Morphologies of Asia and Africa

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Edited by
Alan S. Kaye

Winona Lake, Indiana
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1. Derivational ablaut

There are few languages whose phonologies and morphologies are so richly intertwined as in Moroccan Colloquial Arabic (MCA), as I suggested in my essay on Moroccan Arabic phonology (Heath 1997). This is because MCA has a rich system of derivational ablaut, each ablaut pattern taking an input stem and mapping it onto a template containing C positions (mostly as-yet unfilled) and pre-specified vowels. An example of a rigid template is Agentive CCAcC, which forces input stems of various shapes to fill out its four C positions, if necessary repeating (geminating) an internal C and/or adding a (probably) nonlexical semivowel. Thus nsa ‘forget’ has agentive nssay ‘forgettable one’.

Other grammatical categories have more flexible templates than the agentive. 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). For example, the regular plurals of input (singular) nouns of various shapes are shown in (1), where “V” is any full vowel [i a u].

(1) singular plural
   a. CCAc, CaCC CCAcC (less often CCaC, CCuC)
   b. CaC CIC-an
   c. CuC CwaC
   d. CIC CyaC
   e. CCA CCAc (and other shapes)
   f. CCI CCA (and other shapes)
   g. CCC-a CCC-a
   h. CCC-i CCC-a
   i. CCVC CCaC(a)C
   j. CCCaC CCaC(a)C
   k. CCCVC CCaC(a)C (in pre-Saharan dialects CCAcC)

An input a (schwa) is disregarded by the ablaut system, and an input short ă is only marginally relevant (its rounding feature is sometimes retained in some form in ablaut outputs). On the other hand, input full vowels (which reflect Classical Arabic diphthongs or long vowels) are definitely relevant to the selection of a plural pattern, though they are not carried over in their original form into the output. The main break is between the triliteral inputs (1a-d), each consisting of exactly three full segments (consonants and full vowels), and the longer inputs of (1g-k).
Moreover, of the four trilliteral patterns, only CwaC and CyAC can be unified (as CCaC), with the proviso that the input high vowel u or i is mapped directly onto the ablaut C2 position, becoming the homorganic semi-vowel. There is no way to integrate CI-C-an or CCaCa into this CCaC pattern, so we have at least three productive trilliteral plural patterns. These observations on nominal plurals and wider consideration of other morphological patterns force us to distinguish the following basic trilliteral stem types, where ‘V’ represents any full vowel and ‘&’ any short vowel: hollow CVC stems, weak CCV stems, geminate CVC-C stems, and strong CCVC or CCVC stems (with C2 distinct from C3). Examples are bjr ‘(water) well’, dlbu ‘bucket’, mdax ‘brain’ or ‘marrow’, and kblj ‘dog’. The distinction between strong and geminate trilliterals is not important for the nominal plural, which has an ablaut vowel intervening between C2 and C3, whether or not the two constitute a geminate cluster in the input. However, the strong/geminate distinction is crucial in verbal morphology. Strong trilliteral verbs have a fixed shape CCaC or CCBC and a verbal noun CCIC (occasionally CCaC or CCaC), as in skat ~ skat ‘be silent’ (verbal noun s&kat). By contrast, if C2 = C3 we get a geminate trilliteral verb C&C,C,C, or C&C,C,C and a verbal noun C&C,C,C,C or C&C,C,C,C, as in samm ‘smell’ (verbal noun samm-an).

Quadrilleral stems have four full segments, and the few stems with five segments are generally treated in the same way. We can see in (1g-k) that the plurals of all quadrilleral nouns begin with CCaC. Whereas trilliteral stems must be broken up into several subclasses with distinct morphological properties, quadrillerals are more uniform. It is useful to distinguish weak (V-final) from strong (C-final) stems for certain purposes, and verbs (often themselves derived by ablaut) of the shape C(a)C,C,C have a slightly different verbal noun than do other quadrilleral verbs. However, there is a basic uniformity among quadrilleral stems.

The plurals in (1g-k) all begin with CCaC, and contain at least one further segment. We can unify them under the formula CCaC*X, where X* denotes a variable tail consisting of one or two segments. There are, to be sure, formal challenges in getting the correct outputs. For example, in (1g-h) we need a supplementary rule switching final i and a vowels in the X* tail, and (1g) shows that the input-to-template mapping rule transfers a stem-final input C3 onto X* rather than onto the C3 of CCVrx*, leaving a blank C3 that must be filled by a nonlexical semi-vowel. However, these complexities do not seriously undermine the uniform plural ablaut of quadrilleral stems. For a complete model of ablaut in the mainstream MCA dialect, see Heath (1987).

2. Categories

The basic categories marked in MCA by affixation and/or ablaut are in (2). Parentheses around “&” under a column heading indicate that the process is sometimes but not always involved. For fuller discussion of the syntax and semantics of these categories, see Gaubet (1993) or Youssi (1992); non-francophone readers will find Harrell (1962) useful.

The (positive) imperative is expressed as the imperative minus the latter’s usual second person subject prefix: bkl ‘weep!’ (i-bkl ‘[that] you weep’) In comparison with Classical Arabic (CA), there is some trimming of verbal derivation. Gone are the CA case endings on nouns and the modal endings on imperative verbs, both of which were expressed chiefly by word-final CA short vowels. CA verb forms III (imperative -u-CaCIC), IV (-u-CCIC), and X (-staCCIC) have gone out of use; surviving vestiges have been folded into other, more broadly defined types. Another important simplification is the loss of the morphological dual, an important CA category (in nouns, adjectives, pronouns, and verbal agreement), now confined to a handful of high-frequency, commonly counted nouns like ‘time (instance),’ ‘day,’ ‘month,’ and ‘year’. The feminine plural category of CA is also largely gone, except in nominalized adjectives (l-hbir-‘at ‘the big ones’ [feminine]) and some other nouns. In general, there has been a modest reduction in the inventory of inflectional and derivational categories.

In the three following sections we illustrate the themes of formal renewal after disruptive phonetic attrition (‘eat’), consolidation of multiple morphological patterns into a simpler system (passive verbs), and the partial shift from morphological to analytic (phrasal) expression of certain categories (relative adjectives).
3. ‘eat’

CA, which for present purposes can be taken as the proto-language, had a verb with perfective *ākal- and imperfective *kūl-. The CA glottal stop phoneme was dropped in MCA, as in other vernacular Arabics. CA stems, particularly verbs, that had the misfortune to have a glottal stop had to be reshaped to reintegrate themselves into acceptable MCA formal patterns. ‘Eat’ (CA root ʔzl) and ‘take’ (CA ʔtzl) were the two major ?-initial verbs, and they have a basically parallel history in MCA (a few dialects lack reflexes of ?-tsl). Using ʔzl as our focus, CA imperfectives like 3msg ya-ʔkul ‘he eats’ and 2msg ta-ʔkul ‘you eat’ were inherited as MCA y-ʔkal- – y-ʔka1 and t-ʔkal- – t-ʔkal. (In both CA and MCA, one can argue about the location of the morpheme break.) Although these imperfective forms, with their stem-initial full a, do not fit into established MCA stem patterns, they have not been reshaped. Counting the a as part of the stem, -ʔkal- – -ʔkal at least verges on regularity, since it has two consonants and one full vowel, and in this respect it stays within the bounds of trilliteracy.

CA perfective *ʔkal-, as in 3msg *ʔkal-a ‘he ate’ and 1sg *ʔkal-tu ‘I ate’, was inherited initially as 3msg *kal and 1sg *kal-t. These forms are still preserved in some (chiefly Jewish) MCA dialects. While *kal is perfectly pronounceable, morphologically it is (along with reflexes of *ʔxa1 ‘take’) a unique and therefore anomalous “strong trilliterary” stem. In most (Muslim) MCA dialects, the perfective paradigm has been reshaped either as kla, kli-t (weak trilliterary), as kal, kal-t (hollow trilliterary), or as kall, kal-lit (geminate trilliterary). Such reshapings are striking evidence of the continuing “psychological reality” of these abstract formal patterns. They reveal the fragility of the core system of stem shapes, which requires three or four full segments and can be disrupted (temporarily) by low-level phonetic processes. But they also show how the system can reconstitute itself after such a disruption.

4. Passives

CA had several ways by which transitive and (passive-like) intransitive verb stems could be paired. Quadriliterary transitive stems, including ablauted form II factitive-causative verbs, added a prefix -ta- [just before the stem to create the passive (form V) -ta-CaC-CaC, hence form II -xarraj- ‘remove, take out’ (causative of -xraj- ‘go out’) and its passive form V -ta-xarraj- ‘be removed’ (semanotically specialized as, e.g., ‘graduate’ from school). The same -ta- prefix was added to verbs of form III to constitute the basically reciprocal form VI, -ta-CaC-CaC.

For trilliterary transitive, the passive was usually either form VII, characterized by prefix -n- (-qafl- ‘cut’, passive -nqafl-), or form VIII, with infix -t- (perhaps actually -ta-, but the segmentation is now following the first stem consonant (-nqat- ‘destroy’, passive -ntaqat-).

MCA dialects continue the quadriliterary passive form V with only regular sound changes, e.g., -t-xrra2 ‘graduate’. However, the dialects differ from each other significantly in the passivization of trilliterary transitive forms.

Some dialects preserve the (form VII) n-passive (generally alongside t-passives, on which see below). This occurs with many Jewish dialects, and with some archaic northern, Jebil, and urban Muslim dialects. This “coalescence” of dialects is a recurring theme in MCA dialectology. However, n-passives are also common in Muslim dialects of the pre-Saharan oases, and around Oujda in northeastern Morocco near the Algerian border. These dialects belong to a distinct dialectal grouping that is usually sharply opposed to the Jewish dialects and to the archaic Muslim dialects mentioned above. That n-passives occur in both dialectal groups would suggest independent retention from a proto-language even if CA were not preserved.

The chief alternative in MCA to the inherited n-passive is a t-passive, hence n-qatfl or t(l)-qatfl ‘it was cut’. In one sense, the t-passive is a phonological transformation of the old form VIII, which formerly had a *(t)-a- formative infixed after the stem’s C1 (as in -ntaqat(-)). In MCA, the t- is now prefixed to the stem, parallel to the n- prefix of the n-passive and to the t-prefix of the quadriliterary form V (t-CaC-CaC).

In the mainstream Muslim dialects that are the basis for the emerging national koiné, the t-passive has completely ousted the old n-passive. The effect is an appreciable morphological simplification, by which both trilliterary and quadriliterary stems are passivated by a single basic t(l)- prefix, rather than by three distinct mechanisms (prefix -n-, infix -ta-, and prefix -ta-) as in CA.

5. Elative (comparative) adjectives

While CA relied very heavily on nominal, verbal, and adjectival morphology to express grammatical categories, MCA and many other modern Arabic vernaculars have shifted some of the burden onto phrasal syntax. Among Arabists, the best-known example of this is the rise of the analytic genitive (like English’s genitives), partially replacing the inherited “construct” genitive (roughly like English’s genitives but morecompound-like). In this paper, we make the general point using a different CA morphological pattern, the “elative” adjectives in their comparative function (e.g., ‘bigger than X’).

In CA, adjectives and even many verbs (perhaps actually their participles) have elative forms, e.g., *ākbar- ‘bigger’ from kābar- ‘big’ and *sawwal- ‘longer’ from sawwil- ‘long’. There are special rsg forms like kubr-aa ‘bigger’ and special plural forms. Even adjectives already of CaC-shape, including the important “color and defect” class of adjectives that denote surface features, have CaC-elatives even though it may be difficult to distinguish simple from elative terms: ātur- ‘deaf’ or ‘deafener (than . . .)’. This is not as serious as it might seem, since color/defect adjectives lend themselves to comparison (‘redder’, ‘deafener’) less readily than do CaC-shape adjectives (‘bigger’, ‘smaller’, ‘more’, ‘less’, etc.). Moreover, there is little likelihood of real ambiguity in discourse context, since elatives in comparative function are normally followed by ‘than . . .’ phrases.
By the same logic, the ?aCCaC-elative of CaCiIC- adjectives could also be abandoned. One could add a 'than' phrase to the simple CaCiIC-adjective, and it would be understood as a comparative construction.

In the most archaic Muslim dialects, such as those of the far northern cities (Tangiers, Tetuan), there are indeed only a handful of high-frequency ablauted elative forms left. These include kbar 'bigger' (pronounced kbar farther south) and others meaning 'more', 'less', 'smaller', 'better', and 'worse', three of the six being suppletive. Other adjectives lack morphological elatives in this dialect area, and even these six sometimes allow analytic comparatives based on the simple adjectival form, e.g., hawa kbi? mi:n-na 'he [is] bigger than us'. As one goes south, through the major cities of central Morocco, then on to Marrakesh and then to the pre-Saharan oases, the frequency of the morphological elative progressively increases. By the time one reaches Mauritania we are back to a CA-like degree of productivity.

Since MCA, even in the archaic northern Muslim dialects, has not undergone a radical slashing of its morphology, it would be circular to "explain" the shift from morphology to syntax in the elative as a specific case of a broad typological shift. In the archaic northern Muslim dialects where the elative has lost the most ground, the relevant forms may have been problematic. These dialects show surface mergers of long and short vowels in such positions as CC-C, so a CA elative *?aCCaC- would appear either as CCaC or CCiC, depending on the consonantism (pharyngealized, pharyngeal, and uvular consonants favoring a). Whether CCaC or CCiC, such an elative would very likely be homophonous to a non-elative form of the primary adjectival class (continuing the CA CaCiIC-class), namely, either singular CCiC or plural CCaC (kbi? 'big', Pl. kbar). This confusing homonymy, now with the non-elative singular and now with the non-elative plural, may well have been partly responsible for the loss of morphological elatives in these dialects. While it lasted, the homonymy may also have been partly responsible for some puzzling innovations affecting the non-elative adjectival plural in these dialects, where Plural suffix -in (taken from participial morphology) can be superimposed on the already plural ablaut form CCaC to give CCaC-in, or added directly to the singular to give plural CCiC-in (kbar ~ kbar-in ~ kbi?-in 'big [PL]').

6. Conclusion

Morocco is an excellent laboratory for a grammatically sophisticated historical dialectology. The three immediately preceding sections, though severely simplified, give an inkling of the possibilities. The particular attraction of MCA is that the basic morphological structures of the dialects have been largely unaffected by diglossic mixing or other forms of standardization. Moreover, we can still gather grammatical data from speakers of some 25 Jewish community dialects (for the most part resettled in Israel since the early 1950s) in addition to a wide range of interesting Muslim dialects. This two-tier array has no parallel in other Arab countries (except potentially Yemen). I have published a substantial MCA Jewish and Muslim dialectology (Heath 2002), but nearly every grammatical topic raised therein deserves much more thorough study, and the possibilities for future study are as endless as the Sahara and as sublime as the towering peaks of the Atlas.

References