A Grammar of Ghomara Berber

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III Morphology

1. The Berber-morphology noun

In Ghomara Berber there is a distinction between Berber-morphology and Arabic-morphology nouns which form two separate morphological classes. These are the main morphological noun classes. Berber-morphology nouns can be etymologically of Berber origin or integrated loanwords. Arabic-morphology nouns are borrowed nouns which retain their original Arabic morphology. Berber-morphology nouns comprise about 47% of our corpus while morphologically Arabic nouns comprise approximately 53%, meaning that an enormous amount of Arabic nouns have been borrowed that keep their original morphology (see III.2. for Arabic-morphology nouns). In this section the morphological structure of the Berber-morphology noun will be examined. The categories expressed in the noun will be discussed followed by a discussion on the prefix and the base and the suffix, which is mostly about regular plural formation. A separate section presents the apophonic plurals which are formed by vowel changes in the base (in combination with the plural prefix). In the final section some minor exceptional cases are discussed; differing masculine and feminine plurals, irregular plural formations, non-affix nouns, and compounds. The Berber noun has the basic structure prefix-base-(suffix). The prefix expresses gender, state and number while the suffix expresses number and gender. The base consists of a lexical stem which expresses number in some types of plural formation. The diminutive degree can be expressed in the base as well. In this chapter we do not discuss diminutive formation (cf. III.3.). Schematically, the basic structure of the noun is as follows:

	Prefix	**Base**	**Suffix**
Categories:	Gender, State, Number	Number/Degree	Number, Gender

First we will present in a general way how the categories of gender, number and state are expressed. Then, the morphemes which make up the Berber noun will be discussed separately. In the first part the prefix will be discussed. State distinctions will be discussed under the gender and number headings. In the second paragraph we will present the suffixes and their interaction with the base. Finally, the base will be discussed in the section on apophonic plural patterns. The final paragraphs will deal with irregular plural formation and nouns without number opposition.

1.1. The categories expressed in the Berber noun

1.1.1. Gender

There are two genders in Ghomara Berber, masculine and feminine. For humans and other higher animates, gender derivation is possible by means of change of the affixes, for example:

M:SG:EL		**F:SG:EL**	
a-ḥmam	‘pigeon’	*ta-ḥmam-t*	‘female pigeon’
a-ḡḏi	‘jackal’	*ta-ḡḏi-ṯ*	‘female jackal’
a-ḇeṛṛey	‘ram’	*ta-ḇeṛṛeḵ-t*	‘ewe’
a-ɣyul	‘donkey’	*ta-ɣyul-t*	‘female donkey’
a-yaw	‘grandson’	*ta-yaw-t*	‘granddaughter’

The same derivation is possible for some professions or nouns describing characteristics of people, for example:

M:SG:EL		**F:SG:EL**	
a-ɛeṣkṛi	‘soldier’	*ta-ɛeṣkṛi-ṯ*	‘female soldier’
a-ẓayẓun	‘deaf man’	*ta-ẓayẓun-t*	‘deaf woman’
a-rifi	‘riffian man’	*ta-rifi-ṯ*	‘riffian woman’

In a number of instances the male - female opposition is expressed by suppletive stems. No derivation by affix change is possible in such cases. The nouns can be of the Berber-morpholgy, the Arabic-morphology or the non-affix class, for example:

M:SG(:EL)		**F:SG(:EL)**	
a-rgaz	‘man’	*ta-mɣaṛ-t*	‘women’
ḵma	‘brother’	*uleṯma*	‘sister’
a-serdun	‘mule’	*le-bhima*	‘mule’ (F.)
žeddi	‘grandfather’	*le-ɛziza*	‘grandmother’
le-fḥel	‘bull’	*ta-sa*	‘cow’
a-feṛṛuž	‘rooster’	*ta-fulus-t*	‘chicken’
a-qḇay	‘billy-goat’	*ta-ɣaṭ-t*	‘goat’
a-ṭužk (~ l-ɣeštul)	‘partridge’	*ta-sekkur-t*	‘partridge’ (F.)
a-lef	‘boar’	*ta-muḏa*	‘boar’ (F.)

Masculine – feminine gender derivation is used to indicate smaller and bigger size. In the semantic group of lower animals and inanimates, the feminine denotes an entity smaller than the masculine (for a general overview of diminutive types cf. III.3.2.). The basic noun can have the feminine or masculine form depending on the noun. If the basic noun is feminine the masculine forms the augmentative (cf. chapter III.3.5.). For example:

M:SG:EL		**F:SG:EL**	
a-fenṭuṭ	'lip'	*ta-fenṭuṭ-t*	'small lip'
a-maras	'valley, stream'	*ta-maras-t*	'small valley, stream'
a-maleḥ	'fish'	*ta-maleḥ-t*	'small fish'
a-kfer	'turtle'	*ta-kfer-t*	'small turtle'

F:SG:EL		**M:SG:EL**	
ta-ɛeddis-t	'belly'	*a-ɛeddis*	'big belly'
ta-mmar-t	'beard'	*a-mmar*	'big beard'

In two cases, the noun basis is altered by a gender alternation. In the first case the **a** changes position and the ending **i** is added. In the second case there is doubling of the first base consonant in the feminine counterpart.

M:SG:EL		**F:SG:EL**	
a-fṛaṭ	'water pool'	*ta-faṛi-t*	'small water pool'
a-ṭaṛ	'leg'	*ta-ṭṭaṛ-t*	'small leg'

Language names are in principle in Arabic, although occasionally the Berberised forms (on the right side) are used in a derogatory way to refer to the languages:

F:SG		**F:SG:EL**	
ššelḥa	'Berber'	*ta-šelḥi-ṯ*	'Berber'
lɛaṛbiyya	'Arabic'	*ta-ɛeṛbi-ṯ*	'Arabic'

The following feminine nouns have an idiosyncratic meaning:

M:SG:EL		**F:SG:EL**	
a-sekkaw	'horn'	*ta-sekkaw-t*	'goat fight'
a-syaṛ	'stick'	*ta-syaṛ-t*	'right to a part'

There is a great deal of interaction between Arabic and Berber morphology in the domain of gender and other domains. This interaction will be discussed in more detail in chapter III.4.

1.1.2. Number

Number is established by agreement on the verb, the adjective, the participle or the (demonstrative) pronoun. The great majority of nouns (both Berber- and Arabic-morphology) allow for a singular – plural number opposition and will be discussed in the sections on morphology. Most Berber-morphology nouns express plural on the affixes, but there is a second category of apophonic plurals which expresses plural in the base. Arabic-morphology nouns also have external plurals (by means of suffixation) and internal plurals. Furthermore, there is a small group of non-affix nouns which express number either by suppletion or by suffixation. Some nouns do not have a number opposition; the singularia tantum and pluralia tantum. Singularia tantum are more frequent than pluralia tantum. Nouns that belong to these two categories have only one form, either a singular or a plural. For example in (1) the noun shows singular agreement, while in (2) the noun shows plural agreement:

(1) *aḡ* *i-ll* *a-ywer* *mṭeḥteḥ*
PAST 3MS-be:P MS:EL-moon strong:PP:MS
'The moon was very bright.'

(2) *bb = d* *i-rd-en = i-hen*
bring:IMP = DC MPL:EL-barley-MPL = PL-ANP
'Bring me the barley.'

1.1.2.1. Singularia tantum

The following list contains examples of nouns which are singular in form and agreement and do not have a plural counterpart. They are all non-count nouns. There are many nouns of this type especially in the domain of plant names. Both masculine and feminine gender nouns are included.

M:SG:EL

a-k̲al	'earth, soil'
a-ywer	'moon'
a-ṯil	'grapes'
a-d̲les	'kind of plant'
a-tay	'tea'

a-lum	‘hay’

F:SG:EL

t-aḏu-ṯt	‘wool’
t-iḡel-t	‘bush’
ta-ẓemmi-ṯ	‘crushed barley’

1.1.2.2. Pluralia tantum

The following nouns are pluralia tantum. These nouns occur only in the plural form and include masculine and feminine nouns.

M:PL:EL

i-rd-en	‘wheat’
a-m-an	‘water’
i-ḇzaḡ-en	‘beans’

F:PL:EL

ti-ṣuṣaf	‘saliva’
ti-lḳam-an	‘kind of spinach’
ti-meḳṛaṭ	‘scissors’

1.1.3. State

The Berber noun has two basic state distinctions, a free state (henceforth EL = Etat Libre) and an annexed state (henceforth EA = Etat d’Annexion[20]). The EL is the citation form. The difference of state is marked by a change in the nominal prefix. In Ghomara Berber the use of the EA is more restricted than in many other Berber languages. The EA only occurs after prepositions and after the numeral **yan** / **yaṯ** ‘one’. In the following examples there is a change of the prefix from **a** > **u** in the masculine in example one and from **ta-** > **t-** in the feminine in example (4)[21]:

(3)	*i-ḡḡ=ahen*	*g*	*u-qemmum*	*nn-es*	(EL = *aqemmum*)
	3MS-do:P=S:ANP	in	MS:EA-mouth	of-3MS	
	‘He put them in his mouth.’				

[20] The labels are based on the French tradition in Berberology. For a discussion of these the states see the seminal article by Lionel Galand (2002 [1964]: 287-308).

[21] Both numerals have other allomorphs, which are **ya** for masculine and **yaṯ** ~ **ya** for feminine (cf. III.12.1.2. on numerals).

(4) *i-fk = at* *i* *ya* *t-metṭṭu-t* (EL = *tametṭut*)
3MS-give:P = 3MS:DO to one:F FS:EA-woman-S
'He gave it to a woman.'

1.2. The prefix

Of a total of 424 masculine singular Berber-morphology nouns in our corpus the vast majority of masculine singular nouns (about 90%) takes an **a-** prefix in the EL and an **u-** prefix in the EA. There are 19 masculine singular nouns which have the prefix **wa-** in the EA. A smaller group, consisting of only four nouns, has free variation between **wa-** ~ **ya-** and one noun has the prefix **ya**- in the EA. Four nouns have free variation of the prefix **u-** ~ **i-** in the EA. A number of nouns take the prefix **i**- and one noun has a prefix **u**- in the EL. In the EA the **i**- and the **u**- prefix do not change. All masculine plural nouns have an **i-** prefix which never makes a state distinction.

Our corpus contains 378 feminine Berber-morphology nouns. The vast majority of feminine nouns (about 90%) are marked by the prefix **ta-** in the singular and the prefix **ti-** in the plural. In the EA the vowel of the prefix is absent. There is a group of nouns (about 10%) which form an exception. A couple of feminine nouns have a prefix **ta-** that marks both the singular and the plural. Within this group some nouns do not distinguish state, i.e. the **ta-** prefix does not change. In addition there are a couple of nouns which have a **ti-** prefix in the singular. Nouns that take the prefix **ti-** do not mark state. Schematically this can be summarised as follows:

	EL	**Example**	**EA**	**Example**	
M:SG	a-	*a-maḵar*	*u-*	*u-maḵar*	'thief'
	a-	*a-ḏfel*	*u-* ~ *i-*	*u-ḏfel* ~ *i-ḏfel*	'snow'
	a-	*a-sif*	*wa-*	*wa-sif*	'river'
	a-	*a-ɣil*	*wa-* ~ *ya-*	*wa-ɣil* ~ *ya-ɣil*	'hill'
	i-	*i-les*	-	*i-les*	'tongue'
	u-	*u-l*	-	*u-l*	'heart'
M:PL	*i-*	*i-muras*	*i-*	*i-muras*	'valleys'
F:SG	*ta-*	*ta-fellun-t*	*t-*	*t-fellun-t*	'frying pan'
	ta-	*ta-la*	*ta-*	*ta-la*	'spring'
	ti-	*ti-rg-et*	*ti-*	*ti-rg-et*	'ember'
F:PL	*ti-*	*ti-ẓugg-an*	*t-*	*t-ẓugg-an*	'forests'
	ti-	*ti-rg-an*	*ti-*	*ti-rg-an*	'embers'
	ta-	*ta-ẓiw-an*	*t-*	*t-ẓiw-an*	'udders'
	ta-	*ta-liw-an*	*ta-*	*ta-liw-an*	'springs'

1.2.1. The *voyelle constante*

The vowel of the prefix changes in the EA and in the plural of most nouns, however a small number of nouns have a prefix vowel that does not change. Traditionally, this unchanging vowel is called the *voyelle constante* in the French Berberological tradition. It does not change in the EA nor in the plural. For Aït Ndhir Berber, Penchoen (1973:7) has proposed to reinterpret the non-changing vowel as part of the base instead of a separate prefix. Thus in his view there is a distinction between vowel-initial and consonant-initial noun bases which is reflected in the EA. For Ghomara the *voyelle constante* can be maintained in the masculine singular, but not in the masculine plural. The masculine plural marker is **i**- for all nouns. Therefore we assume that masculine singular nouns have two prefixes **u**- and **wa**- in the EA which are replaced by **i**- in the plural. For the feminine the situation is somewhat different. The majority of nouns have singular **ta**- and plural **ti**- in the EL and **t**- in the EA, while a minority has a *voyelle constante* **ta**- or **ti**- that does not change in the EA nor in the plural (with the exception of some **ta**- prefixes which change to **t**- in the EA plural). However, we will not consider the vowel to be part of the base in order to maintain the symmetry of prefixes. In the following part the morphology of state distinctions will be presented on the basis of gender and number heads.

1.2.2. Masculine singular

The great majority of masculine singular nouns (424 in our corpus) within the Berber-morphology nouns have the prefix **a-** in the EL and **u-** in the EA. For example:

M:SG:EL	**M:SG:EA**	
a-maras	*u-maras*	‘riverbed’
a-mɣaṛ	*u-mɣaṛ*	‘old man’
a-maḵar	*u-maḵar*	‘thieve’
a-ṣɣaṛ	*u-ṣɣaṛ*	‘stick’
a-ẓṛu	*u-ẓṛu*	‘stone’

The EL prefix **u-** becomes **w-** when immediately preceded by a vowel, for example by the numeral **ya**(**n**) ‘one’.

ya w-maras	‘one valley’
ya w-ṛḥeḇ	‘one big piece of land’

A small set of nouns has free variation between a prefix vowel **u**- and **i**- in the EA. The noun **a-ḡeṛṭ** ~ **a-yḡeṛṭ** only allows for the prefix vowel **i**-. All these nouns consist of a base with three consonant and no plain vowel.

M:SG:EL	**M:SG:EA**	
a-ɣlel	*i-ɣlel ~ u-ɣlel*	‘stalk’
a-ḏfel	*i-ḏfel ~ u-ḏfel*	‘snow’
a-zref	*i-zref ~ u-zref*	‘road’
a-ḏles	*i-ḏles ~ u-ḏles*	‘kind of grass’
a-ḡeṛṭ ~ a-yḡeṛṭ	*i-ḡeṛṭ*	‘neck’

A group of 19 nouns in the corpus mark the EA by means of the prefix **wa**-, for example[22]:

M:SG:EL	**M:SG:EA**	
a-ḵal	*wa-ḵal*	‘soil’
a-sif	*wa-sif*	‘river’
a-ḏan	*wa-ḏan*	‘intestines’
a-ywer	*wa-ywer*	‘moon’
a-rsin	*wa-rsin*	‘hunger’
a-ṭḡam	*wa-ṭḡam*	‘yesterday’
a-lum	*wa-lum*	‘hay’

The noun **ayeffeṭ** ‘cattle’ has the same morphology but has plural agreement[23]. In addition, it has a variant which has the prefix **wi**-.

M:SG:EL	**M:SG:EA**	
a-yeffeṭ	*wa-yeffeṭ ~ w-iffeṭ*[24]	‘cattle’

A few nouns allow for free variation in the EA between the prefix **wa**- and a prefix **ya**-. These are all the nouns of this type in our corpus.

M:SG:EL	**M:SG:EA**	
a-ɣeḏ	*wa-ɣeḏ ~ ya-ɣeḏ*	‘ash’
a-ḏem	*wa-ḏem ~ ya-ḏem*	‘blood’
a-ɣil	*wa-ɣil ~ ya-ɣil*	‘hill’
a-lef	*wa-lef ~ ya-lef*	‘boar’

There is one noun which takes only the **ya**- prefix in the EA.

[22] The other nouns are which have the prefix **wa**- in the EA are: **wa-fel** ‘top’, **wa-kkil** ‘curdled milk’, **wa-laẓen** ‘tomorrow’, **wa-m-an** ‘water’, **wa-mmar** ‘big beard’, **wa-mmas**, **wa-ssa** ‘nowadays’, **wa-ssar** ‘afternoun’, **wa-ywel** ‘platform in a traditional house’, **wa-žuf** ‘stench’, **wa-ṭil** ‘grapes’, **wa-ššin** ‘stable in the house’.

[23] In the Bni Menṣur dialect of Ghomara it is **aḵfeṭ** (El Hannouche 2010: 278).

[24] The latter version is phonologically /**u-yeffeṭ**/ ‘cattle’.

M:SG:EL	M:SG:EA	
a-ḡer	*ya-ḡer*	‘field’

Some nouns have **i-** as a prefix vowel in the singular. The form of the prefix does not change in the EA. These are all the nouns of this type in our corpus:

M:SG:EL	M:SG:EA	
i-zi	*i-zi*	‘fly’
i-ḏeɣ	*i-ḏeɣ*	‘sheaf’
i-naɣ	*i-naɣ*	‘palate’
i-les	*i-les*	‘tongue’

One noun in the corpus starts in **u-**. This noun does not mark the EA and does not have a plural form[25].

M:SG:EL	M:SG:EA	
u-l	*u-l*	‘heart’

1.2.3. Masculine plural

Masculine plural nouns take the prefix **i-** regardless of the form of the singular masculine prefix.

M:SG:EL	M:SG:EA	M:PL (EL = EA)	
a-maras	*u-maras*	*i-muras*	‘valley’
a-mɣaṛ	*u-mɣaṛ*	*i-mɣaṛ-en*	‘eldery men’
a-maḵar	*u-maḵar*	*i-muḵar*	‘thieves’
a-sɣaṛ	*u-sɣaṛ*	*i-sɣaṛ-en*	‘sticks’
a-mmar	*wa-mmar*	*i-mmira*	‘big beards’
a-lef	*wa-lef ~ ya-lef*	*i-lf-an*	‘boars’

In the masculine plural, state is not marked. The initial prefix vowel **i**- does not change its form when following a preposition.

M:PL		
i-muras	*bezzaf n i-muras*	‘a lot of valleys’

[25] In the dialect of the village Amṭiqan in the Ghomara Berber speaking region the plural of **u-l** is **u-liy-en** (see El Hannouche, 2008: 61).

i-lf-an	*bezzaf n i-lf-an*	‘a lot of boars’

1.2.4. Feminine singular

Most feminine singular nouns have the prefix **ta**- in the EL with a corresponding form **t-** in the EA.

F:SG:EL	**F:SG:EA**	
ta-zref-t	*t-ezref-t*	‘small road’
ta-mḍa	*t-emḍa*	‘lake’
ta-ẓgā	*t-eẓgā*	‘forest’
ta-fellun-t	*t-fellun-t*	‘frying pan’
ta-mugnan-t	*t-mugnan-t*	‘boiled egg’
ta-muḍa	*t-muḍa*	‘sow’

In a small number of feminine singular nouns the prefix **ta-** remains the same in the EA.

F:SG:EL	**F:SG:EA**	
ta-ɣil-t	*ta-ɣil-t*	‘small mountain’
ta-sif-t	*ta-sif-t*	‘small river’
ta-la	*ta-la*	‘water spring’

There are a few feminine singular nouns that have a prefix **ti-**. The vowel is preserved in the EA[26].

F:SG:EL	**F:SG:EA**	
ti-ṭṭ	*ti-ṭṭ*	‘eye’
ti-ṭṭa	*ti-ṭṭa*	‘nipple’
ti-ṣmeṭ	*ti-ṣmeṭ*	‘cold’
ti-ḍḍa	*ti-ḍḍa*	‘leech’

1.2.5. Feminine plural

The main feminine plural prefix is **ti-**. Most feminine nouns take this plural prefix. The vowel of the plural prefix is absent in the EA.

F:PL:EL	**F:PL:EA**	
ti-zerfawṯ-an	*t-zerfawṯ-an*	‘small roads’

[26] The other feminine singular nouns which have a **ti**- prefix are: **tirgett** ‘embers’, **tikkuk** ‘bird’ (sp.), **tilket** ‘head louse’, **tiziṯ** ‘fly’ (sp.), **tiǧelt** ‘woods’, **timekṛaṭ** ‘scissors’, **tiḍert** ‘ear’, **tiskert** ‘garlic’, **tizelt** ‘berry’ (sp.).

ti-mḏiw-an	*t-emḏiw-an*	‘lakes’
ti-ẓugg-an	*t-ẓuggan*	‘forests’
ti-fellun-an	*t-fellun-an*	‘frying pans’

A handful of feminine nouns retain the singular **ta-** in the plural, but drop the prefix vowel in the EA of both numbers. These are all examples in our corpus:

F:SG:EL	**F:SG:EA**	**F:PL:EL**	**F:PL:EA**	
ta-ḵna	*t-eḵna*	*ta-ḵniw-an*	*t-eḵniw-an*	‘co-wife’
ta-ẓa	*t-ẓa*	*ta-ẓiw-an*	*t-ẓiw-an*	‘udder’
ta-ylal-t	*t-eylal-t*	*ta-ylal-an*	*t-eylal-an*	‘insect (sp.)’
ta-rtiw-t	*t-ertiw-t*	*ta-rtiw-an*	*t-ertiw-an*	‘rheum’

Some feminine nouns with prefix **ta-** or **ti-** in the singular retain the prefix in the plural, and retain the prefix vowel in the EA of both numbers.

F:SG:EL = EA	**F:PL:EL = EA**	
ta-ɣil-t	*ta-ɣill-an*	‘small mountain’
ta-sif-t	*ta-sif-ṯan*	‘small river’
ta-la	*ta-liw-an*	‘spring’ (water)
ta-yt	*ta-yṯw-an*	‘shoulder’
ta-fuḵ-t	*ta-fuḵ-an*	‘sun’
ti-lk-et	*ti-lk-an*	‘louse’
ti-rg-et	*ti-rg-an*	‘embers’

Two nouns only mark the EA in the plural but not in the singular:

F:SG:EL	**F:SG:EA**	**F:PL:EL**	**F:PL:EA**	
ti-ḍḍa	*ti-ḍḍa*	*ti-ḍḍiw-an*	*t-eḍḍiw-an*	‘leech’
ti-ṭṭ	*ti-ṭṭ*	*ti-ṭṭiw-an*	*te-ṭṭiw-an*	‘eye’

1.3. The base and the suffix

In the previous paragraph we have seen that prefixes are portmanteau morphemes which express gender, number and state. In addition, many nouns have suffixes which express gender and number. There are two feminine singular suffixes, one masculine plural suffix and one suffix which expresses both feminine and masculine plural. Most feminine singular nouns (about 90%) take the suffix **-t** (after base-final consonants) or **-ṯ** (after base-final vowels) while a minority (about 3%) of feminine singular nouns take the suffix **-et** (after

base-final consonants) or **-t** (after base final vowels). Five feminine singular nouns in our corpus have a base extension +**k̲**. A number of feminine singular nouns (about 7%) does not take a suffix at all. All these noun bases end in **a**. Masculine singular nouns do not take suffixes (except for augmentatives, see III.3.5.). Many masculine plural nouns (about 55%) take the suffix -**en** while a minority of these nouns (about 8%) take -**an**. Four masculine nouns in our corpus have a base extension +**aw** before suffix **-en** in the plural. Two masculine nouns add +**y** before the plural suffix **-en** and one noun adds +**w** before the same suffix. Many feminine nouns (about 68%) take the plural suffix -**an** which is sometimes combined with a base extension.

This can be schematically summarised as follows:

Suffix	**Value**	**Change of base**
-**t** ~ -**t̲**	F:SG	- five nouns with base extension +**k̲**
-**et** ~ -**t**	F:SG	-
∅	-	-
-**en**	M:PL	- Four nouns with extension +**aw**, two with +**y**, one with +**w**
-**an**	M:PL / F:PL	- Masculine nouns base-final vowel is apocopated - Some feminine nouns have one of the extensions +**iw**, +**t̲**, +**at̲**, +**t̲w**, +**aw**. - Change of base forms of some nouns

Some nouns suppress a vowel or degeminate a consonant in the plural. Some nouns which have a CVC-base in the singular geminate the final consonant in the plural, and finally there are a number of otherwise irregular plural nouns. In this paragraph we will discuss each of the suffixes and their interaction with the base.

1.3.1. The suffix -t ~ -t̲ 'feminine singular'

Approximately 90% of the feminine Berber nouns in our corpus have feminine singular suffix -**t** ~ -**t̲**. A noun base that ends in a consonant is followed by **-t**, while a noun base that ends in a vowel is followed by **-t̲** (see II.1.10. on spirantisation). For example:

-t

F:SG:EL

ta-mɛilaq-t	'spoon'
ta-maras-t	'little valley'

-**t̲**

F:SG:EL	
ta-sla-t̲	‘bride’
ta-meṭṭu-t̲	‘women’

The following nouns have a base extension +**k̲** when the noun gets a suffix. The first two nouns on the left side are collective nouns with Arabic morphology, the third noun is a masculine singular Berber noun. We have put them on the left side in order to compare them with the feminine nouns on the right that get a base extension +**k̲**.

M:SG(:EL)	**F:SG:EL**	
ssfenğ	*ta-sfenğe* + *k̲-t*	‘donut, (kind of)’
šmuṛṛa	*ta-šmuṛṛe* + *k̲-t*	‘cactus fruit’
a-malu	*ta-malu* + *k̲-t*	‘shady place’
a-b̲eṛṛey	*ta-b̲eṛṛe* + *k̲-t*	‘sheep’[27]

One internal diminutive of a feminine noun gets a base extension +**k̲** (cf. chapter III.3.2. for internal diminutives):

F:SG:EL	**F:SG:EL**	
ta-ḡnaw-t	*ta-ḡniw* + *ek̲-t*	‘pumpkin’

1.3.2. The suffix -et ~ -t ‘feminine singular’

The other feminine singular suffix is -**et**. A small minority of the feminine nouns (about 3%) which have a base-final consonant take this suffix. Some examples are:

F:SG:EL	
ti-rg-et	‘ember’
ta-rqiɛ-et	‘rag’
ta-mušš-et	‘pussy-cat’

In a few cases the suffix appears after a base-final vowel **a**. We consider **-t** in these instances an allomorph of -**et**. Note that the regular suffix **-t** ~ **-t̲** always has the fricative **-t̲** after a final vowel. These are all the nouns in our corpus:

F:SG:EL	
ta-rba-t	‘girl’
ta-qaha-t	‘crow’

[27] There is no assimilation **yt** > **k̲t**.

ta-saɛɛa-t	‘moment’
ta-b̠ṛa-t	‘letter’

In our corpus about 6% of the feminine nouns do not have a feminine suffix. All these nouns have a base ending in **a**. The plural of most of these nouns has a base extension **-iw**.

F:SG:EL	
ta-md̠a	‘lake’
ta-mya	‘throat’
ti-d̠̲d̠̲a	‘leeche’

1.3.3. The suffix -en ‘masculine plural’

The suffix **-en** is the most frequent suffix marker of masculine plural nouns. 54% of the masculine nouns takes this plural suffix, for example:

M:SG:EL	**M:PL:EL**	
a-rgaz	*i-rgaz-en*	‘man’
a-rrar	*i-rrar-en*	‘threshing floor’
a-ẓenniṭ	*i-ẓenniṭ-en*	‘tail’
a-fraḡ	*i-fraḡ-en*	‘fence’

In four cases the base is extended by an element **+aw** which precedes the masculine plural suffix **-en**. All attested nouns have a ccc base:

M:SG:EL	**M:PL:EL**	
a-zref	*i-zerf + aw-en (~ i-zerf-an)*	‘road’
a-ḡeṛṭ	*i-ḡeṛṭ + aw-en*	‘neck’
a-ṛṣeṭ	*i-ṛeṣṭ + aw-en*	‘pus’
a-ṛḥeb̠	*i-ṛeḥb̠ + aw-en*	‘big piece of land’

The following two nouns have base extension **-y** in the plural.

M:SG:EL	**M:PL:EL**	
a-messak̠i	*i-messak̠i + y-en*	‘non-utilised farmland’
a-ɣumṛi	*i-ɣumṛi + y-en*[28]	‘corner’

[28] This plural has the free variants **i-ɣumṛ-an** ~ **i-ɣumṛa** ‘corners’.

One noun adds +**w** to the base when followed by -**en**.

M:SG:EL	**M:PL:EL**	
a-senslu	*i-senslu+w-en*	‘spine’

There is one single feminine noun which takes the masculine plural suffix **-en**[29]. Furthermore there are several nouns without affixes in the singular which form a separate group (cf. III.5.).

F:SG:EL	**F:PL:EL**	
ta-ɣaṭ-t	*ti-ɣaṭṭ-en*	‘goat’

1.3.4. The suffix -an ‘masculine or feminine plural’

The suffix -**an** marks both masculine and feminine plurality. Only a minority of masculine nouns, approximately 8%, take this suffix, for example:

M:SG:EL	**M:PL:EL**	
a-k̲mez	*i-k̲emz-an*	‘nail’
a-ṭuḡd	*i-ṭuḡd-an*	‘finger’
a-lef	*i-lf-an*	‘boar’

The final base vowel of the singular noun is dropped in the plural, for example:

M:SG:EL	**M:PL:EL**	
i-zi	*i-z-an*	‘fly’
a-ẓṛu	*i-ẓṛ-an*	‘stone’
a-sla	*i-sl-an*	‘bride groom’
a-ḡd̲i	*i-ḡd̲-an*	‘jackal’
a-werdu	*i-werd-an*	‘louse’

The suffix **-an** is the regular marker with feminine plural nouns. Most feminine nouns take -**an** without any change in the noun base, as exemplified in the following singular - plural pairs:

[29] In many Berber languages this particular word forms an exception with respect to its plural suffix, e.g. Eastern Riffian SG. **t̲ɣaṭṭ** PL **t̲iɣeṭṭen**, Beni Snous **tɣaṭṭ** - **tiɣeṭṭen**, Ait Seghrouchen **tɣaṭṭ** - **tiɣeṭṭen**, (Kossmann, 2000:33).

F:SG:EL	**F:PL:EL**	
ta-maẓay-t	*ti-maẓay-an*	‘canine tooth’
ta-ɛebbuṭ-t	*ti-ɛebbuṭ-an*	‘navel’
ta-mesɛay-t	*ti-mesɛay-an*	‘beggar’ (F.)
ta-wriš-t	*ti-wriš-an*	‘sieve’

In a number of cases the plural suffix **-an** is preceded by a base extension. The base extensions are +**iw**, +**t̲**, +**at̲** +**t̲w** and +**aw**. Below we present some examples, beginning with the most frequently occurring base extension. All singular nouns that have a base-final **a** get a base extension +**iw** when the plural suffix is added. The final vowel is deleted. Some nouns have an irregular vowel change, whereas in one noun the geminated consonant is reduced to a single one.

F:SG:EL	**F:PL:EL**	
ta-mezgiḏa	*ti-mezgiḏ* + *iw-an*	‘mosque’
ta-sarka	*ti-sark* + *iw-an*	‘traditional shoe’
ta-sisma	*ti-sism* + *iw-an*	‘needle’
ta-susna	*ti-sisn* + *iw-an*	‘vespiary’
ta-ḡursa	*ti-ḡers* + *iw-an*	‘ploughshare’
ta-ɣ^{w}ḏa	*ti-ɣḏ* + *iw-an*	‘part of the plough’
ta-qnissa	*ti-qnis* + *iw-an*	‘chicken stomach’

One noun with this base extension does not have base-final **a**.

F:SG:EL	**F:PL:EL**	
ti-ṭṭ	*ti-ṭṭ* + *iw-an*	‘eye’[30]

A number of nouns have the base extension +**t̲** and +**at̲** in the plural. It could be argued that in addition to the suffix **-an** there exists a feminine suffix **-t̲an.** However, in view of the rarity of the two base extensions (29 x +**t̲**, 20 x +**at̲**) we prefer to consider these elements +**t̲** and +**at̲** base extensions, thereby maintaining a single feminine plural suffix **-an**. Some examples of nouns which take +**t̲** base extensions are:

F:SG:EL	**F:PL:EL**	
ta-b̲eṛṛek̲-t	*ti-b̲eṛṛek̲* + *t̲-an*	‘ewe’
ta-fraw-t	*ti-fraw* + *t̲-an*	‘leaf’
ta-rba-t	*ti-rba* + *t̲-an*	‘girl’

[30] Younger speakers omit the prefix in the plural which results in the form **ṭṭiwan** ‘eyes’.

ta-sla-t̲	*ti-sla* + *t̲-an*	‘bride’
ta-mazir-t	*ti-mazir* + *t̲-an*	‘land’

These are some examples of feminine nouns which end in **-at̲**. This suffix is always preceded by a cluster of two or three consonants.

F:SG:EL	**F:PL:EL**	
ta-ɣuṛ-t	*ti-nuɣṛ* + *at̲-an*	‘stable’
ta-frux-t	*ti-ferx* + *at̲-an*	‘small chicken’
ta-zezzer-t	*ti-zezzr* + *at̲-an*	‘pitchfork’
ta-ɣerdem-t	*ti-ɣerdm* + *at̲-an*	‘scorpion’
ta-k̲b̲er-t	*ti-k̲eb̲r* + *at̲-an*	‘woolen djellaba’

Some forms with the base extension +**t̲** are in free variation with forms that do not have a base extension. The geminate **ll** is degeminated when the base extension is added, for example:

F:SG:EL	**F:PL:EL**	
ta-rb̲ib̲-t	*ti-rb̲ib̲-an* ~ *ti-rb̲ib̲* + *t̲-an*	‘stepdaughter’
ta-ɣil-t	*ta-ɣill-an* ~ *ta-ɣil* + *t̲-an*	‘small hill’

There is one noun that has a final **-et** suffix that takes a base extension +**t̲** in the plural.

F:SG:EL	**F:PL:EL**	
ta-fx-et	*ti-fex* + *t̲-an*	‘calf of the leg’

The base extension **-t̲w** occurs once:

F:SG:EL	**F:PL:EL**	
t-ay-t	*t-ay* + *t̲w-an*	‘shoulder’

A combination of the base extensions +**aw** and +**t̲** is also found once:

F:SG:EL	**F:PL:EL**	
ta-zref-t	*ti-zerf* + *aw* + *t̲-an*	‘small road’

The two feminine nouns that have a base extension +**k̲** in the singular have the same

extension in the plural.

F:SG:EL	**F:PL:EL**	
ta-sfenğ + ek-t	*ti-sfenğ + k-an*	‘donut’
ta-šmuṛṛ + ek-t	*ti-šmuṛṛ + k-an*	‘cactus fruit’

1.3.5. Change without base extension

Several nouns which take the plural affixes **-en** or -**an** suppress a vowel or undo gemination in the base. The resulting plural base has ccc-structure if the base has three consonants, for example:

The suffix -en

M:SG:EL	**M:PL:EL**	
a-fṛaṭ	*i-feṛṭ-en*	‘water pool’
a-ɣižd	*i-ɣežd-en*	‘billy goat’
a-ḥezzum	*i-ḥezm-en*	‘collection of fire wood’
a-geždir	*i-gežd-en*	‘kind of lizard’

The following noun has degemination of **ww** resulting in **ew** > **u** in the plural.

a-ṭewwal	*i-ṭulan*	‘son-in-law’

One noun which has two plurals which are in free variation, one of which retains the geminate consonant.

a-šeṭṭiḇ	*i-šeṭḇ-en* ~ *i-šeṭṭiḇ-en*	‘small bush’

The suffix -an

M:SG:EL	**M:PL:EL**	
a-frux	*i-ferx-an*	‘boy, small bird’
a-zemmur	*i-zemr-an*	‘wild olive’

F:SG:EL	**F:PL:EL**	
ta-ɛaṛeṭ-t	*ti-ɛeṛṭ-an*	‘wooden lock’

The following example has a degemination and depharyngealisation of the consonant **ẓẓ** in the plural.

a-meẓẓuḡ	*i-mezg-an* (~ *i-mezzaḡ*)	‘ear’

The suppression of a vowel or gemination is not obligatory, e.g.

F:SG:EL	**F:PL:EL**	
ta-sekkur-t	*ti-su̲kr-an*[31]	‘partridge’

M:SG:EL	**M:PL:EL**	
a-ṭuḡd	*i-ṭuḡd-an*	‘finger’
a-ṭemmar	*i-ṭemmar-an (~ i-ṭemmira)*	‘liar’

Some nouns which have a cvc-base geminate the final consonant of the base. The base vowel changes to **a** (or **e** in one case), for example:

M:SG:EL	**M:PL:EL**	
a-fus	*i-fass-en*	‘hand’
a-d̲em	*i-d̲amm-en*	‘blood’
a-sif	*i-saff-en*	‘river’
a-ɣil	*i-ɣall-en*	‘mountains’
a-faf	*i-faff-en* (~ *i-feff-en*)	‘nipple’

Other nouns with the same base structure do not show such changes in the plural, for example:

M:SG:EL	**M:PL:EL**	
a-nas	*i-nasen*	‘sparkle’
i-naɣ	*i-naɣen*	‘palate’
a-t̲ar	*i-t̲ar-en*	‘bird’ (sp.)

A few irregular nouns show changes in the base in combination with affixation in the plural.

M:SG:EL	**M:PL:EL**	
a-ẓekka	*i-ẓukk-an*[32]	‘tomb’
a-muxxed̲	*i-muxd̲-en*[33]	‘wild cat’
a-ẓaṛ	*i-ẓuṛ-an*	‘root, muscle’

[31] The **u** is possibly labialisation of the **kk** and **k̲**. This cannot be established because of the position of the **u** (cf. II.4. phonology for discussion of the problem).

[32] The **u** might be labialisation of the consonant **kk**, i.e. /i-ẓekk^{w}-an/.

[33] The **u** might be labialisation of the consonant **xx**, i.e. /a-mexx^{w}ed̲/, /i-mex^{w}d̲-en/.

a-sammer	*i-sammir-en* (~ *i-summar*)	‘sunny hill’
a-ḇušaḵer	*i-ḇušaḵir-en*	‘kind of worm’

F:SG:EL	**F:PL:EL**	
ta-ɣrimez-t	*ti-ɣermiz-an*	‘small head louse’

1.4. Apophonic plurals

Apophonic plural bases are formed by a vowel change of the singular base (in combination with the change of the prefix). These type of nouns do not take a plural suffixes. Apophonic plurals comprise about 17% of the total plurals. There exist two categories of apophonic plurals. The first type has an **i** preceding the base-final consonant and an **a** in final position. About 6% of the plurals is of this type. An **i** is inserted before the final consonant. If the base-final vowel is already **i**, only **a** is added to the base. Most of the singular bases have cCvc or cvCvc structure. Examples:

M:SG:EL	**M:PL:EL**	
a-ṭeṛṛaš	*i-ṭeṛṛiša*	‘jar’
a-ṣennaž	*i-ṣenniža*	‘basket’
a-ṭewwiš	*i-ṭewwiša*	‘rain-pipe’
a-ɛukkaz	*i-ɛukkiza*	‘walking stick’
a-ṯebban	*i-ṯebbina*	‘trousers’
a-ṛappaṣ	*i-ṛappiṣa*	‘hat’
a-ḥettaš	*i-ḥettiša*	‘slash’
a-ḡellu (~ a-wellu)	*i-ḡelliwa (~i-welliwa)*	‘plough’
a-rekkal	*i-rekkila*	‘dog’
a-qeṛṛaṣ	*i-qeṛṛiṣa*	‘leaf of cactus plant’
a-newwal	*i-newwila*	‘hut’
a-mmar	*i-mmira*	‘big beard’

F:SG:EL	**F:PL:EL**	
ta-muggas-t	*ti-muggiza*	‘stick (type)’
ta-rekkal-t	*ti-rekkila*	‘bitch’
ta-ḵemmar-t	*ti-ḵemmira*	‘face’
ta-ḵewwaṛ-t	*ti-ḵewwiṛa*	‘roll’
ta-ṛappaṣ-t	*ti-ṛappiṣa*	‘hat’
ta-žellab-t	*ti-želliḇa*	‘djellaba’

The second category consists of several types. About 11% of the plurals form their plural in this way. There are two basic patterns which make an apophonic plural of this type.
1. The vowel **a** is inserted immediately before or after the base-final consonant. The vowel always replaces another vowel when it is inserted after the base-final consonant. If there is already an **a** in this position it does not change.
2. In certain types of nouns, pattern (1) is combined with further changes in the base. In addition to this, **u** is inserted after the first base consonant or there is labialisation of the first or second base consonant. If the first base vowel is **a**, it is replaced by **u**.

Pattern 1:

final a = a

F:SG:EL	**F:PL:EL**	
ta-zizwa	*ti-zizwa*	‘bee’

prefinal i > a

M:SG:EL	**M:PL:EL**	
a-ɛebbiz	*i-ɛebbaz*	‘calf’
a-šeṛwiṭ	*i-šeṛwaṭ (~i-šeṛwiṭ-en)*	‘piece of string’
a-gṯiṭ	*i-gṯaṭ*	‘bird’
a-gelzim	*i-gelzam*	‘pick-axe’

final i > a

M:SG:EL	**M:PL:EL**	
a-seḵni	*i-seḵna*	‘big needle’

pre-final u > a

M:SG:EL	**M:PL:EL**	
a-qemmum	*i-qemmam (~ i-qemmum-en)*	‘mouth’
a-ferkuṭ	*i-ferkaṭ*	‘piglet’
a-ɛenquš	*i-ɛenqaš*	‘head (angry)’
a-meẓẓuḡ	*i-meẓẓaḡ (~i-mezg-an)*	‘ear’
a-myuz	*i-myaz*	‘nit’
a-keppuṭ	*i-keppaṭ* (~ *le-kpapeṭ*)	‘coat’

final u > a

M:SG:EL	**M:PL:EL**

a-qenqbu	*i-qenqba*	‘beak’

Ø > a

pre-final Ø > a

M:SG:EL	**M:PL:EL**	
a-seɣnes	*i-seɣnas*	‘big needle’

One noun has two forms in free variation:

M:SG:EL	**M:PL:EL**	
a-keskes	*i-keskas ~ i-kesksa*	‘couscous colander’

One noun does not change, except for the prefix.

a-ɛuqqaḏ	*i-ɛuqqaḏ*	‘knot’

Type 2

a…a > u…a

M:SG:EL	**M:PL:EL**	
a-maras	*i-muras*	‘valley, stream’
a-maḡal	*i-muḡal*	‘plants for goats’
a-maḵar	*i-muḵar*	‘thieve’

a…u > u…a

M:SG:EL	**M:PL:EL**	
a-saṯur	*i-suṯar*	‘beam’
a-safu	*i-sufa*	‘torch’
a-mdakkul	*i-mdukkal*	‘friend’
a-malu	*i-mula*	‘shady place’

a…Ø > u…a

M:SG:EL	**M:PL:EL**	
a-xaḇeš	*i-xuḇaš*	‘jug’
a-ḥayeḵ	*i-ḥuyaḵ*	‘woolen cloth’
a-sammer	*i-summar (~ i-sammir-en)*	‘sunny side of a hill’

F:SG:EL	**F:PL:EL**	
ta-xaḏem-t	*ti-xuḏam*	‘ring’

ta-šašeḵ-t	*ti-šušaḵ*	‘hat’

F:SG:EL	**F:PL:EL**	
ta-saru-ṯ	*ti-sura*	‘key’
ta-ḡayzu-ṯ	*ti-ḡuyaz (~ti-ḡayzu+ṯ-an)*	‘calf’

Some nouns labialise a consonant in the plural. Because of the position and the accompanying consonant we can establish labialisation with certainty for the following nouns (cf. II.4. phonology):

Ø…u > c^{w}…a

M:SG:EL	**M:PL:EL**	
a-ḡlul	*i-ḡ^{w}lal*	‘sea horn’
a-ɣyul	*i-ɣ^{w}yal*	‘donkey’
a-qšuš	*i-q^{w}šaš*	‘snail shell’
a-zɣul	*i-z^{w}ɣal*	‘ladle’

Ø…i > c^{w}…a

F:SG:EL	**F:PL:EL**	
ta-qḇil-t	*ti-q^{w}ḇal*	‘tribe’

It is impossible to establish whether there is labialisation or insertion of **u** in the following nouns with **x**. As the pattern of plural formation of nouns with **x** is identical to nouns which have **ḥ** in this position we choose to analyze the vowel as an **u**.

Ø..u > u…a

M:SG:EL	**M:PL:EL**	
a-xenṭuṭ	*i-xunṭaṭ*	‘nasal mucus’
a-xennus	*i-xunnas*	‘piglet’
a-ḥeṛṛuš	*i-ḥuṛṛaš*	‘chestnut tree’
a-ḥečču̇n	*i-ḥuččȧn*	‘vagina’

1.5. Different masculine and feminine plurals

Masculine and feminine forms of a noun share the same plural formation, except for the following exceptions. The different genders have different plural formations, for example:

M:SG:EL	**M:PL:EL**	
a-ɣezdiz	*i-ɣezdas*	‘rib’

F:SG:EL	**F:PL:EL**	
ta-ɣezdis-t	*ti-ɣezdis-an*	‘rib’

M:SG:EL	**M:PL:EL**	
a-keskes ~ *a-keskas*	*i-kesksa* ~ *i-keskas*	‘couscous colander’

F:SG:EL	**F:PL:EL**	
ta-keskas-t	*ti-kskis-an*	‘couscous colander’

M:SG:EL	**M:PL:EL**	
a-maḡal	*i-muḡal (~i-maḡal-en)*	‘plants for goats’

F:SG:EL	**F:PL:EL**	
ta-maḡal-t	*ti-maḡal-an*	‘plants for goats’

1.6. Irregular plural formations

final Ø > a

F:SG:EL	**F:PL:EL**	
ta-ggur-t	*ti-ggura (~ti-ḡura*)	‘door’
ta-ḥebb-et	*ti-ḥebba*	‘granule, pimple’

Some nouns have irregular plurals. All irregular forms are presented here. Either the apophonic type is specific to the noun or there is a combination of an irregular change of the base with plural suffixation. There are two nouns with internal change and a plural prefix -**en** or -**an**.

M:SG:EL	**M:PL:EL**	
a-yḏa	*i-ṭ-an*	‘dog’
a-zeɣbiw	*i-zeɣbun-en* (*~i-zeɣbiw-en*)	‘hair’

The following noun has an irregular apophonic plural:

M:SG:EL	**M:PL:EL**	
a-qellawes	*i-qelliwas*	‘water jug’

There are a number of feminine nouns which have irregular base forms in combination with the feminine plural suffix -**an**.

F:SG:EL	**F:PL:EL**	
ta-sa	*ti-se<u>k</u><u>t</u>-an*	‘cow’

There is one feminine noun with an apophonic plural which deletes a vowel, degeminates **ll** and adds an **a** in final position.

F:SG:EL	**F:PL:EL**	
ta-selluf-t	*ti-selfa*	‘tick’

A number of feminine nouns have insertion of **i** in the plural base.

F:SG:EL	**F:PL:EL**	
ta-keskas-t	*ti-keskis-an*	‘couscous colander’
ta-sammer-t	*ti-sammir-an*	‘small sunny hill’
ta-siddel-t	*ti-siddil-an*	‘small wall’

There are two feminine nouns which have only a masculine plural. It is not possible to form a feminine plural. The first noun does not have a masculine singular counterpart whereas the second noun does have one.

F:SG:EL	**M:PL:EL**	
ta-ḡiḡ-et	*i-ḡiḡ-en*	‘tree’
ta-ɣyul-t	*i-ɣ^{w}yal*	‘donkey’

1.7. Compounds

Two nouns in our corpus are compounds. The singular of the first compound does not have a prefix as the first noun is the kinship noun **yemma** ‘(my) mother’. The first compound is a combination of **yemma** ‘mother’ + **a<u>k</u>al** ‘earth’, the second compound is a combination of **aɣižd** ‘billy goat’ and **amyan** ‘small billy goat’.

M:SG:EL	**M:PL:EL**	
yemmawa<u>k</u>al	*i-mmawa<u>k</u>al-en*	‘type of worm’
*a-ɣižd**a**myan*	*i-ɣežd**e**nimyan-en*	‘penisless billy goat’

2. The Arabic-morphology noun

Ghomara Berber has borrowed an great number of Arabic nouns which preserve their original morphology (53% out of a total of about 1700 nouns in our corpus). The basic structure of the Arabic noun consists of an article **l-**, a base and for most feminine nouns, a suffix -**a**. The article can be absent in a number of contexts (cf. IV.1.1.1. syntax). However, as the number of contexts is restricted, we will present the Arabic noun together with the article in this chapter. Like the nouns with Berber morphology, two genders are distinguished, masculine and feminine. Gender is morphologically marked in the great majority of cases, although there exist a number of exceptions. Some nouns are derived by means of an Arabic adjectival (so called *nisba*) ending -**i** or an **m**- prefix. After some remarks on definiteness, gender and derivative noun formation, we will look at plural formation. The discussion of plural formation will comprise the largest part of this chapter. Arabic nouns have two types of plural formation, internal and external plurals, which can be further divided into several types. They distinguish a singular, a dual and a plural number. Dual is a minor category which is only expressed on a few nouns.

2.1. Definiteness

The article **l**- is usually present in borrowed nouns (for assimilations, see II.3.6.). However, different from other Berber languages which borrow Arabic nouns, in Ghomara Berber the article in Arabic borrowings can be omitted. Examples (1) and (2) show examples of the use of the article whereas examples (3) and (4) show examples of nouns without the article.

(1) *uleṯma-s i-ḡḡ=at g l-kuša*
sister-3S 3MS-do:P=3FS:DO in ART-fire.place
'He put his sister in the fireplace.'

(2) *i-ḵšem fx-essen l-weḥš*
3MS-enter:P on-3PL ART-animal
'Animals came in on them.'

(3) *ɣr-i kuṛ-a muqqṛ-eṯ*
at-1S ball-F big-FS
'I have a big ball.'

(4) *te-qql-et weḥš*
2S-become:P-2S animal
'You have become an animal.'

2.2. Gender

Gender is only a relevant opposition in the singular. Neither in morphology, nor in agreement patterns is there a gender distinction in the plural. This is different from the nouns with Berber morphology, which have a morphological difference between plurals of masculine and feminine nouns. In general, feminine nouns end in **-a** while masculine nouns do not have any ending. Gender derivation is restricted to sex opposition in the category of nouns referring to professions and qualities of people (cf. Caubet, 1993:61)[34]. Some examples are:

F:SG

l-ɣeḇṛ-a	'dust'
le-ksiḇ-a	'livestock'
ṣ-ṣemṭ-a	'leather belt'
l-kuṛ-a	'ball'
l-kelm-a	'word'

M:SG

l-kaf	'cave'
d-dḵeṛ	'male'
l-menqeṛ	'chisel, sting'
l-mus	'retractable knife'
l-ğim	'pocket'

There exist a couple of feminine nouns that do not take the feminine suffix **-a** but have feminine agreement[35], for example:

F:SG

l-baṭil	'boat'
l-lḥem	'meat'
l-kif	'cannabis'
ṭ-ṭunuḇir	'car'

There are five feminine nouns which have a suffix **-eṯ** instead of **-a**. In many Berber languages this suffix is much more frequent in borrowed nouns (cf. Kossmann, 2013: 210)[36].

[34] In the section on the external plural we will see that the suffix **-a** can be polysemous (III.2.3.4.). It can indicate feminine singular and plural.

[35] There is one noun in our corpus which ends in **a** and has masculine agreement **le-xwa** 'valley'. In this case, the ending goes back to an old long **ā** and not to the feminine suffix **-a** (Wehr, 1979: 307).

One of these nouns, **nneqqaḇeṯ** ‘woodpecker’ is only used by old people. Young people use **nneqqaḇa**.

F:SG

l-lefɛ-eṯ	‘snake’
l-xaṛb-eṯ	‘ruin’
n-neqqaḇ-eṯ (~ *n-neqqaḇa*)	‘woodpecker’
l-ɣaṛṣ-eṯ	‘vegetable garden’
ṛ-ṛumay-eṯ	‘sling’

2.3. Number

Most nouns have both a singular and a plural form. A very restricted amount of nouns retain a dual form. There are also nouns which have no number opposition. The dual, singularia and pluralia tantum are presented first. Singularia and pluralia tantum have either singular or plural morphology and agreement, but lack the opposite number.

The major part of this chapter deals with nouns that have a singular - plural opposition (cf. III.4.1. for collective - unity opposition). There is a basic distinction between two major plural types; the external plural which is formed by means of suffixes and the internal plural (or broken/apophonic plural) which entails a change of the vowel scheme of a base. The external plural can be formed by the suffixes **-a**, **-in**, **-aṯ**, **-waṯ** and **-s** or **-is** for Spanish loanwords. The suffixes **-a** and **-in** are mostly used for the same type of noun. There is a group of Spanish-type borrowings which are partly integrated in the Arabic morphological system. These nouns all allow for the Arabic article, but the plural is formed by suffixing **-s** or **-is**, according to Spanish morphology. Some of these nouns combine Arabic-type internal plural formation with Spanish suffixation. A few kinship nouns have a suffix **-waṯ**.

The internal plural is formed by molding the singular noun type, of which there are many, into one of a restricted number of fixed plural patterns consisting of three or four consonants and an optional vowel (which can be a schwa). Furthermore, there is a suffix type plural which combines **-an** with infixation of a vowel. There are a number of exceptional types which have very few attestations each. The few nouns that combine internal and external plural formation are treated in this section as well. A number of plurals are borrowed from Standard Arabic even though the singular is not necessarily a Standard

[36] Its origins are unknown. It is tempting to connect it to the Arabic marker **-t** of a head noun in a genitive construction of the type **mṛa-t muḥammad** ‘Mohammed’s wife’. However, in Arabic the head noun never takes the article l-, while in Ghomara Berber these nouns can take the article. Moreover, although this type of genitive construction is quite common in Morocco, it is not common in the Jbala (cf. Moscoso, 2003: 156 - 158). In the Arabic dialects of the North, the periphrastic genitive type noun + dyal + (pro)noun is dominant. Thus, the aforementioned phrase would rather be: **lemṛa dyal muḥammaḏ** ‘Mohammed’s wife’.

Arabic noun. Borrowed nouns from European languages (Spanish and French), except for the Spanish borrowings mentioned before, follow the Arabic patterns. If a noun has multiple plurals the variant is given between brackets. Gender is not distinguished in the plural.

2.3.1. The dual

The expression of the dual is limited to a small set of nouns. All these nouns refer to time and number concepts (cf. III.12. on numerals). The dual suffix is **-ayen**. Note that **nhaṛ** has a suppletive dual (cf. also III.12.1.5. on numerals). These duals can all take an article, meaning that they can be used adverbially as well as nominally.

SG		**Dual**	
l-ɛam	'one year'	*l-ɛam-ayen*	'two years'
š-šheṛ	'one month'	*š-šehṛ-ayen*	'two months'
n-nhaṛ	'one day'	*l-yum-ayen*	'two days'
le-qṣem	'ten minutes'	*le-qṣem-ayen*	'ten minutes'
t-tutluṯ	'twenty minutes'	*t-tuluṯ-ayen*	'fourty minutes'
le-mya	'hundred'	*le-myat-ayen*	'two hundred'
l-alef	'thousand'	*l-alf-ayen*	'two thousand'

2.3.2. Singularia tantum

A number of nouns do not have number opposition. They show singular morphology and agreement. Some examples are:

l-berzax	'honeycomb'
l-weḥš	'animals'
l-ǧaw	'weather'
l-ḥṣaḏ	'harvest'
ṛ-ṛawẓ	'rice'
l-ɣeṛṣ	'plant'
l-bašaṛ	'people'
le-gg^{w}az	'food'
ṛ-ṛṣaṣ	'bullets'
ṭ-ṭḥin	'flour'
z-ziṯ	'oil'
š-šmal	'north'

2.3.3. Pluralia tantum

Other nouns have the morphology and agreement of plural nouns. These pluralia tantum do not have singular counterparts, for example:

le-mnaḏer	‘spectacles’
n-nḍaḍer	‘glasses’
d-draḇel	‘clothes’
le-kṛafez	‘celery’
l-lɛaɛeḇ	‘slobber’
l-ḥayawan	‘animals’
l-ğḏam	‘lepra’
le-mṯaɛ	‘property’

2.3.4. The external plural

The external plural is formed exclusively by means of suffixes (24% of the Arabic-morphology plurals in our corpus). The suffixes are as follows:

-in / **-a**
-aṯ
-s ~ **-is**
-waṯ

The suffixes **-in** and **-a** are mainly used with nouns of the **cCac** type. The suffix -**a** also functions as a feminine singular marker, meaning that plurals of this type are often homophonous with the feminine singular. The suffix **-aṯ** is the plural suffix of many feminine and masculine nouns of different types. The suffixes -**s** ~ -**is** are borrowed together with the Spanish noun. By no means all Spanish nouns are borrowed with (part of) their original morphology. The plural marker -**waṯ** is suffixed to a limited set of kinship nouns.

-in[37] ~ **-a**

Nouns which have base structure **cCac** refer mostly to professions or qualities of people. The following nouns take the plural marker -**in**.

M:SG	**F:SG**	**PL**	
s-seḥḥar	*s-seḥḥar-a*	*s-seḥḥar-in*	‘wizard’
l-xewwaf	*l-xewwaf-a*	*l-xewwaf-in*	‘coward’

[37] The suffix -**in** is used as well with a number of other nominal categories, such as the adjectives, participles and diminutives.

l-keddaḇ	*l-keddaḇ-a*	*l-keddaḇ-in*	‘liar’
l-ɣeḍḍaṛ	*l-ɣeḍḍaṛ-a*	*l-ɣeḍḍaṛ-in*	‘betrayer’

A small number of nouns that have an **m**- prefix also take the masculine external plural **-in**.

M:SG	**F:SG**	**PL**	
l-mežmuɛ	*l-mežmuɛ-a*	*l-mežmuɛ-in*	‘crowd’
l-mɛaṛeḏ	*l-mɛaṛḏ-a*	*l-mɛaṛḏ-in*	‘invitee’
l-mɛellem	*l-mɛellm-a*	*l-mɛellm-in*	‘master’
l-meyyeṯ	*l-meyyṯ-a*	*l-meyyṯ-in*	‘deceased’
l-muɛallim	*l-muɛallim-a*	*l-muɛallim-in*	‘teacher’

The suffix **-in** also occurs with some nouns with a different structure. The first noun does not have a feminine form. A glide **yy** is inserted between noun bases that end in **i** and the plural suffix **-in**.

M:SG	**F:SG**	**PL**	
š-šfeṛ	-	*ššefṛ-in* (~ *lešfaṛ*)	‘eyelid’
l-ummi	*l-ummiyy-a*	*l-ummiyy-in*	‘ignorant’
l-walid	*l-walid-a*	*l-walid-in*	‘parent’
l-puṛẓwaẓi	*l-puṛẓwaẓiyy-a*	*l-puṛẓwaẓiyy-in*	‘rich person’ (<Fr.)
l-puḇri	*l-puḇriyy-a*	*l-puḇriyy-in*	‘poor person’ (<Sp.)
š-šṭayṛi	*š-šṭayṛiyy-a*	*š-šṭayṛiyy-in*	‘stingy person’

The following two nouns form an exception in that the **i** in the first noun becomes a glide **y** while in the second noun the suffix replaces the base ending. Both nouns are borrowings from Standard Arabic.

M:SG	**F:SG**	**PL**	
l-muddaɛi	*l-muddaɛy-a*	*l-mudaɛy-in*	‘plaintiff’
z-zani	*z-zaniyy-a*	*z-zan-in*	‘adultery committer’

Most nouns of the structure **cCac** take the plural suffix **-a**, for example:

M:SG	**F:SG**	**PL**	
l-fellaḥ	*l-fellaḥ-a*	*l-fellaḥ-a*	‘farmer’
š-šeffaṛ	*š-šeffaṛ-a*	*š-šeffaṛ-a*	‘thief’
š-šekkam	*š-šekkam-a*	*š-šekkam-a*	‘traitor’

l-xeyyaṭ	*l-xeyyaṭ-a*	*l-xeyyaṭ-a*	‘tailor’

An example of plural agreement is:

(5) *šw a degg-an l-fellaḥ-a?*
What REL do:IMP-3PL ART-farmer-PL
‘What do farmers do?’

There is one noun in our corpus which allows both plural suffixes **-in** or **-a** in the plural.

M:SG	**F:SG**	**PL**
l-ɣeššaš	*l-ɣeššaš-a*	*l-ɣeššaš-in* ~ *l-ɣeššaš-a*‘traitor’

The following two nouns have a different structure, **caccac** and **cccac**:

M:SG	**F:SG**	**PL**	
d-dawsas	*d-dawsas-a*	*d-dawsas-a*	‘squeaker’
l-bergag	*l-bergag-a*	*l-bergag-a*	‘traitor’

2.3.4.1. The plural suffix -a̲t̲

67% of the external plurals in our corpus take the plural marker **-a̲t̲**. The plural suffix replaces the feminine suffix **-a**. Among these nouns there is a considerable number of loanwords from Spanish and French. If the noun base ends in **i** a glide **yy** is inserted between the noun the plural suffix (except for a couple of kinship nouns, see III.5.). If it ends in **u** the glide **ww** is inserted. Some examples are:

SG	**PL**		
ṛ-ṛwiḍ-a	*ṛ-ṛwiḍ-a̲t̲*	‘tire, wheel’	(< Sp.)
n-nsiḇ-a	*n-nsiḇ-a̲t̲*	‘mother-in-law of a man’	
s-sḇiɣ-a	*s-sḇiɣ-a̲t̲*	‘paint’	
l-batri	*l-batriyy-a̲t̲*	‘battery’	(<Fr.)
l-prikanti	*l-prikantiyy-a̲t̲*	‘nurse’	(<Sp.)
š-šeɛṛ-a	*š-šeɛṛ-a̲t̲*	‘fishing line’	
l-kamyuna	*l-kamyun-a̲t̲* (~*l-kamyun-is*)	‘big truck’	(< Sp.)
l-kridi	*l-kridiyy-a̲t̲*	‘debt’	(< Fr.)
l-buṛǧ-a	*l-buṛǧ-a̲t̲*	‘fortress’	
l-laṛḍ-a	*l-laṛḍ-a̲t̲*	‘school of fish at night’	(< Sp.)
s-sint-a	*s-sint-a̲t̲*	‘cassette’	(< Sp.)

There are two feminine nouns with a prefix **m**- that take the external plural -**at̲**.

l-mdab̲z-a	*l-mdab̲z-at̲*	‘fight’
l-mdafn-a	*l-mdafn-at̲*	‘fight’

Some examples of masculine nouns that take this plural suffix are:

M:SG	**PL**		
l-lt̲am	*l-lt̲am-at̲*	‘veil’	
s-sḍ̲aɛ	*s-sḍ̲aɛ-at̲*	‘sound, noise’	
s-sb̲ab̲	*s-sb̲ab̲-at̲*	‘amulet’	
t-tran	*t-tran-at̲*	‘train’	(< Fr.)
s-sb̲iṭaṛ	*s-sb̲iṭaṛ-at̲*	‘hospital’	(< Sp.)
l-ɛilwan	*l-ɛilwan-at̲*	‘address’	
l-intixab̲	*l-intixab̲-at̲*	‘election’	
l-mešklit̲	*l-mešklit̲-at̲*	‘bicycle’	(< Fr.)

A glide **ww** ~ **w** is inserted between the final **u** of a noun and the plural suffix, e.g. (cf. Marçais, 1977: 121 – 122):

M:SG	**PL**			
l-ɛaḍ̲u	*l-ɛaḍ̲uww-at̲*	(~ *l-ɛuḍ̲y-an*)	‘enemy’	
l-meṛ̣raxu	*l-meṛ̣raxuw-at̲*		‘shark’	(< Sp.)
l-ganču	*l-gančuww-at̲*	(~ *l-ganču-s*)	‘kind of rake’	(< Sp.)
s-stilu	*s-stiluw-at̲*	(~ *s-stilu-s*)	‘pen’	(< Fr.)

The following noun which has irregular addition of final **u** in the plural inserts **w** between the base and the suffix.

SG	**PL**	
l-isem	*l-ismuwat̲*	‘name’

There is one exception of a noun that ends in an **u** and has a -**t̲** plural suffix.

SG	**PL**		
t-ṭ̲rayenbu	*t-ṭ̲rayenbu-t̲*	‘spintop’	(< Sp.)

-s ~ -is

There are a number of borrowed Spanish and French nouns which take over the Spanish plural suffix **-s** after a base final vowel and **-is** after a base final consonant.[38] They are included in the category of Arabic morphology nouns as the noun can be combined with the Arabic article **l-**. The following list provides examples of nouns that take this plural.

M:SG	**PL**		
l-kuntru	*l-kuntru-s*	'crossroads'	
l-byixu	*l-byixu-s*	'old man'	
r-ruḇyu	*r-ruḇyu-s*	'blond'	
s-suḇri	*s-suḇri-s*	'envelope'	
l-funḍu	*l-funḍu-s*	'bottom'	
l-kurču	*l-kurču-s*	'mattress'	
l-pirmi	*l-pirmi-s*	'driver's licence'	(< Fr.)
l-grifu	*l-grifu-s*	'tap'	
l-kwaḏru	*l-kwaḏru-s*	'doorframe'	
d-difidi	*d-difidi-s*	'DVD'	
l-laḇaḇu	*l-laḇaḇu-s*	'sink'	
n-nigru	*n-nigru-s*	'brown dolphin'	
t-tuṛneyyu	*t-tuṛneyyu-s*	'screw'	
l-ğuṛni	*l-ğuṛni-s*	'wage for one day'	(< Fr.)
r-rigalu	*r-rigalu-s*	'present'	
ṣ-ṣalaḇa	*ṣ-ṣalaḇari-s (~ṣalaḇaṯ)*	'fyke'	

Following Spanish plural morphology, nouns that end in a consonant have the plural marker **-is**.

M:SG	**PL**	
l-luring	*l-luring-is*	'beacon'
l-muṛtal	*l-muṛtal-is*	'flip (in the water)'
s-stenyaḏuṛ	*s-stenyaḏuṛ-is*	'screwdriver'
ṛ-ṛaḏyun	*ṛ-ṛaḏyun-is*	'radio'

There is one noun which only occurs in the plural:

M:SG	**PL**	
--	*l-waṇṭ-is*	'gloves'

[38] According to Moscoso (2003:146) there is a plural suffix **-š** in the dialect of Chefchaouen which is thought to be a remnant of an earlier stage of Romance influence, for example **ɛwin-eš** 'small children'.

Note that most loanwords from Spanish and French follow other Arabic plural formations. Both internal and external plural formation are found in such loanwords, for example:

The external plural

M:SG	**PL**		
l-ganču	*l-gančuww-aṯ*	‘rake’	(< Sp.)
l-gaṛaž	*l-gaṛaž-aṯ*	‘garage’	(< Fr.)

The internal plural

F:SG	**PL**		
l-falḍa	*l-flaḍi*	‘skirt’	(< Sp.)
l-plaṣa	*l-playeṣ*	‘seat’	(< Fr.)

2.3.5. The internal plural

With about 500 nouns (30% of all plurals, including Berber) in our corpus, the Arabic internal plural is the most frequent plural type. The internal plural can be divided into several major types, exceptional types, and Standard Arabic borrowings. For the major types many verbs for each type are attested while the exceptional types have only a couple of attestations each. In the part on the major types different plural schemes will be presented which correspond to a vast array of singular schemes. The schemes have a number of consonants (including semi-vowels) and one or two vowels (excluding schwa). For some types which have a vowel insertion, vowels have a corresponding semi-vowel in the plural. Geminate consonants, which are always in final position, are split in the plural. Diphthongs **ay** and **aw** are treated as single vowels (cf. II.2.2. Phonology). The final plural type are the nouns which take the suffix -**an** in the plural and have vowel insertion. In a separate paragraph loans from Standard Arabic will be discussed.

ccacc

There is one basic structure **ccacc**. Two schemes which insert the semi-vowels **w** or **y** are presented separately. Some nouns have an **m**- prefix which is treated in the same way as a base consonant. This is a fairly frequent plural scheme. It is mainly found with nouns which have four (or five) consonants. Geminates behave like two consonants. If the second consonant is a geminate in the singular, it is split by the vowel in the plural. The singular schemes corresponding to this plural scheme are numerous: **cCc**, **cCic cccic**, **cccuc**, **cCuc**, **cccc**, **cccac**, **cCac**, **ciccac**, **cccc-a**, **cccic-a**, **ccccc-a**, **cCac-a**, **cccuc-a**, **cCuc-a**, **cCic-a** (**c** stands for single consonant, **C** for a geminate consonant). Some examples are:

SG PL

d-dexxan	*d-dxaxen*	‘smoke’
l-perrim	*le-prarem*	‘drill’
l-qendil	*le-qnaḏel*	‘oil lamp’
z-zeɛbul	*z-zɛabel*	‘kind of bag’
s-sellum	*s-slalem*	‘ladder’
t-teɛlem	*t-tɛalem*	‘fox’
l-feṛṛan	*le-fṛaṛen*	‘oven’
ṣ-ṣebbaṭ	*ṣ-ṣbabeṭ*	‘shoe’
l-ɣeṛṛaf	*le-ɣṛaṛef*	‘cup’
d-demmal-a	*d-dmamel*	‘hump’
ẓ-ẓeṛmuṭ-a	*ẓ-ẓṛameṭ*	‘lizard’
l-bezzun-a	*l-bzazen*	‘female breast’

2.3.5.1. m- derived nouns

A number of plural nouns have an **m-** prefix. The prefix functions as a fourth consonant and the most common plural pattern is **mcacc** (cf. Marçais, 1977:123 who groups them together with four-consonantal nouns). The singular schemes corresponding to the plural scheme are abundant: **mccc**, **mccac-a**, **mccac**, **mCac**, **muccac**, **mccac-a**, **mccuc**, **muccic**, **mcicc-a**.

M:SG	**PL**	
l-medfeɛ	*le-mdafeɛ*	‘canon’
l-menšeṛ	*le-mnašeṛ*	‘saw’
l-mehraz	*le-mharez*	‘mortar’
l-menqaṛ	*le-mnaqeṛ*	‘chisel, sting’
l-meṛfeɛ	*le-mṛafeɛ*	‘shelf’
l-mexxaṣ	*le-mxaxeṣ*	‘poking stick’
l-meqqaṣ	*le-mqaqeṣ*	‘scissors’
l-muqdaf	*le-mqadef*	‘paddle’

A few nouns with less than four consonants have a similar structure in the plural:

M:SG	**PL**		
l-ǧenn	*le-ǧnawen*	‘spirit’	
t-teksi	*t-tkases*	‘taxi’	(< Sp. / Fr.)

In one five-consonant noun, the final **n** is deleted in the plural.

M:SG	PL		
l-puklan	*le-pwakel*	‘excavator’	(<Sp.)

cwacc

Singular schemes corresponding to this plural scheme are **cacc**, **cicac**, **cicicu**, **cucuc**, **cacic**, **cacic-a**, **cacuc**, **cacuc-a**, **cCic-a**, **cacac**, **cacac-a**, **cucac**, **caycuc**.

SG	PL	
z-zamel	*z-zwamel*	‘homosexual’
s-saḇeɛ	*s-swaḇeɛ*	‘birth ceremony’
š-šiṭan	*š-šwaṭen*	‘satan’
n-nimiṛu	*n-nwameṛ*	‘number’
l-muṭuṛ	*le-mwaṭeṛ*	‘motorcycle, engine’
l-kaɣiṭ	*le-kwaɣeṭ*	‘papers’
l-baṭil	*le-bwaṭel*	‘boat’
l-maḵina	*le-mwaḵen*	‘machine’
l-ḥanuṯ	*le-ḥwaneṯ*	‘shop, store’
ṭ-ṭaḥun-a	*ṭ-ṭwaḥen*	‘electric mill’
čekkiṭ-a	*čwakeṭ*	‘coat’
ṭ-ṭayfuṛ	*ṭ-ṭwafeṛ*	‘table’
l-qayṭun	*le-qwaṭen*	‘small tent’

The same plural type is found with **m**- derived nouns with the singular schemes **macac**, **mucac**, **macac-a**, for example:

M:SG	PL	
l-maḥal	*le-mwaḥel*	‘room’
l-muṭaɛ	*le-mwaṭeɛ*	‘place’

The following noun of this type only has a plural:

SG	PL	
--	*le-xwašem*	‘gills’

ccayc

The singular patterns corresponding to this plural pattern are **ccic**, **ccic-a**, **cicc-a**, **ccuc-a**, **ccac-a**, **cC-a**. For example:

SG	PL	
le-bzim	*le-bzayem*	‘buckle’
s-srir	*s-srayer*	‘hand-made bed’
ṣ-ṣṛiṛ	*ṣ-ṣṛayeṛ*	‘secret’
le-bhim-a	*le-bhayem*	‘female mule’
le-qmiǧ-a	*le-qmayež*	‘shirt’
l-xiḏm-a	*le-xḏayem*	‘work’
ṛ-ṛḏum-a	*ṛ-ṛḏayem*	‘bottle’
l-plaṣ-a	*le-playeṣ*	‘seat’
š-šeff-a	*š-šfayef*	‘lip’

There is one bi-consonantal **caca** noun which inserts a **w** and a **y** in the plural.

F:SG	PL	
l-ḥaž-a	*le-ḥwayež*	‘thing’

ccvc / ccvcv schemes

There are several plural schemes that have the structure **ccvc**[39]. The vowel position can be filled by either **a**, **u** or schwa. This type is mainly found with triconsonantal and bi-consonantal singular nouns. Singular schemes with two consonants and a full vowel (**cuc**(**a**), **cic**, **cac-a**) insert **w** or **y** in the second consonant position in the plural.

ccac

The singular schemes corresponding to this plural scheme are **ccic**, **cuc**, **cuC**, **cuc-a**, **cac-a**, **cic**, **ccc**, **ccc-a**, **cC-a**, **cucc**, **cucc-a**. Final geminates in the type **cuC** are degeminated while geminates in the type **cC-a** are split. Examples of singular nouns corresponding to this plural noun scheme are:

SG	PL		
n-nsiḇ	*n-nsaḇ*	‘father-in-law (of a man)’	
s-suq	*le-swaq*	‘market’	
l-ɛušš	*le-ɛwaš*	‘nest’	
l-muss	*le-mwas*	‘retractable knife’	
l-buṭ-a	*le-bwaṭ*	‘butagas cylinder’	(< Fr./Sp.)
l-ḥukk	*le-ḥkaḵ*	‘ankle, wrist’	
l-ǧim	*le-žyam*	‘pocket’	

[39] cf. Moscoso 2003 (p. 140-141) for a comparison with the neighbouring dialect of Chefchaouen. The singular schemes in Ghomara only partly correspond to those in the Chefchaouen.

l-qeḥb-a	*le-qḥaḇ*	‘prostitute’
s-sekk-a	*s-skak*	‘coin’
l-ǧumb	*le-žnaḇ*	‘side’
l-buṛk-a	*le-bṛaḵ*	‘duck, pond’
n-naq-a	*n-nyaq*	‘female camel’

ccuc

The singular schemes corresponding to this plural schemes are **cC**, **cc**, **cac**, **cic**, **ccc**, **ccc-a**, **cC-a**, **cicc**, **ccic-a/-eṯ**, **cacc**. This type includes one noun with an **m-** prefix.

SG	**PL**	
l-hemm	*le-hmum*	‘anxiety’
ṛ-ṛas	*ṛ-ṛyus*	‘cape’
l-biṯ	*le-byuṯ*	‘room’
ẓ-ẓeṛb	*ẓ-ẓṛuḇ*	‘fence’
ḍ-ḍayf	*ḍ-ḍyuf*	‘guest’
n-nežm-a	*n-nžum*	‘star’
l-ɛeṭṭ-a	*le-ɛṭuṭ*	‘bite’
l-gayz-a	*le-gyuz*	‘stick, wood, pole’
l-qird	*le-qruḏ*	‘monkey’
l-mḏin-a	*le-mḏun*	‘town’
l-lefɛ-eṯ	*l-lfuɛ*	‘snake’
š-šaheḏ	*š-šhuḏ* (~ *š-šuhuḏ*[40])	‘witness’

ccc

The singular schemes corresponding to this plural scheme are **cacc-a/-eṯ**, **cC-a**, **cac-a**, **ciC-a**, **cuc-a**, for example:

F:SG	**PL**	
l-xaṛḇ-eṯ	*le-xṛeḇ*	‘ruin’
l-ɣaṛṣ-eṯ	*le-ɣṛeṣ* (~ *le-ɣṛuṣ*)	‘vegetable garden’
ṛ-ṛeẓẓ-a	*ṛ-ṛẓeẓ*	‘turban’
l-qett-a	*le-qtet*	‘bunch of cane’
ṣ-ṣaḇ-a	*ṣ-ṣyeḇ*	‘harvest’
l-miss-a	*le-mses*	‘table’
l-fuṭ-a	*le-fweṭ*	‘towel’

[40] This is a borrowing from Standard Arabic.

In addition to plurals of the type **ccvc**, there are also plural schemes that have a structure **ccvcv**, in which the first vowel is **a** or **u**, while the final vowel is **a** or **i**:

ccaca

Singular schemes corresponding to this plural scheme are: **ccc-a**, **ccci**.

SG	**PL**	
l-kebd-a	*le-kḇada*	‘liver’
l-ǧebli	*le-žbala*	‘man from the Jbala’
l-ɛezri	*le-ɛzara*	‘adolescent’

ccaci

The singular schemes corresponding to this plural scheme are **cic**, **cac**, **ccc-a**, **cacc-a**, and nouns that take a base extension **-eyy** followed by the feminine suffix **a**. The **i** in biconsonantal nouns in the singular becomes either a semi-vowel **y** in the case of **l-lil** > **l-lyali** or is replaced by a **w** in the case of **ṛ-ṛiḥ-eyya** > **ṛ-ṛwaḥi**. In the case of **ḍ-ḍaw** > **ḍ-ḍwawi** the vowel **w** is inserted, as in the case of **l-ɣaḇeyy-a** > **le-ɣwaḇi**. Except for the first two examples below, all nouns have the feminine singular suffix **-a**.

SG	**PL**	
l-lil	*l-lyali*	‘night’
ḍ-ḍaw	*ḍ-ḍwawi*	‘light’
ṛ-ṛiḥ-eyya	*ṛ-ṛwaḥi*	‘traditional women’s shoe’
t-terb-eyya	*t-trabi*	‘baby’
ṭ-ṭeɣṭ-eyya	*ṭ-ṭɣaṭi*	‘lid’
l-ɣaḇ-eyya	*le-ɣwaḇi*	‘seagull’
l-belɣ-a	*le-blaɣi*	‘traditional shoe’
l-qehw-a	*le-qhawi*	‘coffee’
l-falḍ-a	*le-flaḍi*	‘skirt’

ccuca

The singular scheme **ccc** is the most frequently occurring scheme corresponding to this plural. The **i** of biconsonantal nouns of the type **cic** becomes a semi-vowel **y** in the plural, cf. **z-zif** > **z-zyufa** ‘handkerchief’. The diphthong **ay** in **s-sayf** ‘sword’ is treated in the same way as **i**. Singular schemes corresponding to this plural scheme are **cC**, **ccc**, **ccc**, **ccac**, **cacc**, **cic**, **ccic**.

SG	**PL**	
ḍ-ḍell	*ḍ-ḍlula*	‘shadow’
d-dk̲eṛ	*d-dk̲uṛa*	‘male’
ṭ-ṭeṛf	*ṭ-ṭṛufa*	‘end, side, edge, piece’
le-ktaḇ	*le-ktuḇa*	‘book’
s-sayf	*s-syufa*	‘sword’
z-zif	*z-zyufa*	‘handkerchief’
ṛ-ṛḇiɛ	*ṛ-ṛḇuɛa*	‘grass’

2.3.5.2. The suffix type

There are two types of plural schemes which take the suffix -**an**. Suffixation is combined with insertion of, or replacement by, **i** or **u** after the first base consonant. The suffix can be applied to both bi-consonantal and tri-consonantal singular nouns.

cic-an

The singular schemes corresponding to this plural type are **cac**, **cac-a** and **cC-a**. The feminine singular -**a** is replaced by -**an** in the plural. Geminate consonants are degeminated before this suffix. Suffixation is combined with the presence of **i** after the first consonant. Some examples are:

SG	**PL**		
l-kaṛ	*l-kiṛ-an*	‘intercity bus’	
l-kaf	*l-kif-an*	‘cave’	
l-baz	*l-biz-an*	‘hawk’	
z-zaž	*z-zič-an*	‘glass’	
l-qaɛ	*l-qiɛ-an*	‘bottom’	
ṭ-ṭaṣ-a	*ṭ-ṭiṣ-an*	‘cup’	(< Sp.)
l-leṭṭ-a	*l-liṭ-an*	‘bottle’	

cucc-an

There are different singular noun schemes corresponding to this scheme: **caci**, **ccac**, **ccc**, **ccic**, **cacu**. Suffixation is combined with the insertion of vowel **u** after the first consonant.

M:SG	**PL**	
š-šɛaṛ	*š-šuɛṛ-an*	‘hair’
d-dheḇ	*d-duhb-an*	‘gold’
t-tris	*t-turs-an*	‘kind of fishnet’

cucy-an

In this type, final **u** or **i** is changed to the semivowel **y** before the suffix, as shown in the following examples:

M:SG	**PL**	
l-ɛaḍu	*l-ɛuḍy-an*	‘enemies’
ṛ-ṛaɛi	*ṛ-ṛuɛy-an*	‘herdsman’
s-saɛi	*s-suɛy-an*	‘beggar’

cicc-an

There is one noun of the type **cacc** which has this plural.

M:SG	**PL**	
l-ḥažeḇ	*l-ḥižḇ-an*	‘eyebrow’

2.3.5.3. Exceptional types

Plural schemes for which maximally three, but mostly just one or two nouns are attested in our corpus are presented here.

cci

M:SG	**PL**	
ṛ-ṛḥa	*le-rḥi*	‘stone mill’

cuCac

M:SG	**PL**	
t-tažiṛ	*t-tuǧaṛ*	‘rich man’
l-kari	*l-kurray*	‘renter’

cucac

M:SG	**PL**	
ṛ-ṛayeṣ	*ṛ-ṛuyaṣ*	‘chieftain’

cuCa

M:SG	**PL**	
ṭ-ṭḇiḇ	*ṭ-ṭubba*	‘doctor’

cucca

M:SG	**PL**	
ṭ-ṭaleḇ	*ṭ-ṭulḇa*	‘older pupil’

cuca

M:SG	**PL**	
le-fqi	*l-fuqa*	‘imam’

In the two plurals below internal and external plural are combined. The plural suffix **-a<u>t</u>** is added and **u** is inserted in the base.

M:SG	**PL**	
s-sqef	*s-squf-aṯ*	‘roof’
s-sḇeḥ	*s-sḇuḥ-aṯ*	‘morning’

Three Spanish loanwords combine the Spanish suffix -**s** with Arabic internal plural formation.

M:SG	**PL**	
l-gaṛṛu	*le-graṛu-s* ~ *l-gaṛṛu-s*	‘cigarette’
l-baṛku	*le-bṛaku-s*	‘big ship’
ṣ-ṣalṭu	*ṣ-ṣlaṭu-s*	‘dive’

ccacc

Two nouns with a base extension and an irregular plural are:

l-qneyy-a	*l-qnayen*	‘rabbit’
l-pakeyy-a	*le-pwaket*	‘pack’

2.3.6. Borrowings from Standard Arabic

Ghomara Berber has a number of plural schemes which are borrowed from Standard Arabic. They do not generally correspond to the plural schemes of dialectal Arabic due to the historical loss of vowels in the latter. These borrowings have mainly entered the language through modern media and education. Below we present a complete list of the nouns in our corpus. The long vowels in Standard Arabic are not distinguished in the dialect.

caccac

All these nouns start with a glottal stop in the plural. In dialectal forms the glottal stop does not exist. Singular noun patterns corresponding to this plural are: **cacc**, **cic**, **cicc**, **ccc**. Note that some of the nouns have a singular in dialectal Arabic e.g. **l-merṭ** and **l-wext**.

M:SG	**PL**	
l-lawn	*l-ʔalwan*	'colour'
d-din	*l-ʔadyan*	'religion'[41]
l-film	*l-ʔaflam*	'film'
ṛ-ṛaqem	*l-ʔaṛqam*	'number'
l-wext	*l-ʔawqat*	'time'
l-merṭ	*l-ʔamṛaḏ*	'sickness'

cucaca

The singular noun patterns for this type are: **cacic**, **cacc**.

M:SG	**PL**	
š-šaɛir	*š-šuɛaṛa*	'poet'
l-ɛalem	*l-ɛulama*	'Islamic scholar'

cacaca

The singular patterns are identical to the previous ones: **cacic**, **cacc**.

M:SG	**PL**	
l-wazir	*l-waẓaṛa*	'minister'
ṭ-ṭaleḇ	*ṭ-ṭalaḇa*	'pupil in islamic education'

caca?ic

The singular pattern is **cacica**.

[41] cf. **din** - **dyun** 'debt'.

M:SG	PL	
ḍ-ḍaṛiḇa	*ḍ-ḍaṛaʔiḇ (~ ḍ-ḍariḇaṯ)*	‘tax’
l-ǧarima	*l-ǧaraʔim*	‘crime’

cucuc ~ cucac

The singular noun patterns corresponding to the plural are: **cC**, **cacc**, **caC**.

M:SG	PL	
l-ḥedd	*l-ḥudud*	‘border’
l-ḥeqq	*l-ḥuquq*	‘right’
l-ḥaṛb	*l-ḥuṛuḇ*	‘war’
l-ḥağ	*l-ḥuǧağ*	‘hadji, pilgrim’

cacacic

The noun patterns **ciccac**, **cccaca** correspond to this plural.

M:SG	PL	
z-zinzal	*z-zanazil*	‘earthquake’
l-meḥkama	*l-maḥakim*	‘court’

ʔaccica

There is only one noun of the type **cacac** corresponding to this plural pattern.

M:SG	PL	
t-taman	*l-ʔatmina*	‘price’

cuCac

M:SG	PL	
l-qaḍi	*l-quḍḍat*	‘judge’

2.3.7. Summary

In the following table all singular schemes are grouped together next to the corresponding plural schemes.

Four-consonant nouns	Corresponding singular patterns
ccacc	ceCec, ceCic ceccic, ceccuc, ceCuc, ceccec, ceccac, ceCac, ciccac, ceccca, ceccica, ceccecca, cCaca, ceccuca, cCuca, cCica

m- derived nouns	mccc, mccaca, mccac, mCac, muccac, mccaca, mccuc, muccic, mcicca
cwacec	cacec, cicac, caccuc, cicicu, cucuc, cacic, cacica, cacuc, cacuca, ceCica, cacac, cacaca, cucac
m- derived nouns	macac, mucac, macaca
ccayec	ccic, ccica, cicca, ccuca, ccaca, ceCa, cc, caca
CCVC / CCVCV schemes	
ccac	ccic, cuc, cuC, cuca, caca, cic, cecc, cecca, ceCa, cucc, cucca
ccuc	ceC, cec, cac, cic, cecc, cecca, ceCa, cicc, ccica/et, cacec
ccec	cecca, ceCa, caca, ciCa, cuca
ccaca	cecca, cecci
ccaci	cic, cac, cecca, cacca
ccuca	ceC, ccec, cecc, ccac, cacc, cic, ccic
Suffix type	
cic-an	cac, caca, ceCa
cucc-an	caci, ccac, ccec, ccic, cacu
cucy-an	cacu, caci
cicc-an	cacec
Exceptional types	
cci, cuCac, cucac, cuCa,	
cucca, cucca, cuca, cuCac	
ceccac ~ cuccac	
Borrowings from Standard Arabic	
ʔaccac	cacc, cic, cicc, cecc
cucaca	cacic, cacec
cacaca	cacic, cacec
cacacic	cacica
cucuc ~ cucac	ceC, cacc, caC
cacacic	ciccac, ceccaca
caccica	cacac

3. Size derivation

In this chapter size derivation is discussed. Ghomara Berber has two types of size derivation; the diminutive and the augmentative. There are two processes by which diminutives are formed; (1) gender change and (2) application of a vowel scheme to the base. Process (1) only applies to the Berber-morphology class, process (2) applies to both morphological classes. Berber-morphology diminutives can be formed by a combination of both the external diminutive (the application Berber affixation) and the internal diminutive (the insertion of a vowel scheme in the base). The augmentative is formed by applying masculine Berber morphology to a Berber-morphology or Arabic-morphology noun.

Semantically, within the domain of lower animates and inanimates, the diminutive marks a smaller sized object while the augmentative marks a bigger sized object than the basic term. The basic term is a noun (or adjective) from which the smaller or bigger size is derived. It is neutral or unmarked regarding size. For example, the feminine noun **ta-ɛeddis-t** 'belly' is neutral regarding size, whereas **a-ɛeddis** 'big belly' refers explicitly to its bigger counterpart. On the other hand the masculine noun **a-sif** 'river' is neutral regarding size, whereas the feminine **ta-sif-t** 'small river' refers to a smaller sized object. For this reason it is possible to decide which one is the basic term (cf. Kossmann, 2012). In the domain of the diminutive however, there are a number of exceptions, where the meaning is lexicalised and usually not size-related. As it is very productive, most of this chapter will comprise a discussion of the diminutive. In the first part the functioning of the diminutive is presented followed by a discussion of the morphology of the diminutive. The application of the internal schemes follows the Arabic pattern regardless to which base it is applied. The plural of diminutives is discussed in a separate paragraph. There are two small sections on diminutives of adjectives and diminutives of nominalised adjectives. Finally, in a separate paragraph, the augmentative will be presented.

3.1. The diminutive: function

There is a clear division between morphological classes. Many Arabic-morphology nouns that are borrowed can form the internal diminutive, like in Arabic. The internal diminutive involves the application of a fixed set of vowel patterns to a nominal (noun or adjective) base. This mechanism of diminutive formation is taken over in Arabic-morphology nouns in Ghomara Berber, for example:

M:SG		**M:SG:DIM**	
le-ɛmel	‘fishnet’	*le-ɛmeyyel*	‘small fishnet’
l-meqqaṣ	scissors	*le-mqiqeṣ*	‘small scissors’

F:SG		**F:SG:DIM**	
l-uṭa	‘field’	*l-wiṭa*	‘small field’

Berber-morphology nouns can form an external diminutive of lower animate (e.g. insects) and inanimate nouns by means of the feminine affixes **t**….**t** (cf. III.6.4. for other functions of feminine derivation). For a number of nouns it is the only way to form a diminutive:

M:SG		**M:SG:DIM**	
a-wraw	‘two fistfuls’	*ta-wraw-t*	‘two small fistfuls’
a-sif	‘river’	*ta-sif-t*	‘small river’
a-messiw	‘old basket’	*ta-messiw-t*	‘small old basket’
a-safu	‘torch’	*ta-safu-ṯ*	‘small torch’

In addition, the patterns of the internal diminutive are borrowed from Arabic. They are extended to many Berber-morphology nouns resulting in the possibility of combining the two diminutives. This does not go the other way around; Arabic-morphology nouns never take the external diminutive. Depending on the Berber-morphology noun the diminutive types can be combined yielding a variety of diminutives. There is a difference between on the one hand higher animates (including humans) and on the other hand lower animates and inanimates. As feminine derivation entails a sex opposition in higher animates, only internal diminutives can be formed. For higher animates the internal diminutive indicates a smaller size. Within this domain there are a few nouns which have only a masculine or a feminine form and a corresponding internal diminutive, for example:

M:SG		**M:SG:DIM**	
a-ḇeddiḵ	‘rooster’	*a-ḇdideḵ*	‘small rooster’
a-ɣižd	‘billy-goat’	*a-ɣžeyyež*	‘small billy-goat’
ta-myan-t	‘she-kid’	*ta-mweyyen-t*	‘small she-kid’

ta-ɣaṭ-t	‘goat’	*ta-ɣṭiw-et*	‘small goat’
ta-mɣaṛ-t	‘woman’	*ta-mɣeyyeṛ-t*	‘small, nice woman’

Many higher animates can form the diminutive of the masculine and the feminine noun, however, very few nouns referring to human beings can form a diminutive. The diminutive always refers to a smaller size in these cases:

M:SG	**M:SG:DIM**		**F:SG**	**F:SG:DIM**	
a-frux	*a-freyyex*	‘boy’	*ta-frux-t*	*ta-freyyex-t*	‘girl’
a-rekkal	*a-rkikel*	‘dog’	*ta-rekkal-t*	*ta-rkikel-t*	‘bitch’
a-ɛebbiz	*a-ɛbibez*	‘bull’	*ta-ɛebbiz-t*	*ta-ɛbibez-t*	‘cow’
a-ḥeẓẓut	*a-ḥẓiẓet*	‘naked one’	*ta-ḥeẓẓut*	*ta-ḥẓiẓet*	‘naked one’
a-ɣyul	*a-ɣweyyel*	‘donkey’	*ta-ɣyul-t*	*ta-ɣweyyel-t*	‘she-ass’

There are other higher animate nouns which do not have an internal diminutive. Diminutive formation is not possible in such cases, as feminine gender marks the masculine-feminine sex opposition, for example:

M:SG		**F:SG**	
a-ferkuṭ	‘farrow’	*ta-ferkuṭ-t*	‘piglet’
a-meslem	‘muslim’	*ta-meslem-t*	‘muslima’
a-yaw	‘grandson	*ta-yaw-t*	‘granddaughter’
a-ḇeṛṛey	‘ram’	*ta-ḇeṛṛeḵ-t*	‘sheep’

The diminutives of lower animate (such as insects, fish and vermin) and inanimate nouns are more heterogeneous. The diminutive can in principle be formed by both the internal and external diminutive, and the distribution of diminutive patterns seems to be arbitrary. The following examples show that two nouns which fall in the same semantic domain have different types of diminutives, for example:

M:SG		**M:SG:DIM**	
a-fus	‘hand’	*a-fweyyes*	‘small hand’
a-ṭar	‘leg’	*ta-ṭṭar-t*	‘small leg’

Some nouns which are inherently masculine or feminine do not allow the external diminutive. They can have an internal diminutive, for example:

M:SG		**M:SG:DIM**	
a-gežd̲ir	‘lizard’ (sp.)	*a-gžider*	‘small lizard’ (sp.)
a-keppuṭ	‘coat’	*a-kpipeṭ*	‘small coat’
a-mḡer	‘sickle’	*a-mḡeyyer*	‘small sickle’
a-fus	‘hand’	*a-fweyyes*	‘small hand’
a-ḡṭiṭ	‘bird’	*a-ḡṭeyyeṭ*	‘small bird’

F:SG		**F:SG:DIM**	
ta-fellun-t	‘frying pan’	*ta-flilen-t*	‘small frying pan’
ta-wleḵ-t	‘gunny sack’	*ta-wleyyeḵ-t*	‘small gunny sack’
ta-xaḏem-t	‘ring’	*ta-xwiḏem-t*	‘small ring’
ta-b̲ṣat-t	‘mat’	*ta-b̲ṣeyyet-t*	‘small mat’

More frequent are nouns that have a masculine form and a feminine internal and external diminutive, a three-way distinction. The external diminutive refers to a smaller size while the internal and external diminutive combined refer to an even smaller object. Informants readily accept the second diminutive in many cases. It should be kept in mind that the diminutive except for size difference can stress condescendence, childish talk or involvement on the part of the speaker (Caubet, 1993:132).

M:SG		**F:SG**	**F:SG:DIM**	
a-ḡussar	‘hill’	*ta-ḡussar-t*	*ta-ḡʷsiser-t*	‘small hill’
a-sammer	‘sunny hillside’	*ta-sammer-t*	*ta-smimer-t*	‘small sunny hillside’

In some cases, the meaning difference has become lexicalised and refers to clearly defineable different types of objects. For instance, the noun **a-zref** meaning ‘road’ has a diminutive **ta-zref-t** to refer to ‘footpath’ and **ta-zreyyef-t** to mean ‘small path’ for animals such as rabbits and the like. In this case the reference is clearly different. The same goes for the nouns **a-xšeb̲**, **ta-xšeb̲-t** and **ta-xšeyyeb̲-t** which refer to traps of different sizes used for different kinds of animals. There are not many nouns which show this lexicalisation.

M:SG		**F:SG**		**F:SG:DIM**	
a-zref	‘road’	*ta-zref-t*	‘path’	*ta-zreyyef-t*	‘small path’
a-xšeḇ	‘boar trap’	*ta-xšeḇ-t*	‘bird trap’	*ta-xšeyyeḇ-t*	‘mouse trap’

An interesting case is the noun **a-salles** ‘darkness’. Here the diminutives refer to a less strong type of darkness.

M:SG		**F:SG**	**F:SG:DIM**	
a-salles	‘darkness’	*ta-salles-t* ‘slight darkness’	*ta-sliwes-t*	‘twilight’

The combination of external diminutive and internal diminutive can even result in a four-way distinction with a (Berber-morphology) masculine and feminine noun which both have an internal diminutive. The speakers indicated that the internal diminutives are smaller versions. In the case of **a-maleḥ** ‘fish’ there is a clear gradation from normal size to smaller. On other occasions the differences were not that clear-cut. It was sometimes indicated that there was no difference between the masculine and the feminine internal diminutives. The semantic motivation for these diminutives remains unclear.

M:SG	**M:SG:DIM**	**F:SG**	**F:SG:DIM**	
a-maleḥ	*a-mwileḥ*	*ta-maleḥ-t*	*ta-mwileḥ-t*	‘fish’
a-newwal	*a-nwiwel*	*ta-newwal-t*	*ta-nwiwel-t*	‘hut’
a-qemmum	*a-qmiqem*	*ta-qemmum-t*	*ta-qmiqem-t*	‘mouth’
a-qṛaḇ	*a-qṛeyyeḇ*	*ta-qṛaḇ-t*	*ta-qṛeyyeḇ-t*	‘bag’
a-saṯur	*a-swiṯer*	*ta-saṯur-t*	*ta-swiṯer-t*	‘pole’
a-sɣun	*a-sɣ^{w}eyyen*	*ta-sɣun-t*	*ta-sɣ^{w}eyyen-t*	‘rope’
a-šaquṛ	*a-šwiqeṛ*	*ta-šaquṛ-t*	*ta-šwiqeṛ-t*	‘axe’
a-ṛappas	*a-ṛpipeṣ*	*ta-ṛappaṣ-t*	*ta-ṛpipes-t*	‘hat’

In the following cases the nouns have the masculine internal diminutive and either the feminine external or internal diminutive, for example:

M:SG	M:SG:DIM	F:SG	F:SG:DIM	
a-ftuṯ	*a-ftiweṯ*	-	*ta-ftiweṯ*	‘piece of bread’
a-ḡelzim	*a-ḡlizem*	*ta-ḡelzim-t*	-	‘pick-axe’
a-fṛaṭ	*a-fṛeyyeṭ*	*ta-faṛiṭ-t*	-	‘water pool’
a-nšel	*a-nšeyyel*	*ta-nšel-t*	-	‘storage floor’

3.2. Internal diminutives: morphology

In the following discussion of the different base types we will begin with the singular nouns. Berber and Arabic class nouns show the same pattern and are therefore lumped together. Because degree is only expressed in the base, masculine and feminine nouns are treated together. In the section on the plural formation of diminutives, Arabic and Berber class nouns will be treated separately, as plurality is expressed in the affixes. Finally, some mixed forms and the diminutives of adjectives will be treated.

3.2.1. Quadriliteral bases

All quadriliteral bases insert a vowel **i** between the second and third consonant.

ccicc / ccicca

This scheme has four consonants and the vowel **i** between the second and the third consonant. The base vowels are suppressed. This group includes many nouns with the prefix **m-**. Singular schemes corresponding to this diminutive type are **cuccac**, **cccc**, **ciccac**, **cccic**, **cuccic**, **cccuc**, **ccucc**, **cccac**, **cCcac-a**, **ccccu**.

l-ɛunṣaṛ	*le-ɛniṣeṛ*	‘water source’
l-menšeṛ	*le-mnišeṛ*	‘saw’
l-qiṛṭaṣ	*le-qṛiṭeṣ*	‘bullet’
l-qezdir	*le-qzider*	‘tin can’
a-ḡelzim	*a-ḡlizem*	‘pick-axe’
l-meskin	*le-msiḵen*	‘poor man’
l-muṛhiṭ	*le-mṛiheṭ*	‘homosexual man’
a-ṣnuḇeṛ	*a-ṣniḇeṛ*	‘pine tree’
a-fernaq	*a-frineq*	‘bulging on a stick’
l-mežmaṛ	*le-mžimeṛ*	‘stove’

ta-mengaž-t	*ta-mnigež-t*	‘earring’
a-keskes ~ a-keskas	*a-ksikes*	‘couscous colander’

The same diminutive pattern is applied to triliteral common nouns of which the second base consonant is a geminate. This type seems to be infrequent in Arabic, and mainly occurs with certain types of adjectives (cf. Moscoso, 2003: 150-151, Marçais 1977:148, Caubet, 1993:138). In Ghomara Berber the Arabic class diminutives of this type are infrequent as well. However, Berber class nouns with the base structure **cvCvc** and **cCvc** are abundant . Other common nouns which have this type of diminutive are **ccCvc**, **cCvc**, **ccccu**, **cCvcc**, **ccc-a**. Examples:

a-ɛebbiz	*a-ɛbibez*	‘calf’
a-b̲eɛɛiš	*a-b̲ɛiɛeš*	‘lamb’
a-k̲emmar	*a-k̲mimer*	‘face’
a-muggaz	*a-mgigez*	‘stick to pin animals to’
a-kepput̠	*a-kpipet̠*	‘coat’
a-t̲ebban	*a-t̲biben*	‘trousers’
l-meqqaṣ	*le-mqiqeṣ*	‘scissors’
ta-gussar-t	*ta-g^{w}siser-t*	‘small hill’
ta-ḥeẓẓut̠-t	*ta-ḥẓiẓet̠-t*	‘naked woman’
ta-sammer-t	*ta-smimer-t*	‘sunny hill’
a-ṛẓeẓẓan	*a-ṛẓiẓen*	‘wasp’
a-qenqbu	*a-qniqeb̲*	‘beak, point of a knife’
l-keddab̲-a	*l-kd̲id̲b̲-a*	‘liar’
l-bezzun-a	*l-bzizn-a*	‘woman’s breast’
d-demmal-a	*d-dmiml-a*	‘hump’

One Berber noun with a diphthong **aw** between the second and third consonant forms its diminutive as if this diphthong were absent:

ta-qellawes-t	*ta-qliles-t*	‘small jar’

There are two Arabic-morphology nouns which double a middle single consonant in the diminutive. This is a regular process in the formation of the diminutive of adjectives (cf. paragraph III.9.2.4.).

l-qeḥb-a	*le-qḥiḥb-a*	‘prostitute’
a-fulus	*a-fliles*[42]	‘rooster’

The following word is exceptional in that it has a reduplication of the first consonant in third position instead of a geminate split.

ta-qemmum-t	*ta-qmiqem-t*	‘small mouth’

3.2.2. Triliteral bases

ccyyc / ccica

In this type **eyye** is inserted between the second and third base consonant. Two-consonantal nouns of which the final consonant is a geminate are included in this group. When the feminine suffix is added Arabic nouns of this type reduce the vowel sequence **eyye** to **i**, for example in the pair **s-sḇeyyeɛ** ‘small lion’, **s-sḇiɛ-a** ‘small lioness’[43]. Noun patterns corresponding to this diminutive scheme are **ccc**, **ccc**, **ccac**, **ccic**, **ccuc**, **cucc**, **cicc**, **cC**, **ccc-a**, **cucc-a**, **cC-a**, **ccac-a**, **cacc-a**.

l-ferg	*le-freyyeg*	‘swarm’
ḍ-ḍḵeṛ	*ḍ-ḍḵeyyeṛ*	‘male’
ta-ḵʷser-t	*ta-ḵʷseyyer-t*	‘piece of bread’
a-ɣʷlal	*a-ɣʷleyyel*	‘pot’
le-bzim	*le-bzeyyem*	‘buckle’
a-frux	*a-freyyex*	‘small chicken’
ṭ-ṭuɛm	*ṭ-ṭɛeyyem*	‘bait’
l-qird	*le-qreyyeḏ*	‘monkey’
a-ɣeṣṣ	*a-ɣṣeyyeṣ*	‘bone’
n-neṣṣ	*n-nṣeyyeṣ*	‘half’
s-seḇɛ-a	*s-sḇiɛ-a*	‘lioness’
š-šuṛb-a	*š-šṛib-a*	‘soup’
l-ɛeṭṭ-a	*le-ɛṭiṭ-a*	‘bite’
le-plaṣ-a	*le-pliṣ-a*	‘seat’

[42] Nouns which have this singular base structure have different diminutive types, compare **a-saṯur** > **a-swiṯer** ‘rafter’, **a-šaquṛ** > **a-šwiqeṛ** ‘axe’, **a-maṭuṭ** > **a-mṭiweṭ** ‘useless person’.

[43] Marçais (1977:146) notes that the **cciyyec-a** type is ‘*facultatif dans les parlers citadins et ruraux d’Algérie et du Maroc, des diminutifs masculins de type* ***c₁c₂iyyec₃,***’ one of his examples occurs in our corpus too, namely **qerda** dim. **qrida**. An important addition of him is ‘*Les formes considérées comme facultatives évoluent généralement vers un type où la diphthongue est complètement réduite*’ which supports us in our decision to lump these two together.

l-malṭ-a	*le-mliṭ-a*	‘blanket’
l-qahw-a	*le-qhiw-a*	‘coffee’
l-ḥelw-a	*le-ḥliw-a*	‘candy’

The base extension **eyy** is not part of the root to which the diminutive pattern is applied.

s-seḇn-eyy-a	*s-sḇin-eyy-a*	‘headband’

Some Arabic-morphology nouns show their gender in the diminutive by adding a feminine suffix **-a**, for example:

ḍ-ḍell	*ḍ-ḍlil-a*	‘shadow’

ccicv

The next diminutive formation has either the structures **ccici** or **ccicu**. The final geminate of two-consonantal bases is split. In the Berber-morphology class, which has three nouns in this structure, the vowel **u** is found in final position, being added or replacing base-final **a** or **aw**. The schemes **cucci**, **cacci**, **caccu**, **cCaci**, **ccci**, **cuC**, **cccac** correspond to this diminutive type.

l-kursi	*le-krisi*	‘chair’
l-kanki	*le-kniki*	‘gas lamp’
l-baṛku	*le-bṛiku*	‘ship’
l-ɣaṛbi	*le-ɣṛiḇi*	‘wind from the west’
l-ferdi	*le-fridi*	‘gun’
a-mušš	*a-mšišu*	‘cat’
a-mexṛaw	*a-mxiṛu*	‘rabbit young’
ta-mezla-ṯ	*ta-mzilu-ṯ*	‘goat that bears in the first year’

cciwc / cciwca

Numerically this is only a small group. In our corpus there are nineteen nouns which form the diminutive in this way[44]. A geminate consonant is degeminated before the infix **iw**. Singular normal schemes which correspond to this diminutive are **cCac**, **cCac-a**, **caCc**, **cacuc**, **cCuc**, **ccuc**, **ccac**, **ccc-a**.

[44] We count masculine and feminine nouns separately. If one counts on the basis of structure alone, the number would be lower, a certain structure can, and often does, have both masculine and feminine affixes.

l-ḥessas	*le-ḥsiwes*	‘submissive homosexual’
ṣ-ṣennaṛ-a	*ṣ-ṣniwṛ-a*	‘fish hook’
ta-salles-t	*ta-sliwes-t*	‘darkness’
ta-maṭuṭ-t	*ta-mṭiweṭ-t*	‘dirty person’
a-mellul	*a-mliwel*	‘white one’
ta-qšuš-t	*ta-qšiweš-t*	‘shell’
a-ftuṯ	*a-ftiweṯ*	‘small piece of bread’
š-šeɛṛ-a	*š-šɛiwṛ-a*	‘fishing line’

There is one feminine noun which has a base extension +**k̲**.

ta-ḡnaw-t	*ta-ḡniw + ek̲-t*	‘pumpkin’

cwicc

In this scheme **wi** is inserted between the first and second base consonant. All twenty one nouns in this group have a full vowel following the first base consonant. There are two schemes which form this diminutive: **cvcvc** and **cvycvc**.

l-kaɣiṭ	*l-kwiɣeṭ*	‘paper’
a-maleḥ	*a-mwileḥ*	‘fish’
l-qaleḇ	*le-qwileḇ*	‘mould’
a-saṯur	*a-swiṯer*	‘rafter’
l-muṭuṛ	*le-mwiṭeṛ*	‘engine’
l-muṭaɛ	*le-mwiṭeɛ*	‘place’
ta-šaquṛ-t	*ta-šwiqeṛ-t*	‘small axe’
ta-maras-t	*ta-mwires-t*	‘valley’
ṭ-ṭayfur	*ṭ-ṭwifeṛ*	‘table’
a-k̲ayḍaṛ	*a-k̲wiḍaṛ*	‘horse’
ta-zaytun-t	*ta-zwiten-t*	‘olive’

The following noun does not belong to the Arabic nor the Berber class, as it does not take a prefix nor the article. The diminutive has Berber morphology.

buriš	*a-bwireš*	‘flying ant’

cwyyc / cwic-a

This pattern applies to two- and three-consonantal noun bases. All nouns which form the diminutive in this way have a **w** or **y** as a second consonant. There are two nouns in the following list which have two consonants and a diphthong. Nouns which have this diminutive formation have the following patterns: **ciCac**, **ccuc**, **cacc**, **ccac**, **cacc-a**, **caccu**.

a-ɛeyyal	*a-ɛweyyel*	'boy'
ta-ɛeyyal-t	*ta-ɛweyyel-t*	'girl'
a-ɣyul	*a-ɣweyyel*	'donkey'
l-ḥawṭ	*a-ḥweyyeṭ*	'vegetable garden'
l-ḥayṭ	*a-ḥweyyeṭ*	'wall'
a-ṣyaṭ	*a-ṣweyyeṭ*	'border in a meadow'
ta-myan-t	*ta-mweyyen-t*	'baby goat'
ṛ-ṛwaḥ	*ṛ-ṛweyyeḥ*	'wind'
ta-gayzu-ṯ	*ta-gweyyez-t*	'kind of cow'
l-gayz-a	*le-gwiz-a*	'stick'

The following noun forms an exception because the addition of **wi** is combined with reduplication of the first base consonant[45]. This could be due to its adjectival origins.

a-ḇeyyuṭ	*a-ḇwiḇeṭ*	'white one'

There are a number of two-consonantal bases which have this diminutive. The base patterns corresponding to this diminutive type are: **cac**, **cic**, **cuc**, **cuc-a**, **caca**, **caC-a**. The vowel sequence **eyye** is reduced to **i** when a feminine suffix **-a** is added to the base. Most of the nouns in this group have Arabic morphology.

a-ẓaṛ	*a-ẓweyyeṛ*	'root'
ṛ-ṛaṣ	*ṛ-ṛweyyeṣ*	'cape'
l-ğim	*le-ğweyyem*	'pocket'
l-mus	*le-mweyyes*	'knife'
s-suq	*s-swiqa*	'market on an alternative day'[46]
ṭ-ṭaṣ-a	*ṭ-ṭwiṣ-a*	'bowl'

[45] This noun is a nominalised colour adjective. Colour adjectives all have reduplicated diminutive forms (cf. III.9.4.2.)

[46] If the normal market day, which is held on a fixed day in the week, for example coincides with a festivity, it is held on another day in a more compact form. This is referred to as '**swiqa**'.

ṭ-ṭaqq-a	*ṭ-ṭwiq-a*	‘small window’[47]
ta-saɛɛa-t	*ta-swiɛ-et*	‘moment, period’

This one noun is a variant of the above type which has an **-eyy** base extension.

r-riḥeyy-a	*r-rwiḥeyy-a*	‘traditional shoe’

3.2.3. Exceptions

A small number of diminutives do not fit any of the types discussed above.

ḍ-ḍaw	*ḍ-ḍwiwi*	‘light’
tu-zzal-t	*tu-zizel-t*	‘knives’
l-uṭa	*l-wiṭa*	‘plain’

3.2.4. Schemes with suffixes

-š ∼ -ž suffix

Two Berber class nouns combine suffixation of **-š** with a pattern insertion based on the type **ccyyc**[48]. In the second example there is distant voice assimilation and loss of the final base consonant.

a-qḇay	*a-qḇeyyeš*	‘billy goat’
a-ɣižd	*a-ɣžeyyež*	‘male kid goat’

3.2.5. Exceptional Berber feminine nouns

In two cases it is not clear which internal diminutive pattern is applied. These feminine Berber-morphology nouns have a **-t** ∼ **-et** suffix (cf. III.1.3.2.). For some of these nouns it is not immediately obvious what the underlying base structure is upon which the internal diminutive is applied. It seems that the suffix functions as part of the base. For example the noun **tarbat** ‘girl’ has the diminutive pattern **ccyyc** which indicates that it is seen as a three-consonantal base. This noun has no masculine form. The **t** is a base consonant.

ta-rbat	*ta-rbeyyet*	‘girl’

[47] The **qq** is degeminated in the diminutive.

[48] Moscoso (2003:151) gives only the example **šwiyya** > **šwiweš** or **šwiwweš** for Chefchaouen Arabic.

In the following noun the feminine suffix consonant is analyzed as a part of the base as well and correspondingly the diminutive scheme **cciwc** is applied to it. We therefore analyze this noun in the following way.

ta-ɣaṭ-t	*ta-ɣṭiw-et*	‘goat’

3.2.6. Diminutive of nominalised adjectives

Colour adjectives can be nominalised by applying Berber affixes and suffixing **-aw**. In the diminutive, the regular pattern of the adjectives is copied, and **-aw** is absent. Most of these colour nouns have doubling of the second base consonant and the insertion of an **i** after this consonant. Diminutives can be formed from masculine and feminine nouns (and their corresponding plurals), for example:

M:SG:EL	**M:SG:EL**	**F:SG:EL**	**F:PL:EL**	
a-keḥlaw	*a-kḥiḥel*	*ta-keḥlaw-t*	*ta-kḥiḥel-t*	‘black one’
a-ḥemṛaw	*a-ḥmimeṛ*	*ta-ḥemṛaw-t*	*ta-ḥmimeṛ-t*	‘red one’
a-zerqaw	*a-zrireq*	*ta-zerqaw-t*	*ta-zrireq-t*	‘blue one’
a-xed̠raw	*a-xd̠id̠er*	*ta-xed̠raw-t*	*ta-xd̠id̠er-t*	‘green one’
a-ṣefṛaw	*a-ṣfifeṛ*	*ta-ṣefṛaw-t*	*ta-ṣfifeṛ-t*	‘yellow one’
a-zergaw	*a-zrireg*	*ta-zergaw-t*	*ta-zrireg-t*	‘grey one’
a-ẓeɛṛaw	*a-ẓɛiɛeṛ*	*ta-ẓeɛṛaw-t*	*ta-ẓɛiɛṛ-t*	‘blond one’

There are two colour nouns, both referring to ‘white’, which do not take the suffix **-aw**. They show the same diminutive form in the singular as the adjectives.

M:SG:EL	**M:SG:EL**	**F:SG:EL**	**F:PL:EL**	
a-mellul	*a-mliwel*	*ta-mellul-t*	*ta-mliwel-t*	‘white one’
a-beyyuṭ	*a-b̲wib̲eṭ*	*ta-beyyuṭ-t*	*ta-b̲wib̲eṭ-t*	‘white one’

3.3. The diminutive plural

Arabic-morphology and Berber-morphology plurals are formed by means of affixation. Arabic plurals are presented first after which Berber plural formation will be discussed.

3.3.1. Arabic-morphology plurals

Arabic diminutive plurals are formed regularly by the external suffix **-at̲** or **-in**. The suffix **-at̲** is used on both masculine and feminine nouns while **-in** is used on a couple of masculine nouns. Some examples are:

ṭ-ṭb̲iṣel	*ṭ-ṭb̲iṣl-at̲*	'little plate'
ṭ-ṭwifeṛ	*ṭ-ṭwifṛ-at̲*	'little table'
d-dšeyyeṛ	*d-dšeyyṛ-at̲*	'little village'
ṭ-ṭwiṣ-a	*ṭ-ṭwiṣ-at̲*	'little cup'
ṣ-ṣmiṭ-a	*ṣ-ṣmiṭ-at̲*	'little belt'
le-xṛib̲-a	*le-xṛib̲-at̲*	'little ruin'
le-qniṭṛ-a	*le-qniṭṛ-at̲*	'little bridge'

Nouns ending in a vowel **i** have a semi-vowel **yy** before the suffix, e.g:

le-krisi	*l-krisiyy-at̲*	'little chairs'

The middle vowel sequence **eyy** is reduced to **i** when **-at̲** is suffixed.

ṛ-ṛb̲eyyeɛ	*ṛ-ṛb̲iɛ-at̲*	'little/small grass'
d-dreyyeɛ	*d-driɛ-at̲*	'little arm'

There are a few masculine nouns in our corpus which take the plural marker **-in**. Again, the vowel sequence **eyy** is reduced to **i**.

z-zweyyef	*z-zwif-in*	'little handkerchief'
ṭ-ṭṛeyyef	*ṭ-ṭṛif-in*	'little piece'
š-šfifeṛ	*š-šfifṛ-in*	'small thief'

3.3.2. Berber-morphology plurals

The Berber diminutive nouns show the same affixal morphology as non-diminutive regular plurals. They express number, state and gender in the affixes. Masculine nouns have the prefix **a**- in the singular EL, **u**- in the singular EA and **i**- in the plural. The suffix is always **-en** except for two nouns which take the suffix **-an**. Feminine nouns have a regular **ta**-….-**t**

~ **-t̲** or **ta**-….-**et** circumfix in the singular EL, **t**-….-**t** ~ -**t̲** in the singular EA, **ti**-….-**an** circumfix in the plural EL and **t**-….-**an** in the plural EA. Some feminine nouns have a base extension +**t̲** before **-an**. Feminine nouns reduce vowel **eyy** to **i** when a plural suffix is added.

3.3.2.1. Masculine plurals

The masculine plural takes the prefix **i**- and the suffix -**en**, for example:

M:SG:EL	**M:PL:EL**	
a-ɣṛiṛef	*i-ɣṛiṛf-en*	‘small earthernware plate’
a-ɣdiden	*i-ɣdidn-en*	‘small fig tree’ (type)
a-ɛweyyel	*i-ɛweyyl-en*	‘small boy’
a-xneyyeq	*i-xneyyq-en*	‘small corridor’
a-qzizen	*i-qzizn-en*	‘small dog puppy’

The following two masculine nouns form an exception because they take the -**an** plural suffix.

M:SG:EL	**M:PL:EL**	
a-ftiweṯ	*i-ftiwṯ-an*	‘small piece of bread’
a-mṭiweṭ	*i-mṭiwṭ-an*	‘small useless person’

Two Arabic-morphology nouns take the Berber plural suffix -**en**.

le-mweyyes	*le-mweyys-en*	‘small retractable knife’
le-qweyyeṣ	*le-qweyyṣ-en*	‘small arch’

3.3.2.2. Feminine plurals

The plurals of feminine diminutive nouns have the same affixes as the normal plurals. By far the most frequent type of feminine diminutive plural is the one which has prefix **ti**- and suffix -**an**.

F:SG:EL	**F:PL:EL**	
ta-fšiqeṛ-t	*ti-fšiqṛ-an*	‘small bale’
ta-lfifeṭ-t	*ti-lfifṭ-an*	‘small blister’
ta-mnigež-t	*ti-mnigž-an*	‘small earring’

ta-qzizen-t	*ti-qzizn-an*	‘small female puppy’
ta-wfeyyel-t	*ti-wfeyyl-an*	‘small eggs’
ta-wqiqef-t	*ti-wqiqf-an*	‘small door jamb’
ta-ṛpiṗeṣ-t	*ti-ṛpiṗṣ-an*	‘small straw hat’
ta-flilen-t	*ti-fliln-an*	‘small clay frying pan’

Two diminutive nouns have a prefix **ta-** in the plural. The base has an extension +**t̲**. Both singular and plural prefixes distinguish state.

F:SG:EL	**F:SG:EA**	**F:PL:EL**	**F:PL:EA**	
ta-smimer-t	*te-smimer-t*	*ta-smimer* + *t̲-an*	*te-smimer* + *t̲-an*	‘small sunny land’
ta-ɣweyyel-t	*te-ɣweyyel-t*	*ta-ɣweyyel* + *t̲-an*	*te-ɣweyyel* + *t̲-an*	‘small filly’

A couple of other nouns also have a base extension +**t̲** in the plural. These nouns have the regular prefix **ti-**. Many of these nouns reduce vowel **eyy** in the singular to **i** in the plural.

F:SG:EL	**F:PL:EL**	
ta-ḥbib-et	*ti-ḥbib* + *t̲-an*	‘small granule, pimple’
ta-rbeyy-et	*ti-rbeyy* + *t̲-an*	‘little girl’
ta-freyyex-t	*ti-frix* + *t̲-an*	‘little chicken, girl’
ta-nqeyyel-t	*ti-nqil* + *t̲-an*	‘small plant stengel’
ta-wneyyef-t	*ti-wnif* + *t̲-an*	‘small bread’
ta-zreyyef-t	*ti-zrif* + *t̲-an*	‘small road’

3.4. Mixed Berber and Arabic forms

Some Arabic class nouns change to the Berber class when in the diminutive. As only the nouns below show this pattern this is to be considered a marginal process.

le-fḥel	*a-fḥeyyel*	‘bull’
r-rt̲il-a	*ta-rt̲eyyel-t*	‘spider’
l-feṛn	*a-fṛiṛen* (~ *l-fṛeyyen*)	‘traditional oven’
ṣ-ṣtel	*ta-ṣteyyel-t*	‘bucket’

There is one noun which has a Berber-morphology masculine form and a feminine Arabic-morphology diminutive.

a-mezbel	*le-mziḇl-a*	‘refuse-dump’

3.5. Augmentative

There are a number of nouns that can form an augmentative. Augmentatives are formed by applying masculine Berber affixes. The nouns are derived either from feminine Berber-morphology nouns or from Arabic-morphology nouns (of which many are feminine). The augmentative only applies to the semantic group of lower animates and inanimates. In the Berber-morphology class the feminine noun has to be the basic term. If the masculine is the basic term, only diminutives can be formed.

There are morphological differences between the two morphological classes. Almost all masculine nouns that are derived from Berber feminine nouns do not show any particular augmentative morphology. They simply have the masculine nominal affixes (cf. III.1. for nominal morphology). In the group that derives the augmentative from Arabic-morphology nouns there are three types; the first type has plain Berber-morphology masculine affixation, the second type combines the Berber affixes with a suffix, while the third type combines Berber affixation with a change of the base pattern.

Many Arabic nouns that form an augmentative are fruits and vegetables. Most nouns referring to fruits and vegetables oppose a collective and a unity noun. The unity noun takes Berber feminine affixes. The augmentative of the unity nouns can be formed by making them masculine. They refer to one big unit. Below we will only present the augmentative masculine form. It is not possible to combine the internal diminutive with an augmentative noun. The plural of the augmentatives is either unattested or formed in a regular way (see III.1. for Berber-morphology plural formation).

3.5.1. Berber-morphology nouns

The following list presents a number of Berber-morphology feminine nouns that have an augmentative. All these forms have a Berber-morphology plural.

F:SG:EL		**M:SG:EL**	
ta-fraw-t	‘leaf’	*a-fraw*	‘big leaf’
ta-mmar-t	‘beard’	*a-mmar*	‘big beard’
ta-mṣeṭ-t	‘thigh’	*a-mṣeṭ*	‘big thigh’
ta-ɛeddis-t	‘belly’	*a-ɛeddis*	‘big belly’
ta-ṛḥeḇ-t	‘land’	*a-ṛḥeḇ*	‘big land’
ta-wfal-t	‘egg’	*a-wfal*	‘big egg’
t-uzzal-t	‘knife’	*a-wzzal*	‘big knife’
ta-qebbiṭ-t	‘bundle’	*a-qebbiṭ*	‘big bundle’
ta-ɣ^{w}lal-t	‘pot’	*a-ɣ^{w}lal*	‘big pot’

ta-xxun-t	'ass'	*a-xxun*	'big ass'
ta-xšeḇ-t	'trap'	*a-xšeḇ*	'big trap'
ta-ɛebbuṭ-t	'navel'	*a-ɛebbuṭ*	'big navel'
ta-ḇekkiw-t	'worm'	*a-ḇekkiw*	'big worm'
ta-ḡnaw-t	'pumpkin'	*a-ḡnaw*	'big pumpkin'

There is one Berber-morphology noun which gets a base extension +**iw** in the masculine.

F:SG:EL		**M:SG:EL**	
ta-sarka	'traditional shoe'	*a-sark* + *iw*	'big traditional shoe'

There is one noun which has a suppletive augmentative counterpart:

F:SG:EL		**M:SG:EL**	
ti-ṭṭ	'eye'	*a-ḇerruq*	'big eye'

3.5.2. Arabic-morphology nouns

The augmentatives corresponding to Arabic-morphology nouns can be divided in three groups. The first group simply gets masculine Berber affixation just like the Berber-morphology nouns treated above (except for one). Except for **a-ḇeṛquq** and **a-qṣeḇ** it is not possible to form a plural of the augmentatives using Berber affixation. Instead, the usual Arabic-morphology plural is used. Some examples are:

		M:SG:EL	
l-bezzun-a	'breast'	*a-ḇezzun*	'big breast'
le-bṭaṭ-a	'potatoes'	*a-ḇaṭaṭ*	'big potato'
maṭiš-a	'tomatoes'	*a-maṭiš*	'big tomatoe'
t-teffaḥ	'apples'	*a-teffaḥ*	'big apples'
d-dellaḥ	'watermelons'	*a-dellaḥ*	'big watermelon'
l-bettix	'melons'	*a-ḇettix*	'big melon'
le-bṣel	'onions'	*a-ḇṣel*	'big onion'
le-qṣeḇ	'cane'	*a-qṣeḇ*	'big cane'
l-baḵur	'fig'	*a-ḇaḵur*	'big fig'
l-beṛquq	'prunes'	*a-ḇeṛquq*	'big prune'
l-qenbul-a	'bomb'	*a-qenbul*	'big bomb'
l-keṛṛus-a	'wagon'	*a-keṛṛus*	'big wagon'
le-hraw-a	'beating stick'	*a-hraw*	'big beating stick'

bušbel	‘mushroom’	*a-bušbel*	‘big mushroom’[49]
buqɛaṣ	‘unripe fig’	*a-ḇuqɛaṣ*	‘big unripe fig’[50]

Group 2

The augmentatives in this group combine the masculine affixes with one of the suffixes **-un**, **-iw** and (in one case) **-win**.

-un

		M:SG:EL	
š-škaṛ-a	‘bag’	*a-šekṛ-un*	‘big bag’
l-lefɛ-eṯ	‘snake’	*a-lefɛ-un*	‘big snake’
l-ɛaṯb-a	‘threshold’	*a-ɛeṯb-un*	‘big threshold’
š-šmeɛ	‘candles’	*a-šemɛ-un*	‘big candle’
le-bṣel	‘onions’	*a-ḇeṣl-un*	‘big onion’
l-left	‘sweet potato’	*a-left-un*	‘big sweet potato’
l-qefl-a	‘button’	*a-qefl-un*	‘big button (sea vest)’
l-qettal-a	‘cobra’	*a-qettal-un*	‘big cobra’
ṣ-ṣennaṛa	‘fish hook’	*a-ṣennaṛ-un*	‘big fish hook’

There is one noun which has two possible forms of which the second is irregular.

		M:SG:EL	
l-ḥafer	‘foot print’	*a-ḥefṛ-un* ~ *a-ḥawfar*	‘big foot print’

Some augmentatives have a suffix **-iw**. The few nouns which take this form all end in **a**.

-iw		**M:SG:EL**	
ṛ-ṛeml-a	‘thin sand’	*a-ṛeml-iw*	‘thick sand’
l-xanč-a	‘bag’	*a-xanč-iw*	‘big bag’
ṛ-ṛeẓẓ-a	‘turban’	*a-ṛeẓẓ-iw*	‘big turban’

-win

There is one noun which takes the suffix **-win**.

		M:SG:EL	
r-rḥ-a	‘mill’	*a-reḥ-win*	‘big mill’

[49] The noun does not take an article.

[50] idem.

Group 3

The final group form the augmentative by changing the base pattern in the masculine. All nouns have the pattern **cCvc** in het augmentative. The vowel is **a**, **i** or **u**.

d-ders-a	‘wheat heap’	*a-derrus*	‘big wheat heap’
l-bḥar	‘sea’	*a-ḇeḥḥur*	‘big wave’
l-ɛeṭṭ-a	‘bite’	*a-ɛeṭṭuṭ*	‘big bite’
ṭ-ṭḇel	‘tambourine’	*a-ṭebbal*	‘big tambourine’
d-debz-a	‘slap’	*a-debbiz*	‘big slap’
l-gezb-a	‘horn’	*a-gezziḇ*	‘big horn’
š-šṭeḇ	‘heap of bush’	*a-šeṭṭiḇ*	‘big heap of bush’
l-gayz-a	‘beam’	*a-geyyuz*	‘big beam’
l-ḥayṭ	‘wall’	*a-ḥeyyuṭ*	‘big wall’
l-ɣayṭ-a	‘flute’	*a-ɣeyyuṭ*	‘big flute’
l-ǧeld	‘skin’	*a-želluḏ*	‘big skin’
l-xubz-a	‘one bread’	*a-xubbaz*	‘one big bread’

4. Interaction of Arabic and Berber systems

In this section nouns are presented whose inflection is both Arabic and Berber. Nouns which oppose a collective and a unity noun can have Arabic morphology for the collective noun and Berber morphology for the unity noun. Moreover, a fair amount of nouns have Berber morphology in the singular and Arabic morphology in the plural. There are some Berber-morphology deadjectival nouns which are derived from Arabic-morphology adjectives. Finally, adjectival (nisba-type) nouns, the Berber element **ay** for tribal affiliation and the elements **bu**-, **ṣ-ṣḥab** and **mul** are discussed.

4.1. Collective and unity nouns

The collective refers to a group of individuals or objects. It has masculine singular agreement (with verbs, adjectives and pronouns). Most collectives are found within the semantic group of fruits and vegetables. The collective nouns in Ghomara Berber are taken over from Arabic in their original forms, i.e. they retain their Arabic inflectional morphology. There are no collective - unity noun oppositions which have only Berber-morphology. Some unity nouns are formed according to Arabic morphology; individuation of a noun is established by adding the feminine suffix **-a** to the masculine form. Only some of these nouns allow for a plural. Most unity nouns apply the Berber feminine affixes. It is always possible to form a plural of a Berber-morphology unity noun. A number of Berber-morphology feminine nouns have base extensions. The attested base extensions in the singular or plural are: +**i**, +**t̲**, +**it**, +**it̲**, +**k̲**, +**iw**. Especially fruit, vegetables, trees and plants oppose a collective and a unity noun. The nouns **manḍalina** ‘mandarine’, **xiča** ‘dried fig’ and **maṭiša** / **tumaṭiš** ‘tomatoe’ do not take an article. However, there are a number of nouns that fall outside of this group. Examples of Arabic-Berber correspondences are:

M:SG	**F:SG:EL**	**F:PL:EL**	
l-banan	*ta-b̲anan-t*	*ti-b̲anan-an*	‘banana’
l-baḳ̲ur	*ta-b̲aḳ̲ur-t*	*ti-b̲aḳ̲ur-an*	‘fig’
l-laymun	*ta-laymun-t*	*ti-laymun-an*	‘lemon’
manḍalin-a	*ta-manḍalin-t*	*ti-manḍalin-an*	‘mandarin’
l-beṛquq	*ta-b̲eṛquq-t*	*ti-b̲eṛquq-an*	‘prune’
d-dellaḥ	*ta-dellaḥ-t*	*ti-dellaḥ-an*	‘watermelon’
l-felfel	*ta-felfel-t*	*ti-felfl-an*	‘paprika’
l-firas	*ta-firas-t*	*ti-firas-an*	‘pear’
l-lečin	*ta-lečin-t*	*ti-lečin-an*	‘orange’
l-lingaṣ	*ta-lingaṣ-t*	*ti-lingaṣ-an*	‘pear’
t-teffaḥ	*ta-teffaḥ-t*	*ti-teffaḥ-an*	‘apple’
s-snub̲eṛ	*ta-snub̲eṛ-t*	*ti-snub̲ṛ-an*	‘stone pine’

l-xeṛṛuḇ	*ta-xeṛṛuḇ-t*	*ti-xeṛṛuḇ-an*	‘carob bean / tree’
le-xniš	*ta-xniš-t*	*ti-xniš-an*	‘plant’
l-bettix	*ta-ḇettix-t*	*ti-ḇettix-an*	‘melon’
ṭ-ṭmar	*ta-ṭmaṛ-t*	*ti-ṭmaṛ-an*	‘date’
ṣ-ṣefṣaf	*ta-ṣefṣaf-t*	*ti-ṣefṣaf-an*	‘tree’ (sp.)
nnwaṛ	*ta-newwaṛt*	*ti-newwaṛ-an*	‘plant’ (generic)
l-lažuṛ	*ta-lažuṛ-t*	*ti-lažuṛ-an*	‘brick’
le-fḥem	*ta-fḥem-t*	---	‘charcoal’
n-namus	*ta-namust*	*ti-namus-an*	‘mosquito’

The following Berber-morphology unity nouns take base extensions.

M:SG	**F:SG:EL**	**F:PL:EL**	
l-ǧuǧeṯ	*ta-žuž-et*	*ti-žuž + ṯ-an*	‘peanut’[51]
n-niš	*ta-niš-et*	*ti-niš + ṯ-an*	‘apricot’
l-luwqiṯ	*ta-lewqit-t*	*ti-lewqit-an*	‘match’
l-lawz	*ta-lawz + i-ṯ*	*ti-lawz + iṯ-an*	‘almond’
š-šmuṛṛ-a	*ta-šmuṛṛ + eḵ-t*	*ti-šmuṛṛ + ḵ-an*	‘barbary fig’
s-sfenǧ	*ta-sfenǧ + eḵ-t*	*ti-sfenǧ + ḵ-an*	‘kind of donut’

In addition to a base extension the following noun also has a vowel change **i** > **a** in the plural.

xič-a	*ta-xač + iw-t*	*ti-xač + iw-an*	‘dried fig’

For the noun ‘tomato’ there are two equivalents which are in free variation. As the noun **tumaṭiš** ‘tomato’ has this form we do not consider **tu** a prefix in the singular unity noun.

M:SG	**F:SG:EL**	**F:PL:EL**	
maṭiša~ tumaṭiš	*ta-maṭišt~tumaṭiš-t*	*ti-maṭiš-an*	‘tomato’

The following collective-unity nouns have Arabic morphology all over. Some unity nouns have an attested plural form. The noun **š-šmeɛ** ‘candles’ adds an extension + **ay** in the plural.

M:SG	**F:SG**	**F:PL**	
ṭ-ṭuḇ	*ṭ-ṭuḇ-a*	*ṭ-ṭuḇ-aṯ*	‘dried clay’
l-lḥem	*l-leḥm-a*	-	‘meat’
l-ǧawhaṛ	*l-ǧawhaṛ-a*	-	‘jewel’

[51] See II.1.3. phonology for **ǧ** and **ž**.

ṣ-ṣaḇun	*ṣ-ṣaḇun-a*	-	‘soap’
š-šmeɛ	*š-šemɛ-a*	*š-šemɛ + ay-aṯ*	‘candle’
n-nxel	*n-nexl-a*	-	‘palm tree’

In one case the Berber singular nouns refers to the collective and the Arabic singular noun refers to the unity.

M:SG	**F:SG:EL**	
ta-lqim-t	*l-xubz-a*	‘bread’

In one case the Arabic singular refers to the collective, but a plural Berber (diminutive) noun to refer to single small children.

M:SG	**F:SG:EL**	
le-ḥšam	*i-ḥšišm-en*	‘children’

One noun has a Berber unity noun and an Arabic-morphology plural, for example:

M:SG	**F:SG:EL**	**PL**	
d-dlem	*ta-dlem-t*	*d-dluma*	‘plant’

In some cases either the Arabic- or Berber-morphology unity noun functions as a diminutive:

M:SG	**F:SG:EL**	**F:PL:EL**	**PL**	**Dim:SG**	**Dim:PL**	
l-qiṛṭaṣ	*ta-qiṛṭaṣ-t*	*ti-qiṛṭaṣ-an*	*le-qṛaṭeṣ*	*le-qṛiṭeṣ*	*le-qṛiṭṣ-aṯ*	‘bullet’

The following Berber-morphology diminutive has a base extension + **ṯ**.

M:SG	**F:SG:EL**	**F:PL:EL**	**PL**	
l-luḥ	*ta-lwiḥ-et*	*ti-lwiḥ + ṯ-an*	*l-lwayeḥ*	‘shelf’

4.2. Berber singular - Arabic plural

Some Berber-morphology singulars have Arabic-morphology plurals. Their feminine counterpart, if existent, has Berber morphology.

M:SG:EL	**F:SG:EL**	**PL**	
a-beɛbuš	*ta-beɛbuš-t*	*le-bɛabeš*	‘dung beetle’
a-heğal	*ta-heğal-t*	*le-hğağel*	‘widow(er)’
a-karḇaš	*ta-karḇaš-t*	*le-kraḇeš*	‘claw’

a-menǧuṛ	-	*le-mnažeṛ*	‘traditional chair’
a-meɣraḇi	*ta-meɣraḇi-ṯ*	*le-mɣaṛḇa*	‘Moroccan’
a-rifi	*ta-rifi-ṯ*	*r-rwafa*	‘Riffian’
a-meḥǧuṛ	*ta-meḥǧuṛ-t*	*le-mḥažeṛ*	‘orphan’
a-meṣmaṛ	-	*le-mṣumaṛ*	‘nail’
a-mqerreḏ	*ta-mqerreḏ-t*	*le-mqerrḏin*	‘weak, small person’
a-mxazni	-	*le-mxazniyya*	‘government agent’
a-mɛawen	*ta-mɛawen-t*	*le-mɛawnin*	‘help’
a-mḥaḏri	-	*le-mḥaḏra*	‘pupil’
a-qṛin	*ta-qṛin-t*	*le-qṛan*	‘peer’
a-xeddam	*ta-xeddam-t*	*l-xeddama*	‘worker’
a-ɛeyyal	*ta-ɛeyyal-t*	*le-ɛwawel*	‘boy / girl / children’
a-ḵayḍar	-	*le-ḵyaḍer*	‘horse’
a-fešqaṛ	*ta-fešqaṛ-t*	*le-fṣaqeṛ*	‘bale’

One noun has an Arabic-morphology feminine and plural. For another noun Arabic- and Berber-morphology variants are in free variation.

M:SG:EL	**F:SG**	**PL**	
a-g^{w}ren	*le-grana*	*le-grayen*	‘frog’
a-šeṛṛiṭ	*ta-šeṛṛiṭ~š-šeṛṭ-a*	*i-šeṛṛiṭ-en~š-šṛaṭ*	‘line, scar’

One noun has Berber-morphology singulars and a feminine plural, whereas the general plural is Arabic.The feminine plural has a base extension +**ṯ**.

M:SG:EL	**F:SG:EL**	**F:PL:EL**	**PL**	
a-žaṛ	*ta-žaṛ-t*	*ti-žaṛ+ṯ-an*	*l-ǧiṛan*	‘neighbour’

There are two nouns in our corpus for which the Berber- and Arabic-morphology plurals are in free variation.

M:SG:EL	**PL**	
a-keppuṭ	*i-keppaṭ~ le-kpapeṭ*	‘coat’
a-quṛtaš	*i-quṛtaš~ le-qṛateš*	‘plant’ (sp.)

There is one case of an Arabic singular noun which has a Berber-morphology plural.

M:SG	**PL**	
l-mehraz	*i-mehrazen*	‘insect’ (sp.)

Finally, the noun for ‘nose’ is an Arabic-morphology plural, whereas the word for ‘nostril’ is a Berber-morphology singular noun:

PL		**F:SG:EL**	**F:PL:EL**	
le-xnafer	‘nose’	*ta-xenfur-t*	*ti-xenfur-an*	‘nostril’

4.3. Deadjectival nouns

A limited amount of nouns can be derived from Arabic-morphology adjectives using Berber morphology (cf. III.9.2.4. for diminutives of these forms). These are mostly colour nouns. Most of these nouns are derived by adding Berber nominal inflection and a base extension + **aw**, for example:

Adjective			**M:SG**	**F:SG**	
kḥel	‘black’	>	*a-keḥl* + *aw*	*ta-keḥl* + *aw-t*	‘black one’
ḥmeṛ	‘red’	>	*a-ḥemṛ* + *aw*	*ta-ḥemṛ* + *aw-t*	‘red one’
zreq	‘blue’	>	*a-zerq* + *aw*	*ta-zerq* + *aw-t*	‘blue one’
xḏer	‘green’	>	*a-xeḏr* + *aw*	*ta-xeḏr* + *aw-t*	‘green one’
ṣfeṛ	‘yellow’	>	*a-ṣefṛ* + *aw*	*ta-ṣefṛ* + *aw-t*	‘yellow one’
zreg	‘grey’	>	*a-zerg* + *aw*	*ta-zerg* + *aw-t*	‘grey one’
ẓɛeṛ	‘blond’	>	*a-ẓeɛṛ* + *aw*	*ta-ẓeɛṛ* + *aw-t*	‘blond one’

There are two color nouns, both referring to ‘white’, which do not take the base extension + **aw**. One of these nouns is derived from an Arabic-morphology adjective, the other from a Berber-morphology adjective:

Adjective			**M:SG**	**F:SG**	
byeṭ	‘white’	>	*a-beyyuṭ*	*ta-beyyuṭ-t*	‘white one’
mellul	‘white’	>	*a-mellul*	*ta-mellul-t*	‘white one’

There are two more examples of de-adjectival nouns in our corpus. One is derived from an Arabic-morphology adjective, the other from a Berber-morphology adjective. The first noun adds an irregular element **ḥen**.

ṭwil	‘tall’	>	*a-ḥenṭwil*	‘very tall person’
messus	‘insipid’	>	*ta-messus-t*	‘bread without salt’

4.4. Nisba type and tribal affiliation

The suffix -**i** (masculine), and base extensions plus suffix **eyy-a** (feminine), **eyy-in** (plural) has several functions, one of which is to refer to ethnicity or place of origin (cf. Marçais, 1977:113 for other functions).

M:SG	**F:SG**	**PL**	
t-tiṭwan-i	*t-tiṭwan-eyy-a*	*t-tiṭwan-eyy-in*	‘person from Tetouan’
l-buzraṯ-i	*l-buzraṯ-eyy-a*	*l-buzraṯ-eyy-in*	‘person from Beni Bouzra’
l-menṣur-i	*l-menṣur-eyy-a*	*l-menṣur-eyy-in*	‘person from Beni Mensour’

In addition, there is a Berber element **ay** used for tribal affiliation which can be translated as ‘those of’. It only has a plural meaning. It is connected to the noun by the genitive prepostion **n**. Note that it is only used for the names of neighbouring tribes. Tribes which are located further away are referred to by the Arabic element **mni**, e.g. **mni xaled** ‘Bani Khaled’.

ay n buẓṛa	‘those of Bouzra’
ay n menṣur	‘those of Mensour’
ay n ẓyaṯ	‘those of Ziat’

In the following case the adjectival nisba suffixes are used to single out a person out of a collective noun, for example:

		M:SG	**F:SG**	
l-lihuḏ	‘Jews’	*l-lihuḏ-i*	*l-lihuḏ-eyy-a*	‘Jew’

The feminine form of the following noun refers both to the feminine and the plural.

M:SG		**F/PL**	
l-ǧaḍarm-i	‘male gendarme’	*ǧaḍarm-eyy-a*	‘female gendarme / gendarmes’

The suffix -**eyy-a** is used to refer to different age groups of goats depending on the number of teeth they have. In its fourth year the goat has all its teeth.

F:SG	
t-tn-eyy-a	‘one year old goat (with two teeth)’

r-rbaɛ-eyy-a	‘two year old goat’
le-xmas-eyy-a	‘three year old goat’
s-sdas-eyy-a (~ *ž-žamɛ-a*)	‘four year old goat’

4.5. Pre-nominal elements bu-, sḥaḇ, mul

The element **bu**- can be prefixed to nouns. Its meaning is something like ‘possessor of’. It can also have a pejorative meaning in combination with some characteristic with which the referent is known (e.g. big nose, big feet). When preceding a Berber-morphology noun, the latter is in the EA. The form refers to the masculine, there is no feminine form. For the plural the noun **ṣṣḥaḇ** ‘people’ is used, followed by the EL. The prefix **bu**- can be preserved when **ṣṣḥab** precedes. The noun M:SG **mul** F:SG **mul-a** PL **mwal-in** ‘owner’ has a similar function. This noun takes pronominal suffixes (cf. III.11.4.). The nouns **sḥaḇ** and **mul** are followed by nouns in the EL. Some examples are:

bu-

bu-t-ɛeddis-t	‘the one with the belly’
bu-i-fadd-en	‘the one with the knees’
bu-te-xxun-t	‘the one with the ass’

sḥaḇ

sḥaḇ ti-ɛebbuṭ-an	‘the people with the bellies’

mul

mul l-ḥanuṯ	‘the owner (M.) of the shop’
mul ṭṭunuḇir	‘the owner of the car’
mul-a l-ḥanuṯ	‘the owner (F.) of the shop’
mwal-in ti-mmira	‘the people with the beards’
mwal-in bu-t-ɛebbuṭ-an	‘the people with the bellies’

5. Non-affix nouns

There are a number of nouns which do not take affixes in the singular. They can be categorised into different groups; kinship nouns that do not have nominal affixes, nouns that have a Berber-morphology plural, singularia tantum without affixes and finally nouns which have the Arabic-morphology plural -**aṯ**. The kinship nouns display features which are different from other morphology classes. None of these nouns has Berber inflection nor can they take the Arabic article **l**-. The nouns that have a plural either have a suppletive form or take a suffix -**waṯ** which is not attested in other morphology classes. This plural suffix cannot be analyzed as a glide between the final base vowel **i** and the plural marker as all other nouns have a glide **yy**. The singular of a number of kinship nouns which are clearly borrowed from Arabic, always imply a relation to the first person singular, i.e. 'my aunt', 'my uncle'. The final base vowel **i** is the petrified Arabic 1SG possessive suffix. All kniship nouns enumerated below have inherent 1SG reference. It is not necessary to use the possessive pronoun, except for emphatic purposes. To refer to other persons and in the plural, a possessive preposition is used, e.g. **ɛemṯi nnes** 'his/her paternal aunt'. There are two kinship nouns that have a suppletive plural **ayeṯma** 'brothers and sisters'. These nouns refer to the first person possessor when used without a suffix. They take pronominal suffixes in the second and third person singular (not in other persons for which a genitive construction is used, cf. III.11.4. on pronouns). Other kinship nouns belong to the Berber or the regular Arabic morphology class. The kinship nouns in this class are:

SG		**PL**	
ḵma	'brother'	*ayeṯma*	'brothers and sisters'
uleṯma	'sister'	*ayeṯma*	'brothers and sisters'
ɛemṯi	'paternal aunt'	*ɛemmṯi-waṯ*	'paternal aunts'
ɛemmi	'paternal uncle'	*ɛemmi-waṯ*	'paternal uncles'
xalti	'maternal aunt'	*xalti-waṯ*	'maternal aunts'
ḥḇiḇi	'maternal uncle'	*ḥḇiḇi-waṯ*	'maternal uncles'
žeddi	'grandfather'	*žeddi-waṯ*	'grandfathers'
ɛezzi	'older brother'	-	
nanna	'older sister'	-	
ḇaḇa	'father'	-	
yemma	'mother'	-	

Some non-affix nouns have a Berber-morphology plural, for example:

buqɛaṣ (~ *a-ḇuqɛaṣ*)	*i-ḇuqɛaṣ-en*	'unripe fig'
buriš	*i-buriš-en*	'ant with wings'
žaymuṯ	*i-žaymuṯ-en*	'gadfly'

The following two nouns only take a Berber-morphology plural suffix.

ṭrayllil	*ṭrayllil-en*	‘bat’
paɣeyyu	*paɣeyyu + w-en*	‘parrot’

Other nouns do not take the Arabic article **l**- in the singular, but have an Arabic-morphology plural -**aṯ**. Some of these nouns are Spanish loanwords. The following two nouns which do not allow for the article take the plural suffix -**aṯ**.

budrihem	*budrihm-aṯ*	‘type of bird’
muḵa	*muḵ-aṯ*	‘owl’

There are some singularia tantum which cannot be combined with the article[52]. It should be noted that a considerable amount of these nouns in our corpus are plant names. Some examples are:

bušuḵ	‘iron fence’	
buḏen	‘kind of pasta’	
buḥḇel	‘life’	
buhrawa	‘bird’ (sp.)	
quṛṛayes	‘insect’ (sp.)	
qlallu	‘plant’ (sp.)	
kersanna	‘bitter vetch’	
qesbaṭṭa	‘plant’ (sp.)	
gamba	‘shrimp’	(< Sp.)
gana	‘interest’	(< Sp.)

One of these singularia tantum is a compound made up out of **serraq** ‘thief’ + **zziṯ** ‘oil’. It does not take an article.

serraqzziṯ	‘cockroach’

[52] Part of the nouns in this group have the element **bu**-. In some cases it can without problems be historically analysed as the prefix **bu**-.

6. The verbal noun

Verbal nouns are nouns derived from verbs. In Ghomara Berber by far most verbal nouns are derived from Arabic, meaning that verbs that are of Berber etymology have suppletive verbal nouns (the verbal noun is referred to as *maṣdar* in Arabic). Verbal nouns express '*the fact of (...) finishing a transitive or intransitive action, coming into a state*' (cf. Marçais, 1977: 83). The feminine suffix -**a** can be a singulative marker in verbal nouns, e.g. **ḍṛab**, **ḍaṛb** 'the fact of hitting' > **ḍeṛb-a** = 'one hit'. An effect is that '*fréquemment lorsqu'on ajoute aux formes en usage la finale -**a**, ils acquièrent une valeur concrète*', except for the verbal nouns with the form **ccvc-a** which do not get such an interpretation (cf. Marçais 1977:85). The number of verbal nouns attested in our corpus is quite limited. They are difficult to elicit and many verbs do not have a verbal noun. In the following overview the types of verbal nouns found are presented. The verbs from which they are derived will be presented as well. Note that sometimes derived verbs (mostly stem II) correspond to verbal nouns that correspond to underived nouns in Arabic.

6.1. Non-derived nouns

cvcc / **ccvc**

verb		**VN**	
ḥezzen	'grief'	*l-ḥuzen*	'the fact of grieving'
hewwel	'disturb'	*l-hawl*	'the fact of disturbing'
rɛeḇ	'scare'	*r-ruɛḇ*	'the fact of scaring'
qeyyes	'mesure'	*le-qyas*	'the fact of mesuring'
dleḡ	'rub'	*d-dliḡ*	'the fact of rubbing'
qṛeṭ	'break'	*le-qṛiṭ*	'the fact of breaking'
fṛeq	'separate'	*le-fṛaq*	'the fact of separating'

ccvc-a

In this scheme the **a** does not mark the singulative. Rather, nouns having this scheme are nouns '*exprimant la manière de faire, où l'exercise d'un metier*' (Marçais 1977:86). For example:

fhem	'understand'	*le-fham-a*	'the fact of understanding'
fleḥ	'cultivate'	*le-flaḥ-a*	'the fact of cultivating'
xeyyeṭ	'sew'	*le-xyaṭ-a*	'the fact of sewing'

ccc(**-a**)

ḥteš	'collect bush'	*le-ḥteš*	'the fact of collecting bush'
rbeḥ	'earn'	*r-rbeḥ*	'the fact of earning'
ɛzel	'separate'	*l-ɛezl-a*	'the fact of separating'

According to Marçais (1977:85) a **ccuc** verbal noun '*caractérise des verbes exprimant un mouvement, une attitude de corps*'. There is one example in our corpus:

k̲šem	'enter'	*d-dxul*	'the fact of entering'

cvc (hollow)

ṣum ~ ṣam	'fast'	*ṣ-ṣum*	'the fact of fasting'
zzenz ~ znez	'sell'	*l-biɛ*	'the fact of selling'

ccv (defective)

žerri	'run'	*le-ǧri*	'the fact of running'
qqim	'stay'	*le-bqa*	'the fact of staying'
ssyas / ɣli	'boil'	*le-ɣli*	'the fact of boiling'
xṛa	'defecate'	*le-xṛa*	'the fact of defecating'
ṛṛḏ̲a	'exceptance'	*ṛ-ṛḏ̲a*	'the fact of excepting'
ddu	'go'	*le-mši*	'the fact of going'
ddu d	'come'	*le-mži*	'the fact of coming'

Berber-etymology verbs have suppletive verbal nouns of different types.

ṭṭeṣ	'sleep'	*n-nɛas*	'the fact of sleeping'
serwe̲ṭ	'thresh'	*d-dras*	'the fact of threshing'
werg	'dream'	*le-mnam*	'the fact of dreaming'
wwe̲ṭ	'hit'	*ḍ-ḍeṛb*	'the fact of hitting'
ffuɣ	'go out'	*l-xuṛž-a*	'the fact of going out'
ara (*kte̲b*)	'write'	*le-k̲tab-a*	'the fact of writing'
ɣṛes	'slaughter'	*d-dbiḥ-a*	'the fact of slaughtering'
ssendu	'churn'	*le-mxiṭ*	'the fact of churning'
nu	'be cook'	*ṭ-ṭyab*	'the fact of cooking'

One verb with Arabic etymology corresponds to a verbal noun of different Arabic origin.

ɛeyyeṛ	'play'	*l-leɛb*	'the fact of playing'

6.2. Derived nouns

In the following overview the attested verbal nouns with Arabic derived schemes are presented. All these verbal nouns can get an **-a** suffix to get a more concrete meaning. There are no examples of verbal nouns of stem III.

tvccic

Mostly **cCc** (stem 2) verbs correspond to these schemes.

derreɛ	‘embrace’	*t-tedriɛ*	‘the fact of embracing’
kemmeš	‘winkled’	*t-tekmiš*	‘the fact of winkling’
šekkem	‘squeal’	*t-tešk̲im*	‘the fact of squealing’
ḥelleq	‘fish’	*t-teḥliq*	‘the fact of fishing’
ṛeqqeɛ	‘repair clothes’	*t-teṛqiɛ*	‘the fact of repairing’
sqef	‘roof’	*t-teṣqif*	‘the fact of making a roof’
debbeɣ	‘weed’	*t-tedbiɣ*	‘the fact of weeding’
felleq	‘cut in half’	*t-tefliq*	‘the fact of cutting in half’
felleḥ	‘burst, dispose of’	*t-tefliḥ*	‘the fact of bursting’
heddeḏ	‘threat’	*t-tehdiḏ*	‘the fact of threatening’
hemmeḵ	‘hit’	*t-tehmiḵ*	‘the fact of hitting’
melleḥ	‘salt’	*t-temliḥ*	‘the fact of salting’
nedder	‘shock after crying’	*t-tendir*	‘the fact of shocking’
qeṣṣeṣ	‘cut’	*t-teqṣiṣ*	‘the fact of cutting
ḥeṛq	‘feel pain’	*t-teḥṛiq*	‘the fact of feeling pain’
sellem	‘permit’	*t-teslim*	‘the fact of permitting’
seǧeɛ	‘be brave’	*t-tesžiɛ*	‘the fact of being brave’
šebbeṛ	‘catch’	*t-tešbiṛ*	‘the fact of catching’
ɛerref	‘authenticate’	*t-teɛrif*	‘the fact of authenticating’
ɛeṛref	‘invite’	*t-teɛṛif*	‘the fact of inviting’
ṣeffeṛ	‘whistle’	*t-teṣfiṛ*	‘the fact of whistling’
ẓewweṛ	‘forge’	*t-teẓwiṛ*	‘the fact of forging’
tʔekkeḏ	‘guarantee’	*t-teʔkiḏ*	‘the fact of guaranteeing’

ccuc(a)

There is one verbal noun which has the same scheme but a different vowel.

qeṭṭeɛ	‘cut’	*t-teqṭuɛ*	‘the fact of cutting’

tvcc-eyy-a

There are two verbal nouns which have an initial **t** and an **-a** suffix. A glide is inserted between the base and the suffix. The verbal nouns are both derived from defective stem II verbs.

ṛebbi	‘raise’	*t-teṛbiyy-a*	‘the fact of raising’
lewwi	‘roll’	*t-telwiyy-a*	‘the fact of rolling’

tcccic(a)

There are a couple of four-consonantal verbal nouns which all have a **t**- prefix. These verbal nouns can get an -**a** suffix as well.

qeṛfez	'pinch'	*t-tqeṛfiz*	'the fact of pinching'
beɣez	'swap'	*t-tbeɣiz*	'the fact of swapping'
bežɣeṭ	'mumble'	*t-tbežɣiṭ*	'the fact of mumbling'
ḥesḥes	'whisper'	*t-tḥesḥis*	'the fact of whispering'

6.3. Berber verbal nouns

The verbal nouns with Berber morphology are very few in number. We have found the following verbal nouns which have a corresponding verb. They are all used in idiomatic expressions.

ɛayen	'look'	*a-mɛayen*	'the fact of looking'
ḇzeḡ	'be wet'	*a-zzuḡ*	'the fact of being wet'
mḡer	'harvest'	*a-mḡer*	'the fact of harvesting'

Examples of their use are:

(1) *i-ttakk = as amɛayen*
3MS-give:I = 3S:IO look:EL
'He gives it a look.'

(2) *ga-s azzuḡ*
in-3S wetness:EL
'He is wet.'

(3) *a ne-ḵmel amḡer*
AD 1PL-finish:A harvest:EL
'We will finish harvest.'

7. The Verb

There exist two groups of verbs in Ghomara Berber; the Berber-morphology group, and the Arabic-morphology group. Verbs which have Berber morphology take Berber inflection, whereas verbs which have Arabic morphology preserve their original Arabic inflection. The Berber-morphology class has integrated many borrowed verbs from dialectal Arabic. However, a number of borrowed Arabic verbs (about 19% of the total of Berber- and Arabic-morphology verbs in our corpus) are taken over including their original morphology. All Arabic verb types can be borrowed with preservation of the original Arabic morphology, with two exceptions: **cCc** (stem II) and **cacc** (stem III) verbs never keep Arabic inflection when borrowed. These two types consist (almost) completely of borrowed Arabic verbs which are integrated in the Berber morphological system. On the other hand, derived verbs (with **tt**- (~**t**-) or **n**- prefix) are never integrated in the Berber morphological system. These verbs are always conjugated using Arabic morphology. For example:

Arabic morphology

non-derived		**tt**- (**t**-) / **n**- **derived**	
fhem	‘understand’	*t-keyyef*	‘smoke’
fleḥ	‘cultivate’	*t-qeyya*	‘vomit’
sken	‘live’	*t-ḥerreḵ*	‘move’
kṛeh	‘hate’	*n-baɛ*	‘be sold’
kri	‘rent’	*ne-dfeɛ*	‘be pushed’

Berber morphology

ccc		**cCc** (stem II)		**cacc** (stem III)	
fṛeq	‘separate’	*xebbeɛ*	‘hide’	*sahel*	‘make easy’
qleḇ	‘flip’	*šebbeṛ*	‘hold’	*ḥawel*	‘try’
hleḵ	‘be sick’	*ɛeqqeḏ*	‘tie’	*ɛafer*	‘try’

The question arises if there is a pattern in this distribution of the borrowings. To some extent transitivity plays a role as **tt**- and **n**- derivation are often detransivisers (used for passive formation). This is, however, not always the case, for example **t**-**keyyef** ‘smoke’ is a transitive verb. On the other hand **cCc** (and similar stem II verbs) and **cacc** (and similar stem III) verbs are mostly transitive. In the choice of inflectional system with non-derived verbs, transitivity does not seem to play a role. Thus, among the Arabic-morphology group there are both intransitive and transitive non-derived verbs, e.g. the intransitives **sker** ‘be drunk’ and **tfa** ‘yawn’ and the transitives **qṛa** ‘read, study’ and **kri** ‘rent’. The borrowing patterns are not based on a semantic distribution either.

Both integrated and non-integrated verbs refer to basic events such as sneezing, sweating, being embarrased, being accustomed, farming, hating etc. For example the verbs **ɛya** 'be tired' with Arabic morphology and **hleḵ** 'be sick' with Berber morphology have similar semantics, but different morphology. In this chapter the Berber-morphology verb is presented first. Then, the formation of the Perfective will be discussed after which the Imperfective will be discussed. The second chapter will deal with the Arabic-morphology verb. **tt-** and **n-** derived verbs will be discussed in the Arabic-morphology part, whereas the **ss**- causative of the Perfective and the Imperfective are presented separately.

7.1. The Berber-morphology verb

The Berber-morphology verb consists of a lexical base, made up of consonants and (optionally) plain vowels. Schwa does not play a role in the structure of a base. In the traditional account the base is a combination of an abstract consonantal root, which conveys lexical information, and a vowel scheme, which conveys grammatical information (e.g. Harrell, 1962: 23-28 for Arabic, cf. Galand, 2002: 87-99 for a discussion of Berber). However, this dichotomy is too simple. There are many examples of roots in which both the consonants and the vowels convey lexical information. These problems were adressed, among others, by David Cohen (1993) who proposes that a vowel can be part of the radical in the same way as a consonant can. In addition, consonant gemination may be specified in the root. This view eliminates most of the homonyms that would exist if one assumed only a consonantal root (D. Cohen, 1993: 170)[53]. If one were to assume a consonantal root **r** one runs into trouble differentiating for example **rri** 'return', **aru** ~ **uru** 'give birth' and **ara** ~ **ura** 'write'; similarly, if consonant gemination does not play a role the root **qlb** yields both **qleḇ** 'roll' and **qelleḇ** 'taste' in Ghomara Berber. Another argument is that many vowel schemes do not convey grammatical information, for instance the verb 'have lunch' has **mṭi** in the Aorist and the Perfective and **meṭṭi** in the Imperfective (cf. Kossmann, 1997:130). Therefore, we will adopt the position of David Cohen and define root structure as a concatenation of consonant and plain vowel positions. The consonantal part of the root contains mainly lexical information, while the (plain) vowels contain lexical as well as grammatical information. This combination constitutes the lexical base. The derivational prefix is added to the lexical base. Then, in order to attain a well-formed verbal form, the lexical base is moulded into one of three aspectual forms. The formation of these forms uses different morphological devices, most important of which are vowel apophony, vowel insertion, consonantal gemination and the Imperfective prefix **tt**. The verb form with derivational and aspectual marking is called the 'aspectual stem'. The verb is completed by adding personal affixes in the form of prefixes, suffixes or circumfixes. Schematically, the maximal structure of a Berber verb is as follows:

[53] cf. Galand (2010:85-86) for a discussion.

person – (**tt**) – aspectual lexical base - person

(1)	*te*	*tt*	*beddal*	*et*
	2S	I	change:I	2S
	‘You always change.’			

For **ss**- derived verbs the structure is:

(2)	*te*	*ss*	*lkam*	*em*
	2PL	CAUS	reach:I	2PL
	‘You make arrive.’			

In the following, we first present the verbal conjugational affixes. After this, the aspectual stems are discussed. Causative derivation will be treated separately.

7.2. The verbal affixes

The subject affixes of the verb express three persons, two genders and two numbers. Masculine and feminine gender are only differentiated in the third person singular[54]. The verbal affixes consist of three sets; the ‘normal’ affixes, the Imperative / adhortative suffixes and the participial affix. There are traces of a fourth set, the ancient ‘stative’ conjugation, which in Ghomara Berber have become part of adjectival morphology and cannot be considered verbal anymore (see III.9.). Normal affixes are either prefixes (3MS/3FS, 1PL), circumfixes (2S, 2PL) or suffixes (1S, 3PL). Imperatives take no affixes in the singular, the plural is expressed by means of the affix -**awe<u>t</u>** or **-a<u>t</u>**. The participle is formed by a circumfix which does not express person, number or gender. The first person suffix is -**x** following a vowel (cf. II.3.5.). The normal affixes are:

		nṭeḡ ‘fly’ (P)		**alu** ‘pick’ (I)	
1:SG	*…- ax /-aɣ/-x*	*neṭḡ-ax*	‘I flew’	*ttalu-x*	‘I pick’
2:SG	*t-… - et*	*t-neṭḡ-et*	‘you flew’	*he-ttalu-t*	‘you pick’
3:M:SG	*i-…*	*i-nṭeḡ*	‘he flew’	*i-ttalu*	‘he picks’
3:F:SG	*t- …*	*t-enṭeḡ*	‘she flew’[55]	*he-ttalu*	‘she picks’
1:PL	*n-…*	*n-enṭeḡ*	‘we flew’	*ne-ttalu*	‘we pick’

[54] In pronouns, one also finds a gender difference between masculine and feminine in the second person singular, see III.11.

[55] See paragraph II.1.2. for different forms of the prefix **t**-.

2:PL	*t-…-em*	*t-neṭḡ-em*	‘you flew’	*he-ttalu-m*	‘you pick’
3:PL	*…-en*	*neṭḡ-en*	‘they flew’	*ttalu-n*	‘they pick’

7.3. The Imperative and injunctive affixes

The Imperative singular has no affix. The plural is marked by means of the suffix -**aweṯ** or -**aṯ**. The suffix does not change when following a verb ending in a vowel. The final vowel becomes a glide. Very often schwa appears at the beginning of the singular form of the Imperative.

		Example	
2:SG	*…-Ø*	*(e)nṭeḡ*	‘jump!’
2:PL	*…-aweṯ* ~ *aṯ*	*netḡ-aweṯ* ~ *netḡ-aṯ*	‘jump!’ (PL)

The verb **ddu** ‘go’ has an irregular form with an initial **n** and an **h** in the plural of the Imperative.

2:SG	*nda*	‘go!’
2:PL	*ndhu*	‘go!’ (PL)

There are verbs which only occur in the Imperative, such as:

2:SG	*hala*	‘come!’
2:PL	*hala-w*	‘come!’ (PL)

2:SG	*aṛa*	‘give!’
2:PL	*aṛa-w*	‘give!’ (PL)

The form **aṛa** ‘give’ takes direct object pronouns and the deictic clitic.

(3) *aṛa=h=id*
give:IMP=3MS:DO=DC
‘Give it to me.’

Several Imperatives can follow each other to form a sequence, for example:

(4)	*kkur*	*nda*	*keğ̌i*	*a*	*saḥḇi*
	get.up:IMP	go:IMP	you:M	VOC	friend

‘You get up and go, buddy.’

In addition, there exists an injunctive form, which encourages the addressee to do something together with the speaker. This form combines the 'normal' prefix of the first person plural **n**- with the Imperative plural suffix -**awe̲t̲** ~ -**a̲t̲**. The non-real marker **a** always precedes the injunctive verb.

1:PL *n-…-awe̲t̲*

(5) *a* *n-k̲erz-awe̲t̲*
AD 1PL-plough:A-PL:IMP
'Let's work the land.'

Negation of the Imperative uses the normal second person forms of the Aorist and is preceded by the non-real marker **a**. Negation is accomplished by the elements **ma**…**ši**. The same construction is used to negate non-realised events[56]. In the examples both translations are given.

(6) *ma* *ya* *k̲erz-et* *ši*
NEG AD plough:A-2:S NEG
'Do not plough! / You will not plough. (S)'

(7) *ma* *ya* *k̲erz-em* *ši*
NEG AD plough:A-2PL NEG
'Do not plough! / You will not plough. (PL)'

7.4. The relative form

The relative form consists of a prefix **i** (before consonants) or **y** (before vowels) and a suffix -**n**[57]. In Berber literature this form is the traditionally know as the 'participle'. As the Arabic participle plays an important role in Ghomara Berber we have decided to use the term 'relative form' to avoid confusion. In many Berber languages it is the verbal form that appears in subject relative constructions. Adjectives have a special relative form as well (cf. III.9.1.). The reason why it is not called the subject relative form is because its use goes beyond subjects and the verb does not get a relative form in subject relative clauses of **a ra a** + Aorist (cf. III.5.9. on relative constructions).

[56] In Arabic the negative imperative is formed by negating the Imperfect, **ma deḥre̲t̲ ši** can mean both 'do not plough' as well as 'you will not plough' in which an Imperfect is used. The Ghomara Berber parallel to the Imperfect is the **a** + Aorist.

[57] The form of the suffix is -**n** after a vowel and -**en** after a consonant.

Relative form	Examples		
i-….-n	*i-ttiṯu-n*	‘go’	(I)
	y-uk̲r-en	‘steal’	(P)

There is one verb which appears only in its relative form in the following question:

(8) *ma* *k̲ = y-uɣu-n?*
what 2S:DO = RL-be.matter-RL
‘What is the matter with you?’

7.5. The aspectual stems

Berber-morphology verbs distinguish three aspectual stems: the Aorist, the Perfective and the Imperfective[58]. Contrary to many other Berber varieties there are no negative aspectual stems[59]. The Aorist and Perfective stems are very often homophonous. Only a few types mark the difference between the two stems. The Imperfective mostly differs from the other stems, but there are a few cases of homophony. Most verbs distinguish two forms, the Aorist/Perfective and the Imperfective as in 2 ‘plough’. Some verb types have separate stems for all three aspects as in 1 ‘pick’. There are some verbs in which the three stems have the same form, as in 3 ‘cry’. Homophony of the stems is determined by the formal make-up of the root (e.g. **vcc** as opposed to **ccc** roots), and is not related to the semantics of the verb, for example:

	1.‘pick’	**2.‘plough’**	**3.‘cry’**
Aorist	*alu*	*k̲rez*	*ttru*
Perfective	*ulu*	*k̲rez*	*ttru*
Imperfective	*ttalu*	*kkrez*	*ttru*

Aorist forms are taken as the basis in describing the forms of the other aspectual stems. Base structure is presented in the form of unspecified consonant positions (using **c** for single consonants and **C** for geminates) and specified vowel positions (**a**, **i**, **u**), according to the vocalisation of the Aorist. When necessary, instead of specifying the vowel (**a**, **i**, **u**), **v** is used to convey the presence of the plain vowels in the structure.

[58] In the French literature on Berber the terminology by A. Basset and Galand is often used. Basset’s ‘prétérit’ and ‘Aoriste intensif’ correspond to our ‘Perfective’ and ‘Imperfective’ respectively. Galand’s ‘accompli’ and ‘inaccompli’ correspond to our ‘Perfective’ and ‘Imperfective’ respectively. The use of ‘Aorist’ is also found with Basset and Galand (Basset, 1952: 13, Galand, 2010: 207-232).

[59] However, many western varities of Senhaja de Sraïr, geographically closest to Ghomara, do not have negative (Perfective or Imperfective) stems (Lafkioui, 2007: 175, 176). The absence of a negative stem is found in certain dialects of Tashelḥiyt in the region of Agadir as well (Aspinion, 1953: 223, 231).

7.5.1. The Aorist

Different from some Perfective verb forms, the form of the Aorist remains the same in all persons. There is one exception, which is the Aorist of the verb **ll** 'be'. In the variety used by an older speaker (73 years old) the stem has the vowel **i** when a person suffix is present. In the first person singular, this **i** takes the place of suffix-initial **a**[60]. Younger speakers have no person-based changes. The full Aorist paradigm of this verb is:

	'be' (A)
1:SG	*ll-ax* ~ *lli-x*
2:SG	*te-ll-et* ~ *te-lli-t*
3:M:SG	*i-ll*
3:F:SG	*te-ll*
1:PL	*ne-ll*
2:PL	*te-ll-em* ~ *te-lli-m*
3:PL	*ll-en* ~ *lli-n*

7.5.2. The Perfective

Only a minority of the Berber-morphology verbs (12%) show a formal distinction between Aorist and Perfective forms by means of a vowel change (including labialisation). The most frequent structures with identical Aorist and Perfective are given below.

	Aorist	**Perfective**	
ccc	*ḵmeṭ*	*ḵmeṭ*	'burn'
cC	*ɛeṭṭ*	*ɛeṭṭ*	'bite'
cCc[61]	*beddel*	*beddel*	'swap, dress'
cCi[62]	*denni*	*denni*	'blow the fire'
cccc	*qefqef*	*qefqef*	'shiver'
cacc	*ɛayen*	*ɛayen*	'look for, search'
Cc	*ṭṭeṣ*	*ṭṭeṣ*	'sleep'

[60] It is interesting to note that in the fixed expression **aṛa-ḵ illa** 'that might be' the third person masculine form verb ends in an **a**.

[61] **cCc** (and other geminated stem II verbs) are by far the most numerous verbs in our corpus. This type consists almost without exception of (integrated) verbs borrowed from Arabic. Verbs of this type can be intensive, de-nominal verbs, de-adjectival verbs, and causative verbs (cf. Marçais 1955: 179).

[62] Note that this type also contains verbs that change the final vowel in the Perfective.

As by far most verbs in our corpus are of the **cCc** type this structure merits some comments. While in local Arabic **ɛṛež** 'limp' is used, in Ghomara Berber **ɛeṛṛež** 'limp' is used. Other examples which have underived forms in Arabic, but have geminated forms in Berber are Arabic **qṭeṛ** Berber **qeṭṭeṛ** 'drip' and Arabic **nder**, Berber **nedder** 'shock after crying'. Examples of de-nominalised forms are **zeḥḥem** 'narrow' from **zzḥam** 'narrowness' and **deḥḥes** 'crowd' from **ddḥas** 'crowdedness'. De-adjectival forms are quite numerous, e.g. **ɛewwež** 'bend' (< **ɛwež** 'be bent'), **ḥewwel** 'make crooked' (< **ḥwel** 'be crooked'), **wesseɛ** 'widen'(< **waseɛ** 'be wide'), **ṛeṭṭeḇ** 'soften, smoothen'(< **ṛṭeḇ** 'soft, smooth'), **ṭewwel** 'lenghten' (< **ṭwil** 'be tall'), **qeṣṣeṛ** 'shorten' (< **qṣiṛ** 'be short'). Many other verbs are not derived from another word class (For causatives of this type see paragraph III.3.2.1.2).

In the remaining part of this section, verbs which distinguish the Aorist from the Perfective be presented. There are several types. There are verbs which have labialised consonants in the Aorist and loose the labialisation in the Perfective. The verb types **cc**, **C**, **cu**, **Ci** add the vowel **a** either throughout the paradigm or before a suffix in the Perfective. Verbs that have an initial **a** or **a** ~ **u** in the Aorist change it to **u** in the Perfective. The verb types **cic**, **cicc**/**ccic** and **cuc** have medial vowel change in the Perfective, while the verb types **ccu**, **Cu**, **cCi**, **caci**, **cci** have final vowel change. Finally, there are some exceptional types.

Cc verbs with labialised consonants only have labialisation in the Aorist (for labialisation cf. II.4.). In the Perfective (and Imperfective) labialisation dissappears. There is one **ccc** and one **cc** verb which are similar.

Cc

Aorist		**Perfective**	
kkur	*/kkʷer/*	*kker*	'stand up'[63]
qqul	*/qqʷel/*	*qqel*	'return'
gguz	*/ggʷez/*	*ggez*	'descend'
kkus	*/kkʷes/*	*kkes*	'remove'
qqun	*/qqʷen/*	*qqen*	'tie, close'
ffuɣ	*/ffeɣʷ/*	*ffeɣ*	'go out'
ẓẓuḡ (~ *ẓẓeḡ*)	*/ẓẓeḡʷ/*	*ẓẓeḡ*	'milk'

[63] For this verb labialisation is optional in the imperative plural but not in the singular:

ukkr-aweṯ ~ *ekkr-aweṯ*	'stand up'	IMP:PL
kkur ~ **kker*	'stand up'	IMP:S

ccc

Aorist		**Perfective**	
lkum	*/lkʷem/*	*lkem*	‘reach’

cc

Aorist		**Perfective**	
suɣ	*/seɣʷ/*	*seɣ*	‘buy’

7.5.2.1. Addition of the vowel a in the Perfective

The first group consists of verbs with the structures **cc**, **C**, **cu** and **Ci**. In the Perfective, the vowel **a** is added either to the complete paradigm, or only before a conjugational suffix.

7.5.2.2. cc verbs

There are only few verbs with the structure **cc**. These verbs belong to three different types, according to their Perfective conjugation. Type 1 always has an **a** ending in the Perfective irrespective of suffixation. The only verb of this type is **nuɣ (/nɣʷ/)** ‘kill’[64]. Type 2, adds the **a** in the Perfective only when the verb has an inflectional suffix. The verbs **nes** ‘be extinguished’, **ḵes** ‘herd’, **ẓeṛ** ‘see’, **fk** ‘give’ and **res** ‘land’ belong to this type. The third type of **cc** verbs does not change at all. It consists of four verbs: **meḏ** ‘finish’, **ẓeḏ** ‘grind’ **mel** ‘show’ and **suɣ** ‘buy’. The verb **reɣ** ‘be lit’ can be inflected according to type 1 or type 3. In the Aorist these verbs do not have a vowel. Relative forms of verbs of type 1 and 2 verbs have an **a** before the relative suffix. The other ones take either -**en** or -**an**. The full Perfective paradigms of the first two types of verbs are given below.

	Type 1		**Type 2**	
	nuɣ ‘kill’		**fk** ‘give’	
1:SG	*nɣa-x*	‘I have killed ’	*fka-x*	‘I gave’
2:SG	*te-nɣa-t*	‘You have killed’	*te-fka-t*	‘You gave’
3:M:SG	*i-nɣa*	‘He has killed’	*i-fk*	‘He gave’
3:F:SG	*te-nɣa*	‘She has killed’	*te-fk*	‘She gave’
1:PL	*ne-nɣa*	‘We have killed’	*ne-fk*	‘We gave’
2:PL	*te-nɣa-m*	‘You have killed’	*te-fka-m*	‘You gave’
3:PL	*nɣa-n*	‘They have killed’	*fka-n*	‘They gave’

Two of the four **cc** verbs which never add a vowel in the Perfective are given below:

[64] In the dialect of Amṭiqan this verb only has **a** when followed by a suffix (El Hannouche 2010: 256).

	meḏ ‘be finished, be extinguished’		**ẓeḏ** ‘grind’	
1:SG	*mḏ-ax*	‘I am finished’	*ẓḏ-ax*	‘I ground’
2:SG	*te-mḏ-et*	‘You are finished’	*te-ẓḏ-et*	‘You ground’
3:M:SG	*i-meḏ*	‘He is finished’	*i-ẓeḏ*	‘He ground’
3:F:SG	*t-meḏ*	‘She is finished’	*t-ẓeḏ*	‘She ground’
1:PL	*n-meḏ*	‘We are finished’	*n-ẓeḏ*	‘We ground’
2:PL	*te-mḏ-em*	‘You are finished’	*te-ẓḏ-em*	‘You ground’
3:PL	*mḏ-en*	‘They are finished’	*ẓḏ-en*	‘They ground’

7.5.2.3. (w)C verbs

This type of verb consists of one geminate consonant in the Aorist. In the Perfective these verbs add an **a** before a suffix. The one exception is the verb **nn** ‘say’ which optionally has an ending **a** in every person of the Perfective. It is therefore the only verb of this type that has type 1 endings (see above). We will give the example of the aformentioned verb **nn** and its variants and the second example of the verb **šš** ‘eat’. Other verbs of this type are **ḡḡ** ‘do/make’, **bb** ‘take/bring’, **ll** ‘be’ and **ǧ** ~ **wǧ** ‘leave’[65]. The relative forms have an **a** before the relative suffix.

	nn ‘say’		**šš** ‘eat’	
1:SG	*nna-x*	‘I said’	*šša-x*	‘I ate’
2:SG	*te-nna-t*	‘You said’	*te-šša-t*	‘You ate’
3:M:SG	*i-nn* ~ *i-nna*	‘He said’	*i-šš*	‘He ate’
3:F:SG	*te-nn* ~ *te-nna*	‘She said’	*te-šš*	‘She ate’
1:PL	*ne-nn* ~ *ne-nna*	‘We said’	*ne-šš*	‘We ate’
2:PL	*te-nna-m*	‘You said’	*te-šša-m*	‘You ate’
3:PL	*nna-n*	‘They said’	*šša-n*	‘They ate’

7.5.2.4. cu verbs

There are two verbs of this type. In the Perfective, the verb **su** ‘drink’ takes **a** when followed by suffix; the verb **nu** ‘be cooked/ripe’ always takes an **a**. These verbs have an underlying semi-vowel **w** which becomes **u** in final position (cf. II.2.1. phonology). The relative forms have an **a** before the relative suffix.

[65] Note that we have put this verb in this type consisting of a single geminate consonant. The fact that this is a geminate is shown by deaffrication when the geminate occurs in final position e.g. **i-žž** ‘he left (something)’. Note also the difference between the singular imperative **žž** ‘leave it!’ and the plural imperative **ǧ-awet̲** ‘leave (PL) it!’ (cf. II.1.3. phonology).

	su ‘drink’		**nu** ‘be ripe/cooked’	
1:SG	*swa-x*	‘I drank’	*nwa-x*	‘I am cooked’[66]
2:SG	*te-swa-t*	‘You drank’	*te-nwa-t*	‘You are cooked’
3:M:SG	*i-su*	‘He drank’	*i-nwa*	‘He is cooked’
3:F:SG	*t-su*	‘She drank’	*te-nwa*	‘She is cooked’
1:PL	*n-su*	‘We drank’	*ne-nwa*	‘We are cooked’
2:PL	*te-swa-m*	‘You drank’	*te-nwa-m*	‘You are cooked’
3:PL	*swa-n*	‘They drank’	*nwa-n*	‘They are cooked’

7.5.2.5. Ci verb

There is one verb of this structure which optionally adds vowel **a**. It is conjugated in three different ways, which are in free variation.

	rri ‘return’	
1:SG	*rrya-x* ~ *rri-x* ~ *rra-x*	‘I returned’
2:SG	*te-rrya-t* ~ *te-rri-t* ~ *te-rra-t*	‘You returned’
3:M:SG	*i-rrya* ~ *i-rri* ~ *i-rra*	‘He returned’
3:F:SG	*te-rrya* ~ *terri* ~ *terra*	‘She returned’
1:PL	*ne-rrya* ~ *ne-rri* ~ *ne-rra*	‘We returned’
2:PL	*te-rrya-m* ~ *te-rri-m* ~ *te-rra-m*	‘You returned’
3:PL	*rrya-n* ~ *rri-n* ~ *rra-n*	‘They returned’

7.5.2.6. Initial vowel change

Verbs that change the initial vowel always involve changing **a** or **a** ~ **u** in the Aorist to **u** to in the Perfective. In a number of cases, mostly verbs that have one consonant, the Aorist shows free variation between **a** and **u** as an initial vowel. Our corpus contains one verb that shows free variation between Ø and **u** in the Perfective.

The following verbs change **a** in the Aorist to **u** in the Perfective. The first two verbs have optionally labialised consonants in the Aorist. This does not occur in the Perfective (cf. II.4. on labialisation).

Aorist	**Perfective**	
a̲kel ~ *a̲kul (/a̲k^{w}el/)*	*u̲kel*	‘step on’

[66] This can be used metaphorically to signify that someone is too hot.

aḵer ~ aḵur (/aḵʷer/)	*uḵer*	‘steal’
alu	*ulu*	‘pick’

The verb **aḡem d** ‘draw water’ and its variants have the deictic particle ‘hither’ obligatorily following or preceding the verb, depending on the syntactic context (cf. IV.3.3.5.). When the deictic particle is in initial position the verb is no longer analysed as vowel-initial, and there is no vowel change **a** > **u**. Therefore the deictic particle **d / id** can be no longer analysed as such in initial position, but should be considered part of the verbal base. In the Aorist the consonant **ḡ** can be labialised **ḡu** (/**ḡ**ʷ/).

Aorist	**Perfective**	
aḡem d ~ aḡum d (*/aḡʷem d/*) ~ *daḡem ~ daḡum* (*/daḡʷem/*)	*uḡem d ~ daḡem*	‘draw water’

The following verbs show free variation between **a** ~ **u** in initial position in the Aorist.

Aorist	**Perfective**	
af ~ uf	*uf*	‘find’
as d ~ us d	*us d*	‘land, be family of’
ara ~ ura	*ura*	‘write’
aru ~ uru	*uru*	‘give birth’
ani ~ uni	*uni*	‘ride’
aggez ~ uggez	*uggez*	‘recognise’
aḡel ~ uḡel ~ aḡul (*/aḡʷel/*)	*uḡel*	‘hang up food for animals’

One verb in our corpus shows free variation between initial **Ø** and **u** in the Perfective.

Aorist	**Perfective**	
ameẓ ~ umeẓ	*meẓ ~ umeẓ*	‘catch, take, grab’

There is one verb beginning with an **a** which does not change in the Perfective.

Aorist	**Perfective**	
ažuf	*ažuf*	‘stink’

7.5.2.7. Medial vowel change

Medial vowel change means a change in any position that is neither initial nor final. Verbs that have medial vowel change can be divided in two types; those that change **i** > **a**, and

those that change **u** > **a** ~ **u**. There is one exceptional case which has **a** ~ **u** > **a**. Many of the verbs which have a vowel alternation are integrated Arabic hollow (**cvc**) verbs. In Maghribian Arabic, hollow verbs which have an **u** or **i** in the Imperfective have an **a** in the third person of the Perfective (singular and plural) (cf. Marçais 1977: 46). There is a third (minor) type which has **a** in both aspects. Although in Arabic the vowel **a** only appears in the third person of the Perfective with these type of verbs, in Berber, **a** is found throughout the complete Perfective paradigm while the Aorist has **i**.

cic verbs

All verbs of this type are borrowed Arabic hollow verbs. The verbs change **i** in the Aorist to **a** in the Perfective as in the following example:

	fiq 'wake up'		
	Aorist	**Perfective**	
1:SG	*fiq-ax*	*faq-ax*	'I woke up'
2:SG	*t-fiq-et*	*t-faq-et*	'You woke up'
3:M:SG	*i-fiq*	*i-faq*	'He woke up'
3:F:SG	*t-fiq*	*t-faq*	'She woke up'
1:PL	*n-fiq*	*n-faq*	'We woke up'
2:PL	*t-fiq-em*	*t-faq-em*	'You woke up'
3:PL	*fiq-en*	*faq-en*	'They woke up'

Other verbs of this type are:

Aorist	**Perfective**	
riḇ	*raḇ*	'destroy'
ɛiš	*ɛaš*	'live'
žif	*žaf*	'choke'
miḥ	*maḥ*	'empty water'
sis	*sas*	'boil'

cicc / ccic verbs

Two verbs have **i** > **a** between the first and second consonant. The verb **sisen** has two possible variants of the Perfective which are in free variation. Both verbs are of Berber origin.

Aorist	**Perfective**	
siwel	*sawel*	'speak or talk'
sisen	*sisen* ~ *sasen*	'dip bread into gravy'

One verb in our corpus has optional **i** > **a** vowel change. There is free variation in the Perfective between the **i** and the **a** variant.

Aorist	**Perfective**	
zwir	*zwir* ~ *zwar*	'go first'

All other verbs of this type do not have vowel change, for example:

Aorist	**Perfective**	
wsir	*wsir*	'be/become old'

cuc verbs

cuc Verbs, most of which are borrowed Arabic hollow verbs, all have **u** > **a** ~ **u** alternation. The vowel changes are not restricted to the third person (singular and plural) but appear throughout the whole paradigm, as illustrated in the following paradigm.

	Aorist	**Perfective**	
1:SG	*ɛum-ax*	*ɛam-ax* ~ *ɛum-ax*	'I swam'
2:SG	*t-ɛum-et*	*t-ɛam-et* ~ *t-ɛum-et*	'You swam'
3:M:SG	*i-ɛum*	*i-ɛam* ~ *i-ɛum*	'He swam'
3:F:SG	*t-ɛum*	*t-ɛam* ~ *t-ɛum*	'She swam'
1:PL	*n-ɛum*	*n-ɛam* ~ *n-ɛum*	'We swam'
2:PL	*t-ɛum-em*	*t-ɛam-em* ~ *t-ɛum-em*	'You swam'
3:PL	*ɛum-en*	*ɛam-en* ~ *ɛum-en*	'They swam'

Other verbs of this type are:

Aorist	**Perfective**	
ṣum	*ṣam ~ ṣum*	‘fast’
ẓuṛ	*ẓaṛ ~ ẓuṛ*	‘visit a marabout’
bus	*bas ~ bus*	‘kiss’
šuš	*šaš ~ šuš*	‘search’

One verb of this type does not allow for free variation of **a** ~ **u** form in the Perfective, but has only **a**. It is originally not Arabic (Kossmann, 2013:124), but occurs as a Berber loan in local Arabic. In the local Arabic dialect the verb does not have vowel change, but has a constant **u**, different from the Ghomara Berber form.

Aorist	**Perfective**	
ṣuṭ	*ṣaṭ*	‘blow’

The following verbs of different types change **u** in the Aorist to **a** or **a** ~ **u** in the Perfective.

Aorist	**Perfective**	
lluẓ	*llaẓ ~ lluẓ*	‘be hungry’

There are two verbs with the same structure which have free variation of **a** ~ **u** in the Aorist while **a** is used in the Perfective.

Aorist	**Perfective**	
ẓẓall ~ ẓẓull	*ẓẓall*	‘pray’
ggall ~ ggull	*ggall*	‘swear’

Note the following verbs which have the same structure as **ẓẓall ~ ẓẓull**, but do not show a vowel change. The Aorist and the Perfective remain the same.

Aorist	**Perfective**	
mmuṯ	*mmuṯ*	‘die’
qquṛ	*qquṛ*	‘dry up’[67]

[67] This form does not have labialisation (see II.4. on labialisation).

One verb in our corpus has **u** ~ **Ø** in the Aorist and in the Perfective.

Aorist	**Perfective**	
šumm ~ *šemm*	*šumm* ~ *šemm*	‘smell’

7.5.2.8. Final vowel change

Verbs that show final vowel change have **u** or **i** in the Aorist and **a** in the Perfective. There are a number of structures that have final vowel alternation: **ccu**, **Cu**, **cCi**, **caci**, **cci**, as well as a number of exceptional cases. The final vowel does not change according to person, for example:

	ṣḥu ‘get better, heal’		
	Aorist	**Perfective**	
1:SG	*ṣḥu-x*	*ṣḥa-x*	‘I have become better’
2:SG	*te-ṣḥu-t*	*te-ṣḥa-t*	‘You have become better’
3:M:SG	*i-ṣḥu*	*i-ṣḥa*	‘He has become better’
3:F:SG	*te-ṣḥu*	*te-ṣḥa*	‘She has become better’
1:PL	*ne-ṣḥu*	*ne-ṣḥa*	‘We have become better’
2:PL	*te-ṣḥu-m*	*te-ṣḥa-m*	‘You have become better’
3:PL	*ṣḥu-n*	*ṣḥa-n*	‘They have become better’

ccu verbs

This verb structure has final vowel **u** in the Aorist that changes to **a** in the Perfective.

Aorist	**Perfective**	
rku	*rka*	‘rot’
bnu ~ *b̲nu*	*b̲na*	‘build’
ṣḥu	*ṣḥa*	‘be strong, cure’
ḥmu	*ḥma*	‘be hot’
rnu	*rna*	‘add’
b̲ṭu	*b̲ṭa*	‘share’
b̲du	*b̲da*	‘begin’

Cu verbs

A number of verbs beginning with an initial geminate change final vowel **u** in the Aorist to **a** in the Perfective.

Aorist	**Perfective**	
ẓẓu	*ẓẓa*	‘plant’
ddu	*dda*	‘walk, go’

Not all verbs of this type participate in this vowel change. The following verbs show no formal difference between Aorist and Perfective:

Aorist	**Perfective**	
kku	*kku*	‘dry up’
ttu	*ttu*	‘forget’

cCi verbs

A considerable number of verbs have final vowel change **i** > **a**. A frequently occurring structure is **cCi** (stem II of defective Arabic verbs). The changed vowels are stable throughout the paradigm, for example:

	ɛelli ‘ascend, go up’		
	Aorist	**Perfective**	
1:SG	*ɛelli-x*	*ɛella-x*	‘I went up’
2:SG	*t-ɛelli-t*	*t-ɛella-t*	‘You went up’
3:M:SG	*i-ɛelli*	*i-ɛella*	‘He went up’
3:F:SG	*t-ɛelli*	*t-ɛella*	‘She went up’
1:PL	*n-ɛelli*	*n-ɛella*	‘We went up’
2:PL	*t-ɛelli-m*	*t-ɛella-m*	‘You went up’
3:PL	*ɛelli-n*	*ɛella-n*	‘They went up’

Other verbs of this type are:

Aorist	**Perfective**	
ḥewwi	*ḥewwa*	‘have sex’
ɛelli	*ɛella*	‘rise’
žerri	*žerra*	‘run’
feḍḍi	*feḍḍa*	‘finish’
meḍ̲ḍ̲i	*meḍ̲ḍ̲a*	‘sharpen’
ḥeffi	*ḥeffa*	‘make blunt’
neqqi	*neqqa*	‘clean’
ḥenni	*ḥenna*	‘rub in with henna’

The following verb of the type **cCi** has vowel change **i** > **i** ~ **a**. The Perfective has two forms which are in free variation.

Aorist	**Perfective**	
tekki	*tekki* ~ *tekka*	‘press on’

A number of verbs which have underlying **ey** > **i** in final position, do not have vowel change, for instance:

Aorist	**Perfective**	
denni	*denni*	‘blow the fire’
lewwi	*lewwi*	‘roll’

cci verbs

The following infrequent structures show the change **i** > **a** of the final vowel. One verb has free variation of **i** ~ **a** in the Perfective.

Aorist	**Perfective**	
qli	*qla*	‘fry’
ʒri	*ʒra*	‘pound’
d̲ri	*d̲ri* ~ *d̲ra*	‘pass’

Other **cci** verbs do not participate in these vowel changes, e.g.

Aorist	**Perfective**	
mṭi	*mṭi*	‘lunch’
ngi	*ngi*	‘push’
ɣli	*ɣli*	‘set, descend’

The following verb of the type **cci** has vowel change **i** > **i** ~ **a**. The Perfective forms show free variation of these two forms.

xwi	*xwi* ~ *xwa*	‘empty’

caci verbs

A number of verbs which have structure **caci** change the final **i** to **a** in the Perfective.

Aorist	**Perfective**	
laqi	*laqa*	‘let, make meet’
wali	*wala*	‘hit’
ẓ̣ali	*ẓ̣ala*	‘separate’
ḥaḏ̣i	*ḥaḏ̣a*	‘touch’

7.5.2.9. Exceptional cases

The following verb shows a mixture of forms which includes optional final vowel change from **i** in the Aorist to **a** in the Perfective.

Aorist	**Perfective**	
uḵ̣i ~ aḵ̣i	*uḵ̣a ~ uḵ̣i*	‘cross the river’

One verb, ending in a vowel, adds vowel **i** to the Aorist to form the Perfective. Underlying **w** becomes **u** in final position.

Aorist	**Perfective**	
ṭ̣ṭ̣u	*ṭ̣ṭ̣wi*	‘fold’

One verb has the vowel change **i** in the Aorist to **a** in the Perfective.

Aorist	**Perfective**	
seqṣ̣i	*seqṣ̣a*	‘ask’

7.5.2.10. Defective verbs

There are two defective verbs in our corpus which have the same meaning: **uḡem** and **aḥu** ‘give deserved punishment’. The verb **uḡem** is obligatorily combined with the indirect object pronoun, for example:

	Perfective ‘give deserved punishment’	
1:SG	*uḡm-ax as*	‘I gave him/her the deserved punishment’
2:SG	*t-uḡm-et as*	‘You gave him/her the deserved punishment’
3:M:SG	*y-uḡem as*	‘He gave him/her the deserved punishment’
3:F:SG	*t-uḡem as*	‘She gave him/her the deserved punishment’
1:PL	*n-uḡem as*	‘We gave him/her the deserved punishment’
2:PL	*t-uḡm-em as*	‘You gave him/her the deserved punishment’
3:PL	*uḡm-en as*	‘They gave him/her the deserved punishment’

The other defective verb which has the same meaning is an Imperative-only verb. It can only be used with the preposition **g** 'in'.

(9) *aḥu* *ga-s*
give.deserved.punishement:IMP in-3S
'Give him/her the deserved punishment.'

There are two verbs of the **Cc** type which only have an Aorist and a Perfective form. They do not have an Imperfective form. They do not have labialised consonants.

Aorist	**Perfective**	
ssen	*ssen*	'know
ffer	*ffer*	'owe'[68]

7.6. The Imperfective

While only a small number of Perfectives differ formally from the Aorist, most Imperfective stems are formally different from the Aorist. The Imperfective is generally formed on the basis of the Aorist by one of the following procedures:
(1) Consonant gemination (and exceptionally vowel insertion). Imperfective formation by gemination involves two possibilities. One group of verbs geminates the first consonant, the other group geminates the second consonant of the Aorist. Consonants in base-final position are rarely geminated (the verb **neɣ** ~ **nuɣ** 'kill' combines gemination with the addition of a final vowel **a**). In some exceptional cases gemination is accompanied by vowel insertion. Gemination can result either in a consonant which is only distinguished by length from its short counterpart or in a geminate consonant with a different manner and/or place of articulation (cf. II.1.9. phonology). Some examples of verbs which have consonant gemination in the Imperfective are:

Aorist	**Imperfective**	
zwir	*zuggir*	'precede'
k̲nes	*kknes*	'argue'
fred̲	*ffred̲*	'graze'
rfes	*reffes*	'knead'
d̲ri	*ddray*	'pass'[69]

[68] All aspectual stems of these verbs have the same form. Instead of the Berber-morphology verb **ffer** 'owe', Arabic-morphology verb **sal** 'owe' is used as well.

(2) Prefixation of **tt** ~ **t**, sometimes combined with vowel insertion or change.
Most verb types form the Imperfective by prefixing **tt** ~ **t**. Many forms combine prefixation with vowel insertion. The distribution of the allomorphs **tt** ~ **t** is to some extent unpredictable. When immediately followed by a vowel or by a consonant plus a vowel, both **tt** and **t** are possible, depending on the verb, for example:

tazzeḡ	'dry'	*ttaẓẓeḏ*[69]	'pee'
tṣuṭ	'blow'	*ttɛum*	'swim'

When followed by schwa and two consonants, the prefix is always **tt.** When followed by schwa and a geminate, it is always **t**, e.g.

tteḥtiž	'want'	*teṭṭeṣ*	'sleep'

When immediately followed by a consonant and schwa the prefix is always **t**, except for **cc** verbs which always have **tt**, e.g.

tlebbaq	'become fat'	*ttṛeẓ*	'break'

The geminate consonant in the verb types **Cc**, **Cvc** and some irregular types degeminates when the **tt** ~ **t** is prefixed, for example:

Aorist	**Imperfective**	
qquṛ	*ttɣaṛ*	'dry'
qqim	*ttɣim* ~ *ttɣima*	'sit'
ggull	*tgalla*	'swear'
kkar	*ttḵar*	'be full'

(3) A combination of these procedures and deletion of a consonant
There is a group of verbs of the structures **ccc**, **ccu** and **cc** that combine gemination of the second base consonant with **tt** ~ **t** prefixation and substitution of the first consonant of the base by **a**. These verbs will be treated as a separate category below.

[69] It should be noted that this is the only example of **ḏ** > **dd** correspondence in our corpus. There is no **ṯ** > **tt** correspondence. One possible candidate with **ṯ** > **dd** correspondence would be Aorist **iddu** > Imperfective **ittiṯu** - **ittuṯu**. As this is the only verb that shows this correspondence it is better considered an exception.

(4) Irregular cases

There is a minor category of verbs that form the Imperfective in an irregular way. Many of these verbs have **tt** ~ **t** prefixation. They have vowel change, consonant change, a combination of both, or suppletion.

7.6.1. Gemination

Verbs that have the structure **ccu** and **cci** (except for one **cci** verb) geminate the second consonant. For the much larger group of **ccc** verbs, gemination works differently. Part of these verbs have gemination of the first consonant in the Imperfective, while others have gemination of the second consonant. Most **ccc** verbs (though not all) have a sonorant in first or second consonant position. There is a correlation between the choice of the geminated consonant and the presence of a sonorant (**l**, **m**, **n**, **r**, **ṛ**). When the sonorant is in initial position, it is always the second consonant that is geminated. When the sonorant is in second position, mostly the first consonant is geminated (often combined with insertion of **u** before the final consonant). The latter distribution is a tendency and by no means a strict rule, as shown by pairs such as **xleq** > **xelleq** 'be born' as opposed to **xneq** > **xxneq** 'smother (somebody)' or **k̲meṭ** > **kemmeṭ** 'burn' as opposed to **k̲nes** > **kknes** 'argue'.[70]

7.6.1.1. ccc verbs with gemination of the first consonant and vowel insertion

The following overview provides examples of **ccc** verbs that geminate the first consonant:

Aorist	**Imperfective**	
ccc	**Ccc**	
dleḡ	*ddleḡ*	'rub'
xneq	*xxneq*	'smother' (person)
k̲nes	*kknes*	'fight'
k̲rez	*kkrez*	'plough'
fred̲	*ffred̲*	'graze'

The **ccv** verbs which have initial consonant gemination and another irregular change are:

Aorist	**Imperfective**	
qla	*qqli*	'bake'
dri	*ddray*	'pass'

A majority of verbs of this type also add **u** or **a** before the final consonant.

[70] For theoretical explanations of similar facts in Tashelḥiyt see Dell & Elmedlaoui (2002) and Lahrouchi (2010).

Aorist	**Imperfective**	
ccc	**Ccuc**	
qleḇ	*qqluḇ*	‘roll’
sleṯ	*ssluṯ*	‘remove’
fṛeq	*ffṛuq*	‘separate’
ɣleq	*ɣɣluq*	‘cover’
slex	*sslux*	‘skin’
žreḥ	*ǧruḥ*	‘injure’
qṣem	*qqṣum*	‘share, divide’

ccc	**Ccac**	
sker	*sskar*	‘do’
šɛel	*ššɛal*	‘turn on (oven)’

Some verbs of this type have two possible Imperfective forms, one with and one without vowel insertion, which are in free variation:

Aorist	**Imperfective**	
ccc	**Ccc** ~ **Ccuc**	
sḇeɣ	*ssbeɣ* ~ *ssbuɣ*	‘dye, paint’
ṭleq	*ṭṭleq* ~ *ṭṭluq*	‘straighten’
qṛeṭ	*qqṛeṭ* ~ *qqṛuṭ*	‘break’
sref	*ssref* ~ *ssruf*	‘comb’
ḥseḇ	*ḥḥseḇ* ~ *ḥḥsuḇ*	‘count’
ḥfeṛ	*ḥeffeṛ* ~ *ḥḥfuṛ*	‘dig’

The following verb of the **ccc** type has three possible Imperfective forms which are in free variation (see above)[71]. One of the forms is identical to the Aorist:

Aorist	**Imperfective**	
ɣems	*qqems* ~ *ɣemmes* ~ *ɣems*	‘cover’

cc verbs

cc verbs have numerous different formations for the Imperfective. A number of verbs have gemination of the initial consonant and insertion of **a**:

[71] This verb is not very well known by many people, and the multiplicity of Imperfective forms may be due to uncertainty on behalf of the informants. This verb is claimed to be used especially by old generations. Younger people use the Arabic borrowing **ɣeṭṭi** ‘cover’ instead.

Aorist	**Imperfective**	
cc	**Cac**	
ẓeḏ	*ẓẓaḏ*	‘grind’
suɣ (*/seɣʷ/*)	*ssaɣ*	‘buy’

7.6.1.2. Verbs with gemination of the second consonant

ccc verbs

Aorist	**Imperfective**	
ccc	**cCc**	
xleq	*xelleq*	‘be born’
mṭel	*meṭṭel*	‘bury’
hleḵ	*helleḵ*	‘be sick, ill’
rfes	*reffes*	‘knead’
mger	*megger*	‘harvest’
fṛeɛ	*feṛṛeɛ*	‘damage, hit’
lseq	*lesseq*	‘stick’
mleḵ	*melleḵ*	‘marry’
ršeq	*rešše**q***	‘split’
lḥes	*leḥḥes*	‘lick’
rwel	*ruggel* (*/reggʷel/*)	‘flee’
ḵmel	*kemmel*	‘finish’
lkem ~ *lkum* (*/lkʷem/*)	*lekkem*	‘arrive’
nǧeṛ	*neǧeṛ*	‘make furniture’
sketˍ ~ *skuˍt* (*/skʷeˍt/*)	*sekketˍ*	‘be quiet’

In some cases when **ḵ** is the first consonant of the verb in the Aorist and the Perfective, in the Imperfective a non-geminated stop **k** is found, for example:

Aorist	**Imperfective**	
ḵmeṭ	*kemmeṭ*	‘burn’
ḵšem	*kečem*	‘enter’
ḵmel	*kemmel*	‘finish’

ccv verbs

Most **ccu** verbs geminate the second consonant to form the Imperfective. There exists another type of Imperfective formation of this type of verb.

Aorist	**Imperfective**	
ccu	**cCu**	
rku	*rekku*	‘rot’
b̲nu	*b̲ennu*	‘build’
sḥu	*seḥḥu*	‘be strong, cure’
ḥmu	*ḥemmu*	‘hot’
rnu	*rennu*	‘add’

Most **cci** verbs geminate the second consonant.

Aorist	**Imperfective**	
cci	**cCi**	
ɣli	*ɣelli*	‘set, descend’
zri	*zerri*	‘pound’
xwi	*xewwi*	‘empty’
mṭi	*meṭṭi*	‘lunch’[72]
ngi	*neggi*	‘push’

cc verbs

Some **cc** verbs geminate the second consonant and some verbs optionally add **a** in the Imperfective. Two verbs have Imperfectives that are in free variation with forms that prefix **tt**.

Aorist		**Imperfective**	
cc		**cC(a)**	
neɣ ~ nuɣ	*(/neɣ^{w}/)*	*neqqa*	‘kill’
k̲es		*k̲ess ~ k̲essa* (*~ttk̲es*)	‘herd’
ruɣ	*(/reɣ^{w}/)*	*reqq* (*~ttraɣ*)	‘light’

The following verbs have free variation between two forms which involve either gemination of the second consonant or gemination of the first consonant and insertion of **u** before the final vowel.

[72] This verb is not used any longer by young people even though many of them know it.

Aorist	**Imperfective**	
ccc	**cCc ~ ccuc**	
ḥfeṛ	*ḥeffeṛ ~ ḥḥfuṛ*	‘dig’
ḥseḇ	*ḥesseḇ ~ ḥḥsuḇ*	‘count’

7.6.2. tt ~ t Imperfectives

In the following part Imperfective formation by means of **tt ~ t** prefixation is discussed. Often **tt ~ t** prefixation is combined with vowel insertion or vowel change.

7.6.2.1. Verbs with initial vowel

All verb forms that have a base-initial vowel in the Aorist have **tt ~ t** prefixation in the Imperfective. Many forms have free variation between **a** and **u**, while some have variation between labialised and non-labialised forms in the Aorist. The vowel is always **a** in the Imperfective and there is no labialisation.

Aorist	**Imperfective**	
acc ~ ucc	**ttacc**	
aḡel ~ uḡel ~ aḡul (*/aḡʷel/*)	*ttaḡel*	‘hang up plants for goats’
aḵel ~ aḵul (*/aḵʷel/*)	*ttaḵel*	‘step on’
aḵer ~ aḵur (*/aḵʷer/*)	*ttaḵer*	‘steal’
ameẓ ~ umeẓ	*ttameẓ*	‘take, grab, trap’
aḡer ~ uḡer	*ttaḡer*	‘put bread in the oven’
ameṛ ~ umeṛ	*ttameṛ*	‘send’
azel ~ uzel	*ttazel*	‘run’
aɣel ~ uɣel	*ttaɣel*	‘be stuck’

Aorist	**Imperfective**	
ac ~ uc	**ttac**	
af ~ uf	*ttaf*	‘find’

Aorist	**Imperfective**	
aca ~ ucu	**ttaca**	
ara ~ ura	*ttara*	‘write’

Aorist	**Imperfective**	
acu ~ ucu	**ttacu**	
alu	*ttalu*	‘pick’
aru ~ uru	*ttaru*	‘give birth’

Aorist	**Imperfective**	
aci ~ uci	**ttaci**	
ani ~ uni	*ttani*	‘ride’
aḵi ~ wḵi	*ttaḵi*	‘cross the river’

Aorist	**Imperfective**	
acuc	**tacuc**	
ažuf	*ttažuf*	‘stink’

The Imperfective of the following verb is formed by prefixing **tt** and inserting **a** before the final consonant. As the deitic clitic **d / id** can be in initial position the **tt**- prefix assimilates in one variant.

Aorist	**Imperfective**	
āgem d ~ āgum d, dāgem ~ dāgum	*ttāgam d ~ ddāgam*	‘draw water’

cCc verbs

cCc verbs are very common in Ghomara Berber. Almost all verbs of this type are borrowings from Arabic (stem II verbs) that are integrated into the Berber morphological system. Most verbs of this type form the Imperfective by prefixing **t-** and adding the vowel **a** before the final consonant.

Aorist	**Imperfective**	
cCc	**tcCac**	
ḵerreḵ	*tḵerraḵ*	‘lie’
lebbeq	*tlebbaq*	‘become fat’
žewwef	*tžewwaf*	‘stink’
neẓẓeẓ	*tneẓẓaẓ*	‘be overripe’
seyyel	*tseyyal*	‘flow’
ṛemmeš	*tṛemmaš*	‘blink’
xebbeṭ	*txebbaṭ*	‘trot’
neqqez	*tneqqaz*	‘jump’

šeṭṭeḥ	*tšeṭṭaḥ*	‘make dance’
neddeh	*tneddah*	‘guide animals’
šebbeṭ	*tšebbaṭ*	‘climb’
weğeḏ	*tweğaḏ*	‘make ready’
seğeɛ	*tseğaɛ*	‘encourage’

There are a number of **cCc** verbs that prefix **t**- and do not insert **a**.

Aorist	**Imperfective**	
cCc	**tcCc**	
nessem	*tnessem*	‘smell’
ɛeššeṛ	*tɛeššeṛ*	‘beget’
ɛeṛṛež	*tɛeṛṛež*	‘limp’
qeššeṛ	*tqeššeṛ*	‘peel’
serrem	*tserrem*	‘comb’

One verb of this type has an Imperfective with an irregular loss of the **w**. It is in free variation with a form that retains the **w**.

Aorist	**Imperfective**	
wesseɛ	*tesseɛ* ~ *twesseɛ*	‘broaden’

cvc verbs

Almost all verb types with structure **cvc** only prefix **tt** ~ **t** to form the Imperfective. The stem vowel remains the same as in the Aorist. The vowel can be **i**, **u** and in one case **a**, for example:

Aorist	**Imperfective**	
cvc	**ttcvc**	
riḇ	*ttriḇ*	‘destroy’
fiq	*ttfiq*	‘wake up’
ɛiš	*ttɛiš*	‘live’
žif	*tžif*	‘choke’
miḥ	*ttmiḥ*	‘empty water’
ṣuṭ	*tṣuṭ*	‘blow’
ẓuṛ	*tẓuṛ*	‘visit a saint’
ɛum	*ttɛum*	‘swim’

ṣum	*ttṣum*	‘fast’
bus	*tbus*	‘kiss’

There is one verb of this type that has an obligatory deictic clitic **d** / **id**.

Aorist	**Imperfective**	
faw d	*ttfaw d*	‘be in the morning’

Two verbs of this type form their Imperfectives in an irregular way:

Aorist	**Imperfective**	
sis	*ssyas*	‘boil’
ẓum	*ttaẓum*	‘fast’

cvcc verbs

cvcc verbs can form the Imperfective in two ways: by prefixing **t** to the Aorist, or by prefixing **t** and copying the first vowel in the base. Some examples of the first type are:

Aorist	**Imperfective**	
cvcc	**tcvcc**	
sisen	*tsisen*	‘dip bread into gravy’
sahel	*tsahel*	‘make easy’

The following verbs copy the first vowel to the position before the final consonant. The vowel is either **a** or **u**.

Aorist	**Imperfective**	
cvcc	**tcacvc**	
ɛayen	*tɛayan*	‘look for, search’
gaded	*tgadad*	‘flatten’
ɛaṛeṭ	*tɛaṛaṭ*	‘memorise’
ḥawel	*tḥawal*	‘try’
susem	*tsusum*	‘listen’
ṣuṣef	*tṣuṣuf*	‘spit’

There is one verb which has an irregular infixation of two **a**'s:

Aorist	**Imperfective**	
cicc	**tcacac**	
siwel	*tsawal*	'speak or talk'

Verbs of the types caci and cCi

caci and **cCi** verbs combine **tt** ~ **t** prefixation with insertion of **a** before final **i**. The **i** becomes **y**. These verbs are borrowed (integrated) Arabic stem III verbs.

Aorist	**Imperfective**	
caci	**tcacay**	
laqi	*tlaqay*	'let, make meet'
wali	*twalay*	'hit'
ẓali	*tẓalay*	'separate'

cCi	**tcCay**	
ḥewwi	*tḥewway*	'have sex'
ɛelli	*tɛellay*	'go up'
žerri	*tžerray*	'run'
feḍḍi	*tfeḍḍay*	'finish'
meḏḏi	*tmeḏḏay*	'sharpen'
lewwi	*tlewway*	'spin, roll'
ɣeṭṭi	*tɣeṭṭay*	'cover'
tekki	*tekkay*	'press'

In one verb, **i** becomes **a** in the Imperfective.

Aorist	**Imperfective**	
caci	**tcaca**	
ḥaḏi	*tḥaḏa*	'touch'

Cc verbs

Most verbs which have the structure **Cc** take the prefix **t** (there are some irregular formations, see 7.6.4.). A number of verbs have labialised consonants which is why the vowel **u** appears in the Aorist (cf. labialisation II.4.). There is one irregular verb which has this Imperfective (see below).

Aorist		**Imperfective**	
Cc		**tCc**	
ṭṭeṣ		*teṭṭeṣ*	‘sleep’
ẓẓeḡ ~ *ẓẓeḡ*	(*/ẓẓeḡʷ/*)	*teẓẓeḡ*	‘milk’
ddez		*teddez*	‘pound’
dder		*tedder*	‘live, be alive’
kkur	(*/kkʷer/*)	*tekker*	‘stand up’
qqul	(*/qqʷel/*)	*teqqel*	‘return’
gguz	(*/ggʷez/*)	*teggez*	‘descend’
kkus	(*/kkʷes/*)	*tekkes*	‘remove’
qqun	(*/qqʷen/*)	*teqqen*	‘tie, close’
ffuɣ	(*/ffeɣʷ/*)	*teffeɣ*	‘go out’

cC verbs

cC verbs prefix **t** and add **a** after the final consonant.

Aorist	**Imperfective**	
cC	**tcCa**	
ɛeṭṭ	*tɛeṭṭa*	‘bite’
kebb	*tkebba*	‘pour’
hezz	*thezza*	‘shake, move’
ṛešš	*tṛešša*	‘splash’
medd	*tmedda*	‘lie down’
ḍeṣṣ	*ḍḍeṣṣa*	‘laugh’
ṣeff	*tṣeffa*	‘empty, dispose’

In one **cC** verb the final consonant is degeminated in the Imperfective.

Aorist	**Imperfective**	
sell	*tesla*	‘listen’

cc verbs with tt- prefix

In five verbs of the structure **cc**, the Imperfective is formed by means of prefixing **tt**. Two verbs have an additional possibility to form the Imperfective by other means.

Aorist	**Imperfective**	
cc	**ttcc**	
res	*ttres*	‘to be put’

ṛeẓ	*ttṛeẓ*	‘break’
meḏ	*ttmeḏ*	‘extinguish’
ḵes	*ttḵes* (∼ *iḵess* ∼ *iḵessa*)	‘herd’
ruɣ	*ttreɣ* (∼ *reqq*)	‘light’

7.6.2.2. Other verbs which take tt- ∼ t-

The few verbs that take a **tt** prefix and do not share their stem structure with other verbs are presented here.

Aorist	**Imperfective**	
mɣi d	*ttemɣi d*	‘grow (plants)’
ɣmuṛ	*tteɣmuṛ*	‘grow (generic)’
kkar	*ttḵar*	‘be full’
ḥruru	*tteḥruru*	‘crawl’
ttu	*tettu*	‘forget’
ẓẓu ∼ *ẓẓa*	*teẓẓa*	‘plant’

Verbs with more than three consonants

Verbs with more than three consonants form their Imperfective by prefixing **t-**. In addition, most verbs insert **a** before the final consonant.

Aorist	**Imperfective**	
caccc	**tcaccc**	
ɣaylef	*tɣaylef*	‘become angry’
qawqeš	*tqawqeš*	‘tickle’

Aorist	**Imperfective**	
caccc	**tcaccac**	
dawses	*tdawsas*	‘squeal’

Aorist	**Imperfective**	
cccc	**tcccac**	
ṭeṛṭeṛ	*tteṛṭaṛ*	‘fart hard’
zegzeg	*tzegzag*	‘mate’
qefqef	*tqefqaf*	‘shiver’
ɛerkel	*tɛerkal*	‘limp’
selsel	*tselsal*	‘bake grain’
serweṯ	*tserwaṯ*	‘thresh’

penčer	*tpenčar*	‘stab’

Aorist	**Imperfective**	
cccc	**tcccc**	
zeɛzeɛ	*tzeɛzeɛ*	‘tremble’
dergel	*ddergel*	‘roll’
qeṛqeṛ	*tqeṛqeṛ*	‘sulk’

7.6.3. Prefix tt ~ t, gemination and substitution of a labial consonant

A number of **ccc**, **ccu** and **cc** verbs combine three procedures of Imperfective formation. The following verbs, which all have an initial labial consonant (**b**, **b̲**, **f**, **m** or **w**), form the Imperfective by prefixing **tt** ~ **t**, followed by an **a** which replaces the initial base consonant, and gemination of the second consonant[73]. There are two verbs of the **ccc** type which do not geminate the second consonant but instead add a final vowel **a**[74].

Aorist	**Imperfective**	
ccc	**t(t)aCc**	
bzeḡ	*tazzeḡ*	‘swell, be wet’
ftel	*tattel*	‘spin, roll’
fsex	*tassex*	‘untie’
fteḥ	*tatteḥ*	‘open’
b̲ẓeḏ	*taẓẓeḏ*	‘urinate’
bdeḏ	*ttaddeḏ*	‘stand up, remain, stop’
b̲ṭeṛ	*taṭṭeṛ*	‘hurry up, hasten’

One verb of this type has two Imperfectives which are in free variation.

Aorist	**Imperfective**	
mseḥ	*tasseḥ* ~ *messeḥ*	‘clean’

The following verb of the type **cc** prefixes **tt**- and **f** is replaced by **a**.

[73] A similar type of verb is found in Tašelḥiyt Berber as well (cf. Kossmann, 1999: 120-125 for a historical explanation). The difference with Tašelḥiyt is that in Ghomara there is a **tt** ~ **t** prefix.

[74] The verbs **mseḥ**, **fteḥ** and **b̲ṭeṛ** are loanwords from Arabic which have been integrated to this native Imperfective formation.

Aorist	**Imperfective**	
cc	**ttac**	
fk	*ttak*	‘give’

The following **ccu** verbs show the same procedure to form an Imperfective.

Aorist	**Imperfective**	
ccu	**taCu ~ ttaCu**	
b̲ṭu	*taṭṭu*	‘share’
b̲du	*ttaddu*	‘begin’

The following two verbs starting in **we** (with schwa that does not change position) form the Imperfective by prefixing **tt**, substituting **we** by **a** and suffixing another **a** after the root. These verbs do not geminate the second consonant.

Aorist	**Imperfective**	
ccc	**ttacca**	
werg	*ttarga*	‘dream’
wešk	*ttaška*	‘get lost’

7.6.4. Irregular verbs

A number of verbs form the Imperfective in an irregular way. There can be irregular vowels, irregular consonants, a combination of both and suppletion. Many verbs have a **tt ~ t** prefix.

7.6.4.1. Irregular vowels

7.6.4.1.1. Insertion of a

The following verbs insert an **a** in an irregular way. In most cases there is a **tt ~ t** prefix as well. Initial **kk** degeminates to **k̲** after the prefix **tt**.

Aorist	**Imperfective**	
mt̲en	*ttamt̲en*	‘ferment’
ǧ ~ wǧ	*ttaǧ*	‘keep’
kku	*ttk̲aw*	‘dry up’
ǧun	*tžawan*	‘be full’
ẓẓwit̲	*ẓẓayat̲*	‘miss’
xṭaṛ	*ttaxṭaṛ (~ttexṭaṛ)*	‘choose’

7.6.4.1.2. Insertion of i

The following verbs consist of a single geminate consonant in the Aorist (see below for other verbs of this type).

Aorist	**Imperfective**	
ll	*ttill*	‘be’
ḥtaž	*tteḥtiž*	‘want, love’

There is one irregular Imperfective in the corpus to which **y** is added.

Aorist	**Imperfective**	
falṭa	*tfalṭay*	‘make a mistake’

7.6.4.1.3. Irregular consonants

There is one verb that adds a **d** in the Imperfective.

Aorist	**Imperfective**	
ḡḡ	*deḡḡ*	‘do, make’

7.6.4.1.4. Irregular consonants and vowels

A number of verbs have both irregular consonants and vowels in the Imperfective. Some of them may be considered suppletive.

Aorist	**Imperfective**	
dheṛ	*ttiṯuṛ* ~ *ttuṯuṛ*	‘appear’
ddu	*ttuṯu*	‘walk’
rri	*rraz*	‘return, plant’
mmuṯ	*tmettaṯ*	‘die’
qquṛ	*ttɣaṛ*	‘dry’
lluẓ	*tlaẓ*	‘be hungry’
ggull	*tgalla*	‘swear’
bbukk	*tb̄akka*	‘explode’
mel	*mmal*	‘show’
wweṯ	*kkaṯ* ~ *tkaṯ*	‘strike, hit, shoot’
su	*sess*	‘drink’

7.6.5. Suppletion

The following verbs have suppletive Imperfectives.

Aorist	**Imperfective**	
šš	*tett*	‘eat’
bb	*ttawi*	‘bring’

There is one verb which does not change its form in the Imperfective.

Aorist	**Imperfective**	
ttru	*ttru*	‘cry’

The following verb forms the Imperfective by prefixing **tt** and optionally adding **a**. Note that **qq** is degeminated after the **tt** prefix.

Aorist	**Imperfective**	
qqim	*ttɣim* ~ *ttɣima*	‘sit’

The verb **nu** ‘be cooked’ has a final **u** which is an underlying **w** (e.g. 3MS **i-nwa** ‘it is cooked’). This semi-vowel has a **gg**^{w} geminated counterpart.

Aorist	**Imperfective**		
nu	*nugg*	(*/negg^{w}/*)	‘be cooked’

7.7. The ss causative derivation

The causative is derived from a non-derived verb by means of the prefix **ss** ~ **s**[75]. There are no other derivational affixes that can be applied to a Berber verb. Instead, derived forms, esp. for the passive, are expressed by suppletion with Arabic forms (cf. chapter III.8.3.1.). The number of verbs that can form a causative by means of the **ss** ~ **s** prefix is limited to about forty in our corpus, which are all presented here. Other verbs (Berber or Arabic-morphology class) form the causative by means of **cCc** verbs (cf. IV.3.2.1. verbal syntax on derivations). Some causative verbs do not have a non-derived counterpart. Because of their formal make-up they will be presented here anyway.

A number of Perfective and virtually all Imperfective forms have specific formations as compared to the non-derived bases. Different from non-derived verbs vowel apophony is the main formation type for the Perfective and Imperfective causative. Another characteristic of Imperfective formation of a causative verb is that in general the **tt** ~ **t**

[75] In Berber linguistics this derivation is often referred to as the *dérivation à sifflante* (prefix **s**- / **ss**- / **zz**-) as opposed to the *dérivation à nasale* (prefix **m-**/**n**-) and *dérivation à dentale* (**tt**- passive, cf. Galand, 2002 [1987]: 323 - 329 and Chaker 1995: 1).

prefix cannot combine with **ss** ~ **s** prefixation (except for four verbs, one of which has optional **tt** ~ **t** prefixation).

In this section we will first present some general phenomena which have to do with causative formation. Then we will present the formation of the Perfective, followed by the formation of the Imperfective. The Aorist is taken as the basis from which the other aspectual stems are derived. Perfective formation can be divided into verbs that add **a** before the suffix, verbs that change vowels **u** > **a** and **i** > **a** and verbs that have labialisation in the Aorist, which is lost in the Perfective. A number of verbs do not change in the Perfective. The Imperfective is mainly formed by vowel insertion. There is one verb that is probably onomatopeic in origin, which has the causative prefix.

Aorist	**Perfective**	
ss-kuḥ	*ss-kuḥ*[76]	‘cough’

7.7.1. Some remarks about the prefix and the base

When the base has a **š**, the prefix optionally harmonises to **šš**. Harmonisation with **z** only occurs in one verb, which no longer has an underived counterpart. Other verbs with **z** in the base have the prefix **ss**-:

Aorist	
šš-eḵšem (~ *ss-eḵšem*)	‘make enter’
š-wešk	‘cause to get lost’
zz-enz ~ *z-nez*	‘sell’

Pharyngealisation spreads to the **ss** ~ **s** prefix (cf. II.1.11. phonology).

Aorist		
ss-eḥṣel	*[ṣṣ-eḥṣel]*	‘drop’
ss-eɣmuṛ	*[ṣṣ-eɣmuṛ]*	‘make grow’

In the following **cc** and **cecc** verbs the causative prefix is not geminated:

Aorist	
s-nes	‘extinguish’
s-res	‘put down’
š-wešk	‘make disappear’

[76] The onomatopeia does not exist in the language. It does exist as a verb in local Arabic, **kaḥ** ~ **ikuḥ** ‘cough’.

Some verbs with an initial geminate insert a vowel between the prefix and the base form of the verb. The geminate is degeminated, for instance:

non-derived Aorist				**Aorist**
ffuɣ (*/ffeɣ^{w}/*)	'go out'	>	*ss-ufuɣ /ss-ufeɣ^{w}/*	'make go out, expel'
gguz (*/ffeɣ^{w}/*)	'descend'	>	*ss-aguz /ss-ag^{w}ez/*	'lower'

Other geminate-initial verbs degeminate the initial consonant after **ss** (without insertion of a plain vowel), for example:

non-derived Aorist				**Aorist**
ttru	'cry'	>	*ss-etru*	'make cry'
kku	'dry'	>	*ss-ku*	'make dry'

7.7.2. Perfective formation

A number of causative verbs formally distinguish the Aorist and the Perfective[77]. Most of these verbs have either one or two base consonants and a full vowel which changes in the Perfective. Two verbs, one **cu** verb and one **cc** verb, add **a** between the base and the suffix in the Perfective. There are basically two vowel changes: **a** in the Aorist becomes **u** in the Perfective, or **i** in the Aorist becomes **a** in the Perfective. These vowels may change in base-initial, base-medial and base-final position. Verbs which have a three-consonantal stem do not change, except for some verbs which have a labialised consonant in the Aorist.

7.7.2.1. Addition of a before suffix

The causatives of the verb **nu** 'be ripe/cooked' and **nes** 'extinguish' have a vowel **a** in the Perfective before a conjugational suffix. The Aorist of the verb **ss-nu** 'be cooked/be ripe' has a free variant with **a**. In the Perfective of the derived verb **ss-nes** 'put out' the **a** is optional. We have provided the full Aorist and Perfective paradigms below.

	ss-nu 'cook'		
	Aorist	**Perfective**	
1:SG	*ss-nu-x ~ ss-enwa-x*	*ss-enwa-x*	'I cooked'
2:SG	*te-ss-nu-t ~ te-ss-enwa-t*	*te-ss-enwa-t*	'You cooked'
3:M:SG	*i-ss-nu*	*i-ss-nu*	'He cooked'
3:F:SG	*t-ess-nu*	*t-ess-nu*	'She cooked'

[77] In other Berber dialects such as Aït Seghrouchen (Bentolila, 1981: 375), **ss-** derived verbs have no formal distinction between Aorist and Perfective. In Tašelḥiyt such verbs do make a distinction which exists in underived verbs as well (cf. Aspinion, 1953: 263).

1:PL	*n-ess-nu*	*n-ess-nu*	‘We cooked’
2:PL	*te-ss-num* ~ *te-ss-enwa-m*	*te-ss-enwa-m*	‘You (P) cooked’
3:PL	*ss-nu-n* ~ *ss-enwa-n*	*ss-enwa-n*	‘They cooked’

ss-nes[78] ‘extinguish, put out’

	Aorist	**Perfective**	
1:SG	*ssens-ax*	*sse-nsa-x*	‘I put out’
2:SG	*te-sse-ns-et*	*t-sse-nsa-t* ~ *t-sse-ns-et*	‘You put out’
3:M:SG	*i-s-nes* ~ *i-ss-ens*	*i-s-nes* ~ *i-ss-ens*	‘He put out’
3:F:SG	*te-s-nes* ~ *te-ss-ens*	*te-s-nes* ~ *t-ss-ens*	‘She put out’
1:PL	*ne-s-nes* ~ *ne-ss-ens*	*ne-s-nes* ~ *ne-ss-ens*	‘We put out’
2:PL	*t-s-ens-em*	*t-se-nsa-m* ~ *t-s-ens-em*	‘You put out’
3:PL	*ss-ens-en*	*ss-ensa-n* ~ *ss-ens-en*	‘They put out’

7.7.2.2. Vowel change u > a

The following verbs change an initial, medial or final vowel **u** in the Aorist to **a** in the Perfective. The **u** in initial position in the Aorist is copied to pre-final position if there is a schwa position (in the example in third person and first person plural). To illustrate this we show the Aorist conjugation of one verb **ssuṭeṣ** ‘make sleep’. A geminate is degeminated in the causative form. The verbs **zzuɣur** ‘drag’ and **ss-umem** ~ **ss-umum** ‘suck’ do not have a non-derived counterpart. The voicing of the prefix of **zz-uɣur** is unexplained.

	Aorist	**Perfective**	
1:SG	*ssuṭṣ-ax*	*ssaṭṣ-ax*	‘I made sleep’
2:SG	*te-ssuṭṣ-et*	*te-ssaṭṣ-et*	‘You made sleep’
3:M:SG	*i-ssuṭuṣ*	*i-ssaṭeṣ*	‘He made sleep’
3:F:SG	*te-ssuṭuṣ*	*te-ssaṭeṣ*	‘She made sleep’
1:PL	*ne-ssuṭuṣ*	*ne-ssaṭeṣ*	‘We made sleep’
2:PL	*te-ssuṭṣ-em*	*te-ssaṭṣ-em*	‘You made sleep’
3:PL	*ssuṭṣ-en*	*ssaṭṣ-en*	‘They made sleep’

initial position			
non-derived	**Aorist**	**Perfective**	
ṭṭeṣ	*ss-uṭuṣ*	*ss-aṭeṣ*	‘make sleep’

[78] The prefix can be simple or geminated.

ṭṭeṭṭ	*ss-uṭuṭ*	*ss-aṭeṭ*	‘suckle’
---	*ss-umem ~ ss-umum*	*ss-amem*	‘suck’

In the two following verbs the **u** before the final consonant is probably the result of labialisation.

ffuɣ	*ss-ufuɣ*	/ss-ufeɣ^{w}/	*ss-afeɣ*	‘make go out, expel’
---	*zz-uɣur*	/zz-uɣ^{w}er/	*zz-aɣer*	‘drag’

There are two verbs with the same vowel change **u** > **a** ~ **u**. Neither of these verbs has a non-derived counterpart. Furthermore, both verbs have a **t**- prefix in the Imperfective.

non-derived	**Aorist**	**Perfective**	
---	*ṣuṣef*	*ṣaṣef*	‘spit’
---	*susem*	*sasem ~ susem*	‘hear’

Medial position

non-derived	**Aorist**	**Perfective**	
ɛum	*ss-ɛum*	*ss-ɛam*	‘let, make swim’

	Aorist	**Perfective**	
bbukk	*ss-b̲ukk*	*ss-b̲akk*	‘explode’

Final position

non-derived	**Aorist**	**Perfective**	
ḥmu	*ss-eḥmu*	*ss-eḥma*	‘heat’
---	*ss-endu*	*ss-enda*	‘churn’

The Perfective of the verb **ttru** ‘cry’ has two forms which are in free variation, one with and one without a vowel change.

non-derived	**Aorist**	**Perfective**	
ttru	*ss-etru*	*ss-etra~ss-etru*	‘make cry’

7.7.2.3. Vowel change **i** > **a**

A number of verbs change **i** > **a** in initial, medial and final position.

Initial position

There are two verbs which have stem-initial **i** in the Aorist, which changes to **a** in the Perfective. These verbs do not exist in a non-derived variant. The non-derived forms (and **ss** causative forms) of these verbs are well attested in a number of other Berber languages.

non-derived	**Aorist**	**Perfective**	
---	*ss-ireḏ*	*ss-areḏ*	‘bathe’
---	*ss-ifef*	*ss-afef*	‘sieve’

There is one other verb which shows this pattern. This verb does not have an underived counterpart either.

non-derived	**Aorist**	**Perfective**	
---	*ss-fi*	*ss-fa*	‘fester, overflow’

Medial position

non-derived	**Aorist**	**Perfective**	
fiq	*ss-fiq*	*ss-faq*	‘wake up’

Final position

non-derived	**Aorist**	**Perfective**	
ani ~ uni	*ss-ani*	*ss-ana*	‘mount’

non-derived	**Aorist**	**Perfective**	
mɣi	*ss-emɣi* (*d*)	*ss-emɣa* (*d*)	‘let grow’ (plants)
ɣli	*ss-eɣli*	*ss-eɣli*	‘swallow’
ɛelli	*ss-eɛli ~ ss-elɛi*	*ss-eɛla ~ ss-elɛa*	‘lift, make ascend’

The verb **ss-eḏri** ‘make pass’ has free variation **i** ~ **a** in the Perfective:

non-derived	**Aorist**	**Perfective**	
ḏri	*ss-eḏri*	*ss-edri ~ ss-edra*	‘make pass’

There is one verb which has **u** in the Aorist and **a** ~ **u** in the Perfective.

non-derived	**Aorist**	**Perfective**	
ggall	*s-gull*	*s-gall* ~ *s-gull*[79]	'make swear'

7.7.2.4. Labialisation

Some verbs have optional or obligatory labialised consonants in the Aorist but not in the Perfective. One such verb is the causative of **ruɣ** ~ **reɣ** (/reɣ^{w}/ ~ /reɣ/) 'be lit':

non-derived	**Aorist**	**Perfective**	
ruɣ ~ *reɣ*	*ss-ruɣ* ~ *ss-reɣ*	*ss-reɣ*	'light'

The labialised geminate consonant in **gguz** 'descend' is degeminated in the derived form and a vowel **a** is added in initial base position. In the Perfective there is no labialisation.

non-derived	**Aorist**	**Perfective**	
gguz (/gg^{w}ez)	*ss-aguz* (*/ss-ag^{w}ez/*)	*ss-agez*	'let, make descend'

The following three-consonantal verbs optionally or obligatorily have labialised **k** or **ḡ** in the Aorist. Note the degemination of **kk** and the addition of **n** in the causative form of **kkur**. This derived form with **n** is known from a number of other Berber varieties (cf. Galand 2002 [1984]:105 for discussion of this verb).

non-derived	**Aorist**	**Perfective**	
lkum (/lk^{w}em)	*ss-elkem* ~ *ss-elkum (ss-elk^{w}em)*	*ss-elkem*	'take, bring'
kkur (/kk^{w}er/)	*ss-enkur (ss-enk^{w}er)*	*ss-enker*	'wake up, get up'
ḇzuḡ (/ḇzeḡ^{w})	*ss-eḇzeḡ*	*ss-eḇzeḡ*	'make wet'

7.7.2.5. Aorist = Perfective

All other derived causative verbs have the same stem forms for the Aorist and the Perfective. This is the case for the following verbs:

non-derived	**Aorist**	**Perfective**	
qquṛ	*ss-qaṛ* ~ *ss-ɣaṛ* ~ *ss-ɣuṛ*	*ss-qaṛ* ~ *ss-ɣaṛ* ~ *ss-ɣuṛ*	'make dry'
faw	*ss-faw* (*d)*	*ss-faw* (*d)*	'make become'

[79] An often used alternative is **cCc** verb **ḥellef** 'make swear'.

kku	*ss-ku*	*ss-ku*	‘make dry’
qqim	*ss-ɣim ~ ss-qim*	*ss-ɣim ~ ss-qim*	‘make sit’
res	*s-res*	*s-res*	‘put’
meḏ	*ss-meḏ*	*ss-meḏ*	‘empty, extinguish’
---	*zzenz ~ znez*	*zzenz ~ znez*	‘sell’
ɣmuṛ	*ss-eɣmuṛ*	*ss-eɣmuṛ*	‘make grow’

The Aorist and the Perfective of **ccc** verbs which do not have a labialised consonant are the same.

non-derived	**Aorist**	**Perfective**	
ḵmeṭ	*ss-eḵmeṭ*	*ss-eḵmeṭ*	‘burn’
ḵšem	*šš-eḵšem*	*šš-eḵšem*	‘make enter, let in’
mleḵ	*ss-emleḵ*	*ss-emleḵ*	‘let, make marry’
ḇdeḏ	*ss-ebdeḏ*	*ss-eḇdeḏ*	‘let, make stand up’
nṭeṛ	*ss-enṭeṛ*	*ss-enṭeṛ*	‘let, make fly’
ḥṣel	*ss-eḥṣel*	*ss-eḥṣel*	‘drop’
nṭeḡ	*ss-enṭeḡ*	*ss-enṭeḡ*	‘let, make fly’
hleḵ	*ss-ehleḵ*	*ss-ehleḵ*	‘make sick’

One verb has three free variants in the Perfective:

non-deriv.	**Aorist**	**Perfective**	
wešk	*š-wešk*	*šš-ušk ~ š-wešk*	‘let, make loose,
		~ šš-ašk	let, make dissappear’

7.7.3. Imperfective formation

Imperfectives of causative verbs are formed by inserting a vowel before the final vowel or consonant of the Aorist base. Most verbs take **a**, while some verbs insert **u** or **i**. Furthermore, there are some exceptional cases where **u** or **y** are added to the end. The Imperfective prefix **tt ~ t** is disallowed in combination with **ss ~ s** causatives, except for four verbs, which take the prefix (one verb has both possibilities). We do consider these two exceptions to be causatives, because they both have corresponding non-derived bases. Finally, there are some Imperfectives that do not change their form. Gemination is not used to form the Imperfective. Below we will present the Imperfective formations, taking the Aorist as the basic form.

7.7.3.1. Insertion of a

The following structures insert vowel **a** before the final base vowel or consonant. There are a number of **ccc** verbs which insert **a** before the final consonant in the Imperfective. The verb **ss-entef** 'wound' does not have a non-derived form.

non-derived	**Aorist**	**Imperfective**	
ḵmeṭ	*ss-eḵmeṭ*	*ss-eḵmaṭ*	'burn'
ḇzeḡ ~ḇzuḡ	*ss-eḇzeḡ*	*ss-eḇzaḡ*	'make wet'
mleḵ	*ss-emleḵ*	*ss-emlaḵ*	'let, make marry'
bdeḏ	*ss-ebdeḏ*	*ss-eḇdaḏ*	'let, make stand up'
---	*ss-entef*	*ss-entaf*	'wound'
nṭeṛ	*ss-enṭeṛ*	*ss-enṭaṛ*	'let, make fly'
nṭeḡ	*ss-enṭeḡ*	*ss-enṭaḡ*	'let, make fly'
hleḵ	*ss-ehleḵ*	*ss-ehlaḵ*	'make sick'

The following two **ccc** verbs loose their labialisation of **k** in the Imperfective:

non-derived	**Aorist**	**Imperfective**	
lkem ~	*ss-elkem ~*	*ss-elkam*	'make arrive'
lkum (/lkʷem/)	*ss-elkum (/ss-elkʷem/)*		
kkur (/kkʷer/)	*ss-enkur*	*ss-enkar*	'awake'
	(/ss-enkʷer/)		

There is one **cc** verb which inserts **a**:

non-derived	**Aorist**	**Imperfective**	
meḏ	*ss-meḏ*	*ss-maḏ*	'extinguish'

Two **ccc** verbs use the Imperfective prefix **t-**, in combination with the insertion of **a**. In the first verb, **t-** is obligatory, in the second it is optional[80]:

non-derived	**Aorist**	**Imperfective**	
ḵšem	*šš-eḵšem*	*t-š-eḵšam*	'make enter'
ḥṣel	*ss-eḥṣel*	*ss-eḥṣal ~ t-s-eḥṣal*	'drop'

[80] In many Berber languages the two prefixes **ss** ~ **s** and **tt** ~ **t** are mutually exclusive, (cf. for example Cadi, 1987 and Kossmann, 2002 for the history of the Imperfective).

In the following verb **u** in the Aorist is changed into **a** in the Imperfective and an **a** is added. The initial **bb** is degeminated.

non-derived	**Aorist**	**Imperfective**	
bbukk	*ss-ḇukk*	*ss-ḇakka*	‘make explode’

In case there is a final vowel, **u** becomes a glide **w** and **i** becomes a glide **y** (The final vowel is underlyingly a semi-vowel, cf. II.2.2.).

non-derived	**Aorist**	**Imperfective**	
kku	*ss-ku*	*ss-kaw*	‘dry’
nu	*ss-nu*	*ss-naw*	‘cook’
ni	*ss-ani*	*ss-anay*	‘let, make mount’
---	*ss-fi*	*ss-fay*	‘fester, overflow’
ḥmu	*ss-eḥmu*	*ss-eḥmaw*	‘make hot’
---	*ss-endu*	*ss-endaw*	‘churn’
ttru	*ss-etru*	*ss-etraw*	‘make cry’[81]
ɣli	*ss-eɣli*	*ss-eɣlay*	‘swallow’
ɛelli	*ss-eɛli* ~ *ss-elɛa*	*ss-eɛlay*	‘make ascend, lift’

A particular case is the following **a-**final verb which forms the Imperfective in the same way as the Imperfectives of the **cci** verbs above. It takes an obligatory deictic clitic **d** / **id**.

non-derived	**Aorist**	**Imperfective**	
mɣi	*ss-emɣa (d)*	*ss-emɣay (d)*	‘grow’

In the following verb, the labialisation found in the Aorist is absent in the Imperfective:

non-derived	**Aorist**	**Imperfective**	
gguz (ggʷez)	*ss-aguz (/ss-agʷez/)*	*ss-agaz*	‘let, make descend’

7.7.3.2. Insertion of u

The following verbs insert **u** before the final consonant in the Imperfective.

non-derived	**Aorist**	**Imperfective**	
nes	*s-nes*	*ss-nus*	‘extinguish’

[81] In this case it seems that an **ss-** prefix precedes a **tt-** prefix. However, in this verb the **tt-** is part of the base **ttru** ‘cry’. In other Berber varieties, e.g. Riffian, **tt-ru** is the Imperfective form of the verb **ru**.

res		*s-res*	*ss-rus*	‘put’
---	*zz-enz ~ z-nez*		*zz-nuz*	‘sell’

non-derived	**Aorist**[82]	**Imperfective**	
ṭṭeṣ	*ss-uṭeṣ*	*ss-uṭuṣ*	‘make sleep’
ṭṭeṭ	*ss-uṭeṭ*	*ss-uṭuṭ*	‘suckle’

Note the two following cases which are partly identical in the Aorist and the Imperfective. The difference is that the Aorist has a labialised consonant whereas the Imperfective has a full vowel **u** (for the behaviour of labialised consonants see II.4.):

non-derived	**Aorist**	**Imperfective**	
reɣ ~ ruɣ (/reɣ^{w})	*ss-reɣ ~ ss-ruɣ (/ss-reɣ ~ ss-rəɣ^{w})*	*ss-ruɣ (/ss-ruɣ/)*	‘light’[83]
ffuɣ (/ffeɣ^{w}/)	*ss-ufuɣ (/ss-ufeɣ^{w}/)*	*ss-ufuɣ (/ss-ufuɣ/)*	‘make go out, expel’

There is one verb in which **u** is added after the base. It does not have a non-derived base.

non-derived	**Aorist**	**Imperfective**	
---	*ss-kuḥ*	*ss-kuḥu*	‘cough’

7.7.3.3. Insertion of i

These vowel **i** is inserted in the following two verbs. None of these verbs has a non-derived form.

non-derived	**Aorist**	**Imperfective**	
---	*ss-ireḍ*	*ss-iriḍ*	‘bathe’
---	*ss-ifef*	*ss-ifif*	‘sieve’

7.7.3.4. No change

Some verbs have an Imperfective that is identical to the Aorist.

[82] **u** appears in some positions before the final consonant.

[83] We can tell for sure that the **u** in the Imperfective is not labialisation because of its fixed position. Labialisation in the Aorist changes position according to syllabification, for example 1:SG **ssurɣ-ax** ‘I lit’ 3.M:SG **i-ssruɣ** ‘he lit’. In the Imperfective the vowel does not change position, e.g. 1:SG **ssruɣ-ax** ‘I lite’ 3.M:SG **i-ssruɣ** ‘he lites’.

non-derived	**Aorist**	**Imperfective**	
ɛum	*ss-ɛum*	*ss-ɛum*	‘let, make swim’
qquṛ	*ss-qaṛ ~ ss-ɣaṛ ~ ss-ɣuṛ*	*ss-qaṛ ~ ss-ɣaṛ ~ ss-ɣuṛ*	‘make dry’
faw (d)	*ss-faw (d)*	*ss-faw (d)*	‘make become’
ɣmuṛ	*sse-ɣmuṛ*	*sse-ɣmuṛ*	‘make grow’
fiq	*ss-fiq*	*ss-fiq*	‘wake up’
qqim	*ss-qim*	*ss-qim*	‘make sit’
wešk	*š-wešk*	*š-wešk*	‘make disappear’
ggull	*s-gall*	*s-gall*	‘make swear’

There are two verbs which do not have a non-derived counterpart and prefix a **t**- in the Imperfective.

non-derived	**Aorist**	**Imperfective**	
---	*ṣuṣef*	*tṣuṣuf*	‘spit’
---	*susem*	*tsusum*	‘hear’

8. The Arabic-morphology verb

In this section we present Arabic verbs that retain the original Arabic morphology in Ghomara Berber[84]. Many Arabic verbs are borrowed without being integrated in the Berber system (approximately 19% of all verbs in our corpus). The borrowing can include the preverbal future marker (**š** ~ **maš** ~ **ɣa**) and postverbal clitics (DO and IO, see III.11.5.). Arabic verbs maximally consist of a stem, a passive derivational prefix **tt**- (~**t**-) or **n**-, and conjugational affixes. The lexical stem can be biliteral, triliteral or quadriliteral[85]. Biliteral verbs often contain a vowel, other types less often so. The conjugational affixes mark person (first, second and third), number (singular and plural) and gender (masculine and feminine, in the singular). Conjugational affixes come in two sets, which will be called by the names common in Arabic linguistics; the Perfect (also: suffix) conjugation and the Imperfect (also: prefix) conjugation.

The vowels of non-derived biliteral verbs often change between Perfect and Imperfect aspectual forms, but not in the derived forms. The Arabic verb can be schematised as follows (excluding preverbal particles):

PNG.ASP -	deriv. -	stem (ASP) -	PNG.ASP
i-	**t**-	**b̲aɛ** -	**u**
3MPL:IMPF	PASS	sell	3MPL:IMPF
‘They are sold’			

8.1. Verbal Affixes

The Arabic verb class, faithful to Arabic morphology, has three sets of verbal affixes, one of the Perfect and one for the Imperfect, and an Imperative set. In the following overview the verbal affixes of the Perfect and the Imperfect are presented.

Perfect		‘hunt/fish’[86]	‘sweat’	‘learn/read’
1:SG	*-t ~ -t̲*	*ṣṣaḏ-it̲*	*ɛṛeq-t*	*qṛi-t̲*
2:SG	*-t ~ -t̲ / -ti ~ -t̲i*	*ṣṣaḏ-it̲ /-it̲i*	*ɛṛeq-t / -ti*	*qṛi-t̲ / -t̲i*
3:M:SG	-	*ṣṣaḏ*	*ɛṛeq*	*qṛa*
3:F:SG	*-t̲*	*ṣṣaḏ-et̲*	*ɛeṛq-et̲*	*qṛa-t̲*
1:PL	*-na*	*ṣṣaḏ-na / -ina*	*ɛṛeq-na*	*qṛi-na*
2:PL	*-tum ~ -t̲um / -tu*	*ṣṣaḏ-tum / -it̲um*	*ɛṛeq-tu(m)*	*qṛi-t̲u(m)*
3:PL	*-u*	*ṣṣaḏ-u*	*ɛeṛq-u*	*qṛa-w*

[84] 118 Verbs (approximately 19%) on a total of 639 verbs in our database retain Arabic morphology.

[85] Here we apply the same definition of the lexical stem as in the part on Berber verbs (cf. III.7.1.).

[86] The insertion of the **i** before a first or second person suffix is optional.

Imperfect		‘hunt/fish’	‘sweat’	‘learn/read’
1:SG	*n-*	*(ka-)ne-ṣṣaḏ*	*(ka-)ne-ɛṛeq*	*(ka-)ne-qṛa*
2:SG	*d-*	*(ka-)de-ṣṣaḏ*	*(ka-)de-ɛṛeq*	*(ka-)de-qṛa*
3:M:SG	*y-*	*(ka-)ye-ṣṣaḏ*	*(ka-)ye-ɛṛeq*	*(ka-)ye-qṛa*
3:F:SG	*d-*	*(ka-)de-ṣṣaḏ*	*(ka-)de-ɛṛeq*	*(ka-)de-qṛa*
1:PL	*n - u*	*(ka-)ne-ṣṣaḏ-u*	*(ka-)n-ɛeṛq-u*	*(ka-)ne-qṛa-w*
2:PL	*d – u*	*(ka-)de-ṣṣaḏ-u*	*(ka-)d-ɛeṛq-u*	*(ka-)de-qṛa-w*
3:PL	*y - u*	*(ka-)ye-ṣṣaḏ-u*	*(ka-)y-ɛeṛq-u*	*(ka-)ye-qṛa-w*

The form -**t** immediately follows a vowel while -**ṯ** immediately follows a consonant in the Perfect (cf. II.1.10. for phonological rules). There is no gender distinction in the second person singular, which is typical of Jbala Arabic[87]; the suffix is either -**t** (~ -**ṯ**) or -**ti** (~ -**ṯi**). The second person plural is either -**tu** (~ **ṯu**) or -**tum** (-**ṯum**)[88]. In the Perfect an **i** is optionally inserted in stems ending in a double consonant, whether they are derived or not. Stems ending in **a** change to **i** in the first and second person (see examples below).
In the Imperfect, **d-** is the prefix of the second person singular and plural and the third person feminine singular. Sometimes **t**- occurs in that position. The Imperfect has a preverbal marker **ka**- in most contexts (cf. IV.8.2.2. for **ka**-). In both aspects, the plural suffix -**u** becomes **w** when following a vowel.

The Imperative

Imperative stems are the same as the Imperfect, but take special verbal indices. The suffixes of the Imperative are Ø for the singular and -**u** for the plural. The vowel **u** becomes **w** after a vowel.

Imperative

SG	**PL**	
ṣṣaḏ	*ṣṣaḏ-u*	‘hunt, fish’
qṛa	*qṛa-w*	‘learn, read’

[87] Both the Jbala dialects described in Vicente (2000:61) and Moscoso (2003: 63) do not have a gender distinction in second person singular. However, the difference with Ghomara is that both dialects only have suffix -**t** in the Perfect. The variant described by Caubet (1993: 31-32) near Fes has only second person -**ti** in the Perfect, but distinguishes gender in the second person of the Imperfect conjugation.

[88] In the Maghreb the plural suffix -**tum** / -**ṯum** is unique to the Jbala region. For the dialect of Anjra the form **tˢum** is described by Vicente (2000: 62).

8.2. Verb types

In our discussion we make a distinction between non-derived and derived verb types. Non-derived verbs consist of several types which have two consonants and a vowel, three consonants or four consonants. The fact that verbs of these structures also exist in the Berber-morphology class shows that it is lexically determined which verb goes into one or the other class. The derived verbs can be subdivided into **tt** ~ **t** derived verbs and **n**- derived verbs (which often interact). Finally, there are some verbs which have other types of derivations.

8.2.1. Verb types with vowel change

Non-derived verbs which have less than three stem consonants are characterised by vowel change or vowel insertion, differentiating Perfect from Imperfect stems. Some verbs have a first and second person vowel in the Perfect which differs from the third person vowel, whereas the Imperfect vowel is the same for all persons. Suffixation may involve vowel insertion or change. The names traditionally used in Arabic linguistics are given between brackets.

cC ~ cvC (geminated verbs)

The so-called geminated verbs have a geminate final consonant. In the Perfect the vowel **i** is inserted between the verb and the suffix of the first and second person singular and plural forms. Verbs of this type either have **u** after the first base consonant in the Imperfect, which is optional, or they have **i**. In the Perfect verbs can have **u**[89]. An example of such a verb is:

	Perfect		**Imperfect**	
1:SG	*fekk-it̲*	'I rescued'	*n-fukk*	'I rescue'
2:SG	*fekk-it̲(i)*	'You rescued'	*d-fukk*	'You rescue'
3:M:SG	*fekk*	'He rescued'	*i-fukk*	'He rescues'
3:F:SG	*fekk-et̲*	'She rescued'	*d-fukk*	'She rescues'
1:PL	*fekk-(i)na*	'We rescued'	*n-fukk-u*	'We rescue'
2:PL	*fekk-(i)tu(m)*	'You rescued'	*d-fukk-u*	'You rescue'
3:PL	*fekk-u*	'They rescued'	*y-fukk-u*	'They rescue'

Some verbs of this type are:

Perfect	**Imperfect**
cC ~ cuC	**cC ~ cuC**

[89] Moscoso writes that this type of verb can get **a**, **i** or **u** in the Imperfective (2000:68).

ɣešš ~ ɣušš	*ɣušš*	‘deceive’
šekk ~ šukk	*šekk ~ šukk*	‘doubt’
fekk	*fukk*	‘rescue’

Perfect	**Imperfect**	
cC	**ciC**	
ɛess	*ɛiss*	‘guard’
ḥebb	*ḥibb*	‘love’

cvc (‘hollow verbs’)

Verbs with a medial full vowel (in the Arabic linguistic tradition called ‘hollow verbs’), have **a** in the third person of the Perfect. In the Imperfect and the first and second person of the Perfect, depending on the verb, the vowel is **a**, **i** or **u** (which means that a number of verbs do not have a vowel change). For example the verb **ɣam - iɣum** ‘bottle up (anger/sorrow)’.

	Perfect		**Imperfect**	
1:SG	*ɣum-t*	‘I bottled up’	*(ka-)n-ɣum*	‘I bottle up’
2:SG	*ɣum-t(i)*	‘You bottled up’	*(ka-)d-ɣum*	‘You bottle up’
3:M:SG	*ɣam*	‘He bottled up’	*(ka-)y-ɣum*	‘He bottles up’
3:F:SG	*ɣam-eṯ*	‘She bottled up’	*(ka-)d-ɣum*	‘She bottles up’
1:PL	*ɣum-na*	‘We bottled up’	*(ka-)n-ɣum-u*	‘We bottle up’
2:PL	*ɣum-tum*	‘You bottled up’	*(ka-)d-ɣum-u*	‘You bottle up’
3:PL	*ɣam-u*	‘They bottled up’	*(ka-)y-ɣum-u*	‘They bottle up’

Perfect	**Imperfect**	
cac	**cac**	
sal	*sal*	‘owe’
ban	*ban*	‘appear, seem’

Perfect	**Imperfect**	
cac	**cic**	
ḥas	*ḥis*	‘feel’
sar	*sir*	‘continue’
ɛaq	*ɛiq*	‘become aware of’
qaṛ	*qiṛ*	‘admit’

Perfect	**Imperfect**	
cac	**cuc**	
sag	*sug*	‘drive’[90]
bas	*bus*	‘kiss’
lam	*lum*	‘blame’
dam	*dum*	‘last’

ccv (and cvcv) verbs (defective verb)

Verbs with a final vowel show variation between **a** in the first and second person and **i** in the third person of the Perfect. Depending on the verb, the Imperfect has **a** or **i** throughout the whole paradigm. For example the verb **qṛa** – **yeqṛa** ‘read, learn’:

	Perfect		**Imperfect**	
1:SG	*qṛi-ṯ*	‘I read/learned’	*(ka-)ne-qṛa*	‘I read/learn’
2:SG	*qṛi-ṯ/qṛi-ṯi*	‘You read/learned’	*(ka-)de-qṛa*	‘You read/learn’
3:M:SG	*qṛa*	‘He read/learned’	*(ka-)ye-qṛa*	‘He reads/learns’
3:F:SG	*qṛa-ṯ*	‘She read/learned’	*(ka-)de-qṛa*	‘She reads/learns’
1:PL	*qṛi-na*	‘We read/learned’	*(ka-)ne-qṛa-w*	‘We read/learn’
2:PL	*qṛi-ṯu*	‘You read/learned’	*(ka-)de-qṛa-w*	‘You read/learn’
3:PL	*qṛa-w*	‘They read/learned’	*(ka-)ye-qṛa-w*	‘They read/learn’

Other verbs of this type are:

Perfect	**Imperfect**	
cca	**cca**	
ḥfa	*ḥfa*	‘be blunt’
tfa	*tfa*	‘yawn’
ɛya	*ɛya*	‘tired’
xṛa	*xṛa*	‘defecate’
rğa	*rğa*	‘hope’
qṛa	*qṛa*	‘study, read’

Perfect	**Imperfect**	
cca	**cci**	
xwa	*xwi*	‘hollow out’

[90] One informant conjugated only the Perfective of this verb using Berber conjugation. Others consistently used Arabic morphology.

kma	*kmi*	‘smoke’
kra	*kri*	‘hire’
bɣa	*bɣi*	‘love’
ḥka	*ḥki*	‘tell’
zna	*zni*	‘comit adultery’

ccc

This type is common in both the Berber and the Arabic-morphology class. A considerable number of **ccc** verbs (48) have Arabic morphology. There is no difference between the form of the Perfect and the Imperfect. Some of the verbs of this type are:

Perfect	**Imperfect**	
ccc	**ccc**	
bṛeq	*bṛeq*	‘shine’
fṭen	*fṭen*	‘become aware of’
ndem	*ndem*	‘regret’
ɣleḏ	*ɣleḏ*	‘wrong’
šxeṛ	*šxeṛ*	‘snore’
ɛgez	*ɛgez*	‘lazy’
sker	*sker*	‘get drunk’
ɛṭeš	*ɛṭeš*	‘be thirsty’
qḍeṛ	*qḍeṛ*	‘be able’
wzen	*wzen*	‘weigh’

cacc

The following verb has a glottal stop in initial position[91].

Perfect	**Imperfect**	
ʔameṛ	*ʔameṛ*	‘command or order’

There is one verb in our corpus which has the form **caCec**, **ʔammen**. It is in free variation with **t-ʔammen** ‘trust’.

Perfect	**Imperfect**	
ʔammen	*ʔammen*	‘believe, trust’

[91] Glottal stops occur in borrowings from Standard Arabic. In the course of history they were lost in colloquial Arabic (cf. Heath, 2002: 179). This is not a stem III verb.

There is one non-derived four-consonantal verb in our corpus. The final vowel of the verb changes from **a** in the Perfect to **i** in the Imperfect and in the first and second person of the Perfect.

Perfect	**Imperfect**	
dumanḍa	*dumanḍi*	'command or order'

cCv

There is one **cCv** verb in our corpus which has Arabic-morphology.

Perfect	**Imperfect**	
mella	*melli*	'be fed up'

8.3. Derived verbs

In this section we will present the **tt**- ~ **t**- and **n**- derived verbs.

8.3.1. tt ~ t Derived verbs

Verbs with the **tt** ~ **t** and **n** derivation always have Arabic inflection. The variation between **tt** and **t** is at least tendentially conditioned by the stem form: **tt** tends to appear when the verb stem begins with two consonants without a vowel in between (including schwa), while the other verb types prefer **t**. The vowel quality is stable between aspectual stems; therefore only one form is presented. Verb stems ending in a vowel have **i** in the first and second person (singular and plural) and **a** in the third person (singular and plural) in the Perfect.

t-cC

t-šedd	'be tie, be closed'

t-cac

t-ḇaɛ (~ *n-baɛ*)	'be sold'
t-maḥ	'be emptied of water'
t-ḇan	'appear'
t-ṭal	'be guessed'

t-cca

t-exwa	'be hollowed out'
t-ešra	'be bought'
tt-eqla	'be fried'
tt-eqṛa	'be studied, be read'

t-ccc

tt-efleḥ	‘be cultivated’
tt-efṛeɛ	‘be damaged, be hit painfully’
tt-eɣleḇ	‘be defeated’
tt-eḥṛeṯ	‘be ploughed’

t-ccac

tt-exṭaṛ	‘be chosen’

t-cCc (stem V)

There are two verbs from standard Arabic in this group which have a glottal stop in stem-initial position.

t-ḥeṛṛeḳ	‘move’
t-keyyef	‘smoke’
t-ɛeṭṭel	‘be late’
t-ɛellem	‘learn’
t-heddeḏ	‘threaten’
t-seyyeḇ	‘be thrown’
t-žeyyeṛ	‘whitewash’
t-ɛewwež	‘be bent’
t-ṛewweḥ	‘be lifted, be returned’
t-xeffef	‘be light’
t-ʔekkeḏ	‘be guaranteed’
t-ʔammen (~ ʔammen)	‘trust’

t-cCa (stem V)

t-menna	‘hope’
t-ɣedda	‘have lunch’

t-cacc (stem VI)

t-taxeṛ	‘be last’
t-dafen	‘fight (each other)’
t-daḇez	‘fight (each other)’
tt-haweḏ	‘talk (to each other)’
t-sameḥ	‘forgive (each other)’

t-caca

t-laqa	‘join, meet’
t-ẓala	‘be separated’

t-caC

t-gadd	‘be flat, flatten’
tt-fakk	‘be rescued’

There are a number of quadriliteral verbs with **t**- passive derivation.

t-berɣez	‘be swapped’
t-ektašef	‘guess’
t-penčer	‘be stabbed’
t-qefqef	‘shiver’
t-selsel	‘be baked (grain)’
t-ṣeṛwel	‘be clothed with trousers’
t-xerčef	‘speak unclearly’
t-zeɛzeɛ	‘tremble’
t-ɣaylef	‘become angry’
t-ɣeṛbel	‘be sieved’

There is one verb of Spanish origin of the type **cacca**. In the first and second person singular the **a** becomes **i**.

t-ṣalṭa	‘dive’

8.3.2. n- derived verbs (stem VII)

Verbs derived by means of the prefix **n** also receive Arabic inflection. We present all the verbs in our corpus here. A number of verbs have free variation between the two passive prefixes **n** and **tt ~ t**.

n-edfeɛ	‘be pushed’
n-eqṛeṭ	‘break’
n-tellef	‘be lost, be dissapeared’
n-exṭeḇ	‘be asked to marry’
n-ɛezzel	‘be filtered, be separated’
n-eɛžen	‘be kneaded’
n-eɣḍeṛ	‘be betrayed’

n-eḍfeṛ	‘be tied (hair)’
n-eḍṛeḇ	‘be hit’
n-bheṭ	‘be astonished’
n-efḏeḥ (~ *tt-efḏeḥ*)	‘be caught
n-eɛqel (~ *t-eɛqel*)	‘be recognised’
n-ekteḇ (~ *tt-ekteḇ*)	‘be written’
n-baɛ (~ *t-ḇaɛ*)	‘be sold’
n-šaq (~ *t-šaq*)	‘be split’

8.3.3. Other derivations

The three schemes presented here have an infix **t**-, a prefix **s**t- or a vowel **a** inserted.

ctcc ~ ctacc (stem VIII)

A small number of verbs have a **t** infix after the stem-initial consonant.

rtɛeḇ	‘be scared’
ntaṣeṛ	‘win over’
ktašef	‘guess’
ɛtaṛef	‘admit, recognise’
štaweṛ	‘consult’

The verb **ṣṣaḏ** ‘hunt’ has initial **st** has become **ṣṣ** through assimilation[92]. The Perfect of this verb gets an optional **i** inserted between the stem and the suffix.

ṣṣaḏ	‘hunt’

ccac (similar to stem XI)

The following verbs all have an **a** before the final vowel.

šṭaṛ	‘ruminate’
shal	‘become, be easy’
ɛšaṛ	‘be pregnant’
ɣṛaq	‘drown’
zḥam	‘bad’
ḥtaž	‘need’
ḥmaṛ	‘tan, redden’

92 According to Moscoso (2002: 100), basing himself on Marçais and Destaing, this form is used in the north of Morocco as opposed to **ṣeyyed** (form Ⅱ), which is typically used in the south.

tqal	‘become heavy’

stccc (stem X)

This type takes the prefix **st**- and is unproductive. Very few verbs take this prefix.

steɛžeḇ	‘astonished’
stanes	‘get used to’

9. The adjective

The adjective in Ghomara Berber is a word class of its own. This makes it significantly different from other Northern Berber languages (so excluding Tuareg and Ghadames) in which the adjective constitutes '*une sous-classe du Nom et est identifié fondamentalement par sa syntaxe et, secondairement, par sa morphologie (son signifiant)*' (Chaker 1985: 1). The Berber adjective has all the morphological and syntactic characteristics of the noun including the expression of gender, number and state and the possibility to function as a predicate nominal. In fact, it only differs from common nouns '*par la capacité qu'il a de déterminer directement un substantif (séquence immédiate, sans marque autre que la position)*' (Chaker, 1985: 2). The adjective in these languages shares all the characteristics of nouns, and in addition it has the capacity to qualify nouns. Therefore this group of nouns which expresses 'property concepts' is to be considered a sub-group of the noun. Galand (2002:199) basically adopts the same view regarding the adjective. In his view it is difficult to distinguish the adjective from other nouns on the basis of morphological criteria. However, only this sub-group of the noun has the possibility to function as the second noun in what Galand calls a '*syntagme de reprise*' (2002: 199).

In Ghomara Berber the adjective class is clearly definable by a number of features. First of all, Berber adjectives have a unique form, not found in any other word class. Only four adjectives have Berber morphology, all of which are clearly of Berber etymological origin. They originally stem from the so-called stative verbs which have a specific verbal conjugation in many Berber languages (for an overview cf. Kossmann, 2009). In Ghomara Berber they differ in that there is only gender and number marking, and no person marking[93]. Furthermore, these forms do not distinguish verbal aspectual stems. The three Berber adjectives **meqquṛ** 'big', **meẓẓi** 'small' and **messus** 'insipid' have only two forms: masculine singular agreement on the one hand and feminine singular / plural agreement. One adjective of Berber origin, **mellul** 'white', has a dedicated plural suffix **-et̲** in free variation with the feminine singular / plural suffix **-et̲**. The following scheme provides an overview of the forms.

		'big'	'small'	'insipid'
M:SG	-	*meqquṛ (meqq^{w}eṛ)*	*meẓẓi*	*messus*
F:SG	*-t̲ ~ -et̲*	*muqqṛ-et̲*	*meẓẓi-t̲*	*messus-et̲*
PL	*-t̲ ~ -e t̲*	*muqqṛ-et̲*	*meẓẓi-t̲*	*messus-et̲*

The plural suffix of adjective **mellul** 'white' is either **-et̲** or **-in**.

[93] In the dialect of Ayt Bšir (Senhaja de Sraïr) the perfective of certain stative verbs (e.g. **meqqur** 'be big') which function as complements have the same indices in the singular, and **-en** in the plural (Lafkioui 2007:165; Lafkioui, 2009:111).

		‘white’
M:SG	-	*mellul*
F:SG	*-eṯ*	*mellul-eṯ*
PL	*-eṯ ∼ -in*	*mellul-eṯ/-in*

All other adjectives are borrowings from colloquial Arabic and follow Arabic morphological rules. Arabic-morphology adjectives express agreement differently from Berber adjectives. They make a distinction between masculine singular, feminine singular and plural. Like nouns Arabic-morphology adjectives occur in several schemes. An important difference between Arabic-based nouns and adjectives is that most Arabic nouns have inherent gender, while gender marking on the adjective is governed by the head noun (Caubet, 1993:59). Morphologically, there are two main types of Arabic-morphology adjectives, adjectives that take the suffix **-in** in the plural and adjectives that form the plural through vowel apophony. The suffixes that the Arabic-morphology adjectives take are listed below:

		Type 1	**Type 2**
		‘tall’	‘yellow’
M:SG	-	*ṭwil*	*ṣfeṛ*
F:SG	*-a*	*ṭwil-a*	*ṣefṛ-a*
PL	*-in*	*ṭwil-in*	*ṣufaṛ*

There are a number of syntactic features that define the adjective class:

1. The Relative Form: All adjectives allow for the relative form (or: Berber participle)[94]. Relative forms of adjectives always function as modifiers. For example:

(1) *iḇeṛṛiyen a y-meẓẓi-n ma ga-sen ši n lḥemm bezzaf*
sheep REL RF-small-RF NEG in-3PL NEG of meat a.lot
‘Small sheep do not have a lot of flesh.’

(2) *lektaḇ n umḥaḏ̱ri a y-ṭwil-in*
book of student:EA REL RF-tall-RF
‘The book of the tall student.’

[94] In Berberology the term participle refers to the verbal form which is used in subject relative clauses (cf. III.7.4. for the relative form). In Ghomara Berber the use of the participle is extended to the adjectives.

2. Head of an NP: The adjective can be the head of a noun phrase, including expression of the Arabic article **l-**. The use of the article is optional and shows the nominalisation of the adjective.

(3) *i-dda d meẓẓi i meqquṛ*
3MS-come:P DC small and big
The small and the big have come.

(4) *i-dda d l-meẓẓi i l-meqquṛ*
3MS-come:P DC ART-small and ART-big
The small and the big have come.

(5) *le-kḥel i le-ḥmeṛ safṛ-en dar ya tmazirt bɛiḏ-a*
ART-black and ART-red travel:P-3PL to one:F land far-FS
'The black one and the red one traveled to a far-away country.'

3. Modifier of a Head Noun: Unlike nouns, adjectives occur as modifiers of head (pro)nouns. They agree in gender and number with the head. The following examples illustrate the use of the Berber adjectives. In (6) the adjective modifies a feminine singular head noun. In (7) the modified head noun is plural and therefore the adjective has the same agreement marker as (6). In (8), (9) and (10) Arabic-morphology adjectives are shown.

(6) *deɣya h-tɛellay g ya tḡiḡet muqqṛ-eṯ*
quickly 3FS-go.up:I in one:F tree:EA big-FS
'She quickly climbs a big tree.'

(7) *i-kkrez s žuž n iɛebbaz muqqṛ-eṯ*
3MS-plough:I with two of oxen big-PL
'He ploughs with two big oxen.'

(8) *ttawi-n=d yah lgayza, ya usɣaṛ ɣliṭ*
take-3PL=DC one:F stick one:M stick:EA thick:MS
'They bring a stick, a thick stick.'

(9) *tamɣaṛt=ahen ṭwil-a hay te-sskar tawnaft*
woman:EL=S:ANP tall-FS she:PRES 3FS-do:I bread:EL
'That tall woman is making bread.'

(10) *i-tkewwaṛ* *ši* *n* *isekkawen* *ṭwil-in*
3MS-make.round:I some of horns tall:PL
'He makes some long horns.'

Examples (11) and (12) show the use of the adjective as a predicate.

(11) *taɛeyyalt* *muqqṛ-eṯ* *i* *wɛeyyal* *baqi* *meẓẓi*
girl:EL big-FS and boy:EA still small:MS
'The girl is big and the boy is still small.'

(12) *lbuffa=yahen* *n* *ṛṛwiḍa* *ṛqiq-a*
tube=S:ANP of tire thin-FS
'This inner tube of the tire is thin.'

Examples (13) and (14) show the difference between masculine singular and feminine singular agreement on the adjective.

(13) *nekki* *meqquṛ*
I big:MS
'I am big' (male speaker)

(14) *nekki* *muqqṛ-eṯ*
I big-FS
'I am big' (female speaker)

In the remainder of this chapter, the subject relative form and the morphology of Arabic-morphology adjectives are presented. Even though borrowed Arabic passive participles are similar to adjectives, they differ in that they can not be nominalised by means of the article **l**- (cf. III.10. for the morphology of participles). In the final part of this chapter, Spanish adjectives and the element 'other' will be presented.

9.1. The relative form

The morphology of the relative form of adjectives shows some variation. Berber adjectives take the relative form **i**-STEM-**in** ~ **i**-STEM-**en** (cf. III.7.4. for the relative form of verbs). Arabic adjectives take **i**-STEM-**in**, except for adjectives that have an apophonic plural where **i**-STEM-**in** is in free variation with **i**-PLURAL STEM. The latter is considered a relative form because the plural stem has number agreement, but no gender agreement. The relative marker **a** obligatorily precedes the relative. Schematically, the relative forms of adjectives look as follows:

Berber Relative

	meqquṛ ‘big’	**meẓẓi** ‘small’
i-STEM-*in* ~ *i*-STEM-*en*	*i-muqqṛ-in/-en*	*i-meẓẓi-n*
	messus ‘insipid’	**mellul** ‘white’
	i-messus-in/-en	*i-mellul-in/-en*

Arabic Relative

	ṭwil ‘tall’	**ṣfeṛ** ‘yellow’
i-STEM-*in* / *i*-PL.STEM	*i-ṭwil-in*	*i-ṣefṛ-in* ~ *i-ṣufaṛ*

Examples (15) and (16) are Berber-morphology adjectives. Example (17) shows an Arabic-morphology adjective. These examples illustrate that the relative has the same form irrespective of the number and gender of the antecedent. In (18) and (19) the two possibilities of adjectives which form an apophonic plural is shown. The variation is only allowed in the plural of (Arabic-morphology) adjectives that have an apophonic plural. Singular agreement of these adjectives (and all other adjectives) is established by means of the form **i**-STEM-**in**, e.g. example (20).

(15) *uleṯma-s = ahen a y-muqqṛ-en*
sister-3S = S:ANP REL RF-big-RF
‘His older sister.’

(16) *iḇeṛṛiyen a y-meẓẓi-n ma ga-sen ši n lḥemm bezzaf*
sheep REL RF-small-RF NEG in-3PL NEG of flesh much
‘Small sheep do not have a lot of flesh.’

(17) *lektaḇ n umḥaḏri a y-ṭwil-in*
book of student REL RF-tall-RF
‘The book of the tall student.’

(18) *iṣɣaṛen = ihen a y-xeḏṛ-in ma mezyan-in ši*
sticks = PL:ANP REL RF-green-RF NEG good-PL NEG
‘Those thick green sticks are not good.’

(19) *iṣɣaṛen = ihen a y-xuḏeṛ ma mezyan-in ši*
sticks = PL:ANP REL RF-green:PL NEG good-PL NEG
‘Those thick green sticks are not good (they are not good for the fire).’

(20) *asɣaṛ = ahen* *a* *y-xeḏṛ-in* *ma* *mezyan* *ši*
stick = S:ANP REL RF-green-RF NEG good NEG
'That green thick stick is not good.'

9.2. Arabic adjectives

Arabic-morphology adjectives are abundant. There exist four major structural types and a number of exceptional types. This division is based on the frequency of the adjectives per type. Adjectives of the major types are numerous, while for each exceptional type there are only one or two adjectives. Within the major types there is a subdivision of adjectives that form their plural by means of the suffix **-in** and adjectives that form their plural by means of vowel apophony. There are two Spanish adjectives which retain their original morphology. A number of active and passive participles function as adjectives as well (cf. III.10. for a full description).

9.2.1. Major types

ccic / ccic-a / ccic-in

This is a common adjective scheme in Moroccan Arabic dialects. Plural formation by means of **-in** (rather than an internal plural) is found only in Morocco, but is far from generally present there (Marçais 1977:119). In nearby Chefchaouen the formation is common (cf. Moscoso 2003:139)[95].

M:SG	**F:SG**	**PL**	
bxil	*bxil-a*	*bxil-in*	'stingy'
bɛiḏ	*bɛiḏ-a*	*ḇɛiḏ-in*	'far'
qlil	*qlil-a*	*qlil-in*	'few'
qṛiḇ	*qṛiḇ-a*	*qṛiḇ-in*	'near'
qṣir	*qṣir-a*	*qṣir-in*	'short'
tqil	*tqil-a*	*tqil-in*	'heavy'
xfif	*xfif-a*	*xfif-in*	'light'
xšin	*xšin-a*	*xšin-in*	'thick'
ždiḏ	*ždiḏ-a*	*ždiḏ-in*	'new'
ɣliṭ	*ɣliṭ-a*	*ɣliṭ-in*	'fat'
ḍɛif	*ḍɛif-a*	*ḍɛif-in*	'weak'
ḥnin	*ḥnin-a*	*ḥnin-in*	'benevolent, mild'

[95] In the dialect Caubet studied this type is different. She writes : '*Tous les adjectifs en ccic ont un pluriel en ccac*; *la plupart du temps, ils ont un deuxième pluriel mixte (schème ccac + suffixe -in: ccacin)'* (Caubet, 1993:114).

ṛqiq	*ṛqiq-a*	*ṛqiq-in*	‘thin’
ṛxis	*ṛxis-a*	*ṛxis-in*	‘cheap’
ṭwil	*ṭwil-a*	*ṭwil-in*	‘long’

ccc / **ccc-a** / **cucc**

This adjective type forms its plural by inserting **u** between the first and the second consonant. Adjectives of this type refer to a colour or a physical deformity. Note that colour adjectives can be nominalised by means of the prefix **a**- and the suffix -**aw** (cf. III.4.3.). These nominalisations are only reluctantly accepted in predicative or attributive position. Thus, there was discussion about the grammaticality of the elicited examples (21) and (22). Most speakers would rather use the adjective or the subject relative form of the adjective. After discussion some people reluctantly agreed on the grammaticality of the phrases, while others did not.

(21) *te-ẓṛa-t* *argaz=ahen* *azergaw*?
2S-see:P-2S man=S:ANP grey:EL
‘Have you seen that grey man?’

(22) *lḥayt=an* *aḥemṛaw* *i* *lḥayt=an* *amellul*
wall=S:DIST red:EL and wall=S:DIST white:EL
‘That wall is red and that wall is white.’

M:SG	**F:SG**	**PL**	
byeṭ	*beyṭ-a*	*buyeṭ*	‘white’
kḥel	*keḥl-a*	*kuḥel*	‘black’
xḏeṛ	*xeḏṛ-a*	*xuḏeṛ*	‘raw, green’
zreq	*zerq-a*	*zureq*	‘blue’
ḥmeṛ	*ḥemṛ-a*	*ḥumeṛ*	‘red’
ḥṛeš	*ḥeṛš-a*	*ḥuṛeš*	‘rough’
ṣmeḵ	*ṣemḵ-a*	*ṣumeḵ*	‘deaf’
ṣfeṛ	*ṣefṛ-a*	*ṣufeṛ*	‘yellow’
ṛṭeḇ	*ṛeṭḇ-a*	*ṛuṭeḇ*	‘soft’

ccc / **ccc-a** / **cicc**

All adjectives of this type have **w** in second consonant position. In the plural **i** is inserted between the first and the second consonant (cf. also Moscoso, 2003: 144, who has one example of this type of plural adjective).

M:SG	F:SG	PL	
ɛwež	*ɛewž-a*	*ɛiwež*	‘crooked’
ḥwel	*ḥewl-a*	*ḥiwel*	‘crooked’
ɛweṛ	*ɛewṛ-a*	*ɛiweṛ*	‘blind’

9.2.2. Exceptional types

Each of the forms below has only one or two attestations.

ccu / ccuw-a / ccuw-in

When a suffix is added to the stem a glide **w** is inserted between the stem and the suffix.

M:SG	F:SG	PL	
ḥlu	*ḥluw-a*	*ḥluw-in*	‘sweet’

cci / cciyy-a / cciyy-in

When a suffix is added to the stem a glide **yy** is inserted between the stem and the suffix.

M:SG	F:SG	PL	
nqi	*nqiyy-a*	*nqiyy-in*	‘clean’
qwi	*qwiyy-a*	*qwiyy-in*	‘strong’

cC / cC-a / cC-in

M:SG	F:SG	PL	
merr	*merr-a*	*merr-in*	‘bitter’

cacic / cacic-a / cacic-in

M:SG	F:SG	PL	
xaṭiṛ	*xaṭiṛ-a*	*xaṭiṛ-in*	‘dangerous’

A number of adjectives have an ending **-i**. This suffix is the so-called nisba ending which, in Arabic, makes adjectives out of nouns (cf. III.4.4.). In Ghomara, the derivation of adjectives from nouns by means of the nisba is not productive. A glide **y** or **yy** is inserted between the **i** ending and the following suffix. All adjectives of this type have external plurals and no changes in the base.

M:SG	F:SG	PL	
qerqašun-i	*qerqašuni-ya*	*qerqašuniy-in*	‘multi-colored’
zelliɣi	*zelliɣiy-a*	*zelliɣiy-in*	‘bald’

ḥeẓẓuti	*ḥeẓẓutiy-a*	*ḥeẓẓutiyy-in*	‘naked’
ḍuɣri	*ḍuɣriyy-a*	*ḍuɣriyy-in*	‘simple, honest’
ǧuhdi	*ǧuhdiyy-a*	*ǧuhdiyy-in*	‘strong’
ḥqiqi	*ḥqiqiyy-a*	*ḥqiqiyy-in*	‘real’

9.2.3. Spanish-type adjectives

There are three borrowings from Spanish which have a masculine singular ending **u**. The feminine singular has **a**. Different from other adjectives these adjectives have a gender distinction in the plural. The masculine plural suffix is Spanish **-s** while the feminine plural suffix is Arabic **-t̲**.

M:SG	**F:SG**	**M:PL**	**F:PL**	
ḍubb-u	*ḍubb-a*	*ḍubb-us*	*ḍubb-at̲*	‘fat’
gurḏ-u	*gurḏ-a*	*gurḏ-us*	*gurḏ-at̲*	‘fat’
ruḇy-u	*ruḇy-a*	*ruḇy-us*	*ruḇy-at̲*	‘blond’

9.2.4. Diminutives of adjectives

A number of adjectives have a diminutive form. The four adjectives with Berber morphology all have diminutive forms, as do some Arabic adjectives. The diminutive adds the meaning of ‘somewhat’ to the adjective. For example, the phrase **leɛwawel mqiqṛ-eṯ** ‘young boys’ refers to children between the age of about 12 to 15 years. There is one exception. The diminutive of the adjective **meẓẓi** ‘small’ is **mzizu** ‘very small’ (the diminutive form loses pharyngealisation).

$c_1c_2ic_2c_3$

This is a regular diminutive adjective scheme in Moroccan dialects (Marçais, 1977:148). These adjectives have one of the base schemes **ccc**, **cacc**, **ccic**. The second base consonant is reduplicated in this type of diminutive.

base	**M:SG**	**F:SG**	**PL**	
kḥel	*kḥiḥel*	*kḥiḥl-a*	*kḥiḥl-in*	‘somewhat black’
qaṣeḥ	*qṣiṣeḥ*	*qṣiṣḥ-a*	*qṣiṣḥ-in*	‘somewhat hard’
qṣir	*qṣiṣeṛ*	*qṣiṣṛ-a*	*qṣiṣṛ-in*	‘somewhat short’
waseɛ	*wsiseɛ*	*wsisɛ-a*	*wsisɛ-in*	‘somewhat wide’
xḏeṛ	*xḏiḏeṛ*	*xḏiḏṛ-a*	*xḏiḏṛ-in*	‘somewhat green’
zṛeq	*zṛiṛeq*	*zṛiṛq-a*	*zṛiṛq-in*	‘somewhat blue’
ɣaṛeq	*ɣṛiṛeq*	*ɣṛiṛq-a*	*ɣṛiṛq-in*	‘somewhat deep’
ɣliṭ	*ɣlileṭ*	*ɣlilṭ-a*	*ɣlilṭ-in*	‘somewhat fat’

ḍɛif	*ḍɛiɛef*	*ḍɛiɛf-a*	*ḍɛiɛf-in*	‘somewhat thin’
ḥmeṛ	*ḥmimeṛ*	*ḥmimṛ-a*	*ḥmimṛ-in*	‘somewhat red’
ṣfeṛ	*ṣfifeṛ*	*ṣfifṛ-a*	*ṣfifṛ-in*	‘somewhat yellow’
ṭwil	*ṭwiwel*	*ṭwiwl-a*	*ṭwiwl-in*	‘somewhat long’

Two Berber adjectives have similar patterns. They have a geminate which is split in the diminutive. The adjectival suffixes for the Berber feminine/plural are also used in the diminutive form.

base	**M:SG**	**F/PL**	
meqquṛ	*mqiqeṛ*	*mqiqṛ-eṯ*	‘somewhat big’
meẓẓi	*mzizu*	*mzizu-ṯ*	‘very small’

cciwc

This scheme is found with adjectives of the structure **ccic** and **cCuc**. The adjective **mellul** ‘white’ has mixed Berber/Arabic affixes. The adjective **messus** ‘insipid’ takes Berber affixes (cf. III.9.) In the diminutive they both take the Arabic gender and number affixes.

base	**M:SG**	**F:SG**	**PL**	
mellul	*mliwel*	*mliwl-a*	*mliwl-in*	‘somewhat white’[96]
messus	*msiwes*	*msiws-a*	*msiws-in*	‘somewhat insipid’
ṛqiq	*ṛqiweq*	*ṛqiwq-a*	*ṛqiwq-in*	‘somewhat thin’
qlil	*qliwel*	*qliwl-a*	*qliwl-in*	‘somewhat few’

$c_1$wic$_1$c$_3$

There is one adjective which has this scheme.

base	**M:SG**	**F:SG**	**PL**	
byeṭ	*bwiḇeṭ*	*bwiḇṭ-a*	*bwiḇṭ-in*	‘somewhat white’

9.2.5. The element ‘other’

The element ‘other’ is not an adjective but forms an element on its own. It does not have a relative form nor can it function as a nominal predicate (cf. Lafkioui, 2007: 151 for similar forms in Senhaja de Sraïr). Furthermore, it can function as a head. The following forms exist:

[96] This adjective has + **ṯ** in the feminine singular and **-in** in the plural which might point to a certain degree of integration in the Arabic morphological system.

M:SG	**F:SG**	**PL**	
wa-yeṭ ~ wa-yṭiṭin	*ta-yeṭ ~ ta-yeṭiṭin*	*wi-yeṭ ~ wi-ṭiṭin*	‘other’

In examples (23) and (24) the use of the element ‘other’ as a noun modifier is shown. In example (25) its use as a head noun is shown.

(23) *lwext* *wa-yeṭ*
time MS-other
‘Another time’

(24) *ayeṯma-s* *wi-yeṭ* *ma* *lla* *kayn-in*
siblings-3S MPL-other NEG be exist-PL
‘His other brothers and sisters where not there.’

(25) *ttafa-n* *ta-yeṭ*
find:I-3PL FS-other
‘They found the other one (F.)’

10. Participles

10.1. Passive participles

Arabic passive participles are very numerous and widely used in Ghomara Berber. They retain their original morphology in Ghomara Berber[97]. Passive participles are formed by applying a scheme to the abstract root. They are derived from verbs, however, unlike verbs they show the following adjectival/nominal gender and number inflection; **Ø** for masculine singular, -**a** for feminine singular and -**in** for the plural (see chapter IV.8.3. and IV.8.4. on the use of participles). They do not inflect for person. Like verbs and adjectives they take the relative form in a subject relative clause. Furthermore, passive participles modify a head noun. These features make passive participles similar to adjectives. However, unlike adjectives they can not function as head nouns (i.e. they can not take the article **l**-). The morphological forms of passive participles are different as well.

Different from passive participles, active participles have the possibility of taking (verbal) object pronouns, therefore they are treated separately below. The non-derived verb (stem I) is the only stem that makes a morphological distinction between active and passive participles. Transitive stem I verbs have a corresponding active and passive participle, while intransitive stem I verbs only have an active participle. Derived verbs have only one form, the passive participle which can only have a passive interpretation (with initial **m-**, cf. also Harrell, 1962: 57-59 for participles in Moroccan Arabic). The verbs from which the participle is derived can have Arabic morphology as well as Berber morphology. Berber-morphology verbs that are not borrowed from Arabic have a suppletive relation with participles borrowed from Arabic, for example the verb **šš** 'eat' corresponds to the passive participle **mukul** 'having been eaten' and the active participle **wakel** 'having eaten'. Below we present the Aorist form of the verbs with Berber morphology and the 3:SG:M Perfect forms of the verbs with Arabic morphology, followed by the corresponding participles. All attested forms are presented here. Stem IV does not exist in Moroccan Arabic. Stem VII is not attested in our corpus.

10.1.1. Non-derived participles

mccuc

Passive participles of non-derived triliteral verbs have the shape **mccuc** and in a few cases **mccac**. Verbs that have **cC/cvC** shape (doubled verbs) and verbs that have initial **w** (assimilated verbs) can have these patterns as well. There are no passive participles of hollow verbs in our corpus.

	M:SG	F:SG	PL

[97] As mentioned before we use 'participle' to mean the Arabic participle.

dfeɛ	*medfuɛ*	*medfuɛ-a*	*medfuɛ-in*	‘push’
dleḡ	*medluḡ*	*medluḡ-a*	*medluḡ-in*	‘rub’
fhem	*mefhum*	*mefhum-a*	*mefhum-in*	‘understand’
fekk	*mefkuḵ*	*mefkuḵ-a*	*mefkuḵ-in*	‘rescue’
freq	*mefruq*	*mefruq-a*	*mefruq-in*	‘separate’
ḥfeṭ	*meḥfuṭ*	*meḥfuṭ-a*	*meḥfuṭ-in*	‘memorise’
ḥkem	*meḥkum*	*meḥkum-a*	*meḥkum-in*	‘adjudicate’
ṛešš	*meṛšuš*	*meṛšuš-a*	*meṛšuš-in*	‘splash’
wzen	*muzun*	*mezun-a*	*muzun-in*	‘weigh
wžeḏ	*mužuḏ*	*mežuḏ-a*	*mužuḏ-in*	‘be ready’

The following verbs of Berber origin have a suppletive relation to Arabic passive participles:

qqen	*mešduḏ*	*mešduḏ-a*	*mešduḏ-in*	‘closed’
šš	*mukul*	*mukul-a*	*mukul-in*	‘eat’
ẓẓeḡ	*meḥluḇ*	*meḥluḇ-a*	*meḥluḇ-in*	‘milk’

In addition to the regular **mccuc** pattern, Ghomara Berber has the following participles with the pattern **mccac**:

	M:SG	**F:SG**	**PL**	
šekk - išukk	*meškak*	*meškak-a*	*meškak-in*	‘doubt’
miḥ	*memyaḥ*	*memyaḥ-a*	*memyaḥ-in*	‘empty water’
xṭaṛ	*mexṭaṛ*	*mexṭaṛ-a*	*mexṭaṛ-in*	‘choose’[98]

cf. the following suppletive passive participles:

ḵnes	*mešṛaṛ*	*mešṛaṛ-a*	*mešṛaṛ-in*	‘fight’
znez	*mebyaɛ*	*mebyaɛ-a*	*mebyaɛ-in*	‘sell’

mcci

This passive participle type is derived from Arabic verbs with the shape **cca** in the Perfective. Some of those verbs change vowel **a** > **i** in the Imperfective. In our corpus only those verbs have a participle of this type. A glide **yy** is inserted between the stem and the suffix in the feminine and the plural.

[98] Note that this verb from which this participle is derived has Berber morphology. Derived verbs always take Arabic morphology, however, in this case **xṭaṛ** is reïnterpreted as a stem I verb. Vicente (2000:95) remarks about this type of verb: *‘el infijo -ṭ- se considera como segunda radical de la raíz y, por lo tanto, se conjugan como un verbo regular en la forma simple’.* The verb **ḥtaž** is not reinterpreted in this way and is therefore conjugated in Arabic.

	M:SG	F:SG	PL	
b̲na	*meb̲ni*	*meb̲ni-yya*	*meb̲ni-yyin*	‘build’
qla	*meqli*	*meqli-yya*	*meqli-yyin*	‘bake’
xwa - ixwi	*mexwi*	*mexwi-yya*	*mexwi-yyin*	‘hollow out’

cf. the following suppletive passive participles:

ttu	*mensi*	*mensi-yya*	*mensi-yyin*	‘forget’
suɣ	*mešri*	*mešri-yya*	*mešri-yyin*	‘buy’
snes	*metfi*	*metfi-yya*	*metfi-yyin*	‘extinguish’

10.1.2. Participles of derived forms

Derived verbs have one participle scheme beginning with an **m-**. The different stems are presented below.

mcCc (**stem II**)

	M:SG	F:SG	PL	
beddel	*mbeddel*	*mbeddl-a*	*mbeddl-in*	‘put on, trade’
berreḏ	*mberreḏ*	*mberrḏ-a*	*mberrḏ-in*	‘make cold’
debbeɣ	*mdebbeɣ*	*mdebbɣ-a*	*mdebbɣ-in*	‘weed’
ḍehheṛ	*mḍehheṛ*	*mḍehhṛ-a*	*mḍehhṛ-in*	‘show, make appear’
felleq	*mfelleq*	*mfellq-a*	*mfellq-in*	‘cut up in two pieces’
melleḥ	*mmelleḥ*	*mmellḥ-a*	*mmellḥ-in*	‘salty’
heddeḏ	*mheddeḏ*	*mheddḏ-a*	*mheddḏ-in*	‘threat’
ḥeddeḏ	*mḥeddeḏ*	*mḥeddḏ-a*	*mḥeddḏ-in*	‘press’
beyyeṭ	*mbeyyeṭ*	*mbeyyṭ-a*	*mbeyyṭ-in*	‘whitewash’
beyyen	*mbeyyen*	*mbeyyn-a*	*mbeyyn-in*	‘show’
wesseɛ	*mwesseɛ*	*mwessɛ-a*	*mwessɛ-in*	‘widen’

There is one passive participle in our corpus which does not have a corresponding verb:

	M:SG	F:SG	PL	
-	*mdexxem*	*mdexxm-a*	*mdexxm-in*	‘excellent’

mcCi (**defective**)

The vowel **i** becomes glide **y** when the feminine suffix **a** follows. The plural form never has a glide, instead **i** is deleted before suffix **-in**.

	M:SG	F:SG	PL	
ibekka	*mbekki*	*mbekky-a*	*mbekk-in*	‘make cry’[99]
feḍḍa	*mfeḍḍi*	*mfeḍḍy-a*	*mfeḍḍ-in*	‘finish’
lewwi	*mlewwi*	*mlewwy-a*	*mleww-in*	‘spin, roll’
meḍ̲ḍ̲i	*mmeḍ̲ḍ̲i*	*mmeḍ̲ḍ̲y-a*	*mmeḍ̲ḍ̲-in*	‘sharpen’
neqqi	*mneqqi*	*mneqqy-a*	*mneqq-in*	‘clean’
qeṛṛi	*mqeṛṛi*	*mqeṛṛy-a*	*mqeṛṛ-in*	‘teach’

mcacc (stem III)[100]

	M:SG	F:SG	PL	
sameḥ	*msameḥ*	*msamḥ-a*	*msamḥ-in*	‘forgive’
ḥaṛeb̲	*mḥaṛeb̲*	*mḥaṛb̲-a*	*mḥaṛb̲-in*	‘wage war’
gadd	*mgaded*	*mgadd-a*	*mgadd-in*	‘flat, flatten’
ɛafer	*mɛafer*	*mɛafr-a*	*mɛafr-in*	‘try’
ɛaqeb̲	*mɛaqeb̲*	*mɛaqb̲-a*	*mɛaqb̲-in*	‘punish’
ɛaweḍ̲	*mɛaweḍ̲*	*mɛawḍ̲-a*	*mɛawḍ̲-in*	‘tell’
ɛaṛeḍ̲	*mɛaṛeḍ̲*	*mɛaṛḍ̲-a*	*mɛaṛḍ̲-in*[101]	‘invite’

There is one Berber-morphology verb with Berber etymology that can form a passive participle:

	M:SG	F:SG	PL	
ag̲em d ~ dag̲em	*mdag̲em*	*mdag̲em-a*	*mdag̲em-in*	‘draw water’

mcaci (defective)

	M:SG	F:SG	PL	
ẓali	*mẓali*	*mẓaly-a*	*mẓal-in*	‘separate’
ḥaḍ̲i	*mḥaḍ̲i*	*mḥaḍ̲y-a*	*mḥaḍ̲-in*	‘touch’

mcawc (hollow)

	M:SG	F:SG	PL	
sawem	*msawem*	*msawem-a*	*msawem-in*	‘bargain over’
ɛaweḍ̲	*mɛaweḍ̲*	*mɛaweḍ̲-a*	*mɛaweḍ̲-in*	‘repeat’

[99] The **ss-** derived form **ss-etru** co-exists with this form.

[100] Vicente (2000: 88) does not have any examples of geminated, assimilated, hollow with radical **y**, or hollow verbs in this form (stem Ⅲ). In Ghomara we have found some examples of hollow verbs.

[101] The variant **meɛṛuḍ̲** exists as well.

mtcCc (stem V)

Passive participles of this type are very rare. Only the following examples occur in our corpus:

	M:SG	**F:SG**	**PL**	
tweqqef	*metweqqef*	*metweqqf-a*	*metweqqf-in*	‘stop’
tḍeššem	*metḍeššem*	*metḍeššm-a*	*metḍeššm-in*	‘be ashamed’

mtcacc (stem VI)

The passive participles of stem VI attested in our corpus are given below.

	M:SG	**F:SG**	**PL**	
ttafeq	*mettafeq*	*mettafq-a*	*mettafq-in*	‘agree’
tɛaqeḇ	*metɛaqeḇ*	*metɛaqḇ-a*	*metɛaqḇ-in*	‘be punished’
tsameḥ	*metsameḥ*	*metsamḥ-a*	*metsamḥ-in*	‘forgive each other’
tsara	*metsari*	*metsary-a*	*metsar-in*	‘take a walk’
tlaqa	*metlaqi*	*metlaqy-a*	*metlaq-in*	‘meet (each other)’
tqadd	*metqadd*	*metqadd-a*	*metqadd-in*	‘become equal’
tfakk	*metfakk*	*metfakk-a*	*metfakk-in*	‘escape, to get rid of’

mctcc ~ mctacc (stem VIII)

There are only sound forms of these passive participles in our corpus.

	M:SG	**F:SG**	**PL**	
ktašef	*mektašef*	*mektašf-a*	*mektašf-in*	‘guess’
ɛṭaṛef	*meɛṭaṛef*	*meɛṭaṛf-a*	*meɛṭaṛf-in*	‘admit’
štaweṛ	*meštaweṛ*	*meštaweṛ-a*	*meštaweṛ-in*	‘advise’
ḥtaṛem	*meḥtaṛem*	*meḥtaṛm-a*	*meḥtaṛem-in*	‘respect’
rtɛeḇ	*mertɛeḇ*	*mertɛeḇ-a*	*mertɛeḇ-in*	‘be scared’
ḥtaž	*meḥtaž*	*meḥtaž-a*	*meḥtaž-in*	‘need’

mstccc (stem X)

	M:SG	**F:SG**	**PL**	
steɛžeḇ	*mesteɛžeḇ*	*mesteɛžḇ-a*	*mesteɛžḇ-in*	‘astonished’
stanes	*mestanes*	*mestanes-a*	*mestanes-in*	‘accustome’

10.1.3. Quadriliteral verbs

mcccc

Participles derived from quadriliteral verbs are well-represented. They always have a passive interpretation. For example:

	M:SG	F:SG	PL	
beḷbeḷ	*mbeḷbeḷ*	*mbeḷbḷ-a*	*mbeḷbḷ-in*	‘mate’
beryez	*mberyez*	*mberyz-a*	*mberyz-in*	‘swap’
derdeḇ	*mderdeḇ*	*mderdb-a*	*mderdb-in*	‘arouse’
penčer	*mpenčer*	*mpenčer-a*	*mpenčer-in*	‘stab’
qefqef	*mqefqef*	*mqefqf-a*	*mqefqf-in*	‘shiver’
qendel	*mqendel*	*mqendl-a*	*mqendl-in*	‘brighten’
qeṛfez	*mqeṛfez*	*mqeṛfz-a*	*mqeṛfz-in*	‘pinch’
qeṛweṭ	*mqeṛweṭ*	*mqeṛwṭ-a*	*mqeṛwṭ-in*	‘stutter or stammer’
selsel	*mselsel*	*mselsel-a*	*mselsl-in*	‘to bake grain’
sentef	*msentef*	*msentf-a*	*msentf-in*	‘wound’
xerčef	*mxerčef*	*mxerčf-a*	*mxerčf-in*	‘speak unclearly’
zegzeg	*mzegzeg*	*mzegzg-a*	*mzegzg-in*	‘mate’
ɛerkel	*mɛerkel*	*mɛerkl-a*	*mɛerkl-in*	‘limp’
ɣaylef	*mɣaylef*	*mɣaylf-a*	*mɣaylf-in*	‘become angry’
ssifef	*mɣerbel*	*mɣerbl-a*	*mɣerbl-in*	‘sieve’

The following participles have irregular schemes. The passive participle **maẓuẓi** does not have a feminine or plural form.

	M:SG	F:SG	PL	
ǧheḏ	*meǧheḏ*	*mǧehḏ-a*	*mǧehḏ-in*	‘loud’
-	*muxliṣ*	*muxliṣ-a*	*muxliṣ-in*	‘faithful’
ziwen	*mziwen*	*mziwn-a*	*mziwn-in*	‘beautiful’
neẓẓeẓ	*maẓuẓi*	-	-	‘be late for ploughing’
-	*mezgawger*	*mezgawger-a*	*mezgawgr-in*	‘squatted’
-	*mmerr*	*mmerr-a*	*mmerr-in*	‘bitter’

10.2. The active participle

Active participles share their defining features with passive participles (and adjectives), and in addition can take object suffixes. As this feature sets them apart from passive participles, we treat them separately (cf. IV.8.3. aspect for their syntactic behavior).

The non-derived verb (stem I) is the only stem that has corresponding active and passive participles. Transitive stem I verbs have a corresponding active and passive participle. Intransitive stem I verbs have only an active participle. Other verb stems only have a corresponding passive participle.

Active participles are borrowed from Arabic and have Arabic morphology. The verbs from which the participle is derived can have Arabic morphology as well as Berber

morphology. Berber-morphology verbs which are not borrowed from Arabic have a suppletive relation with the participles, for example the (intransitive) verb **ṭṭeṣ** ‘sleep’ corresponds to the active participle **naɛes** ‘asleep’. There exist four basic schemes of active participles. In one scheme the suffix **-an** is added to the verb root. Below we present the Aorist of the verbs with Berber morphology and the Perfect of the verbs with Arabic morphology followed by the corresponding active participles.

Most active participles are derived from sound **ccc** verbs. Triliteral verbs with initial **w** (assimilated verbs) also occur in this group. A number of participles which have **y** as their middle consonant are derived from **cvc** verbs (hollow verbs). When a suffix is added to the masculine singular scheme, schwa in the preceding syllable is deleted.

cacc

	M:SG	**F:SG**	**PL**	
bred	*bareḏ*	*barḏ-a*	*barḏ-in*	‘become cold’
ḵmel	*kamel*	*kaml-a*	*kaml-in*	‘complete’
kṛeh	*kaṛeh*	*kaṛh-a*	*kaṛh-in*	‘hate’
mles	*males*	*mals-a*	*mals-in*	‘smooth’
mleḥ	*maleḥ*	*malḥ-a*	*malḥ-in*	‘salty’
ban	*bayen*	*bayn-a*	*bayn-in*	‘appear, seem’
fiq	*fayeq*	*fayq-a*	*fayq-in*	‘wake up’
ɛiš	*ɛayeš*	*ɛayš-a*	*ɛayš-in*	‘live’
ḥas	*ḥayes*	*ḥays-a*	*ḥays-in*	‘feel’
ṣum ~ ẓum	*ṣayem*	*ṣaym-a*	*ṣaym-in*	‘fast’
wseɛ	*waseɛ*	*wasɛ-a*	*wasɛ-in*	‘wide’

The active participle **kayen** in different from other active participles in that it functions as an existential (cf. IV.2.8.5. non-verbal predicate, furthermore the related element **ḵun** is used in counterfactuals, cf. IV.4.2.4.).

-	*kayen*	*kayn-a*	*kayn-in*	‘exist’

Suppletive participles

	M:SG	**F:SG**	**PL**	
qqim	*gales*	*gals-a*	*gals-in*	‘sit’
šš	*wakel*	*wakl-a*	*wakl-in*	‘eat’
ṭṭeṣ	*naɛes*	*naɛs-a*	*naɛs-in*	‘sleep’
ḇdeḏ	*waqef*	*waqf-a*	*waqf-in*	‘stand up, remain’

caci (defective verbs)

The final **i** can be assimilated or become a glide **y** when followed by the plural marker **-in**.

	M:SG	**F:SG**	**PL**	
kra - ikri	*kari*	*kary-a*	*kar(y)-in*	‘hire’
mḍi	*maḍi*	*maḍy-a*	*maḍ(y)-in*	‘pointed’
qṛa - iqṛa	*qaṛi*	*qaṛy-a*	*qaṛ(y)-in*	‘study, read’

Suppletive participles

	M:SG	**F:SG**	**PL**	
ttu	*nasi*	*nasy-a*	*nasy-in*	‘forget’
ddu	*maši*	*mašš-a*	*maš(y)-in*	‘go’
ddu d	*maži*	*mağ-a*	*mažy-in*[102]	‘come’

ccc-an

	M:SG	**F:SG**	**PL**	
ḥzen	*ḥeznan*	*ḥeznan-a*	*ḥeznan-in*	‘be sad’
ɣḍeḇ	*ɣeḍḇan*	*ɣeḍḇan-a*	*ɣeḍḇan-in*	‘be angry’
zɛef	*zeɛfan*	*zeɛfan-a*	*zeɛfan-in*	‘be reluctant’
sker	*sekran*	*sekran-a*	*sekran-in*	‘be drunk’
fṛeḥ	*feṛḥan*	*feṛḥan-a*	*feṛḥan-in*	‘be happy’
ɛgez	*ɛegzan*	*ɛegzan-a*	*ɛegzan-in*	‘be lazy’

There is one adjective of this type which has an optional **u** after the first consonant.

	M:SG	**F:SG**	**PL**	
---	*ɛuryan* ~ *ɛeryan*	*ɛuryan-a* ~ *ɛeryan-a*	*ɛuryan-in* ~ *ɛeryan-in*	‘naked’

cCac

There is one active participles of this type in our corpus.

	M:SG	**F:SG**	**PL**	
xdem	*xeddam*	*xeddam-a*	*xeddam-in*	‘work’

[102] This form has a free variant **mağ-in**.

There is one active participle that combines gemination and the -**an** suffix.

	M:SG	**F:SG**	**PL**	
ɛya	*ɛeyyan*	*ɛeyyan-a*	*ɛeyyan-in*	‘tired’

11. Pronouns

There are Berber pronouns and (borrowed) Arabic pronouns. Berber pronouns are subdivided into independent pronouns, direct object pronouns, indirect object pronouns and adnominal suffixes. Arabic suffix pronouns are borrowed together with the Arabic verb and some prepositions (cf. III.13.5. prepositions). Arabic nouns are generally not taken over with their pronominal suffixes, though a few exceptions exist.

The Berber pronouns will be presented first. After the independent pronouns the different forms of the Berber direct object and indirect object pronouns will be discussed. Adnominal suffixes which only apply to a limited set of kinship nouns, will then be presented. After this, the Arabic pronouns that are used in Ghomara Berber are discussed. In the final section demonstrative pronouns and deictic clitics are discussed.

11.1. Independent pronouns

Independent pronouns express person, number and gender. There are three persons (first, second and third), two numbers (singular and plural) and two genders (masculine and feminine) which are only expressed in the second and third person singular. First and second person singular forms have a number of variants which are in free variation.

1:SG	*nekk ~ nekki ~ nekkin ~ nekkineṯ*
2:M:SG	*kežž*[103] *~ keği ~ keğin ~ keğineṯ*
2:F:SG	*kemm ~ kemmi ~ kemmin ~ kemmineṯ*
3:M:SG	*netta*
3:F:SG	*nettaṯa*
1:PL	*nuḵna*
2:PL	*kunna*
3:PL	*nihma*[104]

Arabic third person pronouns can optionally follow the presentative particle **ha**. Berber pronouns can be used in this context as well.

3:M:SG	*ha huwwa*
3:F:SG	*ha heyya*
3:PL	*ha hum*

[103] At the end of a word **ğ** can become **žž** (cf. II.1.3.).

[104] El Hannouche (2010: 113) gives the form **niḵma** for the dialect of Amṭiqan, and **niḵnam** in Beni Menṣur for third person plural. This author also remarks that there is sometimes debuccalisation of **ḵ** which becomes **h** in the first and third person plural. We have not encountered the same phenomenon in the variety described here.

11.2. Clitic pronouns

Direct object pronouns, indirect object pronouns and the deictic clitic **d** / **id** together form a complex which forms an integral part with the verb (cf. Kossmann 2012: 50). These clitics constitute the clitic complex. [105] Depending on the syntactic context the clitic complex can precede and follow the verb. The clitics can have different forms depending on their position regarding the verb. In this section the morphology of the direct object and the indirect object pronouns will be presented. Examples from texts will be given to illustrate the use of the pronouns. The syntax of the clitic complex will be treated in IV.3.3.

11.2.1. Direct object pronouns

Direct object pronouns express person, number and gender. Gender is only distinguished in the singular. There are three paradigms in total; two post-verbal paradigms and one pre-verbal paradigm.

Preverbal direct object pronouns appear in syntactic contexts which always involve a preceding particle that ends in **a**. It is therefore impossible to determine which **a** is elided. We have chosen to represent the preverbal pronouns without the **a** vowel. Other differences between the direct object sets will be discussed below.

	Post-verbal 1	**Post-verbal 2**	**Pre-verbal**
1:SG	*ay*	*ay*	*y ~ ṯ (yṯ)*[106]
2:M:SG	*aḵ*	*aḵ*	*ḵ*
2:F:SG	*am*	*am*	*m*
3:M:SG	*aṯ / ah*	*t*	*y ~ ṯ*
3:F:SG	*at / ah*	*t ~ tet ~ teṯ*	*t*
1:PL	*anax*	*anax*	*ɣen*
2:PL	*awen*	*awen*	*wen*
3:PL	*ahen*	*ten*	*n*

[105] In many other Berber languages prepositions and other elements also form part of the clitic complex (cf. Dell & Elmdelaoui, 1989). In Ghomara Berber prepositions fall outside of the realm of the clitic complex and therefore never change position in attraction contexts.

[106] The variant **yṯ** is put between brackets as it is not the common form in Iɛṛaḇen. It is encountered once in our text corpus. In Amṭiqan there is a distinction when the pronouns occur in this position (El Hannouche, 2010: 116). The third person pronoun is **ṯ**, like in Iɛṛaḇen, whereas the first person has form **yṯ**. **š a yṯ iẓẓwiṯ** thus only means ‘He will miss me’. The speakers in Iɛṛaḇen recognise this form. It appears in the Colin texts as well (1929: 54).

11.2.1.1. Postverbal direct object pronouns

1.There are two types of post-verbal paradigms. The third person (masculine and feminine) singular and plural of the paradigms are different. Type one is used after verbs without a suffix, while type two is used after a verbal suffix or the indirect object pronoun. In the following two paradigms the third person singular of the verb **šebbeṛ** 'grab' does not have a suffix whereas the third person plural has a suffix. The third person differs in these contexts. The third person feminine singular form **t** appears after indirect object pronouns (see example (4) below).

	'He grabbed (X)'	**'They grabbed (X)'**
1:SG	*i-šebbṛ = ay*	*šebbṛ-an = ay*[107]
2:M:SG	*i-šebbṛ = ak̲*	*šebbṛ-an = ak̲*
2:F:SG	*i-šebbṛ = am*	*šebbṛ-an = am*
3:M:SG	*i-šebbṛ = at̲*	*šebbṛ-en = t*
3:F:SG	*i-šebbṛ = at*	*šebbṛ-en = tet ~ teṭ̲*
1:PL	*i-šebbṛ = anax*	*šebbṛ-an = anax*
2:PL	*i-šebbṛ = awen*	*šebbṛ-an = awen*
3:PL	*i-šebbṛ = ahen*	*šebbṛ-en = ten*

The use of the pronouns is illustrated by the following examples. In example (1) first the third person masculine type 2 pronoun is used following a verbal suffix while type 1 is used following the verb which does not take a suffix.

(1) *te-nn = as:* *'a* *xay,* *nekki* *ḡḡa-x = t*
3FS-say:P = 3S:IO VOC brother I do:P-1S = 3MS:DO
'She said to him: 'o brother, I put it in the frying pan,
g *lmeqla,* *netta* *i-nṭeṛ,* *i-leqṭ = at̲* *afeṛṛuž.*'[108]
in frying.pan he 3MS-fly:P 3MS-pick:P = 3MS:DO rooster:EL
it flew, and the rooster took it.'

The third person feminine singular pronoun of the second type has the forms **t / tet ~ teṭ̲**. The forms **tet** and **teṭ̲** are in free variation as shown by examples (2) and (3). The form **t** follows an indirect object pronoun as shown in example (4). However, in the same position **tet ~ teṭ̲** can appear, as shown in examples (5) and (6). In the third person plural pronoun there is a difference between type 1 **ahen** and type 2 **ten.** Type 1 is used after a verb that

[107] The difference between conjugational suffix -**en** and -**an** is due to schwa retention (cf. II.2.3. phonology).

[108] The neighbouring dialect of Amṭiqan has the spirantised form of the third person masculine direct object pronoun **ṯ** following a verbal suffix, cf. **ufax ṯ idda** ' I found (him) that he had gone' (El Hannouche 2010: 114).

does not end in a suffix. Type 2 appears after a verbal suffix and after an indirect object pronoun. Example (7) shows type 1 pronoun, examples (8) and (9) show type 2.

(2) *qeddḏ-en = tet,* *mmṛ-en = tet*
cut:P-3PL = 3FS:DO send:P-3PL = 3FS:DO
'They cut her into pieces and sent her.'

(3) *i* *lɛeṭṭa* *tseyyaḇ-en = teṯ*
and piece.of.bread throw:I-3PL = 3FS:DO
'and the chunk of bread, they throw it away'

(4) *maši* *iḏ* *izref i* *netta* *i-tett* *tayʷlalt = ahen.*
go:AP:MS with road and he 3MS-eat:I bissara:EL = S:ANP
i-tqeṭṭaṛ = as = t *x* *umeẓẓuḡ nn-es*
3MS-drip:I = 3S:IO = 3FS:DO on ear:EA of-3S
'Walking down the road he eats the *bissara*. He drops it on his ear.'

(5) *te-fk = as = tet*
3FS-give:P = 3S:IO = 3FS:DO
'She gave it (F) to him.'

(6) *ṭṭf-an = as = teṯ*
3FS-grab:P = 3S:IO = 3FS:DO
'They grabbed her for him.'

(7) *ma* *h-uf = ahen* *ši*
NEG 3FS-find:P = 3PL:DO NEG
'She did not find them.'

(8) *qleḇ* *x* *ṭṭhaṛ* *nn-eḵ* *te-ḡḡ-et = ten*
turn:IMP on back of-2S 2S-do:A-2S = 3PL:DO
'Turn on your back and release them.' (lit. do them)

(9) *i-qqn = as = ten* *i* *uɛebbiz = ahen*
3MS-tie:P = 3S:IO = 3PL:DO to bull:EA = S:ANP
'He tied them to that cow.'

In the third person type 1 distinguishes the masculine variants **aṯ** / **ah** and the feminine variants **at** / **ah**. The variant **ah** appears when it follows a verb not ending in a suffix and

preceding the deictic particle **d** (after a feminine pronoun) / **id** (after a masculine pronoun), for example:

(10) *i-šebbeṛ* *ya* *tsekkurt,* *saɛa* *i-bb = ah = d*
3MS-catch:P one:F partridge:EA then 3MS-take:P = 3FS:DO = DC
dar *uxyam*
to house:EA
'He caught a partridge, then he brought it home.'

(11) *bb = ah = id!*
take:IMP = 3MS:DO = DC
'bring him (here)!'

11.2.1.2. Preverbal direct object pronouns

There is one paradigm of preverbal direct object pronouns. At one point, the preverbal forms are somewhat complicated, viz. the difference between the first and third person singular pronouns, which are almost identical. Both pronouns have the form **y** in preverbal position, except before third person singular masculine verbs and the relative form, where they both have **ṯ**. The two pronouns are different, however, when preceding a third person plural verb. In this position the first person pronoun is **ṯ** while the third person pronoun is **y**. This is summarised in the following table. The person, number and gender on the left represent the verbal form which the pronoun precedes:

	1:M:SG	**3:M:SG**
1:SG	-	*y*
2:SG	*y*	*y*
3:M:SG	*ṯ*	*ṯ*
3:F:SG	*y*	*y*
1:PL	-	*y*
2:PL	*y*	*y*
3:PL	*ṯ*	*y*

In the following examples, the forms are only given separately when the forms differ. Note that the variants are not due to phonological conditioning; cf. for example the verbs **ẓẓwiṯ** 'miss' without initial vowel and **uf** 'find' with initial vowel. First person and third person direct object pronouns precede the verb:

1:SG	*š a y ẓẓwiṯax*	‘I will miss him’
2:SG	*š a y teẓẓwiṯet*	‘You will miss him/ me’
3:M:SG	*š a ṯ iẓẓwiṯ*	‘He will miss him/ me’
3:F:SG	*š a y teẓẓwiṯ*	‘She will miss him/ me’
1:PL	*š a y neẓẓwiṯ*	‘We will miss him’
2:PL	*š a y teẓẓwiṯem*	‘You will miss him/ me’
3:PL	*š a y ẓẓwiṯen*	‘They will miss him’
3:PL	*š a ṯ ẓẓwiṯen*[109]	‘They will miss me’

The same forms appear when the pronouns appear before a verb that has an initial vowel. Compare the following examples.

1:SG	*š a y wfax*	‘I will find him’
2:SG	*š a y tufet*	‘You will find him/ me’
3:M:SG	*š a ṯ yuf*	‘He will find him/ me’[110]
3:F:SG	*š a y tuf*	‘She will find him/ me’
1:PL	*š a y nuf*	‘We will find him’
2:PL	*š a y tufem*	‘You (PL) will find him/ me’
3:PL	*š a y ufen*	‘They will find him’
3:PL	*š a ṯ ufen*	‘They will find me’[111]

In the examples below, we will show the use of the pronouns in texts. Example (12) shows the preverbal form **y** with third person reference preceding a first person plural verb. The second verb shows the same pronoun in post-verbal position.

(12) *ne-ttuṯu a y=n-ẓeḏ g rrḥa, rrḥa n ufus,*
1PL-go:I AD 3MS:DO=1PL-grind:A in mill, mill of hand:EA
hamḵa, ne-ẓẓaḏ=aṯ…..
like.this 1PL-grind:I=3MS:DO
‘We go and grind it in the mill, a hand mill, like this, we grind it…’

[109] It is unexpected to find this difference only before a third person plural verb and not before any other verb form. A reason for this could be the lack of a prefix in third person plural verbal conjugation. The only other verbal conjugation which does not have a prefix is the first person. However, it is impossible to test the difference as for obvious reasons the first person direct object pronoun can not combine with a verb in the first person. A reflexive construction is used in that case (cf. III.11.6. for reflexive constructions). In Amṭiqan the pronoun **yṯ** would be used here.

[110] In the variant of Amṭiqan ‘He will find me.’ is **š a yṯ yuf** (elicitation in Bou Ahmed).

[111] In the variant of Amṭiqan ‘They will find me.’ is **š a yṯ ufen** (elicitation in Bou Ahmed).

In the next example the pronoun refers to a rooster which was mentioned before in the discourse. The example illustrates that the third person form **y** is used before a third person plural verb while the variant **t̲** is used preceding third person masculine singular verbs.

(13) *wella a weḵl-en ga-s iɣežden a y=b̲eššṭ-en*
or AD step:A-3PL in-3:MS billy.goats AD 3MS:DO=hurt:A-3PL
wella a t̲=ye-wweṭ̲ aɣižd iši
or AD 3MS:DO=3MS-hit:A billy.goat:EL some
'Or the billy goats would trample on it, they would hurt it or a billy goat would hit it.'

In the following text excerpts the difference between the first person singular and third person singular pronoun is shown. In both examples the third person plural verbal form of **šš** 'eat' is used. In example (14a) the third person pronoun is used whereas in (14b) the first person pronoun is used.

(14a) *lmuhim, aḇeṛṛey tẓeyyer s iḇẓaḏen nn-es.*
anyway sheep:EL PASS:tight:PF:3MS with urine of-3:M
š i-ɛiq-u iḏ̲-es š a y=šš-en.…
FUT IMPF:3PL-be.aware-IMPF:3PL with-3:M FUT AD 3MS:DO=eat:A-3PL
'Anyway, the sheep had to urinate. They would become aware of him, they would eat him.'

(14b) *i-nn=as: 'mḵi ne-dda ḥetta tferreq-na, š*
3MS-said:P=3S:IO if 1PL-go:P until PASS:separate-1PL:PF FUT
i-ɛiss-u=li ag̲ḏ̲i ulla nnmer ulla kḏ̲a,
3PL:IMPF-guard-3PL:IMPF=1PL:IO jackal:EL or leopard or something
š a t̲=šš-en.'
FUT AD 1S:DO=eat:A-3PL
'He said: 'If we would split up, the jackal or the leopard or so would keep an eye on me and they would eat me.'

There are two other pronouns that differ from postverbal pronouns (except for the **a**): first person plural **ɣen** and third person plural **n**, e.g:

(15) *nhaṛ=aḏ̲ š a ɣen=i-neɣ b̲aḇa nn-em*
day=S:PRX FUT AD 1PL:DO=3MS-kill:A father of-2FS
'Today your father is going to kill us.'

(16) *i* *lɣula=yahen* *š* *a* *n=te-šš.*
and ogress=S:ANP FUT AD 3PL:DO=3FS-eat:A
'And the ogress is going to eat them.'

Example (17) illustrates the use of a third/first person singular pronoun **ṯ** before the participle. The referent can only be inferred from the context.

(17) *šk* *a* *ṯ* *i-ẓẓwiṯ-en*?
who REL 3/1MS:DO RC-miss:P-RC
'Who misses me/him?'

11.2.2. Indirect object pronouns

Indirect object pronouns only differ from direct object pronouns in the third person singular and plural. There is no gender distinction in the third person singular.

	post-verbal	**pre-verbal**
1:SG	*ay*	*y* ~ *ṯ*[112]
2:M:SG	*aḵ*	*ḵ*
2:F:SG	*am*	*m*
3:SG	*as*	*s*
1:PL	*anax*	*ɣen*
2:PL	*awen*	*wen*
3:PL	*asen*	*sen*

Like the direct object pronoun the first person indirect object pronoun in preverbal position has two forms. The form **y** is used with second person, third person feminine and second person plural verbs. The variant **ṯ** is used before third person masculine singular and third person plural verbs, e.g.:

2:M:SG	*š a y tɛawḏet taxʷṛaft*	'You will tell me a story'
3:M:SG	*š a ṯ iɛaweḏ taxʷṛaft*	'He will tell me a story'
3:F:SG	*š a y tɛaweḏ taxʷṛaft*	'She will tell me a story'
2:PL	*š a y tɛaḏwem taxʷṛaft*	'You will tell me a story'
3:PL	*š a ṯ ɛawḏen taxʷṛaft*	'They will tell me a story'

[112] Just like the direct object pronoun the variant **yṯ** is used in Amṭiqan (cf. El Hannouche, 2010: 116, 118). Speakers from Amṭiqan consulted in Bou Ahmed confirmed this variant to me.

However, the first person singular indirect object pronoun always has the form **y** when it precedes the direct object pronoun, for example:

(18) *š a y=d=i-rry=ah=d (i nekkin)[113]
FUT AD 1S:IO=3MS:DO:DC=3MS-return:A=3MS:DO=DC (to me)
'He will return it to me.'

(19) *š a t=d=i-rry=ah=d (i nekkin)
FUT AD 1S:IO=3MS:DO:DC=3MS-return:A=3MS:DO=DC (to me)
'You will return it to me.'

11.3. Prepositional suffixes

Most simple prepositions take prepositional suffixes (cf. III.12. for prepositions). Prepositional complexes do not take suffixes but are followed by a construction with the genitive preposition **n** (once by **i**) 'of'. The pronominal suffixes have slightly different forms with consonant-final and with vowel-final prepositions. This is to do with syllable structure. Below we present the pronominal paradigm of two prepositions, one ending in a consonant, the other in a vowel.

		***fsir* 'behind'**		***g* 'in'**	
1:SG	*-i ~ y*	*fsir-i*	'behind me'	*ga-y*	'in me'
2:M:SG	*-k*	*fsir-ek*	'behind you (M)'	*ga-k*	'in you'
2:F:SG	*-m*	*fsir-em*	'behind you (F)'	*ga-m*	'in you'
3:SG	*-s*	*fsir-es*	'behind him/her'	*ga-s*	'in him/her'
1:PL	*-nax*	*fsir-nax*	'behind us'	*ga-nax*	'in us'
2:PL	*-un ~ -wen*	*fsir-un*	'behind you (PL)'	*ga-wen*	'in you'
3:PL	*-sen*	*fsir-sen*	'behind them'	*ga-sen*	'in them'

11.4. Adnominal suffixes

A limited number of kinship nouns express possession by adding an adnominal suffix to the singular noun. This is the case of the nouns **kma** 'brother', **uletma** 'sister' and **ayetma** 'brothers and sisters'[114].The first person singular uses the form without a suffix. Plural possession with these nouns is expressed by the genitive preposition plus a pronominal

[113] See IV.3.3.5. for doubling of the deictic clitic **d** and II.3.1. for assimilation of preverbal **t** > **d**.

[114] In many Berber languages there is a complete paradigm and there are more lexical items which take this suffix (cf. e.g. for neighbouring Riffian, Lafkioui, 2007:133).

suffix (cf. III.13.2.8. for the genitive preposition).

		‘brother’	
1:SG	*-Ø*	*ḵma-Ø*	‘my brother’
2:M:SG	*-ḵ*	*ḵma-ḵ*	‘your (M) brother’
2:F:SG	*-m*	*ḵma-m*	‘your (F) brother’
3:SG	*-s*	*ḵma-s*	‘his brother’
1:PL	-	*ḵma nn-ax*	‘our brother’
2:PL	-	*ḵma nn-un*	‘your (PL) brother’
3:PL	-	*ḵma nn-sen*	‘their brother’

11.5. Borrowed pronouns

Arabic suffix pronouns are taken over unchanged in Ghomara Berber when borrowed together with Arabic-morphology verbs, prepositions, reflexive and reciprocal elements and some other elements (cf. also Moscoso, 2003:162 and Vicente, 2000:137 for similar forms). Another set of Arabic third person pronouns can be expressed on interrogatives (cf. 11.5.2. below). In addition, one borrowed noun, SG **mula** PL **mwalin** ‘owner(s)’ optionally uses the suffix pronoun[115]. The suffixes for the word classes are similar, however, there are some differences: Most forms have a post-vocalic and post-consonantal form. Only the first person has a separate post-verbal form -**ni**. We have summarised them in the following scheme:

Arabic suffix pronouns

	post-consonantal	**post-vocalic**
1:SG	*-i / -ni* (verbal suffix)	*-y / -ni* (verbal suffix)
2:SG	*-eḵ*	*-ḵ*
3:M:SG	*-u*	*-h*
3:F:SG	*-a*	*-ha*
1:PL	*-na*	*-na*
2:PL	*-ḵum*	*-ḵum*
3:PL	*-em*	*-hem ~ -hum*

The following paradigms show direct object pronominal suffixes attached to a third person singular and a third person plural form of the verb **ɛṭeq** ‘help’. The glide **ww** is inserted

[115] Note that in local Arabic, only very few nouns take suffixal pronouns. Instead, Ghomara Arabic, like other Jbala varieties of Arabic, uses the analytical construction with the preposition **dyal**- to form possessives.

between the conjugational vowel and the pronominal suffix (see also Vicente, 2000:137).

	ɛṭeq ‘he helped’	**ɛeṭqu** ‘they helped’
1:SG	*ɛṭeq-ni*	*ɛeṭqu-ni*
2:SG	*ɛeṭq-eḵ*	*ɛeṭquww-eḵ*
3:M:SG	*ɛeṭq-u*	*ɛeṭquww-eh*
3:F:SG	*ɛeṭq-a*	*ɛeṭqu-ha*
1:PL	*ɛṭeq-na*	*ɛeṭqu-na*
2:PL	*ɛṭeq-ḵum*	*ɛeṭqu-ḵum*
3:PL	*ɛeṭq-em*	*ɛeṭqu-hem* ~ *-hum*

In the following text excerpts the use of the pronouns is illustrated. The borrowed Arabic DO pronoun accompanies the borrowed verb:

(20) *aḡḏi* *ɛṭeq-ni* *zeg* *nnmer*
jackal help:PF-1S from leopard
‘The jackal helped me (get rid of) from the leopard.’

(21) *nettaṯa* *ma* *ka-t-fehm-u* *ši* *ɛaweḏ*
she NEG IMPP-2PL:IMPF-understand-2PL:IMPF NEG again
‘She did not understand him either.’

(22) *netta* *ka-y-tlaqa-ha*
he IMPP-3MS:IMPF-meet-2FS:DO
‘He meets her.’

The pronominal paradigm for the indirect object pronoun **l-** ‘to’ is basically a preposition which accompanies the verb as a pronoun. It does not function independently outside the verb phrase (cf. III.13.5. for other borrowed prepositions).

	l- ‘to’
1:SG	*l-i*
2:SG	*l-eḵ*
3:M:SG	*l-u*
3:F:SG	*l-a*
1:PL	*l-na*
2:PL	*l-ḵum*
3:PL	*l-em*

The following two examples show the use of the indirect object pronoun with borrowed verbs.

(23) *ka-ḥsab̲=l-a* *š* *a* *t* *i-šš.*
IMPP-suppose:3MS=to-3FS FUT AD 3FS:DO 3MS-eat:A
'She thought that he would eat her.'

(24) *š* *i-ɛiss-u-l-i* *aḡd̲i* *ula* *nnmer…*
FUT 3PL:IMPF-guard-3PL:IMPF-to-1S jackal:EL or leopard
'The leopard or the jackal will watch out for me…'

mula' (SG), '**mwali**' (PL) 'owner/lord' optionally take the third person pronouns. No other borrowed nouns take a suffix. Instead, the Berber preposition **n** 'of' is used to express possession (cf. III.13.2.8.).

(25) *mwali-ha* *dda-n* *fḥal-em*
owners-3FS go:P-3PL way-3PL
'Her owners went their way.'

(26) *amk̲* *a* *ye-ḥtaž* *mula-h*
how REL 3MS-want:P owner-3MS
'It does not matter.'

11.5.1. Other elements that take suffix pronouns

Elements that take Arabic suffix pronouns are **bi**- and **bweḥd**- 'alone' used with collective numerals (see III.12.3.). Other elements are **ɛemmeṛ**- ~ **ɛummeṛ**- 'never', **fḥal**- 'way' shown in examples (27) and (28) and **byedd**- 'self' in (29) and (30) (See below for reciprocal pronoun **baɛṭiyat̲**- / **baɛṭ**- ~ **baɛḍ̲**- and the reflexive pronoun **miss-** ~ **nefs-**.).

(27) *ɛemmṛ-ek̲* *ma* *he-šš-at* *aylal*?
never-2S NEG 2S-eat:P-2S snails
'Have you never eaten snails?'

(28) *i-qqel* *fḥal-u*
3MS-return:P way-3MS
'He went back'

(29) *šeṭṭḥ-ax=t̲* *byedd-i*
make.dance:P-1S=3MS:DO self-1S

‘I made him dance myself.’

(30) *wella* *a* *k̲ = i-bb* *netta* *byedd-u*
or AD 2MS = 3MS-take:A he self-3MS
‘Or he will take you himself.’

11.5.2. Suffix pronouns -ahu, -ahi, -ahem ~ -ahum

The interrogatives **nemmen** and **ɣemmen**, made up of a combination of the simple preposition **n** ‘of’ and **ɣer** ‘at’ with **men** ~ **mmen** ‘who, what’ can take the Arabic suffix pronouns: -**ahu** masculine singular, -**ahi** feminine singular and -**ahem** ~ -**ahum** plural. Furthermore, so can prepositions consisting of a preposition and the element **nemmen**, so-called prepositional complexes, except for **fsi nemmen**. For example:

(31) *n-emn-ahu?*
of-who-3MS
‘Whose is it?’

(32) *gum* *ne-mmen-ahem?*
front of-who-3PL
‘In front of whom are they?’

11.6. Reciprocal and reflexive pronouns

The reciprocal element **baɛṭiya̲t̲** / **baɛṭ** ‘each other’ and the reflexive element **miss**- ~ **nefs**- ‘self’ are borrowed from Arabic. They take Arabic suffixes. The form **baɛḏ̲**- is found as well, though it is less frequent than the others. It can only be used in the plural. The reciprocal forms are:

baɛṭiya̲t̲- / **baɛṭ**- ~ **baɛḏ̲-**

1:PL	*b̲aɛṭiya̲t̲-na ~ baɛṭ-na*	‘each other’
2:PL	*baɛṭiya̲t̲-k̲um ~ baɛṭ-k̲um*	‘each other’
3:PL	*baɛṭiya̲t̲-em ~ baɛṭ-em*	‘each other’

For example:

(33) *ne-dda* *i* *baɛṭiya̲t̲-na*
1PL-go:P with each.other-1PL

‘We went with each other.’

(34) *te-wṯ-em* *baɛṭ-ḵum*
2PL-hit:P-2PL each.other-2PL
‘You hit each other.’

(35) *wṯa-n* *baɛṭiyaṯ-em*
hit:P-3PL each.other-3PL
‘They hit each other.’

An example of the reflexive pronoun is:

(36) *i-deḡḡ* *miss-u* *ssḇeɛ*
3MS-do:I self-3MS lion
‘He pretends he is a lion.’

11.7. Postnominal deictic clitics

There are a number of post-nominal deictic clitics which distinguish proximal, distal and anaphoric deixis. They can cliticise to nouns and pronominal elements with which they agree in number (singular and plural)[116]. The proximal and distal postnominal deictics have several different emphatic forms. The plural anaphoric deictic has two forms which are in free variation. The deictic clitics are:

	proximal	**distal**	**anaphoric**
SG.	*a-ḏ ~ a-ḏin ~ a-ḏineṯ*	*a-n ~ a-ni ~ a-niṯ*	*a-hen*
PL.	*i-ḏ ~ i-ḏi ~ i-ḏineṯ*	*i-n ~ i-ni ~ i-nineṯ*	*i-hen ~ i-hin*

The agreement in number of the post-nominal clitics is shown in the following examples.

Masculine Singular		**Feminine Singular**	
argaz a-ḏ	‘this man’	*tameṭṭuṯ a-ḏ*	‘this woman’
argaz a-n	‘that man’	*tameṭṭuṯ a-n*	‘that woman’
argaz a-hen	‘that man’	*tameṭṭuṯ a-hen*	‘that woman’
Masucline Plural		**Feminine Plural**	
irgazen i-ḏ	‘these men’	*tiɛeyyalan i-ḏ*	‘these girls’

[116] Deictic clitics in Senhadja, Zenaga, Ghadames also agree in number (see Lafkioui, 2007: 206 for demonstrative pronouns, Kossmann, 2013: 56-57 for Ghadames, Taine-Cheikh, 2008: 55 sub ce).

irgazen i-n	‘those men’	*tiɛeyyalan i-n*	‘those girls’
irgazen i-hen	‘those men’	*tiɛeyyalan i-hen*	‘those girls’

11.8. Demonstrative pronouns

Demonstrative pronouns consist of two elements; a pronominal form and a deictic clitic. There is a masculine singular, a feminine singular and a plural form (there is no feminine plural form). The demonstrative pronouns distinguish proximal, distal/relative and anaphoric deixis. Furthermore, there are separate forms, so-called ‘pronominal heads’ which are used when followed by a determination, i.e., a relative clause or a possessive phrase. The difference with the other demonstrative pronouns is that they cannot be used outside of that specific context. Pronominal heads consist of a pronominal form and the element **a** in the singular or the element **i** in the plural. Demonstrative pronouns can follow postnominal clitics to add emphasis. Demonstrative pronouns have many forms which are in free variation, as shown in the overview:

	proximal	**distal/relative**
M:SG	*u-ha* ~ *u-haḏ* ~ *u-haḏin* ~ *u-haḏineṯ*	*w-an* ~ *w-ani* ~ *w-aniṯ*
F:SG	*t-ha* ~ *t-haḏ* ~ *t-haḏin* ~ *t-haḏineṯ*	*t-an* ~ *t-ani* ~ *t-aniṯ*
PL	*u-hi* ~ *u-hiḏ* ~ *u-hiḏin* ~ *u-hiḏineṯ*	*w-in* ~ *w-ini* ~ *w-iniṯ*

	anaphoric	**pronominal head**
M:SG	*u-hen* ~ *u-henni* ~ *u-henniṯ*	*w-a*
F:SG	*t-hin* ~ *t-hinni* ~ *t-hinniṯ*[117]	*t-a*
PL	*u-hin* ~ *u-hinni* ~ *u-hinniṯ*	*w-i*

A number of examples of demonstrative pronouns as they are used in texts are:

(37) *u-ha* *ɛemmi* *nn-em* *afeṛṛuž*
M-PRX:S uncle of-2FS rooster:EL
‘This is your uncle the rooster.’

(38) *t-ha* *maši* *yemma*
F-PRX:S NEG mother
‘This is not my mother.’

(39) *u-hin* *ma* *ssn-en* *walu!*

[117] The internal vowel in this form is in free variation with **e** and **a**. Sometimes the form of this pronoun is **t-hen** or **t-han**.

PL-ANP:PL NEG know:P-3PL nothing
'They do not know anything!'

It is possible to combine post-nominal deictics and demonstrative pronouns to add emphasis, as shown in the following examples:

(40) *amaleḥ = a-ḏ u-ha*
fish:EL = S:PRX MS-PRX
'This fish!'

(41) *tameṭṭuṯ = a-n t-an*
woman = S-DIST FS-DIST
'That woman!'

(42) *lxeddama = i-n w-ini*
workers = PL-DIST PL-DIST:PL
'Those workers!'

The following text excerpts show examples of pronominal heads. We have contrasted pronominal heads in (43a), (44a) and (45a) which can only be used in this context, with the forms in examples (43b), (44b) and (45b), which can be used both as antecedents in relative clauses and as demonstrative pronouns (cf. IV.5. syntax for relative constructions). Note that the 'normal' demonstrative pronouns have to be followed by the relative marker **a**.

(43a) *t-a ye-nwa-n i netta*
FS-PRH RF-be.cooked:P-RF for he
'The one (F) that is ripe is for him'

(43b) *t-an a lla g lbir*
FS-PRH REL be:P in well
'The one that is in the well.'

(44a) *w-a nn-es s ššɛaṛ i w-a ynu s isennanen*
MS-PRH of-3S with hair and MS-PRH my with thorns
'His have hair and mine have thorns.'

(44b) *škun w-an a y-ṯerraḥ-en?*
who MS-PRH REL RF-call:I-RF

‘Who is that who is calling?’

(45a) *ɣa* *w-i* *d=i-ttiṯu-n=d* *a* *su*
only PL:PRH DC=RF-go:I-RF=DC AD [3MS-]drink:A
‘Only the ones who come will drink’

(45b) *ama* *w-in* *a* *ye-dda-n* *ɣa* *leɛwawel,* *ɣa* *ššmayeṯ*
as.for PL-PRH REL RF-go:P-RF only children, only cowards
‘Those who have gone are children, just cowards’

11.9. Indefinite pronouns

The indefinite element **ay** either occurs on its own or combines with the singular proximal or anaphoric post-nominal deictic to form an indefinite pronoun. The proximal and anaphoric forms have several forms which are in free variation. The element **ay** marks state.

Proximal

EL *ay-ha ~ ay-haḏ ~ ay-haḏi ~ ay-haḏineṯ*

EA *w-ay-ha ~ w-ay-haḏ ~ w-ay-haḏi ~ w-ay-haḏineṯ*

Anaphoric

EL *ay-hen ~ ay-henni ~ ay-henniṯ*

EA *w-ay-hen ~ w-ay-henni ~ w-ay-henniṯ*

The element **ay** is always followed by a relative clause introduced by **a**, as in example (46) and (47). It is therefore always a focus construction (cf. chapter IV.7.2.). It is not possible to use it in any other context. The phrase **ay a nnes** means ‘property’ (lit. ‘that which is his’). The use proximal and anaphoric indefinite pronouns are shown in example (48) and (49). They get EA marking when preceded by a preposition. As shown in example (50) and(51) the EA form **way-** can be shortened to **wi**- or **uy**.

(46) *fk=ay* *ay* *a* *ṭleḇ-t-eḵ*
give:IMP=1S INDEF REL demand:PF-1S-2S:DO
‘Give me what I demanded from you.’

(47) *i-sker* *ay* *a* *nn-es*
3MS-make:P INDEF REL of-3S
‘He has built up his property.’

(48) *ay-haḏ* *a* *ḵ = i-fk*
EL:INDEF-PRX:S REL 2MS:IO = 3MS-give:P
'This is all that he gave to you'

(49) *i-rri* *ay-hen* *mudḥiḵa*
3MS-return:P EL:INDEF-S:ANP laughter-FS
'He made it into laughter.'

(50) *ssfi* *n* *w-ihen*
behind of INDEF:EA-S:ANP
'After that.'

(51) *u* *x* *uy* *a* *lla-x* *ḥaḏṛ-ax…*
and on INDEF:EA REL be:P-1S be.present:P-1S
'And it is this which I had witnessed.'

12. Numerals

The numeral system of Ghomara Berber is almost completely borrowed from Arabic. In this system cardinal and ordinal numbers are morphologically distinct.

Within the group of cardinal numbers there is a set of numbers which have a different form when preceding nouns referring to time. Only the cardinal number **yan** ~ **ya** / **ya̲t** ~ **yah** 'one' is of Berber origin and shows somewhat different behaviour from the other numbers. The numeral is linked to the noun by the preposition **n** 'of'. The noun is in the singular after one. It has a plural form after plural numerals. Arabic-morphology nouns always take the article in this construction. The Berber-morphology noun is in the EA. For example:

NUMERAL n (of) **NOUN**.

(1) *žuž* *n* *tse**k̲t̲**an*
two of EA:cows
'Two cows.'

(2) *žuž* *n* *leḥyif*
two of rocks
'Two rocks.'

12.1. Cardinal numbers

The numeral 'one' distinguishes two different forms, Arabic **waḥit** is used on its own while Berber **yan** ~ **ya** / **ya̲t** ~ **yah** is used to modify a noun. When asked 'could you count from one to ten' the people use **waḥit**, **žuž** ~ **zuž**, **tla̲ta** etc. When asked 'how much do you have?' the answer could be **yan** / **ya̲t** 'one'. The number 'two' is different according to the age group. Very old people use **tnayen** for counting instead of **žuž** ~ **zuž**, which is the common numeral among younger people[118]. From 'twenty-one' upwards until 'hundred' the Arabic coordinative element **u** connects the numerals in the order 'one and twenty'. In combination with a decimal the form form for 'two' is always **tnayen**. From hundred upwards the order is switched to 'hunderd and one' etc. The same applies to 'thousand and one', 'million and one' etc. All numerals have plural forms with **-at** except for 'thousand' 'million' and 'billion' which have separate singular and plural forms.

There is a second set of cardinal numerals which consists of the numerals 3 to 19 and 100. This set is used in combination with the numerals 'hundred' and 'thousand' (except for '200' which gets the form **mya̲ta̲yen** and '2,000' which is **alfayen**) as well as with certain nouns referring to time such as 'month', 'year'. There exists a suffix **-ayen** which expresses the dual. It is used on a restircted number of nouns. Combined numerals are linked

[118] In the Arabic dialect of Anjra the same two forms exist (cf. Vicente 2000:145).

togethere by means of **u** ~ **w** (cf. IV.4.1. coordination). Below we present the two sets of cardinal numbers.

	Set 1	**Set 2**
1	*waḥit, yan ~ yaṯ*	-
2	*žuž / zuž, tnayen*	-
3	*tlaṯa*	*telt*
4	*areb(b)ɛa*	*arbeɛ*
5	*xemsa*	*xems*
6	*setta*	*sett*
7	*sebɛa*	*sebɛ*
8	*tmenya*	*tmen*
9	*tesɛuṯ*	*tseɛ*
10	*ɛašra*	*ɛšeṛ*
11	*ḥḏaš*	*ḥḏašer*
12	*ṭnaš*	*ṭnašer*
13	*tleṭṭaš*	*tleṭṭašer*
14	*ṛbeɛṭaš*	*ṛbeɛṭašer*
15	*xemmesṭaš*	*xemmesṭašer*
16	*seṭṭaš*	*seṭṭašer*
17	*sḇeɛṭaš*	*sḇeɛṭašer*
18	*tmenṭaš*	*tmenṭašer*
19	*tseɛṭaš*	*tseɛṭašer*
20	*ɛišrin*	
21	*waḥit u ɛišrin*	
22	*tnayen u ɛišrin*	
etc.		
30	*tlaṯin*	
40	*arebɛin*	
50	*xemsin*	
60	*settin*	
70	*sebɛin*	
80	*tmanin*	
90	*tesɛin*	
100	*mya*	*myaṯ*

101	*mya w waḥit*
etc.	
200	*myaṯayn*
300	*teltemya*
400	*aṛbɛemya*
500	*xemsemya*
600	*settemya*
700	*sebɛemya*
800	*temnemya*
900	*tesɛemya*
999	*tesɛemya*
1100	*ḥḏašermya*
1000	*alef*
2000	*alfayen*
3000	*teltalaf*
11000	*ḥḏašeralef*
million	*menyul*
	žuž n mnayel
	etc.
bilion	*menyaṛ*
	žuž n mnayeṛ
	etc.

The following remarks have to be taken into account with regards to the numeral system:

12.1.1. The numeral ‘one’

‘One’ is the only cardinal numeral that has gender distinction. When used independently the forms are **yan** for masculine and **yaṯ** for feminine. In its function as a modifier of the noun there are several possibilities. Before a masculine Berber noun the forms **yan** ~ **ya** are in free variation as examples (3) and (4) show. Before a feminine Berber noun the forms **ya** ~ **yah** are in free variation as in examples (5) and (6). Arabic-morphology nouns (and other numerals) can only be preceded by the forms **yan** for masculine and **yah** for feminine as exemplified in (7) and (8). The use of **ya** is ungrammatical in such circumstances, as shown by (9). The Arabic-morphology noun always takes the article in such a construction. On the

basis of the plural numerals (from two onwards) there might be reason to consider the form of the masculine number 'one' as **ya** + **n** + **NOUN**. However, as there exists a separate form **yan** and as **ya** ~ **yah** can not be linked to a feminine noun by **n**, (the order is always **ya** ~ **yah** + **NOUN)** we consider **n** part of the numeral.

(3) *yan* *usɣun*
one rope:EA
'one rope'

(4) *ya* *wsɣun*
one rope:EA
'one rope'

(5) *ya* *temḏa*
one pond:EA
'a lake'

(6) *yah* *temḏa*
one pond:EA
'a lake'

(7) *yan* *ḍ-ḍwiwen*
one ART-light:DIMIN
'a small light'

(8) *yah* *s-sennaṛ-a*
one ART-hook-FS
'a hook'

(9) **ya* *ssennaṛa*
one ART-hook-FS
'a hook'

12.1.2. Nouns with special morphology

Besides the numerals 'hundred' and 'thousand' a limited number of nouns is preceded by the numerals from set 2. The singular is expressed by using the bare noun. The dual is expressed using the suffix -**ayen**. From three until ten the set 2 forms are followed by the plural form of the noun. The numerals eleven to nineteen take a special form with **er** ending. From twenty upwards the same numerals are used as with other nouns. The noun is in the

singular form from eleven upwards. Note that the noun ‘year’ is variable. It is **ɛam** for ‘one year’, **ɛamayen** for ‘two years’, but **snin** from three to ten years. From ten upwards it is either **ɛam** or **sna**.

‘day’		**‘month’**	
nhaṛ	‘one day’	*šhaṛ*	‘one month’
yum-ayn	‘two days’	*šehṛ-ayn*	‘two months’
telt eyyam	‘three days’	*telt šhuṛ*	‘three months’
ṛeḇɛ eyyam	‘four days’	*ṛḇeɛ šhuṛ*	‘four months’
xems eyyam	‘five days’	*xems šhuṛ*	‘five months’
sett eyyam	‘six days’	*sett šhuṛ*	‘six months’
seḇɛ eyyam	‘seven days’	*sḇeɛ šhuṛ*	‘seven months’
tmen eyyam	‘eight days’	*tmen šhuṛ*	‘eight months’
tesɛ eyyam	‘nine days’	*tseɛ šhuṛ*	‘nine months’
ɛešṛ eyyam	‘ten days’	*ɛšeṛ šhuṛ*	‘ten months’
ḥḏašer yum	‘eleven days’	*ḥḏašer shaṛ*	‘eleven months’
tmanin yum	‘eighty days’	*tmanin šhaṛ*	‘eighty months’

‘year’	
ɛam	‘one year’
ɛam-ayn	‘two years’
telt snin	‘three years’
ṛḇeɛ snin	‘four years’
xems snin	‘five years’
sett snin	‘six years’
seḇɛ snin	‘seven years’
tmen snin	‘eight years’
tseɛ snin	‘nine years’
ɛešṛ snin	‘ten years’
hḏašer ɛam ~ sna	‘eleven years’
tmanin ɛam ~ sna	‘eighty years’

12.1.3. Money units

The most frequently used money units in the Jbala are **ryal**, **fṛank** and **derhem**. One **ryal** is half a dirham and a **fṛank** is 1/100 of a dirham. The old term **peṣṣiṭa** is used by older people. The currencies are counted in different ways, either using the genitive preposition **n** or by simple juxtaposition of the numeral and the noun. When the preposition is used, the noun always has the article **l-**. Below some examples of each of the nouns will be presented.

ryal

ryal	‘one ryal’
žuž ryal ~ žuž n rryal	‘two ryal’
ɛešṛa ryal ~ ɛešṛa n rryal	‘ten ryal’
ḥḏaš ryal ~ ḥḏaš n rryal	‘eleven ryal’
alef ryal ~ alef n rryal	‘thousand ryal’

fṛank

fṛank	‘one frank’
žuž fṛank ~ žuž n lefṛank	‘two frank’
ɛešṛa fṛank ~ ɛešṛa n lefṛank	‘ten frank’
ɛišrin fṛank ~ ɛišrin n lefṛank	‘twenty frank’
alef fṛank ~ alef n lefṛank	‘thousand frank’

derhem

Note that for the numerals 11 till 19 set 2 cardinal numbers are used.

derhem	‘one dirham’
žuž derhem ~ žuž n ddrahem	‘two dirham’
ɛešṛa derhem ~ ɛešṛa n ddrahem	‘ten dirham’
ḥḏašer derhem ~ ḥḏaš n dderhem	‘eleven dirham’
ṭnašer derhem ~ ṭnaš n dderhem	‘twelve dirham’
tlaṯin dderhem ~ tlaṯin n dderhem	‘thirty dirham’
alef dderhem ~ alef n dderhem	‘thousand dirham’
menyul dderhem ~ menyul n dderhem	‘milion dirham’

peṣṣita

Note that there are three possibilities for ‘a million peseta’.

yah peṣṣiṭa	‘one peseta’
žu pṣaṣet ~ žuž n lepṣaṣet	‘two peseta’
tlaṯin peṣṣiṭa ~ tlaṯin n lepṣaṣeṭ	‘three peseta’
menyul peṣṣiṭa ~ menyul n lpeṣṣiṭa ~ menyul n lepṣaṣeṭ	‘million peseta’

12.1.4. Time reference

When referring to time the numeral ‘one’ is feminine. The other numerals are the normal cardinal numbers. The preposition **g** ‘in’ is used to signify ‘at’.

g lweḥda	‘at one o’clock’

g žžuž / zzuž	‘at two o’clock’
g ttlaṯa	‘at three o’clock’
etc.	

12.2. Ordinal numbers

Ordinal numbers keep their Arabic morphology. Except for numbers **luli** ‘first’, **tani** ‘second’ and **laxri** ‘last’ all ordinal numbers are formed by applying the **cacc** scheme to the cardinal numbers. Ordinal numbers up to ten are used. In the singular, masculine and feminine gender are distinguished. The feminine singular marker is -**a** or -**ya**, while the plural marker is -**in** or -**yin**. Ordinal numbers always take the Arabic-morphology article. The ordinal numbers are:

M:SG	**F:SG**	**PL**	
luli	*luli-ya*	*luliyy-in*	first
tani	*tany-a*	*tan-in*	second
taleṯ	*talṯ-a*	*talṯ-in*	third
ṛaḇeɛ	*ṛaḇɛ-a*	*ṛaḇɛ-in*	fourth
xames	*xams-a*	*xams-in*	fifth
sades (~*saḍes*)	*sads-a* (~*saḍs-a*)	*sads-in* (~*saḍes*)	sixth
saḇeɛ	*saḇɛ-a*	*saḇɛ-in*	seventh
tamen	*tamn-a*	*tamn-in*	eighth
taseɛ	*tasɛ-a*	*tasɛ-in*	ninth
ɛašer	*ɛašr-a*	---	tenth
laxri	*laxri-yya*	*laxri-yyin*	last

12.3. Collective numerals

There are two adverbial constructions using numerals which are used to signify either the fact that something was done alone **b weḥd**-SUFFIX or together **b** NUMERAL **bi-**SUFFIX. The latter construction takes only plural suffixes. Both constructions are borrowed from local Arabic and take Arabic pronominal forms.

	b weḥd-	‘alone’	**b** NUMERAL **bi-**	‘together’
1.	*b weḥd-i*			
2.	*b weḥd-eḵ*			
3.	*b weḥd-u*			
3.	*b weḥd-a*			
1.	*b weḥd-na*		*b žuž bi-na*	

2. *b weḥd-ḵum* *b aṛbɛa bi-ḵum*
3. *b weḥd-em* *b tlaṯa bi-hem*

13. Prepositions

Prepositions in Ghomara Berber can be divided in two groups: simple prepositions and prepositional complexes. The simple prepositions can be further subdivided in those that have both a prenominal and a pronominal form and those that only have a prenominal form. Pronominal forms of the preposition are followed by a prepositional suffix (cf. III.11.3. pronouns). Prenominal forms are followed by nouns in the EA, provided the noun has state distinction (cf. chapter III.1.1.3. for a discussion of state). Exceptions to this are the prepositions **bla** 'without' and **qb̲el** 'before'. Unlike many other Berber languages, prepositions do not have a separate form or syntactic position in relative constructions (cf. for example Kossmann 1997: 213-233 for Figuig Berber). Prepositional complexes consist of an element followed by the preposition **n**. The three elements **ammas** *,* **af** ~ **afel***,* **aḡʷemmaṭ** have nominal characteristics. Two of these consistently mark state on the prefix when preceded by a preposition. The three elements **ṭṭerf***,* **aḡʷemmaṭ***,* **ammas** can be preceded by a preposition and occur without the following preposition **i** / **n** 'of'. The other elements only occur in prepositional complexes. There is one preposition, **fsir** 'behind' which like the simple prepositions takes pronominal suffixes, but takes **n** before a noun. Furthermore, there are a few Arabic prepositions which take Arabic suffixes. Finally, there are some marginal prepositions borrowed from Arabic that are used in collocations or as part of a borrowed construction. Some prepositions can be combined. This chapter is divided in two parts. In the first part the different types of prepositions are enumerated. In the second part each of the prepositions is discussed separately.

13.1. Types of prepositions

13.1.1. Simple prepositions

On the one hand there are prepositions which have identical forms when followed by a noun and when followed by a pronominal suffix, on the other hand there are prepositions which distinguish the two forms. There is one case of suppletion (**s** and **iḏ-**), and a number of prepositions have an additional **a** in the pronominal form (e.g. **zeg** and **zga**). Some prepositions have different forms that are in free variation. The pronominal form of the genitive preposition **n** has an irregular form in the first person singular and a geminate form for all other persons.

Prenominal	**Pronominal**	**State**	**Function**
i ~ *iḏ*	*iḏ-*	EA	comitative
s	*iḏ-*	EA	instrumental
dar ~ *da*	*dar-*	EA	allative
day ~ *dayer*	*dayer-*	EA	allative 'chez'

zeg	*zga-*	EA	ablative
g	*ga-*	EA	locative
x ~ fex ~ f	*xef- ~ fex-*	EA	locative
n	*nn-* (1SG : *inu*)	EA	genitive
ɣer ~ ɣ	*ɣer-*	EA	possessive / loc.
zdu	*zdaw-*	EA	locative
sennig	*sennig-*	EA	locative

It is possible to combine prepositions to a limited extent. The element **z**, probably a shortened form of **zeg**, can precede **ɣer** and **gum** (see below) to add the meaning 'from' (it can be combined with some adverbs as well, cf. III.14.). Prepositions can be combined with the element **men** (~ **m**) to form prepositional interrogatives (cf. IV.6.4. interrogatives).

13.1.2. Simple prepositions without pronominal forms

A few prepositions do not take pronominal suffixes. They can be followed by an independent pronoun. Nouns that follow these prepositions have the EA, except for nouns following **bla** 'without' which can have EL or EA and nouns that follow **qḇel** which have EL. The dative preposition **i** ~ **iḍ** can be substituted by the indirect object pronoun (cf. III.11.2.2. for the full IO paradigm).

	State	**Function**
i ~ iḍ	EA	dative
am	EA	similative
ḥettar	EA	'until'
qḇel	EL	'before'
bla	EA / EL	'without'

13.1.3. Prepositional complexes

Prepositional complexes are combinations of two elements, the final one of which is the genitive preposition **n** 'of' and in one case optionally **i** 'to'. The second preposition of the complex can be used in the prenominal as well as in the pronominal form. Nouns following the prepositional complex are in the EA. The first element is either a Berber nominal element such as **ammas**[119] 'in the middle' and **af** 'above', **aḡʷemmaṭ** 'opposite', which mark state, or an Arabic borrowed nominal element, **ṭṭerf** 'beside'. The latter must have a preceding preposition which is often **i** 'with'. The element **af** has a variant **afel** which is used adverbially. When **aḡʷemmaṭ** is followed by a noun the preposition **i** is used instead of **n**,

[119] This noun also means 'waist (of the body)' and has a plural: SG. **ammas** PL. **immasen**.

while with pronouns **n** is used. The elements **gum** and **nešt** occur only as part of complex prepositions.

	EA	
gum n	---	'in front of, beside'
ammas n	*wammas*	'in the middle of'
af n / afel	*waf / wafel*	'on top (of)'
agʷemmaṭ i / n-	*ugʷemmaṭ*	'on the opposite side of'
ṭṭerf n	---	'beside'
nešt n	---	'as big as'

The preposition **fsir** ~ **sfir** is ambiguous between a prepositional complex and a simple preposition. Prenominal forms have the preposition **n**, while in pronominal forms the pronoun immediately follows the preposition.

Prenominal	**Pronominal**	
fsi n ~ sfi n	*fsir- ~ sfir-*	'behind'

13.1.4. Arabic prepositions

Three prepositions of Arabic origin keep their original morphology; **qḇalṯ-** and **bɣaṛt-** meaning 'opposite' and **lil-** ~ **dil-** in **šḥal lil-** ~ **šḥal dil-** (Other borrowed Arabic prepositions, **ɛla**, **b**, **f**, **l** do not occur independently, but appear in adverbials, collocations or as part of indirect object marking, cf. chapter III.14. for adverbs). The pronominal forms of the prepositions take the Arabic suffixes. When these prepositions are followed by a noun, the noun is in the EL, provided the noun has state distinction.

13.2. Simple prepositions

13.2.1. Comitative preposition i ~ iḏ at / with

The comitative preposition has the form **i** or **iḏ** before a noun, as shown in examples (1) and (2). The most common form is **i**, while **iḏ** is mainly used by old people. When a pronominal suffix is added only the form **iḏ** is used, as in example (3).

(1) *i-dda = d* *i* *umdakkul* *nn-es*
3MS-go:P = DC with friend:EA of-3S
'He came with his friend.'

(2) *ssḇeɛ maš a šš ašnikef iḏ uḡḏi*
lion FUT AD [3MS]-eat:A hedgehog:EL and jackal:EA
'The lion is going to eat the hedgehog and the jackal.'

(3) *i-dda = d iḏ-es*
3MS-go:P = DC with-3S
'He came with him.'

13.2.2. Instrumental preposition s 'with'

The pronominal form of the instrumental preposition **s** is **iḏ**[120]. Compare the following sentences, (4) is an example of the prenominal form while (5) is the pronominal form.

(4) *i-ddez iḇawen s usɣaṛ*
3MS-crush:P beans with stick:EA
'He crushed the beans with a stick.'

(5) *i-ddez iḏ-es iḇawen*
3MS-crush:P with-3:MS beans
'He crushed the beans with it.'

13.2.3. Allative preposition dar ~ da 'to'

The allative preposition **dar** has a purely allative meaning 'in the direction of'. This differs from many Berber varieties in which the allative preposition carries the meaning comparable with French 'chez' as well (**l - ɣeṛ** for Figuig, Kossmann, 1997: 224-225, **ɣeṛ** for Aït Seghrouchen, Bentolila, 1981: 215 **dar** in Tashelḥiyt cf. van den Boogert 1997:235). Ghomara Berber uses a separate preposition **daɣ ~ daɣer** for 'chez'. Examples of **dar** are:

(6) *dda-n dar urrar*
go:P-3PL to threshing.floor:EA
'They went to the threshing floor.'

(7) *nettaṯa h-teffeɣ dar-es ssluqiyya = yahen*
she 3FS-go.out:P to-3S greyhound = S:ANP
'That greyhound then went to her.'

[120] This use is the same in Amṭiqan according to El Hannouche's data (2010: 130). Interestingly in Colin's text (1929:52) the pronominal form of the first person is **siss-i**. In Iɛṛaḇen a speaker told me that the preposition **siss** is used in Beni Menṣur. Furthermore in Colin's text (1929) the preposition **s** is used in an ablative sense in the phrase **iḏ ušnekkaf iffeɣ s teryalt** 'Then the hedgehog came out of the basket.'

It is possible to combine the preposition **dar** with the prepositional complexes **gum n** ‘in front of’, **af n** ‘on top of’, **ammas n** ‘in the middle of’, **āgwemmaṭ n** ‘opposite’, for example:

(8) *yaḷḷah* *qerrḇ = at* *dar* *gum* *n* *te-sla-ṯ*
come.on move:IMP = 3FS:DO to front of bride:EA
‘Come on, move her in front of the bride.’

dar can precede nouns with a locative meaning, as well as nouns with temporal meaning, for example:

(9) *š* *a* *y* *n-ežž* *dar* *ṣṣḇeḥ*
FUT AD 3MS:DO 1PL-leave:A to morning
‘We’ll leave it till the morning.’

The form of the preposition **da** is in free variation with **dar** as the following examples show.

(10a) *i-ttuṯu* *ɛaweḏ* *da* *waššin*
3MS-go:IMP again to stable:EA
‘He goes to the stable.’

(10b) *i-dda* *dar* *waɣeḏ* *a* *ṭṭeṣ*
3MS-go:P to ash:EA AD [3MS]-sleep:A
‘He went to sleep in the ash.’

(11a) *da* *lemḏina*
to city
‘to the city’

(11b) *t-ɛelli-t* *dar* *lemḏina*
2S-go up:A-2S to city
‘You go to the city.’

13.2.4. Preposition daɣ ~ daɣer ‘chez’

The preposition **daɣ ~ daɣer** has about the same meaning as the French preposition ‘chez’.[121] The preposition can only be followed by nouns referring to humans[122]. The

[121] In Moroccan Arabic the preposition **lɛend** exists, which is a combination of allative **l** ‘to’ and pseudo-verb **ɛend**. Caubet (1993: 219) translates this verb in French with ‘vers chez’. Moroccan Arabic and Ghomaran Berber are very similar as regards this preposition as **daɣer** is a combination of the allative preposition **dar** and the possessive preposition **ɣer**.

complete form **daɣer** is hardly ever used before a noun in continuous speech. We have encountered one exception in our texts before a noun beginning with vowel **i** (example 13). See the following examples:

(12) *saɛa te-dda daɣ urgaz nn-es*
then 3FS-go:P chez man:EA of-3S
'Then she went to her husband.'

(13) *i-lkem daɣer išurkan*
3MS-arrive:P chez peasants
'He arrived at the peasants.'

The prepositions **dar** ~ **da** and **daɣ** ~ **daɣer** can both be used before a noun referring to a human being. However, the meaning is different, as illustrated by the following examples. (14a) is a statement of somebody going to the location of the *Kaid* (local governor), whereas in (14b) the interpretation is that the person is going to the person (e.g. to resolve a conflict or so).

(14a) *i-dda daɣ lqayeḏ*
3MS-go:P to Kaid
'He went to the Kaid's place.'

(14b) *i-dda da lqayeḏ*
3MS-go:P to Kaid
'He went to the Kaid.'

13.2.5. Locative preposition g 'in'

The locative preposition **g** 'in' has the allomorph **ga** when used with a pronoun as shown in the following example:

(15) *yaṯ te-qqim g uxyam i žuž rewl-en*
one:F 3FS-stay:P in house:EA and two flee:P-3PL
'One stayed in the house and two fled.'

An example of the pronominal use of prepositions is:

(16) *ne-sskar ga-s i-syaṛ-en*

[122] Speaking animals in tales are treated as humans.

1PL-do:I in-3S sticks
'We put sticks in it.'

13.2.6. Ablative preposition zeg ~ zga- 'from'

This preposition expresses movement from a location. The pronominal form is **zga-**. This preposition also functions as a conjunction in the combination **zegya** (cf. IV.4.2.7. conjunctions). Compare the following examples for the different forms.

(17) *i-ffeɣ* *zeg* *uxyam*
3MS-go.out:P from house:EA
'He got out of his house.'

(18) *sessa-n* *zga-s* *tisukran*
drink:I-3PL from-3S partridge:EL
'The partridges drink from it.'

13.2.7. Locative preposition xf ~ fx ~ x ~ f 'on'

This preposition is a locative preposition 'on'. It has several prenominal allomorphs which are in free variation. The form **x** is most often used, while **fx** occurs less often. The variant **f** is attested only once in our corpus with an old speaker[123].We have not encountered **xf** in prenominal position. The prepositional suffix is suffixed to either of the forms **xf** or **fx**. We present the complete suffixal paradigm with the two forms **xf** and **fx** below. Some forms are irregular. In the first and third person plural schwa can end up in an open syllable after the initial consonant cluster. The first consonant (**n** or **s**) of the suffix is then geminated.

1:SG	*xf-i ~ fx-i*
2:M:SG	*xf-ek ~ fx-ek*
2:F:SG	*xf-em ~ fx-em*
3:SG	*xf-es ~ fx-es ~ fx-es*
1:PL	*xef-nex ~ fx-ennex*
2:PL	*xf-un ~ fx-un*
3:PL	*xf-essen ~ xef-sen ~ fx-essen ~ fex-sen*

Examples (19), (20) and (21) illustrate the prenominal forms.

123 In Amṭiqan the **f** is used while **fex** seems to be absent (El Hannouche 2010: 133-134). In the Colin (1929) texts **f** occurs as well.

(19) *š* *a* *ḡḡ-aɣ* *aẓṛu* *fx* *uẓṛu*
FUT AD do:A-1S stone:EL on stone:EA
'I will put a rock on a rock.'

(20) *ay* *akfer* *dha* *x* *lḥafa* *ya-ḏ*
VOC turtle:EL here on stone S-PRX
'You turtle here on this rock.'

The one occurrence of **f** is in the following sentence. The noun **taṭṭiwan** 'eyes' does not have a state difference.

(21) *rrɣ-an* *as* *lǧeld* *f* *taṭṭiwan* *nn-es*
return:P-3PL 3S:IO skin on eyes of-3:M
'They put his skin on his eyes.'

The following examples show the suffixal forms. Examples (23), (24) and (25) show the implicative use, i.e., the preposition conveys that the action has an effect on someone that has no control over the action (cf. Kossmann 1997: 223 who introduced this notion for Figuig Berber).

(22) *š* *a* *qeṭṭr-en* *fx-essen*
FUT AD drip:A-3PL on-3PL
'They will drip on them.'

(23) *leḥšam=i-hen* *ḵerrḵ-en xf-es*
children=PL-ANP lie:P-3PL on-3S
'Those children lied to him.'

(24) *i-ḇeṛṛeḥ* *xf-es*
3MS-call:P on-3S
'He called him.'

(25) *i-tḍeṣṣa* *x* *te-mɣaṛ-t* *nn-es*
3MS-laugh:I on woman:EA of-3S
'He laughs about his wife.'

13.2.8. Genitive preposition n ‘of’

The main function of the genitive preposition is to link two nouns, typically to form a possessive construction. The first person of the pronominal forms has an irregular form. In the rest of the paradigm the regular prepositional suffix is suffixed to the geminate **nn**.

1:SG	*inu*
2:M:SG	*nn-eḵ*
2:F:SG	*nn-em*
3:SG	*nn-es*
1:PL	*n-nax*
2:PL	*nn-un*
3:PL	*nn-sen*

Their use is shown in the following examples:

(26) *afraw n tḡiḡet*
leaf:EL of tree:EA
‘The leaf of a tree.’

(27) *afraw nn-es*
leaf:EL of-3:SG
‘Its leaf’

13.2.9. Possessive / locative preposition ɣer ~ ɣ / ɣer- ‘at’

This preposition has two forms; when suffixed it has the form **ɣer-**, when prenominal the form has free variation between **ɣer** and **ɣ**. It is used in possessive and locative constructions as shown in the examples below.

(28) *ɣer-sen leḥšam g uxyam s warsin*
at-3PL children in house:EA with hunger:EA
‘They have hungry children in the house.’

(29) *i-mmuṯ g martin, ɣ uleṯma-s*
3MS-die:P in Martil at sister-3S
‘He died in Martil, at his sister’s (place)’

(30) *ɣer muḥemmeḏ leflus nn-eḵ*

at Mohammed money of-2MS
'Mohammed has your money.'

The preposition can be preceded by an element **z** (probably from **zeg**, maybe from **s**) which yields **zɣe(r)** meaning 'from someone/somewhere', for example:

(31) *i-dda d zɣe žeddi nn-es*
3MS-go:P DC from grandfather of-3S
'He came from (at) his grandfather'

13.2.10. Preposition zdu 'under'

The preposition **zdu** 'under' has the allomorph **zdaw** before pronominal suffixes.

(32) *i-ḵšem zdu waḵal*
3MS-enter:P under earth:EA
'He entered under the soil.'

(33) *nekki zdaw-es*
I under-3MS
'I am under it.'

13.2.11. Preposition sennig 'above'

This preposition has a variant pronominal form **senniga-** in the first person singular, second person feminine singular and in the plural. In the second person masculine and the third person the form is **sennig-**. The preposition followed by the complete suffixal paradigm is as follows:

1:SG	*senniga-y*
2:M:SG	*sennig-eḵ*
2:F:SG	*senniga-m*
3:SG	*sennig-es*
1:PL	*senniga-nax*
2:PL	*senniga-wen*
3:PL	*senniga-sen*

Examples:

(34) *aḡṭiṭ* *i-neṭṭeḡ* *sennig* *uxyam*
bird:EL 3MS-fly:I above house:EA
'The bird is flying over the house.'

(35) *walakin* *ma* *ya* *te-ḡḡ-et* *ši* *sennig* *lɛafya*
but NEG AD 2S-do:A-2S NEG above fire
'But do not put it above the fire.'

(36) *haw* *senniga-y*
PR:3MS above-1S
'He is above me.'

13.3. Simple prepositions without pronominal forms

The simple prepositions discussed in this section do not take pronominal suffixes. They only have a prenominal form (with possible free variation) and can be followed by an independent pronoun. Nouns that mark a state distinction have the EA when following most of these prepositions, but with **bla** 'without' there is free variation between the use of EA and of EL. Nouns are in the EL after the preposition **qḇel** 'before'.

13.3.1. Dative preposition i ~ iḏ to / for[124]

The dative preposition has two prenominal forms which are in free variation **i** ~ **iḏ**; the variant **iḏ** is more often used by old people. The preposition has the form **iḏ-** in the pronominal form. It is often (though not obligatorily) used in combination with the dative pronoun in a ditransitive phrase (compare examples 37 and 38). The preposition **i** can be followed by an independent pronoun, as in example (39). Example (40) shows the use of the variant **iḏ**.

(37) *i-dda* *i-fk = as = t* *i* *ya* *tmeṭṭuṯ*
3MS-go:P 3MS-give:P = 3S:IO = 3MS:DO to one:F woman:EA
'He gave it to a woman.'

(38) *i-dda* *i-fk = aṯ* *i* *ya* *t-meṭṭu-ṯ*
3MS-go:P 3MS-give:P = 3MS:DO to one:F woman:EA
'He gave it to a woman.'

(39) *t-a* *ye-nw-an* *i* *netta*

[124] **i** ~ **iḏ** functions a coordinative element as well (cf. chapter IV.4. on coordination and subordination).

FS-PRH RF-be.cooked:P-RF to he
'The ripe one for him.'

(40) *i-nn = as* *iḏ* *nnmer*
3MS-say:P = 3S:IO to leopard
'He said to the leopard.'

The preposition can be substituted by the indirect object pronoun, for example (41) can be substituted by (42) (cf. III.11.2.2. for indirect object pronouns):

(41) *ifk = aṯ* *i* *ya* *tmeṭṭuṯ*
3MS-give:P = 3MS:DO to one:F woman:EA
'He gave it to a woman.'

(42) *ifk = as = t*
3MS-give:P = 3S:IO = 3MS:DO
'He gave it to her.'

13.3.2. Preposition am 'like, the same as'

In the following two examples the use of the preposition is shown:

(43) *mawši* *am* *keǧi*
NEG like you
'Not like you.'

(44) *am* *tɛebbist,* *am* *tgayzuṯ*
like calf:EA like calf:EA
'A *taɛebbist* (calf) is the same as a *tagayzuṯ* (calf).'

13.3.3. Preposition ḥettar 'until'

The preposition has the form **ḥettar**. Before a liquid consonant the **r** is omitted as in example (45); under other circumstances the presence of **r** is obligatory (48). An alternative construction with the same meaning is the preposition **ḥetta** followed by the preposition **dar**[125], as examples (46) and (47) show. The conjunction **ḥetta** meaning 'also/until' also functions as a subordinator (cf. chapter IV.4.2.6.).

(45) *ḥetta* *lexṭuḇer*

[125] It is found in Colin's text (1929:55) as well: **ḥetta dar wasif** 'until the river'.

until winter
'Until the winter season.'

(46) *i-dda ḥettar uxyam i-qqel=d*
3MS-go:P until house:EA 3MS-return:P=DC
'He went until the house and came back.'

(47) *i-dda ḥetta dar uxyam i-qqel=d*
3MS-go:P until to house:EA 3MS-return:P=DC
'He went until the house and came back.'

(48) **i-dda ḥetta uxyam i-qqel=d*
3MS-go:P until house:EA 3MS-return:P=DC
'He went until the house and came back.'

13.3.4. Preposition bla 'without'

This preposition can only be followed by a (pro)noun. Following this preposition a Berber morphology noun can be in the EL or in the EA. The speakers accepted both example (50) with EA marking and example (51) with EL marking.

(49) *he-dda dayer leḥšam nn-es, ɣa he-dda bla waman.*
3FS-go:P until children of-3MS only 3FS-go:P without water:EA
'She went to her children, though she went without water.'

(50) *i-dda bla uɛeyyal nn-es*
3MS-go:P without child:EA of-3S
'He went without his child.'

(51) *i-dda bla aɛeyyal nn-es*
3MS-go:P without child:EL of-3S
'He went without his child.'

13.3.5. Preposition qb̲el 'before' (temporal)

This preposition is only used in a temporal meaning. In combination with **ma** this preposition functions as a conjunction/complementiser (cf. IV.4.2.5. on conjunctions). It does not take a pronominal suffixes and is followed by a noun in the EL.

(52) *qb̲el leɛša*
before dinner

‘before dinner’

(53) *qḇel azal*
before midday:EL
‘before midday’

13.4. Prepositional complexes

Prepositional complexes consist of a (noun-like) element + the genitive preposition **n** ‘of’. As a consequence, all Berber morphology nouns that follow these complexes have the EA. The preposition **fsir** ~ **sfir** is an exception, as it does not have the genitive preposition in its pronominal forms, while it is combined with the preposition **n** prenominally. We will present examples of the prenominal and pronominal forms of each prepositional complex.

13.4.1. Prepositional complex gum n ‘in front of / beside’

This prepositional complex means both ‘in front of’ and ‘next to/beside’. For example:

(54) *netta i-bdeḍ waqef gum n uxyam*
he 3MS-stand.up:P stand.up:AP:MS in.front of house:EA
‘He stood still in front of/beside the house.’

(55) *t-sers = as gum nn-es ya wdideḡ*
3FS-put:P = 3S:IO in.front of-3S one:M pestle:EA
‘She put a pestle next to/in front of her.’

The preposition can be preceded by other prepositions, such as **dar** and **zeg**, which express movement towards or from the front of a location.

(56) *yaḷḷah qeṛṛḇ = at dar gum n te-sla-ṯ*
come.on move:IMP = 3FS to in.front of bride:EA
‘Come on, move her in front of the bride.’

The preposition can be preceded by the element **z** which yields **z gum n** ‘from in front of’.

13.4.2. Prepositional complex af n ~ afel ‘on top of’

This prepositional complex occurs in combination with other prepositions such as **g**, **dar** and **zeg**. The form **waf** is in free variation with **af** as shown in the following two examples. The form is **afel** when it is used adverbially as in (59) and (60).

(57) *t-ɛellq = at* *g* *af* *n* *dduxxan*
3FS-hang:P = 3FS:DO in above of smoke
'She hung it above the smoke.'

(58) *dar* *waf* *n* *mni* *menṣuṛ*
to above of Beni Mensour
'To the top of Beni Mensour.'

(59) *i* *wa-yeṭ* *i-bb* *ifrawen* *zeg* *wa-fel*
and MS-other 3MS-take:P leaves from top:EA
'And the other took leaves from the top'

(60) *haw* *afel*
PR:3MS top:EL
'He is in the top.'

13.4.3. Prepositional complex ammas n 'in the middle of'

In this complex, the first element is a noun meaning 'waist, middle' (PL: **immasen**). This prepositional complex is often preceded by another preposition (often **g**, but also **dar** and **zeg**). The preposition takes the EA when preceded by a preposition. The preposition **n** links the noun to a following element (prepositional suffix or noun). **ammas** can be used as a noun standing on its own, as in examples (64) and (65). Examples are:

(61) *g* *wammas* *n* *ṭṭšaṛ*
in middle:EA of village
'In the middle of the village.'

(62) *g* *wammas* *nn-es*
in middle:EA of-3S
'In the middle of it.'

(63) *i-dda* *dar* *wa-mmas* *n* *lemḏina*
3MS-go:P to middle:EA of city
'He went to the center of the town.'

(64) *haw* *g* *wammas*
PR:3MS in middle:EA
'He is in the middle.'

(65) *haw* *ammas* *n* *lemḏina*
PR:3MS middle:EL of city
'He is in the middle of town.'

13.4.4. Prepositional complex aḡʷemmaṭ (n) / i 'opposite side'

This prepositional complex takes the EA when preceded by another preposition such as **dar** or **zeg**. The preposition **g** cannot be used with **aḡʷemmaṭ**. **aḡʷemmaṭ** can function as a noun standing on its own as example (66) and (67) show. When it functions within a prepositional complex, the pronominal form has the preposition **n** as its second part (example 68), while the prenominal form has **i** (example 69):

(66) *i-dda* *dar* *uḡʷemmaṭ*
3MS-go:P to other.side:EA
'He went to the other side.'

(67) *i* *nihma* *twala-n = teṯ* *aḡʷemmaṭ,* *is-sen*
and they see:IMPF-3PL = 3FS:DO other.side:EL with-3PL
'And they see her on the other side, with them.

(68) *i-dda* *dar* *uḡʷemmaṭ* *nn-es*
3MS-go:P to other.side:EA of-3S
'He went to the other side of it.'

(69) *i-dda* *dar* *uḡʷemmaṭ* *i* *uxyam = ahen*
3MS-go:P to other.side:EA to house:EA = S:ANP
'He went to the other side of that house.'

13.4.5. Prepositional complex i ṭṭeṛf n 'side of, beside'

This prepositional complex is based on the Arabic noun **ṭṭeṛf** 'side' combined with the preposition **n**. The preposition is preceded by **i** ~ **iḏ**, **dar** and **zeg**. In the following examples the prenominal and the pronominal forms are used.

(70) *i* *ṭṭeṛf n* *uxyam*
with side of house:EA
'On the side of the room.'

(71) *i* *ṭṭerf* *nn-es*
with side of-3S
'on its side'

13.4.6. Prepositional complex nešt n ‘as big as/as old as’

This prepositional complex can mean both ‘as big as’ and ‘as old as’. In (72) and (73) examples of the prenominal and pronominal forms are given.

(72) *netta nešt n ḵma-s*
he as.big.as of brother-3S
‘He is as big as his brother.’

(73) *netta nešt nn-es*
he as.big.as of-3S
‘He is as big as him.’

13.4.7. Prepositional complex fsi n ~ sfi n / fsir- ‘behind’

This element combines features of the prepositional complexes and simple prepositions[126]. As example (74) shows, before a noun the genitive preposition **n** is used. Example (75) shows that the preposition takes suffixes. The **r** is always absent when followed by **n**, while the pronominal form always has **r**. This preposition has both locative (76), and temporal reference (77).

(74) *haw fsi n uxyam=ahen*
PR:3MS behind of house:EA=S:ANP
‘He is behind that house.’

(75) *netta maši fsir-es i-tbeɣbaɣ*
he go:AP:MS behind-3S 3MS-bleat:I
‘He was walking behind him bleating.’

(76) *sfi n yaɣil=a-ḏ*
behind of mountain:EA=S-PRX
‘Behind this mountain.’

(77) *fsi n lmaḵla*
behind of meal
‘After the meal.’

[126] In the Colin (1929: 54) texts the form **zdfir-es** is found.

13.5. Arabic prepositions

There are two Arabic prepositions, **qḇalṯ** ‘opposite’ and **bɣart** ‘opposite’, which take Arabic suffixes (cf. III.11.5.). The element **lil-** ~ **dil-** follows **šḥal** which together mean ‘how long ago’. The complete paradigm of the prepositions including their suffixes is shown below. Note that different from the Berber paradigm there is no gender distinction in the second person, but there is a distinction in the third person singular:

	qḇalṯ ‘opposite’	**bɣaṛt** ‘opposite’	**lil** ~ **dil**
1:SG	*qḇalṯ-i*	*bɣaṛt-i*	*lil-i* ~ *dil-i*
2:SG	*qḇalṯ-eḵ*	*bɣaṛt-eḵ*	*lil-eḵ* ~ *dil-eḵ*
3:M:SG	*qḇalṯ-u*	*bɣaṛt-u*	*lil-u* ~ *dil-u*
3:F:SG	*qḇalṯ-a*	*bɣaṛt-a*	*lil-a* ~ *dil-a*
1:PL	*qḇalṯ-na*	*bɣaṛt-na*	*lil-na* ~ *dil-na*
2:PL	*qḇalṯ-ḵum*	*bɣaṛt-ḵum*	*lil-ḵum* ~ *dil-ḵum*
3:PL	*qḇalṯ-em*	*bɣaṛt-em*	*lil-em* ~ *dil-em*

A noun following one of these prepositions takes the EL, e.g.

(78) *qḇalṯ* *axyam*
opposite house:EL
‘opposite the house’

(79) *bɣaṛt* *amaras*
opposite riverbed:EL
‘opposite the riverbed’

(80) *šḥal* *lil-eḵ* *ma* *he-ẓṛ-at=t?*
how.many for-2S NEG 2S-see:P-2S=3MS:DO
‘How long ago did you see him? ’

14. Adverbs

Adverbs modify propositions. They are elements which do not belong to another part of speech and they can and often do function as the central element of an adverbial clause. A number of adverbs have nominal origin. They have an **a**- prefix which changes to **u**- or **wa**- in the EA. However, different from most nouns they do not have a plural form and they cannot be the head of an NP (e.g. they do not take postnominal determiners). The following adverbs have been identified which can be divided into different categories.

Temporal Adverbs

nhaṛ / nhaṛ aḏ / nhaṛ ahen	‘day’ (also: ‘today’, ‘that day’)
amilla ~ amella (*wa-*)	‘now’
amla ɛiḏ (*wa-*)	‘just now’
deɣdaḵ ~ deɣdayaḵ	‘earlier today’
assa (*wa-*)	‘nowadays’
aẓgaṣneṭ - aẓg^{w}asneṭ (*u-*)	‘last year’
asleṭ (*u-*)	‘two years ago’
asleṭ n usleṭ	‘three years ago’
alaẓen (*wa-*)	‘tomorrow’
nafaẓen ~ lafaẓen	‘the day after tomorrow’
anawiṭin ~ aliwiṭin (*wa-*) ~ *liwiṭin ~ niwiṭin*	‘in three days’
nafaẓnaẓ	‘in three days’
aṭḡam (*wa-*)	‘yesterday’
aṣelaṭḡam (*u-*)	‘the day before yesterday’
asnuṣelaṭgam (*u-*)	‘three days ago’
llumayen iḏ	‘the past few days’
daʔimen	‘always’
ɛaḏ ~ ɛiḏ	‘still, yet’
saɛa	‘then, later’
mbeɛd	‘after’
zegya	‘from the time that’
bihabiha	‘directly’
meṛṛa	‘time, occassion’
meṛṛa meṛṛa	‘sometimes’
meqḇeyya	‘almost’
xeṭṛa	‘time, occassion’

Manner Adverbs

hamk̲a ~ hamk̲ad̲ ~ hamk̲an ~ hamk̲ad̲in ~ hamk̲ad̲inet̲	‘in this way, like this’
deɣya	‘quickly’
bellati	‘slowly’
mezyan	‘good’
nišan	‘straight on, right’

Locative Adverbs

dha ~ dhad̲ ~ dhad̲in ~ dhad̲inet̲	‘here’
das ~ dan	‘there’
zdas	‘from there’
ssiha ~ ssihad̲ ~ ssihad̲in ~ ssihad̲inet̲	‘from here, through here’
ssyan ~ ssyas	‘from there, through there’
darha ~ dariha ~ darihad̲ ~ darihad̲in ~ darihad̲inet̲	‘to here’
daryan ~ daryas	‘to there’
ssihan ~ ssyani	‘from there’
beṛṛa ~ beṛṛayan	‘outside’
zbeṛṛa	‘from outside’
ɛla beṛṛa	‘on the outside’
daxel	‘inside’
z daxel	‘from the inside’
hab̲eṭ	‘the upper side, upwards’
ṭaleɛ	‘the lower side, downwards’
afel (*wa-*)	‘on the top’

The preposition **dar** is combined with the active participles **ṭaleɛ** ‘above’, **hab̲eṭ** ‘down’ to form locative adverbials.

dar ṭaleɛ	‘upwards’
dar hab̲eṭ	‘downwards’

Quantative Adverbs

The following elements can all be linked to the noun by the preposition **n.** They function as adverbs on their own as well. The element **šḥal** is an interrogative as well. **kamel / kamla / kamlin** is derived from an adjective.

xṛebbi	‘quite a lot, quite a while’
bezzaf	‘a lot, many’
meṛṛa	‘all’
kamel - kamla - kamlin	‘all’
šweyya	‘a little’
šwiwweš	‘very little’
ši ḥaža	‘a bit’
šḥal	‘a lot’
k̲teṛ ~ xteṛ	‘more’

The following element can only be linked to a noun by means of **n** ‘of’.

beɛḍ ~ beɛṭ	‘some (people)’

Other Adverbs

yyeh	‘yes’
a ~ ah	‘yes’
lla	‘no’
beɛda	‘already’
aqa ~ qa	‘wait a moment’
fḥal fḥal	‘the same’
xyaṛ	‘better’
ḥsen	‘better’
bellati	‘wait’
ɛla qedd- (+ 3 person Arabic suffix)	‘bad’
belḥeqq	‘in fact’
amexṭa	‘probably’
waqila	‘probably’
aḇenṣaḇ	‘it is unlikely that’
ilaxiri-hi / -ha / - him	‘etcetera’
yak̲	‘isn’t it’