grandson	Man	N, C	

ḥ-m-l	ḥāmil	ḥawāmil	pregnant	Man	N, C	Cf. nāgil
ḥ-m-w	ḥamā	ḥamaw-āt	mother-in-law	Man	N, C	
x-t-r	xityār	xityāriyya	old man	Man	N, C	šāyib
x-t-r	xatyar	y-xatyir	to become old	Man	V	
x-ṭ-b	xaṭīb	*	fiancé	Man	N, C	
x-m-s	il-xamsa	*	people who descend from the same fifth ancestor	Man	N, U	
x-w-l	xāl	xawāl	maternal uncle	Man	N, U	
d-x-ḷ	dixīḷ	duxaḷa	person asking protection	Man	N, C	
r-j-l	rajul	rjāl	man	Man	N, C	Cf. zalama
r-ḥ-m	riḥim	ʔarḥām ~ rḥūm	female relative	Man	N, C	
r-m-l	ramla	rumil	widow	Man	N, C	
z-l-m	zalama	zulum	man	Man	N, C	Cf. rajul
s-l-f	silf	slāf	brother-in-law (spouse's brother)	Man	N, C	
š-b-b	šabb	šabāb	young man	Man	N, C	
š-ḥ-d	šaḥḥād	šaḥḥad-īn	beggar	Man	N, C	
š-y-b	šāyib	šiyyāb	old man	Man	N, C	Cf. xityār

š-y-x	šēx	šyūx	head of tribe	Man	N, C	
ṣ-r-b	ṣurba	*	group of men	Man	N, U	
ḍ-ᶜ-f	ḍᶜūf	*	children	Man	N, pl.	Cf. ᶜayyil and maᶜajwa
ḍ-y-f	ḍēf	ḍyūf	guest	Man	N, C	
ᶜ-j-w	*	maᶜajwa	children	Man	N, pl.	Cf. ᶜayyil and ḍᶜūf
ᶜ-d-l	ᶜadīl	ᶜadāyil	brother in-law (sibling of the husband)	Man	N, C	
ᶜ-r-s	ᶜarīs	ᶜirsān	groom	Man	N, C	
ᶜ-r-s	ᶜarūs	ᶜarus-āt	bride	Man	N, C	
ᶜ-z-b	Ɂaᶜzab ~ ᶜazzābi	ᶜuzbān	single (unmarried)	Man	N, C	
ᶜ-z-b	ᶜziba	ᶜzib-āt	divorced	Man	N, C	Cf. to mṭallaga
ᶜ-z-b	mᶜazzib	mᶜazb-īn	host	Man	N, C	
ᶜ-m-m	ᶜamm	ᶜamām	paternal uncle/father-in-law	Man	N, C	
ᶜ-y-l	ᶜayyil	ᶜyāl ~ ᶜwayyil	child	Man	N, C	Cf. ḍᶜūf and maᶜajwa
ᶜ-y-l	ᶜēla	ᶜil-āt ~ ᶜiyal	family	Man	N, C	
f-x-ḏ	faxiḏ	fxāḏ	sub-branch of tribe	Man	N, C	
g-ḥ-r	gḥara	*	last son in a family	Man	N,U	

g-ṣ-r	gāsir	gussār	immature	Man	N, U	
k-n-n	kanna	kann-āt	daughter-in-law	Man	N, C	
n-s-b	nasīb	nasāyib	son-in-law	Man	N, C	
n-s-w	*	niswān	women	Man	N, pl.	
n-š-m	našmi	našāma	person with good characteristics	Man	N, C	
n-g-l	nāgil	nawāgil	pregnant	Man	N, C	Cf. ḥāmil
w-l-d	walad	wlād	son	Man	N, C	Cf. ᶜayyil
w-l-d	wallāda	wallad-āt	new mother	Man	N, C	
y-t-m	yitīm	yutmān	orphan	Man	N, C	
ʔ-ḏ-n	ʔāḏin	ʔaḏana	cleaner	Profession	N, C	
b-n-y	banna	bannay-īn	bricklayer	Profession	N, C	Cf. ṭubarji
b-y-ᶜ	bayyāᶜ	bayyaᶜ-īn	shop assistant	Profession	N, C	
t-m-r-j	tamarji	tamarjiyya	nurse	Profession	N, C	
ḥ-t-t	ḥattāt	ḥattat-īn	olive picker	Profession	N, C	Cf. farrāṭ
ḥ-r-ṯ	ḥarrāṯ	ḥarraṯ-īn	ploughman	Profession	N, C	
ḥ-ṣ-d	ḥaṣṣād	ḥaṣṣad-īn	harvester	Profession	N, C	

ḥ-k-m	ḥakīm	ḥakim-īn	doctor	Profession	N, C	
ḥ-l-g	ḥallāg	ḥallāg-īn	hairdresser	Profession	N, C	Cf. mzayyin
ḥ-w-š	ḥawwāš	ḥawaš	shepherd	Profession	N, C	Cf. rāᶜi
x-b-z	xabbāz	xabbāz-īn	baker	Profession	N, C	
x-y-ṭ	xayyāṭ	xayyāṭ-īn	tailor	Profession	N, C	
d-r-s	darrās	darras-īn	someone whose job is to thresh grain	Profession	N, C	
d-g-š	digīš	digāyiš	substitute	Profession	N,C	
d-w-j	dawwāj	dawwaj-īn	peddler	Profession	N, C	
r-b-ᶜ	mrābᶜi	mrābᶜiyya	person who helps in farming for some money	Profession	N, C	
r-ᶜ-y	rāᶜi	riᶜyān	shepherd	Profession	N, C	Cf. ḥawwāš
z-y-n	mzayyin	mzayn-īn	hairdresser	Profession	N, C	Cf. ḥallāg
s-b-k	sabbāk	sabbak-īn	plumber	Profession	N, C	Cf. musarji
s-g-y	sagga	saggay-īn	waterman	Profession	N, C	
s-m-k-r	samkari	samkariyya	blacksmith	Profession	N, C	
š-l-b	šalabi	šalabiyya	circumciser	Profession	N, C	Cf. mṭahhir
ṭ-b-r	ṭubarji	ṭubarjiyya	bricklayer	Profession	N, C	Cf. banna

ṭ-h-r	mṭahhir	mṭahr-īn	circumciser	Profession	N, C	Cf. šalabi
ṭ-w-f	ṭawwāf	ṭawwaf-īn	person watching forest	Profession	N, C	
f-r-ṭ	farrāṭ	farraṭ-īn	olive picker	Profession	N, C	Cf. ḥattāt
f-l-ḥ	fallāḥ	fallaḥ-īn	farmer	Profession	N, C	
k-s-ḥ	kassāḥ	kassaḥ-īn	person who prepares land before ploughing	Profession	N, C	
l-ḥ-m	laḥḥām	laḥḥam-īn	butcher	Profession	N, C	
m-s-r-j	musarji	musarjiyya	plumber	Profession	N, A	Cf. sabbāk
ʔ-b-l	ʔibil	*	camel (m.)	Animals	N, pl.	
ʔ-s-d	ʔasad	ʔusūd	lion	Animal	N, C	
b-s-s	biss	bsās	cat	Animals	N, C	
b-ġ-ḷ	baġaḷ	bġāḷ	mule	Animals	N, C	
b-g-r	bagara	bagar	cow	Animals	N, C	
b-h-m	baham	*	cattle	Animals	N. pl.	
t-y-s	tēs	tyūs	billy-goat	Animals	N, C	
ṯ-ᶜ-l-b	ṯaᶜlab	ṯaᶜālib	fox	Animals	N, C	
ṯ-n-y	ṯiniy	ṯanāya	one year lamb	Animals	N, C	

t̲-w-r	t̲ōr	t̲irān	bull	Animals	N, C	
j-ḥ-š	jaḥaš	jḥūš	donkey foal	Animals	N, C	
j-d-y	jidi	jdāya ~ jidyān	kid (m.)	Animals	N, C	
j-m-l	jamal	jmāl	camel	Animals	N,C	
j-h-m	jhām	*	herd of camels	Animals	N, pl.	
j-y-j	jāja	jāj	hen	Animals	N, C	
ḥ-ṣ-n	ḥṣān	xēl	horse	Animals	N, C	
ḥ-m-r	ḥmār	ḥamīr	donkey	Animals	N, C	
ḥ-w-r	ḥwār	*	kid of camel	Animals	N, pl.	
ḥ-y-y	ḥayya	ḥayāya	snake	Animals	N, C	
x-r-f	xarūf	xirfān	sheep	Animals	N, C	
d-b-r	dabbūr	dababīr	wasp	Animals	N, C	
d-b-š	dabaš	*	sheep	Animals	N, pl.	
d-y-k	dīk	dyūk	cock	Animals	N, C	
r-ġ-t̲	raġat̲	*	lambs with their kids	Animals	N, pl.	
r-y-ᶜ	miryāᶜ	marayīᶜ	biggest and strongest ram that walks ahead of flock	Animal	N, C	

z-l-ṭ	zilīṭ	*	group of kids	Animals	N, pl.	
s-r-b	sirb	*	flock (of birds)	Animals	N, U	
s-l-ḥ-f	sulḥafa	salāḥif	turtle	Animals	N, C	Cf. girgaᶜa
š-l-y	šiliyya	šalāya	herd (of goats, sheep)	Animals	N, C	
ṣ-x-l	ṣaxal	ṣxāl	kid (f.)	Animals	N, C	
ṭ-l-y	ṭili	ṭily-ān	lamb (f.)	Animals	N, C	
ḏ-y-x	ḏīx	ḏix-ān	watchdog	Animals	N, C	
ᶜ-b-r	ᶜabūr	ᶜubur	ewe kid (f.)	Animals	N, C	
ᶜ-n-z	ᶜanz	miᶜza ~ maᶜaz	goat	Animals	N, C	
ᶜ-n-g	miᶜnagi-yya	miᶜnagiyy-āt	horse of pure-bred	Animals	N, C	
ġ-n-m	ġanama	ġanam	sheep	Animals	N, C	
f-ḥ-l	faḥal	fḥūl	stallion	Animals	N, C	
f-r-s	faras	xēl	mare	Animals	N, C	
f-r-š	farāša	faraš-āt	butterfly	Animals	N, C	
f-ṭ-m	faṭīm	faṭāyim	camel calf that feeds itself	Animals	N, C	
g-r-g-r	gargūra	garagīr	weak lamb	Animals	N, U	

g-r-g-ᶜ	girgaᶜa	garagīᶜ	turtle	Animals	N, C	Cf. sulḥafa
g-ᶜ-d	gᶜūd	*	camel that can be ridden	Animals	N, U	
k-b-š	kabiš	kbāš	ram	Animals	N, C	
k-l-b	kalb	klāb	dog	Animals	N, C	
m-h-r	muhra	muhur	foal	Animals	N, C	
n-ᶜ-j	naᶜja	nᶜāj	ewe	Animals	N, C	
n-w-g	nāga	nūg	camel (f.)	Animals	N, C	
h-r-f	hirfi	harāfi	kid that is 4-6 months old	Animals	N, C	
h-r-m	harma	hrām	old ewe	Animals	N, C	
b-r-d	bard	*	cold	Nature	N, U	
b-ṭ-n	biṭīn	biṭn-ān	mountain	Nature	N, C	Cf. jabal
ṯ-l-j	ṯalj	ṯlūj	snow	Nature	N, C	
j-b-l	jabal	jbāl	mountain	Nature	N, C	Cf. biṭīn
ḥ-j-r	ḥajar	ḥjār	stone	Nature	N, C	Cf. damas
ḥ-r-g	ḥarīga	ḥrāyig	fire	Nature	N, C	Cf. nār
ḥ-ṣ-w	ḥaṣwa	ḥaṣu	pebble	Nature	N, C	

x-l-w	xala	*	desert	Nature	N, U	Cf. ṣaḥra
d-m-s	damas	dmūs	stone	Nature	N, C	Cf. ḥajar
z-x-x	zaxxat	t-zixx	to rain heavily	Nature	V	
s-ḥ-w	saḥu	*	soft pieces of soil	Nature	N, U	
s-m-g	samaga	*	mixture of soil and hay used in making substances such as *kwāra* and *ṭabūn*	Nature	N, U	
s-y-l	sēl	*	heavy rain	Nature	N, U	
š-t-y	šita	*	rain	Nature	N, U	Cf. maṭar
š-t-y	šitwiyya	*	winter	Nature	N, U	
š-m-s	šmīsa	*	sunny	Nature	Adj.	
š-m-s	t-šammas	yi-t-šammas	to sunbathe	Nature	V	
š-w-b	šōb	*	heat	Nature	N; Adj.	
ṣ-ḥ-r	ṣaḥra	ṣaḥāri	desert	Nature	N, U	Cf. xala
ṣ-g-ᶜ	ṣagᶜa	*	extreme cold	Nature	N; Adj.	
ṭ-g-s	ṭags	*	weather	Nature	N, U	
ṭ-y-n	ṭīn	*	mud	Nature	N, U	

ᶜ-j-j	ᶜajja	*	dust	Nature	N; Adj.	Cf. ġabara
ġ-b-r	ġabara	*	dust	Nature	N, Adj.	Cf. ᶜajja
ġ-y-m	ġēma	ġyūm	cloud	Nature	N, C	
ġ-y-m	ġāyim	*	cloudy	Nature	Adj.	
f-y-ḏ	fayaḏān	fayaḏan-āt	flood	Nature	N, C	
g-m-r	gamra	*	clear night	Nature	N, U	
m-ḫ-l	maḫal	*	drought	Nature	N, U	
m-ṭ-r	maṭar	maṭar	ʔamṭār	Nature	N, C	Cf. šita
n-ṯ-ṯ	naṯnaṯat	t-naṯniṯ	to drizzle	Nature	V	
n-d-f	nudfa	nudaf	piece of snow	Nature	N, C	
n-w-r	nār	nir-ān	fire	Nature	N, C	Cf. ḥarīg
w-d-y	Wadi	widy-ān	valley	Nature	N, C	
b-r-š-ᶜ	t-baršaᶜ	yi-t-baršaᶜ	to assault someone verbally/ abuse	Violence	V	
b-ṭ-ḥ	baṭaḥ	yi-bṭaḥ	to overthrow	Violence	V	
b-ṭ-ḥ	mbāṭaḥa	*	wrestling	Violence	N, U	
b-ṭ-ḥ	t-bāṭaḥ	yi-t-bāṭaḥ	to wrestle	Violence	V	

b-h-w-r	t-bahwar	yi-t-bahwar	to tell incorrect facts about someone	Violence	V	
j-r-h-m	t-jarham	yi-t-jarham	to assault with no reason	Violence	V	
j-f-l	jaffal	y-jaffil	to terrify	Violence	V	
d-w-š	dawaš	yi-dwiš	to annoy	Violence	V	
ḏ-l-l	ḏall	y-ḏill	to humiliate	Violence	V	
ḏ-m-m	ḏamm	y-ḏimm	to gossip	Violence	V	
s-b-b	sabb	y-sibb	to curse	Violence	V	
š-r-t-ḥ	šartaḥ	y-šartiḥ	to insult	Violence	V	Cf. šaršaḥ
ṭ-r-š	ṭaraš	yi-ṭriš	to hit	Violence	V	Cf. laxam and ḍarab
ḍ-r-b	ḍarab	yi-ḍrub	to hit	Violence	V	Cf. laxam and ṭaraš
ᶜ-n-b-ṭ	ᶜanbaṭ	y-ᶜanbiṭ	to irritate	Violence	V	
ᶜ-w-r	ᶜawwar	y-ᶜawwir	to stab	Violence	V	
k-w-n	kāwan	y-kāwin	to fight	Violence	V	Cf. t-hāwaš
k-w-n	kwān	*	fighting	Violence	N, U	Cf. hōš
l-s-n	t-lāsan	yi-t-lāsan	to argue with someone	Violence	V	
l-ḥ-m	laḥḥam	y-laḥḥim	to hit harshly	Violence	V	

l-x-m	laxam	yi-lxam	to hit	Violence	V	Cf. ṭaraš
m-r-ṭ	marmaṭ	y-marmiṭ	to assault someone harshly	Violence	V	
h-w-š	t-hāwaš	yi-t-hāwaš	to fight	Violence	V	Cf. kāwan
h-w-š	hōš	*	fighting	Violence	N, U	Cf. kwān
b-x-n	baxan	yi-bxan	to know someone very well	Feelings and states	V	
b-x-n	mabxūn	mabxun-īn	well-known	Feelings and states	Adj.	
b-r-k	bārak	y-bārik	to congratulate	Feelings and states	V	Cf. hanna
b-s-ṭ	basaṭ	yi-bsiṭ	to gladden	Feelings and states	V	
b-s-ṭ	mabṣūṭ	mabṣuṭ-īn	glad	Feelings and states	Adj.	
b-ġ-d-d	baġdad	y-baġdid	to enjoy	Feelings and states	V	
b-h-ḏ	mabhūḏ	mabhūḏ-īn	shocked with some signs of fear	Feelings and states	Adj.	
b-w-y	bāwa	y-bāwi	to disclaim	Feelings and states	V	
ḥ-b-b	ḥabb	y-ḥibb	to love	Feelings and states	V	Cf. ᶜišig
ḥ-s-s	ḥass	y-ḥiss	to feel	Feelings and states	V	
ḥ-s-f	t-ḥassaf	yi-t-ḥassaf	to regret	Feeling and stares	V	
ḥ-n-n	ḥann	y-ḥinn	to long	Feeling and stares	V	

r-g-r-g	ragrag	y-ragrig	to miss	Feelings and states	V	
z-l-g-m	mzalgim	mzalgm-īn	very angry	Feelings and states	Adj.	Cf. zamgān
z-l-g-m	zalgam	y-zalgim	to get angry	Feelings and states	V	Cf. zamag
z-m-g	zamag	yi-zmag	to become very angry	Feelings and states	V	Cf. zalgam
z-m-g	zamgān	zamgan-īn	angry	Feelings and states	Adj.	Cf. mzalgim
s-l-y	salla	y-salli	to entertain	Feelings and states	V	Cf. ġaṭraš
š-w-g	štāg	yi-štāg	to miss	Feelings and states	V	
ṭ-n-š	ṭannaš	y-ṭanniš	to ignore	Feelings and states	V	
ṭ-y-b	ṭāb	y-ṭīb	to recover	Feelings and states	V	
ḍ-l-l	ḍallal	y-ḍallil	to misguide	Feelings and states	V	
ᶜ-z-y	ᶜazza	y-ᶜazzi	to console	Feelings and states	V	
ᶜ-š-g	ᶜišig	yi-ᶜšag	to love	Feelings and states	V	Cf. ḥabb
ġ-ṭ-r-š	ġaṭraš	y-ġaṭriš	to ignore	Feelings and states	V	Cf. ṭannaš
ġ-w-š	mitġawġiš	mitġuġš-īn	worried	Feelings and states	Adj.	
k-r-h	kirih	yi-kkrah	to hate	Feelings and states	V	
l-w-m	lām	y-lūm	to blame	Feelings and states	V	

n-m-s	t-nōmas	yi-t-nōmas	to be proud of	Feelings and states	V	
h-m-k-r	t-mahkar	yi-t-mahkar	to ridicule	Feelings and states	V	
*h-n-ʔ	hanna	y-hanni	to congratulate	Feelings and states	V	Cf. bārak
w-l-w-l	t-walwal	yi-t-walwal	to complain	Feelings and states	V	
b-r-ṭ-l	barṭīl	*	tip	Money	N, U	
b-r-ṭ-l	barṭal	y-barṭil	to tip	Money	V	
j-m-ᶜ	jamaᶜ	yi-jmaᶜ	to fundraise	Money	V	Cf. lamm
d-y-n	dayyan	y-dayyin	to lend money	Money	V	Cf. sallaf
z-n-g-l	zangīl	zanagīl	rich	Money	Adj.	
z-n-g-l	zangal	y-zangil	to become rich	Money	V	Cf. migriš and maysūr
s-l-f	sallaf	y-sallif	to lend money	Money	V	Cf. dayyan
š-ġ-l	šuġil	*	work	Money	N, U	
ṭ-f-r	ṭafrān	ṭafran-īn	poor	Money	Adj.	
ᶜ-y-š	maᶜāš	mᶜaš-āt	salary	Money	N, C	Cf. rātib
f-r-ṭ	frāṭa	*	change	Money	N, U	
f-r-ṭ	faraṭ	yi-fruṭ	to change (money)	Money	V	

f-l-s	flūs	*	money	Money	Cf. grūš	
f-l-s	mfallis	mfals-īn	bankrupt	Money	Adj.	
f-l-s	fallas	y-fallis	to run out of money	Money	V	
g-b-ḏ	gabaḏ	yi-gbaḏ	to get salary	Money	V	
g-r-š	grūš	*	money	Money	N, pl.	Cf. flūs
g-r-š	migriš	migirš-īn	wealthy	Money	Adj.	Cf. zangīl and maysūr
g-r-ḏ	stagraḏ	yistagriḏ	to borrow money	Money	V	
g-ᶜ-d	tagāᶜud	tagaᶜud-āt	ponsion	Money	Adj.	
k-t-m	maktūma	maktum-āt	pocket	Money	N, C	
k-y-š	kayyaš	y-kayyiš	to pay cash	Money	V	
l-m-m	lamm	y-lumm	to fundraise	Money	V	Cf. jamaᶜ
l-m-m	lamma	*	fundraising	Money	N, U	
w-ḏ-f	waḏīfa	waḏāyif	job	Money	N, C	
w-f-r	waffar	y-waffir	to save money	Money	V	
y-s-r	maysūr	maysur-īn	wealthy	Money	Adj.	migriš and zangīl
ʔ-m-s	ʔams	*	yesterday	Adverbs of time	Adv.	Cf. mbāriḥ

b-r-ḥ	mbāriḥ	*	yesterday	Adverbs of time	Adv.	Cf. ʔams
b-r-r	barra	*	outside	Adverbs of time	Adv.	
b-ᶜ-d	baᶜd	*	after	Adverbs of time	Adv.	
b-ᶜ-d	baᶜd-ēn	*	later on	Adverbs of time	Adv.	
b-k-r	bakkīr	*	early	Adverbs of time	Adv.	
b-k-r	bukra	*	tomorrow	Adverbs of time	Adv.	
ḥ-w-l	ḥōl	ḥwāl	year	Adverbs of time	Adv.	Cf. sana
s-b-ᶜ	ʔisbūᶜ	ʔasabīᶜ	week	Adverbs of time	Adv.	
s-n-	sana	snīn	year	Adverbs of time	Adv.	Cf. ḥōl
š-h-r	šahar	šhūr	month	Adverbs of time	Adv.	
g-r-ḏ	mistagriḏāt		last seven days in March and the first four of April	Adverbs of time	Adv.	
g-y-ḏ	gīḏ	*	summer time	Adverbs of time	Adv.	
l-y-l	lēla	layāli	night	Adverbs of time	Adv.	
y-w-m	yōm	ʔayyām	day	Adverbs of time	Adv.	
*	gabil šwayy	*	recently	Adverbs of time	Adv.	
*	hassaᶜ	*	now	Adverbs of time	Adv.	

*	hān	*	here	Adverbs of time	Adv.	
*	hanāk	*	there	Adverbs of time	Adv.	
N/E	bas	*	when	Function words	Conj.	
N/E	ʔaw	*	or	Function words	Conj.	
N/E	kamān	*	in addition	Function words	Conj.	
N/E	fiᶜlan	*	indeed	Function words	Conj.	
N/E	ᶜašān hēk	*	for this reason	Function words	Conj.	
N/E	ᶜašān	*	because	Function words	Conj.	
N/E	laww	*	if	Function words	Conj.	
N/E	ʔiḏa	*	if	Function words	Conj.	
N/E	ʔilla	*	but	Function words	Conj.	
N/E	nafs aš-šī	*	likewise	Function words	Conj.	
N/E	bi-l-ᶜaks	*	in contrary	Function words	Conj.	
N/E	baᶜd hēk	*	then	Function words	Conj.	
N/E	zayy	*	like	Function words	Conj.	Cf. miṯil
N/E	miṯil	*	like	Function words	Conj.	Cf. zayy

N/E	min	*	since	Function words	Conj.	
N/E	lamma	*	while	Function words	Conj.	
b-t-n	betinjān	*	aubergine	Plants	N, U	Cf. ʔaswad
b-r-g-g	bargōg	*	plums	Plants	N, U	
b-ṣ-l	baṣal	*	onion	Plants	N, U	
b-ṭ-x	baṭṭīx	*	water-melon	Plants	N, U	
b-ṭ-ṭ	baṭāṭa	*	potatoes	Plants	N, U	
b-n-j	babūnij	*	chamomile	Palnts	N, U	
b-n-d-r	bandōra	*	tomatoes	Plants	N, U	
t-f-ḥ	tuffāḥ	*	apple	Plants	N, U	
t-y-n	tīn	*	figs	Plants	N, U	Cf. ḥamāṭa
j-z-r	jazar	*	carrots	Plants	N, U	
ḥ-r-š	ḥarrūš	*	melon	Plants	N, U	
ḥ-m-ṣ	ḥummaṣ	*	chick-peas	Plants	N, U	Cf. giṭāni
ḥ-m-ṭ	ḥamāṭa	*	fig tree	Plants	N, U	Cf. tīn
h-m-ṭ	hamaṭ	yi-hmiṭ	to pick all fruits of tree	Plants	V, Tran	

d-g-g	dugga	*	thyme	Plants	N, U	
ḏ-b-l	ḏbāliyya	*	dried figs stored to be eaten in winter	Plants	N, U	
r-ṣ-ṣ	raṣīṣ	*	pickled olives	Plants	N, U	
z-r-ᶜ	zrīᶜa	*	plant	Plants	N, U	
z-y-t	zaytūna	*	olive tree	Plants	N, C	
s-w-d	ʔaswad	*	egg-plants	Plants	N, U	Cf. betinjān
ġ-r-s	ġarsa	ġars-āt ~ ġrās	tree	Plants	N, C	
f-j-l	fijil	*	radish	Plants	N, U	
f-g-ᶜ	faggūᶜ	*	pumpkin	Plants	N, U	Cf. yagṭīn
g-ṯ-y	giṯṯa	*	ridge cucumber	Plants	N, U	
g-r-f	girfa	*	cinnamon	Plants	N, U	
g-ṣ-l	gaṣaliyya	*	wheat used as fodder for horses	Plants	N, U	
g-ṭ-n	yagṭīn		pumpkin	Plants	N. U	Cf. faggūᶜ
g-ṭ-n	giṭāni	*	chickpeas	Plants	N. U	Cf. ḥummaṣ
g-m-ḥ	gamḥ	*	wheat	Plants	N, U	
k-s-b-r	kusbara	*	coriander	Plants	N, U	

l-f-f	malfūf	*	cabbage	Plants	N, U	
l-m-n	laymūn	*	lemon	Plants	N, U	
N/E	ḥabba samra	*	black cumin	Plants	N, U	
b-ḥ-š	baḥaš	yi-bḥaš	dig	Agriculture	V	
b-d-r	bēdar	bayādir	threshing floor	Agriculture	N, C	
b-d-r	bardiya	*	piece of land cultivated at beginning of season	Agriculture	N, U	
b-ḏ-r	bḏār	*	sowing	Agriculture	N, C	
b-w-r	būr	*	uncultivated piece of land	Agriculture	N, U	
j-b-y	jābya	jawābi	trough	Agriculture	N, C	
j-r-f	mijrafa	majārif	hoe	Agriculture	N, C	Cf. ṭuriyya
j-r-n	jurun	jrūn	stone trough	Agriculture	N, C	
j-l-l	jallal	y-jallil	to collect animal dung	Agriculture	N, C	
j-w-l-g	jawlag	jawālig	bag of hay put on back of donkey	Agriculture	N, C	
ḥ-b-l	ḥabbūl	*	vertical piece of land	Agriculture	N, U	
ḥ-r-ṯ	ḥaraṯ	yi-ḥruṯ	to plough	Agriculture	V	
ḥ-r-z	ḥirza	ḥrūz	camel dung	Agriculture	N, C	

243

ḥ-ṣ-d	ḥaṣad	yi-ḥṣud	to harvest	Agriculture	V	
ḥ-ḏ-r	ḥaḏīra	ḥaḏāyir	place where sheep sleep	Construction	N, C	
ḥ-y-ṣ	ḥayyāṣa	ḥayyaṣ-āt	cover of sackcloth put on back of donkey	agriculture	N, C	Cf. lobbādah
x-m-m	xumm	xmām	hen-house	Agriculture	N, C	Cf. zarb
d-r-s	daras	yi-drus	to thresh	Agriculture	V	
ḏ-r-y	ḏrah	*	scattering grain on land after ploughing	Agriculture	N, U	
ḏ-r-y	ḏarra	y-ḏarri	to scatter grain on land after ploughing	Agriculture	V	
ḏ-w-d	miḏwad	maḏāwid	wooden trough for fodder of mule	Agriculture	N, C	
r-j-m	rujum	rjūm	stack of stones	Agriculture	N, C	
z-b-l	zibil	zibla	dung	Agriculture	N, U	
z-r-b	zarb	zrūb	henhouse	Agriculture	N, C	Cf. xumm
z-w-d	zuwwāda	zawawīd	bag of food prepared for shepherds when they tend sheep	Agriculture	N, C	
s-g-y	saga	yi-sgi	to irrigate	Agriculture	V	
s-g-y	sgāya	*	irrigation	Agriculture	N, U	
š-d-d	šadd	y-šidd	to grow	Agriculture	V	
š-g-b	mišgāb	mašagīb	tool used for removing grass	Agriculture	N, C	

ṣ-l-b	ṣlība	*	harvested crops	Agriculture	N, U	
ṣ-y-r	ṣīra	ṣyarr	wall to keep livestock inside spot of land	Agriculture	N, C	
ṭ-w-r	ṭuriyya	ṭuriyy-āt	hoe	Agriculture	N, C	Cf. mijrafa
ᶜ-g-r	ᶜagīr	*	crops that remain after harvesting wheat and hay	Agriculture	N, U	
g-r-ᶜ	girgāᶜ	garagīᶜ	series of metal rings put round sheep's neck to make sound	Agriculture	N, C	
k-r-b	krāb	*	ploughing land before cultivating	Agriculture	N, U	
k-r-b	karab	yi-krub	to plough land	Agriculture	V	
k-r-m	karim	krūm	field	Agriculture	N, C	
k-s-ḥ	taksīḥ	*	preparing land before ploughing, including clearing thorn bushes and grass	Agriculture	N, U	
k-s-ḥ	kassaḥ	y-kassiḥ	to prepare land before ploughing, including clearing thorn bushes and grass	Agriculture	V	
k-l-b	kullāb	kalalīb	ring used to hang slaughtered sheep	Agriculture	N, C	
l-b-d	lubbāda	labab-īd	cover of sackcloth put on back of donkey	Agriculture	N, C	Cf. ḥayyāṣa
l-g-ḥ	ligiḥ	ti-lgiḥ	to water land before cultivating it	Agriculture	V	

m-r-ḥ	mrāḥ	*	land where sheep sleep	Agriculture	N, U	
n-j-l	minjal	manājil	sickle	Agriculture	N, C	
w-j-b	wijib	*	turn to fill water	Agriculture	N, U	
w-t-r	watar	wtār	wooden frame put on back of horse or donkey to transport hay during harvest	Agriculture	N, C	
w-ṭ-y	waṭā	*	piece of land	Agriculture	N, U	
b-ḫ-l-g	baḫlag	y-baḫlig	to stare	Verbs	V	
*b-d-ʔ	bada	yi-bda	to start	Verbs	V	
b-ṛ-ṛ	baṛṛa	y-baṛṛi	to exonerate	Other	V	
b-r-k	barak	yi-bruk	to sit down	Verbs	V	
b-ᶜ-t̲	baᶜat̲	yi-bᶜat̲	to send	Verbs	V	Cf. gazz
b-k-y	baka	yi-bki	to cry	Verbs	V	
b-k-y	st-abka	yist-abki	to pretend to cry	Verbs	V	
b-l-s	balas	yi-blus	to tell secret	Verbs	V	
b-l-š	ballaš	y-balliš	to start	Verbs	V	
b-l-ṣ	balaṣ	yi-bluṣ	to steal	Verbs	V	Cf. laṭaš and sarag
b-w-s	bās	y-būs	to kiss	Verbs	V	

b-y-d	bād	y-bīd	to exterminate	Verbs	V	
t-r-t-ḥ	tartaḥ	y-tartiḥ	to keep hold of	Verbs	V	
t-n-y	tana	yi-tna	to wait	Verbs	V	
j-h-z	jahhaz	y-jahhiz	to prepare	Verbs	V	
j-w-ᶜ	jāᶜ	y-jūᶜ	to get hungry	Verbs	V	
j-y-b	jāb	y-jīb	to bring	Verbs	V	
ḥ-b-s	ḥabas	yi-ḥbis	to jail	Verbs	V	
ḥ-t-t	ḥatt	y-ḥitt	to erode 'to (leaf) fall'	Verbs	V	
ḥ-ṭ-ṭ	ḥaṭṭ	y- ḥiṭṭ	to put	Verbs	V	
ḥ-g-ṭ	ḥagaṭ	yi-ḥguṭ	to fasten	Verbs	V	
ḥ-w-š	ḥawwaš	y-ḥawwiš	to collect	Verbs	V	Cf. lamm
ḥ-w-l	ḥāwal	y-ḥāwil	to try	Verbs	V	
*x-b-ʔ	xabba	y-xabbi	to hide	Verbs	V	
x-s-r	xisir	yi-xsar	to lose	Verbs	V	
x-s-r	xassar	y-xassir	to cause someone to lose	Verbs	V	
x-š-š	xašš	y-xišš	to go inside	Verbs	V	Cf. daxal and fāt

d-b-l	dabbal	y-dabbil	to gather in large groups	Verbs	V	
d-ḥ-š	daḥaš	yi-dḥaš	to insert by force	Verbs	V	
d-x-l	daxal	yi-dxul	to go inside	Verbs	V	
d-x-ḷ	daxaḷ	yi-dxaḷ	to ask for protection	Verbs	V	
d-z-z	dazz	y-dizz	to push	Verbs	V	
d-w-r	dawwar	y-dawwir	to look for	Verbs	V	
ḏ-w-y	ḏawa	yi-ḏwi	to wither	Verbs	V	
ḏ-y-ᶜ	ḏayyaᶜ	y-ḏayyiᶜ	to let news out	Verbs	V	
r-ʔ-s	raʔʔas	y-raʔʔis	to appoint someone the head	Verbs	V	
r-b-ṭ	rabaṭ	yi-rbuṭ	to tie	Verbs	V	Cf. magaṭ
r-j-w	t-rajja	yi-t-rajja	to appeal	Verbs	V	
r-t-b	rattab	y-rattib	to tidy	Verbs	V	
r-s-l	ʔrsal	yi-sril	to send	Verbs	V	
r-f-ᶜ	r-t-afaᶜ	yi-r-t-afiᶜ	to go up	Verbs	V	
r-k-b	rikib	yi-rkab	to ride	Verbs	V	
r-w-ḥ	rawwaḥ	y-rawwiḥ	to leave	Verbs	V	

z-ḥ-f	zaḥaf	yi-zḥaf	to crawl	Verbs	V	
z-g-ṭ	zagaṭ	yi-zguṭ	to catch	Verbs	V	
z-g-l-b	zaglab	y-zaglib	to fall	Verbs	V	
z-m-ṭ	zamaṭ	yi-zmiṭ	to swallow	Verbs	V	
z-m-m	zamm	y-zumm	to carry	Verbs	V	
s-ʔ-l	saʔʔal	y-saʔʔil	to ask questions repeatedly	Verbs	V	
s-r-g	sarag	yi-srug	to steal	Verbs	V	Cf. laṭaš and balaṣ
s-ṭ-r	saṭṭar	y-saṭṭir	to line up	Verbs	V	
s-m-r	smarr	yi-smarr	to become dark	Verbs	V	
š-ᶜ-t-l	šaᶜtal	y-šaᶜtil	to cause someone some trouble	Verbs	V	
s-ᶜ-d	sāᶜad	y-sāᶜid	to help	Verbs	V	ᶜāwan
s-k-r	sakkar	y-sakkir	to close	Verbs	V	
s-m-ᶜ	simiᶜ	yi-smaᶜ	to hear	Verbs	V	
s-w-g	sāg	y-sūg	to drive	Verbs	V	
s-w-y	sawwa	y-sawwi	to do	Verbs	V	
š-ġ-l	šaġġal	y-šaġġil	to make someone work	Verbs		

š-l-ḥ	šalaḥ	yi-šlaḥ	to take off clothes	Verbs	V	
š-l-ᶜ	šalaᶜ	yi-šlaᶜ	to take off some thing, e.g, tree	Verbs	V	
š-n-d-l	t-šandal	yi-t-šandal	to relax	Verbs	V	
š-y-l	šāl	y-šīl	to carry	Verbs	V	Cf. nataᶜ
ṣ-b-b	ṣabb	y-ṣibb	to pour	Verbs	V	
ṣ-l-w	ṣalla	y-ṣalli	to pray	Verbs	V	
ṣ-n-n	ṣann	y-ṣinn	to listen	Verbs	V	
ṭ-l-ᶜ	ṭiliᶜ	yi-ṭlaᶜ	to go out	Verbs	V	
ṭ-l-l	ṭall	y-ṭill	to appear	Verbs	V	
ṭ-m-m	ṭamm	y-ṭimm	to fill dig with soil	Verbs	V	
ṭ-w-ḥ	ʔi-ṭ-ṭawṭaḥ	yi-ṭ-ṭawṭaḥ	to swing while walking	Verbs	V	
ṭ-w-ḥ	ʔi-ṭ-ṭawwaḥ	yi-ṭ-ṭawwaḥ	to lay	Verbs	V	
ḏ̣-r-r	ḏ̣arr	y-ḏ̣urr	to cuase harm	Verbs	V	
ḏ̣-l-l	ḏ̣all	y-ḏ̣all	to stay	Verbs	V	
ḏ̣-m-m	ḏ̣amm	y-ḏ̣imm	to hug	Verbs	V	
ḏ̣-w-y	ḏ̣awa	yi-ḏ̣wi	to turn light on	Verbs	V	

ḍ-y-ᶜ	ḍayyaᶜ	y-ḍayyiᶜ	to lose	Verbs	V	
ᶜ-j-l	staᶜjal	yist-aᶜjil	to hurry up	Verbs	V	
ᶜ-d-d	ᶜadd	y-ᶜidd	to count	Verbs	V	
ᶜ-d-y	t-ᶜadda	yit-ᶜadda	to pass	Verbs	V	Cf. marag
ᶜ-r-b-š	t-ᶜarbaš	yi-t-ᶜarbaš	to climb	Verbs	V	
ᶜ-r-f	ᶜirif	yi-ᶜrif	to know	Verbs	V	
ᶜ-ṭ-š	ᶜiṭiš	yi-ᶜṭaš	to get thirsty	Verbs	V	
ᶜ-l-m	ᶜallam	y-ᶜallim	to know	Verbs	V	
ᶜ-w-n	ᶜāwan	y-ᶜāwin	to help	Verbs	V	Cf. sāᶜad
ġ b-b	ġabb	y-ġibb	to put your hand inside something and pick great deal of something	Verbs	V	
ġ-r-b	st-aġrab	yi-st-aġrib	to wonder	Verbs	V	
ġ-ṭ-y	ġaṭṭa	y-ġaṭṭi	to cover	Verbs	V	
ġ -f-y	ġafa	yi-ġfa	to take nap	Verbs	V	
f-t-r-k	t-fatrak	yi-t-fatrak	to become incoherent	Verbs	V	
f-r-ḏ	farraḏ	y-farriḏ	to cut something into pieces	Verbs	V	
f-r-ġ	farraġ	y-farriġ	to vacate	Verbs	V	

f-g-š	fagaš	yi-fguš	to split melon into two	Verbs	V	
f-h-m	fihim	yi-fham	to understand	Verbs	V	
f-w-t	fāt	y-fūt	to go inside	Verbs	V	Cf. daxal and xašš
f-w-d-s	fõdas	y-fõdis	to finish (work, school)	Verbs	V	
f-y-ḍ	fāḍ	y-fīḍ	to overfill	Verbs	V	
g-z-d-r	gazdar	y-gazdir	to walk slowly	Verbs	V	
g-z-z	gazz	y-gizz	to send	Verbs	V	Cf. baˁaṯ
g-ˁ-d	gaˁad	yi-gˁud	to sit	Verbs	V	
g-l-ṭ	gallaṭ	y-galliṭ	to serve food	Verbs	V	
g-n-z	ganaz	yi-gnuz	to vomit	Verbs	V	
g-l-ṭ	galaṭ	yi-gluṭ	to move forward	Verbs	V	
g-w-ṭ-r	gōṭar	y-gōṭir	to go	Verbs	V	
k-b-š	kabbaš	y-kabbiš	to sleep	Verbs	V	
k-s-r	kassar	y-kassir	to break	Verbs	V	
k-s-r	n-kasar	yi-nkasir	to be broken	Verbs	V	
k-l-f	kallaf	y-kallif	to prepare food	Verbs	V	

k-m-s	kamas	yi-kmus	to extinguish	Verbs	V	
k-m-š	kamaš	yi-kmuš	to grasp	Verbs	V	
l-ṭ-š	laṭaš	yi-lṭuš	to steal	Verbs	V	Cf. balaṣ and sarag
l-ṭ-l-ṭ	t-laṭlaṭ	yi-t-laṭlaṭ	to move across different places	Verbs	V	
l-ᶜ-b	liᶜic	yi-lᶜab	to play	Verbs	V	
l-m-m	lamm	y-limm	to collect	Verbs	V	Cf. ḥawwaš
l-w-ṣ	lāṣ	ylūṣ	to hide	Verbs	V	
m-r-g	marag	yi-mrug	to pass	Verbs	V	Cf. t-ᶜadda
m-s-s	mass	y-miss	to touch	Verbs	V	
m-š-y	maša	yi-mši	to walk	Verbs	V	
m-š-y	sta-mša	yist-amši	to have desire to walk	Verbs	V	
m-s-k	masak	yi-msik	to catch	Verbs	V	Cf. zagaṭ
m-ṣ-ṣ	maṣṣ	y-miṣṣ	to suck	Verbs	V	
m-g-ṭ	magaṭ	yi-mguṭ	to tie	Verbs	V	Cf. rabaṭ
m-g-ṭ	mgāṭ	mgaṭ-āt	rope	Verbs	N, C	
m-g-l	t-maggal	yi-t-maggal	to keep looking at someone to know all his features	Verbs	V	

m-l-ṣ	malaṣ	yi-mluṣ	to escape	Verbs	V	
m-h-l	ʔamhal	yi-mhil	to give time	Verbs	V	
n-t-ᶜ	nataᶜ	yi-ntaᶜ	to lift/walk long distance; to carry	Verbs	V	Cf. šāl
n-ṣ-l	t-naṣṣal	yi-t-naṣṣal	to escape	Verbs	V	
n-ṭ-ṭ	naṭṭ	y-niṭṭ	to jump	Verbs	V	
n-f-x	nafax	yi-nfax	to puff	Verbs	V	
h-r-r	harr	y-hirr	to leak out some salt or sugar from bag	Verbs	V	
h-y-ʔ	hayyaʔ	y-hayyiʔ	to prepare	Verbs	V	
w-j-h	wājah	y-wājih	to meet	Verbs	V	
j-b-n	mijbana	majābin	graveyard	Construction	N, C	Cf. mijanna
j-n-n	mijanna	mijann-āt	graveyard	Construction	N, C	Cf. mijbana
x-š-š	xišša	xšāš	room made of mud and stones	Construction	N, C	
d-w-r	duwwār	dawawīr	bus stop	Construction	N, C	
s-j-d	masjid	masājid	mosque	Construction	N, C	
ṭ-b-b	ṭubāba	ṭubab-āt	hospital/clinic	Construction	N, C	
g-ṣ-l	gaṣīla	gaṣāyil	group of houses made of mud and stone	Construction	N, C	

j-d-r	jidir	jdūr	large cooking pot	Household	N, C	
j-r-r	jarra	jrār	water jar	Household	N, C	
ḥ-w-z	ḥawūz	ḥawawīz	water tank	Household	N, C	
x-r-j	xirj	xrūj	box used for keeping/storing coffee, jewellery, money, etc.	Household	N, C	
x-r-g	xirga	xirag	cloth	Household	N, C	
x-š-g	xašūga	xawašīg	spoon	Household	N, C	
x-w-ṣ	xūṣa	xuwaṣ ~ xiwaṣ	knife	Household	N, C	
d-b-y	dubiyya	dubiyy-āt	gallon for keeping milk	Household	N, C	
d-g-r	duggārah	dugagīr	piece of wood or metal used to lock the door	Household	N, C	
d-l-l	dallah	dlāl	coffee pot	Household	N, C	
s-ḥ-l	sḥala	saḥāli	metal cup for water	Household	N, C	
s-ᶜ-n	siᶜin	sᶜūna	container made of leather for storing yoghurt	Household	N, C	
š-x-l	mišxāla	mišaxīl	sieve	Household	N, C	Cf. saffāya
š-ṭ-r	šaṭṭāra	šaṭarāṭ	big knife used for chopping meat	Household	N, C	Cf. gaṭṭāᶜa
ṣ-f-y	ṣaffāya	ṣaffay-āt	sieve	Household	N, C	Cf. mišxāla
ṭ-b-š	ṭibšiya	ṭabāši	bowl	Household	N, C	Cf. gušaniyya

ṭ-b-n	ṭabūn	ṭawab-īn	oven for making bread made of mud and hay	Household	N, C	
ṭ-w-s	ṭāsa	ṭūs	cooking pot	Household	N, C	
ġ-r-f	muġrafa	maġarīf	spoon for picking food out of cooking pot	Household	N, C	ġ-r-f
g-ḥ-r	migḥara	magāḥir	piece of wood used to clean up fire after baking	Household	N, C	
g-r-b	girba	girab	container made of goatskin used for keeping and cooling water	Household	N, C	
g-š-š	magašša	magašš-āt	broom	Household	N, C	
g-š-n	gušāniyya	gušaniyy-āt	bowl	Household	N, C	Cf. ṭibšiya
g-ṭ-ᶜ	gaṭṭāᶜa	gaṭṭaᶜ-āt	big knife used for chopping meat	Household	N, C	Cf. šaṭṭāra
g-ᶜ-b	guᶜub	gᶜāb	can	Household	N, C	
g-l-y	gallāya	galāli ~ gallay-āt	frying pan	Household	N, C	
k-f-r	kfara	kfar-āt	lid of container	Household	N, C	
k-w-r	kwāra	kwar-āt	substance made of mud used for storing grains particularly wheat	Household	N, C	
l-ḥ-š	laḥḥāša	laḥḥaš-āt	place for storing house stuff such as clothes	Household	N,	
m-r-w	maru	*	container made of goat/sheep leather used for storing *samna*	Household	N, U	

m-ṣ-n	maṣanna	maṣann-āt	store	Household	N, C	
w-g-d	mūgad	mawāgid	stove	Household	N, C	
b-j-d	mabjūd	mabjud-īn	weak	Human qualities and defects	Adj.	Cf. msangir
b-x-l	baxīl	buxala	mean	Human qualities and defects	Adj.	
j-ḥ-d	jaḥūd	jaḥud-īn	person always claiming poverty	Human qualities and defects	Adj.	
ḥ-w-l	ʔaḥwal	ḥuwil	cross-eyed	Human qualities and defects	Adj.	
x-r-s	ʔaxras	xurs ~ xurs-ān	dumb	Human qualities and defects	Adj.	
x-r-ṭ-m	mxarṭim	mxarṭim-īn	long-faced	Human qualities and defects	Adj.	
x-r-ṭ-m	xarṭam	y-xarṭim	to show a long face	Human qualities and defects	V	
z-ṭ-y	ziṭṭi	ziṭṭiyya	ignorant	Human qualities and defects	Adj.	
s-n-g-r	msangir	msanigr-īn	weak	Human qualities and defects	Adj.	Cf. mabjūd
š-l-h-b	mšalhib	mšalihb-īn	person who does things too quickly	Human qualities and defects	Adj.	
ṣ-ṭ-l	maṣṭūl	maṣaṭīl	insane	Human qualities and defects	Adj.	
ṭ-r-ṭ-š	mṭarṭiš	mṭarṭš-īn	stubborn	Human qualities and defects	Adj.	
ṭ-r-m	ʔaṭram	ṭurum ~ ṭurmān	deaf	Human qualities and defects	Adj.	
ḍ-y-x	ḍīx	ḍixān	careless	Human qualities and defects	Adj.	

ᶜ-r-j	ʔaᶜraj	ᶜurj	lame	Human qualities and defects	Adj.	
ᶜ-r-r	mᶜarᶜir	mᶜariᶜr-īn	absent-minded	Human qualities and defects	Adj.	
ᶜ-m-y	ʔaᶜma	ᶜumyān ~ ᶜumiy	blind	Human qualities and defects	Adj.	
ᶜ-w-r	ʔaᶜwar	ᶜuwir	one-eyed	Human qualities and defects	Adj.	
g-n-t-r	mgantir	mgantr-īn	proud	Human qualities and defects	Adj.	
l-t-ġ	ʔaltaġ	lutuġ	person with speech impediment	Human qualities and defects	Adj.	
n-š-m	našmi	našāma	person with good qualities	Human qualities and defects	Adj.	
n-ṣ-l	naṣla	naṣl-āt	useless	Human qualities and defects	Adj.	
w-n-s	winis	wins-īn	lovely	Human qualities and defects	Adj.	
ʔ-ḏ-n	ʔiḏin	ʔaḏān	ear	Body parts	N, C	
b-r-ṭ-m	burṭum	barāṭim	lip	Body parts	N, C	
ṯ-m-m	ʔuṯum	ṯmām ~ ʔṯāmi	mouth	Body parts	N, C	
j-l-d	jild	jlūd	skin	Body parts	N, C	
ḥ-j-b	ḥājib	ḥawājib	eyebrow	Body parts	N, C	
ḥ-f-n	ḥafna	ḥafn-āt	handful	Body parts	N, C	
ḥ-l-g	ḥalg	ḥlūg	throat	Body parts	N, C	

x-d-d	xadd	xdūd	cheek	Body parts	N, C	ṣidiġ
x-š-m	xašim	xšūm	nose	Body parts	N, C	
d-f-f	dfūf	*	buttocks	Body parts	N, U	d-f-f
ḏ-g-n	ḏagin	ḏgūna	beard	Body parts	N, C	Cf. liḥya
*r-ʔ-s	rās	rūs	head	Body parts	N, C	
r-g-b	ragaba	rgāb	neck	Body parts	N, C	
s-n-n	sinn	snūn	tooth	Body parts	N, C	
š-r-b	šārib	šawārib	moustache	Body parts	N, U	
š-ᶜ-r	šaᶜar	*	hair	Body parts	N, U	
š-y-m	šāma	šam-āt	birthmark	Body parts	N, C	
ṣ-d-r	ṣadir	ṣdūr	chest	Body parts	N, C	
ṣ-d-ġ	ṣidiġ	ṣdūġ	cheek	Body parts	N, C	Cf. xadd
ᶜ-y-n	ᶜēn	ᶜyūn	eye	Body parts	N, C	
ġ-r-r	ġurra	ġrar	fringe	Body parts	N, C	
k-t-f	katif	ktūf	shoulder	Body parts	N, C	
k-r-š	karš	krūš	belly	Body parts	N, C	

k-ᶜ-b	kaᶜab	kᶜūb ~ kᶜāb	heel	Body parts	N, C	
k-f-f	kaff	kfūf	palm	Body parts	N, C	
l-ḥ-y	liḥya	lḥiyy ~lḥiyya	beard	Body parts	N, C	Cf. ḏagin
l-s-n	lsān	lisna	tongue	Body parts	N, C	
w-j-h	wajih	wjūh	face	Body parts	N, C	
ṯ-l ṯ	ṯalūl	ṯawalīl	piece of *jamīd*: dried yoghurt used in cooking *Mansaf*	Cooking	N, C	Cf. jaᶜjūl
j-d-ᶜ	jadᶜah	jdiᶜ-āt ~ jdaᶜ	piece of bread	Cooking	N, C	Cf. ṭigšah
j-d-ᶜ	jadaᶜ	yi-jdaᶜ	to cut bread into pieces	Cooking	V	
j-r-š	jirīš	*	ground wheat	Cooking	N, U	
j-ᶜ-j-l	jaᶜjūl	jaᶜajīl	piece of *jamīd* : dried yoghurt used in cooking *Mansaf*	Cooking	N, C	Cf. ṯalūl
r-d-š	radša	*	loafs of bread	Cooking	N, Pl.	
z-ᶜ-g	zaᶜg	*	salty	Cooking	Adj.	
s-l-g	salag	yi-slig	to boil	Cooking	V	
s-f-f	saff	y-siff	to swallow some powder with no water	Cooking	V	
s-f-f	sufūf	*	ground herbs	Cooking	N. U	
š-x-l	šaxxal	y-šaxxil	to sieve	Cooking	V	Cf. ṣaffa

š-r-k-n	šarkan	y-šarkin	to bake type of bread called *šrāk*	Cooking	V	
š-f-y	šaffa	y-šaffi	to take meat off bones	Cooking	V	
š-w-y	šawa	yi-šwi	to grill	Cooking	V	
ṣ-f-y	ṣaffa	y-ṣaffi	to sieve	Cooking	V	Cf. šaxxal
ṭ-b-x	ṭabax	yi-ṭbux	to cook	Cooking	V	
ṭ-g-š	ṭigša	ṭigaš	piece of bread	Cooking	N, C	Cf. jadᶜa
g-l-y	gala	yi-gli	to fry	Cooking	V	
ṯ-w-b	ṯōb	ṯwāb	long dress	Belongings	N, C	
ḥ-ḏ-w	ḥaḏwa	ḥaḏw-āt	shoes made of leather	Belongings	N, C	Cf. maššāya
ḥ-f-y	ḥaffāya	ḥaffāy-āt ~ ḥuffi	slippers	Belongings	N, C	
d-š-d-š	dišdāš	dašadīš	slip-like garment	belongings	N, C	
z-y-n	mizyān	mizay-īn	scissors	Belongings	N, C	
s-f-ḥ	misfaḥ	misāfiḥ	black piece of cloth wrapped around woman's head	Belongings	N, C	
s-y-r	sēr	sirān	belt	Belongings	N, C	Cf. gšāṭ
š-m-x	šmāx	šumux	headscarf for men	Belongings	N, C	
ᶜ-b-y	ᶜabāya	ᶜbiyy ~ ᶜabay-āt	covering dress for old people	Belongings	N, C	

f-r-w	farwa	farāwi	coat made of sheep skin	Belongings	N, C	
g-š-ṭ	gšāṭ	gušuṭ	belt	Belongings	N, C	Cf. sēr
m-š-y	maššāya	maššay-āt	shoes	Belongings	N, C	Cf. ḥaḏwa
h-w-š	hušaniyya	hušaniyy-āt	sharp tool worn on the right side of man's body	Belongings	N, C	
w-ṭ-y	waṭya	wiṭāy-āt	thin shoes	Belongings	N, C	Cf. maššāya
b-r-z	burza	buraz	place where bride and groom sit on wedding day	Weddings	N, C	
d-x-ḷ	daxḷa	*	wedding day	Weddings	N, U	
s-t-r	satar	yi-stur	to marry	Weddings	V	
f-y-d	fēd	fyūd	dowry	Weddings	N, U	
g-r-ʔ	grah	gray-āt	food on wedding day	Weddings	N, C	
g-w-d	gōd	*	sheep gifted to groom on his wedding day	Weddings	N, U	
n-g-ṭ	naggaṭ	y-naggiṭ	to give money to groom as a gift	Weddings	V	
n-g-ṭ	nagūṭ	*	money gifted to groom	Weddings	N, U	
*	yōm in-naṣṣa	*	day before wedding day	Weddings	N, U	
d-x-l	daxla	daxl-āt	by-street	Other	N, C	
s-f-ṭ	safaṭ	sfāṭ	pocket	Other	N, C	

s-f-n	safīna	sufun	notebook	Other	N, C	
š-r-k	tašrīka	*	sheep or goat slaughtered and distributed evenly between some people	Other	N, U	
ᶜ-w-n	ᶜōna	*	voluntary help	Other	N, U	
ᶜ-w-n	ᶜōnt ir-radd	*	help in building of house	Other	N, U	
ġ-r-r	ġurra	*	first day in Ramadan	Other	N, U	
f-z-ᶜ	fazᶜa	*	some help made collectively by some people, especially relatives	Other	N, U	
k-w-l-s	kawlasa	kawlasāt	plotting	Other	N, U	

Chapter Seven

Conclusion and Suggestions for Further Studies

7.1 Conclusion

The present study provides a detailed account of the segmental and prosodic phonology and morphology of WM Arabic, a rural Jordanian dialect spoken by members of the Bani Lay<u>t</u> tribe in WM district. The study consists of seven chapters. Chapter one starts with an overview of Arabic followed by a presentation of the scope, objectives, rationale and structure of the thesis. The chapter then turns to present some socio-historical background about WM district, and discusses the methodology used by the researcher to collect the data. The researcher recruited 20 native participants who had spent all their life in WM and whose age ranged from 45 to 88 years old. Data collection methods included interviews, direct elicitation, observation and narration. All data have been subsequently checked with four language consultants, with whom I have been in touch throughout the whole writing-up period of the thesis.

Chapter two presents an overview of Arabic dialectology with a presentation of the various classifications of Arabic dialects. The linguistic situation in Jordan is thereafter examined with a presentation of the various classifications of Jordanian dialects. A review of Levant Arabic with some focus on Jordanian dialects is presented under the following themes: the phoneme system, stress assignment, syllable structure, complex clusters, the major phonological processes, personal pronouns, demonstratives and lexicon.

Chapter three examines the phonological aspects of the dialect adopting for the section of prosodic phonology Metrical Theory and Moraic Theory. Chapters four and five present a description of the verbal and nominal morphological aspects in WM Arabic. The study concludes with a short lexicon to the dialect following categories and head terms used in Behnstedt and Woidich's *Word Atlas of Arabic Dialects* (2011). Lexical entries are grouped according to the following semantic classes: man, professions, animals, nature, violence, feelings and states, money, adverbs of time, verbs, function words, weddings, plants, cooking, constructions, household, agriculture and different objects. The conclusion and suggestions for further studies are given thereafter.

The rationale of the study originates from the fact that WM has recently undergone significant linguistic changes as a result of the selection of Petra as one of the Seven Wonders of the World. This renders the city of WM a tourist attraction for millions of people worldwide, a fact that has also encouraged many people, particularly from the city of Maʕān, to work and/or invest in the city. This has resulted in direct communication for the first time between a large proportion of the community of WM with people from outside from different backgrounds, a factor which has affected the linguistic repertoire of the younger generation in particular. Further, mass media has had a significant impact on WM Arabic. Radio and television are an entertainment source for lots of families in the community who listen to the world news spoken in MSA or watch Bedouin, Egyptian or Syrian TV series. This was apparent during my fieldwork, where even old men have been influenced by MSA vocabulary.

The main contribution of this study is to provide a description of the phonological, morphological and lexical features of the dialect. The study has drawn on Metrical Theory and Moraic Theory to account for the prosodic phonology. Secondly, since the majority of literature on Jordanian Arabic to date focuses on phonological aspects, the present study contributes to the literature by examining morphological aspects of a rural Jordanian dialect. Since this work is the first examination of the morphology of a rural Jordanian dialect, it will hopefully pave the way for future research on morphological aspects of other rural Jordanian dialects. A short lexicon of the basic terms in the dialect is provided which will hopefully be a starting point for the documentation of key basic terms in other Jordanian dialects. Below I highlight the most significant linguistic features in WM Arabic in comparison with other Jordanian dialects.

In terms of the phoneme system, WM Arabic has 27 consonants some of which differ from those attested in other Jordanian dialects. The most prominent features are the realisation of the voiceless uvular stop *q as a voiced velar stop /g/, the merging of the emphatic interdental fricative *ḏ̣ and the emphatic voiced dental plosive *ḍ into /ḍ/, and the realisation of *k as a voiceless velar stop /k/ in all contexts. The table below compares the phoneme system of WM Arabic with that of three rural Jordanian dialects: Ḥōrān Arabic (Cantineau 1946), Maʕān Arabic (Rakhieh 2009) and Ṣalṭi Arabic (Herin 2013), two Bedouin dialects: Bani Ḥasan Arabic (Irshied 1984) and ʕAbbādi Arabic (Sakarnah 1999), and the urban ʕAmmāni Arabic (al-Wer 2007) (cf. 2.3.1).

Table 234: The phoneme system of WM Arabic compared to other Jordanian dialects

	WM	ḪA	MA	ṢA	BHA	ABA	AA
Uvular stop *q	/g/	/g/	/g/	/g/	/g/	/g/	/ʔ/[19] ~ /g/
Dental plosive *ḏ	/ḏ/	/ḏ/	/ḏ/	/ḏ/	/ḏ/	/ḏ/	/ḍ/
Voiceless velar stop *k	/k/	[k] ~[č]	[k] ~[č]	[k] ~[č]	[k] ~[č]	[k] ~[č]	/k/

Ḥōrān Arabic (ḪA), Maᶜān Arabic (MA), Ṣalṭi Arabic (ṢA), Bani Ḥasan Arabic (BHA), ᶜAbbādi Arabic (ABA), and ᶜAmmāni Arabic (AA)

Like many other Jordanian dialects, the vocalic system of WM Arabic comprises three short vowels /i/, /a/ and /u/, their long counterparts /ī/, /ā/, /ū/ and two long mid vowels /ē/ and /ō/, which result from monophthongisation of CA diphthongs *ay and *aw (cf. 2.3.2.1). Four contexts exist in which the CA diphthongs *ay and *aw are preserved in WM Arabic: where C1 is a glide, e.g. ʔawsaᶜ 'wider', ʔaysar 'easier'; where /w/ or /y/ is a geminate, e.g. rawwaḥ 'he left', ḥayyan-at 'she milks'; where a monosyllabic word has a final glide, e.g. laww 'if'; and finally where quadriliteral verbs and nouns have an antepenultimate glide, e.g. kawlasa 'plotting against someone', t-bayṭar-u 'they try to fix something'. This contrasts with ᶜAjārma Arabic (Palva 1976), for which Palva argues that the original diphthongs *ay and *aw undergo partial monophthongisation into [ey] and [ow] before back and emphatic consonants, e.g. ᶜeyn 'eye', xowṣa 'knife', and undergo complete monophthongisation elsewhere into [ē] and [ō] (cf. 2.3.1.2).

WM Arabic has two classes of emphatics: a primary class which comprises the set of pharyngealised coronal obstruents /ṭ/, /ṣ/ and /ḍ/ and a secondary class comprising the segments secondary set of /m̩/, /r̩/, and /l̩/ which exhibit phonemic contrast in a few words

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[19]/The /g/ ~ /ʔ/ variation marks the distinction between male speakers who realise *q as /g/ and female speakers who realise it as /ʔ/ (Palva 1994; al-Wer 2007).

only in the vicinity of the low vowels /a/ and /ā/. While emphasis spreads bidirectionally in WM Arabic, i.e. rightward and leftward, rightward emphasis is impeded by the set of palatal segments /i/, /y/ and /š/.

One characteristic of WM is its adherence to the Sonority Hierarchy Principle in the treatment of final consonant clusters. Thus, in underlying CVCC and CVGC forms (G = guttural), the epenthetic vowels [i] and [a] are inserted respectively iff C2 is more sonorous than C1, e.g. *sahl > sahil* 'easy', *laḥm > laḥam* 'meat'. By contrast, where WM Arabic has a set of potential onset clusters, some of these clusters abide by the Sonority Hierarchy Principle, e.g. *kwāra* 'substance made of mud used for storing grains particularly wheat', *grūš* 'money', while some clusters occur even where the Sonority Hierarchy Principle is not obeyed, e.g. *y-kabbiš* 'he sleeps', *n-kassir* 'we break', *n-balliš* 'we start'.

Similar to Bani Kinaāna Arabic (al-Damen 2007), *l-* of the definite article assimilates optionally to a following palato-alveolar affricate /j/ whereas it fails to assimilate in some Bedouin dialects, e.g. ᶜAbbādi Arabic (1999) (cf. 2.3.5.1). Furthermore, while many rural Jordanian dialects, e.g. Ḥōrān Arabic (Cantineau 1946), Ṣalṭi Arabic (Herin 2013), tend to assimilate the glottal fricative /h/ of third person pronouns to a preceding obstruent, e.g. *binit-ha > bint-ta* 'her girl', *ḥagg-ha > ḥag-ga* 'her right', /h/ assimilation in this context fails to take place in WM Arabic (cf. 2.3.5.1).

A moraic analysis of the data shows that the minimum weight of the syllable is monomoraic and the maximum is bimoraic. Words consisting of a single monomoraic syllable do not receive stress because they fail to satisfy the minimality condition; loan words conform to the bimoraicity condition by maximizing their weight through gemination or vowel lengthening, e.g. *bāṣ* 'bus' and *ġāz* 'gas', *jakk* 'jack'. The dialect obeys the End Rule Right Principle which places stress on the head of the right-most foot. Below is a summary of stress assignment in WM Arabic:

(a) Consonant Extrametricality: C → ⟨C⟩ /___]word

(b) Foot Construction: Form moraic trochees from left to right

(c) Degenerate feet are forbidden absolutely

(d) Foot Extrametricality: Foot → ⟨Foot⟩ /___]word

(e) Word Layer Construction: End Rule Right

Ten verb forms are attested in the dialect (I-X), plus two quadriliteral forms (Q1 and Q2). In this respect, the dialect exhibits some differences from other Jordanian dialects. While forms VII and VIII are realised in WM Arabic respectively as n-CaCiC and C-t-aCiC, an umlaut rule affects both forms in Bani Ḥasan Arabic (Irshied 1984) and ᶜAbbādi Arabic (1999), making them surface respectively as n-CaCiC and C-t-aCiC, e.g. e.g. *yi-n-kisir* 'he is broken' and *yi-r-tifiᶜ* 'he goes up' (cf. 2.3.5.5). Additionally, Form IX is shown productive in WM Arabic, realised as CCaCC in the perfect and yi-CCaCC in the imperfect. Some Jordanian dialects, e.g. Bani Ḥasan Arabic (Irshied 1984), Bani Kināna Arabic (al-Damen 2007) tend to substitute this form with a periphrastic phrase involving the verb *ṣār* 'to become' followed by the adjective, e.g. *ṣār ʔaḥamar* 'it (m.) became red'. A raising of the short low vowel /a/ into [i] in a non-final open syllable affects the verbal forms I, IV, VII and VIII in many Bedouin Jordanian dialects, e.g. Bani Ḥasan Arabic (Irshied 1984), ᶜAbbādi Arabic (Sakarnah 1999) but fails to take place in WM Arabic in the same contexts (cf. 2.3.5.4).

Perfect subject-verb agreement involves a set of subject suffixes that exhibit some differences from other Jordanian dialects. For example, while WM Arabic marks 2f.pl. and 3f.pl. respectively using the suffixes *-tan* and *-an*, Ġawārna Arabic (Bani Yassin 1980) and Bdūl Arabic (Bani Yassin and Owens 1984) utilise *-tin* for 2f.pl. and *-in* for 3f.pl. Further differences between WM Arabic, Ġawārna Arabic (Bani Yassin 1980) and Bdūl Arabic (Yassin and Owens 1984) are given in the table below:

Table 235: Subject suffixes in WM Arabic, Ġawārna Arabic and Bdūl Arabic

	WM Arabic		Ġawārna Arabic		Bdūl Arabic	
Person-Gender	S	Pl	S	Pl	S	Pl
1	-t	-na	-t	-na	-t	-na
2m	-t	-tu	-t	-tu	-t	-tuw
2f	-ti	-tan	-ti	-tin	-tiy	-tin
3m	-0	-u	-0	-u	-0	-aw
3f	-at	-an	-at	-in	-at	-in

Imperfect subject-verb agreement is marked through a set of prefixes and/or suffixes. The table below compares the set of prefixes and/or suffixes utilised in WM Arabic, Ġawārna Arabic (Bani Yassin 1980) and Bdūl Arabic (Bani Yassin and Owens 1984).

Table 236: Imperfect subject-verb agreement in WM Arabic, Ġawārna Arabic and Bdūl Arabic

	WM arabic		Ġawārna Arabic		Bdūl Arabic	
Person-Gender	S	Pl	S	Pl	Pl	S
1	a-	n-	a-	n-	a-	n-
2m.	t-	t-…..-u	t-	t-…..-w	t-	t-…..-u
2f.	t-….i	t-… -an	t-	t-… -an	t-… -i	t-… -in
3m.	y-	y-…. -u	y-	y-…. -w	y-	y-….-u
3f.	t-	y-….-an	t-	y-….-an	t-	y-….-in

The application of inflectional morphology in WM Arabic involves some alternations. The most prominent of these are outlined below:

1- Where the stem of a perfect verb ends in a geminate or a vowel, the long vowel /ē/ surfaces before consonant-initial subject suffixes, e.g. *jarr+t > jarr-ēt* 'I pulled', *sawwa+na > saww–ē-na* 'we did'.

2- Syncope of the high front vowel occurs in open unstressed syllables, e.g. *'ši.ri.b-u > 'šir.bu* 'they drank'.

3- The stem vowel /a/ is subject to syncope in unstressed syllables in forms VII and VIII before vowel-initial suffixes, e.g. *'n-ka.sa.r-u > 'n-kas.r-u* 'they were broken', though it is retained in other forms in the same environment, e.g. *'tif.ha.mi* 'you (f.s.) understand', *'yif.ha.m-u* 'they (f.) understand', *'ga.ʕa.du* 'they (m.) sat'.

4- Similarly, the inflection of imperfect verbs involves the syncope of the unstressed short high vowel /i/ in forms IV, VII and VIII before vowel-initial subject suffixes, e.g. *yin.'ka.si.ru > yin.'kas.ru* 'they break', and the degemination of C2 in Form II to avoid an impermissible sequence of three consonants, e.g. *y-ʕallim-an > y-ʕalm-an* 'they (f.) teach'

5- Where glides in the perfect of VII, VIII and X hollow verbs are realised as /ā/, giving the pattern CāC, the long vowel shortens into [a] where a consonant-initial subject suffix attaches, e.g. *n-hār+ti > n-har-ti* 'you (f.s.) declined'.

A basic feature of the WM Arabic morphological system is the retention of gender distinction in second and third person plural pronouns. Thus, while ᶜAmmāni Arabic (al-Wer 2007) uses the form *intu* 'you' for both genders, WM Arabic uses *intu* 'you (m.)' for the masculine and *intan* 'you (f.)' for the feminine. Similarly, while ᶜAmmāni Arabic uses the form *humme* 'they' for both genders, WM Arabic uses *humma* 'they (m.)' for the masculine and *hinna* 'they (f.)' for the feminine (cf. 2.3.6.1).

The table below presents the basic features that define WM Arabic:

Table 237: The basic features of WM Arabic

Feature	WM Arabic
The reflex of /q/	/g/
Affrication of /k/	✘
Preservation of interdentals	✓
The reflex of *ḍ	/ḍ/
Monopthongisation of *ay and *aw	blocked in four contexts: where C1 is a glide, where the glide is a geminate, where a monosyllabic word ends in a geminate, and where a quadrilateral root has an antepenultimate glide.
Stress system	C'aCaC (trochaic)
Degenerate foot	forbidden
Minimality condition	✓
Syllable Structure	Minimally monomoraic and maximally bimoraic
The core syllable types	CV, CVC, CVV, CVVC, CVCC
Syllable Repair processes	Epenthesis, syncope, glottal stop prosthesis, V-V resolution, degemination, long vowel shortening and pre-suffix lengthening.
Adherence to Sonority Hierarchy Principle	✓
Gahawa syndrome	✘
bṣalah pattern	✘
Trisyllabic elision	✘
Raising	✘
Definite article assimilaion	Assimilates obligatory to coronals and optional to palato-alveolar affricate /j/
Assimilation of /h/ to a following obstruent	✘
Primary emphaics	/ṭ/, /ṣ/ and /ḍ/
Emphasis blockers	/i/, /y/ and /š/
Dialect classification according to Kiparsky (2003)	Coda dialect (VC)
b-imperfect	✓
Basic patterns of non-derived nouns	CVVC, CCVVC, CVCC, CVCVC, CVVC-a, CVCC-a, CVCCVC, CVCCVVC, CVCCVVC-a, CVVCVC, CVCVVC, CCVVC-a
Diminutive patterns	1- CCēC for triliteral masculine singular nouns 2- CCēC-a for triliteral feminine nouns. 3- CCiC-āt for triliteral plural nouns 4- CCiCīC and CCēCiC for quadriliteral masculine singular nouns 5- CCiCīC-a for quadriliteral feminine singular nouns 6- CCiCiC-āt for quadriliteral plural nouns

Basic adjectival patterns	CVCC, CVCVC, CVCV, C(V)CVVC, CVVCVC, CVCCVC, CaCCāC, CCVVC, CICCīC, and ʔaCCaC
Gender distinction in 2nd and 3rd plural pronouns	✓
The set of distal demonstratives	*hāḏ* 'this (m.)' , *hāḏi* 'this (f.)', *haḏōl* 'these'
The set of proximal demonstratives	*haḏāk* 'that (m.)', *haḏīk* 'that (f.)', *haḏol-āk* 'those'

7.2 Suggestions for Further Studies

This section provides some suggestions for future research on WM Arabic and other Jordanian dialects.

7.2.1 Future Research on WM Arabic

Much research is yet needed to examine some of the unexplored linguistic features of WM Arabic. During my stay in WM district, I have come across a number of idiomatic expressions and adverbs that are specific to WM Arabic. I recommend a study targeted to document these expressions and provide an analysis of the clues by which these idioms are interpreted with reference to their context. These expressions exhibit a range of syntactic patterns that are different from those of other Jordanian dialects. Therefore, I recommend a study that examines the syntactic features of these expressions and compare these with those already examined in other Arabic dialects.

Further, while much of the phonological and morphological aspects of the dialect have been examined in this work, the syntactic features of the dialect remain largely unexplored. Therefore, I recommend a study that records the syntactic features of the dialect and compares the findings with Bdūl Arabic (Bani Yassin and Owens 1984), a Bedouin dialect spoken in Petra province. What justifies such a study is the syntactic differences between the two dialects that I have observed during my stay in WM district. Furthermore, where the study shows that WM Arabic has an epenthetic vowel that helps avoid an impermissible structure in the language, research that measures the differences between epenthetic vowels and lexical vowels acoustically is recommended.

7.2.2 Research on Other Jordanian Dialects

With the flood of about one million Syrian refugees to il-Zaᶜtari camp in the city of al-Mafraq since 2011, research that examines the linguistic features of Bedouin dialects in al-Mafraq is recommended before these dialects mix with the new Syrian ones. Since that time, marriage between Bedouins and Syrian refugees has been very common. Among these dialects that need to be examined is Ahl il-Jabal dialect spoken by members of the Ahl il-Jabal tribe[20], having come from Jabal al-ᶜArab in Syria circa 150 years ago. Research should examine the linguistic features of the dialect benefiting from recent linguistic theories. The study should uncover if the dialect has retained any of the linguistic features of Bedouin Syrian dialects since many of the speakers are originally from Syria.

Moreover, the furthest populated area in the Hashemite Kingdom of Jordan is Rwēšid district on the border between Jordan and Iraq with a population of about 15 thousand people. The city is a crossing point for thousands of Iraqi and Jordanian travellers and hosts many traders from outside the original communities. Research should, therefore, record the linguistic features of that dialect before it loses them and see if it exhibits any similarity to neighbouring Iraqi dialects.

While two previous accounts have dealt with emphasis spread in Jordanian Arabic, (Zawaydeh 1999; al-Masri and Jongman 2004), none of these studies have examined the speech of Bedouin dialects in the north of Jordan. An acoustic study is therefore needed to examine the correlates and directionality of emphasis spread in Bedouin dialects in the north of Jordan.

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[20] They are known in Jordan as Jbiliyyah.

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Appendix

Consent form

Full project title: The phonology and morphology of Wadi Mousa Arabic

Principal researcher: Anas Al Huneety

You are invited to take part in this research project which aims to study the phonology and morphology of Wadi Mousa Arabic. We request permission to record oral speech in order to analyse data. Data will be recorded on a digital audio recorder (Olympus LS-11). All sound files will be saved on an SD (memory) card, and then transferred to my computer. The results may be used in academic conferences and papers, but all data will be kept confidential and anonymous. You will be given a copy of this form.

Participation in this research is voluntary. If you do not wish to take part, you do not have to. You are free to withdraw from the research at any time, without giving a reason. You are also free to withdraw any data you have already provided from the research at any time, without giving a reason. Your signature plus your check mark in box in each part indicate that you have read the information about the project, and you have agreed to take part in the study.

Please do ask questions about anything that you do not understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend, or your local worker.

Please read this form carefully, and then put a tick (√) in the box so as to know you read and agree to participate in the project.

☐- I have read, or have had this document read to me in a language that I understand, and I understand the purposes, procedures and risks of this research project as described within it.

☐- I freely agree to participate in this research project, as described.

☐- I have been informed of the purpose of the research for which you have interviewed me with and my rights as a research informant have been explained to me.

☐- I am fully aware of the fact that the interviews are being recorded, and that I have the right to request the deletion of any portion of the recorded interview that I am uncomfortable with.

☐-I understand that all information provided will be kept strictly confidential, and that my identity will be known only by the present investigator. The recorded materials will be stored safely as long as they are needed. Whenever the researcher thinks that they are no longer needed, they will be destroyed.

☐-It is understood that my participation is voluntary and that I have the right to withdraw from the project at any time without explanation.

☐- I give you permission to use the interview material for your current research, and for any resulting published or unpublished works.

☐-I further give you permission to use the interview material for any other purpose directly related to your PhD research.

Participant's name: …………………………………………………

Age:

Occupation:

Signature: Date:

Arabic Consent Form

<div dir="rtl">

نموذج موافقة

عنوان المشروع: علم الصوت (الفونولوجيا) والصرف للهجة وادي موسى

اسم الباحث: أنس الحنيطي

أنت مدعو إلى المشاركة في هذا المشروع الذي يهدف إلى دراسة علم الصوت (الفونولوجيا) والصرف للهجة وادي موسى. نطلب السماح بتسجيل كلام شفهي لتحليل المعلومات. المعلومات سوف تسجل باستخدام جهاز صوتي رقمي نوع (**Olympus LS-11**). جميع ملفات الأصوات ستخزن في البداية على بطاقة ذاكرة اس-دي ثم ستنتقل الى حاسوبي الشخصي. النتائج يمكن أن تسخدم في المؤتمرات و الأوراق العلمية، لكن كل البيانات سوف تحفظ بسرية وخصوصية تامة. سوف تعطى نسخة من هذا النموذج.

المشاركة في هذا البحث تعتبر تطوعية. اذا لم ترغب المشاركة، أنت في حرية تامة لكي تتراجع عن المشاركة في المشروع في أي وقت، و بدون ذكر الأسباب. لك ايضا مطلق الحرية أن تسحب أي معلومات قد قمت بتزويدنا في أي وقت وبدون ذكر أسباب. توقيعك و اشارة (√) في الصندوق لكل بند تدل أنك قرأت المعلومات عن المشروع وأنك وافقت على المشاركة في الدراسة. من فضلك، اسأل عن أي شيء لم تفهمه أو تريد المزيد عنه. قبل أن تقرر المشاركة، بامكانك الحديث عنه مع قريب، صديق أوعامل محلي.

من فضلك، إقرأهذا النوذج بتمعن، ثم ضع إشارة (√) في الصندوق للتأكد من أنك قرأت و وافقت على المشاركة في المشروع.

☐ قرأتُ| قُرِأ هذا النوذج لي بلغة واضحة و فهمت الأهداف و الإجراءات المتّبعة لهذا المشروع.

☐ وافقت المشاركة في هذا المشروع بإرادتي كما وصف لدي.

☐ أخبرت بهدف المشروع الذي قوبلت من أجله و أخبرت بكل حقوقي كمشارك في هذا المشروع.

☐ أنا على علم بأن المقابلات ستسجل وأن لدي الحق بطلب حذف أي جزء من المقابلة المسجلة التي لم أرتاح لها.

☐ أفهم أنّ كل المعلومات المزودة سوف تحفظ بسرية وأن هويتي لن يعرفها إلا من خلال الباحث، وأن المادة المسجلة سوف تحفظ بشكل آمن و كما يجب. في أي وقت يعتقد الباحث لا حاجة للمعلومات سوف تتلف.

☐ أعلم أن مشاركتي تطوعية وأن لدي الحق في الانسحاب من المشروع في أي وقت و بدون توضيح.

☐ أسمح باستخدام المادة المسجلة لهذا البحث ولكل الأعمال الناتجة المنشورة وغير المنشورة.

☐ أعطي السماح أيضا باستخدام المادة المسجلة لأي هدف علمي آخر ذات علاقة مباشرة بمشروع رسالة الدكتوراه

اسم المشارك:

العمر:

المهنة:

التاريخ:

التوقيع:

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