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A GRAMMAR OF MOROCCAN ARABIC

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SOUAD SLAOU

Pars Lettres 25

A Grammar of Moroccan Arabic *** 2004**

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Introduction

This book is a descriptive grammar of Moroccan Arabic from a broad perspective of generative grammar. We have avoided as much as possible the technicalities associated with theory, and attempted to simplify the jargon and the description because we had in mind primarily undergraduate and graduate students of linguistics, and the general reader who is particularly interested in the structure of Moroccan Arabic.

In this book, we describe and analyse important phonological, morphological and syntactic phenomena of the variety of Moroccan Arabic spoken in the areas of Meknès and Fès. To satisfy this aim, the book covers a wide range of empirical data. It does not attempt to offer an exhaustive survey of the structures of Moroccan Arabic, however, as it would be the case in the excellent tradition of Arab grammarians such as Sibawayhi or Ibnu Jinni, to name but two. Our aim is to provide the reader with a coherent and systematic approach to the structures of Moroccan Arabic. This aim informs our discussion of basic structural phenomena, such as the sound pattern, the morphology, and the syntax of the language.

The book is divided into three chapters. The first one deals with phonology, the second is concerned with morphology, and the third one deals with syntax. The chapter on phonology deals with the phonetic and phonemic inventories of the language, and examines the ways the various speech-sounds contrast and are distributed. We have provided a sound description of the vowels, semi-vowels, diphthongs and consonants of Moroccan Arabic taking into account the phonotactics of the language. A brief description is given of the syllable structure and of the stress patterns. Further, the different prosodic features of Moroccan Arabic are presented including secondary articulation features. The chapter has equally described and analysed basic phonological processes like assimilation, insertion and deletion of consonants and vowels in continuous speech.

The main concern of the second chapter is to provide a systematic description of the morphological system of Moroccan Arabic, more precisely verbal and nominal morphological patterns. In connection with verbal morphology, we have particularly dealt with verbal inflection and verbal derivation, i.e., affixes that are attached to verbs, and derived forms such as causatives, reflexives, reciprocals, etc. In the section on nominal morphology, we have described especially the morphology of nouns and adjectives. Both of these structures reflect the richness and regularities of the verbal and nominal morphology in Moroccan Arabic.

The chapter is also concerned with the morphological idiosyncrasies of Moroccan Arabic. The aim is to delineate the idiosyncratic properties underlying the morphology of the language under study in comparison with other Chamito-semitic languages, mainly modern colloquial Arabic dialects

and Berber. Our focus is on language facts with the aim to outline the regularities, as well as the exceptions underlying the morphology of Moroccan Arabic. The chapter shows that Moroccan Arabic has a typically Semitic morphology in which morphological categories are represented not only by prefixes and suffixes, but also by non-concatenative structures built on non-concatenative stems.

The chapter of syntax provides a detailed description of the major types of simple and complex sentences in this language. This chapter is divided into two major separate sections. The first section is concerned with the simple sentence, and the second section deals with the complex sentence. Special attention has been paid to the inflectional morphology of the language, which is closely linked to word order variation. Focus has also been put on some functional categories like Tense, Agreement, Aspect, Negation and Complementisers in view of the central role they play in the process of building various construction types. In the section on complex sentences, we have discussed the formation of complement clauses, relative clauses, small clauses and cleft sentences.

The systematic description and analysis of the different linguistic phenomena do not consider the data in isolation but rather as part of an overall description of Moroccan Arabic. Similarly, we do not conceive of Moroccan Arabic structures as a collection of individual constructions, each with its specific properties; rather we have globally examined the different structures in the tradition of generative grammar.

The individual constructions of Moroccan Arabic described in this book result from the interaction of various components of the underlying language system. We have tried to specify the underlying rules, and attempted to formulate interesting generalisations, and a coherent grammar of Moroccan Arabic in which the structures discussed are described and analysed in the most economical way. We illustrate how a restricted number of rules and principles can account for a wide range of phenomena of Moroccan Arabic.

This book does not claim to offer an exhaustive description of Moroccan Arabic, nor is it an introduction to a given linguistic theory. One of our aims is to show the reader how Moroccan Arabic can be studied in a systematic way. This kind of approach allows us not only to describe the language scientifically, but also to analyse and discover new linguistic facts that were hitherto ignored or neglected by linguists.

Phonology

Introduction

Moroccan Arabic is historically derived from Classical Arabic. Given its direct contact with Berber, Moroccan Arabic is much influenced by the Berber sound pattern, morphology and lexicon. It is in a diglossic relationship with Classical Arabic (see Chtatou 1997). While the latter is high because it is the language of the holy Qur'an, and the vehicle of a large body of literature, Moroccan Arabic is low because it is neither codified nor standardized.

Moroccan Arabic, like Classical Arabic, belongs to the Semitic of the Afro-Asiatic language family. Moroccan Arabic is distinct from Classical Arabic, as well as from the varieties of the Middle East (see Sadiqi and Ennaji 1994).

Today with the expansion of education and the growth of means of communication and the development of urbanization, Moroccan Arabic has become the language of mass communication and daily activities in towns and cities. Moroccan Arabic is spoken by all Moroccans except 10% of monolingual Berbers (Youssi 1983).

Classical Arabic was proclaimed the official language of the State by the constitution of 1961. Classical Arabic, which has no native speakers, is learned exclusively in school and is used only in formal contexts.

By contrast, Moroccan Arabic, the second mother tongue in the country after Berber, is used in informal settings for daily conversations and transactions. The population of Moroccans who use Classical Arabic is estimated at about 25% according to Youssi (1983:77).

Morocco uses Classical Arabic as the official language, which is used throughout the Arab world for writing purposes. Nonetheless, other languages are spoken in Morocco, namely Berber, Moroccan Arabic and French. Moroccan Arabic is a mix of Arabic, Berber, French and Spanish (see Ennaji 1991, Ennaji to appear). It is used exclusively for spoken purposes, while Classical Arabic is used only in writing. In Morocco, there are many dialects of Moroccan Arabic, the most important of which are the Shamali (northern) dialect, the Oujdi dialect (eastern region) the Fassi dialect (of the region of Fès), the Casawi dialect (of Casablanca), the Marrakeshi dialect (of Marrakesh area) and Hassania, spoken in the Sahara.

The phonological system of Moroccan Arabic is briefly described in this chapter. According to Benhallam and Dahbi (1990), the variety of Moroccan Arabic spoken in the urban areas of Rabat and Casablanca is considered a "reference" dialect or a "supralocal variety"; it is usually used in advertisements, on radio and television; it is both prestigious and

unmarked, that is devoid of any heavy regional features. Benhallam and Dahbi (ibid) refer to it as "Average Moroccan Arabic". The Moroccan Arabic reference variety is different from the rural dialects which are characterized by the linguistic features of Bedouin tribes, e.g., diphthongization, the use of /g/ instead of /q/, and the labialization of some consonants.

The Moroccan Arabic consonantal system contains 28 consonant phonemes and four vowel phonemes. They are described in the following sections.

Consonants

	Labial	Dental	Palatal	Velar	Uvular	Pharyngeal	Laryngeal
Obstruents							
Stops							
Voiceless		<u>t</u> T	k	q			/
Voiced	b B	d D		g			
Fricatives							
Voiceless	f	s S	š	x	χ	h	
Voiced		z Z	ž	ɣ	ʁ		
Resonants							
Trill		r R					
Lateral		l L					
Nasals	m M	n					
Semi-vowels	w		j				

Note that Moroccan Arabic has a segmental phoneme of emphasis which co-occurs with the consonants and spreads over a domain of one syllable. Emphatic consonants in this chapter are underlined with the understanding that emphasis spreads over the syllable initiated by the emphatic consonant. There are eight emphatic consonants: /B, M, T, D, S, Z, L, R/. These sounds are lower in pitch than their non-emphatic counterparts. They are produced forcefully with much muscular tension in the mouth and throat, accompanied with a raising of the back and root of the tongue toward the roof of the mouth. Moreover, /T / differs from /t/ by lower pitch and the contraction of the throat, and also by being released without any friction noise whereas /t/ is usually articulated with some friction (cf. Harrell 1965: 6).

The emphatic consonants /T, D, S/ are phonemes, which may be used in words that either have or lack other emphatic consonants. Likewise, /r/ also is quite common in words which contain no emphatic consonants, but it is strictly used with the vowels /e/ and /a/, unless a /t/, /d/, or /s/ also appears in the word. By contrast, the emphatic consonants /B, M, Z, L/ appear usually in the presence of the commonly used emphatics /T, D, S, R/. However, plain /b/ or /m/ cannot occur in a word if one of the emphatic consonants is present.

Similar to other Moroccan Arabic dentals, /l/ is articulated with the tip of the tongue raised against the upper front teeth. Moroccan emphatic /L/ is similar to British English dark /L/, whereas the Moroccan non-emphatic /l/ is like the Romance /l/, as it is produced with the tongue raised forward in the mouth without raising the back of the tongue toward the roof of the mouth.

The Moroccan Arabic plain /r/ is a trill which resembles the /r/ in Spanish words like *madre* (mother). Its emphatic counterpart /R/ is related to /r/ in the same way that other plain consonants are related to their corresponding emphatics.

The consonant /q/ is pronounced like /k/, but with the root of the tongue retracted further back in the mouth. It is found in words like /faqir/ (poor), qimma (summit), /zwaq/ (decoration).

/x/ and /ɣ/ are fricatives produced nearly in the same position as /q/, but they are pronounced with the back of the tongue raised toward the roof of the mouth in the uvula. For example: /xmira/ (yeast), /mux/ (brain), /xbar/ (news), /ɣdar/ (betrayal), /ɣul/ (monster), /msbuɣ/ (painted).

The consonants /ħ, ʕ/ are produced by raising the larynx and retracting the root of the tongue toward the back of the throat. Moroccan Arabic /ħ/ is different from English /h/; it is a voiceless laryngeal fricative. It is used in words like /mliħ/ (good), /ħmir/ (donkeys), /tffaħ/ (apples). On the other hand, /ʕ/, which is also different from any English consonant, is a voiced laryngeal fricative. It appears in words like /ʕmama/ (turban), /qamʕ/ (oppression), /l↔ʕb/ (play). The voiced laryngeal fricative consonant /h/ is similar to English /h/; it is found in words like /hada/ (this one), /huwa/ (him), /S↔hd/ (heat).

The glottal stop /// is quite rarely used in Moroccan Arabic. It is a voiceless laryngeal stop. It occurs in words like //amr/ (order), //idara/ (administration), /ja/imma..wa/imma/ (either ... or).

Geminates are double consonants which commonly occur in Moroccan Arabic; they are represented by doubling the consonants. For example, /ttub/ (cloth), /mmi/ (my mother), /ħubbi/ (my love).

Clusters of two consonants are quite common; they may occur initially, medially or finally in a word, as in: /lkas/ (the glass), /makla/

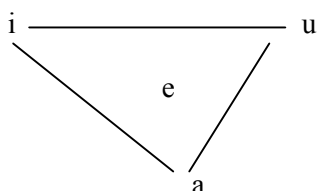
(food), /k↔lb/ (dog).

Triple consonants occur but are relatively rare; they appear in words like /krmu/ (he gave him good food), /tmnna/ (he wishes), /smn/ (butter), /smra/ (she is dark), /katft↔n/ (she is attractive).

In the section below, we will look at the different types of vowels and their features.

Vowels

Benhallam and Dahbi (idem) argue that Average Moroccan Arabic has four vowels:



We assume that vowel length does not exist in Moroccan Arabic, and that the schwa is phonemic (see Benhallam and Dahbi, idem).

At the phonetic level, Moroccan Arabic has seven short vowels, but no long vowels: /a, i, u, e, o, ↔, à/ (cf Benkirane 1982). For Benhallam (1990), there exist only four vowels: /i, u, a, à/. Benkaddour (1982) is the only Moroccan linguist who affirms that long vowels exist in Moroccan Arabic without providing any tangible evidence. Here is the list of vowels we have:

1)

/i/ short close front unrounded, as in /bir/ (well), /fil/ (elephant), /smija/ (name).

/u/ is short close back rounded; it is found in words like /ful/ (beans), /sum/ (price), ktub/ (books).

/e/ is short half-close front unrounded; it is found in forms like /Ter/ (bird), /lmeda/ (toilet), /bexer/ (in good shape).

/o/ is short half-close back rounded; it occurs in words like /Tobba/ (rat),

/dboça/ (wolves), /fTor/ (breakfast), /sxon/ (hot).

/↔/ is short close central unrounded. It appears in words like /gl↔s/ (sit down), /sah↔l/ (easy), /s↔ktu/ (listen).

/a/ is short open back unrounded; it is encountered in words involving emphatic consonants like /qamar/ (moon), bašar/ (mankind), /hdra/ (talk).

/à/ occurs in words like /çàr/ (shame), Allàh/ (God), /ràs/ (head). It is pronounced halfway between the /æ/ of English "mad" and the /A/ of English "father". It is always shorter than /a/, which is held longer than /à/. (See Harrell 1965: 8, and Benkaddour 1990).

Vowels may change in their voice quality when they are adjacent to emphatic consonants. Vowels occurring with /□/ and /√/ are similar to the vowels appearing close to an emphatic consonant. For example, /çàjjan/ (tired), /hàwli/ (sheep), /hàjjed/ (go away), /çàjn/ (wait).

In addition, vowels do not cluster. They may receive primary or secondary stress, as we shall see shortly.

Diphthongs

There are two major diphthongs in Moroccan Arabic: /ai/ and /aw/, which are similar to English diphthongs. They occur in words like /mSaib/ (disaster), /Snaic/ (skills/jobs), /blaiS/ (places), /çawdu/ (he redid it), /žlawh/ (they lost it), /mçawT/ (correct).

Harrell (1965) distinguishes between /ài/, /àw/ which appear after /□/ or /ç/, and /aj/, /aw/ which occur with other consonants:

2)

/ài/, /àw/

□àwli (sheep)

□àiT (wall)

□àw↔l (try)

çàin (wait)

3)

/aj/, /aw/

lajn (where)

bajn (clear)

qawm (people)

xajT (thread)

ɣawt (cry)

The syllable structure

The vowel is the nucleus of the syllable. There is a correlation between the number of vowels and the number of syllables involved. Moroccan Arabic syllables have three basic forms: CV, CVC, CVCC. The latter occurs only before juncture. The form CVC may alternate with VC when the initial consonant is a glottal stop. CVC occurs in postjunctural position and receives weak stress.

Moroccan Arabic has two basic syllable types: CV and CVC. Benhallam (1989) argues that Moroccan Arabic has full vowels, namely /i, a, u/ that are underlying phonemes and the schwa, which is epenthetic. Thus, Moroccan Arabic has the following basic syllable structure: C(V)C. The optionality of the vowel between brackets indicates the distinction between a full vowel which occurs in the lexical representation and a schwa which is introduced only during syllabification together with its V-node.

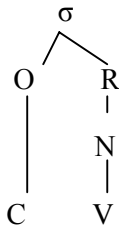
Consider the following cases of full vowel syllabification:

4)

xima (tent)
ktuba (books)
kas (glass)

A structure has to be assigned to each CVC sequence by the following syllable:

5)



N= nucleus, O= onset, R= rhyme

The coda rule applies when there are straightforward consonants following CV syllables.

Schwa syllabification is also productive in Moroccan Arabic. Consider the following examples:

6)

kt↔b (write)
xs↔r (fail)

š↔ft↔k (I saw you)

t↔fr↔□l↔k (she will be happy for you)

Note that the schwa appears between every two consonants, which implies that the schwa is epenthetic (cf. Benhallam 1989). Schwa epenthesis is a rule which allows "degenerate" syllables to acquire the canonical structure of surface syllables in Moroccan Arabic.

Juncture

There exist four possible junctures in the sound pattern of Moroccan Arabic : /+ | || #/. / # / and / || / have a contrastive function: they may distinguish between a statement and an echo question, for example.

7)

/llila #/ 'tonight.' (statement)

/llila || / 'tonight?' (echo question)

/ || / and /+ / may contrast between a direct wh-question and an echo question:

8)

/√laš + mša | / 'why did he go?' (direct wh-question)

/√laš + mša || / "why did he go?" (echo question)

/#/ and / | / may contrast also between a statement and an interrogative form:

9)

/huwa #/ "him."

/huwa | / "him?"

/# / is associated with a pitch falling on the last syllable of the utterance.

/ || / is associated with a raising pitch on the last syllable of the utterance.

/ | / is used when there is a sustained pitch which begins before and carries over to the last syllable of the utterance.

/# /, / || /, / | / are terminal junctures. / | / can occur internally in a sentence; it may appear as an internal juncture. For illustration, consider

10)

/qbal + man ži | hreb + b□alu # / 'Before I arrived, he fled home.'

The three terminal junctures above may not be predictable from the pitch forms, because each one may co-occur with different pitch morphemes. Similarly, the use of /|/ inside a sentence cannot be predicted from the segmental or suprasegmental features.

/+/-/ appears internally between two words whose two adjacent syllables are both under major stress, or in which one syllable takes major stress and the other one minimal stress. By way of example, consider

11)

/kifaš + kayx↔dmu / 'how do they work?'

/bbak + mrid # / 'your father is ill.'

/mdrastu + qriba # / 'his school is close.'

Thus, /+/-/ appears in Moroccan Arabic as an auditory pause with a low functional load. In general, the juncture /+/-/ coincides with the grammatical boundary as may be noticed in the examples above.

Pitch in Moroccan Arabic has three shapes: high, mid and low. There is a partial link between pitch and stress, on the one hand, and pitch and juncture, on the other hand. In general terms, high pitch accompanies primary stress, as we shall see in the following section.

The stress

Stress in Moroccan Arabic has received little attention from Moroccan and international linguists. The studies that have dealt with the topic are either impressionistic or empirical (cf. Benkirane 1982 and Benhallam 1990). Previous studies by Abdelmassih (1973), Benkirane (1982), Benkaddour (1982), Youssi (1986) and Benhallam (1990) have dealt with Moroccan Arabic stress in a sketchy way. Most of these works state that stress falls on the penultimate syllable.

Benkirane (1982) and Benhallam (1990) based their studies on experiments and the intuitions of groups of Moroccan Arabic native speakers. Benhallam (1990) notes that the final syllable is never stressed in multisyllabic words. In trisyllabic words, stress falls on the penultimate syllable or on the antepenultimate one. In quadrisyllabic words, tertiary stress falls on the first, secondary stress on the final syllable and primary stress on the penultimate syllables, as illustrated below. But the question to be asked is: under what circumstances do native speakers choose the primary syllables in multisyllabic words?

Word stress

According to Lahlou (1982), Moroccan Arabic is characterized by

two stress rules; the first applies to heavy final CVC syllables, and the second assigns stress to the penultimate syllable in the absence of a final CVC syllable. For Benkirane (1998), who analyses a final consonant as a rimeless final syllable, there is in reality only one stress rule: the stress always falls on the penultimate syllable, as in:

12)

bu'lisi (policeman)
md'rasa (school)
'žari (my neighbour)
mi'rikan (America)
miri'kani (American)

Notice that, in these examples, the fundamental frequency relevant to these examples has usually a rising-falling pattern.

Thus, the sequence CVC(V) is the domain of stress in Moroccan Arabic. Intensity is one of the major acoustic aspects which contribute to stress, because a pitch accent is normally a mark both of word accent and of sentence accent. Recent research has shown that duration is one of the most prominent cues for the distinction between stressed and unstressed syllables.

In a monosyllabic word, the syllable receives one primary stress. In multisyllabic words, primary stress falls on the penultimate syllable, and secondary stress falls on the final syllable. We will use 1 to indicate primary stress, 2 to mark secondary stress and 3 to indicate tertiary stress:

13)

kt¹ bi² (my book)
ma³ ga¹ na² (watch)
xdda¹ ma² (workers)
fla¹ ye²k (boats)

Benhallam (1990) puts forward the following tendencies. Stress falls on the penultimate position except in the following cases:

-if the word begins with a CV syllable, then the initial position is stressed, as in:

14)

kli¹ nahum (we ate them)
xu¹ dihum (take them)
do¹ wwaqha (give her a bite)

-in a disyllabic word, a closed syllable takes priority over an open one in case the open syllable is not the stem of the word concerned, e.g. /mu¹luç/ (infatuated)

-in a disyllabic word involving two schwas, the stem is stressed, e.g. /t↔gl¹↔s/ (she stays)

-in a disyllabic word, in which the first vowel is a schwa and the second one a full vowel, stress falls on the latter, e.g. /dr↔b¹tih/ (you hit him)

-in case the final syllable is an object clitic, stress falls on the syllable preceding the clitic, e.g., /nr↔ɣ¹buha/, (we'll beg her), /b↔v¹naha/ (we sold it). If there are more than one clitic, stress falls on the penultimate syllable following the final clitic, as in: /nr↔ɣbu¹halkum/ (we'll beg her for your), /b↔v¹na¹halkum/ (we sold it for you).

However, these generalisations are not definite and absolute, as there are always exceptions; new data may show that there are counterexamples and new violations of these rules. That is why it is preferable to call them tendencies (cf. Benhallam 1990).

The phrase as well must have one primary stress and may include secondary and tertiary stress :

15)

kt ² ab l ¹ mu ³ dir	'the director's book'
fs ² dat lma ¹ ki ³ na	'the machine went out of order.'
³ š↔ç ¹ ri □m ² ↔r	'my hair is red.'
² sir mç ¹ ah	'go with him'

Thus, whereas the word involves one primary stress, the phrase contains one primary stress and at least a secondary one. Primary stress falls on a major stressed syllable other than the last in the phrase. However, contrastive stress may fall on the major syllable or on the last syllable to express contrastive emphasis.

16)

mš ⁱ ti l mdra ¹ sa ?	'did you go to school ?
kl ¹ it lxubz.	'I ate bread.'

Note that the phrase may not be interrupted by /+/. The juncture /+/ does not affect the stress pattern of the phrase.

Sentence stress

Sentence stress in Moroccan Arabic is generally put on the rightmost word or phrase of an utterance, as in the following examples:

17)

mrida 'mina	(Mina is ill)
šralha qa'miža	(He bought her a shirt)
ma'bqaš	(there is nothing left)
ma'žaš	(lie didn't come)
baču'lih	(he sold it to him)

As can be noticed, in these sentences stress appears on the penultimate syllable i.e., on the stressed syllable of the final word.

Intonation

While there are many studies on the segmental phonology of Arabic, very few works have dealt with the suprasegmental properties of Arabic phonology.

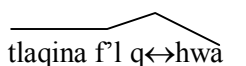
Intonation is a suprasegmental feature; it may be defined as a sequence of "key points distributed throughout the intonation unit and it may be stated that an intonation contour is perceived as an interpolation between these points", as Benkirane (1998) states. However, these key points differ from language to language depending on the stress rules of each language. In Moroccan Arabic, the main pitch movement of the intonation contour occurs on the tonic and post-tonic syllables.

Based on the analysis of a large corpus of sentences by Moroccan native speakers in an echoic chamber, Benkirane's (1998) description of intonation is relevant to declarative and interrogative sentences.

Intonation of declarative sentences

Declarative sentences in Moroccan Arabic are characterized by a rising and falling intonation; for example, consider

18)



tlaqina f'l q↔hwa
'We met in the café.'

This sentence includes two intonation units: the first part of the utterance /tlaqina/ is separated from the second part /f l q↔hwa/ by a pause. The first part ends on a high pitch whereas the second ends on a low pitch indicating finality. The sentence stress is marked by a rising pitch which characterizes the penultimate syllable /q↔/.

Thus, in general, declarative sentences consist of a rising-falling pitch, with the rising part appearing on the syllable carrying the sentence stress followed by a fall of intonation.

In case sentence stress is assigned to a word of the form CVC, the

rising-falling pitch movement often appears on the vowel (Benkirane 1998), as in:

19)

Darna 'zina.

'Our house is nice.'

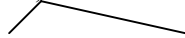
Thus, a rising-falling pitch contour appears on the last two syllables of a final intonational unit, especially words with the CVC(V) prosodic structure. The rising-falling pitch movement at the end of the utterance is associated with neutral non-emphatic declarative utterances in Moroccan Arabic.

Intonation of interrogative sentences

As to interrogatives, they are distinct from declarative sentences so far as the intonation pattern is concerned. Questions have a higher onset than declarative utterances, and the pitch movement tends to occur on the question word in wh-questions, while yes/no questions finish on a rising pitch.

Wh-questions in Moroccan Arabic have a peak appearing on the question word followed by an abrupt falling pitch.

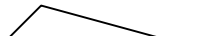
20) a-



fīn mšiti lbar□?

“Where did you go yesterday?”

b-



škun xda ktabi?

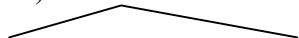
'Who took my book?'

The question word is prominent because of the high peak that occurs on it followed by a rapid falling pitch.

According to Benkirane (1998, 2001), the intonation contour of wh-questions is similar to that of imperative utterances which also exhibit a high or a rising onset followed by an abrupt fall of intonation.

As to yes/no questions, their intonation pattern is similar to that of non-emphatic declarative utterances. Both are characterized by a rising-falling pattern: however, in yes/no questions, there is a general raising of the pitch involving the onset, with the final falling pitch being stronger than that of declarative utterances.

21) a-



Ahmed mazal f l q↔hlwa?

'Is Ahmed still in the cafe?'

b-

waš qriti dak lktab?

'Have you read that book?'

Notice that the fall of intonation occurs at the end of the question.

Thus, the major difference between declaratives and questions is related to the difference between two types of fall : normal and strong. To conclude, Moroccan Arabic has the following major features

- 31 consonants, including emphatic ones
- 7 vowels
- 4 junctures
- 3 pitches : high, mid and low
- 3 stresses: primary, secondary and tertiary

Dialectal variation

Dialectal variation may be at the segmental level (phonetic, phonemic, phonotactic, lexical) or at the suprasegmental level (voice quality, rhythm). Cf. Francis (1983), Wells (1982) and Benhallam and Dahbi (1990). Moroccan dialects of Arabic differ according to geographical origin. It will be interesting to find cues for the determination of Moroccan Arabic varieties, and for their comparison with Maghrebi and Middle Eastern varieties. According to a recent article by Barkat (2001) based on perceptual experiments, Maghrebi varieties have central vocalic positions in contrast with Middle Eastern ones, which prefer peripheral positions; additionally, Middle Eastern varieties have a higher ratio long/short vowel than their Maghrebi counterparts.

Phonetic variation may occur at the level of pronunciation; it is generally allophonic in nature. Phonemic variation affects the number of phonemes in a variety. Thus, the number of phonemes may vary according to the Moroccan Arabic dialect concerned. Phonotactic variation, on the other hand, affects the kind of constraints on phoneme sequences and determines their occurrence in a phonetic context. This may also have a consequence on syllable structure. As to lexical variation, it involves phoneme differences that different dialects select to represent a given morpheme or word. This kind of variation is also called "lexical distribution". Rhythmic variation involves differences at the level of juncture, stress and intonation. We will overlook rhythmic variation in this chapter.

-phonetic variation

Concerning consonants, in the Tétouani dialect, there is an affrication of palatal /š/ and /ž/ into /tš/ and /dž/, respectively:

Reference Tétouani

22)

žuhar	džawhar	(pearls)
župa	džupa	(skirt)
hažžala	hadžala	(widow)
š↔ftih	tšuftih	(you saw him)
qrišlat	qritšlat	(cakes)

This variation is phonetic because the palatals /Σ/ and /Z/ are available in the Tétouani dialect.

23)

džat	(she came)
ši □adža	(something)

This means that affrication is not systematic. Nonetheless, the variation is widespread, and it does not seem to be lexically dependent. For more on dialectal variation, see Benhallam and Dahbi (ibid)

As concerns vowels, we can state that the changes are remarkable. In the Tétouani dialect, for example, the schwas found in reference Moroccan Arabic are turned into full vowels, namely /a/ or /u/:

Reference Tétouani

24)

wn↔SS	wnuSS	(and a half)
fr↔□na	fra□na	(we were happy)
jTaww↔l	jTawwal	(he makes long)

Phonemic variation is also important as far as consonants are concerned. However, vowels are not affected as the repertoire of vowel phonemes does not change.

Concerning consonants, in the Béni Mellal, El Jadida and Casablanca dialects the consonant /q/ may be changed to /g/, as in

25)

qal	gal	(say)
lq↔T	lgaT	(the cat)
□r↔q	□r↔g	(to burn)

fuq fug (on)

However, there are many words where /q/ and /g/ do occur in the above-mentioned dialects:

26)

lg↔rça	(gourgette)	lqabsa	(small bag)
l-g↔nDora	(a kind of gown)	qamiZa	(shirt)
gawri	(foreigner)	□aqiqa	(truth)
buga	(much)	baqi	(remain)

This implies that the occurrence of /g/ and /q/ is lexically dependent.

In the Tétouani and Fassi dialects, the reverse process is available: /q/ is turned into /// in many phonetic contexts. The environments in which /g/ and /q/ appear are borrowings from other varieties or are simply lexically dependent.

General prosodic properties of Moroccan Arabic

Moroccan Arabic exhibits the greatest degree of vowel reduction in comparison with Classical Arabic. According to Benkirane (1982), the opposition between short and long vowels has disappeared from Moroccan Arabic. This loss at times brings about consonant clusters, which according to Youssi (1983), distinguishes Moroccan Arabic from the Middle Eastern varieties. In this case, Moroccan Arabic is similar to Berber, which is also abundant with consonant clusters. However, in Classical Arabic the structure of the syllable is always CV, CVC or CVV.

27)

<i>Classical Arabic</i>	<i>Moroccan Arabic</i>	<i>Gloss</i>
□izaamuha	□zamha	(her belt)
sirwaaluhu	srwalu	(his trousers)
fīraaš	fraš	(bed)
samaa/	sma	(sky)
zamaan	zman	(time)
/akaltu	klit	(I ate)
žamaçtu	žm↔çt	(I gathered)
mustaqil	mstaç↔l	(independent)

In Moroccan Arabic, a syllable with a full vowel is more prominent

than a syllable with a schwa /↔/ which can be considered as epenthetic since it is possible to predict its occurrence. The schwa /↔/ is phonetically a very short vowel which is usually followed by a consonant in the same syllable.

While the presence of a consonant in the syllable onset is obligatory in Moroccan Arabic, the number of consonants preceding the syllable nucleus does not contribute to the prominence of the syllable which is rather determined by the intrasyllabic relation between the vowel and the subsequent consonants. Benkirane (1998)

When there is a full vowel, sequences with a CVC structure have a very crucial role in the sound pattern of Moroccan Arabic.

CVC structure

CVC sequences generally occur word-finally (see Benkaddour 1986). They are said to form a syllable which is heavier than the basic CV structure. For Benkirane (1982,1998), the sequence CVC is disyllabic, with the last consonant being the onset of a syllable with an empty rime. For example, a word like /nuD/ can be pronounced with a final schwa /nuD↔/ or with a devoiced but released final consonant /nuD°/. The two pronunciations aim to separate the consonant from the preceding syllable. More evidence for this analysis comes from the fact that vowels in final position are pronounced and perceived as short vowels (see Harrell 1962 and Benkirane 1998).

However, in final CVC sequence the stable vowels are very long. For example in the pair

28)

sma (sky)

smaç (listen)

The vowel in /smaç/ is phonetically longer than in /sma/.

The lengthening of vowels before final consonants is crucial for delimiting word boundaries:

29)

žaab# kasu

(he brought his glass)

ža#bkasu

(he came with his glass)

xda#trija

(he took a lightshade)

xdaat#rija

(she took liver)

Note that in Moroccan Arabic, a final vowel may be dropped, as in

30)		
Tomobil	Tomobila	(car)
□daj	□daja	(near me)
mçaj	mçaja	(with me)

In the following section, we will look at secondary articulation as a phonological phenomenon.

Secondary articulation

It is an articulation which is superimposed on the primary one. For example, /t/ is phonetically described as voiceless, alveolar, stop in its primary articulation. But, if it is pharyngealized /T/, then we add the feature pharyngealized which is a secondary articulation that is superimposed on it.

Pharyngealization

It is involved when there is a restriction of the air at the level of the pharynx. It is phonetic in English, but in Moroccan Arabic it is both phonetic and phonemic. Consider the following examples:

-Phonetic pharyngealization

31)	
billahi nastağin	"We seek God's help."
/allahu akbar	"God is great."

In the first example, the /l/ is not pharyngealized because it is followed by /i/, in contrast with the second instance where the pharyngealized /T/ occurs.

-Phonemic pharyngealization

32)	
s↔lça	"marchandise"
S↔lça	"bald head"

Notice that the two words above are different in meaning because the feature of pharyngealization in this case is phonemic.

Labialization

Labialization is another type of secondary articulation. It is an articulation of speech sounds accompanied with the rounding of the lips and the extension of the oral cavity. "Labialization is indicated by a small rounded stroke over the consonants in question" Harrel (1962: 9). For example,

33)

k ^w waš	"blankets"
t ^w wam	"twins"
m ^w was	"knives"

Palatalization

It is characterized by moving the tongue towards the hard palate when producing the sound in question. Look at the examples below:

34)

s ^j juf	"swords"
d ^j jali	"mine"
š ^j jafr	"drivers"

Nasalization

It is another type of secondary articulation that is superimposed on the vowels preceding nasal consonants. Both the nasal consonant and the nasalized vowel should be tautosyllabic, i.e., they should belong to the same syllable. The diacritic /[^]/ above the vowel in the following examples indicates this articulation:

35)

nirân	"a huge fire"
/insân	"a human being"
salûn	"living room"
frîni	"put on the brake"

Phonological processes

The interaction between the segments of speech sometimes results in some phonological changes. These changes do not have the same status, the

same consequence or the same mechanism. A segment used in a sequence of other speech sounds does not have the same pronunciation as when it is produced in isolation. Among the changes that may occur, we have assimilation, deletion, insertion, gemination, etc. These changes are phonological processes which can appear within words or in a sequence of words. Phonological changes and processes are noticeable in continuous speech and apply to both consonants and vowels. Let us focus on assimilation, gemination, deletion and insertion.

Assimilation

Assimilation is a phonological process whereby two speech sounds become identical or similar under the influence of one upon the other. This process, which is found essentially in rapid speech, mostly occurs between two words. In this respect, Lass (1984: 171) states that

In assimilation one segment becomes more like (or identical to) another (or two become more like each other).

Similarly, Schane (1973:49) points out in this regard that

In assimilatory processes a segment takes on features from a neighbouring segment. A consonant may pick up features from a vowel, a vowel may take on features of a consonant, one consonant may influence another, or one vowel may have an effect on another,

These quotes undoubtedly inform us that assimilation can be either identical or similar, i.e., we have total and partial assimilation. Here are some examples from both of types of assimilation:

36)

a- x↔BRru	→ x↔BRu	"He informed him."
b-Sba□	→ SBa□	"morning"
c- zzaž	→ žžaž	"glass"
d- rras šaj↔b	→ rraš šaj↔b	"a grey-hair-head"
e- žb↔d tu	→ žb↔ t tu	"I rescued him"

In (a) there is partial assimilation illustrated by the influence of the pharyngealized consonant /S/ on the consonants /R/. In (b), the segment /b/ also becomes pharyngealized because of the influence of the pharyngealized sound /s/. Thus, in (a) and (b), the assimilation is clearly a partial one since

only one feature has been added or changed. On the other hand, in (c) and (d) the segments /z/ and /s/ become /ž/ and /š/. This is a case of total assimilation since the physical form of the segments changes totally. In (e), we have also a case of total assimilation because two different consonants /d/ and /t/ become identical /t/, in the sense that /d/ takes the feature voiceless and changes into /t/.

In addition to what has been stated above, assimilation can be progressive or regressive. In progressive assimilation, the segment that undergoes the change is influenced by a preceding speech-sound. By way of illustration, consider

37)

/s/ → /š/

a- ššems → ššemš “sun”

/d/ → /D/

b- sdr → sDr “chest”

/a/ → /à/

smajm → sMàjm “mid summer”

These examples illustrate that consonants can assimilate the features of other consonants. Thus, in general a consonant agrees with another adjacent consonant in voicing, and two consonants occurring in the same phonetic

context tend to agree in pharyngealization. In addition, a vowel may take the features of a pharyngealized consonant, as in /smajm/ above where /a/ becomes somewhat back /à/ under the influence of the pharyngealized /M/. These examples reflect regional differences in pronunciation, as they include regional free variants.

Regressive assimilation

Unlike progressive assimilation, regressive assimilation goes backward in the sense that the segment which undergoes the change is influenced by a following speech sound. Here are some examples:

38)

/t/ → /d/

a-w↔st DDar → w↔sDDar “the interior of the house”

/z/ → /ž/

b-tzewwež → tžewwež "he got married"

zzawž → žžawž "a kind of bird"

From these examples, we can conclude that pharyngealization in Moroccan Arabic leads to assimilation in the sense that neighbouring segments are usually assimilated to pharyngealized sounds.

Gemination

This is another phonological process which is usually referred to as consonant lengthening. It is the counterpart of vowel lengthening. It occurs when the same point of articulation position is maintained in the production of consonants. Gemination, which is a doubling of the same consonant, is an articulatory phenomenon. Unlike other phonological processes, gemination is restricted to consonants. By way of illustration, consider:

39)

a- šr↔b bzzaf
"He drank a lot."

b- ž↔r r↔žl↔k
"pull your leg."

c- šaf fas
"He saw Fès."

d- rramla
"sand"

e- mxajjar
"It's great."

In (a-c), there is doubling of the consonants /b/, /r/ and /f/ at word boundaries, while in (d-e), gemination occurs inside words at the level of /f/, /r/, /j/. Thus, gemination in Moroccan Arabic tends to occur in word boundaries or within words. In the latter case, gemination may appear either initially or medially.

Deletion

Deletion (or elision) is involved when a segment (a consonant or a vowel) is omitted within words or at word boundaries. Deletion is most common in rapid or continuous speech. Look at the following examples:

40)

- | | | | | |
|----|---------------|---|--------------|------------------------|
| a- | fin kunti? | → | fi kunti? | "where have you been?" |
| b- | b□al ila mrid | → | b□al la mrid | "as if he were ill" |
| c- | f had ssaça | → | f ha ssaça | "at this hour" |
| d- | šuf | → | šu | "look" |

In (a), we notice the deletion of the consonant /n/, and in (b) the deletion of the vowel /i/; in (c) and (d), the consonants /d/ and /f/ are omitted. Note, however, that the meaning remains the same in all cases of deletion.

Insertion

Insertion, which is widely used in Moroccan Arabic, is involved when a consonant or a vowel is inserted intrawords or interwords during continuous speech. The insertion of a schwa /↔/ is most common, the aim of which is to break a cluster of two or three consonants in the initial or final position of a word. By way of illustration,

41)

- | | | | | |
|----|-------|-------|--------|---------------------|
| a- | talf | ----> | tal↔f | "he is lost." |
| b- | naž□ | ----> | naž↔□ | "he is successful." |
| c- | xasr | ----> | xas↔r | "he failed." |
| d- | bnadm | ----> | bnad↔m | "human being" |
| e- | ku□l | ----> | ku□↔l | "they are black." |

The insertion of other vowels such as /u/ is allowed for morphological purposes, as in:

42)

k□al	----> ku□↔l	"they are black."
bjad	----> buj↔d	"they are white."
xDar	----> xuD↔r	"they are green."

The insertion of the vowel /u/ here occurs after the first consonant in the plural form of adjectives of colour. By contrast in English, there is no distinction between the singular and the plural form because they are distinguished by the nouns they modify, that is according to whether these nouns are singular or plural.

The phonological processes discussed in this section are among the most important operations in Moroccan Arabic phonology. In other terms, assimilation, gemination, deletion and insertion are common in rapid speech in Moroccan Arabic.

Conclusion

This chapter was concerned with the phonology of Moroccan Arabic. We dealt with the phonetic and phonemic inventories of the language, and looked at the ways the various speech-sounds are arranged and contrast. We provided a sound description of the vowels, semi-vowels, diphthongs and consonants of Moroccan Arabic taking into account the phonotactics of the language. A brief account was given of the syllable structure and of the stress patterns. Then, the different prosodic features of Moroccan Arabic were presented including secondary articulation features. Finally, the chapter considered the most prominent phonological processes like assimilation, insertion and deletion of consonants and vowels in continuous speech.

Morphology

Introduction

The main concern of this chapter is to provide a systematic description of the morphological system of Moroccan Arabic (hereafter, MA), more precisely verbal and nominal categories. The aim is to delineate the idiosyncratic properties underlying the morphology of the language under study with reference to some other Chamito-semitic languages mainly modern colloquial Arabic dialects, Berber and Hebrew. Our focus is on language facts with the aim to outline the regularities, as well as the exceptions underlying the morphology of MA. The working assumption of this chapter is that the notion of root in the language under scrutiny is not purely consonantal, as pointed out in previous works (e.g., Wright 1968, Ennaji 1985, Caubet 1993, Sadiqi 1999 to cite but a few). More importantly, the root is assumed not to be always triconsonantal, as there exist biconsonantal roots as well. A root may contain both vocalic and consonantal sounds or merely consonantal segments. Most importantly, affixation is shown to play a fundamentally crucial role in a number of derivational and inflectional processes (e.g. causativization, plural formation ,...etc). The chapter will deal with verbal morphology, particularly verbal inflection and verbal derivation, i.e., affixes that are attached to verbs and derived forms such as causatives, reflexives, reciprocals, etc. Focus will also be on nominal morphology, especially the morphology of nouns and adjectives.

MA has a typically Semitic morphology in which morphological categories are represented not only by prefixes and suffixes, but also by non-concatenative structures built on non-concatenative stems, each of which is being composed of a radical made up of non-syllabics (consonants and semi-vowels), vowel melody and prosody (i.e. suprasegmental features). Thus, a Semitic language like MA has words of several classes related not to differences in the prefixes or suffixes that are taken by words of the different classes, but to differences in the canonical syllabic shape of the stems as well as in the vowel melodies assigned to them. However, the classes have derivational implications that are idiosyncratic, based on a system called “*binjan*” or patterns. The latter is very systematic and thus learnable¹. Therefore, MA provides a convenient body of data which display the formal

¹ This means that words, in general, are not assigned to one pattern or another by arbitrary marking in the lexicon. Rather, what the whole chapter shall demonstrate is that what determines the pattern and hence the full set of forms, is the phonological factor. Though different, this resembles the assumptions set in the works of Marantz (1989), where distributed morphology is discussed.

morphological properties of such a system (for comparative analyses with Hebrew and other Semitic languages, see Hoberman (1992). Before tackling the core of the matter, a point concerning notions like root, stem and pattern is in order.

Root vs pattern

The importance of this section stems from the moderate stand-point we are adopting and where we reconcile the root-based approach (as in Brame, 1970, Caubet, 1993, Sadiqi, 1998, Chekayri, 1998 and Cohen, 1989, to cite but a few) with the pattern-based approach (as defended in earlier and traditional accounts, as well as in works by Harrell (1962), Harris (1970) and Abdel-Massih (1974), among others).

We assume that most Moroccan Arabic words are built up on a basic consonantal skeleton called “root”. The latter usually has some fundamental kernel meaning expanded by the pattern. This is because roots are in patterns with various vowels and additional (non-root) consonants. These two notions are fundamental to the structure of Moroccan Arabic words. For instance, the three consonantal roots *ktb* and *šrb* may be associated with the following patterns:

k t b	(write)	š r b	(drink)
ktɔb	(he wrote)	šrɔb	(he drank)
kɔtbu	(they wrote)	šɔrbu	(they drank)
ikɔ tbu	(they write)	šarɔb	(having drunk)
katɔb	(having written)	šrab	(wine)
katib	(a writer)	mɔšrub	(a drink)
ktab	(a book)	šɔrrɔb	(make someone drink)
ktub	(books)		
mɔktaba	(a library)		
mɔktɔb	(a desk/an office)		

Types of Root

There are four basic root types, biliteral, trilateral, quadrilateral and atypical². The following table summarizes all the different root types:

² A difference exists between strong and weak roots. Strong roots are composed entirely of consonants as in *ktb*, *qtl* and *tržm*, meaning to write, to kill, and to translate, respectively. However, roots which have vowel elements are called weak, as in *ma* (water), *ža* (come), *fɔ* (in), etc. Strong roots with the three consonants to be differentiated are called “sound” as in *h r b* (flee). Double strong roots are those

Types	Examples
1. Biliteral:	
a) Strong:	
i. Sound	“f” (in) and “l” (to)
ii. Doubled	Non-existing/ impossible
b) Weak	
i. final-weak	“ž a” (come) and “ma” (water)
ii. middle-weak	Non-existing/ impossible
2. trilateral:	
a) Strong:	
i. Sound	“ktb” (write) and “xbz” (bread)
ii. Doubled	“fmm” (smell) and “kull” (all)
b) Weak	
i. final-weak	“mra” (wife) and “ħda” (near)
ii. middle-weak	“xaf” (frightened) and “rah” (return)
3. quadrilateral:	
a) Strong:	
i. Sound	“tržm” (translate) and “tnbr” (stamp)
ii. Doubled	“ž r ž r” (drag)
b) weak	
i. 2 nd element weak	“sifōt” (he sent)

wherein the second and third consonants are identical as in *ž d d* (renew). If the last two consonants are a repetition of the first two, we consider these to be a case of reduplication as in *ž r ž r* of *žōržōr* (he dragged).

- ii. 4th element weak “seqsa” (he asked)

Types of pattern

There are two types of pattern: simple and complex patterns.

- a) A simple pattern is one that adds to the root one or two vowels. A pattern, by the way, is defined by specifying which vowel(s) occur(s) and between which two consonants they occur. For instance, the pattern of *ktəb* (he wrote) is derived from the root *ktb* inserting a specific vowel /ə/ between the second and the third consonants.
- b) A complex-pattern joins to its pattern an affix to the root as in *məktəba* (library) where the pattern *ktəba* occurs in conjunction with the prefix *m-* and the vowel /ə/. It has been documented in Harrel (1962 & 1963) that the affixes which combine with patterns to form complex-patterns are very limited in number. Harrel (1962 & 1963) has mentioned only two infixes as in:
 - 4) i- *t* is inserted after the first consonant as in *ʔtaʒ* (he needed).
 - ii- the doubling of the middle consonant as in *qddəmə* (he presented), *fəkkəra* (he thought).

As a corollary, there is only one prefix and two suffixes which occur in complex-patterns for all practical purposes:

- 5) i- the prefix *m-* followed by various vowels as in *məzrub* (in a hurry) and *məktub* (written, fate).
- ii- the two suffixes are: *-an* and *-a* as in *məzjan* (good), *zərbən* (hurrying) and *wəhla* (troublesome situation).

Root-structure and word-derivation

In MA, the relation between word-classes and root-types is very close. Verbs are almost exclusively trilateral and quadrilateral (Chekayri, 1998); few, however, are biliteral or atypical. Adjectives are also almost exclusively trilateral as in “*kbir*” (big) from “*k b r*”. Nouns generally have trilateral or quadrilateral roots. For instance, “*wəld*” (boy) from “*w l d*”, “*səksu*” (Couscous) from “*s k s*”. However, nouns with biliteral roots and atypical ones are not uncommon as in “*x t*” (sister), “*ʒənkbut*” (spider-web). For some particles and quantifiers, the trilateral form is the most commonly found one as in “*bəʒD*” (some), “*bəʒd*” (after), “*kull*” (all), etc. The other parts of speech are roots fewer than three consonants as in “*f*” (in), “*t*” (to), “*l*” (the), “*b*” (with), etc.

Stems and affixes

- a. A stem is a root that is combined with a pattern or a complex-pattern. Stems are usually word-class forms. They are related to word-classes and to grammatical classes. Hence, we say V-stem, N-stem, Adj-stem, Adv-stem, etc.
- b. Affixes are elements that are attached to roots or pattern-forms to convey a lexical or a grammatical meaning. In MA, the number of affixes is quite limited. The most encountered ones are
 - a- The personal prefixes and suffixes of the imperfective as the “*n*” and “*t*” of *nšuf* and *tšuf* (I/ you see)³.
 - b- the personal suffixes of the perfective as “-*ǝ*” and “-*n*” of “*kanǝl*” (she was) and “*kamu*” (they were)⁴.
 - c- The prefix {*m*-} of various nouns, adjectives and verbal derivations as in “*mǝrtaah*”⁵ (restful), “*mxǝDDǝr*” (garnished), “*myǝTTi*” (being covered) and “*msǝmmjin*” (having been named)⁶.
 - d- The feminine suffix -*a*⁷, though not always, as in “*kbira*” (big, fem.).
 - e- The plural ending suffix -*in* as in “*fǝrhanin*” (happy, pl.).
 - f- The plural ending -(*a*)*t* as in “*hkayat*” (stories).
 - g- The *nisba* ends as in “*mǝknasi*” (from Meknès), “*fasi*” (from Fès), etc.
 - h- The suffixed pronouns as the -*h* and -*k* of *mǝṣah* (with him) and *mǝṣak* (with you), respectively.

For the sake of precision, we shall first deal with inflections that are marked on verbs.

Verbal inflectional morphology

The verb- Inflection

³ More details are given in the section dealing with the imperfective V-forms.

⁴ More details are given in the section dealing with the perfective V-forms

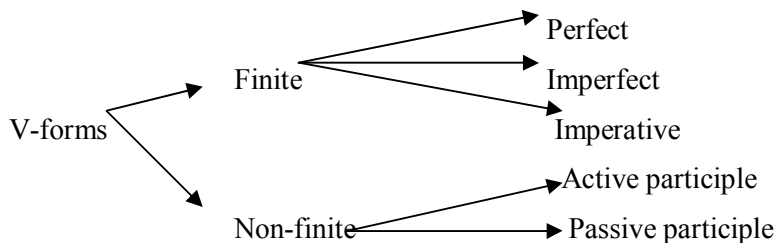
⁵ That is a form of the active participle.

⁶ That is a form of the passive participle.

⁷ See the section on Gender.

a- There are two kinds of V-forms in MA: finite and non-finite. There are, furthermore, two non-finite forms: The active and passive participles⁸. There are two types of finite forms, with the imperative, namely the perfect and imperfect forms. The following schema shows such a division:

6)



The perfect and the imperfect share one property of being very sensitive to the type of subject involved. They agree in number, person and gender with their respective subjects, be they lexical or pronominal (for more details, see the next chapter on the syntax of MA). Likewise, they show mood distinction ranging over the indicative and the imperative.

Inflectional forms

A verb-form in MA consists of a V-stem combined with an inflectional affix that could be a prefix, infix and/ or suffix. For instance, the imperfect is formed by a set of prefixes in the singular and by the same set of prefixes plus a set of suffixes in the plural. The perfect is formed by a set of suffixes.

The Verb-stem:

Two properties mark the V-forms of MA. The first one is the simplest form which is generally assumed to be the third person singular masculine of the perfect tense: e.g. “zrðb” (he hurried). It is this form which is standardly defined as the V-stem and which is taken as the basic form of the verb from which other inflected forms are derived. It is the form that appears in dictionary entries. The second property is that one V-stem could express a sentential meaning. In other words, one V-stem could express a sentential meaning, entailing information on the subject, verb and object.

⁸ We treat the participles as adjectives, rather than verbs for MA cannot be treated to have purely non-finite V-forms.

This is because one V-form contains different affixes that express all the argument(s) of the verb: *žaw* (they came) *saftǝhanna* (he sent it to us).

The perfect tense

-The inflectional suffixes

The following table shows the different personal suffixes of the perfect:

7)

Number Person	Singular	Plural
First person	-t (I)	-na (we)
Second person	-ti (you)	-tiw/ -tu (you)
Third person	-v-stem alone (he)	-u/ -w (they)
	-ǝt/ -at/ -t (she)	

-V-stem classes

Certain regular stem changes take place with the addition of the suffixes of the perfect tense. There are four major kinds of stems, singled out on the basis of different stem changes triggered by the addition of the inflected endings. We examine each pattern and the changes affecting it.

-Stems ending in “ǝC”

These stems are not affected by the endings of the first and second persons. With -ǝt/ -at and -u, sound roots show an inversion of the “e” while other stems show an elision of it as in:

8) a- ktǝbt	(I wrote)	ktǝbna (we wrote)
ktǝbti	(you (sing) wrote)	ktǝbtiw (you (pl) wrote)
ktǝb	(he wrote)	ktǝbu (they wrote)
ktǝtbǝt	(she wrote)	
b- sijjǝbt	(I threw)	sijjǝbna (we threw)

sijjḍbti	(you (sing) threw)	sijjḍbtw(you (pl) threw)
sijjḍb	(he threw)	sijjbu (they threw)

- stems ending in -aC

These verbs replace the “a” regularly with “e” before the first and second person endings:

9) bḍṣt	(I sold)	bḍṣna	(we sold)
bḍṣti	(you (sing) sold)	bḍṣtiw	(you(pl) sold)
baṣ	(he sold)	baṣu	(they sold)
baḍṣt	(she sold)		

Two verbs do not conform to this rule, namely “*kan*” (to be) and “*qal*” (to say) since both of them substitute “a” instead of “e” for the medial “a” in the 1st and 2nd persons.

10) a- kunt	(I was)	kunna	(we were)
kunti	(you (sing) were)	kuntiw	(you (pl) were)
kan	(he was)	kanu	(they were)
kanḍt	(she was)		
b- qolt	(I said)	qol	(we said)
qolti	(you (sing) said)	kuntiw	(you (pl) said)
qal	(he said)	qalu	(they said)
qalḍt	(she said)		

The V-types follow three different patterns, depending on the dialect and on individual speakers. Some speakers insert “i”; others “e”; while others insert “a”, as in :

tbasḍt, tbest, or tbast (someone kissed her)
xtarḍt, xtḍrt, or xtart. (I made a choice)

-stems ending in a doubled consonant

In these stems, an “i” is inserted between the stem and the endings of the first and second persons.

11) šemmit	(I smelt)	šemmina	(we smelt)
šemmiti	(you (sing) smelt)	šemmitiw	(you(pl) smelt)
šemm	(he smelt)	šemmu	(they smelt)
šemmḍt	(she smelt)		

-stems ending in -a

In these stems, the final “-a” is changed to “i” before the inflectional endings of the 1st and 2nd persons:

12) bdit	(I began)	bdina	(we began)
bditi	(you (sing) began)	bditiw	(you (pl) began)
bda	(he began)	bdaw	(they began)
bdāt	(she began)		

The same thing for “ža” (he came) and “dda” (he took something).

Inflectional forms of the imperfect

The following table shows the general characteristics of the imperfect verbs:

13)

	Singular	Plural
1 st	n(e)- (I)	ne (e)- + -u, -w (we)
2 nd	t(e)- you (mas) t(e)- + -i, -j (they)	t(e)- + -u, -w (you (pl))
3 rd	i-, j (e)- (he) t (e)- (she)	i- n j(e)- + -u, -w (they)

A close examination of this table shows that the plural is formed by the addition of *-n* and *-w*. This alternative change stems from the fact that the *-n* is added to stems ending in Cs, and the *-w* to stems ending in vowels, as in:

14) jḥḥll-u	(they are opening)
nekmiw	(we are smoking)

The first person is marked by an *-n* prefixed to the stem as in *nsḥdd* (I close), *nsḥddu* (we close), *nbdaw* (we begin). Second person singular feminine is usually neutralized into only the second person singular masculine form, hence, *tekteb* *tketbi*. But in general, the second person prefix has the form {t-} before stems beginning with a C + a vowel and the form {te-} before stems beginning with a C-cluster: *tšuf* (you (masc., sing) see) *tḥbda* (you (masc, sing) begin). One exception is when the stem begins with t, T, d, or D as in:

15) tkḥllḥm	ttkḥllḥm ⁹	(you speak)
Tlḥb	Ttlḥb	(you request)
dfḥn	ddfḥn	(you bury)

⁹ In some MA dialects, we add *ka+V*.

The 3rd person feminine singular is identical to that for the 2nd person. The prefix for “he” and “they” is usually {i-}:

- 16) kajiddi (he is taking)
 kajddiw (they are taking)
 kajšuf (he is seeing)
 kajšufu (they are seeing)

However, before stems beginning with w, h, ɟ or h plus a C, the prefix is usually realized as jə-:

- 17) jəwSəl (he arrives)
jəhDər (he talks)
jəhdiw (they give)
jəhməl (he carries)
jəɟbər (he measures)

V-stem classes and inflections of the imperfect

The stem changes of the imperfect are different from those of the perfect. Five different stem types may be singled out in the imperfect:

-stems ending in -eC

These are subject to patterns of inversion and elision with the addition of the endings {-u} and {-ə}.

- 17) nr̥bɔT (I tie) nr̥bTu (we tie)
t̥rbɔT (you (masc) tie) tr̥bTu (you tie)
tr̥bTi (you (fem) tie)
ir̥bɔT (he ties)
t̥rbɔT (she ties)

A limited number of verbs substitute “o” for the “e” of the V-stem. This is the case of $dx\partial l$, $sk\partial n$, $sk\partial t$, $sx\partial n$, $xr\partial z$.

- | | | | |
|-----------|--------------------|-----------------------|------------------|
| 18) ndxul | (I enter) | ndɔ̃xlu | (we enter) |
| ddxul | (you (masc) enter) | ddɔ̃xlu ¹⁰ | (you (pl) enter) |
| ddexli | (you (fem) enter) | idɔ̃xlu | (they enter) |
| idxol | (he enters) | | |
| tdxol | (she enters) | | |

-Hollow verbs¹¹

¹⁰ Notice here that we have some kind of assimilation that resulted in gemination.

Most of these verbs change the medial “a” to “i/u” in the imperfect. Other verbs retain the “a”:

20) nžib	(I bring)	nžibu	(we bring)
džib	(you (masc) bring)	džibu	(you(pl) bring)
džibi	(you (fem) bring)		
ižib	(he brings)		
džib	(she brings)		

Verbs that change “a” into “i” are as follows:

21) baç (sell), dar (house), faq (wake), Tar (fly), Taħ (fall), zad (add)

Verbs that change “a” into “u” are illustrated by the following examples:

22) bal (piss), bas (kiss), daz (pass), kan (was), mat (die), naD (get up), qal (say), saq (know), Sam (fast).

23) Verbs that retain the “a” are exemplified in :

bat (stay the night), xaf (be scared).

-Doubled roots

In fact, these roots include gemination as they double the last consonant. Most such verbs show no stem change, except for dialectal variation

24) šedd	nšedd	(to close)
hekk	jihekk/ jihokk	(to rub)

-Stems ending in -a

A category of these verbs has no change:

25) tçešša	(to have dinner)	
ntçašša	(I have dine)	nteçššaw (we have dinner)
ttçešša	(you have dinner)	ttçeššaw (you (pl.) have dinner)
ttçeššaj	(you (fem.sing) have dinner)	
itçešša		
ttçašša		
itçeššaw		

Measures II and III change the final “a” to “i”, as in yeTTa (cover), qaDa (finish), seqSa (ask):

¹¹ Through the literature on MA, we find the expression “concave verbs”.

26) $\gamma eTTa$	$\gamma eTTi$ $\gamma eTTi$ $i\gamma eTTi$ $\gamma eTTi$	$\gamma eTTiw$ $\gamma eTTiw$
-------------------	---	----------------------------------

Others of Measure I retain the “a”:

27) qra	$neqra$ $teqra$ $teqraj$ $iqra$ $teqra$	$neqraw$ $teqraw$ $iqraw$
-----------	---	---

The inflection of the imperative

The imperative has a special inflectional form in the second person. Four verbs do not conform to this, namely *mša* (he went), *ža* (he came), *kla* (he ate) and *xda* (he took):

28) a. $mša$	(go)			
	sir (masc)	$siri$ (fem)	$siru$	(pl)
b. $ža$	(come)			
	$aži$ (sing)	$aži$ (pl)		
c. kla	(eat)			
	kul (masc)	$kuli$ (fem)	$kulu$	(pl)

One alternative form of the imperative that has no corresponding perfect or imperfect is ζTi (give, hand over):

d. ζTi	(give)			
ara (masc)	ari (fem)	$araw$	(pl)	

Nominal morphology

-The participles

Participles are adjectives derived from verbs and inflected for both gender and number, but not for person and tense. There are two types of participles which are derived from transitive verbs (especially measure I (*fçel*, *feççal* & *fça*.....))

The active participle

The general pattern is *façəl* as in *katəb*, *naçəs*, etc. In doubled verbs the “ə” is omitted between the last two consonants. For instance, *ħəll*/*ħal*. Hollow verbs, however, have a “j” as the second consonant of the pattern as in *baç* / *bajəç*. In defective verbs, the final “a” is replaced by “i”:

29) ktəb (wrote)	katəb	(having written)
həll (opened)	hall	(having opened)
baç (sold)	bajəç	(having sold)
šra (bought)	šari	(having bought)

The passive participle

The general pattern is *məʕul* as in *məktub*. In hollow verbs, a “j” appears as the second consonant of the root: *məbjuç*¹². In defective verbs, the final *-ul* is replaced by *-i*. *məšri*. This table summarizes all these forms:

31)

Type of V-stem	V-stem	Passive participle
Simple/ General	ktəb	məktub
Hollow V	baç	məbjuç
Defective V	šra	šari

Harrel (1962) states that measure IX verbs of the form *fəʕal* (bjaD) do not have a participle. However, we assume in this chapter that such verbs are participles as *məbjjəD* (whiten).

Another class includes the active and passive verbs that are formed differently. For instance, *wa* is added to the active and *mu* to the passive or the first consonant is doubled. In fact, only few verbs are of this type:

V-stem	Active participle	Passive participle
kla (ate)	wakəl	mukul
xda (take)	waxəd	muxud
dda (bring/ take)	dday	meddi
ža (come)	maži/ žaj	

The Adj- form of fəʕlan

This is the most widely derived form from intransitives. In hollow verbs, an “i” takes the “əç” of this pattern, while in defective verbs a *ju* is

¹² The usual consonant is “m” rather than *mə* if the following consonant is “b” or “m” as in *mnəç* (forbid) *məmnuç* (forbidden). ”.

added as the third consonant of the root. Adjectives of the pattern refer to human beings and temporary physical or mental states. Unlike in Harrel (1962), *fəḍḍlan* forms could have *faḍḍl* as their active participle forms. *fəḍḍlan* adjectives are not numerous. The most widely encountered ones are:

32)

V-stem	Derived adjective
brəd (cold)	bərdan/ barəd (getting cold)
dhəš (perplexed)	dəhšan/ dahəš (getting perplexed)
frəh (joy)	fərhan/ farəh (being happy)
hrəb (escape)	hərbān/ harəb (escaping)
sxəf (faint)	səxfan/ saxəf (fainting)
skər (drink)	səkran/ sakər (drunk)

There are two forms of the same pattern “CəCcaC”, *fəḍḍal* for trilaterals and *fəḍḍal* for quadrilaterals and Ns. The “ww” and “jj” function as the medial consonants of middle-weak roots, and “j” functions as the final consonant of final-weak roots. Forms like these are to be semantically linked to professions and personal characteristics or habitual activity. Some examples are:

33)

V-stem	Gloss	N- adjective	Gloss
Bka	weep	bəkkaj	weeper
Xobz	bake	xəbbaz	baker
dhəb	gold	dəhhab	jeweller
gəzra	being a butcher	gəzzar	butcher
sbər	be patient	səbbar	patient
kdəb	lie	kəddab	liar
Hd	work with iron	həddad	blacksmith
Kma	smoke	kəmmaj	smoker
nəžr	doing woodwork	nəžžar	carpenter

-The “nisba”

The Nisba is characterized by the ending *-i* attached to a stem. For instance, */islam*” (Islam) gives */islami*. Morpho-phonological changes occur in inversion, elision, insertion, etc.

34) a. *dhḡb* (gold) → *dḡhbi*¹³ (golden)

There are few examples where “aw” is inserted before the “i” ending as in:

b. *ḡḡrb* (west) → *ḡḡrbawi*¹⁴ (from the west, *ḡḡrb*, between Rabat and Meknès)

Other nisba forms that end in “a” drop the “a” and change it either to “i” or “wi”, as in:

c. *qahwa* (coffee) *qahwi* (coffee-colored)
fransa (France) *fransawi* (French)
sma (sky) *smawi* (sky blue)¹⁵

A small number of nisbas show the ending {-ni} added to stems which end in “a” and {-ani} to stems which end in “aC”:

d. *luwwḡl* → *luwwlani* (first)
lḡxxḡr → *lḡxxrani* (last)
šib → *šibani* (white-haired)

Nisba forms are derived from different types of stems, as the following table shows:

35)

Derivation Source	Stem	Nisba
Singular (geographical names)	<i>fas</i> (Fès) <i>tuns</i> (Tunis)	<i>Fasi</i> (native of Fès) <i>tunsi</i> (from Tunis)
Plural Ns	<i>bḡajḡr</i> (orchads) <i>kwarḡT</i> (cards)	<i>bḡajri</i> (orchad farmer) <i>kwarTi</i> (card palyer)
Pseudo-plurals	<i>dḡaḡ</i> (chicken)	<i>dḡajḡi</i> (chicken-seller)
Adv-particles of space	<i>bḡrra</i> (countryside) <i>fuq</i> (above) <i>llur</i> (the rear) <i>teḡt</i> (down)	<i>bḡrrani</i> (coutsider) <i>fuqani</i> (upper) <i>lurani</i> (hindmost) <i>tḡḡtani</i> (bottom)

¹³ Other examples are : *xrif* (fall) *xrifi* (autumnal)
ḡḡḡl (honey) *ḡḡḡli* (honey-colored)
fas (Fès) *fasi* (vative of Fès)
limun (orange) *limuni* (orange-colored).

¹⁴ This is to contrast *ḡḡrbi* (westerner)

¹⁵ There is one exception to this *nqa/ nqi* (proper)

	wǝST (center)	wǝSTani ((central)
Numerals	tlata (three) rǝbǝa (four) xǝmsa (five)	tǝlti (three-fold) rbaǝi (four-fold) xmasi (five-fold)

-The diminutive

Diminutives are derived from nouns and Adjectives. A distinguishing trait common to most diminutives is an initial cluster of two consonants followed by a vowel. The exact meaning of diminutives is not predictable from the meaning of the derivational base.

- 1) Monosyllables: Most trilateral monosyllables form the diminutive by inserting “ijje” between the second and third consonants: *qeTT* / *qTojjeT*.
- 2) Middle-weak monosyllables realize the diminutive by *fwila* or *fwijjǝl* (a small elephant)
- 3) Few monosyllables with trilaterals and the vowel “ǝ” that realize the diminutive by the pattern *fǝila*
- 4) Adjectives of color, defect and adjectives of the pattern *fǝil* form the diminutive by *fǝiǝǝl*, where the second root consonant is repeated.
- 5) Stem-patterns like *fǝǝl* / *faǝl* + vowel form diminutives by inserting the vowel “i” between the second and third consonants. However, if the stem is middle-weak with a final vowel, a “w” is added.
- 6) The stem pattern *fǝala* / *fǝila* form the diminutive by *fǝijjila*.
- 7) Quadriliteral roots realize the diminutive pattern CCiCCǝC, except if the word has a final vowel in which case “ǝ” is dropped. Occasionally, we find four consonants diminutives with an “i” between the second and third consonants and between the third and fourth consonants.

The following table summarizes all these points:

36)

word-stem	derivational base	Diminutive forms ¹⁶
Triliteral monosyllables	bɣɔl (mule) kɔlb (dog) Tɔrf (piece) xɔbz (bread)	bɣijjɔl klijjɔb Trijjɔf xbijjɔz
Middle-weak triliterals	bab (door) bir (well) buq (horn) far (mouse)	bwiba bwijjɔr bwijjɔq fwijjɔr
Triliteral monosyllables with a vowel “ɔ”	bɔnt (girl, daughter) rʒɔl (foot) ɕsɔl (honey)	bnita rʒila ɕsila
Adjectives of color defect adjectives and adjectives of the pattern <i>fɕila</i>	bhɔl (stupid) bɔkm (mute) khɔl (black) bxil (miser) mlih (good) Twil (tall)	bhihɔl bkikɔm khihɔl bxixɔl mlilɔh Twiwɔl
Stem patterns <i>fɔɕl</i> and <i>faɕl</i> + vowel	bɔgra (cow) Derba (a blow) ɣɔnmi (lamb)	bgira Driba ɣnimi
Stem patterns <i>fɕala</i> /	bLaSa (place)	bLijjSa

¹⁶ For comparative purposes, Berber (Soussi variety) also makes use of diminutives with social or discourse-based implications. What is striking in this variety is that diminutives are marked by the feminine that could be for beauty or another dialectal purpose as in:

/imʒʒan (ears)	timzgin (small ears)
/imzzij (small)	imzzik (very small)
anu (well, sg & masc)	tanut (small well, sg & fem)

The data is taken from a number of native speakers of the variety spoken in Ait Abdellah, Agadir.

<i>fçila</i>	bnīqa (room, cell) džaža (hen)	bnijjqa džijža
Quadrilateral roots	kðskas (couscous pot) mbðxra (smoked) Tðnžijja (steam Pot) Zerbijja (carpet)	ksikðs mbixra Tnižira Zribijja

-The comparative

Only a limited number of Adjs have a comparative form; the exceptions are learned as vocabulary items.

1. The patterns *fçil*, *fçul* and *façðl* have the comparative form *fçðl*.
2. The pattern *fijjðl* have the comparative pattern *fjðl* or *fwðl*.
3. The pattern *fçil* from doubled roots have one or two options, either
4. *fçðç*, or *feçç*.
5. The final weak patterns *fçi* and *fçu* have the comparative form *fça*.
6. Adjs of color and defect: the property is that these adjectives are the same as their comparative forms. They are used in the comparative without any change of form.

(37)

The pattern	The simple stem	The comparative form
<i>fçil</i> , and <i>façðl</i>	kbir (big) tqil (heavy) wasðç (wide)	kbðr (bigger) tqðl (heavier) wsðç (wider)
<i>fijjðl</i>	xir (good)	xjjðr (better)
<i>fçil</i>	bnina (delicious) xfifa ((light) ždida (new)	bðnn (tasty) xðff (lighter) žðdd (newer)
<i>fçi</i> and <i>fçu</i>	nqi (clean) hlu (sweet)	nqa (cleaner) hla (sweeter)
<i>fçðl</i>	khðl (black) hmðq (crazy) bjðd (white)	khðl (blacker) hmðq (crazier) bjðd (whiter)

The numerals

MA has separate forms for cardinal and ordinal numbers from one through twelve.

The cardinals

There are individual forms for the numbers from one through 19, for the tens from twenty through ninety, for a hundred, a thousand, a million and a billion.

- (38) *wah*∂d (one, masc)/ *w*∂hda (one, fem)/ *w*∂Hdin (pl).
 žuž (two)/ *tnajn* or *tnin*.
 tlata (three).
 r∂bça (four).
 ç∂šra (ten).

The numeral *wah*∂d differs from numerals from one to ten in being an adjective. It occupies the same place in the structure as all adjectives and similarly agrees in gender with whatever noun it modifies.

- (39) *ktab wah*∂d (one book)
 Tomobila w∂hda (one car)
 žuž ktub (two books)
 žuž d-l-ktub (two books)
 žuž Tomobilat (two cars)

The ordinals

The ordinal numerals are simple adjectives, both morphologically and syntactically, except for “first” and “second” which have special forms. They all have the pattern *faç*∂l, as in:

- (40) *lluww*∂l¹⁷ (first)
 tani (second)
 tal∂t (third)
 rab∂ç (fourth)
 xam∂s (fifth)
 sad∂s (sixth)

Adjective inflection

MA has two main grammatical features. Genders (masculine and feminine), and two numbers (singular and Plural). Adjectives, unlike nouns, do not take the suffixed pronominal endings.

¹⁷ These are masculine singular. The feminine forms are regular, formed with the endings “-a”.

Gender

a- The base form of the adjective is the masculine singular. The feminine is formed by adding {-a} to the masculine as in:

(41)

- sxun (hot, masc)	sxuna (hot, fem)
- mōrr (bitter, masc)	mōrra (bitter, fem)
-ferħan (happy, masc)	ferħana ((happy, fem)

b-However, participles which end in {-i} mark their feminine by changing “i” into “j” before adding the feminine {-a}. For instance:

(42)

-maši (walking, masc)	mašja (walking, fem)
-mrōbbi (well-educated, masc)	mrōbbja (well-educated, fem)

c- Others keep the {-i} and add {-j} before “a” as in :

(43)

-nqi (clean, masc)	nqija (clean, fem)
-mōfri (bought, masc)	mōšrija bought, fem)

d- Cases of elision and metathesis are met with:

(44)

- galōs (sitting, masc.)	galsa (sitting, fem)
-mijjōt (dead, masc)	mijjta (dead, fem)
-mōslōm (Muslim, masc)	msōlma (Muslim, fem)

Number

The adjective in MA is marked for number.

a- Participles:

Masculine singular	Plural
<i>mōDrub</i> (passive participle of <i>Drōb</i> (hit))	<i>mōDrubin</i> (having been beaten)
<i>katōb</i> (active participle of <i>ktōb</i> (write))	<i>katbin</i> (having written)
<i>nasi</i> (active participle of <i>nsa</i> (forget))	<i>nasjin</i> (having forgotten)

Even diminutive adjectives are marked for number:

(45)

-Syiwōr (small, sing)	Syiwrin (small, pl).
-zwiwōn (good, sing)	zwiwnin (good, pl).

Agreement between the noun and the adjective

The noun and the adjective show regular mutual agreement in terms of number, gender and diminutive.

There is full agreement in number and gender between adjectives and the nouns or pronouns they modify:

(46)

- wahðd l-bit kbir (one big room)
- wahd ðdar kbira (one big house)
- bjut kbar (big room)
- huwwa mriD (He is ill)
- hija mðriDa (She is ill)

The comparative form of the adjective does not conform to this pattern:

(47)

- huwa (hija, huma) kbðr mðnni.
- He (she, they) bigger than me
- “He/ she/ they are bigger than me”.

What are the possible positions that an adjective may occupy in relation to the noun it modifies? Adjectives in MA have two positions, namely attributive and predicative.

The attributive adjective

The attributive adjective usually occurs after the noun it modifies:

(48)

- ši nas mðzjanin “Some good people”.
- mudda Twila “A long period of time”.

However, in a construct-state, the adjective modifying the first element of the construct-state is placed after the entire construct rather than immediately after the noun it modifies.

(49)

- ktub ddrari muhimmin
- “children’s books are interesting”

The predicative adjective

The predicative adjective occurs either as a predicate complement or as an adjective complement:

(50)

- kunna fðr□anin (we were happy).
- Sbðγhum □umðr (He painted them red).

The position that predicative adjectives take is similar to that of English ones; i.e. they occur in the predicate. Note that adjectives agree with the nouns they modify even in the diminutive form:

(51)

- qTeTa Syiwra “kitten”.
- wliḍat zwiwnin “good boys”.
- wliḍat zinin “good boys”.

Verbal derivational morphology

A brief sketch of the morphology of the verb

The main objective of this section is to examine the major derivational verb forms, showing that derivation in Moroccan Arabic is obtained by affixation. The morphemes that are systematically affixed to the verbal stems derive the following major derivational categories: causatives, reciprocals, reciprocal causatives, reflexives and the passive. We are mainly concerned with the first four categories¹⁸.

Causatives

Causative verbs are used to express causality (a relation of cause and effect). They are formed in MA by infixation and gemination. More specifically, the causative is formed by geminating the second stem consonant of the source verb in triconsonantal forms. The causative is, thus, formed according to a fixed CVCCVC pattern. The following paradigms illustrate the five basic triconsonantal verb forms (i.e., regular, “deaf”, assimilated, concave and defective verbs)¹⁹.

¹⁸ There are five derivational categories of the verb including the passive. In this chapter, we will ignore any discussion of this verbal class.

¹⁹ See Caubet (1993) for ‘les verbes sourds’ which are defined as triconsonantal stems in which the last two final consonants are similar such as (*Kḍbb* ‘pour’; *ḥḍḍ* ‘to close’). As to ‘assimilated verbs’, they refer to the class of verbs in which the first radical is a semi-vowel as in (*wqḍf* ‘stand up’ and *jbḍs* ‘to dry’). They conjugate in a very similar way to regular verbs. Following Caubet (ibid), stems or words that have a vowel in middle position are called concave stems (e.g. *qal* ‘to say’; *baḥ* ‘to sell’). This definition can be extended to cover substantives as well (*bab* ‘a door’ the plural of which is *biban* ‘doors’; *nar* with the plural as *niran*). As to the last category in the list, it is used to refer to verbs that have the pattern of CCa. Examples of these defective verbs are (*bra* ‘to recover’; *nsa* ‘to forget’).

Basic stem	Derived Stem
<hr/>	
<i>A.. Regular Verbs :</i>	
1. hrðb “to escape”	hðrrðb “to make someone escape”
2. ktðb “to write”	kðttðb “make someone write something”
3. glðs “to sit down”	gðllðs “make somebody sit”
4. frðb “to drink”	frðrðb “make somebody drink”
5. frð h “to be happy”	fðrrðh “to make someone happy”
6. lbðs “to dress”	lðbbðs “to make someone wear something”
7. hbðl “to become foolish”	hðbbðl “cause somebody to become foolish”
<i>B. Deaf Verbs</i>	
1. šðdd “close”	šðddðd “to be firm”
<i>C. Assimilated Verbs</i>	
1. hbðT “to descend”	hðbbðT “to cause to descend”
2. wSðl “to arrive”	wðSSðl “to escort”
<i>D. Concave Verbs :</i>	
1. dab “melt”	dewweb “cause to melt”
2. har “confuse”	hejjer “to confuse someone”
3. mat “to die”	mewwet “cause someone to die”
4. xaf “to be afraid”	xewwef “frighten”
5. Ta h “to fall”	Tejje h “cause someone to fall”
<i>E. Defective Verbs</i>	
a. qra “read” something”	qðrra “make someone read something”
b. žra “to run”	žðrra “make someone run”
c. kla “to eat”	wðkkðl “to feed”
<i>F. Exceptions :</i>	
qðllðb “to search”	(no derived causative)
hðrrðs “break”	

A consideration of these data allows the following generalization: the structure of the causatives varies according to the shape of the basic stem. Generally, infixes appear in the middle of the stems, i.e. a short vowel schwa is inserted between the first and the second radicals in all classes of the above mentioned verbal stems (i.e. regular, concave, assimilated and defective verbs) and the second radical of stem A, B, C and E are doubled. As to concave verbs, the vowel *a* in the basic stem changes into the semi vowel ‘y’ and ‘w’. Consider the following examples:

- (52) dab → dðwweb (to melt)
 har → hðjjjer (to get confused)

Following Ratcliff (1997), we assume that, in general, the stem has only two consonants, although there are stems with more than two consonants such as :

- (53) rxam → rðxxam (to tile with marble)
 sman → sðmmen (to become fat)
 kdub → kðddðb (to disbelieve)

Interestingly, ergative verbs in this language can be causativized, as shown in:

- (54) a. ttelž dab
 “The snow melted.”
 b. dðwwðb-u ttelž
 cause –melt-they the snow
 “They melted the snow.”

The verb displays the same morphological property as other causatives (i.e. gemination of the second radical). Here, it is the vowel *a* that is converted into *w* and is then geminated.

With regard to the last class of verb stems, i.e. defective verbs, although the causative form is derived, it is observed that the vowel /ð/ keeps the same position in both the basic and derived forms .

- (55) a. qra → qðrra ‘‘make someone read’’
 b. žra → zðrra ‘‘cause somebody to run’’
 c. kla → wðkkel ‘‘to make someone eat’’

The only difference between the basic form and its corresponding accusative verb is that the derived form is accompanied with a schwa which immediately follows the first radical. While /a / takes the same position and remains unchanged in both the base and derived forms in (56a-b), it is elided

in (55c). One interesting property of causative verbs is that they can be derived from either transitive or intransitive ones. However, in the case of base verb forms, verbs like *gles* (to sit down); *n̄es* (to sleep); *freh* (be happy), they do not require a direct object. After the morphological process of causative formation, the derived verb becomes transitive, hence requiring a direct object. Here are two examples illustrating this point²⁰:

- (56) a. *drari herb-u*
 ‘‘The children have escaped’’.
 b. *h̄rrb-u drari*
 ‘‘They have made the children escape.’’

Another salient feature of this process is that causatives can equally be derived from nouns as shown below.

- (57) a. *sqaf* (roof) → *s̄dqqaf̄* ‘‘cause something to have a roof’’
 b. *dheb* (gold) → *d̄dh̄b̄* ‘‘gild ;cover with gold’’
 c. *qsem* (a share ; a part) → *qessem* ‘‘to divide into parts’’

A last property characterising causative stems in Moroccan Arabic is that although causativization in this language consists in most cases of the gemination of the second radical of the root, not every verb with a reduplicated middle radical is a derived causative. Some verbs have exactly the same morphology as derived causatives, but do not convey this meaning. The difference between the two is that derived causatives have a non-causative counterpart, whereas the other type of verbs does not. For instance, verbs like *h̄rr̄des*, *break* and *q̄ll̄b̄* (search) have a middle geminated consonant but are not causatives. However, our focus here is exclusively on morphologically derived causatives.

To summarize, we have presented an account of causativization as an instance of affixation²¹. It has been shown all through that causative

²⁰ For an insightful discussion of this topic, see Benmamoun (1995).

²¹ The main point we want to stress here is that unlike in MA, English causatives are not derived by the affixation of a causative affix to the verb. It is rather derived by embedding a sentence to a causative verb. For instance, we can say,

The children wrote a letter.
 He made the children write the letter.

forms are structured according to the forms of their stems that can consist of either infixation, or gemination of the second radical or the infixation and the change of the vowel *a* into a semi vowel *w*, which is doubled.

Reflexives and reflexive causatives in Moroccan Arabic

The second derivational categories to consider are the reflexive and the reflexive causatives in MA. Reflexive verbs are formed on the basis of the pattern [nfaʋel]. This class of verbs is obtained by the adjunction of the prefix *n-* to the stem of the so called direct reflexives as in :

(58)

šeq (divide) → t/nšeq (be split)
 sheb(withdraw)→ nsaheb (withdraw himself)
 hzem (defeat) → nhazem (be defeated)
 kla (eat) → t/tʔnkʔl or tkal (was eaten)
 kšef (show) → nkašʔf (be discovered)
 Tlʔq (to start) → nTalʔq (make a fresh start).

Besides the prefixation of *n*, it is worth emphasizing here the role of infixation. The short vowel *e* is replaced by the vowel *a* in the above cases of *nsaħʔb* and *nhazʔm*, for example. The /t/ and /n/ of the reflexive can be combined in the same form such as /ttenkl/ ‘‘being eaten’’(see Chekayri, 1998 for a lengthy discussion of this issue). In this respect, it is worthy of note that Standard Arabic has a great influence on the Moroccan Arabic morphological system where words like *nšeq* can have their base forms in Moroccan Arabic. Verbs like *ndater* (disappear); *nhazʔm* (be drfeated), however, seem not to be commonly used in their simple (base) transitive form in Moroccan Arabic, as in *der* or *hzem*²².

Related to this structure of Reflexives is that the so-called reflexive causatives. For the sake of illustration , consider the following paradigm in :

(59) stʔrxa (relax) stʔwfa (to have his full share of)
 stexdʔm (employ) stʔʔbʔd (enslave)

The difference between English and Moroccan Arabic reduces to the morphological nature of the Causative morpheme. In the former, it is a free morpheme, i.e., it can surface morphologically on its own. In the latter , it is a bound morpheme, requiring some lexical category to which it has to attach; i.e. it has to attach to the stem.

²² We very rarely say, for example, *hzʔm* (defeat), but the corresponding reflexive foms are rather frequently used in Standard Arabic.

The above examples are derived on the pattern of [stəfɿl]. In [stəfɿl] , we have a simple regular verb form [fɿl], a trilateral regular stem , to which is adjoined the prefix [stə]. On the basis of this, we can derive the following forms in (60):

(60)

tsəkbəɾ (be arrogant)
 stəwfa (take the amount of money that one
 deserves)
 stəhza (be patient)
 rxa→sterxa (to relax)
 staʒdəɾ→(excuse oneself)
 stəxdəɾm (utilize)
 ʒbəɾ→stəʒləbəɾ (exploit)
 ɣfəɾ→tsɣləfəɾ (to forgive)
 wəxxəɾ→stəwxəɾ (to delay)
 tsəwla (take by force)
 qəɾTəɾ→stəqTəɾ (drop)

These forms are mostly used by educated people, but when used by non-educated persons, the phenomenon of metathesis crops up. Instead of saying /stəɣfəɾ/, we hear the word /tsəɣfəɾ/. This phenomenon which refers to the alternation in the sequence of sounds is noted in Moscati (1963:63) to be a widespread phenomenon in Semitic languages. In the case of the reflexive causative, it is derived by the infixation of [t] in the second radical which is inserted, but because of the metathesis, the affix [t] is added (i.e. put before the consonant [s]). A similar phenomenon is observed in Hebrew and Syrian Arabic, as witnessed in examples (60a-b).

(60) a. *Hebrew*: ‘hit \$ammer’ ‘He was in his guard’
 ‘hit\$ammer’

b. *Syrian Arabic*: ‘’ /etsemek ‘He leaned ‘
 ‘’ /estemek’
 (From Moscati: 1963:63).

This phenomenon, as Moscati (ibid) observes, occurs with verbs whose first radical is a dental or a palato-alveolar fricative.

Reciprocal verbs

Let us now shift the attention to reciprocal verbs. This category of verbs is derived from verbs expressing the idea of mutuality or exchange. Broadly speaking) reciprocal verbs are obtained by the prefix *t-*, which

indeed plays a substantial role in several verbal derivation processes such as reflexive, passive, etc. The reciprocal is regulated by other vocalic permutations within the word itself, and the structure where it is used. To illustrate, consider the following instances:

- (62)a. d-darb-u
reciprocal affix hit –they
‘‘They hit each other’’
b. d-darɔb mʒan-a
‘‘He fought against us’’.
c. ʃaaf (the basic form)
tʃaawf-u → They saw each other.
d. tfaahm-t mʒa-ha
‘‘I reached an agreement with her’’.
e. tfahɔm-na
‘‘We have agreed.’’
f. *tfaahm-t
‘‘she understands.’’

The above data show that the preposition may or may not be present. However, when the prepositional phrase is not used, reciprocity is stated by the affix *-t* (the reciprocal affix) together with the plural subject marker. Otherwise, sentence (62c) would be ungrammatical. In this example, although the reciprocal affix is present, a prepositional phrase is needed to convey the idea of reciprocity.

The reciprocal form is obtained by the prefixation of *-t* and the suffixation of *-u*, or *-na* in addition to the elision of the schwa after the second radical and the insertion of the vowel *a* after the first radical as *tʃaawf-u* (they have made peace.).

Equally important is the fact that concave verbs of the ‘‘fal’’ pattern realize their reciprocal forms by the infixation of the semi vowel *w* after the vowel *a* besides the affixation of *-t* and suffixation of *-u* as is the case with the verb *bas* ‘‘kiss’’ whose reciprocal form is *tbaws-u* ‘‘they kissed each other’’.

As to stems ending in *-a*, as in *dʒa* (to sue), it is observed that the initial consonant [d] in (1-7) is illustrating the reflexive causative. In the reflexive causative *ddaʒin-a* (we have sued each other) and *ddaʒin-a mʒa hum* (we have sued each other) the first radical stem *d* becomes doubled as a result of regressive assimilation whereby the reciprocal affix [t] changes into d as a result of assimilation. The base form *dʒa* is a transitive verb, whereas the two derived forms *ddaʒin-a* and *ddaʒin-a mʒa hum* are intransitives.

Thus far, we have shown how affixation plays a central role in a number of verbal derivational processes in Moroccan Arabic. Unlike other languages, in which verbal derivational morphemes are mostly consonantals (see Sadiqi 1999, for Berber), in Moroccan Arabic the morphemes that are systematically affixed to the verbal stems are both consonantal and vocalic. Another striking peculiarity of verbal derivation in this language is that the structures of causatives, reciprocals, reflexives and reflexive causatives vary according to the shape of the basic stem, which explains the richness and regularity of the rules involved in this process.

Nominal inflection

The nominal category acquires its grammatical value by means of inflectional morphemes. There are three types of inflection that substantives can take.

1. Gender (masculine/ feminine),
2. Number (singular, dual or plural)
3. state (free state and construct state).

Given this, there is a couple of interesting questions which can be raised in relation to the way gender is realized in Moroccan Arabic and to the different possible manifestations of number in the language under consideration. We examine each issue in turn.

Gender

Included under this class of nominals are substantives and adjectives. While substantives are inflected for gender, adjectives in MA do not have an intrinsic gender feature. The gender feature is imposed on adjectives by agreement with its substantives.

Substantives

It is fairly well-known among grammarians (cf. Harrell 1963 and Caubet 1993) that each substantive in MA has its own gender. As a matter of fact, all nouns in this language are categorized into one of the two classes : masculine or feminine. Thus, the suffix *-a(t)* is commonly associated with the feminine nouns. However, this generalisation is not tenable in the sense that some feminine nouns may not end in *-a(t)*, in the same way that we can find other masculine nouns ending in *(-a)*. More specifically, this suffix has other functions than marking feminine gender. It is, for example, attested in the formation of some collective nouns (nouns of collective unity), verbal nouns, nouns of unique actions and certain masculine plurals. In this section,

the focus is put on the different uses of this suffix with the aim to work out the invariant behind the diversity of these functions.

The major uses of the suffix –a (t)

One interesting characteristic of this suffix –a(t) is that when adjoining a vocalic initial suffix or when put in a liaison with the following word, the –t suffix of feminine gender re-appears. For the sake of exposition, consider the following set of examples:

(63)	<i>Word in isolation</i>	<i>Liaison</i>
	-magan-a (a watch)	→ magan-ti (my watch)
	-fist-a (a jacket)	→ fist-tu (his jacket)
	-rih-a (odour)	→ rih-tu (his odour)
	-lil-a (a night)	→ lil-t lqadr (The 27 th day of Ramadan)
	-žellab-a (a Jellaba)	→ žellab-t bba (my father's jellaba)
	-mra (a woman/ wife)	→ mrat ζammi (my uncle's wife).

The examples above elucidate the fact that the feminine nouns ending in –a regularly change the –a into –t before taking possessive endings or occurring as the first noun of a construct state.

Gender markers

Certain male animals are opposed to their females by the suffix –a(t)²³

(64)	
Male animals	Female animals
qɖ T	qɖ TTa (a cat)
far	fara (a mouse)
kɖ lb	kɖ lb-a (a dog)

Some male and female names are, however, designated by words of a different root. By way of illustration, consider:

²³ Moroccan Arabic, unlike French, does not have an article explicitly indicating gender. For comparative purposes, consider the following examples :

French: une voiture- une fleur - une robe
 Moroccan Arabic: Tomobila - werda - keswa

- (65) džaža (a chicken) → fǝrruž (a cock)
 begra (a cow) → Tor (a bull)

Another use of the suffix *-a* is to refer to names of occupation and crafts, as illustrated in (66):

Names of Occupation	Masculine Form	Feminine Form
Names of crafts	Tbib	Tbib-a (a medical doctor)
	mučallim	mučallim-a (a teacher)
	Tǝbbax	Tǝbbax-a (a cook)
	ressam	rǝssam-a (a painter)
	xeyyaT	xeyyaT-a (a tailor)

The third context of use of *-a(t)* is in the formation of collective nouns. On the basis of collective nouns, nouns indicating a unit of the overall entity expressed with the collective is formed via the suffix *a (-t)*. Here are some illustrative examples :

(67)

Collective Nouns	Nouns of Units
bgǝr (cows)	bǝgr-a (a cow)
nmel (ants)	nǝml-a (ant)
bSǝl (onion)	bǝSl-a (an onion)

Formation of the verbal nouns

Verbal nouns are nominal forms derived from verbs. To illustrate this, consider the following paradigm:

(68)

Verbs	Verbal Nouns
Tehhǝr (to circumcise)	Thara (circumcision)
rbǝT (to Tie)	rbaT (the act of tying)
γsel (to wash)	γsil (the act of washing)
rkeb (to ride)	rkub (riding)
Sam (to fast)	jam (fasting)
bna (to build)	bni (building)
Tfa (to extinguish)	ǝfjan (extinction)
tafa (to be confused)	mfaf-ja (confusion)
qSǝm (to divide)	qSim (partition)
Drǝb (to hit)	ǝrb(hitting)
dhǝk (o laugh)	dǝhk (laughing)

Some verbal nouns, however, may have the same form as their corresponding verbs. For instance,

the verb: γɔš (o cheat) Verbal Noun: lγɔš (cheating)

It is observed that the suffix *-a* in this class of verbal nouns may serve to oppose the abstract nouns like *hulm* ‘‘dream’’, referring to the whole process in general, to a noun indicating a unique action, or a particular occurrence of an accident or act. In this case, the verb *hlem* from which the noun *hulm* is derived can have another verbal nominal form (for some discussion of the treatment of verbal nouns see Caubet 1993).

(69)

Verbal Stem	Name of Action	Individual Unique Act
Safɔr (to travel)	Sfɔr (travel)	Sɔfra (a trip)
rkɔb (to ride)	rkub (riding)	rɔkba (a ride or riding)
Drɔb (to hit)	Dɔrb (hitting)	Dɔrb-a (a hit)
zhɔq (to slip)	zhiq (slipping)	zɔhq-a (a slip)

-a (t) with the Plural of Masculine Substantives

The suffix *-at* can also be used along or combined with other stems to permit the plural of certain masculine substantives, viz. nouns designating occupations/professions or the geographical places from which a person comes²⁴, or geographical places referring to people’s geographical origin. To illustrate, consider the following:

(70)

<i>Plural of Names of Geographical Origin (nisb-a)</i>	<i>Plural Nouns referring to occupations</i>
Sɔhrawi→Sɔhrawa (people coming from the Sahara)	gɔzzar→gɔzzar-a (butcher(s))
žabl-i→žbal-a (people living in “žbala” in the North West of Morocco)	

²⁴ This is called in Standard Arabic the *nisba*. See the section devoted to this notion.

As to adjectives, they can form their feminine gender by the adjunction of the suffix *-a(t)* to the masculine form. Being vocalic, this suffix is subject to usage constraints concerning the permutation of short vowels. Consider these examples in (72):

(72)

Masculine

Feminine

Zbɔ̃n Tre (a fresh cheese)

Zɔ̃bda Trija (fresh butter)

kbbuT bali (an old pull over)

kɔ̃swa balja (an old dress)

Active participle:

sabɔ̃q ‘running’

sabqa (running)

rabɔ̃h ‘winner, masc’

rabha ‘winner, fem’

The main point we want to stress here is the change of the short vowels *e* and *i* into the semi vowel *-j* in the feminine counterpart.

In short, in addressing the way gender is realized in Moroccan Arabic, we have come to the conclusion that all nouns are categorized as belonging to one of two classes: masculine or feminine. In other terms, the suffix *-a*, usually associated with the feminine gender, is revealed to display a number of different uses. While the majority of nouns ending in *-a(t)* are feminine (e.g. Tɔ̃bla), most other nouns which do not end in *a* are masculine such as *ɣerraf* (a pot). A few nouns, however, not ending in *-a* are feminine like *hanut* (a shop); *dar* (a house)²⁵. The task of the next section is to touch on the issue of plural formation.

Number

Before embarking on the analysis of the way plural formation processes are carried out, a word about the function of the category number is in order. There are essentially two numbers: the singular and the plural. Not all nouns are, however, subject to these two forms. On the one hand, certain nominals have a ternary system due to the existence of the dual form. A series of nominals, on the other hand, have only one possible form: the singular. In what follows, we discuss each of these categories in turn.

Nominals without plurals

²⁵ According to Harrell (1963:44), these relatively few feminine nouns, which do not end in *-a*, are actually exceptions and must be simply memorized by speakers of Moroccan Arabic.

This category of nominals in which no plural forms are attested is constituted of collective nouns. Collectives behave as singulars (i.e., they show singular agreement with the verbs and anaphoric pronouns). They designate groups of individuals or objects understood as a whole or as a collection of elements, such as fruits, vegetables, living animals in groups or crew, insects, etc. Examples of this category are:

(72)

zǝbda	(butter)	dra	(corn)
smǝn	(preserved butter)	qTǝn	(cotton)
Suf	(wool)	ħrir	(silk)

When used in the plural, some of these substantives obtain a morphological form with a very particular meaning that serves to mark intensity. Moreover, they are used with the exclamative quantifier *šhal* (meaning how much), as illustrated in the following examples.

(73)

- a. *šhal dsmunat dewwǝb-ti!*
 ‘‘What a lot of preserved butter you have melted!’’
 b. *šhal dezyyut šrit-I!*
 ‘‘What a lot of oil you have bought!’’.

Notice that collectives are not generally pluralized. When they are, the plural form is meant to reinforce the idea of intensity.

In what follows, we consider nouns having a ternary system. This class of nouns is not large in number. They are limited in number and are used to designate units of time, measures. Added to this is the very restricted set of nouns referring to certain double parts of the body. The dual is formed by the insertion of the affix *-ayn* to the masculine with the usual permutation of the short vowel within the word. It is sometimes set in the form of the suffix *-in* as is the case of certain parts of the human body. Consider the following illustrative data:

(75)

<i>Types of nouns having a ternary system</i>	<i>Singular</i>	<i>Dual</i>	<i>Plural</i>
<i>Units of time</i>	qsǝm (5mn) jum (a day) ζam (ayear)	qsmajn (10mn) jumin (2days) ζamin(2 years)	qsum-a (minutes) ijjam(days) ζwam (years)
<i>Numerals</i>	ζšra(ten) mja (a hundred)	ζšrin(twenty) mjatajn(2 hundred)	ζšrawat (tens) mjawat (hundreds)

<i>Units of measure</i>	uqijja (ounce)	uqijtajn (2 ounces)	uqijjat (ounces)
	qǧlla (a jar to measure oil)	qǧltayn	qlǧl

As to the units of measures which have a foreign origin, they are used with cardinal numbers for they disallow a dual form of their own. For instance, consider (75) :

kilu	→	žuž kilu	(2 kilos)
litǧr	→	žuž litǧru	(2liters)
mitǧr	→	xamsa mitǧr	(five meters)

Apart from the above marginal instances, Moroccan Arabic substantives have basically two forms: the singular and the plural. As far as plural formation is concerned, three strategies have been singled out in this language:

1. Plurals formed by simple adjunction of a suffix and labelled external plurals.
2. Internal plurals, characterized by a modification of the stem ending up in the formation of another word.
3. A combination of both the first and second strategies: mixed plurals.

Types of plurals

External plurals

External plurals are formed, according to Caubet (1993), by the adjunction of one of the following suffixes to the singular stems: *-in*; *-a(t)*, and *-an*.

The suffix –in

The suffix used with adjective participles

This suffix is almost exclusively observed in the pluralization of adjectives and participles. For instance, we can say

(76)

mzjan	→	mzjan-in	(good/handsome)
maši	→	mašj-in	(leaving)
mṛǧdd-I	→	mṛǧd-j-in	(having eaten our lunch)

The suffix –in used with substantives

The plural of nouns formed by the suffix *–in* are less numerous. They are found with nouns referring to double parts of the body, nouns of occupation or with borrowed words from Standard Arabic.

-Nouns referring to parts of the body

(77) jǝdd→jǝddin (hands); wdǝn→wǝdnin (ears); rǝǝl→rǝǝlin (foot).

-Nouns referring to names of crafts or occupation:

These are formed on the CǝCCaC stem²⁶. For examples:

(78) fxxar(pottery)→fxar-in; xyyaT(taylor)→xyyaT-in; nǝzar(carpen-
ter)→nǝzar-in ; ζǝTTar(perfume vendor)→ ζǝTTar-in; ζǝǝsab(herbage
seller)→ζǝǝsab-in, hǝrrar(a silkweaver) → hǝrrar-in.

-Nouns borrowed from Standard Arabic

(79) muhnd-is→ muhndis-in (engineers); muḥami→ muḥamiyy-in
(lawyers); muftiǝ→ muftiǝ-in (inspectors); muǝǝllim→ muǝǝllim-in
(instructors).

The suffix –a(t)

This suffix serves exclusively to the formation of the plural of masculine substantives designating human groups having the following stem CǝCCaC (referred to as ethnonyms). Consider the following examples with the CǝCCaC :

(80)

gǝzzar → gǝzzara (butchers)
xǝddar→xǝddara (vegetable sellers)
xijjaT→xijjaTa (Taylor)
ǝǝllayǝi→ǝǝllayǝiya (Tile-makers)

Instances with ethnonyms are presented as follows:

(81)

²⁶ Notice that these plural nouns refer to names of streets in the old medina of Fès. They are associated with the places where such crafts are exerted, or where a typical kind of goods is sold.

susi→swasa (from Souss in the south of Morocco)
 žǧbli→ žbal-a (from Jbala in the North West)
 tumsi→twansa (Tunisians)

The above nouns allow two plurals depending on whether they are taken as adjectives or as nouns. In the former, the plural with an *-a* ending is used. However, if considered as substantives, this short vowel *-i* in the singular is substituted for *-y* in the plural, as best illustrated in the following examples:

(82)

mǧknas-i → mkans-a (from Meknès)
 → meknasiy-in (“ ”)
 Sǧhraw-i → Sǧhrawawiy-in (from the Sahara)
 → Sǧhraw-a (“ ” “ ”)

Likewise, the suffix *-at* serves to exclusively form the feminine substantives ending in *-a(t)* and masculine substantives ending in a consonant or a vowel *-u*.

Feminine substantives ending in -a(t)

Examples of this category are best illustrated below:

(83)

čša → čšawat (dinners)
 mlaj-a → mlaj-at (blankets)
 br-a → braw-at (envelopes)
 Sla → Slaw-at (prayers)
 mT ǧrb-a → mT ǧrb-at (mattresses)

When the feminine singular nouns end in *-a*, the insertion of a semi vowel before the plural suffix is obligatory.

Masculine substantives

The suffix *-at* serves to form the plural of masculine substantives on the pattern of CCaC or of nouns derived from foreign origin (loan words), as shown in :

(84)

Twal → Twal-at (ropes)
 nhar → nhar-at (days)
 rjad → rjad-at (gardens)
 xbar → xbar-at (news)
 slam → slam-at (greetings)

Borrowing

(85)

Taks-i→Taksijj-at (taxis)
 radj-u → radjuw-at (Radios)
 bol-a → bol-at (lamps)
 kanap-I → kanapij-at (sofas)
 župp-a → župp-at (skirts)
 sumiž-a→ sumiž-at (shirts)
 blan → blan-at (plans)
 fist-a → fist-at (coats)

Plurals of nouns of unit

The collective nouns of unit if ending in a suffix – *a(t)* can have a form of external plural in-*at*. This plural can be used with quantifiers viz. cardinal numerals or expressions designating a small quantity of elements. Consider the following examples :

(86)

<i>Collective Nouns</i>	<i>Nouns of Unity</i>	<i>Plural</i>
tffaḥ (apples)	tffaḥ-a (an apple)	tffaḥ-at (apples)
mešmaš (apricots)	mšmaša (an apricot)	mšmas-at (apricots)

In adding a cardinal number, we obtain instances like:

(87)

rbča djal lmačzat
 four of the goats
 "Four goats"

But if a quantifier is used instead, the following form is observed:

(88)

bðzzaf djal lmčiz
 "Lot of goats."

The following subsection is mainly concerned with the last suffix, namely -*an*

The suffix –an

The suffix –*an* is used with a singular meaning (or the suffix –*an* in the singular). It plays a crucial role in adjective derivation. We say, for instance, *γðDb-an* (angry) ; *sðkran* (drunk); *zič-an* (hungry), etc. We can also attest this suffix in the formation of the plural having the stem *CðCC-an*, as illustrated below:

Sbač→ Sbč-in (fingers)

ζawd→ζawd-an (horses)
 fexd→ fexd-an (thighs) (we can also say (*fxad*)
 hažeb→hežb-an (eyelashes)

Having exposed the different suffixes used in the derivation of external plurals, the task of the following subsection is to see how internal plurals are derived.

Internal plurals

Compared to other types of plurals, internal plurals are very large in number. They cover both nouns and adjectives. The prominent feature of these plurals is that they maintain the same root, but the stem undergoes a complete change. From a lexical perspective, we can note that there is a formation of a new word. Although Harell (1963) claims that in Moroccan Arabic there is no-one to-one correspondence between a singular stem and its plural corresponding form, and that plural formation in this language is merely a matter of memory, we, in the spirit of Caubet (1993), have singled out the following regularities that concern mostly trilateral stems with sporadic reference to quadrilaterals. In this subsection, we also show that like external plurals, gender plays a crucial role and is closely linked to the form that each word takes. Thus, for each plural stem, the singular stems will be regrouped according to their gender.

Triconsonantal stems

Two sets of changes affect the trilateral plural stems.

- i. The first type of change consists of the adjunction of a vowel /a/ between the second and third stem-radicals. The following forms are, therefore, observed in (90).

(90) -CCaC; CwaC; CyaC; CCaCa; CwaCa; CCaC; CwaCi; CyaCi; CyaCi;

- ii. The second sub-class of triconsonantal internal plurals involves the insertion of the vowel –u to the stem in the following manner:

CCuC
 CwuC
 CyuC
 CcuCa
 CyuCa

With respect to quadriliteral internal plurals, they are characterized by the introduction of a schwa between the third and fourth radicals, as shown in the following stem: CCCeCi . Let's start with the triconsonantal internal plurals

Triconsonantal internal plurals

- i. The first internal plural involves the adjunction of the vowel /a/ between the second and third stem-radicals. There are eight stems:

The CcaCstem

This plural stem corresponds to the following singular stems that are also categorized according to their gender.

Triconsonantal stems

(92)			
Gender	Singular Stems	Plural Stems	Examples
Masculine Substantives	1. CC∂C	CCaC	žm∂l → žmal (camels)
			žb∂l → žbal (mountains)
	2. C∂CC	CCaC	w∂ld → wlad (boys)
Feminine Substantives			k∂lb → klab (dogs)
	3. CuC2C2	CCaC	muxx → mxax (brains)
			fuSS → fSaS (yolks)
Masculine & Feminine Adjectives	4. C∂CC	CCaC	b∂nt → bnat (girls)
	5. CeCCa	CCaC	w∂rq-a → wraq (papers)
			f∂rd-a → f∂rd-at (pairs)
	6. CCiC(a)	CCaC	mrid(a) → mrad (ill)
			qbiha → q bah (ugly)
			tqil(a) → tqal (heavy)

The Second plural stem: CwaC

To this plural stem correspond the following singular stems that are essentially masculine. They are best exemplified in the following paradigm:

(93)			
-CuC	suq (market)	swaq	(markets) (masculine)
-CuC2C2	fumm (mouth)	fmam/ffam	(mouths) (masculine)
-CaC	xal (uncle)	xwal	(uncles) (masculine)

The CyaC stem

This stem serves namely to pluralize masculine singular stems of the following pattern: CiC as exemplified below:

- (94) ζid $\rightarrow \zeta jad$ (feasts)
 kis $\rightarrow kjas$ (bags)

The CwaC-a(t)stem

This stem corresponds to singulars having the following forms:

(94)

CuCi ; CuCiy-a (t)

CuCi $fuqi \rightarrow fwaqa$

$susi \rightarrow swasa$ (people who originate from the south of Morocco)

CuCij-a(t) $fuqij-a \rightarrow fuqijjat$ (outer piece of a Moroccan Caftan).

The CwaCi stem

This stem can generate the plural of feminine nouns having either of the following singular stems:

(95)

CaCi-a (t) /CaCy-a (t)

$sarj-a \rightarrow swari$ (column)

$\zeta afj-a \rightarrow \zeta wafi$ (fires)

$sinija \rightarrow swani$ (trays)

The CwaC∂C stem

This plural is involved in the formation of singular stems having the vowel /a/ after the first radical, as shown below:

(96)

-The CaC∂C stem (both masculine and feminine)

Feminine:

$xat\partial m \rightarrow xwat\partial m$ (rings) (feminine)

$qal\partial b \rightarrow qwal\partial b$ (suppositories) (masculine)

Singular stem CaCC-a (t) (only feminine)

$makla \rightarrow mwakl$ (meals)

-The CaCuC stem (both masculine and Feminine)

qaduS→qwadθS (canals) (masc)
hanut→hwanθʒt (shops) (feminine)

-The CaCuC-a(t) stem (feminine only)
naʒur-a →nwaʒer (wheels)

-The CaCuCi-ya (t)stem (feminine)
namusiya → nwamθs (beds)

-The CaCiC-a (t) stem (feminine)
kaSiTa → kwaST (cassettes)

-The CaCaC-a (t) stem (feminine)
halaqa→hwaleq (earrings)

The second class of internal plurals involves the insertion of the vowel /u/ after the second radical. It equally subsumes the plural of masculine and feminine substantives and adjectives. Moreover, it is involved in the plural formation of singular stems, concave singular substantives and deaf singulars. In what follows, we explore the different possible singular stems, the plural of which can be subsumed under this class.

-Plural of regular stems

The first plural stem is CCuC (a/t). It serves to pluralize the following singular stems: CeCC; CCeC, CeCCa, CuCC, CaCC

(97)

Singular stem: CθCC

fθls→flus	(money)	(masculine)
qθrd→qrud	(monkeys)	(“ ”)
ʃθmš→šmuš	(sun)	(feminine)
kθrš→kruš	(bellies)	(“ ”)

(98)

Singular Stem: CCθC

wʒθh→wʒuha faces (masculine)

Singular Stem CθCC-a (t)

qθTTa→qTUT (cats) (feminine)

(98)

Singular stem CuC2C2 (masculine)

muxx→mxax (brains) (masculine)

(99)

Singular stem CC∂C

fʒ∂r → fʒura (dawns) (masculine)

qlam → qluma (pens) (masculine)

The plural stem CyuCi

This concerns the plurals of concave substantives of the form *CiC* or *CaC*.

Singular stem CiC (masc/fem)

(100)

Ter → Tjur (birds) (masc)

ʒin → ʒjun (spring water) (mac)

Plural stem CyiC

It serves to form the plural of concave feminine substantives.

(101)

Taqa → Tjiq / Taqa (a small window) (fem)

Sala → Sji/ Salat (rooms) (“)

The last category to be investigated is that of triconsonantals with the central vowel schwa, as shown below.

The plural stem C1C2 eC2

This stem is used with deaf singular stems with either the second or the third radical being geminated.

Plural stem C∂C2C2a (fem)

(102)

d∂rra → dr∂r (scarfs) (feminine)

x∂SSa → xS∂S (fountains) (“)

The plural stem CuCeC

This stem is mainly used in the plural formation of adjectives in the following singular form CCEC. For example:

(103)

zr∂q → zur∂q (blue)

Sf∂r → Suf∂r (yellow)

bl∂q → bul∂q (blond)

The plural stem CiCeC/CiweC

This stem serves to form the plural of adjectives having the CweC singular stem.

(104)

ħwðl → ħiwðl (cross-eyed)
 ζwðr → ζiwðr (blind)
 ζwðz → ζiwez (crooked).

*Internal plurals of quadriliteral stems**The quadriliteral stem CCaCðC*

This stem serves to form the plural of a number of masculine and feminine singular nouns. It can pluralize singular nouns with the vowel sounds /a/, /i/, or /u/ after the third radical, or nouns including a schwa /e/ placed either between the first and second radical or after the third radical. The following are illustrative data:

Singular masculine stem CðCCuC (masculine)

(105)

xðnfuf	xnafðf	(ugly people)
qðnfud	qðnafðd	(hedgehogs)

Singular masculine stem CeCCaC

(106)

menšar	mnašðr	(knives)
qðftan	qfaT-ðn	(caftans)
mðsmar	msamðr	(nails)
xðlxl	xlaxðl	(klets)
sðbbat	sbabðT	(pairs of shoes)

Singular feminine stems CeCCaC-a (t)

(107)

Tðbbaxa	Tbabðx	(cooks)
Sðbbana	Sbabðn	(washing machines)
sðmsara	smasðr	(brokers)

Singular stem CðCCaCi

(108)

sðddari	sdadðr	(mattresses)
---------	--------	--------------

Singular stem CeCCaCiy-a

(feminine)

(110)

beTTanija	bTaTən	(blankets)
<i>Singular stem CeCCiC</i> (both masculine & feminine)		

(111)

qəndil	qnadəl	(candle-stick)	(masculine)
bərmil	bramil	(bowels)	
TebSil	Tbasil	(dishes)	(masculine)
təʒriʒa	tʒariʒ	(drums)	(feminine)
təkʃit-a	tkaʃeT	(a traditional female dress)	
təkmis-a	tkaməs	(packages)	

Singular stem CuCCaC

ʒukkaz	ʒəkakəz	(crutches)
(masculine)		

The second set of singular stems deriving their plurals as the CCaCəC contain a central vowel placed mainly between the first and second stem radical. Examples illustrating this category are as follows:

Singular stem CəCCəC (masc)

(112)

sərzəmə	srazəmə	(windows)
xənzəre	xənazəre	(daggers)
mərfəq	mrafəq	(elbows)

Singular CCəC-a(t) Stem

(113)

mdərs-a	mdarəs	(schools)
mrəmma	mramə	(embroidery work)

Singular stem CeCCC-a (f)

(114)

Səlsəl-a	slasəl	(chains) (fem.)
Tənʒra	Tnaʒəre	(pressure-cooker)

Mixed plurals

Mixed plurals constitute the third category of MA plural formation processes. It consists of combining the previous mechanisms involved in external and internal plurals (i.e. internal plural +affixation). Mixed plurals

look like the internal plural with the one difference of an additional suffix adjoined to the internal plural form. To illustrate this, consider the following types of mixed plural stems:

The first mixed plural stem: CCaC-in

The internal plural CCaC has some affinities with the mixed plural stem. The most important feature that is shared by both stems is that for the majority of plural adjectives with CCaC stem, there is another corresponding plural of the CCaC-in form. These are mainly found with adjectives where the singular is CCiC as illustrated in below.

(115)

hnin	hnan	hnan-in	(tender)
xfif	xfaf	xfaf-in	(light)
Twel	Twal	Twal-in	(tall)

The main difference between the two plural stems resides in the fact that the internal plural (CcaC) is used to mark the plural of both substantives and adjectives. However, the CCaC-in is used with adjective shaving a CCiC stem.

The Second mixed plural stem CCa-a(t)/ CCaCC-a(t)

CCa-a(t) and CCaCC-a(t) are plural stems that correspond to trilateral and quadrilateral stems. They are both restricted to the pluralization of nouns referring to ethnonyms. The former stem typically corresponds to nouns regardless of their singular stem form. For example:

(116)

SINGULAR	PLURAL
rifi	rjaf-a
žɔbli	žbal-a
sus-i	swas-a
fasi	fwas-a
wɔždi	wžad-a

As to the quadrilateral mixed plurals, they are formed according to the stem CCaCC-a(t). For illustration, consider these examples:

(117)

tuns-i	twans-a
mɔyribi	myarb-a
mɔknasi	mkans-a

The third mixed plural stem CCuC-at

The internal plural form CCuC is used as a plural counterpart of the regular stems such as C∂CCa²⁷. The CcuCa-t stem seems to be reserved to the internal plural with an exclamative value. To exemplify this case, consider the following instances.

(118)

fTor	fTur-at (breakfasts)
zjut	zjut-at (oils)
smen	smun-at (preserved butter)
zb∂l	zbulat (mountains)

This plural stem corresponds basically to the regular singular feminine stems CC∂C

(119)

m∂rq-a	mruq-at (sauce)
m∂ska	msuk-at (chewing gum)
m∂lha	mluh-at (salt)
b∂rd	brud-at (coldness)

The CiC-an stem

This stem serves to form the plural of concave stems of the CaC and CuC form .

(120)

Singular Stems	Plural Stems
kas	kis-an (cups)
fas	fis-an (fez)
bab	bib-an (doors)
γar	γir-an (caves)

The C∂CC-an stem

This stem serves to form the plural of nouns of the following form: CcaC and CCiC .By way of illustration , consider the following data:

<i>Singular Stems</i>	<i>Singular Nouns</i>	<i>Plural Counterparts</i>
CCaC	blad	b∂ld-an (countries)
CCiC	Triq	T∂rq-an (streets)

²⁷ An example of the regular stems such as C∂CCa is: želd-a →žlud (leather).

CCuC	breq	bḍrq-an (pitchers/jugs)
	xruf	xḍrf-an (young sheep)

All in all, the third category of plurals is observed to be composed of both processes (internal plural rule and suffixation). Some mixed plural stems have been shown to resemble the internal plural in a number of ways with the addition of one of the following suffixes: *-in* ; *-an* or *-at*.

To sum up, it has been observed that the plural of substantives may be characterized as follows: the plural interacts in an intricate way with gender. That is, while certain patterns are typically used with feminine or masculine separately, others can be used with both. This statement is valid for internal plurals, for example, where the singular root is maintained but with some modification(s) in the vocalic melody of the singular stem to obtain the plural form. Another thing to say at this point is that, as in other morphological areas, the plural formation of nouns is a rich area that exhibits the richness of the Moroccan Arabic morphological system that is in large part regularly constrained by a set of rules. In fact, despite the diversity of structures and plural patterns in Moroccan Arabic, the regularities of the rules to which the data readily obey generate and predict the right patterns, which shows the richness and regularity of the data.

Conclusion

In this chapter, we have provided a descriptive account of the major verbal and nominal morphological patterns in Moroccan Arabic. Various issues have cropped in the description of these nominal and verbal systems. One issue concerns nominal morphology and the categories related to it. Another issue is related to verbal morphology and the categories derived from it. Both of these issues reflect the richness and regularities of the verbal and nominal morphology in Moroccan Arabic.

Syntax

Introduction

This chapter, which is devoted to the syntax of MA, provides a detailed description of the major types of simple and complex sentences in this language. The chapter consists of two separate sections. Section one is concerned with the simple sentence, and Section two with the complex sentence.

An important aspect of MA syntax is that it is a head initial language. Verbs, nouns and prepositions always precede their complements. As we shall illustrate in due course, this order is not restricted only to lexical heads, but it applies also to functional categories, namely, Complementizers, Inflections, and Determiners. Another aspect of Moroccan Arabic is its rich morphology: nouns, adjectives, and verbs show a regular inflection for gender, number, and person, as we saw in the chapter on morphology.

The simple sentence

The basic word order

A sentence generally reflects syntactic relations and harmony between constituents in the form of lexical categories such as the noun, the verb, prepositions, adjectives, and functional categories like agreement, tense and aspect. The harmony of these constituents in a MA simple sentence conforms to an ordering that makes such elements both syntactically and semantically congruent.

Recent literature has revealed that Agr(eement), is the crucial element which determines word order in most natural languages. This agreement could be manifested fully, including gender, number and person, or partially, consisting of person and number or gender and number.

However, the distinction between full and partial agreement in MA is absent, since agreement in this language is always realized in the same way, notably full agreement. There is yet a minor exception, where the feature of gender might be missing and no morphological distinction is made on the verb between the feminine and masculine. This is illustrated clearly with feminine nouns in the plural, as in (2):

- 1) a. d-drari ḡaw. (SV)
 the children arrived
 ‘The children (have) arrived’
 b. ḡaw d-drari. (VS)

arrived -pl the- children
 ‘the children (have) arrived’

- 2) a. l-bnat žaw.
 the- girls arrived-pl
 ‘the girls (have)arrived.’
 b. žaw l-bnat.
 arrived-pl the girls
 ‘the girls (have)arrived’
- 3) a. l-weld ža.
 the-boy arrived
 ‘The boy (has)arrived.’
 b. ža l-weld.
 arrived the-boy
 ‘The boy (has)arrived’
- 4) a. l-bent ža-t.
 ‘The girl (has)arrived’
 b. ža-t l-bent.
 arrived-f-sg-the girl
 ‘the girl (has)arrived’

The verb “ža” (arrive) agrees with the NP subject in (1)-(4) in all features (number, gender and person) regardless of whether this NP precedes it or follows it, with the exception of feminine plurals (2), where agreement in gender is missing because the verb displays the same agreement features, as in the case of masculine plurals (1).

Since full agreement is realized in the same pattern (with SVO and VSO), we suggest the basic structure in MA (clauses) to be SVO, as in (5) :

5) *Subject + V + Complement (X)*

Where X is a variable that may stand for a direct object NP, a PP or an AdvP, as in :

- 6) muḥamed Drab xalid.
 Mohamed beat Khalid
 ‘Mohamed beat Khalid.’
- 7) muḥamed Drab (f)-t-tilifun.
 Mohamed beat (in) the phone
 ‘Mohamed made a phone call’

- 8) muhamed nçes f l-uțel.
Mohamed slept in the-hotel
'Mohamed slept in the hotel.'
- 9) muhamed kaj skun çend xu-h.
Mohamed part lives with brother-his
'Mohamed lives with his brother.'
- 10) muhamed kajn f l-kullija.
Mohamed be in the-faculty
'Mohamed is at the Faculty.'

The hypothesis that the basic structure in MA is VSO explains why clitics cannot co-occur with NPs, as it is clear from the following examples :

- (11) a. kla-h.
ate-it
'He ate it.'
- b. ža mç-ah.
came with-him
'He came with him.'
- 12) a. * kla-h l-xubz.
ate – it the-bread
- b. ! ža mça-h r-ražel.
came with-him the-man
'The man came with him'
- 13) a. kla l-xubz.
ate the-bread
'He ate the bread.'
- b. ža mça r-ražel.
came with the-man
'He came with the man.'

In (13), the direct object (a) (and the complement (b)) are overtly expressed, but in (11) they are realised as clitics.

Concerning the subject in MA, it could be a null pronominal element as in (14). As to the suffix - w, it is an agreement marker since it can co-occur with a syntactic subject (15) :

- 14) ža-w.
came-3-ms-pl
'They came.'

- 15) a. l-wlad ža-w.
 the-children came-pl-ms
 ‘The children came.’
 b. huma ža-w.
 They came-pl-ms
 ‘They came.’

It should be noted that *dual* agreement is not morphologically expressed on the verb: it rather takes the same form as plural agreement:

- 16) muḥamed w saʕid tlaqa-w l-ʔusta: δ.
 Mohamed and Said met-pl the-teacher
 ‘Mohamed and Said met the teacher.’

The number morpheme might be inserted before a *dual* NP as in MA, Berber and French.

- 17) muḥamed t-laqa žuž drari. (MA)
 Mohamed (has) met two boys
 ‘Mohamed met two boys.’
 18) muḥamed /sΦa snat tfullusin. (Berber)
 ‘Mohamed bought two hens.’
 19) Mohamed a acheté deux livres
 ‘Mohamed bought two books’

By contrast, in SA, dual agreement is overtly manifested in the form ‘*aan*’ (when NP is nominative) and ‘*ajn*’ (when NP is accusative, oblique or genitive) :

- 20) a. zajdun štaraa kitaabajn-i
 Zayd bought books-dual
 ‘Zayd bought two books’
 b. zajd l-taqaa bi- /ustaaḍajn-i
 Zayd met with teachers- dual-acc
 c. az-zajd-aan /axaḍ-aa kitaab-an.
 the Zaid-dual took-dual-ns a book-acc
 ‘The two Zaid took a book’

In MA, case features (nominative, accusative, genitive, oblique) too are not morphologically realised on lexical categories regardless of whether

the NP is nominative, accusative or genitive. In some dialects, such features appear as agreement markers, as illustrated below :

- 21) a. gult li skent(i) f r-rbaaṭ.
told-you me lived-you in the –Rabat
'You (have) told me that you lived in Rabat.'
b. gult li seknu f r-rbaaṭ.
told-you me lived-they in the-Rabat
'You told me that they lived in Rabat.'
- 22) a. d-jal-u had l-ktab.
his this book
'This book is his.'
- 23) b. d-jal-ha had l-ktab
her this book
'This book is hers.'

In most cases, lexical categories do not exhibit any inflectional ending indicating case:

- 24) a. muḥamed xrež.
Mohamed went out
'Mohamed went out.'
b. muḥamed sekket xalid.
Mohamed made silent xalid
'Mohamed has made Khalid keep silent.'
c. muḥamed saket.
Mohamed silent-ns-sg
'Mohamed is silent.'
d. /ana(ja) msafer
I travelling
'I am travelling.'

We observe here that case is not morphologically realised in the verbal or nominal inflection, in addition to the absence of dual markers. On the basis of the "basic" structure, which we adopted in (5), we will try to distinguish between different types of simple sentences in MA: we will see that functional categories (tense, agreement and aspect, etc.) merge with lexical categories (N,V,P) in different syntactic contexts to construct well formed sentences.

Given that the concern of the present section is the structure of simple sentence in MA, we will try to provide a description of the most important elements that constitute and govern the construction of a variety

of sentences. The focus will be on contexts involving transitivity and intransitivity, negation, nominal sentences and interrogative forms.

The syntactic structure of simple sentences

Subject + Verb

We can distinguish between two types of syntactic contexts in MA :
 a) a context where we can have a subject and the verb without an object; b)
 a context wherein we can have a subject, a verb and a complement (with its
 different types).

The verbs that occur in the syntactic context (24) are characterized
 by the fact they do not need a direct object except when their morphological
 structure is modified to make them transitive, as in (28)-(29) below:

25) l-weld ža.
 the-boy came-ms
 ‘The boy has arrived.’

26) l-weld mša.
 the-boy left-ms
 ‘The boy has left.’

27) l-weld wqef.
 the-boy stood up
 ‘The boy stood up.’

To make the verbs in (25)-(26) (mono)transitive, the second
 consonant is generated (and schwa is inserted before it) if the root is
 triconsonantal, as in (28)-(29) (but see the previous chapter on morphology
 for more details on the internal make up of different verbs):

28) l-weld mešša l-meçmel.
 the-boy made-go the -factory
 ‘The boy has run the factory.’

29) l-weld weqqef l-meçmel.
 the-boy made-stop the factory

The verb *mša* has been made transitive (and causative) by doubling
 the consonant [š] even though the meaning is different; the same thing
 happens to the verb *wqef*, where the consonant [q] is doubled .

Subject + Verb (ergative)

This context involves the use of an NP subject and a verb without an object, which is referred to in the literature as ergativity. This syntactic phenomenon is "manifested" by inserting some particular prefixes, such as *n-*, *t-* and *l-* as in (29):

- 30) a. harres-t l-kas.
broke-I the - glass
'I broke the glass.'
b. l-kas t-harres
the-glass it-broke
'The glass broke.'
- 31) a. Tajjeht l- hajT.
made-fall the -wall
'I have made the wall fall down.'
b. l-hajT Tah.
the-wall fell down
'The wall fell down.'
- 32) a. š- š ifur qleb l-kar.
the-conductor ran over the-bus
'The conductor ran the bus upside down.'
b. l-kar t-qleb.
'The-bus was run upside down.'
- 33) a. r-ražel fteħ l-bab.
the-man open the-door
b. l-bab t-fteħ.
the-door opened
- 34) a. l-muçallem qeṭṭač t-tub.
the-tailor cut the-cloth
b. t-tub t-qeṭṭač.
the cloth it-is cut

Subject + Verb + Object word order

MA, like other languages, requires an NP subject (Agent) , a verb of action and an NP object (patient)/theme , ...). The number of objects depends on the selectional properties of the predicate: there are verbs which require one object only; there are other verbs that require two or more object NPs.

With regard to monotransitive verbs , we find examples like (35) :

- 35) hišam rbeḥ lža/iza.
 Hicham won the -prize.
 'Hicham won the prize.'

It is worth pointing out that the accusative case feature does not show up on the NP object. The latter retains the same form as in the lexicon. It is also possible for the direct object to precede the verb and the subject, as shown in (36)-(38) :

- 36) a. muḥamed Drab hišam.
 Mohamed. beat Hicham
 'Mohamed beat Hicham.'
 b. hišam muḥamed Darb-u.
 Hicham Mohamed beat-him
 'Hicham, Mohamed beat him.'
 c. hišam Drab muḥamed.
 'Hicham beat Mohamed.'
- 37) a. muḥamed Drab d-drari.
 Mohamed beat the-children
 'Mohamed beat the children.'
 b. d-drari Drab-hum muḥamed.
 the-children beat-them M
 c. *d-drari muḥamed Drab.
- 38) a. l-mudir nežžeḥ l-bnat.
 the-headmaster made -succeed the - girls
 'The headmaster had made the girls pass the exam.'
 b. l-bnat nežžeḥ-hum l-mudir.
 the-girls made-them succeed the-headmaster
 c. *l-bnat l-mudir nežžeḥ.
 the-girls the-headmaster made-succeed.

The ill-formedness of the (c) sentences is due to the lack of a pronominal clitic on the verb that could show agreement with the subject.

The complement in the context (2.3) can also be a PP as in (39), exemplified in (40) :

- 39) *Subject + Verb + (P + NP)*
- 40) a. muḥamed nṣas f d-dar.
 Mohamed slept-ms in the-house
 'Mohamed slept in the house.'

The PP could precede the verb and the subject without the realisation of any agreement feature on the verb. This type of structure is less productive :

- 41) b. f d-dar n̄as hišam
 in the-house slept Hicham.
 ‘It is in the house that Hicham slept.’
 c. f d-dar hišam n̄as.
 in the-house Hicham slept.
 ‘It is in the house that Hicham slept.’

When the NP complement of the preposition is fronted by itself, it leaves a resumptive pronoun attached to the preposition to indicate that movement has taken place. This pronoun receives/discharges the case of the preposition.

- 42) a. d-dar hišam n̄as fi-ha.
 the-house H slept in-it
 ‘The house, Hicham slept in it.’
 b. d-dar n̄as fi-ha hišam.

Subject + Verb + Object1 + Object2

This syntactic context can be divided into two types: the first one consists of a verb that requires two object NPs like the verb *çTaa* (give); the second one involves a verb that requires a relation of predication between the two object NPs, a relation which is (traditionally) called 'topic' and 'comment' :

- 43) a. muhamed çta rašid l-flus.
 Mohamed gave Rachid the-money
 ‘Mohamed gave Rachid money.’
 b. çta muhamed l-l-çrusa l-hdija.
 gave Momahed the-bride the-present
 ‘Mohamed offered the bride the present.’

We can see from (43a)- (43b) that there is no relation of predication between *rašid* and *l-flus* or between *l-çrusa* and *l-hdiya*, which is not the case in (44) :

- 44) a. Dann-it muhamed mriD.
 believed-I Mohamed imm_ms-sg
 ‘I believed Mohamed to be ill.’
 b. * Dann-it muhamed.

- 45) a. ts□abi-t muhamed naġes.
 thought-I Mohamed sleeping.
 'I thought Mohamed sleeping.'
 b. *ts□abi-t Muġamed -----.
 'I thought Mohamed.....'

The ungrammaticality of (b) sentences (44)-(45) is due to the fact that the second NP (predicate) is missing, while the verbs 'Dann' and 'šaf' require a second object NP (except when 'šaf' has the meaning of 'see' (šuft d-dar 'I saw the house').

It can be deduced from the syntactic contexts presented above that the underlying structure in MA is as depicted in (5) (i.e. SV X (where X = NP or PP, etc.)). On the basis of this structure, we can derive various constructions, as in (2.5):

- a. *Subject + Verb*
- b. *Subject + Verb + Complement (X)*
- c. *Subject + Verb + Object1 + Object2 (where there is no relation of predication)*
- d. *Subject + Verb + Object1 + Object2 (where there is a relation of predication)*

In all these structural contexts, it is possible to propose a constituent over another while observing some constraints or movement. In what follows, we will try to study each constituent of these structures. We will examine the different types of lexical and functional categories and how they are manifested in MA sentences in general.

The internal structure of simple sentences

Simple sentences in MA, as in other natural languages, consist of lexical categories such as nouns [+N,-V], verbs [-N,+V], prepositions [-N,-V] and adjectives [+N,+V]. A sentence is said to be verbal if it consists of an explicit verb, regardless of whether it is thematic or an auxiliary.

The verb

The verb in MA may be syntactically characterized on the basis of its conjugation (i.e. through the different tenses that it encodes) or according to its (in)transitivity. The aim of this sub-section is to illustrate this point.

The imperative and the past

In SA, past tense is taken to be the basic form from which the present and the future tenses can be derived, though the present tense is more plausibly the basic root in view of its aspectual ambiguity (between the past and the future). By contrast, the basic tense in MA verbs is more likely to be the imperative. The main reason is that the present and the future tenses are derived from the imperative. The imperative form can be used to express a past action. Note that the imperative and the past tense have the same verbal form. The difference between them can essentially be made by means of adverbs of time.

- 46) a. gles f d-dar daba.
 stay in the-house now
 ‘stay in the house now.’
 b. kteb d-dars daba ?aw γadda / *?aw l-bareh..
 write the-lesson now or tomorrow / or the yesterday
 ‘Write the lesson now/tomorrow/*or yesterday.’
- 47) a. dxel d-dar šhal hadi.
 entered-he the-house how long this
 ‘He entered the house a long time ago.’
 b. dxel d-dar çad daba.
 entered-he to-the-house part. now.
 ‘He has just entered the house.’

We can also distinguish between the imperative and the past by the (phonetic) realisation of the subject or its absence. If the subject appears with the imperative verb. It needs to be preceded by a vocative particle such as /a: or wa: as in :

- 48) a. /a muhamed gles fd-dar.
 part Mohamed stay in the-house
 ‘You Mohamed, stay in the house’
 b. /a muhamed! dxul l d-dar.
 part M enter-ms-sg to-the-house
 ‘You Mohamed, get into the house.’

In the past tense, the subject may not need to be preceded by such a vocative particle.

- 49) a. * /a muhamed gles f d-dar.
 Mohamed stayed-he in the -house
 ‘Mohamed stayed at home yesterday.’
 b. * wa muhamed !dxel l-ddar l-bareh.
 *Mohamed! , enter to-the-house the-yesterday

‘*Mohamed! Get into the house yesterday.’

The overlap between the past and the imperative forms is due to the absence of morphological case, as the latter is generally not realised on the inflectional endings, as illustrated below:

- 50) a. xruž nta . (imperative)
go out-you
‘Go out.’
b. xruž l-weld. (past)
went out the boy
‘The boy went out.’
- 51) a. fteħ l-ba-b. (imperative)
open the- door
‘Open the door.’
b. fteħ l-ba-b. (past)
opened-he the- door
‘He opened the door.’

The present tense

The present tense is distinguished by the fact that it is purely aspectual and associated with two prefixes, namely, *ta-* and *ka-*:

- 52) a. xalid ta- jelčab.
khalid part-plays
‘Khalid plays.’
b. xalid ka – jelčab.
khalid part -plays
‘Khalid plays.’

The present tense in MA is realised in the same way as its corresponding form in Standard Arabic (SA) in that the verbal inflection expresses agreement with the subject, where the prefix conveys person and gender while the suffix indicates number, as in :

- 53) l-bnat taj-lečbu daba. (MA)
the-girls part-play now
‘The girls are playing now.’
- 54) al-bana:t tačabna l-/a:na (SA)
the-girls play-f-pl the-now
‘The girls are playing now.’

Verbs in the passive voice

Passivized verbs are generally transitive, where the lexical subject is deleted and replaced by the direct object which is raised to its position and assigned its grammatical function. In Standard Arabic, the direct object takes the case of the subject since it changes from accusative to nominative as clearly indicated in the following examples :

- 55) a. *kataba zayd-un d-dars-a.*
 wrote Zayd-noun the -lesson-acc
 ‘Zayd wrote the lesson.’
 b. *kutiba d-dars-u*
 was written the-lesson-noun
 ‘The lesson was written.’

In MA, the passive verb is merged with the morpheme (prefix), as in:

- 56) a. *xalid ta-yelçab l-kura.*
 khalid plays the-ball
 ‘Khalid plays football.’
 b. *t-leçbet l-kura.*
 was-played the-ball
 c. *ka-t-lçab l-kura.*
 part-part. is-played the-ball
 ‘Football is played.’

The passive voice is clearly distinguishable in the past tense, but not in the present tense. The preposition *bi*, which is attached to *r-ržel* ‘the foot’, corresponds to the *by-phrase* in English or *min qibal* and *min ladun / min taraf* (on the part of) in SA, as shown in:

- 57) *t-tleçbet l-kura b-r-ržel (MA)*
 was-played the-ball with-the-foot
 ‘The ball was played with the foot.’
 58) *qudifa-t l-kurat-u min taraf muhamed (SA)*
 was shot the-ball from part M
 ‘The ball was shot on the part of Mohamed.’

Verbs indicating the future

These verbs are preceded by some 'helping' expressions such as *ya*, *yadi*, *daba*, *sah* ... The following examples illustrate the distribution of these forms :

- 59) a. *hišam ya j-safer yadda*.
 Hicham will travel-3 ms.sg. tomorrow
 ‘Hicham will travel tomorrow.’
 b. *hišam yadi j-safer*.
 Hicham will travel-3 ms.sg.
 ‘Hicham will travel.’
 c. *hišam daba j-safer*.
 Hicham now travel.3ms.sg.
 ‘Hicham will travel now.’

The future can have past reference with the use of the particle *ya* or *yadi* (will) preceded by *kan* (was), as in :

- 60) a. *kan ya j-safer hišam*.
 was will travel-3.ms.sg. Hisham
 ‘Hicham was going to travel.’
 b. *kan yadi j-safer hišam*.
 was will travel-3.ms.sg. Hisham
 ‘Hicham was going to travel.’
 c. *kan Sah j-safer hišam*
 was right now travel.3.ms.sg Hicham

This type of sentences has a negative interpretation.

- 61) *kan ya j-safer hišam wa lakin nṣas*
 was will travel .3.ms Hicham and but slept-he
 ‘Hicham was going to travel but he remained asleep.’

Helping verbs

Helping verbs refer to auxiliaries that normally precede main verbs to express modality. Some of them are obligatorily used to form negative, interrogative and passive sentences as in the case of English.

In view of the fact that helping verbs in MA are “strong” with regard to tense, they can be used to express the past or the future. Such verbs include the following:

Helping verbs for the past

kan (be)
tem (start)
bqa (keep)

Helping verbs for the future

bya (want)
xes (need)
çawed (repeat)

In order to demonstrate that such helping verbs refer to tense, their distribution will be tested by the use of adverbs, some of which indicate the past while others indicate futurity :

62) a. kan γadi j-safer l-bareh / * γadda.
was will travel-3.ms.sg. the-yesterday/* tomorrow
(He was going to travel yesterday / *tomorrow).

63) tem γadi l-bareh buhdu / * γadda.
started going the-yesterday alone / * tomorrow
'He started going alone yesterday / *tomorrow.'

64) bqa γadi m-safer l-bareh / * γadda.
kept-he going travelling the-yesterday / *tomorrow
'He kept travelling yesterday / * tomorrow.'

65) çawed a l-bareh / * γadda.
repeated came the-yesterday / *tomorrow
'He came again yesterday / * tomorrow.'

66) xes j-ži γadda /daba/*l-bareh.
need came -he tomorrow/now/* yesterday
'He needs to come tomorrow/now/*yesterday.'

Conditional sentences

Conditional sentences are often used with such expressions as *lukan* or *w kakan* and */ila* (if) as in :

67) lukan ža kun- tmeššina.
if-was came walked-pl
'If he came , we would take a walk.'

68) a. /ila ža, n-mši-w mça-h.
if came go-we with-him
'If he comes, we will go with him.'
b. w kakan t-ži-w nmšiw.
if was come-you-pl go-we
'If you come, we will go.'

- 69) /ila tʒi n-mʃi-w
 if come-you go-we
 'If you come, we will go.'

In most contexts of condition, two verbs are realised : the first one is expressed in the past (form), while the second is spelled out with present or future reference. This is instantiated by (67) and (68a). The first and the second verb might be realised in the present and the future, as in (68 b,69).

Simple nominal sentences

The basic structure of a simple sentence in MA can be represented, as in :

70) *NP +PP /Adjective/ derived nominal (subject / object)*

Illustrative examples are given below :

- 71) a. xalid f d-dar.
 Khalid in the -house
 'Khalid is at home.'
 b. xalid mriD.
 khalid ill-ms.sg.
 'Khalid is ill.'
 c. xalid mskun / msafer.
 khalid haunted / travelling
 'Khalid is haunted/ travelling.'
 d. xalid naçes.
 khalid sleeping-ms.sg.
 'Khalid is sleeping.'

In such nominal sentences, the subject is definite. Definiteness is indicated by the prefix *al-* (the), or a demonstrative pronoun or construct state forms; it could also be a lexical pronoun, which is a strong indicator of definiteness //(definitude) because a form cannot be pronominalised until it is mentioned before :

- 72) a. l-bent mriDa.
 the-girl ill-fem.sg
 'The girl is ill.'
 b. had lb-bent mriDa.
 this the-girl ill-fem.sg.
 'This girl is ill.'
 c. /ana msafer l-r-rbat.

- I travelling-ms.sg. to Rabat
 'I am travelling to Rabat.'
 d. daar muhamed meziana.
 House (of) M good-fem.sg.
 'Mohamed's house is good.'

It is also possible for a nominal sentence to be introduced by a defective verb such as 'kan' (was) :

- 73) kan-t l-bent mriDa.
 was-fem the-girl ill-fem-sg
 'The girl was ill.'

Demonstrative pronouns

Demonstrative pronouns may be used to express proximity (e.g. *had* "this") or distance (e.g. *dak* "that") :

- 74) a. *had* l-weld
 this the-boy
 'This boy'
 b. *dak* l-weld
 that the-boy
 'That boy'

These pronouns may be in the singular or in the plural when indicating distance. However, the demonstrative pronoun of proximity does not inflect for the dual, which is non-existent; its indication is conveyed by the insertion of the free morpheme of number **žuč** (two), as it is the case with nouns in general :

- 75) a. *had* l-weld
 this the-boy
 'This boy'
 b. *had* l-ulad
 these the-boys
 'Those boys'

- 76) a. *dak* l-weld
 that the -boy
 'That boy'
 b. *duk* l-ulad
 those the-boys
 'Those boys'

- 77) a. *had žuž drari*
 this two boys
 ‘Those two boys’
 b. *duk žuž drari*
 those two boys
 ‘Those two boys’

We notice that demonstrative pronouns do not change their form from the singular to the plural when indicating proximity, as in (75), in contrast with the situation when a demonstrative pronoun indicates distance (76). In this case, the form changes from the singular to the plural, as in (76) and (77) with the insertion (addition) of **žuž** to express the dual :

Attributives vs. predicatives and their properties within the sentence

A syntactic property of predicative adjectives in MA is that they may occur with adjectives or derived nominals:

- 78) a. *l-weld dki.*
 the-boy intelligent
 ‘The boy is intelligent.’
 b. *l-weld twil.*
 the-boy tall
 ‘The boy is tall.’
 c. *l-weld kateb d-dars.*
 the-boy writing ms. sg the-lesson
 ‘The boy has written the lesson’
- 79) a. *d-dars mektub.*
 the lesson written -ms
 ‘The lesson is written.’
 b. *l-bab meqful.*
 the-door closed
 ‘The door is closed.’
- 79) a. *s-sma zerqa.*
 the-sky blue temporary
 ‘The sky is blue.’
 b. *l-ma zraq.*
 the-water blue (intransitive)
 ‘The water is blue.’
- 81) a. *l-weld mezjan.*
 the-boy nice
 ‘The boy is nice.’

- b. l-wlad mezjan-in.
 the- boys nice-pl
 'The boys are nice.'

The predicative or attributive adjective agrees with the modified NP in number, gender and (in) definiteness as in :

- 82) a. wahed l-weld mezjan.
 one the-boy nice-ms.sg.
 'A nice boy'
 b. ši wlad mezjan-in.
 some boys nice ms.pl.
 'Some boys are nice.'
- 83) a. l-bent mezzana.
 the-girl nice-fm.sg.
 'The girl is nice.'
 b. l-bnat l-mezzan-at
 the-girls the-nice-fem.pl
 'The nice girls'

The adjective may not precede the modified element although it is preferable in some cases, nor can it agree with it in definiteness if it occurs before it :

- 84) a. mezzan wahed l-weld.
 nice.ms.sg. one the-boy
 'A boy is nice.'
 b. mezzan-in ši wlad.
 nice-ms. sg. Some boys
 'Some boys are nice.'
- 85) a. mezzan-a lben-t
 nice-fem.sg. the-girl
 'The girl is nice'
 b.* l-mezzan-at l-bnat
 the- nice fem. sg. the -girls

Prepositional and adverbial phrases

Prepositions

Most (of the) prepositions occur with nouns of different types as well as pronouns :

86) *f*-(in), *l*-(to), *çla* (on), *mça* (with), *men* (from), *çand* (at)...

Such prepositions precede all NPs, including pronouns:

87) a. <i>f d-dar</i>	<i>çand d-dar</i>	<i>l-d-dar</i>
in the house	at the-house	to-the-house
<i>b-d-dar</i>	<i>mça d-dar</i>	<i>men d-dar</i>
with the-house	with the-house	from the-house

b. <i>kunt f-d-dar.</i>	<i>kunt çand d-dar.</i>
I was in-the-house	I was at the-house
'I was at home.'	'I was with the family.'

<i>mšit l-d-dar.</i>	<i>mšit mça d-dar.</i>
I went to the-house	I went with the-house
'I went home.'	'I went with the family.'

88) Prepositions are attached to pronouns:

fi-ja / *fi-k* , *çand-i* / *çande-k* , *li-ja* / *li-k*
 In-me / in -you, I have/ you have/, to me/to-you

li-ja / *li-hum* *bi-ja* / *bi-k* *fi-ha*
 to-her / to-them by me/ by-you in-her

Each of these prepositions has a particular meaning depending on the context in which it occurs :

89) *kunt f-d-dar.*
 I was in the-house
 'I was at home/in the house.'

90) *kunt çand d-dar.*
 I was at the-house
 'I was at my family's house / near the house.'

In (89) , the preposition *f* means "in" while *çand* in (90) means "near".

Noun phrases may not precede prepositions; otherwise, the result is an ungrammatical sentence:

- 91) * mšit d-dar çand / mšit çand d-dar.
 I went the-house / I went at the-house
 'I went to the family's house.'

Adverbs

Adverbs in Moroccan Arabic are divided into two types : adverbs of time (such as *l-bareh* 'yesterday', *l-yum* 'today', *γadda*, 'tomorrow', *daba* 'now'...) and adverbs of place (e.g. *hna* 'here', *hnak*, *l-hih* 'there', *fuq* 'over', *teht* 'under', *ženb* 'near', *qeddam* 'in front of', *l-lur* 'behind'...

Adverbs of place are often associated with *men* 'from' or *l-* 'to':

- 92) sir l-fuq / sir men l-fuq / sir men temma
 go to-over / go from the-over / go from there
 go over there / go from over there / go from there

Adverbs of time vary according to the verbs with which they occur.

- 93)a. lçab l-bareh.
 he played the -yesterday
 'He played yesterday.'
- b. kay lçab daba.
 part-he-plays now
 'He is playing now.'
- c. γa j- lçab γadda.
 Will he-plays tomorrow
 'He will play tomorrow.'
- 94)a. l-bareh lçab.
 the-yesterday he played
 'Yesterday , he played.'
- b. daba ka-j- lçab.
 now part-he plays
 'Now he is playing.'
- c. γadda γa-j- lçab
 Tomorrow will-he plays
 'Tomorrow , he willplay'

Aspect, tense and agreement

Generally, a sentence cannot be well formed unless the lexical and functional categories it consists of are merged appropriately. In what follows we will try to present the basic functional categories in MA.

Aspect

Aspect may be realised in the perfective [+ perf] or the imperfective [- perf] form. Concerning the perfective aspect, it could be discontinuous, habitual or continuous, as in :

- 95) T-Talib kteb l-bra. (complete)
 the-student wrote the-letter
 ‘The student wrote the letter.’
- 96) T- Talib kan ka-j kteb. (habitual)
 the-student was-he writes
 ‘The student was writing.’
- 97) T- Talib kan ta-j- kteb. (continuous)
 the-student was he-writes
 ‘The student was writing.’

Aspect may occur with a [- imperfective] form, as in :

- 98) T- Talib ta-j- xdem. (continuous)
 the-student part-3-works
 ‘The student is working.’
- 99) T- Talib ka-j- xdem. (habitual)
 the-student part-3- works
 ‘The student is working.’

The imperfective aspect may be realised in a structural context like (100 a) exemplified by (100 b-e):

100) a. V+V (imperfective)

- b. byit nemši l-bħar.
 wanted-I I-go to-the-beach
 ‘I wanted to go to the beach.’

- c. yađi ngles f d-dar.
 Will I-stay in the-house

- ‘I will stay at home.’
 d. mšit l-busTa baš nDrub t-tilifun.
 went-I to-the-post-office hit-I the-phone
 ‘I went to the post-office to make a phone call.’
 e. γir tuwsal dreb- li t-tilifun.
 as soon as you arrive hit to-me the-telephone
 ‘As soon as you arrive, call me.’

Tense : the past, the present and the future

The past and the present

In MA, tense is generally expressed by means of inflectional morphemes (that could be bound to a verb or free) and also adverbs of time. Past tense, however, is an exception, since it could be manifested without making use of such morphemes. The past may sometimes be confused with the imperative since they display the same form; yet, they could be distinguished from each other by means of adverbs, as in :

- 101)a. xruž ‘go out.’
-
- ```

graph TD
 A[xruž 'go out.'] --- B[xruž nta
go out -you
'Go out.']
 A --- C[xruž l-bareh
went-he the-yesterday
'He went out yesterday.']

```
- b. qra (learn)
- 
- ```

graph TD
    A[qra (learn)] --- B[qra nta daba  
learn - you  
'Learn now']
    A --- C[qra l-bareh  
learned-he the-yesterday  
He learned yesterday.]
  
```

Temporal adverbs referring to the past emphasize the fact that the event took place in the past. They may be considered as morphemes when the verb expresses a present or a future action.

Tense in MA, as in SA, is determined from the moment of speaking (deictic time), which is purely aspectual. This deictic time is conveyed by means of aspectual morphemes such as *ka-* and *ta-*. In this case, there is no need for tense to be specified by means of adverbs, as in :

- 102) a. d-rari ta-j- lečbu l-kura.
 the-children part-3-play-pl. the-ball
 'The children are playing football.'
 b. d-rari ka-j lečbu l-kura.
 the-children part-3-play-pl. the-ball
 'The children are playing football.'
- 103) a. l-bent ta-t lčab š-šetranž.
 the-girl part-3- play the-chess
 'The girl is playing chess.'
 b. l-bent ka-t-lčab š-šetranž.
 the-girl part-3-play the-chess
 'The girl is playing chess.'

What distinguishes the imperfective aspect from the perfective one is that agreement in the latter case is abstract while it is discontinuous in the former (see section below).

In (102), for example, agreement is realised on the verb (*lčab*) as a discontinuous affix (the suffix *y*-indicating person and gender and the suffix-*u* encoding the feature of number). This sequence is clearly illustrated by (104):

- 105) ta-j lčeb-u.
 part-3-ms. Play-pl
 (They play/ are playing.)

The future tense

The Future tense is manifested in the context :

- 106) helping particle + (- perfective thematic V)

The helping particle could be *ya-* or *yadi* "will"... and the particle *ya-* may be considered as an abbreviation of *yadi* in parallel with the particles *sa-* and *sawfa* "will" in SA.

- 107) *ya-t-xruž*.
 Will-2-ms.go out
 'You will go out'
- 108) *yadi t-xuržu*
 Will-2-ms.go out-pl
 'You will go out.'

The future may be conveyed in the form of the imperative:

- 109) safer γ adda l-r-rbaṭ
 travel tomorrow to-the Rabat
 'Travel tomorrow to Rabat.'

It may be noted that futurity in imperative forms is expressed semantically (and not morphologically) because the same form can be used to refer to the past, as mentioned earlier. What determines the intended interpretation of tense, then, is the type of adverbs: if we say γ adi "will" the intended tense would be the future. On the other hand, if we say *l-bareh* "yesterday", the tense to be conveyed would be the past :

- 110)a. safer muḥamed l-bareh l-r- rbaT
 travelled Mohamed the-yesterday to-the-Rabat
 'Mohamed travelled to Rabat yesterday.'
 b. safer /a muḥamed γ dda l-r- rbaT
 travel part Mohamed tomorrow to-the-Rabat
 'Mohamed! Travel tomorrow to Rabat.'

Sometimes, adverbs of time are the determining elements of the tense expressed by the verb :

- 111) safer muḥamed l-bareh (past)
 travelled Mohamed the-yesterday
 'Mohamed travelled yesterday.'
 112) ka-j – kteb muḥamed daba (present)
 part-3.ms.writes Mohamed now
 'Mohamed is writing now.'
 113) safer /a muḥamed γ adda (future)
 travel part Mohamed tomorrow
 'Mohamed! Drink tomorrow.'
 114) muḥamed \check{z} ra l-bareh.
 Mohamed ran-ms.sg the-yesterday
 'Mohamed ran yesterday.'
 115) \check{z} ra daba.
 ran-ms.sg now
 'He has just run.'

- 116) žri γadda
run-2-sg. Tomorrow
'Run tomorrow.'

Agreement

Agreement in MA is expressed on the basis of the syntactic relation that holds between arguments and heads in a given structural domain, in particular the relation between the subject and the verb.

Agreement is fully realised when it encodes the features of person, gender and number; these features may be spelled out together (as a suffix) or discontinuously (prefix - V - suffix), depending on the temporal interpretation of the verb.

When the verb is specified [+ past], agreement is realised as a suffix, which could be phonologically expressed or empty as in :

- 117)a. /ana kteb-t. hija ketbe-t.
I wrote- sg she wrote -3-fem.sg
'I wrote.' 'She wrote.'
- b. l-bnat ketb-u. huma ketb-u.
the-girls wrote-pl they wrote-pl
'The girls wrote.' 'they wrote.'
- c. d-drari ketb-u. huwa kteb - Ø.
the-children wrote-pl he-wrote -sg.ms.
'The children wrote.' 'He wrote.'
- d. nt-uma kteb-tu. hna (ja) kteb-na.
you-pl wrote-pl (ms/fem) we wrote-pl
'You wrote.' 'We wrote.'

We can make two observations from the above examples: first, all agreement features are realised as suffixes; second, the feature of person has an influence on the structure of the verb when it is inflected in the singular, as in :

- 118) a. safer Ø → (+ sing, + third person, - masc)
travelled-3-ms.sg.
'He travelled'
- b. safrat → (+ sing, + third person, + fem)
travelled-3- fem. sg.

Notice the insertion of the agreement marker- at in the place of a silent vowel {Ø} in (118b).

The feature of person is phonologically unrealised when the verb is non-singular, in this case the difference between masculine and feminine is neutralised (in fact, all plural verbal forms carry a masculine gender).

- 119) l-bnat safr-u. d-drari safr-u.
 the-girls travelled-pl the-boys travelled-pl
 ‘The girls travelled.’ ‘The boys travelled.’
- safer-na- . safer –tu.
 travelled-1-pl travelled -2-pl
 ‘We travelled.’ ‘You travelled.’

When the verb is inflected in the perfective aspect, the verb retains all its agreement features regardless of whether the subject follows the verb or precedes it.

- 120) a. kteb-t ?ana l-bareh.
 wrote-1.sg. I yesterday
 ‘I wrote yesterday.’
- b. ketb-u l-bnat.
 wrote-pl the-girls
 ‘The girls wrote.’
- c. ketb-u d-drari l-bareh.
 wrote-pl the-boys the-yesterday
 ‘The boys wrote yesterday.’

When the verb is in non-past, agreement is expressed as a clitic (prefixes and suffixes) as in:

- 121) a. ta-t - lçab → ka-t -l-çab
 part-2-play → part-you-play
- ka-t -l-çab → ta-t -l-çab
 part-2-play-sg. → part-2-play-sg.
- b. ka-j-leçb-u → ta-t-leçb-u
 part-3-play--pl. → part-2-play-pl.
- ka-t -l-çab → ta-t -l-çab
 part-2-play → part-2-play
 ‘You play /are playing.’

In these examples and similar ones, the prefix often refers to the features of person and gender while the suffix encodes the feature of number.

The agreement patterns displayed by the verbs in the past and the future are summarized in the partial paradigm (122):

+ past

- past

- 122)a. 1 Form sing. + masc *kreb-t/ti* *n-kreb*
 b. 1 Form pl. + masc fem *kreb-na* *n-kreb-u*
 c. 2 Form sing. +masc. *kreb-t* *ta-t-kreb*
 d. 2 Form pl. + masc. /fem *kreb-tu* *t-kreb-u*

What distinguishes agreement in imperfective forms is that it is always realised as a discontinuous affix; in the case of perfective forms, however, agreement is fully expressed as a suffix. When the verb is in the singular/1 form and in third person, agreement does not occur.

Negation

Negation in MA is often expressed by means of a morpheme that could be discontinuous (ma...š) or continuous (maš), depending on the syntactic context in which it occurs:

-The negative morpheme may be realised as a discontinuous affix when it occurs with a verbal or adjectival predicate as in :

123) Negation + Verb / Adjective

- 124) a. çali ma-mša-š l-fas.
 Ali neg. went-neg to-Fes.
 ‘Ali did not go to Fes.’
 b. çali ma - xaddam- š mezjan.
 Ali neg. work-neg- well
 ‘Ali does not work hard.’
 c. çali ma-zwin-š bezzaf.
 Ali neg. good-neg. much
 ‘Ali is not handsome enough.’
 d. çali ma-meqtul-š b-leçja.
 Reda neg-dead -neg with -fatigue
 ‘Reda is not dead/tired.’

- Negation can be expressed with all verbs, in the past as in (124), and in the future. In the latter case, the negation element is located between the helping verb and the main verb, as in the context (125) exemplified by (126) :

125) Negation + (helping verb + Negation) main verb (- perf.)

- 126) a. çali ma-γadi-š j-emši.
 Ali - neg. will-neg-3-go
 ‘Ali will not go.’

- b. *çali ma çawd-š j-ži.*
 Ali neg. again -neg.-3- come
 ‘Ali will not come again.’
- c. *çali ma xessu-š j-emši.*
 Amed Ali -neg. need-neg-3- go
 ‘Ali need not go.’

With imperative verbs, negation is realised as in :

- 127) a. *ma-t-mši-š / ma-t-dxul-š / ma-γadi-š t-emši*
 Neg. 2-go-neg. /neg.2-enter-neg. /neg-will -neg-2-go
 ‘Do not go / Do not enter / You won't go’

- Negation is expressed as a single (i.e. continuous) morpheme in the context of NPs and PPs:

- 128) a. *Tariq maši f d-dar.*
 Tarik not in the-house
 ‘Tarik is not at home.’
- b. *jasin maši țalib*
 Yassine not student
 ‘Yassine is not a student.’

In (128a-b), the negative marker *maši* is immediately followed by a PP and by a NP respectively.

Interrogative sentences

There are various interrogative words in MA. Each form corresponds to the questioned element, which could be a subject, an object, an adverb of time or place, an adjective , etc. The basic question morphemes include the following :

- 129) *škun / šnu //aš / çlaš / kif /bħalaš /fin /fuqaš / kifaš...*
 who / what /what / why / how / how /where/ when / how

The examples in (130) illustrate interrogative sentences in which the subject and the object are questioned:

- 130) a. *muħamed Drab hišam.*
 Mohamed beat Hicham
 ‘Mohamed beat Hicham.’
- b. *škun Drab hišam?* (Subject)
 who beat Hicham?

- ‘Who beat Hicham?’
 c. škun muhamed Drab? (Object)
 who Mohamed beat?
 ‘Who did Mohamed beat?’
 d. škun Drab-u muhamed?
 Who beat -him Mohamed?
 ‘Mohamed, who beat him?’

Interrogative structures in which the adjective is the questioned element are illustrated by (131):

- 131) a. muhamed kan çayyan bezzaf.
 Mohamed was tired-ms.sg. much
 b. kifaš kan muhamed?
 ‘How was Mohamed?’
 132) a. muhamed rjaç bhal xu-h.
 Mohamed returned like brother-his
 ‘Mohamed became like his brother.’
 b. kifaš rjaç muhamed?
 How returned Mohamed?
 ‘How did Mohamed become?’

When the question is about the state of a person, we say:

- a. kif hale-k?
 how state-your?
 ‘How are you?’
 b. ma-lek?
 What you-have?
 ‘What's the matter with you?’
 c. ma-lek kat-γawti.
 what-you have part-shout-fem
 ‘Why are you shouting?’

When the question is about reason or an object, we use the interrogative words *çlaš* (why) and *šnu* (what).

- 133) a. çlaš žit-i?
 why came-you?
 ‘Why have you come?’
 b. šnu byit-i?
 what want-you?
 ‘What do you want?’

When the question is about place, we use forms like :

- 134) a. lin γadi?
 where going?
 ‘Where are you going?’
 b. mnin ža?
 from where came-he?
 ‘Where did he come from?’
 c. fin msafer?
 where travel-you?
 ‘Where are you travelling?’

As can be noticed from this set of interrogative sentences, the question word in MA, as in English, occupies a sentence initial position (see Ennaji 1985 for more details).

To sum up, the main concern of this section has been to present the major types of simple sentences in MA. Particular attention has been paid to the basic constituents (or categories) that make up both verbal and nominal sentences. The focus has been placed on word order, verbal inflection, the realisation of aspect, tense and agreement, question formation, negation and conditional sentences. We also made reference to the distribution of demonstrative pronouns, APs, PPs and AdvPs in forming nominal sentences. With this background in mind, we will shift the attention to complex sentences in the next section.

The complex sentence

A complex sentence consists of more than one clause: a main clause and at least one subordinate clause. Subordination may be expressed by means of different subordinating conjunctions, depending on the nature of the subordinate clause. The latter could be declarative, interrogative, adverbial, etc. Other related clauses that will be discussed in this context are relative clauses, small clauses and cleft sentences.

The complement clause

A subordinate clause may have the function of a complement in the sense that it completes the meaning specified by the verb of the main clause. This complementation is determined by the selectional properties of the matrix verb. The latter also determines the nature of the clause to be embedded, as well as the exact tense to be used. It should be noted at this point that a complement clause is not a property of verbs to the exclusion of other syntactic categories such as nouns, adjectives and prepositions.

Therefore, we expect various types of complement sentences including the following:

Declarative complement clauses

Declarative *complement clauses* are generally introduced by the lexical complementisers *blli* or *billa* (that). In this case, the embedded verb is finite:

- 135) a. kan Dunn (blli) *çali nžeh f l-mtiħan*.
I believe (that) Ali passed the exam
b. gal *çali* (blli) *l-mtiħan kan sahl*.
said-ms Ali that the-exam was easy
'Ali said that the exam was easy.'
c. craft (blli/billa) *çali kay y-xdem mežian*.
'I knew that Ali works hard.'
- 136) a. wSel-ni l-xbar (blli) *çali nžeh*.
arrived-me the-news that Ali passed the exam
'I received the news that Ali passed the exam.'
b. smeç-t l-?iša (blli) *çali yađi y-safer l-xariž*.
'I heard the rumour that Ali is going to travel abroad.'
c. Seddeq-t l-fikra (blli) *çali yađi y-bqa f l-xariž*.
'I believed the idea that Ali is going to stay abroad.'
- 137) a. ?ana mtyeqqen (blli) *çali ma- ya-i-eržeç –š*.
'I am sure that Ali will not come back.'
b. *çali m?akked* (blli) *ya-j-sib l-xadma*.
'Ali is certain that he will find work.'
- 138) *çali kaj fekker f kifas j-qra bla ma-jexdem*.
Ali is thinking in how he studies without not works.
'Ali is thinking how to study without working.'

In these examples, the embedded clauses assume the grammatical function of 'complement' as required by the selectional properties of the relevant constituents. If such clauses are omitted, the structures will be ill-formed.

- 139) * *kan Dunn*
I believe

We also notice that such clauses are finite; Moreover, they are optionally preceded by the complementiser *blli*. The latter has the function

of introducing a complement clause. However, its omission does not lead to ungrammaticality.

There are some declarative complement clauses that are preceded by the complementisers baš that may express consequence or purpose as in :

140) çali xdem me³zian baš nžeh.

Ali worked well that succeeded- he

‘Ali worked so hard that he succeeded.’

141) çali mša l-xarij baš j-xdem.

Ali went to abroad in order to work-3-ms-sg

‘Ali went abroad in order to work.’

However, there is a class of verbs that exclusively select the complementiser *blli*, which cannot be interchanged with *baš* that expresses consequence or result; such verbs include: *Saab* (find), *nkar* (deny) and *taa³q* (trust).

142) a. nkar çali blli ya³di y-emši yexdem.

denied Ali that he will go to work.

‘Ali denied that he would go (abroad) to work.’

b. nkar ššeffar blli/*baš ya³di yesraq.

denied the thief that will-he steal.

‘The thief denied that he will steal.’

c. taa³q çali blli /*baš l-qraya sahla f l-xariž.

believed Ali that studying easy abroad

‘Ali believed that studying abroad is easy.’

d. šaa³b çali blli /*baš l-qraya f-l-xariž hsen (better)

found Ali that studying abroad better.

‘Ali found that studying abroad was better.’

Complement clauses introduced by *want* and *begin* - type verbs consist of a verb which is always inflected in the imperfective aspect while tense is anaphoric, as it is related to the referential tense which is conveyed by the matrix verb:

143) b³ya çali y-safer l-xariž.

wanted Ali travel-3 to-abroad

‘Ali wanted to travel abroad.’

144) bda çali yetçallem (kifaš) j-sug T-Tamubil.

began Ali learn 3 (how) drive³

‘Ali began to learn (how) to drive.’

- 145) *hawel ali (bař) j-ředd l-permi f ssajf.*
 tried Ali (that) get-3 the -driving licence in the summer
 ‘Ali tried to get the driving licence in the summer.’
- 146) *ħmed waed ali (bař) j-řrilu Tumubil.*
 Ahmed promised Ali (that) 3ms.buy –to him car
 ‘Ahmed promised Ali to buy him a car.’
- 147) *ħmed qne ali ((bař) ma-jsafer-ř l-xariř.*
 Ahmed convinced Ali that neg. travel -neg to -abroad
 ‘Ahmed persuaded Ali not to travel abroad.’
- 148) a. *qder ħmed jeqne ali (bař) ma- jsafer-ř.*
 could Ahmed persuade Ali that neg-travel -neg
 ‘Ahmed could persuade Ali not to travel.’
 b. *xess ali j-eraf j-sug.*
 need Ali-3.ms know 3.ms.drive.
 ‘Ali needs to know (how) to drive.’
- 149) *ħmed mstaed (bař) j-awen ali j-axud l-permi.*
 Ahmed ready (that) help Ali get the driving licence
 ‘Ahmed is ready to help Ali to get his driving licence.’

In all the above examples (143-149), the embedded verb is uniformly inflected in the imperfective aspect, which roughly corresponds to infinitival forms in English, French and similar languages. Thus, in (143-145), the verbs *bya* (want) and *hawel* (try) among other verbs select a non finite clause. The tense of this clause is understood from the inflection of the matrix verb. So, the intended tense of the embedded verb in (143) - (144) is the past. It could also be the present if the introducing verb is in the present form, as in :

- 150) */ana bayi ali j-bqa ma-na.*
 I want Ali stay with-us
 ‘I want Ali to stay with us.’

Notice that the verbs *bda* (begin) and *hawel* (try), unlike *bya* (want), require that the embedded subject be phonologically unrealised. This is the case in English and many other natural languages (see the glosses). Thus we can have a sentence like (151) but not like (153).

- 152) *ħmed bya ali j-bqa ma-h.*
 Ahmed wanted ali stay-3 with him
 ‘Ahmed wanted Ali to stay with him.’

- 153)* hmed hawel çali j-bqa mça-h.
Ahmed tried Ali stay-3 with him

Note further that *bɣa* and *bda* select a complement clause with a null complementiser. In the case of verbs like *hawel* (try), the use of the complementiser *baš* is optional as indicated by parentheses.

The examples (146)-(147) consist of control verbs *waçed* 'promise' and *qneç* 'persuade' that select a CC introduced by the optimal complementiser *baš* 'that' followed by a null pronominal subject. In (148 a-b), the auxiliary *qder* 'can' and *xess* 'need' require that the embedded verb be inflected in the imperfective form. Thus, the complement clauses in such examples are also non-finite. If the embedded verb carries a past inflection, the structure would be ungrammatical as can be seen from (153):

- 153) * *xess* çali bqa
needs Ali stayed-he

(150a) is an example of a copular construction where the embedded verb must appear in an imperfective form (which is *j-bqa*). In (149b), the adjective *mstaçed* selects a non-finite complement clause.

Interrogative complement clauses

By interrogative complement clauses we mean indirect questions, which are of two major types: (i) Yes/no questions, which are obligatorily introduced by the neutral complementiser *waš*, and (ii) wh-questions, which are introduced by different wh-complementisers.

- 154) a. ma-çraft-š waš had l-xbar šhih.
not know I whether this the-news correct
'I don't know whether this information is correct.'
b. sewwel-ni çali waš ža šahb-u.
asked-me Ali whether came friend-his
'Ali asked me whether his friend came.'

The matrix verbs in (154) select the complementiser *waš*, the absence of which leads to ungrammaticality:

- 155) * sewwel-ni çali ----- ža šahb-u.

Notice that the complementiser *waš* in (154a) can be interchanged with *blli* and the complement clause becomes non-interrogative :

156) ma- ɟraf-š blli had l-xbar šhih.

‘I don't know that this information is correct.’

In this case, the complement clause entails that the information is correct, while in (154a) the complement clause entails that the information may be correct or not. However, in the case of (155b), the interrogative verb *sewwel* or *seqsa* (ask) does not permit the occurrence of *blli*, which exclusively appears with declarative clauses:

157) sewwel-ni ɟali waš ža šaħb-u.

‘Ali asked me whether his friend has come.’

As to wh-interrogative sentences, they may be exemplified by the following structures:

158) a. ma-ɟraft-š škun hal l-bab.

not know I who opened the door

‘I don't know who opened the door.’

b. kan xammem ɟlaš bayi j-mši l-xariž.

‘I wonder why Ali wants to go abroad.’

c. kan tsa?el fuqaš/kifaš ɟali yaɟi j-mši l-xariž.

‘I wonder when Ali wants to go abroad.’

d. kan tsa?el fuqaš/lejen/kifaš ɟali yaɟi j-mši l-xariž.

‘I wonder when/where/ how Ali will go abroad.’

Worthy of notice here is that the embedded subject in the interrogative clause can be pre-verbal as in (158 b-c) or post-verbal as in:

159) kan xammem šnu ya-ydir ɟali f l-xariž.

I wonder what will do Ali in the abroad

‘I wonder what Ali will do abroad.’

This possibility of placing the subject before or after the verb follows from the fact that MA allows both SVO and VSO orders. Thus far, we have seen two basic types of complement clauses: declarative complement clauses that could be finite or non-finite and interrogative clauses. Each type of these clauses requires a particular complementiser, depending on the selectional properties of the matrix verb. Thus, the verbs that take finite declarative complement clauses include the following, with specific reference to complementisers (see Ennaji 1985:423):

MA

blli

160)a.ɟtaref (confess)

obligatory

b. nkar (deny)	“
c. nSah (advise)	optional
d. ttafq (agree)	“
e. çtaber (consider)	“
f. nsa (forget)	obligatory
g. Dman 'guarantee'	optional
MA	Comp. <i>blli</i> / <i>baš</i>
161) a. hawel 'try'	-- optional
b. bya 'want'	-- “
c. qtareh 'suggest'	-- “
d. fekker 'think'	-- -- optional
e. qarrer 'decide'	-- -- “
162) bda 'begin'	comp Ø

With regard to finite interrogative complement clauses, the complementisers involved are of two major types :

Yes-No questions = *waš*

Wh-questions = wh-elements (*škun, šnu, fejn, çlaš, kifaš*, etc.)

The first type of questions is introduced by *waš*. The latter is optional when the question is simple (e.g. (*waš*) *safer mohamed*? ‘Has Mohamed travelled’ versus *ma-çraft-š waš mohamed safer* ‘I don’t know whether Mohamed has travelled.’) As to wh-questions, they are obligatorily introduced by a wh-element irrespective of whether the question is direct or indirect (See (23)-(24); see also Ennaji (1985) for more details).

Adverbial clauses

Adverbial clauses consist of an adverb whose function is to specify the mode of action of the verb. In English , many adverbs are morphologically signalled by the use of the suffix-ly ending, e.g. “quickly”, (cf. Crystal 1980 : 16). In SA, there are other ways to express the same mode of action, e.g. *musričan* or *bi- surçah* ‘quickly’. In MA , we use some expressions such as *deçya/ b-zzerba* ‘quickly’, *b-šwiya* ‘slowly’ , etc.

Adverbial clauses are of various types : time, place, condition, concession, consequence, purpose, etc. Adverbial clauses of time are introduced by such subordinators as *melli* ‘when’, *hetta*, ‘until’, *hit* ‘since’, *qbel* ‘before’ *beçd* ‘after’ , etc.

- 163) a. tsennit l-kar hetta ja.
waited for the coach until come-it
'I waited for the coach until it comes.'
- b. melli jaw dyaf, ddit-hum l-qahwa.
when came the-guests took-I them the-café
'When the guests arrived, I took them to the café.'
- c. xdina taxi hit kunna stta bina.
took-we a taxi since were-we six with us
'We took a taxi since we were six persons.'
- d. qbel ma y-tkellem mul l-qahwa fhamt šnu kay qsed.
before he-talks owner the-café understood-I what he-meant
'Before the café manager talked, I understood what he meant.'
- e. beḍd ma kemmel-t l-xadma, t-farrejt f-l-film.
after part. finished the- work saw-I the film
'After I had finished my work, I watched a film.'

Adverbial clauses of place

They are introduced by the adverbs *fin* / *feyn* 'where', *finma* 'wherever':

- 164) bya ḡali yexdem fin ma kan.
wanted Ali work where was
'Ali wanted to work wherever possible.'

Adverbial clauses of condition and concession

They are introduced by *?ila* (if) / *lukan* (if it were), *waxxa* / *walaw* 'even if'

- 165) a. ḡadi y-safer ḡali ?ila njeḥ.
will travel Ali if succeeded
'Ali will travel if he succeeds.'
- b. *lukan* ža l-mudir, j-mken j-hul l-muškil.
If was come the-director may-3 solve the problem
'If the director were here, he could solve the problem.'
- c. waxxa ma xdem-š ḡali mezian njeḥ f-l-mtiḥan.
even if not work Ali well succeeded in the exam.
'Even if Ali did not work hard, he passed the exam.'
- d. maqderš ḡali yaxud l-visa walaw kan ḡandu l-flus bzzef
not-can Ali get the visa even if he had money much
'Ali couldn't get the visa even if he had a lot of money.'

Adverbial clauses of consequence/ purpose

Adverbial clauses of this type are introduced by the complementiser *baš* 'so that' / 'in order to':

- 166) a. *çali žmeç l-flus baš dewwez l-permi.*
 Ali gathered the-money so that passed the driving licence
 'Ali gathered money so that he could take the driving licence test.'
 b. *çali xda l-permi baš y-šug t-tummubil.*
 Ali took the-driving licence in order drive-3 the car
 'Ali got a driving licence in order to drive the car.'

Although adverbial clauses of consequence and purpose are introduced by the same subordinating conjunction *baš*, they require the use of different tenses: while clauses that express consequence consist of a verb inflected in the perfective aspect / past tense, purposive clauses require that the verb be inflected in the imperfective aspect / present tense.

Relative clauses

The relative clause normally modifies a noun phrase (NP) and the whole structure is standardly identified as a complex NP. There are three major types of relative clauses: restrictive, non-restrictive (or appositive) and free relatives. These clauses have the structure displayed in (167):

[NP [comp [...]]
 S' S
 RC= Complex Noun Phrase
 NP is null in free relatives.

MA makes use of the relative complementizer *lli* "that" in the formation of the three relative clause-types mentioned above. For ease of exposition, we will start by restrictive relatives and show the distribution of *lli*, as well as its salient morpho-syntactic properties.

Restrictive relatives

Restrictive relative clauses serve to restrict the range of reference of the modified NP. This is illustrated by the following examples :

- 168) a. *r-ražel lli ža sewwel fi-k.*
 the-man that came-ms. Asked-ms in-you
 'The man who came inquired about you.'

- b. l-mra lli ža-t sewla-t fi-k.
the-woman that came. fm. asked-f in-you
'The woman who came inquired about you.'
- c. r-rjal lli ža-w sewl-u fi-k.
the-men that came-pl in-you
'The men who came inquired about you.'
- d. l-čyalat / n-nsa lli žaw sewl-u fi-k.
the-women that-came asked-pl in-you
'The women who came inquired about you.'
- 169) a. tlaqit r-ražel lli črad -ti (h) l-hafla
met-I the-man that invited-you -him to the-party
'I met the man whom you invited to the party.'
- b. qrit l-ktuba lli tkellemti čli-hum
read-I the-books that talked-you on -them-ms.
'I (have) read the books that you talked about.'

All these examples illustrate how restrictive relative clauses are formed in MA. Relativisation is a syntactic operation that yields a "complex sentence" as an output. The whole construction contains two verbs, each of which forms part of the predicate of its own clause. For example, in (168), the sentence that contains *sewwel* "ask" is the main clause and the one that contains *ža* is the subordinate clause. It is the latter which is identified as a relative clause. This type of clause is syntactically dependent on the head noun (e.g. *r-ražel* in (168)). This subordination is also indicated (in most cases) by the obligatory presence of the relative complementizer '*lli*'. The latter retains the same frozen (and neutral) form regardless of the nature and grammatical function of the modified noun phrase. Thus in (168a), which is an instance of subject relativization, *lli* does not show any agreement with the head noun *r-ražel* "the man". This lack of agreement becomes clear with the other examples in (168b-c), where the subject is feminine in one case and plural in the other. This is different from Standard Arabic where the complementiser *llađii* (from which *lli* is historically derived) displays agreement in person, gender and number with the modified NP :

- 170) ar-rižaal-u llađiina žaa?-uu
the-men-noun that-ms.pl. came-ms.pl
'The men who came...'

The examples in (169) illustrate how objects of verbs and prepositions are relativised. In the case of object Relativisation, we notice two important things: First the complementiser *lli* does not carry any morphological cue about the case of its antecedent; hence, it does not show any difference between objects and subjects, contrary to the French

complementisers “qui/que” and their English corresponding forms who/whom. This implies that the grammatical function of *lli* can be determined only by the antecedent. Second, unlike English relative complementisers, MA *lli* can occur both with human and non-human NPs. Worthy of notice here is that the complementiser *lli* cannot be deleted whatever the case of the relativised NP could be.

Note further that relativisation in MA makes use of two strategies: the gap strategy and the resumptive strategy. The latter option is typically used when the speaker wants to be more specific and s/he knows in advance the person or object s/he intends to talk about:

- 171) n-nas lli t-laqit-(hum) meçqul-in
 the-people that-met -I (them) serious-pl
 ‘The people (whom) I met are serious.’

When the modified NP is the object of a preposition (cf. 172) or when it occurs in an adjunct clause (173) - which constitutes an island for movement- the resumptive strategy is obligatory :

- 172) r-ražel lli tkellem-t mça-h sewwel fi-k.
 the-man that talked-I with-him inquired -in you
 ‘The man whom I talked to inquired about you.’
- 173) l-mra lli tzewwež-(ha) muħamed [qbel majeçraf-ha mežian]
 drejfa.
 the-woman that married-her Mohamed before he-knows-her well
 nice
 ‘The woman (whom) Mohamed married [before knowing (her) well] is nice.’

Another salient property of relativization in MA that deserves to be pointed out relates to word order. MA is among the Null Subject languages which are characterised by free inversion. This property is attested not only in simple sentences, but also in complex sentences including relative clauses, as exemplified below:

- 174) a. l-ktuba lli [šra muħamed] ɣaljin. (VSO) the-
 books that bought Mohamed expensive-pl
 ‘The books that Mohamed bought are expensive.’
 b. l-ktuba lli [muħamed šra] ɣaljin. (SVO)

The well-formed pair of sentences given above suggests that relatives clauses in MA may be formed with VSO or SVO order. Before

shifting the attention to non-restrictive relatives, it is worth showing another option of forming restrictive relatives when the related NP is the object of a preposition. In this case, we can either have patterns like (175a), where the preposition is stranded and a resumptive pronoun is attached to it, or patterns like (175b), where the whole prepositional phrase is relativised (pied-piping):

- 175) a. r-ražel lli katkellmu čli-h mriD.
 the-man that you-talk on him ill.ms
 ‘The man about whom you are talking is ill.’
 b. r-ražel čla –men katkelmu mriD.
 the-man that you –talk on him ill-ms
 ‘The man about whom you are talking is ill.’

The use of pattern (175b) does not allow the occurrence of a preposition and the relative complementizer *lli*. What is needed instead is the use of specific pronouns that are bound in nature and require to be attached to a host such as *-men* in (176c) and *-aš* in (176a-b).

- (176) a. l-ktab čl-aš katkellmu muhim.
 the-book on which you-talk interesting
 ‘The book about which you are talking is interesting.’
 b. s-sarut b-aš hallit l-bab tlef.
 the-key with-which you-opened the-door lost
 ‘The key with which you opened the door is lost.’
 c. l-mes/ala men-aš kay tšekka l-mudir..
 the-problem from-which complains the-director
 ‘The problem from which the director complains...’
 d. l-kar f-aš safer-na mumtaz.
 the-bus in which we travelled wonderful
 ‘The bus on which we travelled was wonderful.’

The underlined adverbs correspond to the English wh-items “whom”, “which”, “where”, “when”, etc.

Non-restrictive relatives

Non-restrictive relative clauses or appositives are typically headed by a referential NP which is independently identified, and any further modification of such a head is supplementary information about it. Clauses of this type are, thus, considered parenthetical structures whose function is to give additional information about the antecedent, i.e. the modified NP or clause (see Ennaji, 1985)

- 177) a. muhamed,[lli kaj htarmu-h n-nas kull-hum] metwaDeç
 Mohamed, that respect-him the-people-all-them humble
 ‘Mohamed, who all people respect, is humble.’
 b. harsu d-drari s-saržem, lli ma-ši maçqul
 broke-pl the-children the-window that not logical
 ‘The children broken the window, which is not logical.’

Notice that non-restrictive relatives are separated from the antecedent and the predicate by the use of commas; in speech, this characteristic is indicated by a phonological break (or pause). Note further that the difference between restrictive and appositive relatives in MA is neutralized insofar as the use of the relative complementizer *lli* is concerned, since it obligatorily shows up in both types of structures. Additionally, there is no equivalent to the English relative comp ‘that’, which can be used as a test (among others) to distinguish between these types of relative clauses.

Free relatives

Free relatives are called so because they can stand by themselves without being necessarily headed by an NP that usually functions as an antecedent. This type of clauses can be introduced by the neutral complementiser *lli* or *wh-* complementiser depending on the internal structure of the clause:

- 178) žaw [*lli* xabru-k].
 came that informed-they-you
 ‘Those who informed you have arrived.’
- 179) a. kan nçraf [*lli* ka-tkellm-u çli *hum*].
 I know that you-talk-pl on-them
 ‘I know who you are talking about.’
 b. kan nçraf [*çla-men* ka-tkellm-u].
 I know on-whom you-talked-pl
 ‘I know about whom you are talking.’
- 180) [*mça-men* txasem-ti] mrid (Ennaji 1985:85)
 with-whom quarrelled-you sick
 ‘The one who you quarrelled with is sick.’
- 181) neçs-at [*fīn* neças xu-ha].
 slept-she where slept brother-her
 ‘She slept where her brother slept.’

In (178) the free relative clause has the grammatical function of subject and occurs in post-verbal position following the VSO pattern. The same clause can be placed before the verb yielding SVO order.

In (179a), the free relative clause has the function of object because it is adjacent to the transitive verb *çraf* (know), in (179b) the prepositional phrase had undergone pied piping since a preposition cannot be stranded in MA. The free relative structure functions as the direct object of the verb *çraf* (know). In (180) the free relative clause is headed by a prepositional phrase which functions as a subject. In (181), the free relative clause is introduced by the adverb of place *fin* (where).

Small clauses

Introduction

Unlike ordinary clauses which may be finite or infinitival, small clauses lack a Verb; hence they are tenseless and typically occur in embedded contexts (see Chomsky 1981, Sadiqi 2001). This type of clauses which function as complements, are selected by transitive verbs like *çtaber* or *hseb* (consider).

Adjectival small clauses in MA, as in many other natural languages, fall into three basic grammatical varieties:

- 182)a. kan çtaber [çali mtaşwwer].
pron. Consider-I ali intelligent-ms-sg
'I consider Ali intelligent.'
- b. kay dhar [çali mtaşwwer].
pron. Seem Ali intelligent-ms-sg
'Ali seems intelligent.'
- c. rzeç çali men l-hafla [ferhan].
returned-Ali from the-party (happy-ms-sg.
'Ali returned from the party happy.'

Example (182a) is a small clause that patterns like Exceptional Case Marking (ECM) Constructions, where the matrix verb governs and assigns accusative case to the embedded subject. Sentence (182b) is a small clause version of raising: the matrix subject is θ -marked by the adjectival predicate, and by the matrix verb (Stowell 1991:182). Sentence (182c) is an example of adjunct small clauses, where the embedded subject is the null pronominal element PRO which is controlled in this case by the matrix subject.

However, two striking properties of small clauses in MA will be revealed and justified. The first property, which seems (to be) puzzling is that the clauses under consideration can stand independently as normal sentences. This is due to the rich inflectional morphology of MA. The second property of MA small clauses is that they are exclusively subject-

initial , i.e. they have n SVO pattern though the language allows VSO and SVO orders in matrix clauses and in other embedded contexts. In the discussion that follows, we will focus on adjectival small clauses and illustrate their major properties.

Adjectival small clauses

This type of clauses may be exemplified by the following sentences (see Sadiqi 2001:2)

- 183) a. kan çtaber [çali mṭawwer].
 Consider-I ali intelligent-ms-sg
 'I consider Ali intelligent.'
 b. * kan çtaber [mṭawwer çali].
 I consider [intelligent ms. Ali]
- 184) a. hseb-t [laila mṭawra].
 considered-1-sg. Leyla intelligent sing.
 'I considered leyla intelligent.'
 b. * hseb-t [mṭawra laila].
 considered -1 sg. Intelligent -f-sg. Leyla

Adjectival small clauses in MA, as instantiated by the well-formed strings between brackets in (183)-(184) display the following major properties:

- 185) a. They lack tense, due to the absence of the verb.
 b. They are strictly subject-initial;
 c. They may occur as independent clauses; in that case, they behave as ordinary nominal (i.e. verbless) sentences.
 d. The subject and the adjectival predicate agree in the features of gender and number; the case of the subject and the predicate is always assigned by the selecting transitive verb temporal interpretation.
 e. The temporal interpretation of the small clause (e.g. present or past) depends crucially on the tense of the matrix verb (cf.(183)-(184).

Apart from the "puzzling" property in (c) , other properties are attested in many other natural languages such as French and English. As mentioned above, MA small clauses can stand by themselves and behave as true nominal sentences because of the rich inflection that obviates the need for an overtly expressed verb (that corresponds to the copula 'be' in English).

Thus, the well-formed small clauses in (183)-(184) can occur independently as in (186):

- 186) a. *çali mTawwer*.
 Ali intelligent ms.sg.
 ‘Ali is intelligent.’
 b. *Laila mTawra*.
 Leyla intelligent -f-sg.
 ‘Leyla is intelligent.’

Additionally the fact that small clauses require the subject to be initial follows from the status of such clauses themselves which unfortunately behave as *agreements* of the selecting verb. This implies that argumenthood is a property of referential NPs and not other categories like APs or VPs. With these observations in mind, let us examine other properties of adjectival small clauses in MA.

Other properties of adjectival small clauses

The first salient property of this type of clauses is that they are syntactic constituents which conform to the classic constituency tests: distribution, coordination and right node raising. This is exemplified in (187) below: (cf. Sadiqi, (ibid. 2,3) :

- 187) a. *ħseb-t [laila mTawra]*. (cf. (3a))
 ‘I considered Leyla intelligent.’
 b. *ħseb-t [laila mTawra] u [hind ħaššumiya]*.
 considered-I L. intelligent (3fs) and Hind timid-(3fs)
 ‘I considered Leyla intelligent and Hind timid.’
 c. *dan çli u ħesba-t fatima [laila mTawra]*.
 believed (3ms) Ali considered-(3fs) Fatima Leyla intelligent (3fs)
 ‘Ali believed and Fatima considered Leyla intelligent.’

With regard to distribution, the bracketed string in (187a) for instance, functions as a complement in the same way an NP does when it is governed by a transitive verb.

Concerning co-ordination and right node raising, they are illustrated in (187b) and (187c) respectively. The fact that the bracketed strings in (187b) may be conjoined strongly supports their constituents status given that only full constituents may be co-ordinated (Sadiqi, ibid. 3)

In (187c), the bracketed string [*laila mTawra*] (Leyla is intelligent) is a constituent which is shared by both the *Dan* and the *ħseb* sentences. This constituent is displaced to the right by a transformational operation traditionally called "right-node raising".

Such an operation attests to the constituency of the bracketed elements because movement of this type is a distinguishing property of constituents.

The bracketed strings in (187a-c) are also constituents in terms of thematic relations: The verb *hseb* (consider) is dyadic: it takes an external argument which needs to be human (the understood subject "I") and an internal clausal argument (Leyla).

The constituency of the bracketed strings in the above examples and similar ones can be supported further by the existence of accusative case assignment. This property is morphologically visible when the subject of the small clause is realised as a bound pronoun (i.e., object clitic) as in (188):

188) *hsebt [-ha mTawra]*

In (188) the subject of the SC is forced to carry objective case by virtue of the fact that it is structurally adjacent to a governing and case assigning verb. Thus, the predication relation between the verb *hseb* and its clausal argument is constrained by Case Theory (see Chomsky 1981, Radford 1988).

Another interesting argument in support of the Constituent Status of small clauses derives from adverb insertion, which allows different interpretations according to the constituent they modify (Sadiqi 1997: 3, 2001:5):

- 189) a. *hseb-t bssaḥ [laila mTawra]*
 considered-I (1sg) really Leyla intelligent (3f.sg.)
 'I really considered Leyla intelligent.'
 b. *hseb-t [laila mTawra bsaḥ]*
 considered (1sg.) Leyla intelligent (3.f.sg.) really
 'I considered Leyla really intelligent.'

In (189c) the adverb *bssaḥ* (really) modifies the main clause introducing verb while in (189b) it modifies the adjectives that it follows. This implies that adverb placement determines the interpretation of the modified constituent.

Thus, the subject and the predicate which form a small clause, represent a syntactic unit like other ordinary clauses. This unit, can allow the adjectival predicate to be extracted and moved to sentence - initial position in the same way a wh-phrase does in the process of wh-question formation (Sadiqi, 2001: 4).

- 190) *šhal gaç mTawra ka-t-hseb laila ?*
 how at all intelligent (3f.sg.) prep. (2.sg.ms) consider Leyla?
 'How intelligent do you consider Leyla?'

It may be recalled that adjectival small clauses in MA can occur independently as root clauses where the first element must be an NP. This may suggest that this NP is topicalised. However, this observation is not valid : the NP heading the small clause is a true syntactic subject because the subject -predicate relation inside the small clause conforms to the major following requirements imposed on predication (Stowell 1991 : 184, Sadiqi 2001, 4).

- 191) a. The subject is invariably an NP.
- b. The predicate is commanded by the subject (in accordance with the desired hierarchy).
- c. The predicate is a maximal projection (XP).
- d. The subject induces opacity for binding from outside the clause boundary.

With regard to the last requirement, consider the following example :

- 192) *ħseb ħali [laila mftaxra b-ras-ha /*b-ras-u].*
 considered-3ms Ali Leyla proud with-her -head /* his-head
 ‘Ali thought that Leyla is proud of herself/*himself.’

The subject of the small clause *laila* above blocks the binding of the anaphor *ras-u* (himself) by the matrix subject *ħali*. *Laila* is the local binder and *ras-ha* (herself) is the appropriate anaphor to be bound. If the NP heading the small clause were not a subject, the anaphoric relation between *ħali* and the reflexive *ras-u* (himself) would not be blocked.

Cleft sentences

A cleft sentence is a construction 'which gives both thematic and focal prominence to a particular element'. (Quirk and Greenbaum 1973: 414). This implies that structures of this type involve movement of a constituent from its original position to the left of the clause. As an illustration, consider the following examples:

- 193) a. *slaħ muhamed T-Tumubil l-bareħ.* (VSO)
 repaired Mohamed the-car the-yesterday
 ‘Mohamed repaired the car yesterday.’
- b. *muħamed slaħ T-Tumubil l-bareħ.* (VSO)
 Mohamed repaired the-car the-yesterday.
 ‘Mohamed repaired the car yesterday.’

- 194)a. rah muhamed (huwa) lli slah T-Tumubil l-bareh.
 There Mohamed he that repaired the-car the- yesterday
 'It is Mohamed who repaired the car yesterday.'
- b. rah t-tumubil (hiya) lli slah muhamed l-bareh.
 There the-car she that repaired Mohamed the-yesterday
 'It is the car that Mohamed repaired yesterday.'

The structures in (194a-b) are simple sentences that contain the same constituents; they differ only in the position of the subject: post-verbal in VSO constructions and pre-verbal in SVO structures. These orders are used interchangeably without any change of the overall meaning of the whole sentence. However, in the process of clefting, we need to insert some elements (e.g. *rah* 'it's and *lli* (that)) to indicate that the operation in question has taken place. The derived structure is a complex sentence, as can be seen in (194a-b).

Thus, in (194a), the clefted constituent is the subject (*muhamed*), which is obligatory preceded by the deictic particle *rah* (it's). The latter serves two functions: (i) it draws the attention of the listener to the focused element, (ii) it avoids a copular reading for the derived structure, given that copular constructions follows the same pattern.

We also notice that cleft sentences like (194a) involve the optional insertion of the strong pronoun *huwa* 'he', which corresponds to the copula 'is'. This pronoun is used for emphasis and its deletion does not affect the cleft reading of the derived structure.

We finally observe the obligatory use of the relative pronoun *lli* 'that', the omission of which blocks the cleft reading of the sentence. The same operation applies when the clefted element is a direct object (194b), an adverb (195) or a preposition phrase:

- 195) rah l-bareh lli slah muhamed T-Tumubil.
 There the-yesterday that repaired Mohamed the-car
 'It's yesterday that Mohamed repaired the car.'
- 196) rah l-meryem lli ça çali l-ktab.
 there to-Meryem that gave Ali the-book
 'It's to Meryem that Ali gave the book.'

When the clefted constituent is the complement of a preposition, a resumptive pronoun is spelled out, since MA does not allow preposition-standing. This phenomenon is attested in clefting and *wh*-questions as they both involve movement :

- 197) rah l-mudir (huwa) lli t-kellm-t mça-h.
 there the-director he that I-talked with -him

‘It’s to the director that I talked.’

- 198) *škun* lli t-kellem-ti mça-h ?
 who that talked-you with-him?
 ‘Who did you talk to?’

Clefting can also involve relative clauses, as in (199b):

- 199) a. *safer* [l-mudir lli t-kellemt mça-h].
 travelled the director that talked-I with-him.
 ‘The director that I talked to travelled.’
 b. *rah* [l-mudir lli t-kellem-t mça-h] huwa lli *safer*
 there the-director that talked-I with-him he that travelled.
 ‘It’s the director that I talked to who travelled.’

Clefting in (199b), as in the examples given above, always follows the same pattern, as predicted below:

- 200) *rah/raha* XP (*huwa/hija*) lli ... XP= NP, AP, PP, AdvP, Rel. Clause
 there-m./f. (he/she) that... XP= NP, AP, PP, AdvP, Rel. Clause

Conclusion

The main concern of this chapter has been to present the major types of simple and complex sentences in MA. Special attention has been paid to the inflectional morphology of the language, which is responsible for word order variation. Focus has also been placed on some functional categories like Tense, Agr, Aspect, Neg and Comp in view of the central role they play in the process of building various construction types. It has been shown that, apart from a few idiosyncratic properties that relate particularly to cliticisation and to the behaviour of some functional heads, MA patterns like other natural languages in structure building and transformations. Thus, it has been illustrated in detail how simple sentences in MA are formed. It has also been revealed that the formation of complement clauses, relative clauses, small clauses and cleft sentences follow roughly the same principles as those of Standard Arabic.

With regard to adverbial clauses of consequence and purpose, they are introduced by the same subordinating conjunction *baš* (for). Yet, they require the use of different tenses; while clauses that express consequence consist of a verb inflected in the perfective aspect/past tense, purposive clauses require that the verb be inflected in the imperfective aspect/present tense.

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This book is a descriptive grammar of Moroccan Arabic from a broad perspective of generative linguistics. We have avoided as much as possible the technicalities associated with theory, and attempted to simplify the terminology and the description because we target primarily undergraduate and graduate students of linguistics, and the general reader who is particularly interested in the structure of Moroccan Arabic.

In this book, we study important phonological, morphological, and syntactic phenomena of the variety of Moroccan Arabic spoken in the areas of Fès and Meknès. To satisfy this aim, the book covers a wide range of empirical data. It does not attempt to offer an exhaustive survey of the structures of Moroccan Arabic, however, as it would be the case in the excellent tradition of Classical Arabic grammarians such as Sibawayhi or Ibnu Jinni, to name but two. Our aim is to provide the reader with a coherent and systematic approach to the structures of Moroccan Arabic.

This book does not claim to offer an exhaustive description of Moroccan Arabic, nor is it an introduction to a given linguistic theory. One of our aims is to show the reader how Moroccan Arabic can be studied in a systematic way. This kind of approach allows us not only to describe the language scientifically, but also to discover and analyse new linguistic facts that were hitherto ignored or neglected by linguists.

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