

NOUN PREFIXES IN EASTERN BERBER*

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The Eastern Berber languages have a noun prefix system different from other Berber languages. They undergo shortening of the prefix in contexts not found elsewhere and the feminine plural prefix *ti-* appears to be absent. This article examines the conditioning of the different allomorphs of the prefixes, and suggests that the absence of the plural prefix *ti-* cannot be explained as the result of an internal historical development, which may suggest that the Eastern Berber feminine plural prefix *tə-* is the original form.

KEYWORDS: Eastern Berber, Historical Linguistics, Proto-Berber, Noun prefixes

1. INTRODUCTION

THE vast majority of the nouns in Berber have a prefix that expresses gender, number and ‘state’. The two states are the Free State or ‘État Libre’ (henceforth EL) and the Annexed State or ‘État d’Annexion’ (henceforth EA). The EA is generally used to express the post-verbal subject and the post-prepositional object.¹ The prefixes of the EL form a uniform system in Moroccan-Algerian Berber² languages and in Tuareg, with a system that looks as follows:

	m.	f.
sg.	a-	ta-
pl.	i-	ti-

The forms of the EA differ somewhat between Moroccan-Algerian Berber languages and Tuareg Berber, most notably the presence of a semi-vowel *w/y* in the prefix that is absent in Tuareg:

	Moroccan-Algerian		Tuareg	
	m.	f.	m.	f.
sg.	w(ə)-	t(ə)-	ǎ-	tǎ-
pl.	y(ə)-	t(ə)-	ə-	tə-

* I wish to thank Christfried Naumann for allowing me to use his unpublished lexical material of Siwa. I thank Lameen Souag, Maarten Kossmann, Ahmad Al-Jallad and Adam Benkato for commenting on early drafts of this paper.

¹ For a more sophisticated analysis see Mettouchi & Frajzyngier (2013).

² This term is used here to denote Berber languages spoken in Morocco and Algeria, excluding Ahaggar Tuareg.

Berber languages usually also have smaller categories with different prefix shapes, in which the prefix vowel is not reduced in the EA, these nouns are generally said to have a *voyelle constante* in the Berberological literature.³ Examples from Middle Atlas Berber are:

	EL	EA	
sg.	anu	wanu	‘well’
pl.	anutn	wanutn	‘wells’
sg.	taddart	taddart	‘house’
pl.	tadərwin	tadərwin	‘houses’
sg.	ixf	yixf	‘head’
pl.	ixfawən	yixfawən	‘heads’
sg.	tixsi	tixsi	‘ewe’
pl.	tixsiwin	tixsiwin	‘ewes’
sg.	ul	wul	‘heart’
pl.	wulawən	wulawən	‘hearts’
sg.	uššən	wuššən	‘she-jackal’
pl.	uššənn	wuššənn	‘she-jackals’

The historical development of the noun prefixes has received considerable attention in the past. Most authors are in agreement that the prefixes were originally pronominal elements or articles, which have been bleached semantically over time. Stumme (1899: 19-20) was the first to express the hypothesis that the prefix was originally a definite article. Vycichl (1957, 2005: 84-85) continue to build on this hypothesis, attempting to show evidence of definiteness marking by the prefix in the Berber languages. Prasse (2002: 375-377) re-examines the arguments put forth by Vycichl and convincingly argues that there is no evidence that the prefix expressed definiteness. Prasse (1974: 12-14, 2002) however does agree with Vycichl, and other authors (Basset 1959: 83-89, Chaker 1988, Galand 1964: 47) that these prefixes do have a pronominal origin, and sees its origins in the *pronoms d'appui* or in Galand's terminology, *supports de détermination* (Galand 1974). These pronominal elements found in Tuareg can be represented schematically as follows (after Galand 1974: 223):

³ Penchoen (1973: 13) considers this constant vowel to be part of the stem, which ellides the original vowel of the prefix. While this analysis, at least synchronically, is certainly valid, in this paper we consider such constant vowels as part of the prefix.

	Definite	Indefinite	Neutral
m.sg.	wa	i	a
f.sg.	ta	ti	a
m.pl.	wi	i	a
f.pl.	ti	ti	a

Prasse considers the noun prefixes of the EL developed from the neutral and indefinite forms, while the EA developed from the definite forms.

Brugnatelli (1997: 145-146) suggests that both the EL and EA developed from the definite series. He argues that the EL without the initial semi-vowel should be understood as the loss of an initial semi-vowel, which was retained in the EA due to the closer syntactic connection of the word in the EA and the preceding word (be it a preposition, or the verb to which this noun is the subject).

As of yet, there is no true consensus on the historical development of the prefix, and the discussion has revolved mainly around the systems present in the Moroccan-Algerian Berber languages and the Tuareg languages. However, several Berber languages have a different prefix system to that of the Moroccan-Algerian and Tuareg system, which deserve attention within this discussion.

The Zenaga Berber language of Mauritania and its close relative Tetsrerret spoken in Niger lack an EA. The prefix situation in Zenaga is described in detail by Taine-Cheikh (2006) who analyses the alternation of the prefixes as part of the *a* versus non-*a* apophony of the root. For Tetsrerret the amount of lexical data available is currently too limited to give insight into the exact situation of the prefix, but the situation seems to be more complex, because there are examples of initial *i* versus *a* variation (both non-*a* vowels, but of different quality), e.g. *im* pl. *əmowən* ‘mouth’ (Lux 2013: 427). While it is difficult to confirm, with our currently limited understanding of the historical phonology of these two languages, it appears to be possible to derive their prefix systems from the Moroccan-Algerian or Tuareg system.

Only very little is known of the dialects of Tunisia, but as far as it is possible to tell, it seems that also these dialects have the Moroccan-Algerian system (Douiret: Gabsi 2003: 109, 123; Sened: Provotelle 1911: 25-28, 31-34; Jerba: Brugnatelli 1998, 2001, 2009).

In Libya and Egypt however, as Brugnatelli (1984) has shown, the prefix system is quite different. Most of the dialects in this region lack the EA. Those that lack an EA are Awjila, Ghadames, Nefusa, El-Foqaha, Sokna and Siwa.⁴

⁴ Note however that some of these languages can be shown to have had an EA in an earlier stage of the language. Some archaic Ghadames songs and Medieval Nefusa retain the EA (Lanfry 1972: 181-182; Lewicki 1934). Souag (2013: 84) carefully suggests that Siwa originally had an EA as well.

Brugnatelli discusses two other languages of Libya, first the dialect of Zwara and second the Tuareg dialect of Ghat. The prefix system of Zwara has been described in detail by Mitchell (1953, 1957) and clearly follows the Moroccan-Algerian system, with typical Zenatic shortening or loss of the initial root vowel in front of CV. Ghat follows the prefix system of Tuareg, which is well-understood and need not concern us here.

The prefix system of the Eastern Berber languages⁵ differs from that of the Moroccan-Algerian Berber system not only in its absence of the EA, but also shows many different allomorphs of the expected prefix *a-*, *ta-*, *i-*, *ti-*. In many cases we find that nouns completely lack the prefix vowels.

Until now, no structural analysis of the prefixes in Eastern Berber languages has been conducted. This article examines the prefix systems of the different Eastern Berber languages. It will be shown that the Eastern Berber prefix-system cannot be explained as simply a development from the Moroccan-Algerian Berber system.

In the discussion of the different languages, I will comment on the basic prefix system to which the majority of the nouns belong. This is in all cases the equivalent of *a-/ta-/i-/ti-* system of the Moroccan-Algerian Berber languages.

Eastern Berber languages also have nouns with initial stable vowel in both the singular and the plural which corresponds to the *voyelle constante* in the Moroccan-Algerian Berber languages and Tuareg. While these will not be studied in detail, they will be mentioned when relevant to the discussion.

2. OVERVIEW OF DATA

In the following sections the prefix systems of the Eastern Berber languages will be discussed. The sources used for the respective languages are: Naumann (ms.) for Siwa, Sarnelli (1924) for Sokna, Paradisi (1963) for El-Foqaha, Beguinet (1942) and Provasi (1973) for Nefusa, Lanfry (1973) and Kossmann (2013) for Ghadames and Paradisi (1960a;b) and van Putten (2014) for Awjila.

Several times, the article refers to other Berber languages for comparative purposes. The languages referred to and the source from which the material taken are: Mzab (Delheure 1985), Ouargla (Delheure 1987), Zenaga (Taine-Cheikh 2008), Middle Atlas Berber (Taïfi 1993), Mali Tuareg (Heath 2006), Figui (Kossmann 1997) and Kabyle (Dallet 1982).

In the following sections I will discuss the shape of the prefixes in Eastern Berber languages. In these sections I will often discuss variation between a masculine prefix *a-/i-* and a prefix \emptyset . I do not wish to imply that the prefix \emptyset

⁵ In this paper, 'Eastern Berber' refers to the languages of Libya and Egypt that lack an EA, and therefore excludes Zuara and Ghat. This is not to say that the remaining Eastern Berber languages form a genetic unity, but they do form a 'unit' of study, as all of their prefix systems are not well-understood.

indeed is a ‘zero-morpheme’, and one may also read it as ‘no prefix’. However, for the sake of brevity and clarity, I have decided to use this symbol. In some of these languages a sequence of two word-initial consonants is disallowed or in free variation with əCC, e.g. El-Foqaha *ísri* pl. *ásriwən* ‘mat’. Such nouns are considered to have a prefix \emptyset - as well.

The feminine prefixes will be described as having the shape *ta-* or *t-*. Often when a word has a prefix *t-* a short vowel phoneme *ə* follows it. The appearance of *ə* is automatic in front of a sequence of two consonants in order to avoid a cluster tCC. Occasionally this *ə* is also found in front of a single consonant followed by a vowel. Due to a lack of knowledge of the phonology of these languages, we cannot confirm these are non-phonemic, but are considered to be non-phonemic for the discussion of this article.

2. 1. *Siwa*

The masculine singular prefix in Siwa has two allomorphs, *a-* and \emptyset -. The prefix *a-* is the most common. Whenever a noun stem starts with a sequence of a consonant with a short vowel, or when a sequence of two consonants follows, the m.sg. prefix is always *a-*, e.g.

agərđi	igərdən	‘mouse’
afəllu	ifəllan	‘onion’
akəčča	ikəččayən	‘grave’
akərrus	ikərrusən	‘knot’
aččaw	ččawən	‘horn’
agmar	gmarən	‘horse’
abdir	bdirən	‘pigeon’
alyamṃ	iləyṃan	‘camel’

In front of a sequence of a consonant with a long vowel (CV) we find both the prefix *a-* and \emptyset -. The distribution between these two allomorphs is more or less even and seems to be lexically determined. This distribution is very similar to Zenatic languages, where the prefix *a-* irregularly drops in front of a CV sequence (Kossmann 1999a: 31).

anu	inuwən	‘well’
ariwal	iriwalən	‘rag’
aṣez	iṣezən	‘necklace’
asen	isenən	‘tooth’
awaw	iwawən	‘bean’
aṃuṣ	iṃuṣən	‘pot cover’
azidi	izida	‘jackal’
yaṭṭuṣ	yaṭṭuṣən	‘cat’
yaṣiṭ	yaṣiṭən	‘cock’
ṭar	ṭariwən, iṭariwən	‘foot’
fud	ifəddən	‘knee’

fus	ifəssən	'hand'
zalaq	izaluqən ⁶	'he-goat'
ʔad	iʔudan	'finger'
ğadir	iğudar	'wall'
ğiğ	iğiğən	'clothes-peg'

Siwa also has two allomorphs of the masculine plural prefix: *i-* and *ø-*. These two allomorphs are phonetically conditioned. In front of a sequence CC, the prefix is *ø-*, in all other environments, the prefix is *i-*, cf.

ačcaw	čcawən	'horn'
agmar	gmarən	'horse'
abdir	bdirən	'pigeon'
ačcer	čcerən	'nail'
agərđi	iğərđan	'mouse'
afəllu	ifəllan	'onion'
aṃur	iṃurən	'pot cover'
ğadir	iğudar	'wall'

There are five nouns that lack the *i-* prefix where we would expect it to be present: Two animal names with stem-initial *ya*, one noun has the plural suffix *-iyən*, which is discussed in more detail in Souag (2013: 65ff) and two nouns have a word-final *i*.

yaʔus	yaʔusən	'cat'
yaziʔ	yaziʔən	'cock'
ṃaḃrəṃ	ṃaḃrumiyən	'circle'
gəṃḃəli	gəṃḃəliyən	'boot'
rūṃi	rūṃiyən	'woman's dress'
šal	šaliwən ⁷	'town, city'

Not all verbs that end in *-iyən* in the plural lack the initial *i-* prefix however, e.g. *aγərṃawi* pl. *iγərṃawiyən* 'Aghurmi man' and *aḥəddad* pl. *iḥəddadiyən* 'blacksmith' (Souag 2013: 66).

In addition, there are five nouns that have a *i-* prefix where we would not expect it. Three of the five nouns have a structure |i-CəC| in the singular (and thus, a stable *i-* prefix across the singular and plural). All nouns have the pattern |i-CCan| in the plural (*axi* pl. *ixyan*, *xyan* 'milk' has the plural pattern |i-CCan|, besides a regular variant).

iγəs	iγsan	'bone'
iləm	ilman ⁸	'human skin'

⁶ Other attested plural formations for this word are *izulaq* (Vycichl 2005: 206) and *zwalıq* (Souag 2013: 77).

⁷ Souag (p.c.) has recorded both the expected form *išaliwən* and the form *šaliwən*, and suggests that this can be attributed to dialectal variation.

⁸ Naumann records this plural with a question mark in his wordlist. This plural perhaps has not been confirmed with a native speaker.

iləs	ilsan	‘tongue’
afir	ifran	‘wing’
axi	ixyan, xyan	‘milk’

The distribution of the feminine prefix *ta-* and *t-* is similar to that of the masculine prefix *a-/ø-*. In front of the sequences Cə and CC the prefix is always *ta-*.

taməzzuyt	timəzzuyen	‘ear’
taqərɖumt	tiqərɖumen	‘scorpion’
takəčci	tikəčcawen	‘worm’
taɣəmɱarɱ	tiɣəmɱar	‘armpit’
taɣma	təɣmiwen	‘thigh, upper leg’
talti	təltawen	‘woman’
tamdamt	timəɖmen	‘toe’
taɸtəwɱ	tiɸtəwen	‘egg, testicle’

Two nouns have the prefix *t-* instead of *ta-* in front of a CC sequence. Both nouns originally had an initial *ti-*. As we have seen *i* is shortened to ə in front of CC.

təmsi	təmsawen	‘fire, hell’ (cf. MA <i>timəssi</i> ‘fire’)
tətt	ttaawen	‘eye, well’ (cf. MA <i>titt</i> ‘eye’)

Similar to the masculine nouns, in front of the sequence CV, we find both *ta-* and *t-*, the allomorph *t-* being more commonly attested e.g.

tasart	tisar	‘mill’
tasutatt	tisutay	‘Saidi date palm’
taza	tizawen	‘plate’
tazuwatt	tizuwaten	‘palm leaf’
taɣazət	tiɣaziyen	‘prostitute (?)’
takuɸɸət	tikuɸɸaten	‘young woman’
tfunast	tfunasen	‘cow’
tσα	tsawen	‘liver’
tsala	tsaliwen	‘lizard’
tyarɱa	tyarɱiwen	‘paper’
tza	tzawen, tizəzza	‘udder’
tyarɱzast	tyarɱzaɱ	‘rabbit’
tyazətt	tyaziten	‘hen’
tbibət	tibiba	‘penis’
tɸarwət	tɸarwa	‘small hoe’
tɣatt	tiɣeda, tiɣada	‘goat’
tnast	tinisa	‘key’
tɸaɸtət	tɸaɸta	‘bunch’

There are four nouns with an initial Cə sequence that have the prefix *t-* instead of *ta-*. All nouns of this type also irregularly have the plural prefix *ti-* instead of *ti-*.

tłəčča	t(l)əččiwen ⁹	‘girl, daughter’
tməlli	tməllawen	‘wild dove’
tsənti	tsəntawen	‘pillow’
tzənnə	tzənnawen	‘gourd (as help for swimming)’

These four nouns all have the structure |t-CəCCV|. Not all nouns of this stem structure have a prefix without a vowel, e.g. *takəčči* pl. *tikəččawen* ‘worm’.

An initial survey of the distribution of |ta-CəCCV| and |t-CəCCV| words suggests a historical distribution. Nouns that originally had a structure |ta-CVCCV|, lost the prefix vowel (as per the rule (t)a-CV > (t)-CV), while nouns that had a structure |ta-CəCCV|, retained the prefix vowel.

*|ta-CVCCV|

**ta-malla* / i > Siwa *tməlli*, cf. Fig. *tmalla* ‘dove’, MA *tamalla* ‘id.’

**ta-sumta* / i > Siwa *tsənti*, cf. Kb. *tasumti* ‘pillow’, Nef. *tsumtá* ‘id.’, Sok. *tsúmti* ‘id.’

*|ta-CəCCV|

**ta-măksa* > Siwa *taṃəksa*, cf. Ghd. *tamăksa* ‘melon’

**ta-gəkkə* / i > Siwa *takəčči*, cf. Sokna *tagəčči* ‘id.’, Figuig *tašəčča* ‘id.’, Mzab *tagəšša* ‘id.’, Ouar. *tagəšša* ‘id.’, but Nef. *t(ə)kičča* ‘id.’

While the distribution helps to explain why the prefix vowel of the singular *ta-* is lost, it does not explain why the prefix vowel of the plural *ti-* is lost with these nouns. So, even though the singulars can be explained, the plural formation still remains unaccounted for.

The feminine plural prefix has two allomorphs, *ti-* and *t-*. In front of the sequences Cə and CV the prefix is usually *ti-*. In front of a sequence CC, the prefix is always *t-*.

There are also a few cases where we find the plural prefix *t-* in front of CV. All those nouns have a *t-* prefix in the singular as well.

tfunast	tfunasen	‘cow’
tša	tsawen	‘liver’
tsala	tsaliwen	‘lizard’
tza	tzawen, tizəzza	‘udder’
tyarṭa	tyarṭiwen	‘paper’
tyarzašt	tyarzaš	‘rabbit’
tyazətt	tyaziṭen	‘hen’

tyarṭa ‘paper’, *tyarzašt* ‘rabbit’ and *tyazətt* ‘hen’ may be understood as belonging to the same group of nouns with initial *ya* that lack a prefix vowel in the

⁹ Souag (p.c.) points out that he has only recorded the plural form *təččiwen* and that Zuwara *tatsiwin* (Mitchell 2009:258) ‘servant girls’ suggests that this is the original form. If this form is indeed the only occurring form, the lack of a prefix *ti-* could be the result of the regular development iCC > əCC.

masculine as well. The absence of the prefix vowel with such nouns is also found in the other Eastern Berber languages.

The Siwa prefix system is very similar to the one that we know in the Moroccan-Algerian dialects. It usually has the prefixes sg. *a-* / *ta-* pl. *i-* / *ti-*, in front of CV, the vowel *a* of the singular is irregularly lost, as is the case in the Zenatic languages.

The Siwa prefix system diverges most strongly from the Moroccan-Algerian system due to the regular loss of the vowel *i* in the plural prefixes in front of two consonants.

Vycichl (2005: 66) points out that in word-final position *i* is regularly shortened in front of CC sequences. This is easily visible in the feminine formations of the adjective, cf.

aṭwil	taṭwəlt	'long' (Souag 2013: 88, 169)
aḥkik	taḥkəkt	'small'
aṣšim	taṣšəmt	'simple-minded'
anṭif	tanṭəft	'clean'
aṛṭib	taṛṭəbt	'soft'

The distribution of the plural prefixes *ø-* / *t-* suggests that any *i* vowel is shortened to *ə* in front of two consonants regardless of the position in the word.¹⁰

The Siwa prefix system has undergone several isolated changes, but can otherwise be equated to the system of the EL that we find in the Moroccan-Algerian dialects, and especially that of the Zenatic dialects.

2.2. *Sokna*

The Sokna masculine singular prefix has two allomorphs, *a-* and *ø-*. *ø-* is found in front of the sequence CV, *a-* is found elsewhere. *ø-* is the regular reflex in front of CV, and therefore cannot be directly equated to the distribution that we find in Siwa and the Zenatic dialects where this shift is irregular.

agórdi	igórdan	'mouse'
amənsí	imənsíwəṇ	'supper'
alóğği	ilóğğan	'mutton'
agmár	igmárən	'horse'
adbír	idbírən	'pigeon'
arṣáw	irṣáwəṇ	'date'
yil	iyállən	'arm'

¹⁰ The resultative formation in Siwa places a clitic =*a* at the end of the verbal complex. If there is a *ə* in a preceding open syllable, it is changed to *i*. Louali & Philipsson (2005: 17) argue that schwa may not stand in an open syllable in accented position in Siwa, and for this reason, it is lengthened to *i*. Synchronically, this is a sensible analysis, but diachronically another explanation is possible.

Like Siwa, Awjila has the same resultative formation, and like Siwa, the preceding *ə* is lengthened to *i*. But, different from Siwa, Awjila always lengthens the preceding syllable's *ə* to *i*. The constraint found in Siwa can be explained diachronically as the result of the sound law *i > ə / _CC*.

fus	ifóssən	'hand,
fud	ifóddən	'knee'

There are two nouns in front of CV with an initial *a-*: *adán* pl. *idánən* 'bowel'¹¹ and *asíd* pl. *isídən* 'ostrich'.

The masculine plural prefix is always *i-*, as can be seen in the table above. There are only a few nouns, all starting with CV, that lack a plural prefix: the table below is an exhaustive list. Notice that, similar to Siwa, the nouns that start with *ya-* lack a prefix both in the singular and plural.

yazít	yazítən	'cock'
yaṭṭús	yuṭṭás	'cat'
muttór	múttərən	'beggar'

The feminine singular prefix has two allomorphs *ta-* and *t-*. The distribution is identical to that of the masculine: *t-* is found in front of the sequence CV, *ta-* is found elsewhere.

taməqqált	tməqqálin	'tail'
tagədfít	tgədfín	'ant'
taməzzúxt	tməzzuxín	'ear'
tagmárt	tigmarín	'mare'
tazdált	təzdalín	'egg'
támda	tmədwin	'garden'
tmart	tmíra	'beard'
tmiṭást	tmiṭás	'scissors'
tsíla	tsilawín	'sandals'

One noun has a prefix *t-* before a sequence CC: *tərgú* pl. *tərgawín* 'ogre'.¹² There are four nouns that have *ta-* in front of CV:

tafunást	tfunasín	'cow'
tanút	tnutin	'well'
tamúrt	tmúra	'earth'
tawúrt	twíra	'door'

As can be seen in the tables above, the feminine plural prefix is always *t-*. There are two exceptions, namely: *tagmárt* pl. *tigmarín* 'mare' and *taḏlúšt* pl. *tiḏlás* 'beetle'.

Unlike the prefix system of Siwa, the prefix system of Sokna can only partly be equated with that of the Moroccan-Algerian Berber languages. The singular prefix allomorphs *a-/ø-* and *ta-/t-* can easily be derived from the Moroccan-Algerian Berber situation through the (nearly) regular shift: *a > ø / _CV*.

¹¹ *adan* in most languages has a *voyelle constante* (e.g. MA *adan* EA *wadan*), which might be the origin of the retained prefix vowel.

¹² There are cognates of this noun in other languages, for example Mzab also unexpectedly lacks a prefix vowel: *tərgu* 'ogress'.

The masculine plural *i-* is equivalent to the Moroccan-Algerian Berber masculine plural prefix *i-*. However, the feminine plural prefix *t-* cannot be equated to the *ti-* prefix. There is no restraint against *ti-* in the language, and it is found in numerous nouns which have an ancient *voyelle constante* *-ti* in the singular and plural.

tíxsi	tixsíwin	‘goat’ (cf. Kb. <i>tixsi</i> ‘sheep’)
tíli	tiliwín	‘sheep’ (cf. Tashl. <i>tíli</i> ‘id.’)
tiṭ	tiṭṭawín	‘source’ (cf. MA <i>tiṭṭ</i> ‘eye’)
tímsi	timsiwín	‘fire’ (cf. MA <i>timəssi</i> ‘id.’)

From internal reconstruction, we can posit that the Pre-Sokna noun prefix paradigm looked as follows: sg. **a-/ta-* pl. **i-/t-*

Two nouns have the Moroccan-Algerian Berber system. Whether this is the result of an inaccuracy in Sarnelli’s transcription, or a case of a real, but marginal, subsystem, is impossible to decide.

2.3. *El-Foqaha*

There is little lexical data for nouns in the El-Foqaha material because of a very high rate of Arabic loanwords in the vocabulary. This makes the data of El-Foqaha more difficult to interpret than for the languages discussed above. Like Sokna and Siwa, the masculine singular prefix has two allomorphs, *θ-* and *a-*, but the distribution is different from either language. The *θ-* allomorph is the regular form, while the prefix *a-* is only found in nouns with the shape |a-CVC|.

məktár	iməktárən	‘donkey’
mǎkli	iməkláwən	‘meal’
sǎqqa	isəqqáwən	‘house’
ǎsri	əsríwən	‘mat’
trár	trárən	‘new (adj.)’
žadír	žadár	‘wall’
qayú	quyáy	‘(black) slave’
zamár	izamárən	‘mutton’
afúd	ifáddən	‘knee’
afús	ifássən	‘hand’
ađáđ	iđúđən	‘finger’

The only two nouns that have a prefix *a-* that do not have a CVC stem are *agmár* pl. *igmárən*, *agmárən* ‘horse’¹³ and *alyúm* pl. *ilýyman* ‘camel’.

¹³ In many languages *agmar* has a *voyelle constante* in the singular and plural (e.g. MA *agmar* EA *wagmar* pl. *agmarn* EA *wagmarn*). This is perhaps the reason why initial *a-* was retained in this position, and also why the noun has a variant with prefix *a-* in the plural.

The masculine plural prefix has two allomorphs *i-* and *ø-*. *i-* is the regular prefix, found in the vast majority of nouns, as can be seen in the table above. *ø-* is found regularly for adjectives, which is shown in the table below.

məqqár	məqqárən	‘large’
ʂəttáf	ʂəttáfən	‘black’
wəssár	wəssárən	‘old’
məzzáy	məzzáyən (also: iməzzáyən)	‘small’ (also: ‘child’)
trár	trárən	‘new’

The noun *məzzáy* ‘child’ is identical in shape to the adjective ‘small’ and is presumably the adjective used substantively, which has developed a specialized meaning. Interestingly, because in this meaning it cannot be interpreted as an adjective the plural formation always has the regular *i-* plural prefix found with other nouns: *iməzzáyən* ‘children’.

Four nouns lack the plural prefix *i-*. Three of these have an apophonic plural, which is perhaps relevant, but difficult to determine with the limited data available.

ósri	əsríwən	‘mat’
žadír	žadár	‘wall’
qayú	quyáy	‘(black) slave’
yazít, yazíd	yuzáðən	‘cock’

The feminine singular prefix is either *ta-* or *t-*, the distribution is somewhat unclear. In front of Cə, the prefix is always *t-*, except for *takáft* pl. *tikfin*¹⁴ ‘caravan’. In front of a CC cluster, the prefix is *ta-* both in the singular and plural five times, and *t-* in the singular and plural three times. In front of CV, the vast majority of the nouns have the prefix *ta-*.

tsəgnít	tsəgníwin	‘needle’
tməktárt	tməktárin	‘donkey’
tməda	tməwdin	‘garden’
tádri, tádrít	tadríwan	‘ear, spike (of a palm)’
tagmárt	tagmárin	‘mare’
taxrít	taxrítin	‘sac’
tammáy	tammáy	‘tamarix’
təfrít	təfráy	‘leaf’
tətrárt	tətrárin	‘new’
təzdáy	təzdáy	‘palm’
tabarút	tburáw	‘road’
tanást	tnisáw	‘key’

Six nouns that start with the sequence CV have a prefix *t-*:

¹⁴ This word has lost an initial *r* (cf. Awjila *tərakáft* ‘caravan’).

tyazít	tyuzát, tyuzáđ	‘hen’
tɣarít	tɣariyín	‘stick’
tɣayít	tɣúyan	‘stone’
tsadált	tsadálin	‘egg’
tšukkát	tšukátin	‘shirt’
tzamar(ə)t	tzamarín	‘sheep’

For one of these nouns the next syllable may not contain a long vowel. *tɣarít* corresponds to Ghd. *tayǎrit* and Kb. *tiyrit*, so the vowel <a> should perhaps be interpreted as a /ə/ that is lowered to [a] by the /ɣ/.¹⁵

tyazít ‘hen’ has a *t-* prefix in front of CV. As we have seen in Sokna, and Siwa nouns with an initial stem consonant *y* behave irregularly in terms of the prefix more often.

The feminine plural almost always has the prefix *t-*, as can be seen in the examples above. There is a single case of a noun which has an initial sequence *tu-* in the plural: *takúli* pl. *tukláw* ‘palm leaf’. Nouns that have a prefix *ta-* in the singular followed by a CC sequence also have the prefix *ta-* in the plural. The three nouns that have a *t-* prefix in front of CC in the singular also have it in the plural.

There is one noun that has a *ta-* prefix in the singular and plural that starts with a CV sequence: *tasúbliy* pl. *tasúbliyən* ‘needle’.

The exact development of the prefix system of El-Foqaha is difficult to determine. It is clear that the masculine system was originally **a-* pl. **i-*, but the **a-* has been lost in almost all cases. It is unclear whether this is due to a regular sound law, or perhaps a widespread development through analogy.

The absence of the prefix **i-* in plural adjectives cannot be considered a regular phonetic development, and should rather be considered a morphological innovation (or perhaps retention).

The distribution of the absence and presence of the *i-* plural prefix is reminiscent of the distribution that we find between Berber “participles” of dynamic and stative verbs, in for example Ghadames (Kossmann 2013: 94-95). Ghadames has a m.sg. participle form *y-X-ǎn*, while the stative verbs have *X-ǎn*. Ghadames does not have adjectives, but instead uses stative verbs to express qualities. It is not difficult to imagine a connection between the stative verb formations and adjective forms. It is however difficult to understand how the masculine singular participle form would have influenced the masculine plural adjective forms.

¹⁵ Also *tsadált* pl. *tsadálin* ‘egg’ may have a short vowel *ǎ* instead, cf. Tuareg *tasādalt*, Sokna *tazdált*, but there is no clear reason why this vowel, which should normally be reflected as *ə* in El-Foqaha, would be represented with the sign <a> (Paradis’s spelling for this word is <tsadált>). Ghadames also has a long vowel *a*: *tasadalt* ‘egg’.

The feminine prefix system behaves markedly different from the masculine prefixes. While in front of the sequence Cə the feminine prefix is regularly *t-*, it does not seem possible to derive any regular system for the distribution of *ta-/t-* in other environments.

There is no evidence at all for a feminine plural prefix *ti-* in El-Foqaha, and there is no evidence that word-initial **ti-* shifted to *t-*, as we find several nouns that have *voyelle constante ti-* in the singular and plural that retain it in El-Foqaha.

tíxsi	tixsíwin	‘goat’ (cf. Kb. <i>tixsi</i> ‘sheep’)
tiškánt	tiškán, tiškánin	‘foot’ (cf. Siwa <i>təška</i> ‘legs’)
tiṭ	tiṭṭáwin,	ṭṭáwin ‘eye’ (cf. MA <i>tiṭṭ</i> ‘id.’)
tiršít	tiršin,	tiršen ‘louse’ (cf. Mzab <i>tilšin</i> ‘lice’)

Despite the often unclear distribution of the prefixes, it is clear that the system points to a Pre-Foqaha system sg. **a-/ta-* pl. **i-/t-* rather than the Moroccan-Algerian Berber system.

2.4. Nefusa

The basic masculine singular prefix has two allomorphs, *a-* and *ø-*. In front of a CV sequence, the prefix is always *ø-*, save for four nouns. In front of a CC sequence, the prefix is always *a-* except for three nouns. In front of stems with a structure |CəCCVC|, the prefix is always *a-*, while other sequences that start with Cə always have the prefix *ø-*.

akrúm	ikórmən, ikərmán	‘back’
alṡám, alṡəm	iláṡmən, iləṡmán	‘camel’
afríw	ifríwən	‘wing’
funás	ifunásən	‘bull’
sin	isínən	‘tooth’
ṭar	iṭárən	‘foot’
mənsí	imənsíwən	‘dinner’
gərdí	igərdíyən	‘mouse’
məžžər	iməžžərən	‘sickle’
aməqrán	iməqránən, iməqrárən	‘big’
aməzwár	iməzwárən	‘first’
afəttál	ifəttálən	‘tail’

The three nouns whose stems start with CC that do not have a prefix *a-*, all start with a dental followed by /r/, none of the nouns with a prefix *a-* have a |Tr| sequence. This complementary distribution may point to an original sound law **a > ø- / _Tr*. But this conditioning is unusual, and the evidence is sparse.

drim	idərmáwən	‘money’
tri	itrán	‘star’
drar	idurár	‘mountain’

The four nouns that start with CV that have a prefix *a-* are displayed in the table below. There appear to be no conditioning factors.¹⁶

adú	adán	'intestines'
azít	izítən	'donkey'
aburšəni	iburšəniyən	'kid'
asasáy	isasáyən	'beggar'

The masculine plural prefix is *i-* as can be seen in the tables above. Six nouns have *a-* in the singular and plural. Five of these are followed by a CC sequence.

assáy	assáyən	'cistern'
ammúd	ammúdən	'column'
aššáw	aššáwən	'horn'
anzár, anzár	anzárən	'rain'
aššár	aššárən	'nail'
adú	adán	'intestines'

The feminine singular prefix has two allomorphs *ta-* and *t-*, with a similar distribution to the masculine. In front of a sequence CC, the prefix is almost always *ta-*, the one unambiguous exception is *təflillást* pl. *təflillás* 'swallow'.¹⁷

While the only *a-*less prefixes in front of CC in the masculine started with a |Tr| sequence, this is not the case in the feminine. Words that start with a |Tr| sequence simply have the prefix *ta-*, e.g. *tadrá* pl. *tudráw* 'spike of a palm'. Two nouns have free variation between *ta-* and *t-*: *taffá*, *təffá* pl. *tuffáw* 'branch of a palm', *təzdít*, *təzdít* pl. *təzdáy*, *tizdáy* 'palm tree'.

Four nouns have the prefix *t-* in front of CC: *təbgá* pl. *təbgáw* 'flute', *təkbiwt* pl. *təkbiwín* 'pumpkin', *təswit* pl. *təswiyín* 'small plate of vegetable fiber', *təzdít* pl. *təzdíyín* 'small spindle'.

In front of Cə the distribution is the same as with the masculine prefix: *ta-* is found in front of CəCCVC stems, *t-* is found everywhere else. In front of CV the prefix is usually *t-*.

talýamt	tləymin	'she-camel'
taššáwt	taššawín	'small horns'
tamzá	tamziwín	'ogress'
tɣarít	tɣariyín	'stick'
tɣardəmt	tɣurdám	'scorpion'
tfunást	tfunasín	'cow'
tnəllí	tnəlliwín	'thread'
twəssərt	twəssarín	'old'

¹⁶ The *voyelle constante* of *adan* 'intestines' in other Berber languages (see also note 12) perhaps played a role for *adu* pl. *adan*, the other nouns that retain initial *a-* do not seem to have an original *voyelle constante*.

¹⁷ This word perhaps did not start with CC, cf. Siwa *tafellilast* 'swift, swallow' (Souag 2013: 65).

tməǧǧít	tməǧǧíw	‘ear’
tabəlbúlt	tbəlbulín	‘polyp’
takərkást	təkərkasín	‘liar (f.)’
takərrúst	təkərrás	‘wagon’

Two nouns in front of Cə may have a prefix *ta-*: *takəmmít* pl. *təkəmmiyín* ‘type of dagger’ and *tasənkít* pl. *tsinkiyín* ‘large pan’, but possibly they can be analysed as /takəmmitt, tasənkitt/ or /takəmmiyt,¹⁸ tasənkíyt/ and therefore be regular.

In front of CV there are eight nouns that have the prefix *ta-* instead of the expected *t-*. There appear to be no conditioning factors:

taziṭ	tziṭín	‘she-donkey’
tamaziṭt	tmaziṭín	‘Berber woman’
taburšənit	tburšənyín	‘kid (goat, f.)’
tasírt	tsar	‘mill’
tagužílt	tgužilín	‘orphan (f.)’
tafakrúnt	tfakrunín	‘turtle’
tamúrt, tamúrṭ	tamurín	‘earth’
tanút	tanutín, tiná, tnəǧǧ ^w ín	‘well’

The feminine plural prefix is almost universally *t-* which can be seen in the tables above. There are ten nouns that have the prefix *ta-* both in the singular and plural.

tassáyt	tassaṭín	‘cistern’
tammúdet	tammudín	‘column’
taššáwt	taššawín	‘horn’
taṭmá	taṭmiwín	‘thigh’
tamzá	tamziwín	‘ogress’
tallúmt	tallumín	‘sieve’
tamúrt, tamúrṭ	tamurín	‘earth’
tanút	tanutín, tiná, tnəǧǧ ^w ín	‘well’
tamšáṭṭ	tamšáṭ	‘foot sole’
taṭwíst	taṭwisín	‘jar’

There are two nouns with a prefix *ta-* in the singular that have a prefix *tu-* in the plural: *tadrá* pl. *tudráw* ‘spike of a palm’, *taffá*, *təffá* pl. *tuffáw* ‘branch of a palm’.

There are three nouns that have a plural prefix *ti-*, two of which are Arabic loanwords: *taxlált* pl. *tixlalín* ‘pin’ (< Ar. *xilāl* ‘peg, pin’), *tamkúlt* pl. *timkál* ‘kohl container’ (< Ar. *mukḥula* ‘id.’) and the variant plural of *tanút* pl. *tiná* ‘well’ (also: *tanutín*, *tnəǧǧ^wín*).

¹⁸ *takəmmít* is a loan from Libyan Arabic *kəmmiya* ‘dagger’ (e.g. Panetta 1943: 79), making this analysis plausible.

The distribution of the singular prefixes *a-* and *ta-* is phonetically conditioned and can be derived from a Pre-Nefusa form **a-*, **ta-*. The presence of the prefix vowel in front of |CəCCVC| sequences, while they are lost in front of all other sequences that start with |Cə| is very regular, but phonetically difficult to understand.

The masculine plural can easily be reconstructed as **i-*, but there is no convincing evidence for a feminine plural prefix **ti-*. As was the case in Foqaha and Sokna, the absence of *ti-* in the plural cannot be attributed to a regular sound law, because there are many examples of nouns with a *voyelle constante* *ti-* in the singular and plural:

tinzórt	tinzár	‘nose’ (cf. MA <i>tinzərt</i> ‘id.’)
tissəgnít	tissəgnáy	‘needle’ (cf. Mzab <i>tisəgnəft</i> ‘id.’)
tiṭ	tiṭṭáwin, taṭṭáwin	‘eye’ (cf. MA <i>tiṭṭ</i> ‘id.’)
tilšít	tilšín	‘louse’ (cf. Mzab <i>tilšin</i> ‘lice’)

Therefore the feminine plural prefix must be considered to be **t-*. For Pre-Nefusi we must reconstruct a prefix system sg. **a-/ta-* pl. **i-/t-*. The nouns that have *a-* and *ta-* in both the singular and plural appear to be lexically determined.

2.5. Ghadames

The vast majority of the nouns in Ghadames have the common prefix system with masculine singular *a-* and feminine singular *ta-*. But different from all other Berber languages Ghadames has also innovated the prefix system and formed a group of nouns with a prefix *o-/to-* in the singular. Most of these nouns have a prefix *ø-/ti-* in the plural (e.g. *ófəd* pl. *fəddän* ‘knee’; *tomarše* pl. *timəršaw* ‘cricket’). A smaller group retains the *o* vowel in the plural (e.g. *óyār* pl. *oyāráwän* ‘moon’; *tósa* pl. *tosawén* ‘liver’). The reason for this distribution is unclear. The origin of this *o* vowel can, at least in part, be attributed to the loss of a stem-initial glottal stop (see Kossmann 2001: 84ff).

Unlike the languages discussed so far, Ghadames does not have variation in the shape of the singular prefixes. The vast majority of the masculine nouns have a singular prefix *a-* while the feminine nouns have a singular prefix *ta-*.

The masculine plural prefix is consistently *ø-*. When a preposition directly precedes the noun, the *i-* returns, e.g. *lammán – dəffər ilammán* ‘camels – behind the camels’ (Kossmann 2013: 21)

Lanfry (1971-1972) has suggested that this **i-* is an ancient reflex the Etat d’Annexion. But as Kossmann (1999b) convincingly argues, it should be considered a loss of *i* in word-initial position, which resurfaces when a preposition precedes it, in which case it is not to be regarded as word-initial.

aməṭṭa	məṭṭawän	‘tear’
ašällid	šəldan, šuldán	‘king, prince’

abridged	bārdān	‘road’
amžir	məžran	‘sickle’
ađar	đarān	‘foot’
afunas	funasān	‘bull’

Masculine nouns that start with a CC sequence in the stem always have a prefix *a-* in the plural instead of the regular \emptyset - prefix, e.g.:

ađmar	ađmārān	‘horse’
asýér	asýérān	‘wood’
anβār	anβārān	‘eyelash’

A few masculine nouns have a \emptyset - prefix, both in the singular and the plural. Kossmann (1999b: 134) shows that at least part of these nouns developed because of the loss of initial **i-* in both the singular and the plural.

ýäss	ýāsān	‘bone’
ýazār	ýāzran	‘hole’
daž	dažiwān	‘house’
đanaw	đanawān	‘slave’

Only two nouns have a prefix *i-* in the singular and plural, *izi* pl. *izan* ‘fly’ and *iri* pl. *iran* ‘star’.¹⁹ There is no feminine equivalent of this prefix. One noun has a stable prefix *u-* in the singular and plural, *udad* pl. *udádān* ‘mouflon’.

The regular feminine formation is *ta-* pl. *t-*. This is the vast majority of the nouns, e.g.

taβārgot	tβārgo	‘dream’
takətfə	tkətfén	‘ant’
taýməst	təýmás	‘molar tooth’
taýret	təýratén	‘cry of joy’
tafunast	tfúnas	‘cow’
takaṭṭust	tkuṭṭás	‘cat’

Some feminine have *ta-* pl. *ta-*. The majority of the noun in this group are followed by a sequence CC, but unlike the masculine, not all stem-initial CC nouns belong to the *ta-* pl. *ta-* class, as can be seen from the examples above. Moreover, there are several nouns that have the plural prefix *ta-* in front of a sequence CV.

takna	takniwén	‘co-wife’
taržalt	taržalén	‘feather’
tali	taliwén	‘room’
tazart	tazarén	‘dried fig’

¹⁹ Both nouns have a structure |iCi|, which Kossmann (1999a: 136-137) argues is one of the few environments where initial **i-* is retained.

A very small amount of nouns has sg. *ta-* pl. *ti-*. All of these nouns, except perhaps *tahăt* pl. *tihatén* ‘chameleon’ are apophonic plurals:²⁰

tahăt	tihatén	‘chameleon’
tawwawt	tiwwaw (tawwawén)	‘spathe (of dates)’
tamağràft	timəğraf	‘wooden stick that is painted red’
tadilt	tidal	‘travelling bag’
taɣəndurt	tiɣəndar	‘beautiful (girl)’
tazənzăxt	tizənzay	‘an element that puts tension on a loom’
tazəkкот	tizəkát	‘big coucouc plate’

There is a limited group of nouns that have *t-* in the singular and plural. These seem to go back to nouns that originally had a prefix **ti-* in the singular and plural.

təfra	təfrawén	‘leaf’ (cf. Mzab <i>tifrit</i> ‘id.’)
tənzart	tənzár	‘nose’ (cf. MA <i>tinzərt</i> ‘id.’)
tədra	tədrawén	‘spine at the base of a palm’ (cf. Mzab <i>tadra</i> ‘id.’)

The basic system of Ghadames is *a-* pl. *ø-*, f. *ta-* pl. *t-*. There is direct evidence that *ø-* goes back to an initial *i-*, which is regularly lost in word-initial position. The origin of the feminine plural *t-* is not as easily derived from *ti-*, because the *i*-vowel is not in word-initial position. The prefix *ti-* shows up in some plurals.

Different from the other languages that only have *tə-* for the feminine plural, for Ghadames, these forms may in fact go back to an original *ti-* as of the Moroccan-Algerian system. Kossmann (1999b: 137) suggests that the prefix *tə-* is an irregular shortening of *ti-*. This shortening is not only observed in the feminine plural prefix, but is also found for nouns that have an initial *ti-* in the singular and plural, cf.:

tənzart	tənzár	‘nose’ (cf. MA <i>tinzərt</i> ‘id.’)
təsβot	təsβo	‘leaflets of a palm’ (cf. Mzab/Ouar. <i>tizit</i> ‘id.’)
təfra	təfrawén	‘leaf’ (cf. Mzab <i>tifrit</i> ‘id.’)

While the exact development of the feminine plural prefix is difficult to determine, its form *tə-* does not necessarily derive from an older prefix **tə-*, and may simply be considered a shortening of the typical form *ti-*.

The Ghadames prefix system should therefore probably be derived from a system that resembled the Moroccan-Algerian Berber system *a-/i-* pl. *ta-/ti-*.

²⁰ Perhaps *taqəzqəst* pl. *təqəzqazén* (noté aussi: *tiqəzqazén*) ‘large metal castanets’ belongs here too, which would be a case of a non-apophonic plural with the prefix *ti-*, but Lanfry seems to be uncertain of the plural prefix *ti-* in this word.

2. 6. *Awjila*

The Awjila noun prefixes exhibit many of the same allomorphs also found in the other Eastern Berber languages. However, none of this variation seems to be attributable to its phonetic environment.

Because in Awjila the ə is fully phonemic, and can occur in open syllables (van Putten 2014: 37ff.), the difference between the feminine prefix *tə-* and the prefix *t-* is phonemic (it is neutralized in front of two consonants).

The majority of nouns have a masculine singular prefix *a-* and a plural prefix *ø-*. Some nouns have a prefix *ø-* or *i-* in the singular. There seem to be no conditioning factors for this distribution.

aləʔəm	ləʔmín	‘camel’
agəllíd	gəldən	‘head of a tribe’
agmár	gmárən	‘horse’
adbír	dbírən	‘pigeon’
aziʔ	ziʔán	‘donkey’
aʔár	ʔarín	‘foot’
gzín	gzínən	‘dog’
glím	glímən	‘skin’
magi	magiwín	‘eyelid’
ísəm	smíwən	‘ear’
išk	škíwən	‘horn’
iškər	škírən	‘nail’

The majority of the feminine nouns have a prefix *tə-* in the singular. The prefix *t-* is almost equally common in the singular. Only a few nouns have the prefix *ta-*. There is no apparent conditioning to explain the distribution of these allomorphs. The plural prefix is usually *t-* (with an inserted ə before CC), and sometimes *tə-*.

təmandúrt	tmandír	‘rock pigeon’
təsili	tsiliwín	‘sandal’
təfəlušt	tfəlšín	‘large spoon for cooking’
tərakóft	tərakfín	‘caravan’
təgzint	təgzintín, təgzinín	‘bitch’
təbʒalímt	təbʒalimín	‘onion’
tqártay	tqartiwín	‘paper’
tfunást	tfunastín	‘cow’
tkəttíft	tkəttfín	‘ant’
twəllíkt	twəllkín	‘louse’
tamírt	tmíra	‘beard’
takəmmúšt	tkəmmíš	‘bundle of sticks’

The absence of the initial *i-* and *ti-* in the plural of Awjila cannot be due to a phonetic development as it is in Ghadames. There is no constraint against ini-

tial (t)i-. Awjila has nouns that have a *voyelle constante* *i-/ti-* in the singular and plural, e.g.

íləs	ílsən, ílsánen	‘tongue’ (cf. MA <i>iləs</i> ‘id.’)
íštən	íštínən	‘awl’ (cf. Kb. <i>tistənt</i> ‘id.’)
tíxsi	tixsiwín	‘sheep’ (cf. Kb. <i>tixsi</i> ‘id.’)
tit	tiwín	‘eye’ (cf. MA <i>titt</i> ‘id.’)

The Awjila prefix system seems to point to a system with a prefix *a-/ta-* in the singular and a prefix *ø-/t-* in the plural. The vast majority of the cases of feminine singular *ta-* seem to have shifted to *tə-*. The few cases where the singular does not have a vocalic element in the prefix, are not yet well-understood. It is clear however, that in Awjila the absence of *i-* and *ti-* in the plural cannot be the result of a regular loss of *i-* at the beginning of a word.

3. HISTORICAL INTERPRETATION OF THE EASTERN BERBER PREFIX SYSTEM

Above, we have discussed the prefix systems of the different Eastern Berber languages. In this examination we have shown that the Nefusa, El-Foqaha and Sokna systems point to a system summarized in the following table:

	sg.	pl.
m.	a-	i-
f.	ta-	t-

Nefusa, El-Foqaha and Sokna differ then on the point of the feminine plural prefix with the Moroccan-Algerian Berber prefix system (and the Siwa system).

The Siwa system corresponds to the regular Moroccan-Algerian Berber system m.sg. *a-* f.sg. *ta-* m.pl. *i-* f.pl. *ti-*.

As for Ghadames, it is not completely clear to which of the systems it belongs. The regular feminine plural prefix is in fact *tə-*, and there is no regular sound rule that causes *ti-* to be shortened to *tə-*, but words like *tənʒart* ‘nose’ ~ MA *tinʒərt* ‘id.’, suggest that non-systematic shortening of *ti-* has taken place in the language in various contexts.

The original Awjila system on the surface looks the same as the Ghadames system: m.sg. *a-* f.sg. *ta-* m.pl. *ø-* f.pl. *t-*, but there is no evidence, and quite strong counterevidence, that the plural system is the result of a shortening of the prefixes *i-* and *ti-*.

Nefusi, El-Foqaha, Sokna point to an original feminine plural prefix **t(ə)-* rather than *ti-*. This difference needs to be accounted for.

Not much has been written on this different system. In his excellent introductory articles to several Eastern Berber languages in the *Encyclopédie*

Berbère, Karl-G. Prasse (1989, 1998a;b) suggests that the plural prefix of El-Foqaha and Awjila (and he compares it as being similar to Nefusa), and all the prefixes of Ghadames correspond to the EA of other dialects.

For Ghadames, Kossmann (1999b: 136-138) convincingly refutes that the Ghadames are originally EA forms. As Kossmann points out, the vast majority of the singular prefixes have a plain vowel *a-/ta-* and not a short vowel *ǎ-/tǎ-*. The few instances where we do find shortened prefix vowels, we are probably not dealing with an original EA, but with an internal tendency of Ghadames to shorten plain vowels at the beginning of a word. Many words with these short prefixes are also found with the regular plain vowel prefixes.

The EA therefore cannot be the origin of the prefixes in Ghadames. One might wonder whether the EA can be seen as the origin of the prefix system for the other Eastern Berber languages. Like in Ghadames, the singular prefixes of Sokna, Foqaha and Nefusa have a full vowel *a-* and *ta-* when they are present, and they are reduced in predictable phonetic environments. Therefore, the singular must derive from EL and not from the EA.

The plural forms in Sokna, Foqaha and Nefusa could in principle be derived from the regular formation of the EA. In the Moroccan-Algerian Berber dialects we can reconstruct the prefixes in the EA as m. **yǎ-* and f. **tǎ-*. In part of the phonetic environments, these original EA prefixes would have yielded *i-* and *t-* respectively. But, as can be seen in the verbal system, where a prefix *yǎ-* is the marker of the 3sg.m., **yǎ-* does not yield *i-* in all contexts, e.g. Nef. *yǎ-fkú* 'he gave'; *i-fǎkk* 'he is giving'; *i-fár* 'he flew'. For the *i-* prefix to be the result of the EA, it would require an analogical spreading of the allomorph *i-* to the contexts where the *yǎ-* is the regular reflex.

Even when one accepts this analogical spreading, one still needs to take into account the semantic problems. It is difficult to imagine a historical scenario that caused the singular to generalize the EL and the plural to generalize the EA. Therefore, the masculine plural prefix *i-* should probably be connected with the regular Moroccan-Algerian Berber EL prefix *i-*, while the feminine plural prefix *tǎ-* requires further examination.

The feminine plural prefix *t(ǎ)-* cannot be a phonetic innovation in the Eastern Berber prefix system as there is no phonetic constraint against initial *ti-* as is evidenced by nouns that have a constant vowel *i-* in the singular and plural, e.g. Nefusa *tinzárt* pl. *tinzárt* 'nose', *tiddárt* pl. *tidrin* 'ear'; Foqaha *tixsi* pl. *tixsiwin* 'goat', *tiškánt* pl. *tiškán, tiškánin* 'foot'; Sokna *tixsi* pl. *tixsiwin* 'goat'; *tiškánt* pl. *tiškán* 'foot'.

The prefix *tǎ-* cannot be considered an innovation through analogy either. There is a masculine plural *i-*, which gives no reason for *ti-* to be shortened to *t(ǎ)-*, as it would create an asymmetrical prefix system from an originally symmetrical one.

If the *t(ǎ)-* cannot be explained as an innovation, we should consider whether it is a retention in the Eastern Berber languages instead. If this is

true, the original system in Proto-Berber may have looked something along the lines of the table presented below:

	État Libre		État d'Annexion	
	m.	f.	m.	f.
sg.	*a-	*ta-	*wǎ-	*tǎ-
pl.	*i-	*t(ə)-	*yǎ-	*t(ə)-

From this system, the prefix system in Moroccan-Algerian Berber can be understood through analogy. When the *t* in the singular prefix *a-* / *ta-* is interpreted as the feminine marker, while *a* as the singular marker, it stands to reason that the plural form *i-* / *tǎ-* would be leveled to *i-* / *ti-* to create symmetry, where the *i* would be considered the marker of the plural.

The Awjila system is an anomaly in the prefix systems discussed in this article, as it lacks a vocalic element in the plural of both the masculine and the feminine. The Awjila model may be explained by analogy from the Eastern Berber system as well: Where Moroccan-Algerian Berber languages reinterpreted the vowel *i* as a marker of the plural, and spread it to the feminine plural prefix, Awjila had the reverse development and generalized the absence of a plural vowel to the masculine (a similar development was already suggested by Prasse 1989).

The most economical solution to explain the data found in the prefix systems of the Eastern Berber languages, is assuming that their asymmetrical situation is original, and that Moroccan-Algerian Berber and Awjila innovated (in different ways) to make the system symmetrical.

One remarks that a reconstruction with a feminine plural prefix *tǎ-* would perhaps also ask for a different explanation of the origin of the prefixes themselves. Prasse's *pronomes d'appui* which are likely the origin of the prefixes, are not generally considered to have a form *tǎ*. One should note however though that the system as presented by Galand (1964: 223) is based solely on Ahaggar Tuareg. Even within Tuareg we find variation on the shape of these pronominal elements. For example in Ayer Tuareg, the definite masculine and plural forms are *wən* and *čən* (< *tǎn?) rather than *wi* and *ti* (Kossmann 2011: 84). A more in-depth study into these pronominal elements across all of Berber would have to be undertaken to get a clearer picture of the historical development of these pronominal elements, and by extension, the noun prefixes.

One may imagine another interpretation of the data presented above. The main argument used so far to argue that the f.pl. *tǎ-* prefix cannot be considered an innovation is because feminine nouns with a *voyelle constante i* retain *ti-* in all these languages. However, following Penchoen (1973: 13) in interpreting the *voyelle constante* as part of the root, we might be able to imagine a situation where these sequences developed differently. We may imagine that the shortening of the f.pl. prefix **ti-* of the Moroccan-Algerian system to **tǎ-* in

Eastern Berber happened before the univerbation of the prefixes and the nouns, cf. the following situation taking *tixsi* ‘sheep’ (with a *voyelle constante i*) and *tamaziyt* ‘Berber woman’ as examples:

Phase 1: Prefixes are separate pronominal elements.²¹

* <i>(t)a ixsi</i>	pl. * <i>ti ixsiwen</i>
* <i>(t)a maziyt</i>	pl. * <i>ti maziyen</i>

Phase 2: Shortening of **ti* to **tə*.

* <i>ta ixsi</i>	pl. * <i>tə ixsiwen</i>
* <i>ta maziyt</i>	pl. * <i>tə maziyen</i>

Phase 3: Univerbation of the prefix, elision of the prefix vowel to avoid hiatus in **t(a)-ixsi*.

* <i>t-ixsi</i>	pl. * <i>t-ixsiwen</i>
* <i>ta-maziyt</i>	pl. * <i>tə-maziyen</i>

Phase 2 would then be an innovation specific to the Eastern dialects, while Phase 1 and Phase 3 are shared across all Berber languages.

While initially this solution may seem attractive, as it explains why the nouns with a *voyelle constante* behaves differently from other nouns, it moves the problem rather than solves it. The development **ti* > *tə* would have applied exclusively to monosyllabic words that start with a *t* and end with an *i*, that is, only this word. A sound law that only applies to a single word, is *ad hoc* and has no explanatory power. Moreover, the reason why we assume the f.pl. prefix is *ti-* is because we hope to connect it with the f.pl. *pronom d'appui ti*. Awjila has retained the *pronom d'appui* and the feminine plural form is *ti*. The only way one could account for the fact that Awjila has two different reflexes of apparently the same morpheme, is by assuming that Phase 2 took place *after* Phase 3, in which case we once again cannot explain the difference between the nouns with a *voyelle constante i* and those without.

4. CONCLUSION

In this article I have shown that the variation of the Eastern Berber prefixes in the singular can largely be explained through phonetic conditioning. However, the absence of a vowel *i* in the feminine plural prefix *t(ə)-* cannot be understood as a regular sound development.

I have argued that it is easier to explain the Eastern Berber system as original and the Moroccan-Algerian Berber system the result of an analogical regularization. This does not mean, however, that we can be certain that the Eastern Berber system is the Proto-Berber system. But, future discussions will have to take into account the Eastern Berber system, and when it is not

²¹ At this stage of the development of the prefix, Prasse (1974: 14) reconstructs a gender neutral singular prefix **a* for the EL while Brugnatelli (1997) would reconstruct **ta*. This is irrelevant for the present discussion on the development of the f.pl. which is **ti* for both authors.

taken as the original system, it will have to receive a satisfying internal explanation before these forms are discarded.

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COMPOSTO IN CARATTERE DANTE MONOTYPE DALLA
FABRIZIO SERRA EDITORE, PISA · ROMA.
STAMPATO E RILEGATO NELLA
TIPOGRAFIA DI AGNANO, AGNANO PISANO (PISA).

*

*Finito di stampare nel mese di
Marzo 2016*

(CZ 2 · FG 21)



*

Periodico iscritto alla Cancelleria del Tribunale di Roma
in data 7 marzo 2006 n. 121/06
RAFFAELE TORELLA, *Direttore responsabile*
Periodico già registrato in data
30 aprile 1958 n. 6299