

Chapter 18

Berber

Lameen Souag

CNRS, LACITO

Arabic has influenced Berber at all levels – not just lexically, but phonologically, morphologically, and syntactically – to an extent varying from region to region. Arabic influence is especially prominent in smaller northern and eastern varieties, but is substantial even in the largest varieties; only in Tuareg has Arabic influence remained relatively limited. This situation is the result of a long history of large-scale asymmetrical bilingualism often accompanied by language shift.

1 Current state and contexts of use

1.1 Introduction

Berber, or Tamazight, is the indigenous language family of northwestern Africa, distributed discontinuously across an area ranging from western Egypt to the Atlantic, and from the Mediterranean to the Sahel. Its range has been expanding in the Sahel within recent times, as Tuareg speakers move southwards, but in the rest of this area, Berber has been present since before the classical period (Múrcia Sánchez 2010). Its current discontinuous distribution is largely the result of language shift to Arabic over the past millennium.

At present, the largest concentrations of Berber speakers are found in the highlands of Morocco (Tashelhiyt, Tamazight, Tarifiyt) and northeastern Algeria (Kabyle, Chaoui). Tuareg, in the central Sahara and Sahel, is more diffusely spread over a large but relatively sparsely populated zone. Across the rest of this vast area, Berber varieties constitute small islands – in several cases, single towns – in a sea of Arabic.

This simplistic map, however, necessarily leaves out the effects of mobility – not limited to the traditional practice of nomadism in the Sahara and transhumance in parts of the Atlas mountains. The rapid urbanisation of North Africa



over the past century has brought large numbers of Berber speakers into traditionally Arabic-speaking towns, occasionally even changing the town's dominant language. The conquests of the early colonial period created small Berber-speaking refugee communities in the Levant and Chad, while more recent emigration has led to the emergence of urban Berber communities in western Europe and even Quebec.

1.2 Sociolinguistic situation of Berber

In North Africa proper, the key context for the maintenance of Berber is the village. Informal norms requiring the use of Berber with one's relatives and fellow villagers, or within the village council, encourage its maintenance not only there but in cities as well, depending on the strength of emigrants' (often multigenerational) ties to their hometowns. In some areas, such as Igli in Algeria (Mouili 2013), the introduction of mass education in Arabic has disrupted these norms, encouraging parents to speak to their children in Arabic to improve their educational chances; in others, such as Siwa in Egypt (Serreli 2017), it has had far less impact. Beyond the village, in wider rural contexts such as markets, communication is either in Berber or in Arabic, depending on the region; where it is in Arabic, it creates a strong incentive for bilingualism independent of the state's influence. For centuries, Berber-speaking villages in largely Arabic-speaking areas have sporadically been shifting to Arabic, as in the Blida region of Algeria (El Arifi 2014); the opposite is also more rarely attested, as near Tizi-Ouzou in Algeria (Gautier 1913: 258).

In urban contexts, on the other hand, norms enforcing Berber have no public presence – quite the contrary. There one addresses a stranger in Arabic, or sometimes French, but rarely in Berber, except perhaps in a few Berber-majority cities such as Tizi-Ouzou (Tigziri 2008). Even within the family, Arabic takes on increasing importance; in a study of Kabyle Berbers living in Oran (Algeria), Ait Habbouche (2013: 79) found that 54% said they mostly spoke Arabic to their siblings, and 10% even with their grandparents. In the Sahel, Arabic is out of the picture, but there too family language choice is affected; 13% of the Berber speakers interviewed by Jolivet (2008: 146) in Niamey (Niger) reported speaking no Tamasheq at all with their families, using Hausa or, less frequently, Zarma instead.

Bilingualism is widespread but strongly asymmetrical. Almost all Berber speakers learn dialectal Arabic (as well as Standard Arabic, taught at school), whereas Arabic speakers almost never learn Berber. There are exceptions: in some contexts, Arabic-speaking women who marry Berber-speaking men need to learn

Berber to speak with their in-laws (the author has witnessed several Kabyle examples), while Arabic speakers who settle in a strongly Berber-speaking town – and their children – sometimes end up learning Berber, as in Siwa (Egypt). Nevertheless, most Arabic speakers place little value on the language, and some openly denigrate it; in Bechar (Algeria), anyone expressing interest in Berber can expect frequently to hear the contemptuous saying *aš-šalḥa ma-hu klam wə-d-dhən ma hu l-idam* ‘Shilha (Berber) is no more speech than vegetable oil is animal fat’. To further complicate the situation, French remains an essential career skill (except in Libya and Egypt), since it is still the working language of many ministries and companies; in some middle-class families, it is the main home language spoken with children.

On paper, Berber (Tamazight) is now an official language of Morocco (since 2011) and Algeria (since 2016), while Tuareg (Tamasheq/Tamajeq) is a recognised national language of Mali and Niger. In practice, “official language” remains a misleading term. Official documents are rarely, if ever, provided in Berber, and there is no generalised right to communicate with the government in Berber. However, Berber is taught as a school subject in selected Algerian, Moroccan, and (since 2012 or so) Libyan schools, while some Malian and Nigerien ones even use it as a medium of education. It is also used in broadcast media, including some TV and radio channels. Both Morocco and Algeria have established language planning bodies to promote neologisms and encourage publishing, with a view towards standardisation. The latter poses difficult problems, given that each country includes major varieties which are not inherently mutually intelligible.

Berber varieties have been written since before the second century BC (Pichler 2007) – although the language of the earliest inscriptions is substantially different from modern Berber and decipherable only to a limited extent – and southern Morocco has left a substantial corpus of pre-colonial manuscripts (van den Boogert 1997); many other examples could be cited from long before people such as Mammeri (1976) attempted to make Berber a printed language. Nevertheless, writing seems to have had very little impact on the development of Berber as yet. Awareness of the existence of a Berber writing system – Tifinagh – is widespread, and often a matter of pride. However, most Berber speakers have never studied Berber, and do not habitually read or write in it in any script – with the increasingly important exception of social media and text messages, typically in Latin or Arabic script depending on the region. Efforts to create a standard literary Berber language have not so far been successful enough to exert a unifying influence on its dispersed varieties. In the North African context, this is often understood as implying that Berber is not a language at all – “language” (Arabic *luya*) being popularly understood in the region as “standardised written language”.

1.3 Demographic situation of Berber

No reliable recent estimate of the number of Berber speakers exists; relevant data is both scarce and hotly contested. The estimates brought together by Kossmann (2011: 1; 2013: 29–36) suggest a range of 30–40% for Morocco, 20–30% for Algeria, 8% for Niger, 7% for Mali, about 5% for Libya, and less than 1% for Tunisia, Egypt, and Mauritania. Selecting the midpoint of each range, and substituting in the mid-2017 populations of each of these countries (CIA 2017) would yield a total speaker population of about 25 million, 22 million of them divided almost evenly between Morocco and Algeria.

2 Contact languages and historical development

2.1 Across North Africa

Berber contact with Arabic began in the seventh century with the Islamic conquests. For several centuries, language shift seems to have been largely confined to major cities and their immediate surroundings, probably affecting Latin speakers more than Berber speakers. The invasion of the Banū Hilāl and Banū Sulaym in the mid-eleventh century is generally identified as the key turning point: it made Arabic a language of pastoralism, rapidly reshaping the linguistic landscape of Libya and southern Tunisia, then over the following centuries slowly transforming the High Plateau and the northern Sahara in general. This rural expansion further reinforced the role of Arabic as a lingua franca, while the recruitment of Arabic-speaking soldiers from pastoralist tribes encouraged its spread further west to the Moroccan Gharb.

The resulting linguistic divide between rural groups and towns remained a key theme of Maghrebi sociolinguistics until the twentieth century. In several cases, a town spoke a different language than its hinterland; in much of the Sahara, Berber-speaking oasis towns such as Ouargla or Igli formed linguistic islands in regions otherwise populated by Arabic speakers, and in the north, towns such as Bejaia or Cherchell constituted small Arabic-speaking communities surrounded by a sea of Berber-speaking villages. Even in larger cities such as Algiers or Marrakech, the dominance of Arabic was counterbalanced by substantial regular immigration from Berber-speaking regions further afield.

Today all Berber communities are more or less multilingual, usually in Arabic and often also in French; outside of the most remote areas, monolingual speakers are quite difficult to find. Even in the nineteenth century, however, monolingual Berber speakers were considerably more numerous (Kossmann 2013: 41).

Alongside the coexistence of colloquial Maghrebi Arabic with Berber, Classical Arabic also had a role to play as the primary language of learning and in particular religious studies. Major Berber-speaking areas such as Kabylie (northern Algeria) and the Souss (southern Morocco) developed extensive systems of religious education, whose curricula consisted primarily of Arabic books (van den Boogert 1997; Mechehed 2007). The restriction of Classical Arabic to a limited range of contexts, and the relatively small proportion of the population pursuing higher education, gave it a comparatively small role in the contact situation; even in the lexicon, its influence is massively outweighed by that of colloquial Arabic, and it appears to have had no structural influence at all.

2.2 In Siwa

Examples of contact-induced change in this chapter are often drawn from Siwi, the Berber language of the oasis of Siwa in western Egypt. Sporadic long-distance contact with Arabic there presumably began in the seventh or eighth century with the Islamic conquests, and increased gradually as Cyrenaica and Lower Egypt became Arabic-speaking and as the trade routes linking Egypt to West Africa were re-established. During the eleventh century, the Banū Sulaym, speaking a Bedouin Arabic dialect, established themselves throughout Cyrenaica.

In the twelfth century, al-Idrīsī reports Arab settlement within Siwa itself, alongside the Berber population. Later geographers make no mention of an Arab community there, suggesting that these early immigrants were integrated into the Berber majority. Several core Arabic loans in Siwi, such as the negative copula *qačči* < *qaṭṭ šayʔ* and the noon prayer *luli* < *al-ʔülē*, are totally absent from surrounding Arabic varieties today; such archaisms are likely to represent founder effects dating back to this period (Souag 2009).

The available data gives nothing close to an adequate picture of the linguistic environment of medieval Siwa. We may assume that, throughout these centuries, most Siwis – or at least the dominant families – would have spoken Berber as their first language, and more mobile ones – especially traders – would have learned Arabic (but whose Arabic?) as a second language. Alongside these, however, we must envision a fluctuating population of Arabic-speaking immigrants and West African slaves learning Berber as a second language. In such a situation, both Berber-dominant and Arabic-dominant speakers should be expected to play a part in bringing Arabic influences into Siwi.

The oasis was integrated into the Egyptian state by Muhammad Ali in 1820, but large-scale state intervention in the linguistic environment of the oasis only took effect in the twentieth century; the first government school was built in

1928, and television was introduced in the 1980s. An equally important development during this period was the rise of labour migration, taking off in the 1960s as Siwi landowners recruited Upper Egyptian labourers, and Siwi young men found jobs in Libya's booming oil economy. It has then grown further since the 1980s with the rise of tourism and the growth of tertiary education. The effects of this integration into a national economy include a conspicuous generation gap in local second-language Arabic: older and less educated men speak a Bedouin-like dialect with *q > g, while younger and more educated ones speak a close approximation of Cairene Arabic.

3 Contact-induced changes in Berber

3.1 Introduction

As noted above, bilingualism in North Africa has been asymmetrical for many centuries, with Berbers much more likely to learn Arabic than vice versa. This suggests the plausible general assumption that the agents of contact-induced change were typically dominant in the (Berber) recipient language rather than in Arabic. However, closer examination of individual cases often reveals a less clear-cut situation; as seen above in §2.1, the history of Siwi suggests that Berber- and Arabic-dominant speakers both had a role to play, and *post facto* analysis of the language's structure seems to confirm this assumption. The loss of feminine plural agreement, for example (§3.3 below), can more easily be attributed to Arabic-dominant speakers adopting Berber than to Berber-dominant speakers. In the absence of clear documentary evidence, caution is therefore called for in the application of Van Coetsem's (1988; 2000) model to Berber.

3.2 Phonology

The influence of Arabic on Berber phonology is conspicuous; in general, every phoneme used in a given region's dialectal Arabic is found in nearby Berber varieties. Almost all Northern Berber varieties have adopted from Arabic at least the pharyngeals /ʕ/ and /ħ/, a series of voiceless emphatics: /ṣ/, /ḥ/, non-geminate /q/, and either /ḍ/ or /ṭ/. These phonemes presumably reached Berber through loanwords from Arabic, but have been extended to inherited vocabulary as well, through reinterpretation of emphatic spread or through their use in "expressive formations" (Kossmann 2013: 199), e.g. Kabyle *θi-ħəðmər-θ* 'breast of a small animal' < *iðmar-ən* 'breast'.

In Siwi (Souag 2013: 36–39; Souag & van Putten 2016), at least nine phonemes were clearly introduced from Arabic. The pharyngealised coronals /ʃ/, /ʕ/, /r/ and /d/ have no regular source in Berber, and occur in inherited vocabulary almost exclusively as a result of secondary emphasis spread (with the isolated exception of *das* ‘to laugh’). The order of borrowing appears to be *l*, *r* > *ʃ* > *d*; in a few older loans, Arabic *ʃ* is borrowed as *z* (e.g. *zaffar* ‘to whistle’ < *ʃaffar*), and in all but the most recent strata of loans, Arabic *d/ð* is borrowed as *t* (e.g. *a-ʕriṭ* ‘broad’ < *ʕarīd*). The pharyngeals /ħ/ and /ʕ/ (e.g. *ħabba* ‘a little’ < *ħabba* ‘a grain’, *ʕammi* ‘paternal uncle’ < *ʕamm-i* ‘uncle-OBL.1SG’) likewise have no regular source in Berber, although 1SG -*y*- has become -*ʕ*- for some speakers (an irregular sound change specific to this morpheme). *ʕ* is lost in a number of older loans (e.g. *annaš* ‘bier’ < *an-naʕš*), but *ħ* is always retained as such rather than being dropped or adapted (unlike Tuareg, where it is typically adapted to *h*). This suggests that Siwi continued to adapt Arabic loans to its phonology by dropping *ʕ* up to some stage well after the beginning of significant borrowing from Arabic, but started accepting Arabic loans with *ħ* too early for any adapted to survive, implying an order of borrowing *ħ* > *ʕ*. Among the glottals, /h/ (e.g. *ddhan* ‘oil’ < *dihān* ‘oils’) appears in inherited vocabulary only in the distal demonstratives, where comparison to Berber languages that do have *h* suggests that it is excrescent, while /ʔ/ only rarely appears even in recent loanwords (e.g. *ʔəḡḡar* ‘to rent’ < *ʔaḡḡar*). The mid vowel /o/ has been integrated into Siwi phonology as a result of borrowing from Arabic; having been established as a phoneme, however, it went on to emerge by irregular change from original *u in two inherited words (*allon* ‘window’, *agroz* ‘palm heart’), and from irregular simplification of *ayu in some demonstratives (e.g. *wok* ‘this.SG.M’ < *wa yuṛ-ək ‘this.SG.M at-2SG.M’). The interdental /θ/ and /ð/ have a more marginal status, but are used by some speakers even in morphologically well-integrated loans, e.g. *a-θqil* or *a-tqil* ‘heavy’ < *θaqil*. Arabic influence may also be responsible for the treatment of [ʒ] and [dʒ] as free variants of the same phoneme /ǧ/ (Vycichl 2005), so that e.g. /taḡlašt/ ‘spider’ is variously realised as [tʰæʒlʰasʰt] ~ [tʰædʒlʰasʰt] (Naumann 2012: 152); other Berber languages with phonemic ǧ normally have [dʒ] as a conditioned allophone (e.g. when geminated) or as a cluster.

Arabic influence has also massively affected the frequency of some phonemes. /q/ and /ħ/ were marginal in Siwi before Arabic influence, while *e had nearly disappeared due to regular sound changes, but all three are now quite frequent. Conversely, the influx of Arabic loans has helped make labiovelarised phonemes such as *g^w* and *q^w* rare.

3.3 Morphology

Berber offers numerous examples of the borrowing of Arabic words together with their original Arabic inflectional morphology, a case of what Kossmann (2010) calls Parallel System Borrowing. This phenomenon is most prominent for nominal number marking, but sometimes attested in other contexts too.

In Berber, most nouns are consistently preceded by a prefix marking gender (masculine/feminine), number (singular/plural), and often case/state. Nouns borrowed from Arabic normally either get assigned a Berber prefix, or fill the prefix slot with an invariant reflex of the Arabic definite article: compare Figuig *a-gʃud* vs. Siwi *lə-gʃud* ‘young camel’ (< *qaʃūd*). The Berber plural marking system prior to Arabic influence was already rather complex, combining several different types of affixal marking with internal ablaut strategies; many Arabic loans are integrated into this system, e.g. Kabyle *a-bellar* ‘crystal’ > pl. *i-bellar-en* (< *billawr*), Siwi *a-kəddab* ‘liar’ > pl. *i-kəddab-ən* (< *kaððāb*). However, in most Berber varieties, Arabic loans have further complicated the system by frequently retaining their original plurals, e.g. Kabyle *l-kayəd* ‘paper’ > *le-kwayəd* (< *kāyid*), Siwi *al-gənfud* ‘hedgehog’ > pl. *lə-gnafid* (< *qunfuð*). (The difference correlates fairly well with the choice in the singular between a Berber prefix and an Arabic article, but not perfectly; contrast e.g. Siwi *a-fruḥ* ‘chick, bastard’ < *farḥ*, which takes the Arabic-style plural *lə-fraḥ*.) Berber has no inherited system of dual marking, instead using analytic strategies. Nevertheless, for a limited number of measure words, duals too are borrowed, e.g. Kabyle *yum-ayen* ‘two days’ < *yawm-ayn* (although ‘day’ remains *ass!*), Siwi *s-sən-t* ‘year’ > *sən-t-en* ‘two years’ < *san-at-ayn*. Arabic number morphology may sporadically spread to inherited terms as well, e.g. Kabyle *berdayen* ‘twice’ < *a-brid* ‘road, time’, Siwi *lə-g^wrazən* ‘dogs’ < *a-g^wərzni* ‘dog’ (Souag 2013).

Whereas nouns are often borrowed together with their original inflectional morphology, verbs almost never are. The only attested exception is Ghomara, a heavily mixed variety of northern Morocco. In Ghomara, many (but not all) verbs borrowed from Arabic are systematically conjugated in Arabic in otherwise monolingual utterances, a phenomenon which seems to have remained stable over at least a century: thus ‘I woke up’ is consistently *faq-ah*, but ‘I fished’ is equally consistently *ʃsað-iθ* (Mourigh 2016: 6, 137, 165). However, the borrowing of Arabic participles to express progressive aspect is also attested in Zuwara, if only for the two verbs of motion *mašəy* ‘going’ (pl. *mašy-in*) and *žay* ‘coming’ (pl. *žayy-in*), contrasting with inherited *fəl* ‘go’, *asəd* ‘come’ (Kossmann 2013: 284–285).

Prepositions are less frequently borrowed; in some cases where this does occur, however – including Igli *mənyir-* ‘except’, Ghomara *bin* ‘between’ (Kossmann 2013: 293) – they too occasionally retain Arabic pronominal markers, e.g. Siwi *msabb-ha* ‘for her’ < *min sababi-hā* ‘from reason.OBL-OBL.3SG.F’ (Souag 2013: 48). In Awjila, more unusually, two inherited prepositions somewhat variably take Arabic pronominal markers, e.g. *dit-ha* ‘in front of her’ (van Putten 2014: 113).

A rarer but more spectacular example of morpheme borrowing is the borrowing of productive templates from Arabic. Such cases include the elative template əCCəC in Siwi, used to form the comparative degree of trilateral adjectives irrespective of etymology – thus *əmləl* ‘whiter’ < *a-məllal* alongside *ətʷəl* ‘taller’ < *a-ṭwīl* < Arabic *ṭawīl* (Souag 2009) – and the diminutive template CCiCəC in Ghomara (Mourigh 2016), e.g. *aʒwiyyər* ‘little root’ < *aʒar* alongside *ləmwīyyəs* ‘little knife’ < *l-mus* < Arabic *al-mūsā* ‘razor’ (gemination of *y* is automatic in the environment i_V). As the latter example illustrates, borrowed derivational morphology sometimes becomes productive.

The effects of Arabic on Berber morphology are by no means limited to the borrowing of morphemes. There is reason to suspect Arabic influence of having played a role in processes of simplification attested mainly in peripheral varieties, such as the loss of case marking in many areas. In Siwi, where Arabic influence appears on independent grounds to be unusually high, the verbal system shows a number of apparent simplifications targeting categories absent in sedentary Arabic varieties: the loss of distinct negative stems, the near-complete merger of perfective with aorist, the fixed postverbal position of object clitics, and so on. It is tempting to explain such losses as arising from imperfect acquisition of Siwi by Arabic speakers.

Structural calquing in morphology is also sporadically attested. Siwi has lost distinct feminine plural agreement on verbs, pronouns, and demonstratives, extending the inherited masculine plural forms to cover plural agreement irrespective of gender. Within Berber, this is unprecedented; plural gender agreement is extremely well conserved across the family. However, it perfectly replicates the usual sedentary Arabic system found in Egypt and far beyond.

3.4 Syntax

Syntactic influence is often difficult to identify positively. Nevertheless, Berber offers a number of examples, and relative clause formation is one of the clearest (Souag 2013: 151–156; Kossmann 2013: 369–407). Relative clauses in Berber are normally handled with a gap strategy combined with fronting of any stranded prepositions, as in (1).

- (1) Awjila (Paradisi 1961: 79)
ərrafəqa-nnəs wi iżin-an-a nettin id-sin ksum
friend.PL-GEN.3SG REL.PL.M divide-3PL.M-PRF 3SG.M with-OBL.3PL.M meat
‘his friends with whom he divided the meat’

In subject relativisation, a special form of the verb not agreeing in person (the so-called “participle”) is used, as in (2); such a form is securely reconstructible for proto-Berber (Kossmann 2003).

- (2) Awjila (Paradisi 1960: 162)
amədən wa tarəv-ən nettin ŷayyan
man REL.SG.M write.IPFV-PTCP 3SG.M ill
‘The man who is writing is ill.’

In several smaller easterly varieties apart from Awjila, however, both of these traits have been lost. The strategy found in varieties such as Siwi – resumptive weak (affixal) pronouns throughout, and regular finite agreement for subject relativisation – perfectly parallels Arabic:

- (3) Siwi (Souag 2013: 151–152)
tālti tən dəzz-γ-as ġğəwab
woman REL.SG.F send-1SG-DAT.3SG letter
‘the woman to whom I sent the letter’
- (4) Siwi (field data)
āgg^wid wənn i-ŷəmmar iməgran
man REL.SG.M 3SG.M-make.IPFV sickle.PL
‘the man who makes sickles’

In the case of verbal negation, an originally syntactic calque has often been morphologised in parallel in Arabic and Berber. A number of varieties – especially the widespread Zenati subgroup of Berber, ranging from eastern Morocco to northern Libya – have developed a postverbal negative clitic *-š(a)* from **kāra* ‘thing’, apparently a calque on Arabic *-š(i)* from *šay?*; however, some instead use the direct borrowings *ši* or *šay* (Lucas 2007; Kossmann 2013: 332–334).

3.5 Lexicon

Lexical borrowing from Arabic is pervasive in Berber. Out of 41 languages around the world compared in the Loanword Typology Project (Tadmor 2009), Tarifiyt

Berber was second only to (Selice) Romani in the percentage of loanwords – more than half (51.7%) of the concepts compared. More than 90% of loanwords examined in Tarifiyt were from Arabic, almost all from dialectal Maghrebi Arabic. There is little reason to suppose that Tarifiyt is exceptional in this respect among Northern Berber languages; to the contrary, Kossmann (2013: 110) finds its rate of basic vocabulary borrowing to be typical of Northern Berber, whereas Siwi and Ghomara go much higher. The rate of borrowing from Arabic, however, is considerably lower further south and west; on a 200-word list of basic vocabulary, Chaker (1984: 225–226) finds 38% Arabic loans in Kabyle (north-central Algeria) vs. 25% in Tashelhiyt (southern Morocco) and only 5% in Tahaggart Tuareg (southern Algeria).

This borrowing is pervasive across the languages concerned, rather than being restricted to particular domains. Every semantic field examined for Tarifiyt, including body parts, contained at least 20% loanwords, and verbs or adjectives were about as frequently borrowed as nouns were (Kossmann 2009). Numerals stand out for particularly massive borrowing; most Northern Berber varieties have borrowed all numerals from Arabic above a number ranging from ‘one’ to ‘three’ (Souag 2007).

The effects of this borrowing on the structure of the lexicon remain insufficiently investigated, but appear prominent in such domains as kinship terminology. Throughout Northern Berber, a basic distinction between paternal kin and maternal kin is expressed primarily with Arabic loanwords (*ṣammi* ‘paternal uncle’ vs. *ḥali* ‘maternal uncle’ etc.), whereas in Tuareg that distinction is not strongly lexicalised. Nevertheless, borrowing does not automatically entail lexical restructuring; Tashelhiyt, for example, kept its vigesimal system even after borrowing the Arabic word for ‘twenty’ (*ṣšrin*), cf. Ameer (2008: 77).

The borrowing of analysable multi-word phrases – above all, numerals followed by nouns – stands out as a rather common outcome of Berber contact with Arabic. Usually this is limited to the borrowing of numerals in combination with a limited set of measure words, such as ‘day’; thus in Siwi we find forms like *sbaṣ-t iyyam* ‘seven days’ rather than the expected regular formation **səbṣa n nnhar-at* (Souag 2013: 114). In Beni Snous (western Algeria), the phenomenon seems to have gone rather further: Destaing (1907: 212) reports that numerals above ‘ten’ systematically select for Arabic nouns. Souag & Kherbache (2016), however, explain this as a code-switching effect, rather than a true case of one language’s grammar requiring shifts into another.

4 Conclusion

The influence of Arabic on Berber has come to be better understood over the past couple of decades, but much remains to be done. Synchronically, Berber–Arabic code-switching remains virtually unresearched; rare exceptions include Hamza (2007) and Kossmann (2012). Sociolinguistic methods could help us better understand the gradual integration of new Arabic loanwords; the early efforts of Brahim (2000) have hardly been followed up on. Diachronically, it remains necessary to move beyond the mere identification of loanwords and contact effects towards a chronological ordering of different strata, an approach explored for some peripheral varieties by Souag (2009) and van Putten & Benkato (2017). While linguists are belatedly beginning to take advantage of earlier manuscript data to understand the history of Berber (van den Boogert 1997; 1998; Brugnatelli 2011; Meouak 2015), this data has not yet been used in any systematic way to help date the effects of contact at different periods. For many smaller varieties, especially in the Sahara, basic documentation and description are still necessary before the influence of Arabic can be explored. The unprecedented degree of Arabic influence revealed in Ghomara by recent work (Mourigh 2016), extending to the borrowing of full verb paradigms, suggests that such descriptive work may yet yield dividends in the study of contact.

Despite all these gaps, the work done so far is more than sufficient to establish a general picture of Arabic influence on Berber. Throughout Northern Berber, Arabic influence on the lexicon is substantial and pervasive, bringing with it significant effects on phonology and morphology. Structural effects of Arabic on morphology, and Arabic influence on Berber syntax, are less conspicuous but nevertheless important, especially in smaller varieties such as Siwi. Looking at these results through Van Coetsem's (1988; 2000) framework, this suggests that speakers dominant in the recipient languages have had an especially prominent role in Arabic–Berber contact in larger varieties, whereas the role of speakers dominant in the source language is more visible in smaller varieties. However, this *a priori* conclusion should be tested against directly attested historical data wherever possible.

Further reading

- The key reference for Arabic influence on Northern Berber is Kossmann (2012), frequently cited above; this covers all levels of influence including the lexicon, phonology, nominal and verbal morphology, borrowing of morphological categories, and syntax.

- ▶ The most extensive in-depth study of Arabic influence on a specific Berber variety is Souag (2013), effectively a contact-focused grammatical sketch of Siwi Berber.
- ▶ Mourigh (2016) is a thorough synchronic description of by far the most strongly Arabic-influenced Berber variety, Ghomara, giving a uniquely clear picture of just how far the process can go without resulting in language shift.

Acknowledgements

The author thanks his consultants in Siwa, especially the late Sherif Bougdoura, for their help with studying Siwi.

Abbreviations

1, 2, 3	1st, 2nd, 3rd person	OBL	oblique
DAT	dative	PL/pl.	plural
F	feminine	PRF	perfect (suffix conjugation)
GEN	genitive	PTCP	participle
IPFV	imperfective	SG	singular
M	masculine		

References

- Ait Habbouche, Khadidja. 2013. *Language maintenance and language shift among Kabyle speakers in Arabic speaking communities: The case of Oran*. Oran: University of Oran. (Master's dissertation).
- Ameur, Meftaha. 2008. Les contacts arabe-amazighe: Le cas des noms de nombre. In Mena Lafkioui & Vermondo Brugnatelli (eds.), *Berber in contact: Linguistic and sociolinguistic perspectives*, 63–80. Cologne: Rüdiger Köppe.
- Brahimi, Fadila. 2000. Loanwords in Algerian Berber. In Jonathan Owens (ed.), *Arabic as a minority language*, 371–382. Berlin: Mouton de Gruyter.
- Brugnatelli, Vermondo. 2011. Some grammatical features of Ancient Eastern Berber (the language of the *Mudawwana*). In Luca Busetto (ed.), *Studies on language and African linguistics in honour of Marcello Lamberti*, 29–40. Milano: Qu.A.S.A.R.
- Chaker, Salem. 1984. *Textes en linguistique berbère: Introduction au domaine berbère*. Paris: Editions du Centre national de la recherche scientifique.

- CIA. 2017. *The world factbook 2017*. Washington, DC: Central Intelligence Agency.
- Destaing, Edmond. 1907. *Etude sur le dialecte berbère des Beni-Snous*. Paris: Ernest Leroux.
- El Arifi, Samir. 2014. *Tachelhit de l'Atlas blidéen*. 4th edn. Algiers: Haut Commissariat à l'Amazighité.
- Gautier, E.-F. 1913. Répartition de la langue berbère en Algérie. *Annales de géographie* 22(123). 255–266.
- Hamza, Belgacem. 2007. *Berber ethnicity and language shift in Tunisia*. Brighton: University of Sussex. (Doctoral dissertation).
- Jolivet, Remi. 2008. La fidélité au tamashek des berbérophones dans le contexte multilingue du Niger. In Mena Lafkioui & Vermondo Brugnatelli (eds.), *Berber in contact: Linguistic and sociolinguistic perspectives*, 139–149. Cologne: Rüdiger Köppe.
- Kossmann, Maarten. 2003. The origin of the Berber “participle”. In M. Lionel Bender, Gábor Takács & David L. Appleyard (eds.), *Selected comparative–historical Afrasian linguistics in the memory of Igor M. Diakonoff*, 27–40. Munich: LINCOM Europa.
- Kossmann, Maarten. 2009. Loanwords in Tarifiyt. In Martin Haspelmath & Uri Tadmor (eds.), *Loanwords in the world's languages: A comparative handbook*, 191–214. Berlin: De Gruyter.
- Kossmann, Maarten. 2010. Parallel system borrowing: Parallel morphological systems due to the borrowing of paradigms. *Diachronica* 27(3). 459–487.
- Kossmann, Maarten. 2011. *A grammatical sketch of Ayer Tuareg (Niger)*. Cologne: Rüdiger Köppe.
- Kossmann, Maarten. 2012. Berber–Arabic code-switching in Imouzzar du Kandar. *STUF – Language Typology and Universals* 65(4). 369–382.
- Kossmann, Maarten. 2013. *The Arabic influence on Northern Berber*. Leiden: Brill.
- Lucas, Christopher. 2007. Jespersen's cycle in Arabic and Berber. *Transactions of the Philological Society* 105(3). 398–431.
- Mammeri, Mouloud. 1976. *Tajerrumt n tmazight (tantala taqbaylit)*. Paris: Maspéro.
- Mechehed, Djamel-Eddine. 2007. L'organisation des notices de catalogage des manuscrits arabes ou berbères: Cas de la collection Ulahbib, Kabylie. In *Les manuscrits berbères au Maghreb et dans les collections européennes*, 129–138. La Fresquièrre: Atelier Perrousseaux.
- Meouak, Mohamed. 2015. *La langue berbère au Maghreb médiéval*. Leiden: Brill.
- Mouili, Fatiha. 2013. The Berber language of Igli: Language towards extinction. *Humanities and Social Sciences Review* 2(2). 563–580.

- Mourigh, Khalid. 2016. *A grammar of Ghomara Berber (north-west Morocco)*. Cologne: Rüdiger Köppe.
- Múrcia Sánchez, Carles. 2010. *La llengua amaziga a l'antiguitat a partir de les fonts gregues i llatines*. Barcelona: Universitat de Barcelona.
- Naumann, Christfried. 2012. *Acoustically based phonemics of Siwi (Berber)*. Cologne: Rüdiger Köppe.
- Paradisi, Umberto. 1960. Il berbero di Augila: Materiale lessicale. *Rivista degli Studi Orientali* 35. 157–177.
- Paradisi, Umberto. 1961. Testi berberi di Augila (Cirenaïca). *Annali dell'Istituto Orientale di Napoli* 10. 79–91.
- Pichler, Werner. 2007. *Origin and development of the Libyco-Berber script*. Cologne: Rüdiger Köppe.
- Serreli, Valentina. 2017. Language and identity in Siwa Oasis: Indexing belonging, localness and authenticity in a small minority community. In Reem Bassiouney (ed.), *Identity and dialect performance: A study of communities and dialects*, 226–242. London: Routledge.
- Souag, Lameen. 2007. The typology of number borrowing in Berber. In Naomi Hilton, Rachel Arscott, Katherine Barden, Sheena Shah & Meg Zellers (eds.), *Proceedings for the Fifth Cambridge Postgraduate Conference in Linguistics*, 237–244. Cambridge: Cambridge Institute of Language Research.
- Souag, Lameen. 2009. Siwa and its significance for Arabic dialectology. *Zeitschrift für Arabische Linguistik* 51. 51–75.
- Souag, Lameen. 2013. *Berber and Arabic in Siwa (Egypt): A study in linguistic contact*. Cologne: Rüdiger Köppe.
- Souag, Lameen & Fatma Kherbache. 2016. Syntactically conditioned code-switching? The syntax of numerals in Beni-Snous Berber. *International Journal of Bilingualism* 20(2). 97–115.
- Souag, Lameen & Marijn van Putten. 2016. The origin of mid vowels in Siwi. *Studies in African Linguistics* 45(1–2). 189–208.
- Tadmor, Uri. 2009. Loanwords in the world's languages: Findings and results. In Martin Haspelmath & Uri Tadmor (eds.), *Loanwords in the world's languages: A comparative handbook*, 55–75. Berlin: De Gruyter.
- Tigziri, Nora. 2008. Le kabyle au contact des langues en présence en Algérie: Entre codeswitching et parler hybride? In Mena Lafkioui & Vermondo Brugnatelli (eds.), *Berber in contact: Linguistic and sociolinguistic perspectives*, 175–185. Cologne: Rüdiger Köppe.
- Van Coetsem, Frans. 1988. *Loan phonology and the two transfer types in language contact*. Dordrecht: Foris.

- Van Coetsem, Frans. 2000. *A general and unified theory of the transmission process in language contact*. Heidelberg: Winter.
- van den Boogert, Nico. 1997. *The Berber literary tradition of the Sous, with an edition and translation of "The Ocean of Tears" by Muḥammad Awzal (d. 1749)*. Leiden: Nederlands Instituut voor het Nabije Osten.
- van den Boogert, Nico. 1998. "La révélation des énigmes": *Lexiques arabo-berbères des XVIIe et XVIIIe siècles*. Aix-en-Provence: Institut de recherches et d'études sur le monde arabe et musulman (IREMAM).
- van Putten, Marijn. 2014. *A grammar of Awjila Berber (Libya), based on Umberto Paradisi's material*. Cologne: Rüdiger Köppe.
- van Putten, Marijn & Adam Benkato. 2017. The Arabic strata in Awjila Berber. In Ahmad Al-Jallad (ed.), *Arabic in context: Celebrating 400 years of Arabic at Leiden University*, 476–502. Leiden: Brill.
- Vycichl, Werner. 2005. Sprachskizzen: Die berberischen Sprachinseln in Tunesien. In Dymitr Ibrizimow & Maarten Kossmann (eds.), *Berberstudien & A sketch of Siwi Berber (Egypt)*, 136–147. Cologne: Rüdiger Köppe.