Amazigh and Moroccan Arabic in Contact: The Effects on Stress Assignment

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L'objectif de cet article est d'examiner l'impact potentiel que le contact entre l'amazigh et l'arabe marocain peut avoir sur l'accent. À cet égard, nous avons découvert que les critères déterminant l'assignation de l'accent dans les deux langues sont distincts. Ainsi, malgré le fait que le contact prolongé entre les deux langues a un effet immense sur la plupart des niveaux linguistiques, l'accent reste insensible aux influences extérieures. En ce qui concerne les mots arabes empruntés en amazigh, nous avons remarqué qu'ils gardent généralement leur accent d'origine. Toutefois, si ces emprunts subissent un processus de réduction de la structure syllabique ou un processus morphologique, ils sont accentués selon les règles d'accent de l'amazigh.

Intoduction

Amazigh has historically been in contact with a variety of languages, amongst which are Arabic, French and Spanish. But the most intensive kind of contact is clearly that existing between Amazigh and Moroccan Arabic (MA). Since the arrival of Islam to North Africa in the seventh century, the two languages have been in constant daily contact. Consequently, both languages have had a tremendous impact on each other. The notion of contact is interpreted here as including not only geographical proximity, but also the social and cultural relations between the communities concerned.

The objective of this article is two-fold: first to find out whether the prolonged contact that has been obtaining between MA and Amazigh for centuries has an effect on stress assignment or not, and second to examine the stress patterns of MA loanwords in Amazigh.

The present paper is divided into three sections. The first section is concerned with the impact that MA has on the lexicon of Amazigh varieties and with the set of changes that the borrowed items may undergo when they are part of the recipient language. The second section draws a comparison between the stress systems of different MA and Amazigh varieties. Finally, the third section examines stress placement in MA loanwords used in Amazigh.

1. The Impact of MA on Amazigh

Given that the contact between MA and Amazigh has been for a number of centuries, each of these languages has been influenced by the other. In the present section, we will be concerned with the impact that MA has on the lexicon of Amazigh varieties (chiefly Goulmima Amazigh (GA), and with the changes that loanwords may undergo when they are used in the recipient language.

According to a study conducted by Dallet (1982) on Amazigh lexicography, 1590 stems out of the 6000 most frequently used in Kabyle Berber are borrowed from Arabic. Equally, Taifi in his Tamazight-French dictionary (1992) states that about 1260 roots out of a set of 5000 items are common to both Amazigh and Moroccan colloquial Arabic. However, the great impact that Arabic has had upon Amazigh, inferred from the very large number of lexical items that both languages have in common, varies from one variety to another. Tamazight, for instance, which is surrounded by Arab-speaking communities, is more influenced than Tashelhiyt and Tarifiyt, which are more autonomous at the geographical level and hence at the linguistic level (cf. Boukous (1997) and Sadiqi (1997)).

In Amazigh, borrowings are present in all domains: religious, political, judicial, commercial, etc. It seems then that most domains of this Amazigh variety are open for borrowing. Nonetheless, there is a restriction on the set of items to be transferred. An analysis of Arabic loanwords in Amazigh reveals that only members of 'open' classes (nouns, verbs, adjectives) are more readily borrowed than those of 'closed' classes (pronouns, conjunctions, prepositions). Within the former class, nouns are the most frequently borrowed. Here is a sampling of such lexical items.

(1)

	MA	GA	Gloss
a- Religious	*ssla*	*tazallit*	"prayer"
	ssyam	*uzum*	"fasting"
	lħəʒ	*lħidʒ*	"pilgrimage"
b- Political	*ddustur*	*ddustur*	"constitution"
	lħizb	*lħizb*	"political party"
	nnayb	*nnayb*	"deputy"
c- Judicial	*lqanun*	*lqanun*	"law"
	ttuhma	*ttuhma*	"accusation"
	lqadi	*lqadi*	"judge"
c- Commercial	*lbiʕu ʃra*	*lbiʕu ʃra*	"commerce"
	ləħsab	*ləħsab*	"counting"
	ssəlʕa	*ssəliʕt*	"goods"

Nouns are most susceptible to borrowing in all the world's languages. This distribution might, however, be to some extent a reflection of the overall sizes of the classes concerned and of the fact that the great majority of borrowed words are the names of new objects or materials (cf. Bynon (1977)). Other members belonging to open classes are also susceptible to borrowing. For illustration, let us consider the following verbs.

(2)

	MA	GA	Gloss
	fərħ	*fərħ*	"to be happy"
	qnəʕ	*qnəʕ*	"to be satisfied with"
	r̄ħal	*r̄ħal*	"to move away"
	mərd̲	*mərd̲*	"to be ill"
	qr̲a	*ɣər̲*	"to learn /read"
	smaʕ	*səmmaʕ*	"to listen /hear"
	ʕət̲t̲əl	*ʕət̲t̲ər*	"to be late"

As is shown in (2), verbs are also borrowed; yet their number is much smaller than that of nouns. Members of closed classes (namely pronouns, conjunctions and prepositions) are less frequently borrowed into Amazigh. In GA, only some of these units are transmitted. This is illustrated below.

(3)

	MA	GA	Gloss
	ɣir	*ɣir*	"just"
	baʃ	*baʃ*	"in order to"
	walakin	*walaçin*	"but"
	kulʃi	*çulʃi*	"everything"
	bəzzaf	*bəzzaf*	"a lot of"
	ʃwiya	*ʃwiya*	"little / few"

It seems likely that borrowing from closed classes is only possible in situations of intense linguistic exchange since it presupposes the cross-linguistic equations of syntactic patterns, whereas mere lexical borrowing from open classes would require only a minimum of bilingual speakers in the transmission process (cf. Bynon (op. cit.)).

Now that we have given an idea on lexical items that are candidates for borrowing, we should mention that once these words are transferred into GA, they may not undergo phonological or morphological changes. Loans of this kind are said to be partially assimilated because they still contain features that are foreign to the GA system. Illustrations are given below.

(4)   **MA**   **GA**   **Gloss**

  lbab   *lbab*   "door"
  ləħlib   *ləħlib*   "milk"
  lmus   *lmus*   "knife"
  lmut   *lmut*   "death"
  lləft   *lləft*   "turnips"
  zzitun   *zzitun*   "olives"

As is clearly shown, the MA loanwords in (4) keep their original phonological and morphological structures when they are used in GA. However, in some varieties of Amazigh (Ayt Ndhir, Ayt Mguild), forms such as *lmut and lləft* are subject to the phonological process of spirantization (viz. *lmuθ* and *lləfθ*). This entails that the internal phonemic modification that the borrowed item may undergo does not depend on the word itself but on the phonological and/or morphological system of the recipient language. Some borrowed words which appear to be felt as being in some way abnormal by native speakers have to be integrated completely to the productive phonological rules of the recipient language. For this purpose, three phonological processes are at work (see also Boukous (op. cit.)).

(5)   *a- Sound substitution: in this process, the borrowers apparently make a kind of distinctive feature analysis of foreign sounds and assign them to the closest native bundle.*

       b- Segmental deletion.

       c- Syllable structure reduction

These phonological processes which may apply either individually or collectively are illustrated below.

(6)   **MA**   **GA**   **Gloss**
     a-   *Lkas*   *lças*   "cup"
          garru   *jarru*   "cigarettes"

     b-   *lʔiman*   *liman*   "faith"
          lʔislam   *lislam*   "Islam"

     c-   *ləmraya*   *ləmri*   "mirror"
          Lbidaya   *ləbdi*   "beginning"

Since only the spirantized variants of the velar stops (*k, g*) exist in GA, the words in (6a) (which comprise this set of phonemes) should undergo a process of sound substitution so as to meet the requirements of the dialect's phonological system. Moreover, as GA's consonantal inventory does not include the glottal stop /ʔ/, the latter sound deletes in the borrowed words in (6b). As for the items in (6c), owing to the fact that their shapes are felt to be peculiar (probably because of the word-final *ya*), syllable structure reduction and vowel alternation are compulsory. By virtue of these transformations, the aforementioned loanwords get fully assimilated

and thus berberized. The sounds that they contain and the distribution of these are similar to those of native words.

In addition to these phonological changes, most borrowed items are subject to the morphological rules of the recipient language. Henceforth, nouns and adjectives have to be inflected for gender and number. Consider the following illustrations.

(7) a- **Gender Inflection**

Masculine	**Feminine**		**Gloss**
asəħħar	*tasəħħart*	(<*səħħar*)	"magician"
afəllaħ	*tafəllaħt*	(<*fəllaħ*)	"peasant"
aʃəffaṛ	*taʃəffaṛt*	(<*ʃəffaṛ*)	"thief"
Abasal	*tabasalt*	(<*basəl*)	"rioter"
aqəhwi	*taqəhwiyt*	(<*qəhwi*)	"brown"
Alimuni	*alimuni*	(<*limuni*)	"orange (adj.)"

b- **Number Inflection**

Singular	**Plural**		**Gloss**
aħəddad	*iħəddadən*	(<*ħəddad*)	"blacksmith"
aʕəʒli	*iʕəʒlay*	(<*ʕʒəl*)	"calf"
Aqdim	*iqdimən*	(<*qdim*)	"ancient"
Taʒdidd	*tiʒdidin*	(<*ʒdid*)	"new"
tabrat	*tibratin*	(<*bṛa*)	"letter"
taʕəssast	*tiʕəssasin*	(<*ʕəssas*)	"guard"

By being inflected for gender and number, the forms in (7) follow the productive morphological rules of GA. As such, they behave phonologically and morphologically as Amazigh words.

Within the set of borrowed nouns from or via MA, there are many items which retain the Arabic definite article. In fact, in words such as *taləfluçt* «boat», *taddart* «house», *talbitt* «small room», the definite article /l/ loses its syntactic function and appears as an inseparable part of the stem. In contradiction, borrowed verbs reject, without exception, the use of all MA inflections and acquire those of the recipient language. Examples are given below.

(8) a- **Simple form** **Causative** **Gloss**
       lʕəb   *ssəlʕəb*   "to play"
       nʒəħ   *ssənʒəħ*   "to succeed"

    b- **Simple form** **Reciprocal** **Gloss**
       ħsəb   *mħasab*   "to count"
       sməħ   *msamaħ*   "to forgive"

    c- **Simple form** **Passive** **Gloss**
       ɣəlləf   *ttuɣəlləf*   "to cover"
       ɣdər   *ttuɣdər*   "to betray"

As is clearly seen, the MA loans in (8) can be attached the causative, the reciprocal and the passive morphemes of Amazigh verbs. Besides getting GA inflections, borrowed verbs from MA may also behave as an input from which nouns are derived (e.g. *adəffuʕ* «pushing» (<*dfəʕ*), *ssmaħt* «forgiveness» (<*sməħ*), *llʕənt* «insult» (<*lʕən*). As a result, they function as native verbs with respect to derivational morphology.

In sum, it is evident that MA has a considerable impact on the lexicon of Amazigh. In fact, a number of MA words have been borrowed into GA. Before these loanwords get totally integrated into Amazigh, they are subject to a set of processes in order to abide by the phonological and morphological systems of the recipient language.

2. Amazigh and MA Stress Systems

In the preceding section, we noted that the contact between Amazigh and MA has affected the former language nearly at all linguistic levels. In the present section, we draw a comparison between the stress systems of difeerent Amazigh and MA dialects.

Though a number of serious studies have been completed on the role played by the syllable in Amazigh and Moroccan Arabic, an important syllabically motivated phenomenon in both languages has not received the attention it deserves. It is only during the last three decades that some scholars, have started to tackle the issues related to stress assignment in different Amazigh and MA dialects.

On the basis of the research studies carried out on Idaw Tanane Tashelhiyt (ITT) (Adnor, 1995), Ayt Souab Tashelhiyt Amazigh (ASTB) (Marouane, 1997), Ait Wirra Tamazight Amazigh (AWTB) (Hdouch 2010) and Goulmima Amazigh (GA) (Faizi, 2002, 2009, 2011), nominal stress in the four Amazigh dialects depends on syllable weight. In fact, it has been found out that heavy syllables show a stronger tendency towards being stressed than do light ones. But if only light syllables are available in ITT, GA and AWTB, or if the syllables of a given word are equal in quantity in ASTB, then stress is exhibited on the ultimate position in the former dialect (i.e. ITT), and appears on the initial syllable in the other three varieties (i.e. ASTB, GA and AWTB).

As far as verbal stress is concerned, each Amazigh variety seems to follow a different pattern. In fact, it has been found that the criteria governing the placement of stress in verbs are distinct from those determining its location in nominal forms. Stress in verbal forms is not weight-dependent; it is quasi-fixed.

In contrast, studies carried out on stress in MA, namely Benkaddour (1982), Benkirane (1982), El Hadri (1993), Fares (1993) and Kably (2002), have proven that the placement of stress in MA is effected in two different ways. According to El Hadri (op. cit.) and Fares (op. cit.), stress 'regularly' falls on the penultimate position, which means that the criterion which is taken into consideration is the position of the syllable within the word and not its internal composition. For illustration, let us consider the following stress assignment rules reproduced in Kably (op. cit.).

(9) *Stress the penultimate except*

(i) if the word starts by a sequence of CV syllables, stress the one in initial position.

(ii) in disyllabics:

 a- *in a structure $CV_1 CCV_2$ and V_1 and V_2 are both schwas, stress the stem.*

 b- *in a structure $CV_1CCV_2C = \partial$ and V_2 is a full vowel, then stress V_2.*

(iii) if the penultimate is an object clitic, stress the preceding syllable.

On the other hand, Benkaddour (op. cit.), Benkirane (op. cit.) and Kably (op. cit.) claim that stress assignment in their native dialects is contingent on syllable weight and on syllable position. These researchers agree on the fact that stress falls on the ultimate syllable if it is heavy. In the absence of such a syllable, the penultimate attracts stress.

Taking into account this brief overview, it is evident that the parameters governing stress distribution in different MA varieties show marked differences from those postulated for Amazigh dialects. Although both languages resort to the criterion of syllable weight to predict the prominence of certain syllables, MA restricts the domain of application of this parameter only to word-final syllables. By contrast, the heaviness requirement may be used in Amazigh in most syllabic positions.

Therefore, although the contact obtaining between MA and Amazigh is argued by Bounfour (1985) to affect the stress patterns produced by Igliwa Tashelhiyt Amazigh informants, Amazigh varieties are subject to no interference of the MA stress system. This entails that Amazigh words get Amazigh stress and MA ones receive this dialect's stress. In what follows, we shall examine stress distribution in MA loanwords used in GA.

3. Stress Placement in MA Loanwords used in Amazigh

In the previous section, we drew a comparison between the parameters predicting stress distribution in Amazigh and MA. In this section, we discuss the stress patterns of MA loanwords incorporated in GA. Up to this point, the statements made about stress distribution in MA concern the patterns produced by the native speakers. The logical question to ask is then: are these stress contours preserved when the words that bear them are introduced into a foreign language? An analysis of stress in the set of words borrowed into GA reveals that we should distinguish between loanwords that have undergone no phonological or morphological change and those that have been nativized. The reason behind this distinction is that we noticed that borrowed items which belong to the first set do not abandon the stress pattern they acquired from the source language. For illustration, consider the following examples.

(10)   a-   *wálu*   "nothing"
              mə'rḏi   "obedient"
              lmusəʒʒála   "tape recorder"
              ttəlfáza   "television"

        b-   *atáy*   "tea"
              xízzu   "carrots"
              xálti   "my aunt"
              ləbyút   "rooms"

These words do not need a GA stress pattern to get fully integrated into the phonological system of the language. The items in (10a), stressed on the penultimate syllable, retain stress on that syllable when they are produced by GA native speakers. Likewise, the words in (10b), which are assigned stress via the heaviness requirement parameter, show up with GA. Nevertheless, it is useful to note that leaving apart the forms *mə'rḏi* and *lmusəʒʒála*, the stress patterns of all the other words in the list can be accounted for by resorting to the criteria governing stress location in GA. Further evidence that backs up the assumption that MA and Amazigh share a set of words with similar stress patterns is shown by the stress of proper nouns. In fact, since Arabic items such as *brahím*, *yúsəf*, *rafída* and *samíra*, are used equally by both Arabs and Amazighs, their stress patterns remain unaltered. Taking these observations into consideration, we might claim that native speakers of Amazigh simultaneously make use of two distinct prosodic systems: one to produce Amazigh items and the other to utter MA words. On the other hand, closer inspection of the world's languages shows that there are a number of similar loans that get a different stress pattern once they are part of another language. The Italian word *brávo*, for instance, is stressed on the penultimate syllable while it is assigned stress on the ultimate position in French (viz. *bravó*). Also, the Russian word *spútnik* which is stressed initially acquires a word-final stress in French (*sputník*) (cf. Garde (1968)). Likewise, the word *canada* does not sound in the same manner in English, French and Hungarian because the syllables of the item in question differ with respect to length and strength. This is illustrated below (cf. Mackey 1976: 24).

(11)   English   *ca/na/da*   strong / weak / weak
        French   *ca/na/da*   medium / medium / strong
        Hungarian   *ca/na/da*   strong / medium / medium

As is shown in (11), the word *canada* gets different stress patterns in the three languages: In fact, while the initial syllable (*ca-*) bears stress in English and Hungarian, the last one (*-da*) is assigned prominence in French. The question that is brought to the fore at this stage is why the items presented in (10) do not exhibit different stress patterns as *bravo*, *sputnik* and *canada*? A possible answer is that the latter items are shared by speech communities which are far away from each other. Furthermore, the borrowed items are very limited in number and as such they have to be adapted to the stress patterns of the recipient language. By contrast, the loans in (10) are used by MA and GA communities, which are in constant daily contact. As such, these loanwords preserve their original stress patterns unless they undergo

certain phonological or morphological changes. Words which undergo solely the phonological process of sound substitution follow the stress assignment rules prescribed for them in MA. Given that stress in GA is weight-dependent, the replacement of one phoneme by another does in no way alter the syllable structure of loanwords. In this respect, consider the stress patterns of the items given below.

(12)	MA	GA	Gloss
	gárru	*járru*	"cigarettes"
	lgamila	*ljamila*	"porringer"
	ləksáwi	*ləçsáwi*	"dresses"
	ləkʷrása	*ləçʷrása*	"chairs"

Despite the fact that the loanwords in (12) have undergone some phonological changes (i.e. spirantization of the velar stops) when integrated into Amazigh, their stress patterns remain unchanged.

It should be also noted that even though Kably (op. cit) argues that the adjunction of the definite article (*l-*) to the base induces no stress change in Jdidi MA words, the prefixation of this morpheme (which always accompanies the root in Amazigh) to certain disyllabic forms brings about a shift of stress. This is illustrated by the following forms.

(13)	MA	GA	Gloss
	lmə´ska	*lməsçá*	"chewing gum"
	lə´blya	*ləblyá*	"addiction "
	lə´ħlwa	*ləħlwá*	"candy "
	lə´kri	*ləçrí*	"rent"
	lfə´rʃi	*lfərʃí*	"cork"

Henceforth, when these items are used in GA, stress does not fall on the penultimate syllable occupied by schwa as predicted by the Jdidi MA stress assignment rules. On the contrary, stress in these strings always shows up on the final syllable. It seems then that the aforementioned items tend to be stressed by having recourse to the GA rules of stress assignment.

Loans that have undergone other phonological processes (namely syllable structure reduction) or any morphological operation (e.g. gender and number inflections) do not keep their original stress. Since these forms operate as native words, their stress patterns are no longer subject to the criteria governing stress in MA. In this case, these items have to adhere to the prosodic structure of GA. Consult the following set of berberized loan-words.

(14)		MA	GA	Gloss
	a-	*lbidáya*	*ləbdí*	"beginning"
		ləmráya	*ləmrí*	"mirror"
	b-	*ħanút*	*taħanút*	"shop"
		wə´rqa	*tawríqt*	"paper"
		qbíla	*taqbílt*	"tribe"

c-	*kúra*	*taçurín*	"balls"
	dár	*taddarwín*	"houses"
	ʒəllába	*tiʒəllubay*	"djellabas"

Since the items in (14a) undergo a process of syllable structure reduction, and those in (14b, c) take the feminine and plural inflections of Amazigh, their shapes get changed. Consequently, new stress patterns compatible with the stress system of GA show up.

4. Conclusion

The objective of this paper was to examine the potential impact that the language contact between MA and Amazigh may have on stress. In this respect, we have found out that the criteria determining stress distribution in both languages are distinct. This leads us to conclude that, despite the fact that the prolonged contact between MA and GA has an immense effect on most linguistic levels, the phenomenon of stress is not susceptible to outside influence. Concerning MA words borrowed into Amazigh, we discovered that this set of items usually keep their original stress patterns. However, if they undergo a process of syllable structure reduction or a morphological process via which they get berberized, their stressing would obey the criteria of the recipient language.

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