Chapter 19

Beja

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This chapter argues for two types of outcomes of the long-standing and intense contact situation between Beja and Arabic in Sudan: borrowings at the phonological, syntactic and lexical levels, and convergence at the morphological level.

1 Current state and historical development

1.1 Historical development of Beja

Beja is the sole language of the Northern Cushitic branch of the Afro-Asiatic phylum. Recent archaeological discoveries show growing evidence that Beja is related to the extinct languages of the Medjay (from which the ethnonym Beja is derived; Rilly 2014: 1175), and Blemmye tribes, first attested on Egyptian inscriptions of the Twelfth Dynasty for the former, and on a Napatan stela of the late seventh century BCE for the latter. For recent discussions, see Browne (2003); El-Sayed (2011); Zibelius-Chen (2014); Rilly (2014); and Rilly (2018). The Medjays were nomads living in the eastern Nubian Desert, between the first and second cataracts of the River Nile. The Blemmyes invaded and took part in defeating the Meroitic kingdom, fought against the Romans up to the Sinai, and ruled Nubia from Talmis (modern Kalabsha, between Luxor and Aswan) for a few decades, before being defeated themselves by the Noubades around 450 CE (Rilly 2018). In late antiquity, the linguistic situation involved, in northern Lower Nubia, Cushitic languages, Northern Eastern Sudanic languages, to which Meroitic and Nubian belong, also Coptic and Greek to some extent, and in the south, Ethio-Semitic. It is likely that there was mutual influence to an extent that is difficult to disentangle today.

1.2 Current situation of Beja

The Beja territory has shrunk a lot since late antiquity, and Beja (*biḍawije:t*) is mainly spoken today in the Red Sea and Kassala States in eastern Sudan, in the dry lands between the Red Sea and the Atbara River. The 1993 census, the last one to include a language question, recorded some 1,100,000 Beja speakers, and there is probably at least double that figure today. There are also some 60,000 speakers in northern Eritrea, and there may be still a few speakers left in Egypt, in the Nile valley at Aswan and Daraw, and along the coast towards Marsa Alam (Morin 1995; Wedekind 2012). In Sudan today, Beja speakers have also settled in Khartoum and cities in central and western Sudan (Hamid Ahmed 2005a: 67).

All Bejas today are Muslims. They consider themselves Bedouins, and call themselves *arab* 'Arab';[1] they call the ethnic Arabs *balawje:t*. Before the introduction of modern means of transportation, they were traditionally the holders of the caravan trade in the desert towards the west, south and north of their territory, and they still move between summer and winter pastures with their cattle. They also produce sorghum and millet for daily consumption, and fruits and vegetables in the oases. The arrival of Rashaida migrants from Saudi Arabia in the nineteenth century created tensions in an area with meagre resources, but the first contemporary important social changes took place during the British mandate with the agricultural development of the Gash and Tokar areas, and the settlement of non-Beja farmers. The droughts of the mid-1980s brought about a massive exodus towards the cities, notably Port Sudan and Kassala, followed by job diversification, and increased access to education in Arabic, although not generalized, especially for girls, who rarely go beyond primary level (Hamid Ahmed 2005a).

Beja is mostly an oral language. In Eritrea, a Latin script was introduced in schools after independence in 1993, but in Sudan no education in Beja exists. Attempts made by the Summer Institute of Linguistics and at the University of the Red Sea to implement an Arabic-based script did not come to fruition. On the other hand, in the last few years school teachers in rural areas have begun to talk more and more in Beja in order to fight illiteracy (in Arabic) and absenteeism (Onour 2015).

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[1]In Sudan the term *ʕarab* is widely used for referring to nomad groups in general, and not only to ethnically defined Arabs. Thanks to Stefano Manfredi for this information..

2 Arabic–Beja contact

Contact between Bejas and Arabs started as early as the beginning of Islamization, and through trade relations with Muslim Egypt, as well as Arab incursions in search of gold and emerald. Evidence of these contacts lies in the early Arabicization of Beja anthroponyms (Záhořík 2007). The date of the beginning of Islamization differs according to authors, but it seems it started as early as the tenth century, and slowly expanded until it became the sole religion between the eighteenth and nineteenth centuries (Záhořík 2007).

We have no information concerning the onset and spread of Beja–Arabic bilingualism. It is thus often impossible to figure out if a transfer occurred through Beja-dominant speakers or was imposed by fluent Beja–Arabic bilingual speakers, and consequently to decide whether a contact-induced feature belongs to the borrowing or to the imposition type of transfer as advocated by Van Coetsem (1988; 2000) and his followers. What is certain though, is that socio-historical as well as linguistic evidence speaks in favour of Beja–Arabic bilingualism as an ancient phenomenon, but in unknown proportion among the population. With the spread of Islam since the Middle Ages, contact with Arabic became more and more prevalent in Sudan.

In this country, which will be the focus of this chapter, bilingualism with Sudanese Arabic is frequent, particularly for men, and expanding, including among women in cities and villages, but to a lesser extent. Bejas in Port Sudan are also in contact with varieties of Yemeni Arabic. Rural Bejas recently settled at the periphery of the big cities have the reputation of being more monolingual than others, which was still the case fifteen years ago (Vanhove 2003).

The Beja language is an integral part of the social and cultural identity of the people, but it is not a necessary component. Tribes and clans that have switched to Arabic, or Tigre, such as the Beni Amer, are considered Bejas. Beja is prestigious, since it allows its speakers to uphold the ethical values of the society, and is considered to be aesthetically pleasing due to its allusive character. The attitude towards Arabic is ambivalent. It is perceived as taboo-less, and thus contrary to the rules of honour, nevertheless it is possible to use it without transgressing them. Arabic is also prestigious because it is the language of social promotion and modernity (Hamid Ahmed 2005b). Language attitudes are rapidly changing, and there is some concern among the Beja diaspora about the future of the Beja language, even though it cannot be considered to be endangered. Some parents avoid speaking Beja to their children, for fear that it would interfere with their learning of Arabic at school, leaving to the grandparents the transmission of Beja

(Wedekind 2012; Vanhove 2017). But there is no reliable quantitative or qualitative sociolinguistic study of this phenomenon. Code-switching between Beja and Arabic is spreading but understudied.

This sketch of the sociolinguistic situation of Beja speaks for at least two types of transfer: (i) borrowing, where the agents of transfer are dominant in the recipient language (Beja); (ii) convergence phenomena, since the difference in linguistic dominance between the languages of the bilingual speakers tends to be really small (at least among male speakers today, and probably earlier in the history of Beja; see Van Coetsem 1988: 87). Imposition has probably also occurred of course, but it is not always easy to prove.

3 Contact-induced changes in Beja

3.1 Phonology

The few contact-induced changes in Beja phonology belong to the borrowing type.

The phonological system of Beja counts 21 consonantal phonemes, presented in Table 1.

Table 1: Beja consonants

	Bilabial	Labio-dental	Alveolar	Retroflex	Palatal	Velar	Labio-velar	Laryngeal
Plosive		f	t	ʈ		k	kʷ	ʔ
	b		d	ɖ		g	gʷ	
Affricate					ʤ			
Fricative			s		ʃ			h
Nasal	m		n					
Trill			r					
Lateral			l					
Approximant	w				j			

The voiced post-alveolar affricate *ʤ* (often realized as a voiced palatal plosive [ɟ] as in Sudanese Arabic) deserves attention as a possible outcome of contact

with Arabic. Since Reinisch (1893: 17), it is usually believed that this affricate is only present in Arabic loanwords and is not a phoneme (Roper 1928; Hudson 1976; Morin 1995). The existence of a number of minimal pairs in word-initial position invalidates the latter analysis: *ʤi:k* 'rooster' ~ *ʃi:k* 'chewing tobacco'; *ʤhar* 'chance' ~ *dhar* 'bless'; *ʤaw* 'quarrel' ~ *ḍaw* 'jungle' ~ *ʃaw* 'pregnancy' ~ *gaw* 'house' (Vanhove 2017). As for the former claim, there are actually a few lexical items such as *bʔaʤi* 'bed', *gʷʔaʤi* 'one-eyed' (*gʷʔad* 'two eyes'), that cannot be traced back to Arabic (the latter is pan-Cushitic; Blažek 2000). Nevertheless, it is the case that most items containing this phoneme do come from (or through) (Sudanese) Arabic: *a:laʤ* 'tease', *aʤi:n* 'dough', *aʤib* 'please', *ʔaʤala* 'bicycle', *ʔiʤir* 'divine reward', *ʤa:hil* 'small child', *ʤabana* 'coffee', *ʤalla:j* 'because of', *ʤallab* 'fish', *ʤanna* 'paradise', *ʤanta:ji* 'djinn', *ʤarika:n* 'jerrycan', *ʤe:b* 'pocket', *ʤhali:* 'coal', *ʤimʔa* 'week', *ʤins* 'sort', *ʤuwwa* 'inside', *faʤil* 'morning', *finʤa:n* 'cup', *hanʤar* 'dagger', *hiʤ* 'pilgrimage', *maʤʔa* 'famine', *maʤlis* 'reconciliation meeting', *siʤin* 'prison', *tarʤima:l* 'translator', *waʤʤa* 'appointment', and *xawaʤa* 'foreigner'. It is clear that *ʤ* is not marginal anymore. However *ʤ* is unstable: it has several dialectal variants, *ʧ, g* and *d*, and may alternate with the dental *d* or retroflex *ḍ*, in the original Beja lexicon (*ʤiwʔo:r/ḍiwʔo:r* 'honourable man') as well as in loanwords (*aʤi:n/aḍi:n* 'dough') (Vanhove & Hamid Ahmed 2011; Vanhove 2017). In my data, which counts some 50 male and female speakers of all age groups, this is rarely the case, meaning that there is a good chance that this originally marginal phoneme will live on under the influence of (Sudanese) Arabic.

There are two other consonants in Arabic loanwords that are regularly used by the Beja speakers: *z* and *x*, neither of which can be considered phonemes since there are no minimal pairs.

Blažek (2007: 130) established a regular correspondence between Beja *d* and Proto-East-Cushitic *z. In contemporary Beja *z* only occurs in recent loanwords from Sudanese Arabic such as *ʤaza* 'wage', *ʤo:z* 'pair', *rizig* 'job', *wazʔ* 'offer', *xazna* 'treasure', *zama:n* 'time', *zirʔa* 'field', *zu:r* 'visit'. It may alternate with *d*, even within the speech of the same speaker as free variants, e.g. *dama:n, dirʔa, du:r*. The fricative alveolar pronunciation is more frequent among city dwellers, who are more often bilingual. It is difficult to ascertain whether Beja is in the process of re-acquiring the voiced fricative through contact with Sudanese Arabic, or whether it will undergo the same evolution to a dental stop as in the past.

A few recent Arabic loanwords may also retain the voiceless velar fricative *x* (see also Manfredi et al. 2015: 304–305): *xazna* 'treasure', *xawaʤa* 'foreigner', *xadda:m* 'servant', *xa:tar* 'be dangerous', *a:xar* 'last'. In my data, this is usually the

case in the speech of fluent bilingual speakers. We thus have here a probable imposition type of transfer. In older borrowings, even among these speakers, Arabic *x* shifted to *h* (*xajma* > *he:ma* 'tent'). It may be because these older loans spread in a community which was at that time composed mainly of Beja-dominant speakers, but we have no means of proving this hypothesis.

3.2 Morphology

3.2.1 General remarks

Most Cushitic languages only have concatenative morphology, the stem and pattern schema being at best highly marginal (Cohen 1988: 256). In addition to Beja, Afar and Saho (Lowland East-Cushitic branch), Beja's geographically closest sisters, are exceptions, and all three languages use also non-concatenative morphology. In Afar and Saho it is far less pervasive than in Beja; in particular they do not use vocalic alternation for verbal derivation, this feature being restricted to the verb flexion of a minority of underived verbs.

Even though Beja and Arabic share a similar type of morphology, the following overview shows that each language has developed its own system. Although they have been in contact for centuries, neither small-scale nor massive borrowing from Arabic morphological patterns can be postulated for the Beja data. An interpretation in terms of a convergence phenomenon is more relevant, both in terms of semantics and forms.

Non-concatenative morphology concerns an important portion of the lexicon: a large part of the verb morphology (conjugations, verb derivations, verbal noun derivations), and part of the noun morphology (adjectives, nouns, "internal" plurals, and to a lesser extent, place and instrument nouns). In what follows, I build on Vanhove (2012) and Vanhove (2017), correcting some inaccuracies.

3.2.2 Verb morphology

Only one of the two Beja verb classes, the one conjugated with prefixes (or infixes), belongs to non-concatenative morphology. This verb class (V1) is formed of a stem which undergoes ablaut varying with tense–aspect–mood (TAM), person and number, to which prefixed personal indices for all TAMs are added (plural and gender morphemes are also suffixes). V1 is diachronically the oldest pattern, which survives only in a few other Cushitic languages. In Beja V1s are the majority (57%), as against approximately 30% in Afar and Saho, and only five verbs in Somali and South Agaw (Cohen 1988: 256). Table 2 provides examples in the perfective and imperfective for bi-consonantal and tri-consonantal roots.

Table 2: Perfective and imperfective patterns

	Bi-consonantal *dif* 'go'	Tri-consonantal *kitim* 'arrive'
PFV	*i-dif* 'he went'	*i-ktim* 'he arrived'
	i-dif-na 'they went'	*i-ktim-na* 'they arrived'
IPFV	*i-n-di:f* 'he goes'	*k<an>ti:m* 'he arrives'
	e:-dif-na 'they go'	*e:-katim-na* 'they arrive'

Prefix conjugations are used in Arabic varieties and South Semitic languages but their functions and origins are different. In South Semitic, the prefix conjugation has an aspectual value of imperfective, while in Cushitic it marks a particular morphological verb class. The Cushitic prefix conjugation (in the singular) goes back to auxiliary verbs meaning 'say' or 'be', while the prefix conjugation of South Semitic has various origins, none of them including a verb 'say' or 'be' (Cohen 1984). Although different grammaticalization chains took place in the two branches of Afro-Asiatic, this suggests that the root-and-pattern system might have already been robust in Beja at an ancient stage of the language. It is noteworthy that there are at least traces of vocalic alternation between the perfective and the imperfective in all Cushitic branches (Cohen 1984: 88–102), thus reinforcing the hypothesis of an ancient root-and-pattern schema in Beja. In what proportion this schema was entrenched in the morphology of the proto-Cushitic lexicon is impossible to decide.

Verb derivation of V1s is also largely non-concatenative. Beja is the only Cushitic language which uses qualitative ablaut in the stem for the formation of semantic and voice derivation. The ablaut can combine with prefixes.

Table 3 presents the five verb derivation patterns with ablaut, and Table 4 shows the absence of correspondence between the Beja and Arabic (Classical and Sudanese) patterns. Sudanese patterns are extracted from Bergman (2002: 32–34), who does not provide semantic values.

Among the Semitic languages, an intensive pattern similar to the Beja one is only known in some Modern South Arabian languages spoken in eastern Yemen (not in contact with Beja), where it is also used for causation and transitivization (Simeone-Senelle 2011: 1091). The Modern South Arabian languages are close relatives of Ethio-Semitic languages and it is usually considered that the latter were brought to the Horn of Africa by South-Arabian speakers (Ullendorf 1955). However, this ablaut pattern was not retained in Ethio-Semitic. It is also unknown in Cushitic. In Classical Arabic, the plurisyllabic pattern does not have an intensive value, but a goal or sometimes reciprocal meaning.

Table 3: V1 derivation patterns with ablaut

	Monosyllabic V1	Plurisyllabic V1
INT	*bo:s* (*bis* 'burry')	*ka:tim* (*kitim* 'arrive')
MID	*faf* (*fif* 'pour')	*rimad* (*rimid* 'avenge')
PASS	*a:to:-ma:n* (*min* 'shave')	*at-daba:l* (*dibil* 'gather')
		am-he:jid (*ha:jid* 'sew')
RECP	*amo:-ga:d* (*gid* 'throw')	*am-gara:m* (*girim* 'be inimical')
CAUS		*si-katim* (*kitim* 'arrive')

Table 4: Comparison between Beja and Arabic derivation patterns

	Beja Plurisyllabic V1	Classical Arabic	Sudanese Arabic
INT	Ca:Ca *ka:tim* < *kitim* 'arrive'	CaCCaCa, Ca:CaCa	CaCCaC, Ca:CaC
MID	CiCaC *rimad* < *rimid* 'avenge'	CuCiCa, iC\<t>aCaCa, ta-CaCCaCa, ta-Ca:CaCa, in-CaCaCa, tas-CaCaCa, ista-CaCaCa	it-CaCCaC, it-CaCaC
PASS	at-CaCa:C *at-daba:l* < *dibil* 'gather' am-Ce:CiC *am-he:jid* < *ha:jid* 'sew'	CuCiCa, iC\<t>aCaCa, ta-CaCCaCa, ta-Ca:CaCa, in-CaCaCa, ista-CaCaCa	it-Ca:CaC, it-CaCaC, CiCiC, in-CaCaC
RECP	am-CaCa:C *am-gara:m* < *girim* 'be inimical'	Ca:CaCa , ta-Ca:CaCa, iC\<t>aCaCa	Ca:CaC, it-Ca:CaC
CAUS	si-CaCiC *si-katim* < *kitim* 'arrive'	CaCCaCa, ʔa-CCaCa	CaCCaC, a-CCaC

Beja is the sole Cushitic language which differentiates between active and middle voices by means of vocalic alternation. Remnants of this pattern exist in some Semitic languages, among them Arabic, in a fossilized form.

In Cushitic, qualitative ablaut for the passive voice only occurs in Beja. Passive formation through ablaut exists in Classical and Sudanese Arabic, but with different vowels. Bergman (2002: 34) mentions that "a handful of verbs in S[udanese] A[rabic]" can be formed this way. For Stefano Manfredi (personal communication) it is a productive pattern in this Arabic variety.

Like the passive voice, the reciprocal is characterized by a qualitative ablaut in *a:* in the stem, but the prefix is different and consists of *am(o:)-*. *m* is not used for verbal derivation in Arabic, which uses the same ablaut, but for the first vowel of disyllabic stems, to express, marginally, the reciprocal of the base form. Most often the reciprocal meaning is expressed by other forms with the *t-* prefixed or infixed to the derived form or the base form. In some other Cushitic languages *-m* is used as a suffix for passive or middle voice (without ablaut). In Beja *m-* can also marginally be used as a passive marker, together with ablaut, for a few transitive intensive verbs: *ame:-saj* 'be flayed', *ame:-biḍan* 'be forgotten'.

Although a suffix *-s* (not a prefix as in Beja) is common in Cushitic, Beja is once more the only Cushitic language which uses ablaut for the causative derived form. Neither ablaut nor the *s-* prefix exist in Arabic. Arabic uses different patterns for the causative: the same as the intensive one, i.e. with a geminated second root consonant, and the (ʔ)a-CcaC(a) pattern.

This brief overview shows that Beja has not borrowed patterns from (Sudanese) Arabic, but has at best similar, but not exact, cognate patterns which are marginal in both Classical and Sudanese Arabic.

Beja also has four non-finite verb forms. The simultaneity converb of V1s is the only one with non-concatenative morphology. The affirmative converb is marked for both verb classes with a suffix *-e:* added to the stem: *gid* 'throw', *gid-e:* 'while throwing'; *kitim* 'arrive', *kitim-e:* 'while arriving'. In the negative, the negative particle *ba:-* precedes the stem, and V1s undergo ablaut in the stem (Ci:C and CaCi:C), and drop the suffix; it has a privative meaning: *ba:-gi:d* 'without throwing'; *ba:-kati:m* 'without arriving'. No similar patterns exist in Arabic or other Cushitic languages.

3.2.3 Verbal noun derivation

In the verbal domain, non-concatenative morphology concerns only V1s. With nouns, it applies to action nouns (*maṣdars*) and agent nouns.

There are several *maṣdar* patterns, with or without a prefix, with or without ablaut, depending mostly on the syllabic structure of the verb. The most frequent ones with ablaut are presented below.

The pattern *m(i(:)/a)*-CV(:)C applies to the majority of monosyllabic verbs. The stem vowel varies and is not predictable: *di* 'say', *mi-ja:d* 'saying'; *dir* 'kill', *ma-dar* 'killing'; *sʔa* 'sit down', *ma-sʔa:* 'sitting'; *ak* 'become', *mi:-kti* 'becoming'; *hiw* 'give', *mi-jaw* 'gift, act of giving'. A few disyllabic V1s comply to this pattern: *rikʷij* 'fear', *mi-rkʷa:j* 'fearing'; *jiwid* 'curl', *mi:-wad* 'curling'. Some V1s of the CiC pattern have a Ca:C pattern for *maṣdars*, without a prefix: *gid* 'throw', *ga:d* 'throwing'. In Classical Arabic, the marginal *maṣdars* with a prefix concern trisyllabic verbs, none showing a long vowel in the stem or the prefix, nor a vowel *i* in the prefix.

CiCiC and HaCiC[2] disyllabic verbs form their *maṣdars* by vocalic ablaut to *u:*: *kitim* 'arrive', *kitu:m* 'arriving'; *ʔabik* 'take', *ʔabu:k* 'taking'; *hamir* 'be poor', *hamu:r* 'being poor'. CiCaC V1s, and those ending in *-j*, undergo vocalic ablaut to *e:*: *digʷagʷ* 'catch up', *digʷe:gʷ* 'catching up'; *biḍa:j* 'yawn', *biḍe:j* 'yawning'. In Classical Arabic, the *maṣdar* pattern with *u:* has a different vowel in the first syllable, *a* (in Beja *a* is conditioned by the initial laryngeal consonant), and it is limited almost exclusively to verbs expressing movements and body positions (Blachère & Gaudefroy-Demombynes 1975: 81).

Bergman (2002: 35) provides no information about verbal nouns of the base form in Sudanese Arabic except that they are "not predictable".

As for agent nouns of V1s, they most often combine ablaut with the suffix *-a:na*, the same suffix as the one used to form agent nouns of V2 verbs, whose stems do not undergo ablaut. The ablaut pattern is the same as with the verbal intensive derivation: *bir* 'snatch', *bo:r-a:na* 'snatcher'; *gid* 'throw', *ge:d-a:na* 'thrower, a good shot'; *dibil* 'pick up', *da:bl-ana* 'one who picks up'. Some tri-consonantal stems have a suffix *-i* instead of *-a:na*: *ʃibib* 'look at', *ʃa:bb-i* 'guard, sentinel'. Some have both suffixes: *kitim* 'arrive', *ka:tm-a:na/ka:tim-i* 'newcomer'.

These patterns are unknown in Arabic.

3.2.4 Noun morphology

3.2.4.1 General remarks

The existence of verbal noun derivation patterns and nominal plural patterns are well recognized in the literature about Beja morphology; for a recent overview, see Appleyard (2007). It is far from being the case for adjective and noun patterns.

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[2]Where H stands for the laryngeals *ʔ* and *h*.

All noun and adjective patterns linked to V1s are listed below. Vanhove (2012) provides an overview of these patterns which are summed up below.

3.2.4.2 Adjective patterns

There are eight adjective patterns, two of which are shared with nouns. Most are derived from V1 verbs, but the reverse is also attested. A corresponding verb form is inexistent in a few cases. All patterns are based on ablaut, in two cases with an additional suffix -*a*, or gemination of the medial consonant. Arabic has no dedicated adjective pattern (but the active participle pattern of the verbal base form Ca:CiC may express properties). Table 5 provides the full list of patterns with examples. It is remarkable that none of them is similar to those of Classical Arabic or colloquial Sudanese Arabic (Bergman 2002: 17).

Table 5: Adjective patterns

Pattern	Adjective	Verb form
aCa:C	*ama:g* 'bad'	*mig* 'do evil'
CaCCa	*marʔa* 'wide'	*mirʔ* 'be wide'
Ca:Ci(C)	*na:kʷis* 'short'	*nikʷis* 'be short'
	da:ji 'good'	∅
CaCi(C)	*dawil* 'close'	*diwil* 'be close'
CaCa:C	*takʷa:kʷ* 'prepared'	*tikʷikʷ* 'prepare'
CaCa:C-a	*raga:g-a* 'long'	*rigig* 'stand up'
CiCa:C	*ʃikʷa:n* 'aromatic'	*ʃikʷan* 'emit pleasant odour'
CaCCiC	*ʃallik* 'few'	*ʃilik* 'be few'

3.2.4.3 Nouns

There are eleven basic noun patterns related to V1 verbs. Most of the patterns for triconsonantal roots resemble those of Arabic (but are not strictly identical), a coincidence which is not surprising since both languages have a limited number of vowels. Table 6 provides the full list of these patterns. The CaCi pattern is shared with adjectives. The CiCi(C) pattern does not undergo ablaut.

Table 6: Noun patterns

Pattern	Noun	Verb form
CaC	*nakʷ* 'pregnancy'	*nikʷi* 'become pregnant'
CiCa	*nisa* 'advise'	*nisa* 'advice'
CaCi	*sari* 'wakefulness'	*sir* 'keep awake'
CaCa	*nada* 'dew'	*nidaj* 'sweat, exude water'
CiCi(C)	*mirʔi* 'width'	*mirʔ* 'be wide'
	riʃid 'wealth'	*riʃid* 'raise, tend crops or cattle'
CaCi:C	*ʃaḍi:ḍ* 'strip'	*ʃiḍiḍ* 'strip off'
	ʃakʷi:n 'fragrance'	*ʃikʷan* 'emit pleasant odour'
CaCi:C-a	*raʃi:d-a* 'cattle'	*riʃid* 'raise, tend crops or cattle'
Ci:Ca:C	*ti:la:l* 'stride'	*tilil* 'stride far away from home'
CaCo:C	*tabo:k* 'double handful'	*tibo:k* 'fill scoop with cupped hands'
CiCu:C-a	*tilu:l-a* 'exile'	*tilil* 'stride far away from home'

3.2.4.4 Nouns with prefix *m(V)-*

A few other semantic types of nouns, mostly instrument and place names, are formed through ablaut and a prefix *m(V)-*, like in Arabic. Contrary to Arabic where these patterns are productive, they are frozen forms in Beja (some are not loanwords from Arabic, see the last three examples): *ʔafi* 'prevent, secure', *m-ʔafaj* 'nail, rivet, fastener'; *himi* 'cover', *m-himme:j* 'blanket'; *ginif* 'kneel', *mi-gnaf* 'camp'; *mo:k* 'take shelter', *ma-kʷa* 'shelter'; *rifif* 'drag an object on the ground', *mi-rfaf* 'reptile'.

3.2.5 Plural patterns

The so-called "internal" plural patterns are common and frequent in Arabic (and Ethio-Semitic). Beja also has a limited set of internal plural patterns, but it has developed its own system. Ablaut patterns for plural formation mainly concern non-derived nouns containing either a long vowel or ending in a diphthong. Both *i:* and *u:* turn to *i* in the plural, and *a:, e:* and *o:* turn to *a*, sometimes with the addition of the plural suffix *-a*; nouns ending in *-aj* turn to a long vowel *-e:j*: *angʷi:l*, pl. *angʷil* 'ear'; *lu:l*, pl. *lil* 'rope'; *asu:l*, pl. *asil* 'blister'; *hasa:l*, pl. *hasal/hasal-a* 'bridle'; *me:k*, pl. *mak* 'donkey'; *bo:k*, pl. *bak* 'he-goat'; *ganaj*, pl. *gane:j* 'gazelle' (Vanhove 2017).

Even though internal plurals can be considered as a genetic feature, the fact that they are very rare or absent in other Cushitic languages (Zaborski 1986) speaks for a possible influence of Arabic (in Sudan) upon Beja.

3.3 Syntax

3.3.1 General remarks

As far as we know, there are no syntactic calques from Arabic in Beja. There are nevertheless a few borrowed lexical and grammatical items that gave rise to constructions concerning coordination and subordination.

3.3.2 Coordination

One of the three devices that mark coordination is borrowed from Arabic *wa*. It is only used for noun phrases or nominalized clauses (deranked, temporal and relative clauses), whereas the Arabic source particle can be used with noun phrases and simple sentences. *wa* is preposed to the coordinated element in Arabic, but in Beja it is an enclitic particle *=wa*, a position in line with the favoured SOV word order. *=wa* follows each of the coordinated elements. (1) illustrates the coordination of two noun phrases.

(1) Beja (BEJ_MV_NARR_01_shelter_057)[3]
     b?aḍaḍ=wa   i=ko:lej=wa   sallam-ja=aj=he:b
     sword=COORD   DEF.M=stick=COORD   give-PFV.3SG.M=CSL=OBJ.1SG
     'Since he had given me a sword and the stick…'

Deranked clauses with non-finite verb forms, which partly have nominal properties (Vanhove 2016), are also coordinated with *=wa*. (2) is an example with the manner converb, and (3) with the simultaneity converb.

(2) Beja (BEJ_MV_NARR_14_sijadok_281-284)
     winne:t   si-ra:kʷ-o:m-a=b=wa
     plenty   CAUS-fear.INT-PASS-CVB.MNR=INDF.M.ACC=COORD
     gadab-a:=b=wa   ?as-ti   far-i:ni
     be_sad-CVB.MNR=INDF.M.ACC=COORD be_up-CVB.GNRL jump-IPFV.3SG.M
     'Very frightened and sad, he jumps up.'

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[3]The sources of the examples are accessible online at http://corporan.huma-num.fr/Archives/ corpus.php; the indications in parenthesis refer to the texts they are extracted from.

(3) Beja (BEJ_MV_NARR_13_grave_126-130)
afirh-a=b   aka-je:=wa
be_happy-CVB.MNR=INDF.M.ACC   become-CVB.SMLT=COORD
i=dhe:j=i:b   hawa:-je:=wa   rh-ani
DEF.M=people=LOC.SG   play-CVB.SMLT=COORD   see-PFV.1SG
'I saw him happy and playing among the people.'

Relative and temporal subordinate clauses also have nominal properties: the relative markers derive from the articles, and the temporal markers go back to nouns. (4) illustrates the coordination with a relative clause which bears the coordination marker, and (5) the coordination of two temporal clauses.

(4) Beja (06_foreigner_22-24)
u:n   ani   t=ʔarabija:j=wa   o:=ma:l
PROX.SG.M.NOM   1SG.NOM   DEF.F=car=COORD   DEF.SG.M.ACC=treasure
w=ha:j   jʔ-a=b
DEF.SG.M/REL=COM   come-CVB.MNR=INDF.M.ACC
a-kati=je:b=wa   kass=o: a-ni:w=ho:k
1SG-become\IPFV=REL.M=COORD all=POSS.3SG.ACC 1SG-give.IPFV=OBJ.2SG
'I'll give you a car and all the fortune that I brought.'

(5) Beja (BEJ_MV_CONV_01_rich_SP2_136-138)
na:=t   bi=i-hi:w=o:=ho:b=wa
thing=INDF.F   OPT=3SG.M-give\NEG.OPT=OBJ.1SG=when=COORD
i-ni:w=o:=ho:b=wa
3SG.M-give.IPFV=OBJ.1SG=when=COORD
'Whether he gives it to me or not…' (lit. when he does not give me anything and when he gives me)

Adversative coordination between two simple clauses is also expressed with a borrowing from Arabic: *la:kin* 'but'.

3.3.3 Subordination

The reason conjunction *sabbi:* 'because' is a borrowing from the Arabic noun *sabab* 'reason'. Like most balanced adverbial clauses, it is based on one of the relative clause types, the one nominalized with the noun *na* 'thing' in the genitive case. *sabbi:* functions as the head of the relative clause.

(6) Beja (03_camel_192)

ʔakir-a   ḍab   ḍa:b-i:n=e:=na:-ji   sabbi:
be_strong-CVB.MNR   run.AC   run-AOR.3PL=REL=thing-GEN   because
'Because it was running so fast…'

sabbi: can also be used after a noun or a pronoun in the genitive case: *ombarijo:k sabbi:* 'because of you'.

Terminative adverbial clauses are expressed with a borrowing from Arabic, *hadi:d* 'limit'. Again the borrowing is the head of the relative clause.

(7) Beja (BEJ_MV_NARR_51_camel_stallion_026-030)

o:n   i=ka:m=o:k   he:=he:b
PROX.SG.M.ACC   DEF.M=camel=POSS.2SG.ACC   give[.IMP.SG.M]=OBJ.1SG

i-ndi   e:n baru:k   o:=bu:n
3SG.M-say.IPFV   DM 2SG.M.NOM   DEF.SG.M.ACC=coffee

gʷʔa-ti=e:b   hadi:d
drink-AOR.2SG.M=REL.M   until

'Leave your camel with me, he says, until you have drunk your coffee!'

hadi:d can also be used as a postposition after a noun, in which case it can be abbreviated to *had*: *faʤil-had* 'until morning'.

3.4 Lexicon

The study of the Beja lexicon lacks research on the adaptation of Arabic loanwords and their chronological layers. There are no statistics on the proportions of lexical items borrowed from Arabic or Ethio-Semitic as compared to those inherited from Cushitic, not to mention Afro-Asiatic as a whole or borrowed from Nilo-Saharan. Phonetic and morphological changes are bound to have blurred the etymological data, but what is certain is that massive lexical borrowings from Arabic for all word categories took place at different periods of time, and that the process is still going on. Lexicostatistical studies (Cohen 1988: 267; Blažek 1997) have shown that Beja shares only 20% of basic vocabulary with its closest relatives, Afar, Saho and Agaw.

In this section I mainly concentrate on verbs, because they are often believed to be less easily borrowed in language contact situations (see Wohlgemuth 2009 for an overview of the literature on this topic), which obviously is not the case for Beja.

Cohen (1988) mentions that tri-consonantal V1s contain a majority of Semitic borrowings. I conducted a search of Reinisch's (1895) dictionary, the only one to

mention possible correspondences with Semitic languages. It provided a total of 225 V1s, out of which only nine have no Semitic cognates (four are cognates with Cushitic, one is borrowed from Nubian, and one cognate with Egyptian). Even if some of Reinisch's comparisons are dubious, the overall picture is still in favour of massive borrowings from Semitic (96%). It is not easy to disentangle whether the source is an Ethio-Semitic language or Arabic, but until a more detailed study can be undertaken, the following can be said: 55 verbs (20%) have cognates only in Ethio-Semitic (Tigre, Tigrinya, Amharic, and/or Ge'ez); out of the remaining 161 (72%), 85 are attested only in Arabic, 76 also in Ethio-Semitic. Because of the long-standing contact with Arabic for a large majority of Beja speakers in Sudan, and the marginality of contact with Tigre limited to the south of the Beja domain, it is tempting to assume that almost 3/4 of the 76 verbs are of Arabic origin. They may have been borrowed at an unknown time when the new suffix conjugation was still marginal. However, there are also tri-consonantal verbs (V2) which are conjugated with suffixes, albeit less numerous: 164. 141 have cognates with Semitic languages (95 Arabic, 31 Ethio-Semitic, and 15 attested in both branches), six are pan-Cushitic, one is pan-Afro-Asiatic, one Nubian, six are of dubious origin, and nine occur only in Beja. Does this mean that these borrowings occurred later than for V1s? In the current state of our knowledge of the historical development of Beja, it is not possible to answer this question.

On the other hand, Cohen (1988: 256), in his count of consonants per stem in eight Cushitic and Omotic languages, showed that biconsonantal stems are predominant in six of the languages. By contrast, they form 52.8% of the 770 Beja stems in Roper's (1928) lexicon, and 42.7% of the 611 Agaw stems, almost on a par with bi-consonantal stems (42.2%). What this shows is that massive borrowings from Arabic (or from Ethio-Semitic for Agaw) helped to preserve tri-consonantal stems, which still form a majority of the stems in Beja, unlike in other Cushitic languages.

4 Conclusion

This overview has shown that massive lexical borrowings from Arabic in Beja have helped to significantly entrench non-concatenative morphology in this language. Whether this is a preservation of an old Cushitic system, or a more important development of this structure than in other Cushitic languages under the influence of Arabic, is open to debate, but what is certain is that it is not incidental that this system is so pervasive in Beja, the only Cushitic language to have had a long history of intense language contact with Arabic, the Semitic

language where non-concatenative morphology is the most developed. What is important to recall is that Beja non-concatenative morphology shows no borrowings of Arabic patterns (unlike in Modern South Arabian languages; see Bettega and Gasparini, this volume), leading to the conclusion that we are dealing with a convergence phenomenon. Lexical borrowings and morphological convergence are not paralleled in the phonological and syntactic domains where Arabic influence seems marginal.

Much remains to be done concerning language contact between Beja and Arabic, and we lack reliable sociolinguistic studies in this domain. We also lack a comprehensive historical investigation of the Beja lexicon, as well as a sufficiently elaborated theory of phonetic correspondences for Cushitic (Cohen 1988: 267). Even though important progress has been made, in particular for Beja in the comparison of its consonant system with other Cushitic languages and concerning the etymology of lexical items in some semantic fields, thanks to Blažek (2000; 2003a; 2003b; 2006a; 2006b), the absence of a theory of lexical borrowings in Beja (and other Cushitic languages) is still an impediment for a major breakthrough in the understanding of language contact between Beja and Arabic.

Further reading

➤ Apart from Vanhove (2012) on non-concatenative morphology already summarized in §3.2, we lack studies on contact-induced changes in Beja.
➤ Vanhove (2003) is a brief article on code-switching in one tale and two jokes based on conversational analysis.
➤ Wedekind (2012) is an appraisal of the changing sociolinguistic situation of Beja in Egypt, Sudan and Eritrea.

Acknowledgements

Abbreviations

AC	action noun, *maṣdar*	LOC	locative
ACC	accusative	M	masculine
AOR	aorist	MID	middle
BCE	before Common Era	MNR	manner
CAUS	causative	NEG	negation
CE	Common Era	NOM	nominative
COM	comitative	OBJ	object
COORD	coordination	OPT	optative
CSL	causal	PASS	passive
CVB	converb	PFV	perfective
DEF	definite	PL	plural
DM	discourse marker	POSS	possessive
F	feminine	PROX	proximal
GEN	genitive	RECP	reciprocal
GNRL	general	REL	relator
IMP	imperative	SG	singular
INDF	indefinite	SMLT	simultaneity
INT	intensive	TAM	tense–aspect–mood
IPFV	imperfective		

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