MOROCCAN ARABIC BORROWED CIRCUMFIX FROM BERBER: INVESTIGATING MORPHOLOGICAL CATEGORIES IN A LANGUAGE CONTACT SITUATION

1. INTRODUCTION

Moroccan Arabic (MA, hereafter) has a bound derivational noun circumfix /ta-. . -t/. This circumfix productively attaches to base nouns to derive various types of abstract nouns. This /ta-. . .-t/ circumfix is unique because it occurs in no other dialect of Arabic (Abdel-Massih 2009, Bergman 2005, Erwin 1963). There is little question that this morpheme has been borrowed from Berber into Moroccan Arabic, as has been noted by some of the earliest analyses of the language (c.f. Guay 1918, Colon 1945).

This circumfix is highly productive on native MA noun stems but not productive on borrowed Berber stems (which are rare in MA). This pattern of productivity is taken to be evidence in support of direct borrowing of morphology (c.f. Steinkrüger and Seifart 2009) and against a theory where borrowed morphology enters a language as part of unanalyzed complex forms which later spread to native stems (c.f. Thomason and Kaufman 1988; Thomason 2001). Furthermore, it challenges the principle of a “borrowability hierarchy” (c.f. Haugen 1950) where lexical morphemes are borrowed before grammatical morphemes. Additionally, the prefixal portion of the MA circumfix, *ta-*, is a complex (presumably unanalyzed) form from the Berber /t-/ feminine + /a-/ absolute state. Moreover, the morpheme in MA has been borrowed as a derivational morpheme while the primary functions of the donor morphemes in Berber are inflectional.

This case of a borrowed circumfix is examined as an instance which does not conform to traditional typologies of language change through contact patterns and how the boundaries between morphological categories (i.e. inflectional/derivational) are transformed in a language contact situation.

In section 2, the form and functions of the circumfix in MA and Berber are detailed. Section 3 discusses the MA borrowed circumfix in relation to current theories about the typology of borrowed morphology. Section 4 discusses the findings of this paper and their importance with respect to generalizations about the typology of language change through contact and the boundaries of morphology.

*Author's address: University of Colorado at Boulder, Department of Linguistics, Hellems 290, 295 UCB, Boulder CO 80309-0295, USA. Email: georgia.weissman@colorado.edu*
2. BORROWED CIRCUMFIX IN MOROCCAN ARABIC FROM BERBER

The form and function of the circumfixes in MA and Berber are outlined in this section.

2.1. Form and Function of the MA Circumfix

A circumfix can be defined as a discontinuous morpheme that surrounds a base, with one part of the morpheme acting as a prefix and the other part of the morpheme acting as a suffix (Harris and Xu 2006). The circumfix in MA takes the form /ta-. . -t/ when attaching to base nouns. This marker is considered a circumfix because neither the prefixal part /ta-/ nor the suffixal part /-t/ occur with a base alone to derive the same function.

The diffused MA circumfix has the function of deriving abstract nouns from base nouns. There are three main types of abstract nouns derived with the circumfix: nouns of profession, nouns of human characteristics, and general abstract nouns.

The first type of abstract noun that this morpheme derives in MA is a noun of occupation with the sense of “the profession/art/occupation of x” from a base noun of occupation with the meaning of “x.” The forms in (1) show the base lexical items which refer to an occupation and then the derived nouns with the circumfix which refer to ‘the art/profession’ of that occupation.

(1) Moroccan Arabic

<table>
<thead>
<tr>
<th>Base Noun</th>
<th>Gloss</th>
<th>Derived Abstract Noun</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>bənnay</td>
<td>‘mason’</td>
<td>tabənnayət</td>
<td>‘profession/art of masonry’</td>
</tr>
<tr>
<td>buwwab</td>
<td>‘doorman’</td>
<td>tabuwwabət</td>
<td>‘profession/art of doorman’</td>
</tr>
<tr>
<td>kotbi</td>
<td>‘bookseller’</td>
<td>takotbiyət</td>
<td>‘profession/art of bookseller’</td>
</tr>
<tr>
<td>bramli</td>
<td>‘barrel-maker’</td>
<td>tabramlit</td>
<td>‘profession/art of barrelmaking’</td>
</tr>
</tbody>
</table>

(Harrell et al. 1963)

The second type of abstract noun the circumfix can derive in MA is a noun of quality/characteristics of people from base nouns with related meanings. Examples of these base and derived nouns are illustrated in (2).

(2) Moroccan Arabic

<table>
<thead>
<tr>
<th>Base Noun</th>
<th>Gloss</th>
<th>Derived Abstract Noun</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kəddab</td>
<td>‘liar’</td>
<td>takəddabət</td>
<td>‘habitual lying’</td>
</tr>
<tr>
<td>ʔadamit</td>
<td>‘polite’</td>
<td>taʔadamit</td>
<td>‘politeness’</td>
</tr>
</tbody>
</table>

(Harrell 1962, Harrell et al. 1963)
Finally, general abstract nouns can be derived from concrete base nouns, as illustrated in (3), below:

(3) Moroccan Arabic

<table>
<thead>
<tr>
<th>Base Noun</th>
<th>Gloss</th>
<th>Derived Abstract Noun</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>dorri</td>
<td>‘child’</td>
<td>tadørrit</td>
<td>‘childhood’</td>
</tr>
<tr>
<td>šgaʃ ‘ill-fated (person)’</td>
<td>tašguʃiyot</td>
<td>‘bad luck’</td>
<td></td>
</tr>
</tbody>
</table>

Note that the underlying form of the circumfix is considered here to be /ta-. .-.t/. This form surfaces when attached to stems that end in vowels, as shown above in the words ta’adamiit ‘politeness’ < ādami ‘polite’ and tabramlit ‘profession of barrel-maker’ < bramli ‘barrel-maker’. However, when the stem ends in a consonant an epenthetic schwa [ ] is inserted between the stem and suffixal portion of the circumfix. This can be seen above in the words takøddabur ‘habitual liar’ < kɔddab ‘liar’ and tabønnayøt ‘profession of masonry’ < bønnay ‘mason’. Thus, the circumfix has conditioned allomorphy depending on the form of the stem it attaches to.

Importantly, all of the base nouns given in Tables (1)-(3) are MA native stems. Thus, the circumfix is highly productive on native stems.

2.2. Form and Function of the Berber Circumfix

The Berber languages have a circumfix /t-. .-.t/ which has several functions. First, the Berber circumfix is used in the formation of grammatically feminine nouns in the singular. Second, the circumfix is used to form abstract nouns. Furthermore, the circumfix can form a noun of single unit from a collective noun. Finally, the circumfix can form diminutive nouns from masculine nouns.

The following examples illustrate the functions of the /t-. .-.t/ circumfix the Moroccan Berber languages. The /a/ morpheme is a nominal marker of absolute state, as is explained in section 3.1.1, below. The most predominant function of the circumfix in the Berber languages is to mark nouns as grammatically feminine, as shown below in Tashelhit:

(4) Tashelhit (Southern Morocco)

<table>
<thead>
<tr>
<th>Feminine Nouns – Absolute State</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-a-šlh-t</td>
<td>‘Tashelhit, female speaker’</td>
</tr>
<tr>
<td>t-a-frux-t</td>
<td>‘girl’</td>
</tr>
<tr>
<td>t-a-fuk-t</td>
<td>‘sun’</td>
</tr>
</tbody>
</table>

(Dell and Elmedlaoui 2002: 7, 17, 26)
The nouns in (4), above are shown with the feminine circumfix in the absolute state, marked by /a-/ . However, there is another way to inflect these nouns, which is for annex state. The same nouns are given below in (5) in the annex state, which is marked by a zero morpheme with the feminine circumfix:

(5) Tashelhit (Southern Morocco)

<table>
<thead>
<tr>
<th>Feminine Nouns – Annex State</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-šlḥ-t</td>
<td>‘Tashelhit, female speaker’</td>
</tr>
<tr>
<td>t-frux-t</td>
<td>‘girl’</td>
</tr>
<tr>
<td>t-fuk-t</td>
<td>‘sun’</td>
</tr>
</tbody>
</table>

(Ibid)

Note that the /a-/ is a marker of noun state in Berber. The feminine circumfix does occur in Berber without initial /a-/ when it is inflected for annex state.

The function of marking feminine gender applies to animate nouns, as in (5)a. and b. where the noun stem without the circumfix corresponds to the masculine meaning (c.f. a-šlḥ ‘Tashelhit, male speaker’; a-frux ‘boy’). Additionally, this function applies to inanimate nouns where the circumfix conveys grammatical gender, as in (5)c.

The second function of the /t-. . .-t/ circumfix in Berber is to derive abstract nouns. Often, these nouns are derived from verb stems. The data below is from Tamazight:

(6) Tamazight (Central Morocco)

<table>
<thead>
<tr>
<th>Abstract Nouns</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-alum-t</td>
<td>‘blame’</td>
</tr>
<tr>
<td>t-aẓallit-t</td>
<td>‘praying’</td>
</tr>
<tr>
<td>t-ikkī-t</td>
<td>‘passing’</td>
</tr>
</tbody>
</table>

(Abdel-Massih 1971: 96)

The examples below in (7) illustrate the third function of the circumfix, which is to derive count nouns from collective nouns. The data below illustrates this process in Tamazight:

(7) Tamazight (Central Morocco)

<table>
<thead>
<tr>
<th>Collective Noun</th>
<th>Gloss</th>
<th>Derived Noun of Unity</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>azalim</td>
<td>‘onions’</td>
<td>t-azalim-t</td>
<td>‘an onion’</td>
</tr>
<tr>
<td>ʔzznbuʕi</td>
<td>‘oranges’</td>
<td>t-ʔzznbuʕi-t</td>
<td>‘an orange’</td>
</tr>
<tr>
<td>xizzu</td>
<td>‘carrots’</td>
<td>t-xizzu-t</td>
<td>‘a carrot’</td>
</tr>
</tbody>
</table>

(Abdel-Massih 1971: 118)

Finally, the circumfix is used as a derivational morpheme to create diminutive (or augmentative) nouns.
In (8), a grammatically masculine noun *udm* ‘face’ can take the feminine circumfix to derive a diminutive *t-udm-t* ‘little face’. This function also works essentially in reverse whereby grammatically feminine nouns with the circumfix can be derived into an augmentative. This is illustrated below in (9). A grammatically feminine noun *t-aryal-t* ‘basket’, which takes the circumfix, can be derived into an augmentative by removing the circumfix to create *aryal* ‘large basket’.

The two circumfixes differ in both form and function. First, the MA circumfix has been shown to be /ta-. . .-t/, while the circumfix in Berber is simply /t-. . .-t/. The difference is not great, but it reveals that this morpheme was borrowed as an unanalyzed complex form consisting of component inflectional morphemes, as discussed in the next section.

Another difference between the MA circumfix and the Berber circumfix is that while the latter occurs on both native and borrowed stems productively, the MA circumfix is mainly productive with MA native stems. This is odd considering it is a borrowed morpheme. This distributional difference is also examined in the next section. Finally, the functions of the MA and Berber circumfixes differ. While the circumfix (and its component parts) are inflectional morphemes in Berber, they have been analyzed and are used as a single derivational morpheme in MA. These facts explored in this paper make the MA circumfix an insightful instance of borrowed morphology and how the phonological, lexical, and semantic boundaries of morphology become transformed in situations of language contact.

Furthermore, it is worth noting that while the circumfix in Berber is a feminine or diminutive suffix, the morpheme becomes an abstract noun marker in Moroccan Arabic. In other words, there appears to have been a generalizing of the function of the morpheme from a feminine and abstract noun marker in Berber to just the abstract noun function in the receiving language. This is typical of morphology diffused from one language to another through contact.

### Table: Circumfixes in MA and Berber

<table>
<thead>
<tr>
<th>Base Noun</th>
<th>Gloss</th>
<th>Diminutive</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>udm</em></td>
<td>‘face’</td>
<td><em>t-udm-t</em></td>
<td>‘little face’</td>
</tr>
<tr>
<td><em>afus</em></td>
<td>‘hand’</td>
<td><em>t-afus-t</em></td>
<td>‘baby hand’</td>
</tr>
</tbody>
</table>

(8) Tashelhit (Southern Morocco)
(Dell and Elmedlaoui 2002: 26, Kossmann 2008: 76)

<table>
<thead>
<tr>
<th>Augmentative</th>
<th>Gloss</th>
<th>Feminine Noun</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>aryal</em></td>
<td>‘large basket’</td>
<td><em>t-aryal-t</em></td>
<td>‘basket’</td>
</tr>
<tr>
<td><em>amar</em></td>
<td>‘large beard’</td>
<td><em>t-amar-t</em></td>
<td>‘beard’</td>
</tr>
</tbody>
</table>

(9) Tashelhit (Southern Morocco)
(Dell and Elmedlaoui 2002: 26, Kossmann in press: 76)

2.3. **Comparing the Circumfix in MA and Berber**

The two circumfixes differ in both form and function. First, the MA circumfix has been shown to be /ta-. . .-t/, while the circumfix in Berber is simply /t-. . .-t/. The difference is not great, but it reveals that this morpheme was borrowed as an unanalyzed complex form consisting of component inflectional morphemes, as discussed in the next section.

Another difference between the MA circumfix and the Berber circumfix is that while the latter occurs on both native and borrowed stems productively, the MA circumfix is mainly productive with MA native stems. This is odd considering it is a borrowed morpheme. This distributional difference is also examined in the next section. Finally, the functions of the MA and Berber circumfixes differ. While the circumfix (and its component parts) are inflectional morphemes in Berber, they have been analyzed and are used as a single derivational morpheme in MA. These facts explored in this paper make the MA circumfix an insightful instance of borrowed morphology and how the phonological, lexical, and semantic boundaries of morphology become transformed in situations of language contact.

Furthermore, it is worth noting that while the circumfix in Berber is a feminine or diminutive suffix, the morpheme becomes an abstract noun marker in Moroccan Arabic. In other words, there appears to have been a generalizing of the function of the morpheme from a feminine and abstract noun marker in Berber to just the abstract noun function in the receiving language. This is typical of morphology diffused from one language to another through contact.
3. PROBLEMS WITH THEORIES OF BORROWED MORPHOLOGY

There are many commonly held generalizations about what can be easily borrowed in a situation of language contact, as opposed to what is more rarely borrowed. For example, Haugen (1950) outlined a hierarchy of patterns based on the relative freedom of which they are borrowed. This typology generalized that “nouns are the most easily borrowed”, followed by other lexical categories, then affixes, then inflectional morphology, then sounds (224). He supported this hierarchy with evidence from loanword data.

More recently, studies of language contact reiterate this generalization about the hierarchy of borrowability. Thomason and Kaufman (1988) and Thomason (2001) outline predictions and typological generalizations as to which types of elements are borrowed in language contact contexts. They make the generalization that vocabulary is borrowed before structure (Thomason 2001: 69). This generalization is not supported by the borrowed circumfix in MA. This section outlines some of the features of the circumfix that do not conform to the much discussed typologies of borrowed morphology.

3.1. Pattern of productivity

Note that the borrowed circumfix (in both the recipient and donor languages) is a bound morpheme – it always occurs attached to a base noun stem. As was shown in table (1)-(3), the borrowed circumfix is highly productive on native MA noun stems. However, the MA circumfix is not highly productive on borrowed Berber stems (since they are rare in MA). While the exact percentage of borrowed lexical items in MA from Berber has not been calculated to our knowledge, many researchers support the claim that “Berber borrows from MA more than the latter borrows from the former” due to both the prestige of MA since it is speakers associate it with Standard Arabic and since Berber-MA bilinguals are usually L1 Berber speakers, not vice versa (Sadiqi 1997: 14, Ennaji 1997).

Statistics on the percentage of MA loanwords in Berber can be found. For example, the Northern Moroccan Berber language Tarafit has 51.7% of its lexicon consisting of loanwords, 41.7% of those loanwords originating from dialectal Arabic (Kossmann 2009: 197-8).

This pattern of productivity is taken to be evidence in support of direct borrowing of morphology (c.f. Steinkruger and Seifart 2009) and against a theory where borrowed morphology enters a language as part of unanalyzed complex forms which later spread to native stems (c.f. Thomason and Kaufman 1988; Thomason 2001). In addition, Thomason also claims that derivational affixes are borrowed through loanwords and later spread to native stems (2001: 70).

Evidence that the MA circumfix is an instance of direct borrowing of morphology comes from MA loanwords in Berber: a large number of MA loanwords in Berber are transformed to match the inflectional patterns of Berber; specifically, they are inflected for noun state and gender. The borrowed stems from MA that occur in Berber with Berber inflectional morphology can be found in MA with this Berber
inflectional morphology reanalyzed as a single derivational morpheme. There is no evidence that these native MA stems are being re-borrowed back into MA, which might be suggested if it is claimed that these forms were initially borrowed whole with the inflectional morphology unanalyzed, since these stems are not being semantically or phonologically transformed in any way and they occur prevalently in MA without the circumfix. Rather, it appears that the circumfix entered MA on these native stems and has been productively adopted by MA speakers and generalized as a derivational morpheme. This scenario of the MA circumfix as an instance of direct borrowing of morphology is explored in this section.

3.1.1. Noun State in Berber

Borrowed morphology does not always keep the same phonological shape when diffused from one language to another. However, finding evidence for why the shape of the morpheme has changed from one language to the other can give insight into what speakers do when encountered with imported morphological boundaries. There are two points of evidence which explain why the shape of the prefixal portion of the MA circumfix has been borrowed from Berber as /ta-/, rather than simply /t-/. First, the one of the two morphological forms of nouns in Berber, the absolute state, most frequently has initial vowel /a/ in the noun stem. Secondly, nouns borrowed into Berber from MA often take initial /a/.

All nouns in Berber occur in one of two morphological ‘states’: absolute (état libre) or annex (état d’annexion). A morphological change signals the two alternative forms of nouns, whose distribution is determined by syntactic position and other syntactic and morphological properties of the phrase.

The data given in (10) is a nominal paradigm for the noun stem a-drar ‘mountain’ in the Absolute and Annex states in Tashelhit Berber:

(10) Tashelhit (Southern Morocco)

Nominal Paradigm: a-drar ‘mountain’

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute</td>
<td>a-drar</td>
<td>t-a-drar-t</td>
<td>y-drar-n</td>
<td>t-i-drar-in</td>
</tr>
<tr>
<td>Annex</td>
<td>w-drar¹</td>
<td>t-drar-t</td>
<td>w-drar-n</td>
<td>t-drar-in</td>
</tr>
</tbody>
</table>

(Dell and Elmedlaoui 2002: 29)

¹ Glides alternate with their vocalic counterparts when phonologically conditioned (Dell and Elmedlaoui 2002: 29-30).
Absolute state of masculine and feminine singular nouns is marked by initial /a-/ of the stem (Achab 2003: 2). In the annex state the stem is prefixed with either a /w-/ in the masculine or a zero morpheme in the feminine. Sometimes, stems in Berber have lexically specified initial vowels, such as /a/, /i/ or /u/, in which case absolute marker /a/ is either assimilated to the initial vowel or deleted through hiatus resolution: adjacent or long vowels are not permitted in Northern Berber (Dell and Elmedlaoui 2002).

The addition of a schwa between the stem and the final /-t/ of the circumfix can be explained as epenthesis of a vowel, as evidenced by the fact that when a vowel-final stem takes the circumfix, no schwa is inserted (e.g. *bramli ‘barrel-maker’, *tabramli-t ‘profession of barrel-maker’).

The data on Berber noun classes absolute state and annex state begs the question: if the circumfix occurs in Berber around stems without any additional vowel, as in the feminine singular annex state form of the noun in (25) above, why was it not borrowed into MA in this form? The answer to this question lies in the distribution of noun state in Berber. The most important property of noun state in Berber, for our purposes, involves dependency implications. Specifically, nouns in absolute state can are independent – they can stand alone – while nouns in annex state are dependent in that they must occur and be interpreted with another element preceding it in a clause (Chaker 1988). This also follows Basset (1932): “l’état d’annexion [s’emploie] quand le nom, sujet du verbe, est placé après lui, quand il est complément déterminatif, quand il est précédé d’une preposition: en somme quand la voyelle préradicale ou préformative tombe, elle tombe la ou le mot fait étroitement corps avec celui que le précède.« (173).

The examples below illustrate this point. A noun with the absolute marker /a-/ as given in (11), can be stated by itself.

(11) Kabyle (Algeria)
  t-a-zemmur-t
  F-ABS-olive.tree-F
  ‘An olive tree’

  (Amina Mettouchi, p.c.)

However, with annex state morphology must occur post-verbally or following a preposition. For example, in (12)a., the noun uzemmur ‘an olive’ has an initial /w-/ marking annex state and it occurs after a quantifier a eqqa ‘a grain of’. Crucially, the noun uzemmer is ungrammatical if stated by itself, as in (12)b.

(12) Kabyle (Algeria)
  a. a eqqa u-zemmur
  a.grain.of ANN-olive
  ‘an olive’
  b. *u-zemmur
  *ANN-olive

  (Amina Mettouchi, p.c.)
The circumfix in Berber is just /t-...-t/ to mark the feminine and most often occurs around stems with initial /a/ vowels inserted to mark absolute state. This would be the borrowed form because nouns in the absolute state can be stated independently. If this circumfix was borrowed with annex state morphology (without the vowel /a/), it would probably have to be borrowed with another syntactic element since annex state nouns in Berber always occur in a tight relationship with a preceding syntactic element. Since the stem in MA usually begins with a consonant, there has been a reanalysis of the Berber circumfix to have an initial /ta/ to mirror the shape of words with this circumfix in Berber.

3.1.2. /ta/- as an unanalyzed complex form

The MA circumfix has the form /ta-...-t/. However, the form of the Berber circumfix is simply /t-...-t/ with no state morphemes. Thus, there is a slight difference in shape of the prefixal portion between the two morphemes, specifically an additional /a/ vowel which consistently appears in all the MA instances of the morpheme. However, a full vowel such as /a/ has never been described as being epenthetic in MA. The fact that the circumfix exists in MA with the /a/ has significance in regards to the nominal morphology of the donor language, Berber. Specifically, the /a/ vowel is a marker of absolute state in Berber, in nouns both with and without the feminine circumfix. The initial portion of the prefix in MA has been borrowed as an unanalyzed complex form /ta- / with no meaningful component morphemes. It is not uncommon for languages to borrow a complex morphemes as an unanalyzed single morpheme, but since that this morpheme has been borrowed into MA from Berber without the conduit of Berber loanwords makes this an interesting fact. The circumfix in MA has been reanalyzed in the process of being borrowed without the conduit of large Berber loanwords in the language.

3.1.3. MA loanwords in Berber

Many MA lexical items have been borrowed into Berber. These loanwords often take Berber inflectional morphology. For example, in Tashelhit Berber, MA words are “berberized” (term from Aspinion 1953) by adding the absolute state morpheme /a-/ to the beginning of the stem, as shown below in (13).

(13) Tashelhit (Southern Morocco)

<table>
<thead>
<tr>
<th>Borrowed Form</th>
<th>Gloss</th>
<th>Moroccan Arabic Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>abənnay</td>
<td>‘bricklayer’</td>
<td>&lt; bənnay</td>
</tr>
<tr>
<td>axəbbaz</td>
<td>‘bread-maker’</td>
<td>&lt; xaβbax</td>
</tr>
<tr>
<td>ahažžam</td>
<td>‘barber’</td>
<td>&lt; hažžam</td>
</tr>
</tbody>
</table>

(Aspinion 1953: 9-36)

The loanwords from MA illustrated in (29) are borrowed into Tashelhit Berber with initial vowel /a-/ which marks absolute noun state. Loanwords can be fully
inflected for both noun state and gender, for example the feminine gender is marked with the /t-...t/ circumfix, as illustrated in (14):

(14) Tamazight (Central Morocco)

<table>
<thead>
<tr>
<th>Masc. Form</th>
<th>Gloss</th>
<th>Fem Form</th>
<th>Gloss</th>
<th>Moroccan Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>a-xddam</td>
<td>'worker M'</td>
<td>t-a-xddam-t</td>
<td>'worker F'</td>
<td>xddam</td>
</tr>
<tr>
<td>a-rddam</td>
<td>'demolisher M'</td>
<td>t-a-rddam-t</td>
<td>'demolisher F'</td>
<td>rddam</td>
</tr>
</tbody>
</table>

(Abdel-Massih 1971: 92-5)

The forms in (14) show words borrowed from MA into Tamazight that not only have the inserted /a/ vowel in the masculine form, but take the feminine circumfix and the /a/ augment in the feminine form.

All the Arabic loanwords found in Berber given in (13) and illustrated in (15) can take the /ta-...-t/ circumfix in MA as an abstract noun and occur in their unborrowed form (base noun).

(15) Moroccan Arabic

<table>
<thead>
<tr>
<th>Base Noun</th>
<th>Gloss</th>
<th>Derived Abstract Noun</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>bənna y</td>
<td>'bricklayer'</td>
<td>tabənna yat</td>
<td>'occupation of bricklayer'</td>
</tr>
<tr>
<td>xəbbaz</td>
<td>'bread-maker'</td>
<td>taxəbbazat</td>
<td>'occupation of bread-maker'</td>
</tr>
<tr>
<td>həzzarella</td>
<td>'barber'</td>
<td>tahəzzarella</td>
<td>'occupation of barber'</td>
</tr>
</tbody>
</table>

(Harrell et al. 1963)

The pattern of borrowing evidenced here is one where lexical items are being borrowed from MA into Berber. In Berber, these nouns are inflected for noun state and gender like native Berber words. These native MA words can be found in MA with this Berber inflectional morphology reanalyzed as a single circumfix. Since the native MA base nouns are not transformed in any way it can be argued that the /ta-...-t/ circumfix is being directly borrowed into MA from Berber using the native MA stems first as a conduit to later being used productively in the language.

3.1.4. Direct Borrowing of Morphology

The pattern that can be inferred for the MA circumfix is one where MA lexical items are diffused into Berber, the most common language contact scenario, then these stems are inflected to match the inflectional patterns of Berber, including noun state /a-/ and feminine gender /t-...t/. Finally, these nouns with Berber inflectional morphology are incorporated back into MA with the inflectional morphology components reanalyzed as a single derivational morpheme. Again, note that the circumfix in question is a bound morpheme in both donor and recipient languages.
Since the original nouns are native MA stems, and they have not been transformed in shape or semantics, the innovative morpheme component can be argued to be an example of directly borrowed bound morphology.

3.2. Borrowability Hierarchy

Thomason and Kaufman (1988) and Thomason (2001) outline predictions and typological generalizations as to which types of elements can be expected to borrowed in various language contact situations. Their basic prediction is that vocabulary is borrowed before structure (Thomason 2001: 69). Another determinant for borrowing in language contact: “less tightly structured features are easier to borrow than features that fit into tightly integrated closed structures” (ibid: 69).

These statements are the most recent incarnation of what generalizations have been made earlier (c.f. Haugen 1950). However, more recent studies have shed light on the fact that these generalizations cannot be considered cross-linguistic. For example, Steinkru ger and Seifart (2009) have cited numerous instances where bound derivational and inflectional morphology is borrowed without the borrowing of loanword stems (i.e. Bora morphology in Resígaro (North West Amazon) and Bisayan morphology in Chabacano de Zamboanga (Mindanao, Philippines). Along with the evidence examined in this paper where the MA circumfix can be demonstrated to be an instance of where a bound morpheme is directly borrowed from Berber, generalization such as those made by Thomason et al. need to be reexamined. A theory of language contact where needs explain and describe direct borrowing of morphology in specific situations.

4. DISCUSSION

Typological studies of morphology in language contact have made generalization about how borrowed morphology gets diffused. The borrowed MA circumfix examined here does not follow these generalizations in numerous aspects. This is an unusual diffusion pattern for several reasons. Sociolinguistically, MA can be thought of as the prestige language, in relation to the Berber dialects spoken in the same region. This fact can be further supported, linguistically, by evidence that the majority of loanword borrowing goes in the direction of MA to Berber, rather than vice versa. However, this circumfix is an example of direct borrowing of morphology. Perhaps the typical notions of the order of what is borrowed in a language contact situation (i.e. borrowability hierarchy) and what happens in situations of language prestige in a language contact situation need to be reexamined.

Examining instances such as the MA circumfix, which do not conform to wide held generalizations about the formal and functional borders of borrowed morphology, is important.
References


STEINKRUGER, Patrick/Frank SEIFART (2009) “Transfer of Derivational Morphology without Borrowing of Stems: Resigaro (Arawakan, Peru) and Chabacano (Creole,
MOROCCAN ARABIC BORROWED CIRCUMFIX FROM BERBER: 
INVESTIGATING MORPHOLOGICAL CATEGORIES IN A LANGUAGE CONTACT SITUATION

Moroccan Arabic (MA) has a derivational noun circumfix /ta-. .-.t/ that is borrowed from the neighboring Berber languages. This circumfix is highly productive on native MA noun stems but not productive on borrowed Berber stems (which are rare in MA). This pattern of productivity is taken to be evidence in support of direct borrowing of morphology (c.f. Steinkruger and Seifart 2009) and against a theory where borrowed morphology enters a language as part of unanalyzed complex forms which later spread to native stems (c.f. Thomason and Kaufman 1988; Thomason 2001); furthermore, it challenges the principle of a “borrowability hierarchy” (c.f. Haugen 1950) where lexical morphemes are borrowed before grammatical morphemes. Additionally, the prefixal portion of the MA circumfix, ta-, is a complex (presumably unanalyzed) form from the Berber /t-/ feminine + /a-/ absolute state. Moreover, the morpheme in MA has been borrowed as a derivational morpheme while the primary functions of the donor morphemes in Berber are inflectional.

This case of a borrowed circumfix is examined as an instance which does not conform to traditional typologies of language change through contact patterns and how the boundaries between morphological categories (i.e. inflectional/derivational) are transformed in a language contact situation.
Povzetek
BERBERSKI CIRKUMFIKS V MAROŠKI ARABŠČINI:
RAZISKOVANJE MORFOLOŠKIH KATEGORIJ V NA PRIMERU JEZIKOV V STIKU


Omenjeni izposojeni cirkumfiks v članku analiziramo kot primer, ki se ne ujema s tradicionalnimi tipologijami jezikovnih sprememb preko različnih vrst stikov, in primer, kako se lahko zaradi stikov med jeziki premaknejo meje med morfološkimi kategorijami (v našem primeru med oblikoslovjem in besedotvorjem).