Concurrent Cognate and Contact-induced Plural Traits in Afro-Asiatic:

Amazigh *id*- and Arabic *-at* Plurals

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Abstract

Lesser studied Moroccan Amazigh and Arabic plurals are *id*-plurals and *at*-plurals, respectively, which include morphologically simple/complex words, items with expressive morphology, and borrowings. These are quite distinct from Afro-Asiatic concatenative and non-concatenative ones. The paper aims first at establishing commonalities between them, specifically focusing on Arabic masculine *at*-plurals. The further goal is to check whether *at*-pluralization is cognate to *id*-pluralization or substratal thereof. The paper claims that the specifics of *at*-plurals which differ from those of cognate Arabic varieties are the result of contact and are probably a shift-induced interference.

Keywords: Afro-Asiatic, Amazigh (*id*-plurals), Arabic (*at*-plurals), grammatical borrowing, language-contact, plural

This paper is part of a larger project on “extragrammatical” morphology in Amazigh principally. Some parts of it have already been presented and/or published (Bensoukas, 2015a-b-c; 2016a-b). I would like to thank A. Al Ghadi and A. Boudlal for assistance with and discussion of the Moroccan Arabic data. I am finally grateful to A. Boudlal, A. Ech-charfi, M. Marouane and two IJAL anonymous reviewers for comments and suggestions that have made this a better paper than it would otherwise have been. All remaining errors are my entire responsibility.
1. Introduction

The language contact between Moroccan Amazigh (AM) (commonly referred to as Berber) and Moroccan Arabic (MA) dates back to the 7\textsuperscript{th} century (e.g. Aguadé, 2008; Boukous, 1995; Brugnatelli, 2011; Palva, 2006; Pereira, 2011; Versteegh, 2010) and has resulted in mutual contact-induced phenomena in both languages (for a comprehensive treatment of the Arabic influence on AM, see Kossmann, 2013b). A particular complexity of this contact situation relates to the two languages’ being genetically related, AM being Hamitic and MA Semitic; concomitantly, it is quite exacting to assert whether the features they have in common are contact-induced or rather cognate, Afro-Asiatic traits. Nonetheless, the undeniable presence of an AM substratum in the grammar of North African Arabic is not only commonplace in general overviews (e.g. Aguadé, 2008:293; Manfredi, 2018:411-2; Versteegh, 2010:635) but also systematically established on the basis of more specific studies (e.g. Bensoukas, 2016a; Bensoukas and Boudlal, 2012a-b; Boudlal, 1998; Chtatou, 1997; Elmedlaoui, 1998, 2000; El Moujahid, 1995; Lafkioui, 2013; Tilmatine, 1999, 2011; see also the contributions to this issue).

The present paper investigates lesser studied modes of pluralization, namely AM id-pluralization and MA at-pluralization, examples of which are murran/id-murran ‘callous person(s)’ and k\textsuperscript{w}tijb/k\textsuperscript{w}tijb-at ‘book(s), dim.’, respectively. Quite distinct from the more common Afro-Asiatic concatenative and non-concatenative pluralizations, these modes are dubbed herein id/at-pluralizations due to their using the morphemes id-/at-, a usage we stick to for lack of a better term. id/at-pluralizations have been treated only sporadically (e.g. El Moujahid, 1981, 1997; Galand, 2010; Sadiqi, 1997 for AM; and Caubet, 2008; Harrell, 1962; Heath, 2007; Youssi, 1992 for MA), even in works devoted exclusively to plural formation (AM: Idrissi, 2000, 2001; Jebbour, 1988; Saib, 1986; MA: Al Ghadi, 1990/2014). This suggests that id/at-pluralizations are at best marginal. Nonetheless, various nouns resort to them, be they morphologically simple or complex words, items with expressive morphology, or yet loan-words. With the statistically significant sizable number of potential id/at-plurals, the two processes are definitely major modes of pluralization in their respective languages from a productivity perspective.

The goal of the paper is twofold. First, it seeks to systematically establish the structural similarities and differences between AM id-pluralization and MA at-pluralization, focusing in the latter case on the use of –at in masculine plurals. It is shown herein that MA id-plurals and MA
at-plurals are parallels in essence as well as in much of their detail. The further goal is to check, on the basis of a preliminary comparative survey, whether id/at-pluralization is part of the common Afro-Asiatic stock the two languages share or whether the commonalities, no matter how partial, are rather the result of a substratum relationship. Our claim is that the two concur: although id/at-pluralization is itself a cognate, Afro-Asiatic morphological trait, which precludes the possibility of a structural borrowing in either direction, the impact of AM on MA is clearly visible in a twofold fashion. First, some of the items to which at-pluralization extends have parallels in AM and do not seem to have correspondents in other Arabic dialects. This property can probably be attributed to the fact that MA is, so to speak, emulating AM in this respect, given the additional fact that id-pluralization is more elaborate than at-pluralization. Second, MA at-plurals are masculine if the input is masculine, despite the fact that –at is used as a feminine affix elsewhere in the language, as well as in Standard Arabic for that matter. Both aspects can also be claimed to be the result of a shift-induced interference (Hickey, 2010) resulting in the transfer of structural features without the morphemes that express them (Thomason, 2010). The possibility of id/at-pluralization being an areal linguistic trait will also be entertained, only cursorily though, in the absence of more trenchant evidence.

The remainder of the paper is structured as follows. § 2 sets off id/at-pluralization from sound/broken pluralization and suggests characterizing it as extragrammatical morphology. § 3 contains a sketch of id/at-pluralization outside AM and MA, which corroborates our considering it a cognate Afro-Asiatic trait. § 4 scrutinizes possible contact-induced traits in id/at-pluralization, discarding the possibility of an areal morphological property but pointing out their being at least partially AM substratal phenomena in MA. Then, we conclude.

2. id/at-plurals vs. sound/broken plurals

As typical Afro-Asiatic (e.g. McCarthy and Prince, 1990; Ratcliffe, 1998 and references therein), plurals display significant morphological complexity in both AM and MA. A commonality is their use of two modes of pluralization: The more common type- ‘normal’ pluralization, bifurcating into sound and broken types (Al Ghadi, 1990/2014; Caubet, 2008; Heath, 2007; Idrissi, 2000, 2001; Jebbour, 1988; Saib, 1986; Youssi, 1992, and references therein)- and the allegedly less common type, what we dub id/at-pluralization. Unless otherwise stated, AM data comes from the Tashlhit variety- our mother tongue- while the basic core of MA
data comes from our sources and is complemented with further data elicitation during our discussions with MA specialists. Both AM and MA have different dialects.¹

2.1 Sound/broken pluralization: The ‘normal’ mode

The more common type displays both concatenative and non-concatenative types of morphology. Following previous proposals in the literature on AM (Idrissi, 2000, 2001; Jebbour, 1988; Saib, 1986), in an oversimplifying fashion, we will group plurals into (i) sound, (ii) broken and (iii) mixed.² In MA, Al Ghadi (1990/2014) and Heath (2007) describe plurals along the dimension of sound and broken typology and organize broken plurals according to their various prosodic patterns.

2.1.1 Sound plurals

AM and MA sound plurals are illustrated respectively in (1) and (2). Descriptively, an AM masculine plural noun is different from its singular counterpart by having an initial vowel [i], instead of [a], and taking a suffix [n].³ The feminine form of these plurals, on which we do not

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¹ Roughly, there are three major dialect groups of AM: (i) Tarifit in the north, (ii) Tamazight in the center and (iii) Tashlhit in the south. The situation is of course more complex than this. The ‘standard’, official variety is called Amazigh. MA is commonly split into (i) sedentary, pre-Hilalian dialects and (ii) Bedouin, Hilalian ones, depending on the era during which they were established (from the 7th century to the 10th century C.E. or the 11th and 12th centuries C.E., respectively (see Aguadé, 2008; Palva, 2006, for example)). A more current, four-fold subdivision is proposed by Heath (2002:2-12): (i) the northern type (a sedentary, pre-Hilalian Arabic spoken in Tangier, Tetouan, Rabat, and Fes, for instance); (ii) the central type, now the most widespread in Morocco (a sedentary, rural Hilalian type, spoken in Oujda, the Atlantic coast south of Rabat, Casablanca, and rural dialects around Fes, Sidi Kacem, El Jadida, Essaouira, and Marrakech); (iii) the Saharan type (a Hilalian, Bedouin type that is now sedentary, e.g. Hassaniyya in the south (Taine-Cheikh, 2007)); (iv) the Jewish dialects (which are pre-Hilalian and sedentary). The term koiné is also used to refer to the variety spoken in most urban areas. It corresponds roughly to Casablanca MA, which developed in the early 20th century from a koineized Hilali dialect (Caubet, 2008; Miller, 2006). Now spoken by the younger generations in large towns and understood everywhere, this koiné is not only spreading as the national standard (Ech-charfi, 2016; Miller, 2006), but it is also used as a vehicular language.

² The approaches to AM plurals differ as a matter of detail. Idrissi (2000, 2001) groups plurals into A-plurals, AN-plurals and N-plurals, while Saib (1986) classifies plurals into three types, only two of which are primary (A-plurals and N-plurals) (see his Two Primary Plural Hypothesis). Jebbour (1988) adopts a different approach consisting in classifying Tashlhit plurals into an initial taxonomic list of 33 plural patterns and ultimately grouping them into seven patterns depending on the process involved: (i) vowel ablaut, (ii) V-inflixation, (iii) VC-suffixation, (iv) VCC-suffixation, (v) CC-suffixation, (vi) V-suffixation, and (vii) C-suffixation.

³ Transcription and abbreviations: IPA transcription is used except for the dot underneath segments indicating emphatics. Gemination is transcribed by doubling the consonant. Where possible, the transcriptions in the sources have been adapted to the convention used in this paper. The following abbreviations are used: ag.=agentive; AM=Amazigh; AP=active participle; C=consonant; CS=Construct State; EM=Extragrammatical morphology; fem.=feminine; FS=Free State; lit.=literally; MA=Moroccan Arabic; masc.=masculine; N.=noun; NCM=Non-contentative morphology; p.=person; pl.=plural; PM=Plain morphology; PP=passive participle; Quadr.=quadriliteral; R=root; sg.=singular; V=vowel.
dwell herein, takes a suffix [in], as in tatbirt/titbirin, while the final [t] of the feminine singular noun disappears.

(1) AM:

<table>
<thead>
<tr>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sg.</td>
<td>Pl.</td>
</tr>
<tr>
<td>a-rgaz</td>
<td>i-rgaz-n</td>
</tr>
<tr>
<td>a-funas</td>
<td>i-funas-n</td>
</tr>
<tr>
<td>a-tbir</td>
<td>i-tbir-n</td>
</tr>
<tr>
<td>a-ɣaras</td>
<td>i-ɣaras-n</td>
</tr>
</tbody>
</table>

In a much similar fashion, the masculine sound plurals in MA use a suffix -\textit{in} after the singular form, while the sound feminine plural has a final -(\textit{a})t.

(2) MA (Al Ghadi, 1990/2014:20-21 (pages numbers referring to the 2014 version)):

<table>
<thead>
<tr>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sg.</td>
<td>Pl.</td>
</tr>
<tr>
<td>māšlām</td>
<td>msālān-\textit{in}</td>
</tr>
<tr>
<td>mMāšlām</td>
<td>mMāšlān-\textit{in}</td>
</tr>
<tr>
<td>muddān</td>
<td>muddān-\textit{in}</td>
</tr>
<tr>
<td>muhamī</td>
<td>muhamī-\textit{in}</td>
</tr>
</tbody>
</table>

Typologically, sound plurals in both AM and MA use concatenative morphology. The processes involved in this type of plural formation are quite straightforward: changing the initial vowel of AM nouns and suffixing -\textit{n} or -\textit{in} in masc. and fem. nouns, respectively; and suffixing -\textit{in} or -\textit{at} in masc. and fem. nouns, respectively, in MA. As we will show in § 2.2, -\textit{at} is also used to form the plural of some masculine nouns, which will be the focus of this paper.

2.1.2 Broken plurals

(3) contains AM plurals that differ from their singulars in more than one way. In \textit{amalū} in (3i), for instance, in addition to the change affecting the initial vowel, which is reminiscent of what happens in (1) above, both of the remaining stem vowels are altered. In \textit{illūna} in (3i), we notice the alteration of the initial vowel, the addition of a final vowel and the maintenance of the internal vowel. The mixed type, which uses both concatenative and non-concatenative morphology, is exemplified in (3ii).
It should be stressed that the AM nouns are all vowel-initial. The treatments that these modes of pluralization have received delineate a situation that does not differ substantially from that of Semitic.

In MA, Heath (2007:249) lists 11 patterns of broken plurals stating that “the (nominal and adjectival) plural and the verbal noun are sensitive to the size and shape of the input stem, though once this input stem has been “classified” its ablaut derivations are predictable (except for some lexicalized forms).” He goes on that “the main break is between the triliteral inputs ..., each consisting of exactly three full segments (consonants and full vowels), and the longer inputs...”

Al Ghadi (1990/2014:25-37) organizes broken MA plurals into four major patterns and six minor patterns, listed with examples in (4i) and (4ii), respectively:

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4 Heath lists the following patterns: (i) CCaC/CaCC -> CCuCa (less often CCaC/CCuC), (ii) CaC -> CiC-an, (iii) CuC -> CwaC, (iv) CiC -> CjaC, (v) CCu -> CCw-an (and other shapes), (vi) CCi -> CCj-an (and other shapes), (vii) CCC-a -> CCaCi, (viii) CCC-i -> CCaCa, (ix) CCVC -> CCaj(a)C, (x) CCCaC -> CCaC(a)C, and (xi) CCCVC -> CCaC(a)C (in pre-Saharan dialects CCaCiC).

<table>
<thead>
<tr>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a- dənb</td>
<td>dnub</td>
</tr>
<tr>
<td>b- hənbəl</td>
<td>hənał</td>
</tr>
<tr>
<td>c- -------</td>
<td>-------</td>
</tr>
<tr>
<td>d- fərdi</td>
<td>frada</td>
</tr>
<tr>
<td>ii- a- həʒəb</td>
<td>həʒban</td>
</tr>
<tr>
<td>b- ʃrif</td>
<td>ʃərfa</td>
</tr>
<tr>
<td>c- həməq</td>
<td>həmmaq</td>
</tr>
<tr>
<td>d- -------</td>
<td>-------</td>
</tr>
<tr>
<td>e- ʃəṣa</td>
<td>ʃəṣi</td>
</tr>
<tr>
<td>f- ʃələmim</td>
<td>ʃəlama</td>
</tr>
</tbody>
</table>

As far as the typology of the broken plurals of nouns is concerned, it is of a root-and-pattern morphology, a salient morphological aspect of the Afro-Asiatic family which characterizes verbs, too (cf. the different binyanim in Semitic). Also, while infixation is rare, prefixation is less common than suffixation (Gensler, 2011).

### 2.2 id/at-pluralization: Another mode

Both AM and MA have an additional pluralization mode, which we refer to as *id/-at* pluralization. In AM, especially the Tashlhit variety, the masculine affix *id-* has a feminine counterpart, *istt-* , a form neutralized in some varieties so that *id-* is affixed to both masculine and feminine nouns. In MA, the affix -at, normally used as a feminine affix in sound plurals, is very often used to pluralize masculine nouns. In either language, *id-* and -at are resorted to in forming the plural of various types of nouns, some morphologically simple and others complex.

#### 2.2.1 Morphologically simple nouns

We start with names. In both AM and MA, personal names are pluralized via *id-* and -at pluralizations, respectively. In MA, other masculine names whose plural is obtained by suffixing -at include names of the months (6i), regions (6ii), and the letters of the alphabet (6iii). A further bifurcation into the masculine prefix *id-* and feminine *istt-* (and alternately *id-* ) is to be noted in
some AM dialects; and in MA, feminine nouns appear with an -at plural, be they vowel-final or consonant-final, as in the feminine names in (5ii).  

(5)  

<table>
<thead>
<tr>
<th></th>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>i- AM:</td>
<td>muḥammad</td>
<td>faḍma</td>
</tr>
<tr>
<td></td>
<td>hasan</td>
<td>ʕiʃa</td>
</tr>
<tr>
<td></td>
<td>bṛaḥim</td>
<td>jamna</td>
</tr>
<tr>
<td>ii- MA:</td>
<td>ʁaʃid</td>
<td>faṭima</td>
</tr>
<tr>
<td></td>
<td>ʕli</td>
<td>samira</td>
</tr>
<tr>
<td></td>
<td>ʕəbdərrahim</td>
<td>samir-at</td>
</tr>
</tbody>
</table>

(6)  

<table>
<thead>
<tr>
<th></th>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-</td>
<td>ʁəmdan</td>
<td>‘Ramadan’</td>
</tr>
<tr>
<td></td>
<td>maṛṣ</td>
<td>‘March’</td>
</tr>
<tr>
<td>ii-</td>
<td>ʁbaṭ</td>
<td>‘Rabat’</td>
</tr>
<tr>
<td></td>
<td>ʕjun</td>
<td>‘Laayoune’</td>
</tr>
<tr>
<td>iii-</td>
<td>lif</td>
<td>‘ʔalif’</td>
</tr>
<tr>
<td></td>
<td>un</td>
<td>‘nun’</td>
</tr>
<tr>
<td></td>
<td>waw</td>
<td>‘waw’</td>
</tr>
</tbody>
</table>

All the items in (6) are attested borrowings in AM, a characteristic that bestows on them the id-/at-pluralization mode, as we will see below.

id-/at pluralization in both AM and MA extends to brand-names as well. In this case, whether it is the status of these nouns as borrowings that calls for id/at-pluralization remains unclear, since borrowings also resort to id-/at:

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5 Another form in AM is ajit muḥammad, a collective noun meaning ‘Mohamed’s family’. The sg. of aji is gg‘ and its fem. is ultt. gg‘ alternates with u before a vowel initial noun. These forms occur in some kinship terms which are synchronically frozen expressions, e.g. g‘ma/pl. ajtma ‘lit. the one(s) from my mother, my brother(s)’ and ultt/Pl. isttma ‘my sister(s)’. Similar synchronically decomposable words are masc. gg‘ ugdadir/ u ẓnīt and fem. ultt ugdadir/ ultt ẓnīt, and their plurals ajt ugdadir/ẓnīt and istt ugdadir/ẓnīt ‘the one(s) from Agadir/Tiznit’.  

6 That MA fem. names have corresponding at-plurals may be explained in two ways: (i) because they are fem., or (ii) because they are names, especially those that end in a consonant and do not bear a formal marking of fem.
(7) | **AM** | **MA** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>şamşun(g)</td>
<td>id-samşun</td>
</tr>
<tr>
<td>makinţuf</td>
<td>id-makinţuf</td>
</tr>
<tr>
<td>şuni</td>
<td>id-şuni</td>
</tr>
<tr>
<td>birli</td>
<td>id-birli</td>
</tr>
</tbody>
</table>

The last two items in MA are vowel final, which highly probably motivates the epenthetic glide, in this case and in others as in the last item in (8) below.

Borrowings also take id-plurals in both AM and MA. In AM, these loanwords can be direct borrowings from MA or indirect ones from French, for example, through MA:

(8) | **AM** | **MA** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(l)parabul</td>
<td>id-lparabul</td>
</tr>
<tr>
<td>(l)urdinatur</td>
<td>id-urdinatur</td>
</tr>
<tr>
<td>(t)traktur</td>
<td>id-traktur</td>
</tr>
<tr>
<td>(l)kamju</td>
<td>id-lkamju</td>
</tr>
</tbody>
</table>

Another special class of nouns that also use id-pluralization are (some) kinship terms. In AM, native kinship terms take id-. In MA, not all kinship terms take -at, but the two in (10ii) below do, including a masculine kinship term:

(9) | **AM** | **MA** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>i- AM:</td>
<td></td>
</tr>
<tr>
<td>baba</td>
<td>id-baba(tsn)</td>
</tr>
<tr>
<td>dadda</td>
<td>id-dadda</td>
</tr>
<tr>
<td>ii- MA:</td>
<td></td>
</tr>
<tr>
<td>bb’wa</td>
<td>bb’wa-at</td>
</tr>
<tr>
<td>mm’w</td>
<td>mm’w-at</td>
</tr>
</tbody>
</table>

Finally, the last class we describe contains words having a certain expressive morphology, such as a laudatory/pejorative meaning:

(10) | **AM** | **MA** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>buşSu</td>
<td>id-buşSu</td>
</tr>
<tr>
<td>mummu</td>
<td>id-mummu</td>
</tr>
</tbody>
</table>

---

Some AM kinship terms are borrowings from Arabic, for example xali ‘maternal uncle’, šmni ‘paternal uncle’, ḟdli ‘grandfather’, xali ‘maternal aunt’, šmni ‘paternal aunt’, and ḟdla ‘grandmother’. id-pluralization in this case can ambiguously be analyzed as kinship term morphology or be ascribed to the status of these nouns as borrowings.
Note the phonological similarity of some these items, at least as far as their beginnings and their overall prosodic patterns are concerned; these are most probably ideophones (Dingemanse, 2012 and references therein) and may involve some subtle morphology, which would call for classifying them along with the morphologically complex nouns in 2.2.2.

### 2.2.2 Morphologically complex nouns

A number of morphologically complex nouns also use id-/at pluralization, another commonality between AM and MA. The difference in this respect resides in which classes of morphological items have corresponding id/at-plurals: a special class of agentive nouns, compound nouns, bu-nouns and war-nouns in AM; and diminutive nouns, plural of the plural, nouns with the CCVC (plural) pattern, bu-nouns and a bunch of other nouns in MA.

We present AM data first. We start with a special class of agentive nouns (11), recognizable through their meanings and their morphology, with their initial agentive noun affix *m-* (see Bensoukas, 1994, 2012 for details). Compound nouns (12) also use id-pluralization.

<table>
<thead>
<tr>
<th>Sg. base</th>
<th>Sg.</th>
<th>Pl.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ikṣuḍ</td>
<td>mikṣuḍ</td>
<td>id-mikṣuḍ</td>
<td>‘be afraid’</td>
</tr>
<tr>
<td>mmaḏrs</td>
<td>mḏrus</td>
<td>id-mḏrus</td>
<td>‘be improperly slaughtered’</td>
</tr>
<tr>
<td>Lls</td>
<td>Millus</td>
<td>id-millus</td>
<td>‘be dirty’</td>
</tr>
<tr>
<td>ṭṭs</td>
<td>milluṭṭs/ miṭṭus</td>
<td>id-milluṭṭs/ miṭṭus</td>
<td>‘sleep’</td>
</tr>
</tbody>
</table>

(11) Verb base

<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>slm-ggʷrni</td>
<td>id-slm-aggʷrni</td>
<td>‘moth (lit. inhale flour)’</td>
</tr>
<tr>
<td>lah-amja</td>
<td>id-lah-amja</td>
<td>‘useless person (lit. disappear nothing)’</td>
</tr>
<tr>
<td>m-af-aman</td>
<td>id-m-af-aman</td>
<td>‘water finder (lit. ag. -find water)’</td>
</tr>
</tbody>
</table>

(12) Sg.

Perhaps the most complex morphologically, the last type of nouns we consider are the bu-nouns, a type of nouns in which *bu* expresses the generic notion of ‘the one with’, and their periphrastic bab-noun counterparts (e.g. Boukhris et al., 2008; El Moujahid, 1981, 1997; Galand, 2010; Sadiqi, 1997; see Bensoukas, 2015a-b-c for a recent detailed morphological treatment; see also Bensoukas, 2016a for a comparison of bu-nouns in AM and MA). In AM, bu-noun

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8 Although *bu* expresses the generic notion of ‘the one with X (=N)’, as in *bulmal* ‘the rich one (lit. the one with money)’, bu-nouns denote more specific meanings: ownership (*butfunast* ‘*bu*+cow’), personal characteristics (*butamartt* ‘*bu*+beard’), and professions (*buwuna* ‘*bu*+wells’). Also, some bu-nouns have become lexicalized, others once used as nicknames have become proper nouns (*bijiddign* ‘*bu*+flowers’), and others yet are used idiomatically
formation is very productive, affecting nouns that are native and borrowed. For descriptive convenience, Bensoukas (2015a-b-c) distinguishes the ‘inner’ noun- the one to which the affix bu- attaches, from the ‘outer’ noun- the entire bu-noun combination. In some frozen native nouns (buttgra ‘turtle’), the inner noun has a bleached meaning or otherwise does not stand alone. The inner noun is generally in Construct State (CS) form (see § 4.2 below). The periphrastic counterpart of bu-nouns is the multi-word expression bab-noun (with the feminine counterpart lal n), as in bab/lal n tgmmi ‘the owner of the house’. In bab-nouns, the inner noun is obligatorily preceded by the preposition [n] ‘of’ and is, accordingly, in CS.

Concerning number marking, bu-nouns and bab-nouns are similar. The masculine and feminine plurals respectively have id- and istt- concatenated with them, rather than ‘replacing’ them, as illustrated by the frozen bu-nouns (13i), the morphologically decomposable bu-nouns (13ii), and the pair of bu-noun/bab-noun (13iii):

(13)  
i-  bu33ylal id-bu33ylal ‘snail’
    buttgra id-buttgra ‘turtle’
    busskka id-busskka ‘snake’

ii-  buwgajju id-buwgajju ‘stubborn person’
    butammnt id-butammnt ‘honey-seller’
    bijslman id-bijslman ‘fish-seller’

iii-  butgmmi id-butgmmi ‘house-owner’
    bab n tgmmi id-bab n tgmmi ‘house-owner’

Another type of nouns with id-plurals is the war-noun type. war-, whose feminine is tar-, is used to express the notion ‘without’ and is in certain cases the exact opposite of bu-:

(14)  ‘work’          ‘children’
     
  Masc. Sg.  war-tawwuri  war-tarwa
      Pl.  id-war-tawwuri  id-war-tarwa

  Fem. Sg.  tar-tawwuri  tar-tarwa
      Pl.  istt-tar-tawwuri  istt-tar-tarwa

(bijgg“rdan ‘jail (lit. the one with fleas)’). Vowel assimilation results in bu/mmu alternating with bi/mmi when the singular or plural inner noun starts with [i] (bijslman), and a hiatal *[uu] is resolved by turning the second vowel into the glide [w] (buwgajju). An analogous situation holds after [u] is assimilated to [i] (biyjddign). Alternately, one of the vowels may delete (bugajju/mmugajju) (see Bensoukas, 2015a-b-c for details).
The last class of items contains a special class of ‘frozen’ CS nouns recognizable by their now completely integrated initial inflectional CS morpheme \([w^+]\). Examples are \((\text{id-})\text{wabiba} ‘mosquito’\) and \((\text{id-})\text{war\textasciitilde zzan} ‘wasp’\). Having surveyed AM nouns taking a masculine plural with \(\text{id-}\), we now present MA nouns resorting to the \(\text{at-}\) pluralization mode. As a reminder, this class contains diminutives, plural-of-the plural forms, nouns with the (plural) pattern CCVC, bu-nouns and a bunch of other nouns.

In MA, Al Ghadi (1990/2014:20-21) states that virtually all derived nouns (fem. or masc.) are subject to \(\text{at-}\)-pluralization. The author particularly lists examples of diminutives (15) and nouns with the pattern CCaC (16), allegedly a broken plural pattern, both of which are relevant in the present context given their being masculine and having corresponding \(\text{at-}\) plurals:

(15)  
<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Pl. of pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>k(^w)tijb</td>
<td>k(^w)tijb-at</td>
<td>‘booklet’</td>
</tr>
<tr>
<td>kwij(\text{\textasciitilde s})</td>
<td>kwij(\text{\textasciitilde s})-at</td>
<td>‘glass, dim.’</td>
</tr>
<tr>
<td>q(^w)rijd</td>
<td>q(^w)rijd-at</td>
<td>‘monkey, dim.’</td>
</tr>
</tbody>
</table>

(16)  
<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Pl. of pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>lsan</td>
<td>lsan-at</td>
<td>‘tongue’</td>
</tr>
<tr>
<td>(\text{ʕlam})</td>
<td>(\text{ʕlam})-at</td>
<td>‘flag’</td>
</tr>
<tr>
<td>slam</td>
<td>slam-at</td>
<td>‘salutation’</td>
</tr>
<tr>
<td>k(\text{ktab})</td>
<td>k(\text{ktab})-at</td>
<td>‘book’</td>
</tr>
</tbody>
</table>

Another class of nouns with corresponding \(\text{at-}\) plurals is that of the “plural of the plural”. According to Caubet (2008:279), the pattern “\(\text{CC}\text{ūC}\text{āt}\) marks a great amount in the case of uncountable nouns: \(\text{zīt/zi\text{jūtāt} ‘lots of oil; too much oil’; d\text{ḥob/d\text{ḥūbāt} ‘lots of gold; too much gold’}.” Al Ghadi (p.c.) considers these plurals as having an “augmentative” meaning:

(17)  
<table>
<thead>
<tr>
<th>Sg.</th>
<th>Pl.</th>
<th>Pl. of pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{ʕərs})</td>
<td>(\text{ʕəs})</td>
<td>(\text{ʕəs})-at</td>
</tr>
<tr>
<td>(\text{dāmm})</td>
<td>-----</td>
<td>(\text{dmaj})-at</td>
</tr>
<tr>
<td>(\text{lhəm})</td>
<td>(\text{lhum})</td>
<td>(\text{lhumat})</td>
</tr>
<tr>
<td>(\text{f\text{ḥəm}})</td>
<td>(\text{f\text{ḥum}})</td>
<td>(\text{f\text{ḥumat}})</td>
</tr>
<tr>
<td>(\text{lhaf})</td>
<td>(\text{lhufa})</td>
<td>(\text{lhufat})</td>
</tr>
<tr>
<td>(\text{f\text{ṃms}})</td>
<td>(\text{f\text{ṃus}})</td>
<td>(\text{f\text{ṃusat}})</td>
</tr>
</tbody>
</table>

Other forms listed in Al Ghadi (1990/2014:179) are \(\text{bala/balaw-at} ‘cunning’\), \(\text{yda/ydaw-at} ‘lunch’\) and \(\text{smā/smaw-at} ‘sky’\), which would probably be treated on a par with the items in (17), as would other items such as \(\text{ʕʃa/ʕʃa-wat} ‘dinner’\) and \(\text{f\text{nāl/fnaw-at} ‘serenity’}.\)
MA bu-nouns also have corresponding plurals with -at. It should be noted that MA bu-nouns are not as complex as those of AM. (18ii) contains examples of frozen bu-nouns from Al Ghadi (1990/2014:61), to which we have provided plurals, while (18ii) is a morphologically decomposable bu-noun:

(18)

\[
\begin{align*}
\text{i- bu-briş} & \quad \text{bu-briş-at} & \quad \text{‘small lizard’} \\
\text{bu-ʒəʕṛan} & \quad \text{bu-ʒəʕṛan-at} & \quad \text{‘cockroach’} \\
\text{ii- bu-ṛas} & \quad \text{bu-ṛas-at} & \quad \text{‘stubborn person’}
\end{align*}
\]

Al Ghadi (p.c.) comments that at-pluralization is possible only when the word is an integrated entity; otherwise, the periphrastic pluralization using mm"alin is resorted to (e.g. busəbsi/ mm"alin ssbasa ‘lit. the one with the (kif) pipe; someone addicted to smoking kif’). This pluralization is the counterpart of the periphrastic structure mul+noun ‘the one with+N’, which is also the counterpart of AM bab-nouns (see Bensoukas, 2016a for a quite elaborate comparison of AM and MA bu-nouns and their periphrastic counterparts).

The last class of items contains nouns which may be residual Standard Arabic forms. Some of these nouns have a clearly demarcated morphology, as is the case with maṭar ‘airport’, identifiable a place noun derived from the verb ṭar ‘fly’.

(19)

\[
\begin{align*}
\text{ḥajawan} & \quad \text{ḥajawan-at} & \quad \text{‘animal’} \\
\text{ḥammam} & \quad \text{ḥammam-at} & \quad \text{‘bath’} \\
\text{jəllal} & \quad \text{jəllal-at} & \quad \text{‘waterfall’} \\
\text{maṭar} & \quad \text{maṭar-at} & \quad \text{‘airport’} \\
\text{miləff} & \quad \text{miləff-at} & \quad \text{‘folder’}
\end{align*}
\]

To conclude, it seems that the basic plural pattern in MA is the broken plural. Then comes the sound plural. If neither applies, the noun in question has a corresponding at-plural.

### 2.3. id/at-plurals: root-and-pattern vs. extragrammatical morphology

We wind up the discussion in this section by a few final thoughts about a possible characterization of id/at-pluralization morphology. Afro-Asiatic pluralization has for long been a clear case of concatenative and non-concatenative morphology, with the latter especially calling for a consonantal (C-)root as a locus of lexical organization and as a base of derivation (e.g. Cantineau, 1950; Gensler, 2011). id-/at-pluralization, however, reveals that what serves as a base
of derivation is definitely not a C-root. Moreover, the types of nouns subject to it, while not a minority, are treated as a batch of words that can take neither sound pluralization nor broken pluralization. id/at-pluralizations are then treated as a last resort to pluralize nouns that cannot otherwise be pluralized. It is from this perspective that we adapt the notion “extragrammatical” morphology from Zwicky and Pullum (1987) and the more recent work of Mattiello (2013) to characterize such pluralization.

2.3.1 The root or the word as the base of derivation

A source of controversy in the literature on Afro-Asiatic (see Prunet, 2006 and Ussishkin, 2006 for reviews), and more pertinently in AM and MA linguistics in the present context, relates to whether it is the C-root or the stem/word that serves as a basis for the derivation of different morphological categories.

Either unit has been defended within a root-based or a word/stem-based trend. The first trend considers the morphology of Afro-Asiatic a root-and-pattern type. Cantineau (1950:193), for example, illustrates this type with the Arabic adjective of color ʔabjaḍ ‘white’, which is a combination of the root bjḍ and the pattern afʕal. Within Generative linguistics, the theory of Non-Concatenative Morphology (NCM) (McCarthy, 1981) formally represents on separate tiers root consonants and other morphological material, including vowels, mediated by a templatic tier. Through a mechanism known as tier conflation, an autosegmental representation along these lines accounts for active or passive Arabic forms katab and kutib ‘write’ from the C-root ktb by the inter-digitation of the vowel melodies (a...a) or (u...i), respectively, between the consonants. Contrariwise, the word/stem-based approach challenges the assumption that the morphology of Afro-Asiatic is root-based (e.g. Bat-El, 1994; Benmamoun, 1999; Gafos, 2009; Ratcliffe, 1998). For instance, Bat-El (1994) argues that taking the word, rather than the C-root, as a base of derivation makes possible a better analysis of Modern Hebrew denominal verbs, and concludes that the C-root can be eliminated from the grammar.

The literature on AM and MA is likewise characterized by the two trends. For reasons of space, we elaborate only on the situation in AM (for recent treatments defending either or both approaches, see Bensoukas, 2017; Boumal, 2017; El Hamdi, 2017; Galand, 2017; Lahrouchi, 2017 and references therein; for MA, see Boudlal, 2017; Meliani, 2017; Noâmane, 2017; Ziani, 2017 and references therein). The first trend draws a clear-cut line between the C-root lexical
material and the morphological material, which includes vowels. Basset (1929) is a good example of the root-and-pattern approach, adopted by other scholars (e.g. Galand, 1964/2002, 2010; Boumalk, 1996; Taifi, 1990). For example, the preterite of ak"r ‘to steal’ consists of the radical ukr, itself a combination of a C-root and a template (Galand, ibid.). Essentially similar, but theoretically different, approaches are also adopted, one of which uses NCM (e.g. Moktadir (1989)’s analysis of passives). A more recent approach is based on the Theory of Elements (see Lahrouchi (2017) and references therein). For instance, two Tashlhit secret languages use an operation extracting an exclusively C-root (R), a morpheme on its own, and mapping it to a template (e.g. ksd ‘be afraid’; \[ ti \ R_1 a \ R_2 ju \ R_2 R_3 \] tikkasdjusd, in one secret language, and \[ aj \ R_1 a \ R_2 wa \ R_2 R_3 \] ajkkasdwasd, in the other). The other trend defends the hypothesis that bases of derivation consist of both consonants and vowels, which amounts to a possible phonological word form. Arguments for this approach range over the provably lexical status of some vowels (Bensoukas, 2001, 2017; Boumalk, 2017; El Hamdi, 2017; Iazzi, 1991; Jebbour, 1996, among others) as well as the intricate irregularity of Tashlhit morphology, which can only be elucidated by resorting to underlying, non-root vowels. Proponents of this approach conclude that only a verbal base of derivation other than the C-root can account for these phenomena (Bensoukas, 2001, 2016b; Dell and Elmedlaoui, 1991; Iazzi, 1991).

As amply justified in § 2.2, both AM and MA id/at-pluralizations rather call for a word-based approach to morphology. This mode affects two distinct classes of nouns in their phonological word forms. First, the class of morphologically simple nouns contains proper nouns (names), kinship terms, nouns with expressive morphology, and borrowings. Second, in AM the set of morphologically complex nouns contains various subtypes: the inflectionally marked frozen w-Ns, expressive agentive nouns, compounds, and bu-Ns/war-Ns/bab-Ns. In MA, this class contains diminutive nouns, plural-of-the plural forms, nouns with the (plural) pattern CCVC, bu-nouns and a bunch of other nouns. id/at-pluralizations thus stand in stark opposition to the root-based approach and provide another argument against the use of the C-root as a base of derivation.

2.3.2 Extragrammatical morphology and the organization of the lexicon

Different from sound/broken plurals, id/at-plural raise two different but interrelated issues: the need for a morphology different from the (non-) concatenative type and a special
organization of the lexicon to accommodate such diversity in plural formation. We will suggest in
the following section that the notion of “extragrammatical” morphology bears a promising
answer to the first issue and that a layered organization of the lexicon better captures the
typological issue.

In their seminal work, Zwicky and Pullum (1987:335-338) suggest seven criteria to
distinguish extragrammatical morphology (EM) from plain morphology (PM), three of which I
consider. First, “promiscuity with regard to input category” states that rules of PM have a
“specific, determinate input category”, while rules of EM have “variable and peculiar effects on
syntactic categories.” Second, “promiscuity with regard to input basehood” states that rules of
PM apply to bases, never to inflected forms as opposed to rules of EM, which apply to inflected
forms as well as to bases, compounds, syntactic phrases. Finally, the result of EM has special
syntactic properties (likes ideophones). Zwicky and Pullum (ibid.:338) conclude that calling
phenomena extragrammatical does not mean that “such phenomena are marginal in their
grammar… but that the definition of the phenomena lies in a domain orthogonal to the grammar.”

More recently, Mattiello (2013:55) provides the following definition using morphological
phenomena from English:

Extra-grammatical morphology is understood as an umbrella term for heterogeneous
analogy-based operations violating various universal principles of English grammar,
in terms of irregularity of the bases and partial or un-predictability of the output, and
partly governed by universal preferences (notably, for iconicity), although their
morphotactic/ morphosemantic transparency is reduced as compared with that of
morphological rules. Examples of extra-grammatical morphological operations
include: blends, clippings, hypocoristics, acronyms, initialisms, reduplications,
backformations, infixation, and phonaesthemes.

As a reminder, nouns subject to id/at-pluralization may be morphologically simple or
complex, involving both derivational and inflectional affixes. They fall into two classes: (i)
(personal) names, kinship terms, ideophones and loans; and (ii) words with ‘special’ morphology
like ideophones, compounds, bu/bab/war-nouns, diminutives, and the plural of the plural. These
nouns reveal the criteria set for extragrammatical morphology above, namely “promiscuity with
regard to input category”, “promiscuity with regard to input basehood” and that of special syntax,
especially in bu-nouns and bab-nouns. We conclude that the term “extragrammatical” may be
used aptly to refer to id/at-pluralization.
The second issue is the implication of the existence of id/at-plurals, along with sound/broken plurals, for the organization of the lexicon. Our suggestion is inspired from that of the Arabic lexicon in Ratcliffe (1998:53-59), who assumes a ‘very weak version’ of lexical phonology (Kiparsky, 1982) and assigns Arabic plurals to two levels, corresponding to broken and sound pluralization modes. For example, turkiij ‘a Turk’, a noun with a level II suffix -ijj-, can have two plurals: (i) a sound plural \{turk\}ii\text{j}unu at level II, corresponding to the singular word \{turk\}ii\text{j}un or (ii) a broken plural \{atraak\}un at level I, corresponding to the stem- the form without the suffix -ijj-. The author also makes provision for a syntax level morphology, where sentence-level rules apply.

I propose a similar organization of the lexicon of AM and MA, where each of the modes of pluralization would be assigned to a specific level. Three levels are suggested, corresponding to the non-concatenative, concatenative and extragrammatical pluralization modes as follows:

<table>
<thead>
<tr>
<th>Lexicon</th>
<th>Non-concatenative</th>
<th>Concatenative</th>
<th>Extragrammatical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level I</td>
<td>AM: anu (\rightarrow) una (Broken plurals)</td>
<td>MA: d\text{\text{o}}nb (\rightarrow) dnub</td>
<td></td>
</tr>
<tr>
<td>Level II</td>
<td>AM: argaz (\rightarrow) irgazn (Sound plurals)</td>
<td>MA: mu\text{\text{o}}llim (\rightarrow) mu\text{\text{o}}llimin</td>
<td></td>
</tr>
<tr>
<td>Level III</td>
<td>AM: buwgajju (\rightarrow) id-bi\text{\text{j}}\text{\text{g}}\text{\text{w}}\text{\text{j}}ja (id/at-plurals)</td>
<td>MA: bub\text{\text{r}}\text{\text{\text{i}}\text{s}} (\rightarrow) bub\text{\text{r}}\text{\text{\text{i}}\text{s}}\text{-at}</td>
<td></td>
</tr>
</tbody>
</table>

### 2.4 Summary

The first part of this paper is devoted to a detailed description of id/at-pluralizations, distinguishing them from the more common (non-)concatenative pluralizations. Special emphasis has been on the morphological simplicity/complexity of the input nouns as well as on the types of nouns with corresponding id/at-plurals. The obvious conclusion is that id/at-plurals are very different from the sound/broken plurals. This difference calls for a distinction in terms of type of
morphology, id/at-plural characterized as “extragrammatical”, as well as a special organization of the lexicon into three different levels corresponding to broken, sound and extragrammatical pluralizations.

In the second part of the paper, we will take a different look at id/at-plurals. In § 3, we will show, on the basis of a preliminary comparative survey, that id/at-pluralizations are cognate structures, which precludes the hypothesis of structural borrowing between AM and MA. Somewhat paradoxically, § 4 claims that there are indications of a substrate AM influence on MA as far as some of the details of id/at-plurals are concerned.

3. id/at-pluralization: Possible cognate structure

The aim of this section is to claim that id/at-pluralizations are part of the common Afro-Asiatic stock that AM and MA share. We proceed first with the structural similarities and differences between id- and -at. Then we consider various Moroccan and non-Moroccan AM dialects and show the extent to which id-plurals are pan-Amazigh. Afterwards, we compare MA with other Semitic languages, including Standard Arabic, and show that at-plurals are not a singularity of MA. We conclude by just confirming the Afro-Asiatic ancestry source of the two pluralization modes.

3.1 id/at-pluralization: Structural similarity and difference

Advocating the common ancestry provenance of id-/at plural morphology, we claim that this pluralization mode is just another facet of the common Afro-Asiatic stock. Two structural aspects are worth exploring in this respect, one phonological and the other morphological.

First, the phonological similarity between id- and -at is notable in two respects. Both affixes are vowel initial. Although the vocalic component is different, this difference can be attenuated by the fact that i is the vowel par excellence in AM sound plurals, as in argaz/irgazn ‘man’ and tamɣart/timɣarin ‘woman’. In addition, both affixes have a coronal consonantal

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9Both AM and MA are branches of the Afro-Asiatic family of languages (e.g. Chaker and Mettouchi, 2009; Cohen, 1988; Crass, 2009; Heine, 2009; Lipiński, 1997; Vycichl, 1984, 1987; Zaborski, 2006). Lipiński (1997:41) lists five branches of Afro-Asiatic language-families- Semitic, Berber (Amazigh), Cushitic, Egyptian and Chadic; and Omotic is included as the sixth member (see Crass, 2009:12; Sands, 2009:564). Afro-Asiatic languages have both purely linguistic and typological commonalities (Crass, 2009:13-14): (i) morphological features (e.g. case, pluralization, gender...) (ii) lexical items, and (iii) phonological properties (a rich consonantal system, including pharyngeals, uvulars and glottals.) Focusing on AM, Chaker (1990) lists, in addition to lexical similarities, root tri-consonantalism, root-and-template morphology, the verbal and personal pronoun systems.
component, a plosive. The AM and MA affixes differ in voicing; in one AM dialect, however, the
affix is reported as it- (Abdel-Massih, 2011). This shows the extent of the phonological similarity
between the two affixes.

The second fact is positional, relating to the different prefixal/suffixal status of id- and -at.
This difference suggests another parallel, now between AM and Standard Arabic, since MA
seems to have lost case declensions. In AM, CS is a case-marking on the noun when it is a post-
verbal subject, the object of a preposition or the complement of a numeral (e.g. Basset, 1932;
Guerssel, 1983; Saib, 1982). CS contrasts with Free State (FS). Generally, CS morphology
replaces the initial vowel [a] of masc. sg. nouns by [u] (agajju $\rightarrow$ ugajju ‘head’) and deletes that
vowel in both sg. and pl. fem. ones (tagajjut/ tgajjut; ti$^{w}$ija/ ti$^{w}$ija). In Standard Arabic, the
vowel of the nominative state is a suffixal -u, alternating with accusative -a, whereas the cognate
affixes in AM are prefixal (cf. Standard Arabic and AM cognates ?akala ddi:k-u/?akala ddi:k-a
and iffa u-fullus/iffa a-fullus meaning ‘the rooster ate’ and ‘(He) ate the rooster’, respectively.
The vowel indicating state is suffixal in Standard Arabic whereas it is prefixal in AM. Further
evidence for the preference of AM for prefixing comes from a survey of the different verbal and
nominal affixes (causative {s+}, reciprocal/reflexive {m+}, passive {tt+}, agentive noun {m+},
and instrument noun {s+}) as well as a change in progress affecting the post-verbal negative
particle $\hat{a}$, which is becoming preverbal in the dialect of Khemissat, for example ($\hat{a}$ ur iddi ‘he
didn’t go’ as opposed to the more common order ur iddi $\hat{a}$ in the other varieties having both pre-
verbal (ur) and post-verbal negation ($\hat{a}$).)

3.2 id-plurals in Moroccan and other Amazigh varieties

The goal of this subsection is to show that id-plurals are attested not only in AM varieties
other than Tashlhit, from which the data in this paper comes, but also in non-Moroccan AM
dialects, the example of Tuareg being seemingly the remotest and most conservative.

We consider two AM dialects, central AM Ayt Wirra and eastern AM Figuig, and show
that id-pluralization is so common that it is adopted by language planners as a trait of Standard
Moroccan Amazigh. In Ayt Wirra AM (Oussikoum, 2013:539), id- is a plural prefix used to form
the plural of consonant-initial nouns. A closer scrutiny of the nouns with id-plurals reveals that

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10 I am grateful to A. Ech-charfi for having brought this case to my attention. See also Ouali (2011:62-64) for similar
cases and Bensoukas (2015d) for a recent, comprehensive analysis of negation in AM.
these fall into five major categories: bu-nouns (20i), compound nouns (20ii), ideophones (used as child language essentially) (20iii), kinship terms (20iv), and loanwords (20v):

<table>
<thead>
<tr>
<th>(20i)</th>
<th>(Pl.)</th>
<th>(Sg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-</td>
<td>(id-)burabbud</td>
<td>‘snail’ (p.395)</td>
</tr>
<tr>
<td></td>
<td>(id-)busakka</td>
<td>‘cobra’ (p.396)</td>
</tr>
<tr>
<td>ii-</td>
<td>(id-)bajashams</td>
<td>‘sunflower’ (p.377)</td>
</tr>
<tr>
<td></td>
<td>(id-)fortelxil</td>
<td>‘bat’ (p.452)</td>
</tr>
<tr>
<td></td>
<td>(id-)msorf ijsan</td>
<td>‘centipede’ (p.638)</td>
</tr>
<tr>
<td>iii-</td>
<td>(id-)bašša</td>
<td>‘goat, lamb (child language)’ (p.377)</td>
</tr>
<tr>
<td></td>
<td>(id-)buşşu</td>
<td>‘monster (child language)’ (p.397)</td>
</tr>
<tr>
<td></td>
<td>(id-)mustmu</td>
<td>‘baby (child language)’ (p.640)</td>
</tr>
<tr>
<td></td>
<td>(id-)ʃaʃʃa</td>
<td>‘donkey, mule (child language)’ (p.788)</td>
</tr>
<tr>
<td>iv-</td>
<td>(id-)dada</td>
<td>‘grandfather’ (p.403)</td>
</tr>
<tr>
<td></td>
<td>(id-)nanna</td>
<td>‘grandmother’ (p.403)</td>
</tr>
<tr>
<td>v-</td>
<td>(id-)lbarrad</td>
<td>‘tea-pot’ (p.161)</td>
</tr>
<tr>
<td></td>
<td>(id-)iblis</td>
<td>‘Satan’ (p.538)</td>
</tr>
<tr>
<td></td>
<td>(id-)lyul</td>
<td>‘ogre’ (p.596)</td>
</tr>
</tbody>
</table>

The situation is reminiscent of that of the Tashlhit dialect, and our feeling is that a more systematic data-set from Ayt Wirra would reveal a situation quite analogous to that of Tashlhit id-plurals.

In Figuig AM, a similar situation holds: id- is used to form the plural of (i) kinship terms (baba ‘father’ and jomma ‘mother’ provided as examples), (ii) masculine, deverbal action nouns and (iii) non-integrated loanwords (Benamara, 2013:256). A close scrutiny of the entries in Benamara (ibid.), however, shows that id-pluralization is more elaborate than the description provided in the entry for id states. In addition to loanwords and kinship terms (e.g. basklit ‘bicycle’ (p.191), forfoun ‘despot, Pharaoh’ (p.236), garru ‘cigarette’ (p.239), batti ‘maternal aunt’ (p.191), bba [ppa] ‘father’ and bba[ppa]-hnini ‘grandfather’ (p.192)), other words all pluralize using id-. These include, for instance, (i) names of animals, plants and musical instruments (bortbi ‘kind of sheep’ (p.198), bsibsi ‘kind of squash’ (p.199) and ganga ‘kind of drum’ (p.239)); (ii) bu-nouns (bufus ‘one-handed person’ (p.200) and bumar ‘the one with the beard’ (p.201)); (iii) compound nouns and echo-reduplicated nouns (skur-izzan ‘kind of grass-
hopper’ (p.214) and *hajəʃmaʃ* ‘thugs’ (p.243); and (iv) ideophones- mostly child language (*bɔhha* ‘mouth’ (p.195), *buʃu* ‘monster’ (p.203), *fiʃfi* ‘meat’ (p.213), * Hawai ‘obese woman who moves with difficulty’ (p.245), *hɔrkɔlla* ‘ragtag’ and *fiʃʃfi* ‘banquet’ (p.247)). Note that some of these words are feminine.

A particularity of Figuig, which is found neither in Tashlhit nor in Ayt Wirra AM, is that a significant number of action nouns have id-plurals (21i), including those derived from derived (causative) verbs (21ii). The further singularity is that the nouns themselves appear in CS after *id*:

(21) 

<table>
<thead>
<tr>
<th>i-</th>
<th>abdar</th>
<th>id-ubdar</th>
<th>‘mentioning’ (p.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>abunzɔr</td>
<td>id-ubunzɔr</td>
<td>‘nose-bleeding’ (p.8)</td>
<td></td>
</tr>
<tr>
<td>əʃʃməḍ</td>
<td>id-əʃʃməḍ</td>
<td>‘burning’ (p.11)</td>
<td></td>
</tr>
<tr>
<td>əʃʃaf</td>
<td>id-əʃʃaf</td>
<td>‘tying’ (p.17)</td>
<td></td>
</tr>
<tr>
<td>əḏfas</td>
<td>id-əḏfas</td>
<td>‘folding’ (p.21)</td>
<td></td>
</tr>
<tr>
<td>adwal</td>
<td>id-udwal</td>
<td>‘returning’ (p.26)</td>
<td></td>
</tr>
<tr>
<td>armas</td>
<td>id-urmas</td>
<td>‘understanding’ (p.112)</td>
<td></td>
</tr>
</tbody>
</table>

(22) 

<table>
<thead>
<tr>
<th>ii-</th>
<th>asbunzɔr</th>
<th>id-ubunzɔr</th>
<th>‘causing nose-bleeding’ (p.116)</th>
</tr>
</thead>
<tbody>
<tr>
<td>asəḏfər</td>
<td>id-əsəḏfər</td>
<td>‘causing succession’ (p.118)</td>
<td></td>
</tr>
<tr>
<td>asdirɔ</td>
<td>id-usdirɔ</td>
<td>‘blinding’ (p.119)</td>
<td></td>
</tr>
<tr>
<td>asəkkɔr</td>
<td>id-usəkkɔr</td>
<td>‘awakening’ (p.129)</td>
<td></td>
</tr>
<tr>
<td>aslaẓ</td>
<td>id-ulaẓ</td>
<td>‘depriving from food’ (p.130)</td>
<td></td>
</tr>
<tr>
<td>aʃʃməḍ</td>
<td>id-əʃʃməḍ</td>
<td>‘making cold’ (p.145)</td>
<td></td>
</tr>
</tbody>
</table>

An additional argument in favor of the fact that id-pluralization is a common process in AM comes from its being adopted by the language planners as a plural mode in Standard Moroccan Amazigh (Boukhris et al., 2008; Ameur et al., 2017). In Ameur et al. (p.352), the entry for *id*- merely states that it is a plural morpheme. Boukhris et al. (2008:39-40), a proposed grammar of Standard Moroccan Amazigh, contains a more elaborate description and illustration: *id-* is used to form the plural of (i) a number of C-initial nouns, (ii) proper nouns, (iii) kinship terms, (iv) compound nouns, (v) numerals, and (vi) borrowings. These are more or less the same patterns as those established for the Amazigh dialects discussed above. A survey of id-plurals in Ameur et al. confirms what the standard grammar states:

(22) 

<table>
<thead>
<tr>
<th>i-</th>
<th>Ideophones: <em>bubbu/bubba</em> ‘breast’ (p.281); <em>buʃu/buxu</em> ‘fairy creature, monster’ (p.282); <em>mumu</em> ‘pupil of the eyeball, baby’ (p.401)</th>
</tr>
</thead>
</table>
ii- bu-nouns: bu tmazzuyt ‘the one influenced by what others say’ (p.156);
    buyrum ‘baker’ (p.192); buʃari ‘ranger’ (p.282); bumḥmd/bumḥnd
    ‘hedgehog’ (p.282); bukira ‘chandler’ (p.283); butlmsa ‘woodpecker’
    (p.283)

iii- Kinship terms: id/iṣtṭtabtti ‘paternal grandmother’ (p.522)

iv- C-initial nouns: fiḥina ‘terrace, roof’ (p.310); fiɾaṭṭu ‘butterfly, (p.313);
    ʃari ‘mountain, forest’ (p.333); ɣy kamu ‘robin’ (p.443); ʃtaṭṭu ‘fine sieve’
    (p.515); tukrury ‘kind of bird’ (p.653); tuqd mssu ‘small earth-worm’
    (p.653); wiẓuŋn ‘cicada’(p.667)

v- Borrowings: ẓḍamn ‘guarantor’ (p.306); lmikru ‘microphone’ (p.391);
    ulambjad ‘olympics’ (p.424); rrabuz ‘bellows’ (p.439); ssbsi ‘kifpipe’
    (p.487); ssʃud ‘skewer’ (p.487); ssinskima ‘cinema’ (p.493)

vi- Compounds: garsgg‘as ‘bad year, deearth’ (p.201); mffrism ‘pseudonym’
    (p.378); ngrmawas (neologism) ‘inter-ministerial’ (p.407)

ngrmawas is interesting in that it shows that neologisms have id-plurals in Standard Moroccan
Amazigh, an indication of their productivity.

In dialects of Amazigh other than the Moroccan ones, a similar plural marking is to be
states that, in Tamashek (Tuareg of Mali), “for a small number of nouns that for one reason or
another cannot be pluralized by ablaut or by suffixation, a default plural is formed by preposing
ədd, which reduces (in some dialects) to əd before a C and to d before a V.” It is used with
derived nouns that start with a reduced demonstrative and ən, a combination expressing the
meaning ‘[the one] of...’. The author further qualifies these as “noun-noun compounds without a
true noun in first position” and provides the example in (23). Another type of compounds with id-
plurals are those beginning in ægg ‘son of...’, the plural of which is ədd æggX or dæggX ‘sons of X’.

(23) i. Sg. i n t-etṭı
    Dem. of Fem.-eye
    ‘one-eyed person’

ii. Pl. ədd i n t-etṭaw-en

80
In his study of Tahaggart (Tuareg of Algeria), Prasse (1974:62-63) discusses under his plural 11 the plural marking *ed*, which is attached before CS of proper nouns of people and common nouns designating a determined person, and which renders the meaning ‘X and his folks’:

(24)  ed-Ăkăde ‘Ekăde and his folks’
ed-Tănirt ‘Tenirt and her folks’
ed-ămyar ‘The chief and his folks’
ed-wələt-ma-k ‘Your sister and her folks’

The author (ibid.:62; translation ours) also mentions a similar marking in southern Tamasheq: “As a plural marking, *idd* is used to form the plural of all nouns that do not have a regular plural or those whose plural is difficult to conceive, e.g. the plural of personal names and names of places, the plural of domestic animals of the same color, of non-integrated foreign nouns.”

(25)  idd-Ăkăday ‘all the persons whose name is Ekăde’ or ‘Ekăde and his folks’
idd-ədəmi ‘camels with adəmi gazelle color’
idd-əbrək ‘places called Abrek’ or ‘Abrek and surroundings’
id-Tədbək ‘places called Tədbək’ or ‘Tədbək and surroundings’

Prasse (ibid.:63) closes his presentation of plural 11 with the notes that Moroccan Amazigh has *id*- as a plural marking with more or less the same functions as that of southern Tamasheq and that Ghadamsi *ənd* is perhaps a dissimilated form of geminate *idd*.

Kossmann (2013a:40-41) qualifies *ənd* in Ghadames (Libya) as “a passe-partout plural affix” that is attached to concrete nouns (26i), kinship terms (both masculine and feminine) (26ii), and some loans (26iii). It is also found in some plurals that alternate with other modes of pluralization (26iv):

(26)  

(Pl.) Sg.  (Pl.) Sg.  (Pl.) Sg.  (Pl.) Sg.  
i- (ənd-)abarkus ‘lamb of a certain age’
(ənd-)alaqqi ‘schoolmaster in a Coranic school’
(ənd-)bəyər ‘little earthenware bottle’
3.3 at-plurals outside Moroccan Arabic

The fact that Masculine nouns are subject to at-pluralization is not a singularity of MA as it is attested in Standard Arabic as well as in other Semitic languages.

There are traces of at-pluralization in Akkadian and Tigrinya. Diakonoff and Kogan (2007:24) state that, in Akkadian, “there are ... many nouns without -(a)t- and masc. agreement in the sg., but with the pl. in -at-, which shows that the use of this marker is much wider than just fem. pl.” They add in a footnote that “curiously enough, at least some of these nouns in the pl. exhibit fem. agreement: bit-atum takl-atum ‘reliable tribes’..., bit-atu-ni kannuk-a ‘our houses are sealed’...” bit-atum is the plural form of bītum, which agreement reveals to be a masc. sg. form. A related form is naspak-atum, the plural of naspākum ‘granary’, also attested elsewhere as a masc. sg. form. In Tigrinya, the most common external plural marker is -at, suffixed to the singular noun (27i). The plural affix alternates with-tat in vowel-final nouns (27ii), as a result of a -t appearing between the final vowel and the plural suffix, most probably an epenthesis process (Kogan, 2007:389).11

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11In addition, many adjectives suffix –at to form their external plural (e.g., muluʔ/muluʔ-at ‘full’). Kogan (ibid.) also mentions two external plural affixes which are less usual, namely -an and -ot. The marker -an is found mostly with Gez borrowings, e.g. kəddus/kəddus-an, ‘holy, saint’, and həʔaʔ/həʔaʔ-an ‘sinner’. The marker -ot, on the other hand, marks the plural of some nouns ending in -a and -aj, both of which delete before -ot; examples are gəːtaʔ/gəːtaʔ-at ‘lord’, gəːsaʔ/gəːsaʔ-at ‘shepherd’, tāstaj/tāst-at ‘bull’, and bəfaj/bəfaj-at ‘companion’.
A good parallel can be drawn between MA and Standard Arabic, to which MA is closer than it is to Akkadian and Tigrinya. Various sources document masculine nouns with corresponding at-plurals (e.g. Holes, 2004:167-8; Kaye, 2007:233; Ryding, 2005:135-140). The data in Ryding shows that masculine at-pluralization is used in four major classes: names, some “derived” forms, loanwords, and other noun forms.

Ryding provides examples of proper names, names of the months and names of the letters of the alphabet. All the proper names provided by the author are feminine names, but the remaining ones are masculine.

(28) i- Feminine proper names:

\[ Sg. \ (Pl.) \]

\[ \text{zajnab(-aat)} \quad \text{‘Zeinab/s’} \]
\[ \text{?amiir(-aat)} \quad \text{‘Amira/s’} \]

ii- Names of the letters of the alphabet:

\[ \text{?alif(-aat)} \quad \text{‘?alif/s’} \]
\[ \text{raa?(-aat)} \quad \text{‘raa/?/s’} \]
\[ \text{waaw(-aat)} \quad \text{‘waaw/s’} \]

iii- Names of the months:

\[ \text{niisaan(-aat)} \quad \text{‘April/s’} \]
\[ \text{tammuuz(-aat)} \quad \text{‘July/s’} \]
\[ \text{ramaďaan(-aat)} \quad \text{‘Ramadan/s’} \]

The second class of nouns having at-plural is that of derived forms and includes (i) verbal nouns corresponding to derived forms II-X of triliteral roots and forms I-IV of quadriliteral roots as well as nisba derived from verbal nouns (29); (ii) participles, both active and
passive (30); and (iii) plural of the plural (31). It should be pointed out that all the nouns in (29) take the sound feminine plural regardless of their being predominantly masculine in the singular.

(29)  

i- Verbal nouns from triliteral roots:

II. tartiib(-aat) ‘arrangement/s’
IV. ?i znalazł(-aat) ‘announcement/s’
V. tawattur(-aat) ‘tension/s’
VI. tabaadul(-aat) ‘exchange/s’
VII. inśikaas(-aat) ‘reflection/s’
VIII. iktifaaf(-aat) ‘discovery/ies’
X. istiθmaar(-aat) ‘investment/s’

ii- Verbal nouns from quadriliteral roots:

II. tadaḥwur(-aat) ‘decline/s’
IV. ihtmiʔnaan(-aat) ‘serenity/ies’

iii- Nisba derived from verbal nouns:

ihṭijaatijj(-aat) ‘reserve/s’

As to participles, these are derived from form I or forms II-X and quadrilaterals and do not denote human beings:

(30)  

i- Active (AP) and passive (PP) participles of Form I

AP  
AP waaẓib(-aat) ‘duty/ies’
kaaʔiin(-aat) ‘being/s’

PP  
PP maxṭuut(-aat) ‘manuscript/s’
maxluuq(-aat) ‘creature/s’

ii- AP and PP participles of the derived verb forms (II–X) and quadrilaterals

AP  
AP II m uxaddir(-aat) ‘drug/s’
IV muḥiṭ(-aat) ‘ocean/s’
VI mutaraadif(-aat) ‘synonym/s’
Quad  
Quad mufarqiʕ(-aat) ‘explosive/s’

PP  
PP II muʔjalad(-aat) ‘volume/s’
V mutayajjar(-aat) ‘change/s’
VII munḥaḍar(-aat) ‘slope/s’
VIII muʔtamar(-aat) ‘conference/s’
The last type of derived forms is the plural of the plural (jam‘al-jam‘), as in (31). The author comments that it is not clear whether the difference between the simple plural and the plural of the plural is of a semantic or just stylistic nature; however, in a case like raẓul/rizaal/rizaal-aat, the plural of the plural does not express plurality merely but rather ‘distinctive men, men of importance.’

(31) Sg. Pl. Pl. of pl.
    tariiq turuq turuq-aat ‘path/s’
    bajt bujuut bujuut-aat ‘house/s’
    fiaram ?afiraam ?afiraam-aat ‘pyramid/s’

The third class of nouns consists of loanwords. The items in (32) are all masculine nouns in the singular:

(32) taaksiij(-aat) ‘taxi/s’
    duulaar(-aat) ‘dollar/s’
    fiurmuun(-aat) ‘hormone/s’
    luurd(-aat) ‘lord/s’

The last class of nouns Ryding (ibid.) lists contains a number of nouns that do not align with any one of the classes above. She comments that one recurrent type has a final syllable that contains a long /-aa-/ in the singular.

(33) maʒaal(-aat) ‘field/s’
    hajawaan(-aat) ‘animal/s’
    naʃaat(-aat) ‘activity/ies’
    qaraar(-aat) ‘decision/s’
    tajjaar(-aat) ‘current/s’
    nidaaʔ(-aat) ‘call/s’
    mahall(-aat) ‘location/s’
3.4 Summary

Our claim that id-/at plural morphology is another facet of the common Afro-Asiatic stock is borne by two different arguments, one based on kindred structural properties and the other on a comparative survey. First, the phonological similarities between id- and -at are notable while the morphological positional difference can be explained as a preference of AM for prefixation over suffixation as in CS, for instance. Second, id-pluralization is not a particularity of AM, and neither is at-pluralization a particularity of MA. Various related varieties/languages point in the direction of this mode of pluralization being a pan-Amazigh/pan-Arabic (Semitic) trait. The obvious conclusion is that id/at-pluralization must be a common Afro-Asiatic morphological characteristic.

This, however, does not explain id/at-pluralization facts entirely. As we will claim in the following section, at-plurals have more in common with id-plurals than can be explained by resorting to the cognate structure hypothesis.

4. id/at-pluralization and language contact

This section considers two possibilities, both relating to language contact. The first one is that id/at-pluralization is an areal trait. The second is that some aspects of id/at-pluralization receive better explanation if they are considered as AM substratal traits in MA.

4.1 Areal linguistics

For the sake of completion, we consider in this section the possibility of treating id/at-pluralization as an areal characteristic, following the suggestion that the contact between the Afro-Asiatic languages has resulted in areal traits (e.g. Zaborski, 2006:37). It would accordingly be appealing to consider North Africa as a linguistic area.

Although defining the concept “linguistic area” is not a simple matter (e.g. Campbell, 2006, 2015), working definitions are available, two of which we consider. According to Campbell (2015:955), “areal linguistics is about the diffusion of structural features across the languages of a geographical area. The term linguistic area refers to a geographical area in which, due to borrowing and language contact, languages of a region have come to share structural features- not just loanwords, but also shared phonological, morphological, syntactic, and other traits.” He also comments that in establishing linguistic areas, two approaches have been
adopted. Thomason (2001:99) insists on the fact that a linguistic area “is a geographical region containing a group of three or more languages that share some structural features as a result of contact rather than as a result of accident or inheritance from a common ancestor.” Commenting on Thomason’s definition, Muysken (2008:3-4) lists and discusses the six key concepts which it contains and which help identify a linguistic area: (i) a delimited geographical region, (ii) the presence of three or more languages, (iii) the identification of shared structural features, (iv) the presence of language contact, (v) the fact that the shared features are not the result of accident, nor of (vi) inheritance.

On the basis of the criteria from Thomason’s definition, it is hard to consider AM and MA id/at-pluralization an areal trait for two different reasons. The first and obvious reason is that we are considering two languages only. The second reason is that the shared morphological trait can be, and as we have shown above is, an inherited, cognate structure. More data, which is not available to us at the moment, would be necessary, preferably from different Semitic and Hamitic languages, like Algerian, Tunisian, Libyan, and Egyptian Arabic, as well as other Semitic and Amazigh varieties. The (absence of) genetic relationship criterion will pose a problem, though. We leave this issue for future research.

### 4.2 Language contact: Substratal influence

As revealed by general overviews (e.g. Aguadé, 2008:293; Versteegh, 2010:635) as well as more specific studies, the presence of an AM substratum in the grammar of North African Arabic is not a novel hypothesis. For instance, Tilmatine (1999, 2011) provides general surveys treating this aspect with respect to North-African Arabic, while Elmedlaoui (1998, 2000) deals with the more specific case of Moroccan Amazigh. Substratal phenomena extend to phonetics, morphology, the lexicon (Chtatou, 1997), and (morpho-)syntax (El Moujahid, 1995; Lafkioui, 1998).

12The “circumstantialist approach” – the more common approach – consists in listing similarities shared by the languages of a geographical area and bringing to the fore the role of diffusion in the fact that these are shared. As it typically does not seek supporting specific historical linguistic evidence, this approach does not preclude the role of chance, universals, and possibly undetected genetic relationships as an alternative possible source for these traits. Contrariwise, the “historicist approach”, which is preferred, seeks supporting, concrete historical evidence to support the diffusion of the common traits. However, the circumstantialist approach may turn out to be necessary in the absence of clear historical evidence. Campbell (2006: 21-22) concludes by stating that: “(1) we should abandon the search for a definitive definition of ‘linguistic area’; (2) areal linguistics is not distinct from borrowing/diffusion in general; and (3) the concept ‘linguistic area’ is not significant in itself. Instead of pursuing definitions of linguistic areas, we should attempt to account for the history of individual borrowings and diffusion, together with language change in general, in order to answer the question, ‘What happened?’”
Structural borrowing has also been studied on the basis of very subtle aspects of prosodic phonology, more specifically the prosody of schwa (Bensoukas and Boudlal, 2012a-b). On the basis of this background and the discussion in § 3, we claim that although AM and MA id/at-pluralization is an Afro-Asiatic cognate trait, this aspect of the morphology of MA brings to the surface an AM substratum in two different respects: The array of items that take at-plurals and the gender specifications of this type of nouns. One aspect in which id- stands out is its potential for recursion.

4.2.1 Enrichment of input to at-plurals

A common input to id/at-pluralization is the class of bu-nouns, used to express the meaning of ‘the one with ...’). bu-nouns are interesting in the present context as they reveal asymmetries between AM and MA relating to morphological internal complexity and expression of (in)alienability in possession (Bensoukas, 2016a), with the details of at-pluralization in MA correlating with the latter property.

First, in terms of their internal structure, AM bu-nouns can be very complex so much so that it is possible to find inside them coordination and modification, as illustrated by the following examples, respectively: bu tmyart d tarwa ʕzzanin ‘bu+ wife and handsome children’; bu tmyart (lli) baɦra isawaln d tarwa (lli) baɦra baslnin ‘bu+wife who is very talkative and children that are very spoilt.’ The plural of these internally complex bu-nouns is no different from that of the simpler ones; they take id- at the beginning. This internal complexity does not seem to be possible in MA bu-nouns.

The second difference is that in AM bu-nouns can express both alienable and inalienable possession, whereas in MA they can express only inalienable possession (34i-ii). To express alienable possession in MA, the periphrastic mul-noun is used, on a par with the bab-noun of AM (34iii). These possibilities not only make AM bu-nouns in theory largely outnumber those of MA but also make possible the expression of a larger spectrum of meanings.13

13A quirk in the bu-nouns and bab-noun constructions in AM as far as (in)alienability is concerned can be illustrated by the almost semantically equivalent nouns bu-tgmmi ≈ bab n tgmmi and the quite different bu-wgajju ≠ bab n ugajju ‘the stubborn one’/‘the owner of the head (e.g. of a sheep)’. Once more, this marks a significant difference between AM and MA. These characteristics are claimed in Bensoukas (2016a) to indicate the presence of an AM substratum in MA.
What matters in the present context is that all the AM nouns in (34) take id-plurals, a possibility not available in MA. In fact, MA nouns that take at-plurals do include some bu-nouns, revealing a parallel behavior in AM and MA. This is the case with the items in (35), which contains both (apparently) frozen (35i) and morphologically analyzable bu-nouns (35ii):

(35)  

<table>
<thead>
<tr>
<th></th>
<th>AM</th>
<th>MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-</td>
<td>(id-)bu-ʒʒɣlal  `snail'</td>
<td>bu-ṛaṣ(-at)  `small lizard'</td>
</tr>
<tr>
<td></td>
<td>(id-)bu-ttgra  `turtle'</td>
<td>bu-ʒəʕran(-at)  `cockroach'</td>
</tr>
<tr>
<td>ii-</td>
<td>(id-)bu-wgajju  `stubborn person'</td>
<td>bu-ṛas(-at)  `stubborn person'</td>
</tr>
</tbody>
</table>

However, while in (35ii), MA bu-ṛas has a corresponding at-plural, this does not apply to all nouns in this class. In (36), bussbsi, which definitely has a similar morphological constituency, rather pluralizes in a similar fashion to periphrastic mul-nouns. After closer scrutiny, it turns out that bu-ṛas expresses inalienable possession, while bu-səbsi expresses alienable possession:

(36)  

<table>
<thead>
<tr>
<th></th>
<th>AM</th>
<th>MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-</td>
<td>buwgajju</td>
<td>id-buwgajju  `stubborn person’</td>
</tr>
<tr>
<td></td>
<td>bussbsi</td>
<td>id-bussbsi  `the one with the (kif) pipe’</td>
</tr>
<tr>
<td></td>
<td>bab n tgmmi</td>
<td>id-bab n tgmmi  `owner of the house’</td>
</tr>
<tr>
<td>ii-</td>
<td>buṛas</td>
<td>buṛas-at  `stubborn person’</td>
</tr>
<tr>
<td></td>
<td>bussbsi</td>
<td>mm&quot;alin ssbas  `the one with the (kif) pipe’</td>
</tr>
<tr>
<td></td>
<td>mul ddaṛ</td>
<td>mm&quot;alin ddaṛ  `owner of the house’</td>
</tr>
</tbody>
</table>

This difference in pluralization reveals an asymmetry in the two languages: while AM bu-nouns and bab-nouns both have id-plurals without exception, MA bu-nouns and mul-nouns have different plurals. More particularly, at-plurals are restrained to bu-nouns expressing inalienable possession.

To sum up, MA seems to extend at-pluralization to bu-nouns, especially those expressing inalienable possession. The very complexity of the internal structure of bu-nouns and the very
sophisticated reference to (in-)alienable possession in AM indicate that the extension of at-pluralization to bu-nouns in MA might be part and parcel of this AM substratum.

4.2.2 Gender specification of at-plurals

The second aspect that attracts attention with respect to at-plurals in MA is their gender specification. While the normal gender of at-plurals is feminine (37), the one of the nouns considered in this paper is masculine (38):

(37) **Feminine at-plurals**

<table>
<thead>
<tr>
<th>Noun</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>msəlmə</td>
<td>msəlm-at</td>
</tr>
<tr>
<td>bəgrə</td>
<td>bəgr-at</td>
</tr>
<tr>
<td>təbsimə</td>
<td>təbsim-at</td>
</tr>
<tr>
<td>sənsla</td>
<td>sənsl-at</td>
</tr>
</tbody>
</table>

‘Moslem woman’
‘a cow’
‘a smile’
‘a chain’

(38) **Masculine at-plurals**

<table>
<thead>
<tr>
<th>Noun</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>əbdərrahim</td>
<td>əbdərrahim-at</td>
</tr>
<tr>
<td>k&quot;tjəb</td>
<td>k&quot;tjəb-at</td>
</tr>
<tr>
<td>ərs</td>
<td>ərs-at</td>
</tr>
<tr>
<td>bu-ʒəʕrən</td>
<td>bu-ʒəʕrən-at</td>
</tr>
<tr>
<td>kamjun</td>
<td>kamjun-at</td>
</tr>
</tbody>
</table>

‘booklet’
‘marriage ceremony’
‘cockroach’
‘truck’

In a sense, the gender of at-plurals in MA depends on the gender of the base noun. It is this very characteristic that we consider emanating from the impact of AM.

AM distinguishes masculine id- from its feminine ıstt- as in the (i) names (ii) kinship terms, (iii) bu-nouns/bab-nouns, (iv) and war nouns in (39) below. The choice of the exponent depends on the gender of the base of the simple noun ((39i) and (39ii)) or the affix of the complex noun ((39iii) and (39iv)).

(39) **Masc.** | **Fem.**
---|---
(i)-muhmmad | (ıstt-)faḍma<br>(i)-hasan | (ıstt-)ʕifa<br>(i)-dadda | (ıstt-)lalla<br>(i)-ʃmmi | (ıstt-)ʃmntti<br>(i)-ʒddi | (ıstt-)ʒdda

‘elder brother/sister’
‘paternal uncle/aunt’
‘grandfather/grandmother’
iii- (id-)buwgajju (istt-)mmuwgajju ‘strong-headed person’
(id-)butammnt (istt-)mmutammnt ‘honey-seller’
(id-)bab n tsqmmi (istt-)lal n tsqmmi ‘house-owner’
iv- (id-)war-tawwuri (istt-)tar-tawwuri ‘the one without work’
(id-)war-tarwa (istt-)tar-tarwa ‘the one without children’

MA has developed a parallel structure to AM id-/istt-. This is clear in two cases: (i) names and (ii) borrowings. The names in (40) have at-plurals irrespective of their gender. The feminine nouns are all interesting as their singular forms are all consonant final, thus bearing no formal indication of their feminine gender, which otherwise corresponds to a final -a as in maslam/msalma ‘Moslem’. A similar situation is found in borrowings, be they masculine or feminine, as shown by the items in (41) below.

<table>
<thead>
<tr>
<th>(40)</th>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ṭaʃid</td>
<td>ṭaʃid-at</td>
<td>zinɔb</td>
</tr>
<tr>
<td>ẓli</td>
<td>ẓlij-at</td>
<td>nuɾ</td>
</tr>
<tr>
<td>ṣɔbdɔrrahim</td>
<td>ṣɔbdɔrrahim-at</td>
<td>malak</td>
</tr>
<tr>
<td>(41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pɔrabul(-at)</td>
<td>‘satellite dish’</td>
<td>tɔnubil(-at)</td>
</tr>
<tr>
<td>ʊrdinatur(-at)</td>
<td>‘computer’</td>
<td>rʊʃaɾʒ(-at)</td>
</tr>
<tr>
<td>traktur(-at)</td>
<td>‘tractor’</td>
<td>sɑntak(-at)</td>
</tr>
</tbody>
</table>

MA, thus, has a similar array of at-plurals as AM as far as the gender distribution of -at is concerned.

4.2.3 Recursiveness of id-

The last point we would like to raise with respect to id/at-plurals is the intricate recursion capacity of id-, a quality that -at definitely lacks. In combination with the AM affix bu-, id- can appear more than once in the same word. For example, the plural of buttgra ‘turtle’ takes id-, a fact that has been one of the concerns of the paper so far. If we imagine a group of shops that sell turtles, the owner of one shop would be referred to in AM as bu-id-buttgra, and the shops would be referred to as id-bu-id-buttgra ‘the sellers of turtles’. This shows that id- may appear more than once in the same word.\(^\text{14}\)

\(^{14}\)That affixes are recursive is a property reported for some languages, especially ones with polysynthetic morphology (e.g. de Reuse, 2006, 2009).
The recursive property of AM \textit{id}- distinguishes it sharply from MA \textit{-at}, and by the same token shows the extent to which id-pluralization can get complex in AM, as opposed to at-pluralization in MA. The argument to be formulated on the basis of recursiveness and related facts is that since bu-noun morphology and the concomitant id-pluralization are this complex, it does not stand to reason to claim that they are an MA superstratum in AM. More generally, it would be very unlikely for language A to borrow structural properties from language B, and develop on the basis of those properties a grammar that is significantly more complex than that of language B. Rather, in the case of AM and MA, it would make more sense to assign the provably contact-induced traits of at-pluralization to the language with the more elaborate grammar, AM in the case at hand. MA at-pluralization can then be claimed to emulate the possibilities offered by id-pluralization.

4.3 Summary and discussion

A useful distinction proposed in Thomason (2006) is that between “uncontroversial cases” of contact-induced change and “less obvious contact-induced changes”. “The vast majority of these [uncontroversial changes] are changes in which morphemes are transferred from one language to another- namely, lexical borrowing and the borrowing of grammatical morphemes, both particles and affixes.” (p.340). In the case at hand, i.e. id-/at pluralization, the MA morpheme is not transferred from AM, and cannot accordingly qualify as an uncontroversial contact-induced change. What we have claimed in this paper so far is that MA at-plurals display AM substratal characteristics, or what Thomason would subsume under less-obvious contact-induced changes, more specifically “structural interference without morpheme transfer”.

Under this rubric, the author lists three types of structural changes without morphemic borrowing. In the first type, which happens for instance when one dialect borrows from another, change consists in structural borrowing without morphemic exchange, due mainly to the lexical, structural and typological close relation between the two varieties. The second type consists of structural interference, but the morphemes themselves are not borrowed; this is the case of substratal traits present in situations of language shift. The author explains that this type is generally linked with widespread bilingualism and the imperfect learning of the target language which characterize situations of shift-induced interference. The last type involves “the convergence of structure through mutual or one-way borrowing in a highly organized intense
bilingual or multilingual contact situation in which each speaker group is concerned to preserve its own heritage language—sometimes, though by no means always, with a reluctance to engage in any lexical borrowing.”

With respect to MA at-pluralization, the type of change that has probably taken place is the second. The first type is to be excluded from the outset, mainly because we are concerned with two different languages and not dialects, and the languages are members of different phyla. The third type is also excluded because the two languages have had a long-lasting influence on each other. The second type of change remains the most plausible for at least two reasons. First, on account of the various substratal traits present in MA, one can claim that specifics of MA at-pluralization which differ from those of cognate Arabic varieties can safely be ascribed to a contact-induced interference. Also, the idea that the specifics of at-pluralization can be a case of language shift generally linked with widespread bilingualism and the typical imperfect learning of the target language associated with shift-induced interference has reverberations elsewhere in the grammar of MA, as in the case of agentive constructions (Ech-charfi, 2018 (this issue)). We can conclude that the specifics of at-pluralization are of a systemic nature (Hickey, 2010:11), especially since “it may be true that adopting a category rather than its exponence is not so much a feature of borrowing but of transfer in language shift.”

Finally, the claim of this paper that MA at-plurals display AM substratal characteristics indicates an external contact-induced change that is still challenging to sustain for the very reasons Thomason (2010:34-35) lists. In fact, the author lists five conditions to be met in order to consider that structural features are transferred without the morphemes that express them: (i) consider the proposed receiving language (B) as a whole (not just a single point at a time); (ii) identify the source language (A); (iii) identify some shared features in A and B; (iv) prove that the features are old in A; (v) prove that features are innovations in B. The author adds that if all five prerequisites can be met, then contact-induced change is solid, stressing the fact that most common weaknesses relate to requirements (iv) and (v). While conditions (i) through (iii) can be very easily addressed in our case, it is not so obvious how the last two can, given the lack of written documents pertaining to the two languages. Suffice it to say that, as far as id/at-plurals are concerned, these issues need further systematic investigation, as does the possibility of id/at-pluralization being an areal linguistic trait. All of these remain promising research avenues,
especially if id/at-plurals ever turn out to be a trait shared by different languages, which would also open the possibility of establishing a linguistic area in the region.

5. Conclusion

id/at-pluralization is an allegedly peripheral and definitely lesser studied mode of pluralization in the two Moroccan languages AM and MA. After having shown how distinct id/at-plurals are from the more common Afro-Asiatic sound and broken plurals of the two languages, we tried to systematically establish how structurally similar (and different) AM and MA are in this respect, focusing on the use of MA -at with plurals of masculine nouns. Then we characterized id/at-plurals as being the result of extragrammatical morphology.

Not being a universal tendency, the similarity between the two morphological systems calls for explanation based on language contact, either as a substratum/adstratum or an areal trait. The two languages have actually been in contact for almost 15 centuries, a contact situation that is coupled with the genetic relationship between the two languages. This makes matters more complicated due to the likelihood of id/at-pluralization being a cognate structure. On the basis of a preliminary comparative survey, we showed that this is exactly the case, precluding the possibility of a structural borrowing by one language from the other.

Notwithstanding this common Afro-Asiatic morphological trait, the substratal impact of AM on MA is clearly visible, albeit partially. First, some of the items to which at-pluralization extends have parallels in AM. On the basis of this and the fact that id-pluralization is more elaborate in AM, we claimed that MA is extending at-pluralization, emulating in this AM. A related morphological phenomenon is that of bu-noun morphology, which both languages have, but which turns out to be more sophisticated in AM, another property MA is emulating. Second, we have shown how MA at-plurals are masculine if the input is masculine, despite the fact that –at is used as a feminine affix elsewhere in the language. In this, MA looks more akin to AM than it is to Standard Arabic, say.
References


