

An Amazigh substrate in Moroccan Arabic: A sociolinguistic reconstruction of agentives¹

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ملخص

تتطرق هذه الدراسة للاتصال بين اللغتين الأمازيغية والعربية المغربيتين وتركز على أسماء الأفعال على الخصوص، حيث تخلص إلى أن هناك تأثير للأمازيغية على العربية يتجلى في أربعة أوجه. يتعلق الوجه الأول بصيغة "فعال" التي تم توسيعها لتشمل ليس فقط أسماء مختلف الحرف، كما هو الأمر في الفصحى وباقي اللهجات العربية، ولكن كذلك كثيرا من الصفات الثابتة والعادات، كما هو الحال في الأمازيغية. أما الوجه الثاني فيرتبط باستعمال ميم "مفعال" لشق أسماء الأفعال من الأفعال الثلاثية، بل حتى من الأسماء، وهو الوجه الثالث. أما الوجه الرابع، فيتجلى في وجود صيغ مختلفة تعتمد الوجوه الثلاثة السابقة لكن بمعنى واحد. وبناء على هذه المعطيات، حاولت الدراسة إعادة بناء تاريخ الاتصال بين اللغتين على أساس أن الأمازيغ الأوائل لم يكن لديهم ما يكفي من الاتصال بمتكلمين عرب لأخذ اللغة عنهم، مما شجعهم على تحويل سمات كثيرة من لغتهم الأم إلى اللغة الهدف. غير أن قيام الدولة الإدريسية وتأسيس عاصمتهم فاس رفع العربية إلى منزلة أعلى، مما شجع الأمازيغ على تفضيل الصيغ الصحيحة على الدخيلة. ولهذا أوقفوا اشتقاق أسماء الأفعال باستعمال صيغة "مفعال" واستبدلوها بـ "فعال" التي اعتقدوا أنها الصيغة الصحيحة رغم أنها تحمل في استعمالاتها كثيرا من صفات نظيرتها الأمازيغية. وقد ازداد هذا التوجه بعد الهجرات الهلالية.

Abstract

This paper proposes to approach the history of Arabic-Amazigh contact on the basis of the (ir)regularities of Moroccan Arabic participles in comparison with Amazigh agentive nouns. It is argued that MA has developed a category of agentives copied from Amazigh. Four pieces of evidence are advanced in support of an Amazigh substrate in this category: the extension of the “fəʕʕal” pattern, originally associated with occupations, the use of the prefix “m” with active participles derived from trilateral verbs, the use of the same prefix with participles derived from nouns, and the survival of variations with a mixture of these processes. On the basis of these facts, a sociolinguistic reconstruction of the Arabic-Amazigh contact is attempted. The “m” prefix is argued to be an early morphological transfer from Amazigh, when not enough Arabic input was available to Amazigh bilinguals. After the foundation of Fez as the capital of the Idrisids, correct Arabic became more prestigious, a fact which probably encouraged the erasure of salient Amazigh loans, among which was the agentive “m” prefix. The development of the “fəʕʕal” class was probably an attempt by the bilinguals to use what they thought was the correct Arabic participial form, though in fact it was a copy of the Amazigh agentive class. This tendency was further invigorated by later Hilali migrations.

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0. Introduction

Although Arabic and Amazigh have been in contact in North Africa for more than a millennium, the linguistic effects of this contact are not obvious and not much research has been done so far to unearth them. This is more true in the case of Arabic than in that of Amazigh: whereas lexical and grammatical borrowings from Arabic into Amazigh are easily noticeable even for ordinary speakers, the effect of Amazigh on Arabic tends to be less visible. So far, only short lists of Amazigh loans have been identified in North African Arabic by different researchers (e.g. Tilmatine 1999), and many of the grammatical aspects suspected to be of Amazigh origins are contested. Perhaps the best example of such aspects is the reduced vowel system of Moroccan Arabic (MA), first advanced to be a clear result of the Amazigh influence only to be doubted later (cf. Aguade 2010). What complicates the situation further is that the early contact between the two languages is historically obscure: there are very few documents from that period, and later sources are hardly reliable. Therefore, the reconstruction of the prehistory of North African Arabic promises to be very challenging.

This paper will attempt to reconstruct the formation of MA and trace the Arabic-Amazigh contact through the morphology of participles. Participles in MA and agentive nouns in Moroccan Amazigh (MAM) are derived by more than one morphological process, some of which will be argued to result from contact between the two languages. Particular attention will be given to the prefix “m-” found both in MAM and in a class of MA agentive nouns; this formal similarity will be claimed to be the source of some irregularities in MA participles. On the basis of such linguistic clues, sociolinguistic aspects of the early Arabic – Amazigh contact will be analyzed, relying on insights from contact linguistics and historical sociolinguistics. The basic claim is that the Amazigh agentive prefix “m-” was borrowed by early Arabic – Amazigh bilinguals because of lack of authentic input, but this morphological process was later on terminated and its effects gradually undone, probably because of the rise of the political influence of Arabs, despite their small number in comparison with Amazigh natives. The termination of the “m-” prefixation, however, did not lead to the adoption of Arabic participial forms but, rather, to the development of a new agentive category on the model of Amazigh agentive nouns. The new category used the “fəʕʕal” pattern but copied the semantic functions of the corresponding Amazigh class.

The paper will be articulated as follows. Section 1 provides a theoretical overview of the interaction between linguistic, historical and sociolinguistic knowledge, with a focus on North Africa, and expounds some principles and methods of sociolinguistic reconstruction. Section 2 presents briefly the agentive formation in MAm. Section 3 advances arguments for an Amazigh substrate in the formation of MA participles. Section 4 is an attempt at sociolinguistic reconstruction. Section 5 recapitulates and concludes.

1. Linguistics, history and sociolinguistic reconstruction

In contact areas like North Africa, where different peoples speaking different languages have come into contact since antiquity, it is not possible to trace the origin of a particular structure or the etymology of a lexical item without testing the plausibility of the hypothesis against facts of history. When facts of history are well-studied and safely supported by reliable sources or compelling archeological evidence, contact linguistics becomes dependent on history; but when a relevant period is still obscure or when the events reported by later sources are unreliable, history can be dependent on linguistic and dialectological research as much as these are dependent on history. Such is the current state of our knowledge about the Arabization of North Africa since the 7th century CE.

Research on the Arabic-Amazigh contact is still full of controversies despite its relatively long history, which started more than a century ago and was developed by colonial dialectologists. Very often, lack of historical knowledge about the migration and settlement of different groups opens the gate for speculation, thus weakening all possibilities for consensus. Given this situation, it is not surprising that some dialectologists turned into historians. Caubet (1998) raises the issue, reviewing a number of works by early French dialectologists of North Africa, and stressing the important contributions they have made to historical knowledge. In a subsequent paper, Caubet (2004) makes the same point again with a focus on the light that sociolinguistics can shed on dialect contact and koinéization that may have happened in the past, for there is no reason to believe that the Arabic spoken by early or later settlers was uniform. The Amazigh languages themselves were diverse and some of their speakers at least were as nomadic and mobile as the conquerors (e.g. the case of “Botr” discussed in Camps 1983). But although controversy still reigns supreme, there seems to be at least one point researchers agree on, namely, that Arabic-Amazigh contact forms layers corresponding to contact between different

groups in different periods of history. This consensus is summarized by Lévy (1995:59), who, after discussing some aspects of the Jewish Arabic dialect of Tafilalt, concludes:

On ne peut faire de dialectologie sans histoire de peuplement, sans histoire politique [...], sans histoire économique [...], culturelle (Zawiyas), soit sans chercher les facteurs du changement linguistique (arabisation, re-berbérisation), sans établir les problèmes du bilinguisme, du contact des parlers, des niveaux de langues ...²

In the case of Morocco, he asserts firmly that “dialectologie arabe et berbère sont intimement liées”³ and that we cannot do one without the other.

Amazigh speakers (i.e. Berbers) are the original inhabitants of North Africa, but the region has known successive waves of colonization. Greeks and Phoenicians founded colonies along the Mediterranean and the Atlantic coasts and, later on, the Romans managed to lay their control over part of inlands. When the might of Rome weakened, the Visigoths, a Germanic people, also invaded the parts that had been annexed by the Romans. The last power to control these parts before the Arab conquest was the Byzantine Empire. The cultural and the linguistic influence of these peoples on the local inhabitants is uncertain and, although some scholars have identified a number of Latin loanwords in Amazigh (cf. the references in Bougchiche 1997), we will probably never manage to reconstruct any good number of grammatical borrowings or semantic calques from the languages of those ancient colonizers. But that does not mean that the contact had no impact. Heath (2015), for example, who cites some dialectologists who suspected a Late Latin substratum in Amazigh and North African Arabic, claims that the analytic genitive marker in MA is a borrowing from this variety. This demonstrates the difficulty to trace substrata, superstrata or adstrata with any degree of certainty⁴.

The Arab colonization itself did not happen in a single period but extended over many centuries; nor were the Arab settlers of one and the same stock. Generally, two waves of Arab migrants are recognized, following a classification originally made by Ibn Khaldoun. The first wave is associated with the early conquest which started in the mid-7th century CE but was not complete in the case of Morocco till the first decades of the 8th century. The second wave

² “We cannot do dialectological research without referring to the history of settlement, without political [...], economic [...] or cultural (Zawiyas) history; that is, without investigating the factors of linguistic change (Arabization, re-Berberization), or a good understanding of the problems of bilingualism, dialect contact, stylistic levels, etc.”

³ “Arabic and Berber dialectology are intimately connected.”

⁴ Tilimatiné (1999:101) notes in the same vein that “Derrière un mot d’apparence arabe, peut en effet se cacher un mot berbère, qui lui-même peut provenir du grec par l’intermédiaire du latin.” [Behind an apparently Arabic word may lie a Berber word, which may itself be of Greek origin but entered the language through Latin]

corresponds to Bedouin migrations of the period between the 11th and the 13th centuries. In terms of dialects, the first conquerors are assumed to have spoken sedentary varieties of Arabic while the later migrants are known to speak Bedouin varieties. One of the major differences between the two groups concerns the pronunciation of the phoneme corresponding to the grapheme ق, which is realized as [q] or [ʔ] in the first but as [g] in the second groups of dialects. A finer-grained classification, however, could identify differences in each of the two groups. Marçais (1938), for instance, notes a number of isoglosses separating urban from rural sedentary dialects, arguing that the rural varieties exhibit many Amazigh substratal features indicating, thus, that the speakers of this group of dialects were probably Amazigh speakers who shifted toward Arabic. This can be a good example of what dialectology can contribute to social history. A similar classification of the Bedouin group could also identify further categories within the group (cf. Boukous 1995; see also the papers in Aguadé, Cressier and Vicente 1998). Whether these minor categories correspond to specific groups of migrants or to stratal residues will remain open to further research. Lévy (1998:194) warns that “c’est une tautologie que de rappeler que les parlers d’une même couche historique ne présentent pas les mêmes traits, ce qui en ferait un seul et même dialecte”⁵.

Faced with this very complex situation and a drastic shortage of historical sources about the early contact of Arabic and Amazigh, an attempt will be made to use what we know about sociolinguistic variation and contact-induced change to reconstruct some aspects of the formation of early MA and the role that Amazigh might have played in the process. The comparative method has long been recognized to have limitations not only in an adequate reconstruction of proto-languages, which is its primary goal, but also in tracing social domains in which innovations happened and the limits of their propagation (cf. the papers in Durie and Ross 1996, Romaine 1982, among others). Criticism leveled against this method targeted some of its fundamental concepts among which are the very notions of “language” and “dialect” and the family tree model they gave birth to. It has been noted, for instance, that innovations are often assumed to happen in different languages and that, when enough innovations occur in a dialect, that dialect may diverge into a distinct language. Linguists, however, have recorded many cases in which linguistic change extends over many languages (i.e. language areas). Similarly,

⁵ “It is a tautology to state again that varieties from the same historical layer do not exhibit the same features which would make of these varieties part of a single dialect.”

sociolinguists tend to consider language varieties as mere abstractions over patterns of human behavior among groups of individuals at different levels of social organization. Therefore, the domain of linguistic change should not be a language variety but rather a speech community socially defined (e.g. in terms of social networks). From this perspective, tracing the propagation of linguistic innovations in history amounts to tracing the formation and/or the disintegration of social networks, irrespective of whether they were speaking the same or different dialects/languages (sometimes referred to simply as “lects”).

The fundamental principles of sociolinguistic reconstruction have been, and are still being, developed within what is known as “socio-historical linguistics” or “historical sociolinguistics”. Since the seminal work by Romaine (1982), a lot of researchers have tried to develop new methodologies, building on previous ones, in order to reconstruct past sociolinguistic situations, something that techniques of the comparative method alone cannot achieve. In this respect, work by Ross (1996, 1997, 2005), Croft (2000), Toulmin (2009, 2012), Trudgill (2010), among others, is considered to provide the main tenets and the method for sociolinguistic reconstruction (for application of this approach to Arabic, see Magidow 2013). It is beyond the scope of this paper to discuss these works; instead, I will use the “Social Network Model”, as developed by Ross (1997). Ross focuses on the propagation of particular innovations, which he refers to as “PEvents”. These are instantiated by a set of utterances, referred to as “PNetworks”, which need not be structurally homogeneous. A change in the structure of a speech community constitutes a “speech community event” (SCEvent) which may affect the domain of future innovations. The primary mission of the historical sociolinguist is to reconstruct the prehistory of a language through a sequence of SCEvents. Toulmin (2012:507-8), one of the adepts of this model, summarizes its method in the following steps:

- I- Reconstruct linguistic innovations;
- II- Scrutinise in as much detail as possible the dialectological range of the innovations.
- III- Evaluate whether the innovations are diagnostic of Propagation Events. Look at: linguistic complexity of the innovation, ecological distinctiveness of the novel variant, and the historical sociolinguistic plausibility of propagation within the range.
- IV- Investigate whether there are linguistic grounds [...] or textual grounds for a particular sequencing of changes.
- V- Investigate socio-historical grounds for sequencing the PEvents in a certain way. [...]
- VI- Bring together and harmonise the sequencing of PEvents based on linguistic, textual and socio-historical criteria, within a unified account of language history.

It is obvious that linguistic reconstruction in this model goes hand in hand with the reconstruction of the speech community. In other words, instances of linguistic change and their range are used as clues to uncover the borders and the dynamism of the community.

In this paper, although various aspects of the Arabic-Amazigh contact will be invoked, the focus will be particularly on the morphology of active participles corresponding to Amazigh agentive nouns. The (ir)regularities of this class will be used as clues to reconstruct some stages in the formation of MA.

2. Amazigh agentive nouns

The agentive morpheme is no more productive in varieties of MAm. Relying on the few agentive nouns that have survived in the language, some scholars (cf. Aspinion 1953, Chafik 1991, Bensoukas 1994, 2014; Krim 2013) have tried to reconstruct agentive noun formation in Amazigh. According to them, agentive nouns are derived from verbs or other nouns by the prefixation of the agentive morpheme “m-”. In cases where the root contains a labial sound, the prefix usually changes into the corresponding dental nasal, most likely as an instance of dissimilation. Here are some examples:

1- amksa “shepherd”	ks “to shepherd”
amnaj “rider”	ni “to ride”
anzdam “wood collector”	zdm “to collect wood”
amsay “buyer”	sy “to buy”

In these and similar cases, the derived nouns express the meaning of agentivity, irrespective of whether the verb is transitive or intransitive. The derivation, however, is not limited to verbs taking subjects with agent roles, but can occur also with other verb types. This fact is exemplified by the following:

2- amzday “inhabitant”	zdy “live”
amaraj “lover”	iri “love/want”
amzwaru “first”	zwr “outrun”
amggaru “last”	gur “come last”

In these examples, the agentive nouns do not denote agents in the strict sense of the term. It seems that “m-” was subject to semantic extensions that included secondary uses and, thus, separated it gradually from its primary sense. This kind of extension is attested in many other

languages, including English and Arabic (compare, e.g. English “lover”, “villager”, etc. and Arabic “muhibb” (lover), “fārif” (knower)).

What is of more relevance to the present study is that the Amazigh agentive affix was also used to ascribe properties to entities, a function that is not usually associated with the equivalent Arabic construction. These are some examples:

3- amzluḍ	“poor”	zḷḍ	“to be poor”
amɣzuḍ	“bald”	ɣzuḍ	“to be bald”
amddallu	“debased”	ddull	“to be humiliated”
anfraray	“askew”	fry	“to be askew”

Apparently, this type of extension opened the door to further innovations that included even patients. A few of such cases, such as those in (4), did survive in the language, suggesting that the semantic load of “m-”, though being prototypically agentive, included also non-agentive meanings:

4- amazan	“messenger”	azn	“send”
amazɣal	“circumcised”	ɣɣl	“circumcise”
amuḍin	“patient”	aḍn	“be ill”
imnsi	“dinner”	ns	“spend the night”
timlsit	“clothes”	ls	“wear”

When we take into consideration the fact that Amazigh does not have a passive equivalent of agentive nouns, we may get an explanation why various meanings gradually became associated with one and the same morphological construction. In other words, in order to refer to a messenger, for example, using periphrasis, one has to use a clause like “wən i-tt-wazanən” (the one who is sent) or some other complex and awkward structure. In cases like those under 4, semantic extension of an extant morphological form was preferred to periphrasis.

Unsurprisingly, this system of derivation must have lasted for some time after contact with Arabic. Evidence supporting this conclusion comes from Amazigh agentive nouns based on Arabic roots, as in the examples under 5:

5- amḥsad	“envious”	amsjjḥ	“wanderer”
anzdam	“leprous”	amɣḥaḥ	“stingy”
andɣuf	“weak”	amnnaḥr	“denier”
amɣyal	“worker”	amɣawn	“helper”

All these items, and many others more, are derived from Arabic roots. The speakers who derived these and similar words must have been bilingual in the two languages to a considerable degree. This is so not because some Arabic items were borrowed in Amazigh, but because the derivation requires a mastery of the morphological process of the receiver language as well as an ability to extract roots from lexical material in the donor language. This remark will be returned to later.

Apart from this obsolete morphological system, MAm varieties today use the template CCCaC borrowed from Arabic to form agentive nouns (but see Krim 2013 for a slightly different opinion). The template was probably abstracted from the large number of Arabic borrowings referring mainly, but not exclusively, to various occupations, like those under 6 below:

6- agzzar	“butcher”	anɣɣar	“carpenter”
axyyaɣ	“tailor”	aɣllaɣ	“farmer”
abnnaj	“mason”	asbbay	“painter”
aɣɣɣar	“traitor”	aqmmar	“gambler”

Some similar agentive nouns derived from Amazigh roots are given under 7:

7- axwwan	“thief”	anbbaɣ	“ruler”
akrraz	“plower”	agnnaj	“tailor”
azddam	“woodcutter”	aɣwwal	“reaper”

It should be noted, however, that this alternative process itself is not very productive in the sense that it is not often applied to Amazigh roots, especially that speakers are dependent on Arabic for the expression of novel activities and occupations. But for our purposes, suffice it to note that contact between Amazigh and Arabic has resulted in grammatical borrowing of a morphological pattern from the second language into the first as well as the disposal of the equivalent Amazigh pattern.

With this brief diachronic and synchronic sketch of the morphology of agentive nouns in Amazigh, we can now tackle the corresponding classes in MA to consider the extent to which contact has resulted in mutual influence.

3. Moroccan Arabic participles

3.1- Form and meaning

Participles in MA, as is the case in most varieties of Arabic including the standard, can be either active or passive (cf. Harrell 1962; Heath 1987, 2002). Both of them are derived from

verbs, and their forms vary, depending on whether the verb root is trilateral or quadrilateral. When the verb is trilateral, the active participle takes the form CaCC and the passive mCCuC; but when it is quadrilateral, the active and the passive participles have the same form, namely mCCCC. For lack of space, weak verbs and irregular cases (e.g. *kla* “eat”, *qra* “read”, *baʕ* “sell”) will be overlooked since the processes involved in their derivation are not very relevant to the points being made here. The following examples illustrate the two classes of forms:

8- <u>Verb</u>	<u>Active participle</u>	<u>Passive participle</u>
<i>ḍrb</i> “hit”	<i>ḍarəb</i>	<i>məḍrub</i> ⁶
<i>ʔlb</i> “win”	<i>ʔaləb</i>	<i>məʔlub</i>
<i>krkb</i> “roll”	<i>mkərkəb</i>	<i>mkərkəb</i>
<i>tərtəq</i> “explode”	<i>mṯərtəq</i>	<i>mṯərtəq</i>

As can be noticed, the active and the passive participle forms for quadrilateral verbs have merged. In Modern Standard Arabic (MSA), as was the case in Classical Arabic (CA), the difference between the two is expressed by different vowels in the last syllable, namely ‘i’ for the active participle (e.g. *mustahlik* “consumer”) and ‘a’ for the passive (e.g. *mustahlak* “consumed”). The reduction (or deletion) of vowels in closed syllables in MA (irrespective of whether this process was inherited from an old Arabic variety or developed after contact with Amazigh) resulted in a semantic ambiguity of the outcome forms such as the last two examples under (8).

Apart from the complexities of their formal derivation, active and passive participles have a number of functions. One of the most important of these functions is to express aspect, when combined with verbal auxiliaries, particularly “*kan*” (to be). The kind of verbs that can occur in such constructions, as well as the aspect that is expressed with each type, is too complicated to deal with here at any significant detail. Again, suffice it to report that MA is not different from CA or other Arabic varieties in this respect (cf. Brustad 2000; Fassi Fehri 2004; Mughazy 2005; Cowell 1964; Boneh 2010; Prochazka and Batan 2016; Hallman 2017; for MA, see Caubet 1991). The following are examples illustrating this function:

⁶ The schwas in the MA examples throughout the paper are epenthetic and are usually inserted to break illicit consonant clusters. The mechanisms of schwa insertion are discussed by Benhallam (1989); some dialectal variations in the phenomenon are discussed in Ech-Charfi (2008).

9- kan ɾəʒəʕ

was returning

(He was on his way back)

10- kan qari l-ktab

was reading Def-book

(He had already read the book)

As can be noticed, the participles in these examples have verbal functions in the sense that they denote activities rather than entities. But while the participle in (9) denotes an on-going activity (i.e. continuous aspect), that in (10) expresses the completion of the activity in relation to the past reference point (i.e. past perfect). It seems that the appropriate interpretation of such uses of participles depends on verb semantics, linguistic context as well as pragmatic information (cf. the references cited above).

Where MA seems to diverge from CA and other Arabic dialects concerns mainly the nominal functions of participles, particularly that of agentive nouns. It is this aspect of the language that probably exhibits an Amazigh substrate, as will be argued immediately. This hypothesis will be backed by four arguments expounded in the following sub-sections: the emergence of a distinct pattern for the derivation of agentive nouns (3.2); the use of the prefix “m” with triliteral verbs (3.3); the derivation of agentive nouns from nominal roots (3.4); and the survival of variation in the derivation of some agentive nouns (3.5).

3.2- The agentive pattern “fəʕʕal” in MA

In CA, most agentive nouns have the same pattern as active participles. From the triliteral root “ʕlm”, for example, we get “ʕālim” (scientist), and from the augmented form “ʕllm”, we get “muʕallim” (teacher) (cf. Ryding 2005; Wright 1895). A small class of nouns, however, have the pattern CaCCāC (i.e. faʕʕāl), namely, those denoting some occupations. Examples of this class include “fallāḥ” (farmer), “naʕʕār” (carpenter), “ṭabbāx” (cook), etc. According to Arab grammarians, this pattern is not productive (cf. Hassan, n.d.). In modern Arabic varieties, however, the class of CaCCāC nouns has been extended to various degrees. Cowell (1962:30), for example, cites some cases from Syrian Arabic which normally correspond to active participle equivalents in CA. These include “raʕʕāš” (dancer), “bajjāʕ” (seller), “sawwāʕ” (driver)⁷, which are meant to be illustrative rather than exhaustive. Similar examples are also found in other Middle Eastern varieties.

⁷ Viz. “rāqīš”, “bāʕīš” and “sāʕīq”, respectively.

In comparison, MA has not only extended the CCCaC class, but also made of “fəʕʕal” one of the most productive agentive patterns, if not *the* most productive one. As a result of this productivity, the pattern now is no longer limited to occupations only, but also expresses all sorts of meanings that are not strictly speaking agentive. The following are some examples illustrating some of these meanings (see Appendix A):

11- xəwwaf	“fearful”	xaf	“to be afraid”
nəʕʕas	“sleeping”	nʕəs	“to sleep”
wəkkal	“gluttonous”	kla	“to eat”

What distinguishes these examples from their corresponding active participles is that they do not denote activities in a particular point in time, but rather habits associated with the referent. In this respect, such cases are similar to occupation nouns with which they share the same pattern. It is probable that the pattern was originally extracted from occupation nouns illustrated above and extended its meaning in ways exemplified by the items in (11).

While the pattern CCCaC is basically associated with trilateral roots, in which case the second consonant is geminated, it has served also for the derivation of agentive nouns from quadrilateral roots, as in the following examples:

12- bərgag	“spy”	bəznas	“drug dealer”
qəfqaf	“fearful”	ʃəmkar	“street boy”
sərbaj	“waiter”	ʃəfnaʒ	“doughnut maker”
təmtam	“stutterer”	təftaf	“sb. trembling”

Most of the items that undergo this pattern of derivation apparently have non-Arabic origins; they are either borrowed (e.g. ‘sərbaj’ from French ‘service’) or coined, mainly by a process of reduplication that is still productive in MA; hence, their informal character. The only difference between the cases in (11) and those in (12) is that the second consonant is doubled in the first, since the base is trilateral, but not in the second, where the base has four consonants. In both cases, however, one and the same template is used as a basis for derivation.

In what respect does this development bear witness to the influence of the Amazigh language? The morphology and the lexical material of agentive nouns discussed and illustrated so far are all of Arabic origin. Even the extension of the functions and semantics of the occupation noun pattern can be argued to result from internal factors leading to reanalysis. The recording of a similar phenomenon in other Arabic varieties, though to a comparatively lower degree, can serve

as evidence in favor of such an argument. The problem, however, is that the similarity between MA and MAm agentive nouns is too striking to be explained by unidirectional influence only. As was explained in Section 2 above, MAm has completely lost its original pattern of agentive nouns and replaced it by the very CCCaC pattern that has become prevalent in MA. In order to defend the hypothesis that grammatical borrowing happened unilaterally from MA into MAm, a sociolinguistic situation must be postulated in which MA was spoken by a dominant majority of monolinguals while MAm was spoken by a minority who had to be bilingual in both languages in order to communicate with the dominant group. But historical records do not support such a hypothesis; MAm was a majority language up until the first half of the 20th century. For this reason, the Amazigh substrate hypothesis will be preferred.

If this hypothesis is correct, the development of a class of agentive nouns in MA would be the consequence of the mapping of a morphological class that was distinct in Amazigh but not in Arabic. Unlike Arabic participles that had a number of verbal and nominal functions, Amazigh agentive nouns were less opaque in that they denoted typically the agent of an activity and, less typically, experiencer, patient and similar roles. The Arabic nominal category that seemed more similar to Amazigh agentives was that of occupation nouns⁸. The typical function of this category is to denote actions habitually performed by their agents, just like Amazigh agentives. Unsurprisingly, this category was reanalyzed to serve as an equivalent of a first language category, namely that of agentive nouns. The fact that MA agentives, like those under (11) and (12), can denote permanent qualities, habits or roles other than that of an agent, exactly like their Amazigh equivalents, as the examples under (2) and (3) testify, is a good indication that the two classes of derived nouns probably did not develop independently of each other.

3.3- The derivation of triliteral passives.

As was shown in Section 2, participles in MA take a CaCC pattern when derived from triliteral roots (e.g. *gləs* “to sit”, *galəs* “sitting”). In comparison, those derived from quadriliteral roots take a prefixal “m-”, instead. There are, however, a number of exceptional cases that take

⁸ The “fəʕʕal” participles can sometimes have a verbal function and be used, together with “kan” (to be), to express the past continuous, as in “kan xəddam” (He was working). But this is limited to a very small number of verbs (e.g. “ləʕʕab” (playing), “xəddam” (working), “wəllaj” (returning)) and it may be a characteristic of some dialects but not others. Its restriction may even be an indication that it is a recent innovation.

this prefix even though they are derived from trilateral roots. These are some examples (cf. Appendix B below):

13- ḥsəd	“envy”	məḥsad	“envious”
ʕgəz	“be lazy”	məʕgaz	“indolent”
dbəl	“wither”	mədbal	“withered”
zin	“good”	məzyan	“good”

One can only wonder why these and similar cases take the prefix “m-” associated with quadrilateral participles when the template CaCC of trilateral participles is still productive in the language. But when we recall from Section 2 that MAm also used to have a similar prefix by means of which agentive nouns were derived, we can easily suspect its role in the exceptional character of these cases. The formal and the functional similarity between the Arabic and the Amazigh prefixes could have created some confusion to learners of Arabic as a second language and encouraged negative transfer that was fossilized in a later stage. As a matter of fact, some of the exceptional cases are actually derived from Amazigh roots and are still used in the language, as are the following examples:

14- zləṭ	“to be poor”	məzluṭ	“poor”
ḥḍər	“learn”	məḥḍər	“student in a Quranic school”
kʃəf	“fade out”	məkʃuf	“ill-fated”
hawʃ	“play”	mhawʃ	“tranced”

These and similar cases testify that interference from Amazigh did happen. Since the Amazigh agentive prefix occurred with all sorts of roots, irrespective of their length, unlike the corresponding Arabic morpheme, which occurred only with quadrilateral roots, it is very likely that it tended to be overgeneralized during the first stages of learning. The items in (13) are clear cases of overgeneralization, for they cannot have been heard from native speakers if the variety of Old Arabic from which MA descended is similar to CA in this respect. The exceptional items in which it has survived were probably too frequent to be regularized later when enough native input was available to the learners. (On the effect of frequency on irregularity, see Bybee, 1985).

Another reason why the Amazigh agentive prefix could have been borrowed into MA is of a semantic nature. Semantically, Arabic participles are distinguished by their reference to temporary states, as was explained above. The items in Appendix B, however, denote permanent qualities or habits and, therefore, they are not compatible with active participles. In comparison,

the Amazigh agentive construction is more suitable in that it can also denote permanent qualities and habits, though not typically. Accordingly, Amazigh-Arabic bilinguals must have exploited the formal similarity of the prefix “m-” in the two languages in order to express a grammatical meaning that is made available only by the Amazigh counterpart. It should be born in mind that even in CA, Arab grammarians were explicit that participles denoted temporary states (*ḥudūth*), as opposed to adjectives (*ṣifa muḥabbaha*), which are characterized by permanence (*thubūt*) (cf. Fassi-Fehri 1993; Hassan, n.d.). Arabic adjectives, however, do not have a single derivational pattern and today, even advanced students of CA experience a lot of difficulty in learning them⁹. Therefore, there is good reason to suppose that early Amazigh-Arabic bilinguals experienced similar difficulty and that the Amazigh agentive prefix provided them with an easy way out¹⁰.

Of course, there was another option which could have served the purpose, namely the CCCaC pattern discussed in the previous section. As was pointed out, this pattern served basically for the derivation of occupation nouns, but other types of agentives are also mapped on it (cf. Appendix A). Therefore, all the items in Appendix B could in principle take a CCCaC form, but they do not. The question is why. A possible thesis, which is defended in this paper, is that these were formed on the basis of the Amazigh agentive pattern and, for one reason or another, they were never regularized. As a consequence, there are cases in which a word takes the “m-” prefix while its synonym, antonym or other related words do not (e.g. *məʃḥaḥ/zəqram* “stingy”). In a coming section, this type of variation will be discussed in more detail and argued to result from imperfect language learning, which was probably caused by lack of adequate input and/or weak social control on the learning process.

Another piece of compelling evidence in support of an Amazigh substrate in MA participles comes from cases derived from nouns, and these are discussed in the following section.

3.4- Agentives derived from nouns.

In Arabic, participles are derived from verbs. Agentives or other nominals that are derived from nouns have different morphological patterns, most of which have survived in MA but will

⁹ This category of adjectives in CA is expressed by a number of patterns most of which are unproductive. Examples are “ḥasan” (good), “ʿajjid” (excellent), “saʿīd” (happy), “qaliq” (worried), “ʿaṣra3” (crippled), “ṣaṭʿān” (thirsty), etc. Each of these examples instantiates a distinct pattern.

¹⁰ The point, however, would hold only if the Variety from which MA descends is similar to CA in distinguishing between adjectives and participles.

not concern us here (e.g. nisba). What is of more interest is that the patterns we have discussed so far are based essentially on verbal roots. But as the examples in Appendix C testify, MA agentives with the prefix “m-” can also be derived from nominal roots.

As can be noticed in Appendix C, some cases have an ambiguous derivation but others can only be based on nouns. Examples of the ambiguous cases are:

15- mǝbrad	“sensitive to cold”	mnaṣṣ	“half-full”
mǝrzaq	“lucky”	mǝqnaṭ	“boring”

The first of these can be derived either from “brad” (to become cold) or from “bǝrd” (cold); the second from “tnaṣṣ” (to be half-full), in which case it would be a regular quadriliteral passive participle, or from the noun “nṣṣ” (half); the third from “rzaq” (to give) or the equivalent noun meaning (livelihood); the fourth from “qnaṭ” (to be bored) or from the noun “qnaṭ”, meaning boredom. In both cases, however, they do not conform to the Arabic regular derivation: if they are based on verbs, these verbs are trilateral (apart from the dubious case of “mnaṣṣ”) and, therefore, their participles are expected to have a CaCC pattern; and if they are based on nouns, they are even more aberrant for the reason already mentioned. In some cases, such as “mṣakkas / mǝṣkas” (stubborn), two forms are available, each of which gives away its base: the first is clearly based on the augmented form “ṭṣakkas” (to become stubborn), which suggests that the second (and similar cases like those in (15)) is based on the corresponding noun.

In comparison, other cases, examples of which are cited below, are undoubtedly derived from nouns:

16- mǝzdam	“leprous”	mǝbraṣ	“affected with vitiligo”
mǝzwaṣ	“ravenous”	mǝṣnan	“exuding a foul underarm odor”

The bases of these participles do not have a corresponding verb, and, therefore, there is no way in which a verbal derivation can be defended. To express a proposition that someone suffers from the above defects, the phrase “fiḥ/a + N” (s/he has + N) is usually used (e.g. fiḥ l-ṣdam “he is leprous”). This fact indicates clearly that the pattern mCCaC can be based on both verbal and nominal roots. In fact, many of the cases in Appendix B can equally be argued to have a nominal base, and the pattern can be considered simply as agentive, irrespective of the nature of its base. What is of more interest is the origin of this extension to nominal roots when a similar derivation in Arabic is restricted to verbal roots.

If we assume an Amazigh influence, the extension will come as no surprise. In addition to the formal similarity between the Arabic participial prefix and its Amazigh agentive counterpart, which was already pointed out, Amazigh agentives can also have a nominal base. These are some examples, all of which are based on Arabic loans:

17- amssuq	“market visitor”	suq	“market”
anɣdam	“leprous”	ɣdam	“leprosy”
amɣɣuɣ	“ravenous”	ɣuɣ	“hunger”
anbraɣ	“sb. with vitiligo”	bəɣ	“vitiligo”

Of course there are many examples derived from native Amazigh nouns; the choice of Arabic loans in (17) has been made on purpose to draw attention to the striking similarity between the two languages as far as agentive nouns are concerned. Since this derivational process was not allowed in CA and is not widely attested in Arabic dialects spoken outside North Africa, there is a good ground to postulate an Amazigh substrate.

We will now turn to another aspect of MA agentive nouns that possibly points to imperfect learning, which is variation in agentive formation.

3.5- Variation in MA Agentives.

All languages contain some degree of internal variation, and completely regular paradigms in which each form corresponds to a single meaning can only be found in simplified languages like pidgins and creoles. But in monolingual speech communities, linguistic irregularity tends to be minimal, and very often that irregularity can be explained by reference to diachronic facts. When neither internal nor diachronic explanations can be plausibly advanced, external factors such as language contact should be returned to for plausible explanations of irregular paradigms. This seems to be the case with MA agentives.

We have already encountered some aspects of this variation. The coexistence of different derivational patterns for the same class is one example. We have seen, for instance, that in addition to the traditional patterns corresponding to triliteral and quadriliteral roots, MA has extended the use of CCCaC to derive occupation and other types of nouns. The same pattern serves also to derive similar nouns from quadriliteral roots. It is true that, as was mentioned earlier, this pattern is semantically distinct in that it denotes habits and permanent qualities while the traditional participial patterns denote temporary states. But this is not always the case, and

active participles that behave like agentives are not hard to find, as the following examples testify:

18- ḥakəm	“governor”	ḍaləm	“oppressor”
ḍamən	“guarantor”	qabla	“midwife”
zari	“messenger”	najb	“substitute”

These are ambiguous at least in two ways: on one hand, they can be interpreted as perfective or progressive and, thus, they behave like active participles in general; but on the other hand, they can also denote occupations or habits, as the English translations indicate. In this latter sense, they are more like agentives than participles. Why these should have a participial rather than a regular agentive pattern remains unexplained.

Besides the active participle form, agentives can also take the prefix “m-”. As was illustrated above, even synonyms or antonyms can have different patterns. For example, while “xajb” (ugly, bad) is a regular active participle, “məzjan” (beautiful, good) takes the prefix “m”. Considering that the two correspond to the verbs “xjab” (become ugly) and “zjan” (become beautiful), it is not clear why they should have different forms. One can even wonder why such adjectives as “xəwwaf” (fearful) or “zəḥḥaf” (crippled), for example, should not take the agentive prefix and have the forms “məxwaf” and “məzḥaf”, respectively, since they are likewise based on trilateral roots.

Actually, there are cases in which two alternative forms are attested. Examples of such cases are listed in Appendix D. As can be noticed from the Appendix, the agentive forms with “m-” correspond to a variety of patterns. In what follows, the discussion will be limited to these examples for the sake of brevity:

19-	kaməl / məkmul	“perfect”	zamət / məzmut	“damp, muggy”
	ʃəkkak/məʃkak	“suspicious”	ləḥḥas / məlḥas	“bootlicker”
	ḥrəʃ / məḥraʃ	“rough/ kind of bread”	ḥbil / məḥbul	“crazy, mad”

The first two pairs alternate between an active participle form and an agentive form. The two forms are usually used alternatively without any significant semantic distinction. In fact, both forms can sometimes be used idiomatically for exaggeration or some other pragmatic effect, as in “kaməl u məkmul” (very perfect). In the second pair, the agentives alternate with nouns based on the CCCaC pattern originally associated with occupation nouns. Again, the two patterns express the same grammatical meaning in this case, which is that of permanent qualities. As to the last

pairs, alternation is between agentives and adjectives that do not have any systematic derivational pattern. Since these adjectives form an irregular class, it may be argued that the corresponding agentive variants are innovations that resulted from attempts to regularize the class. Although regularization is a tendency that often motivates language change, what we notice in MA agentive nouns seems to go beyond internal factors in that the change does not take a clear direction. On the one hand, many of the agentives with the “m-” prefix are innovations since they diverge from the norms of Arabic participles, as explained in the previous two sections. On the other hand, this class of agentives is itself no more productive in MA and survives in the language only as an exceptional class. If this class resulted from an attempt at regularization, what halted the process? Besides, the extension of the pattern of occupation nouns was also apparently motivated by regularization, if only partly, which means that the same motivation was drawing in different directions. How did the occupation pattern win over the “m-” prefix?

Since both MA and MAm are not written languages and, therefore, lack written records from different periods of history, we can only speculate on the emergence of variation in agentives which has survived in the two languages. The sociolinguistic situation in which the Amazigh prefix “m-” was borrowed and replaced later by the “fəʃʃal” pattern will be discussed in the following section.

4- Sociolinguistic reconstruction.

It should be recalled from Section 1 that the Speech Community Model, as summarized by Toulmin (2012), begins by reconstructing linguistic innovations and their dialectological range, and then evaluates whether these innovations are diagnostic of particular propagation events (PEvents) and whether there is any linguistic or other evidence that favors a particular sequencing of these PEvents, including socio-historical records. The innovations that we are dealing with are the borrowing of the Amazigh agentive prefix “m-” in the derivation of some MA active participles and the extension of the pattern CCCaC (i.e. fəʃʃal) for the derivation of agentive nouns. In the first case, the propagation range is rather limited since the agentive prefix “m-” suspected of Amazigh origin is attested only in a limited class of participles while the others are regular. Besides, most of the irregular participles that take this prefix are found mainly in the

sedentary group of dialects¹¹; conservative Bedouin varieties, in comparison, do not exhibit a similar number of instances¹². So, it seems that this is a case of termination, rather than propagation, of an innovation. The second case, however, has become one of the most productive processes for the derivation of agentive nouns in MA, as has already been noted. Its range of propagation seems to include not only traditional sedentary dialects, but extends also to a large number of Bedouin dialects spoken in the Atlantic plains, Angad plains and the eastern sides of the Atlas Mountains. It is most likely to be found further east in other parts of the Maghreb. As was mentioned earlier, the pattern has become productive even in MAm and probably other Amazigh varieties. Are these two innovations diagnostic of PEvents corresponding to particular SCEvents? And how can they be sequenced in a plausible socio-historical scenario?

If the prefix “m-” found in trilateral active participles is of Amazigh origin, its borrowing into MA would be a contact-induced innovation. Contact linguistics, however, has yielded very few generalizations so far. Thomason (2001:61), for example, asserts that the only prediction that can be made with absolute confidence is that “contact-induced language change cannot occur unless there is language contact”, which is trivial. In the domain of derivational morphology, not much can be deduced from the borrowing of agentive morphemes. Such borrowings have been attested in cases of long term contact as well as in situations where there was very little contact. Matras (2009: Chap.8) cites examples in which the agentive affix is borrowed, including Kedang (borrowing from Indonesian), Tetun Deli (from Portuguese), Quechua and Tagalog (from Spanish) and Hebrew (from various European languages). Matras also cites the case of the Turkish agentive suffix “-ci/çi” borrowed into Iraqi Arabic; it is surprising that the same suffix is found also in Algerian Arabic though contact with Turkish in North Africa was not intensive (cf. Marçais 1977). In the case of MA, what is surprising is not borrowing the Amazigh agentive suffix so much as the ending of the process. Therefore, some major social event must have stood behind this termination.

Historians seem to agree that Berbers converted quickly to Islam, but their Arabization happened much later. According to Camps (1983), while North Africans converted massively to

¹¹ Most of the examples in the appendices are taken from Harrell, Fox and Abu-Talib’s (1962) bilingual dictionary of Moroccan Arabic and English. In the introduction, the compilers assert that “the entries are based on the speech of educated Moroccans from the cities of Fez, Rabat and Casablanca. Except for minor variations, their usage may be taken as typical of urban speech in general.”

¹² “məzjan” (good), for example, for which MA is known among speakers of other Arabic dialects, is not found in Hassaniya, a Bedouin variety spoken in southern Morocco and Mauritania. Instead, “zin” is used.

Islam between the 7th and the 9th centuries CE, Amazigh remained the dominant language in the region until the 11th century when the influx of the Hilali tribes began. Before these waves of Bedouin migrations, Arabic was confined to urban centers, which were not numerous. The Arab conquerors settled first in Tunisia, where they built the city of Kairouan. From there, they raided areas to the west and managed to submit Tangier, Volubilis and a few other cities where they held garrisons. But they were not able to lay complete control over these western parts, which, even during Roman times, were more of buffer zones than integral parts of the empire. The conquest of Morocco was carried out most probably by Berber soldiers recruited in Tunisia by Arab chiefs and, therefore, must have been bilingual in Amazigh and some form of Arabic. Heath (2015:8) quotes the historian Sánchez asserting that:

... the first Arabic speakers of the zone must have been the very Berbers who accompanied the Arab chiefs, most of whom subsequently left the zone. The first Arabization was carried out by these presumably Arabized and therefore bilingual Berbers.

On the basis of this analysis, the local population who wanted to learn Arabic must have had limited access to native input, which encouraged simplification of the target language as well as interference from the mother tongue. It was probably under these conditions that the Amazigh agentive morpheme was introduced, together with other grammatical and phonological traits that are often argued to be Amazigh substrates in MA.

There were, however, two important events in the history of Morocco that not only boosted the status of Arabic, but also encouraged Arab migration. The first relates to the rise of the Idrisid state (788 CE) along with the foundation and the promotion of Fez to the status of a capital city. Historians report that Idris II, who was the real founder of the city, decided to rely more on Arabs in matters of administration, probably with the intention to minimize the role of Berbers (Le Tourneau 1973). The capital became slowly an Arab city, and the arrival there of a group of migrants from Cordova (817-8 CE) and another group from Kairouan (825 CE) contributed to this major shift. When we take into consideration that the Idrisids controlled much of present-day northern Morocco and western Algeria, we can conclude that the Arabization of the capital city must have constituted a major event in the social and cultural life of Moroccans in that period¹³. It was probably for the first time after the Arab conquest, or even long before that, that they had a cultural center which they could take for a model. Another major event was the

¹³ A similar event happened in Muslim Spain when the caliph Abd ar-Rahman III adopted a policy that encouraged the homogenization of Andalusí Arabic (cf. Vicente 2011).

arrival of the Hilali tribes, who boosted the process of Arabization. If we had to look for a PEvent that could explain the termination of the productivity of the Amazigh agentive prefix, and other substratal features, these two would be appropriate ones; for prestige must have been associated not only with Arabs, but also with native Arabic speech.

The sociolinguistic interpretation of grammatical borrowing, however, shows some disagreement. Thomason and Kauffman (1988) distinguish between cases in which imperfect learning plays a role in contact-induced language change and those in which it does not. In cases where imperfect learning plays no role, contact usually results in borrowing of non-basic vocabulary but may affect the grammatical structure of the recipient language when bilingualism is intensive and attitudes are favorable towards the dominant group. By contrast, when a subordinate group learns a target language (TL) imperfectly, presumably because of lack of sufficient contact with native speakers, change may result in the stabilization and conventionalization of an imperfect version of TL. In language shift, for example, there is usually very little or no lexical borrowing from the group's L1 into TL, but many structural aspects of L1 are transferred into TL, including phonology and morphology. In some cases, native speakers of TL, for one reason or another, also adopt the new version of TL (cf. Thomason 2001 for more illustration). Instead of lexical and grammatical borrowing, Ross (1997) distinguishes between phonological restructuring and what he calls "metatypy". Phonological restructuring occurs when speakers use a language that is not their mother tongue and so transfer their accent to TL. The elements transferred are often pronunciation routines that are often beyond conscious control, as is noticed in second language acquisition in general. As to metatypy, Ross (1997:241) maintains that it includes "(a) the reorganization of a language's semantic patterns and 'ways of saying things', and (b) the restructuring of its syntax (i.e. the patterns in which morphemes are concatenated to form words, phrases, clauses and sentences)". Metatypy is characteristic of contact situations in which speakers have to use more than one language continuously so much so that "there is a strong tendency for them to reduce the cognitive and linguistic processing burden by bringing their [...] languages' construals of reality into line with each other" (ibid.). Ross claims also that metatypy is evidence of change in a minority language usually toward the dominant or the inter-community language in contrast with phonological restructuring, which happens during language shift as a consequence of interference from L1. He argues further that "[s]ince metatypy and language shift are alternative outcomes of bilingualism, they cannot affect

a single language simultaneously” (Ross 1997:248). In other words, when speakers drop their L1 and become monolingual in TL, their version of TL will exhibit some substratal phonological, but not grammatical, features. Before we compare the two opposing views in relation with the Amazigh agentive prefix attested in some MA participles, it is worthwhile to put this item in the context of the Arabic-Amazigh contact in general.

Although Arabic and Amazigh have been in contact for more than a millennium, they do not exhibit equal traces of contact. Amazigh, in particular, has been influenced by Arabic at all levels of its structure, sometimes affecting even basic vocabulary (cf. Kossmann 2013). In comparison, although researchers seem to assume that Amazigh must have been behind the very uniqueness of North African Arabic, very few significant substratal features have been identified, and in many cases, there is controversy as to whether those features are Amazigh substrates or mere linguistic innovations (cf. Aguadé 2010; Tilmatine 1999, 2011; Bensoukas 2016, this issue). With regard to vocabulary, research has come up so far only with a derisory list of putative Amazigh loanwords in North African varieties of Arabic. Such a list, like the one cited in Tilmatine’s (1999) overview, is likely to include items that may not be familiar to MA speakers (see also Souag, this issue). The area that apparently shows the heaviest Amazigh influence, at least on MA, is phonology (cf. Heath 1987, 2002; Durand 1998, Elmedlaoui 1998, Bensoukas and Boudlal 2012a, b, Dell and Elmedlaoui 2002, Boudlal, this issue, among others). One aspect of this phonological convergence includes consonants, neutralization of vowel length, phonotactic constraints, banning of schwas in closed syllables and, indeed, the whole syllable structure.

If we follow Ross’s (1997) analysis summarized in the preceding paragraph, this would be a clear case of language shift. The problem, however, is that some cases that would be classified by Ross as instances of metatypy are also attested in MA. Examples are word order, the feminine circumfix “t....t” (used mainly with nouns of occupations), the genitive marker “n” (of) (though limited to some kinship terms like “bb°ay n X” (father of X)), etc. in addition to so many calques (i.e. instances in which the lexical matter is Arabic but the semantic or the phrasal organization is Amazigh) (cf. Colin 1963-6; Lafkioui, this issue; Zellou 2011). Many of these features, however, are controversial; Tilmatine (1999), who cites many of them, is often forced to resort to hedges to make claims sound more of probabilities than assertions. So, how can we interpret the borrowing

of Amazigh morphology, including the agentive prefix, in order to reconstruct the sociolinguistic contact-induced change within a plausible socio-historical scenario?

It should be noted that, although Arabo-Islamic culture was prestigious, Arabs themselves were never demographically superior to native Berbers in North Africa. As was noted earlier, the first conquerors were essentially warriors and there is no evidence that they took their families with them (cf. Heath 2015 and references cited therein). Even the Bedouin migrants who are often held responsible for the Arabization of Berbers are estimated by Camps (1983) to have been only around 80 000 in number at the outset, and their migration extended over two centuries. Besides, not all of them settled in Morocco. The only plausible conclusion is that, although Berbers outnumbered Arabs, they shifted gradually toward Arabic. The process started presumably with Arabs' neighbors and, when these have been Arabized, they serve as intermediary to Arabize their next neighbors, etc. Ross (1997), who excludes the possibility to have metatypy and language shift simultaneously, seems to have in mind the more frequent situation where speakers of a minority language are forced to shift to the dominant language and culture. In such situations, it is indeed difficult to imagine why shifting speakers would transfer grammatical structure or material from their L1 into the inter-community language "as this would run counter to its use as an inter-community language" (Ross 1997:247).

In the case of North Africa, however, the circumstances in which Arabic became an inter-community language are a little peculiar. We must suppose that, for a considerable period of time, Amazigh was used as a means of communication between different tribes since Amazigh varieties spoken in a given region were to a large extent mutually intelligible. When Arabic became an inter-community language (and this had never been a general case except in present times), it was presumably already shaped by early shifters who did not have enough contact with native speakers to undo the effect of imperfect learning. The emergence of early MA would probably correspond to what Thomason and Kaufman (1988) call "abrupt creolization", a situation where a language develops from "extreme unsuccessful acquisition of TL". In such a situation, TL vocabulary is usually inserted in L1 phonological and grammatical structure. If metatypy and language shift cannot occur simultaneously, the only possibility left to account for their co-occurrence in MA is to hypothesize, along with Versteegh (1984), the development of MA from an early Arabic-Amazigh Creole which, later on, was gradually de-creolized. No uncontentious evidence, however, has survived from this early and obscure stage.

This scenario, indeed, seems to be supported by the morphology of MA agentives. Remember that the major PEvent we have to account for is the termination of the Amazigh prefix “m-” and its substitution with the “fəʃʃal” pattern. There seems to be no reason why the use of the prefix “m-” should have been limited only to the items in Appendices B (e.g. məḥsad “envious”) and C (e.g. məɣdam “leprous”), which must have been innovations since they did not accord with Arabic rules. Therefore, it is plausible to advance that this prefix was used with many more cases which were subsequently replaced by other forms believed to be more correct. As was argued earlier in this section, the establishment of Fez as the capital of the Idrisid dynasty, with a significant population of Arab stock, was presumably the major event that triggered the reversal of the effects of prior Creolization, or at least the intensity of the process. The variation exemplified by Appendix D is probably an indication that reversal was still in progress long after that period and that the irregular items in Appendices B and C have escaped regularization possibly because of their high frequency.

Of course, once the agentive formation with “m”-prefixation has been cancelled, it must be replaced by an alternative morphological process. In a situation where there are enough native speakers of Arabic, we would expect a return to the structure of Arabic participles as found in CA and other Middle Eastern dialects. Instead, what we notice in MA is the development of a special class of agentives with the pattern “fəʃʃal” (viz. Appendix A), exactly like its equivalent in all MAm dialects, including those spoken in remote and mountainous areas. What is specific to this class is that both the pattern and its lexical matter seem Arabic, unlike “m-”, which must have been salient as a non-native feature. Apparently, the borrowing of the pattern “fəʃʃal” into MAm follows the general path of contact-induced change which, after long-term contact between a dominated and a dominant language, results in grammatical borrowing (cf. Thomason 2001: Chap.4). But a deeper analysis of MA “fəʃʃal” agentives reveals that the morpho-syntax and the semantics of this class are “copied” from Amazigh. As was pointed out in the first section, Amazigh agentives are essentially active and nominal in character, unlike Arabic participles, which can be active or passive and can express aspect. Therefore, MA “fəʃʃal” agentives and their MAm equivalents, be they in a native or in a borrowed form, are parallel in almost every respect. If MA were a minority language, this result would be expected since its speakers would have to be bilingual in MAm too. But it was MAm that was the less prestigious language and its

speakers who had to learn the inter-community language. So, how did a morpho-syntactic class in the dominated language end up in the dominant language?

It seems that the termination of the Amazigh agentive prefix and the extension of the “fəʕʕal” class were successive PEvents. As was explained earlier, the rise of an Arab community and their growing political influence must have been accompanied by an acute awareness of what is or is not pure Arabic. This positive attitude toward Arabic led to the purification of extant varieties from all sorts of salient non-native features, including the agentive prefix “m-”. In counterpart, the extension of the “fəʕʕal” class from occupation nouns to agentives in general was perhaps an attempt from the Amazigh bilinguals to speak what they thought was correct Arabic without being conscious that they were calquing their native agentive class onto their version of Arabic. Since the number of bilingual Berbers most probably far exceeded the number of the more powerful monolingual Arabs, accommodation to the native speakers was not always required. Actually, because of their demographic disadvantage, monolingual Arabs may have frequently been forced to accommodate to non-fluent speakers of Arabic. Therefore, it seems that both language shift and metatypy can occur simultaneously in complex contact situations.

Ross (1997) does make reference to complex contact histories in which shift and metatypy are sometimes argued to co-occur, but he doubts that the two processes occurred simultaneously. Megleno-Rumanian (north-west of Salonica, Greece) is a case in point. Like other Rumanian varieties of the Balkan, Megleno-Rumanian acquired an essentially Slav phonological system, thus indicating that it was originally developed by Slav shifting speakers. But the language has borrowed also a number of morphemes from Bulgarian. Ross claims that phonological restructuring and grammatical borrowing happened at different periods of contact: the first during language shift and the second long after that under intensive bilingualism in which “speakers treated Megleno-Rumanian and Bulgarian as related lects and used the affixes in the ‘wrong’ lect” (Ross 1997:249). Irrespective of the cogency of this analysis, it is not clear how it could apply to the MA-MAm contact. According to the analysis presented here, the Amazigh prefix “m-” had been borrowed into MA during language shift but it was later on eliminated and only vestiges of it have survived in the language. Even the morphological pattern that replaced it was apparently developed by speakers of Arabic as a second language. This situation is certainly distinct from those Ross had in mind, and Thomason and Kaufman’s (1988) analysis of language shift seems more suitable to MA.

In any case, the Arabic-Amazigh contact seems to present a far more complex situation than one that could fit easily in traditional models. What is most peculiar about this situation is that it apparently involves the adoption of Arabic by a majority of Amazigh speakers in complex social conditions over long periods of history. A better understanding of similar situations will certainly contribute to more accurate models of language contact.

5- Conclusion

Agentive nouns in MA are found to exhibit a variety of morphological patterns that probably reflect the history of contact between Arabic and Amazigh in Morocco. In both languages, this class of derived nouns has lost regularity and productivity. This paper has argued that, although there are very few Amazigh agentive loans in MA, the structure and organization of agentive patterns bear witness to an Amazigh substrate testified particularly by the use of the prefix “m-” with trilateral roots and the derivation of active participles from nominal roots. On the basis of these vestiges, an attempt was made to reconstruct the sociolinguistic situation in which MA developed, a situation which was claimed to have been characterized by widespread bilingualism and language shift. More specifically, the agentive “m-” prefix was argued to have been borrowed from Amazigh at an early stage of contact, when speakers of Arabic were not numerous enough. During this period, the Amazigh – Arabic bilinguals apparently did not have access to authentic Arabic input and/or there was no social control on the use of incorrect Arabic. The m-prefixation process was probably productive since the items in which the prefix is attested are irregular (i.e. incorrect) and cannot have been heard from native speakers. It was only later, when an Arab state was formed under the Idrisid dynasty and Fez was founded and made the capital of the state, that more Arabs migrated to Morocco and gained more prestige, which must have encouraged Amazigh bilinguals to speak what they believed to be correct Arabic. Later Hilali migrations reinforced this tendency. The termination of m-prefixation as a process to derive active participles probably happened in these circumstances, and many of its effects must have also been undone, saving only very frequent cases.

The similarities between MA and Amazigh agentive nouns, however, raise many issues regarding the factors that caused them. The lack of detailed historical records as well as written records of the two languages does not help resolve these issues, and only future dialectological investigations can hopefully provide some clarification.

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Appendix A

bəkkaj	“crybaby”	həddar	“talkative”
bərgag	“spy”	nəʃʃas	“sleeper”
həggar	“humiliating”	wəkkal	“gluttonous”
hərrab	“fugitive”	məkkar	“malicious”
məjjaz	“observant”	qərraj	“studious”
qəmmar	“gambler”	zəhḥaf	“crippled”
ʃəmʃam	“smelling”	ʃəffar	“thief”
təftaf	“trembling”	xərbəq	“foolish”
xəwwaf	“fearful”	qəfqaf	“timorous”
γəddar	“treacherous”	təmtam	“stutterer”

Appendix B

mədbal (dbl)	“withered”	məhjab (hib)	“scary”
məhsad (hsd)	“envious”	məbrad (brd)	“sensitive to cold”
məlḥas (lḥs)	“bootlicker”	mərʃud (rʃd)	“fearful”
məqnaṭ (qnt)	“boring”	mərzaq (rzq)	“lucky”
məʃḥaḥ (ʃḥḥ)	“stingy”	məzjan (zin)	“good”
məsʃur (sʃr)	“rabid”	mətʃus (tʃs)	“unlucky”
məzrub (zrb)	“hasty”	məzlut (zlt)	“poor”
məʒlaq (ʒlq)	“greedy”	məlhuṭ (lht)	“greedy”
məʃgaz (ʃgz)	“indolent”	məyjar (yir)	“jealous”
məʃjaf (ʃif)	“easily disgusted”	məʃkak (ʃkk)	“suspicious”

Appendix C

məhrar (hərr)	“sensitive to touch”	məzhar (zhər)	“lucky”
məşnan (şnan)	“exuding underarm odor”	məşwab (şwab)	“polite”
məzdam (zdam)	“leprous”	məzhəd (zəhd)	“strong”
məzrab (zərb)	“mangy”	məbraş (bərs)	“affected with vitiligo”
məzwaf (zuʔ)	“ravenous”	məsrar (sərr)	“charming”
məʔkas (ʔks)	“stubborn”	məʔnad (ʔnad)	“stubborn”
məʔlal (ʔəlla)	“sickly”	məkraʔ (kəʔ)	“ravenous”

Appendix D

hbil / məhbul	“crazy”	zəʔbi / məzʔub	“ill-fated”
hərəʃ / məhraʃ	“rough”	zin / məzjan	“good; beautiful”
kaml / məkmul	“perfect”	ziʔan / məzwaf	“ravenous”
ləhhas / məlhas	“bootlicker”	ʔəttaja / məʔtaja	“lid”
wasəʔ / mtisəʔ	“wide”; “large”	diʔjəq / mdiʔjəq	“narrow”
zamt / məzmut	“muggy”	zərbān / məzrub	“hasty”
zwiwn / məziwn	“cute”; “good”	qəntān / məqnaʔ	“(tends to be) bored”
qʔif / məqʔuf	“weak”; “slim”	həjl / məhəjl	“aged (of food)”