Abstract:

This paper offers a comparative study of the numerical system in Standard Arabic and Egyptian Colloquial Arabic. It aims to show the correspondences and divergences between the two varieties in relation to the phonology, morphology, and agreement properties of numerals. Arabic numerals are grouped into four classes: cardinals, ordinals, compound numerals and fractions. Each class is treated in a separate section. The paper shows how Egyptian Colloquial Arabic exhibits a simplified system of numerals in contrast to the complexity of numeral formation in Standard Arabic. In addition to the loss of case markers, the colloquial system is largely free from the gender distinction which is connected with the numbered noun.

0. Introduction:

Though numerals may have been studied in Standard Arabic (SA) and Egyptian Colloquial Arabic (ECA) separately, no attempt has been made to deal with them in one comparative approach. The term Standard Arabic is used here to refer to the “modern language of contemporary literature, journalism, news
broadcasting, technological writing, administration, and diplomacy” (Mitchell 1990). The written form of SA is relatively uniform throughout the Arab world. The spoken form, on the other hand, is more or less different from one Arab country to another since it is affected by the local dialects.

By Egyptian Colloquial Arabic, I mean the language of daily social intercourse in Egypt as a whole. It is utilized by every member of the community as the major vehicle of communication at home, in the market place, etc. Although there are some differences between the regional dialects in the country, particularly in pronunciation, these differences are not reflected in the numerals. That is why all Egyptian vernacular dialects are treated here as one major dialect. However, it is the pronunciation of Cairene Arabic that is adopted for the ECA data provided in this paper.

Four classes of numerals can be found in Arabic: cardinal, ordinal, compound and fractional numerals. A treatment of each class will be offered in one section of this paper. First, an analysis of cardinal numerals in SA and ECA will be introduced in section (1). Then, ordinal numerals in the two varieties will be handled in section (2). After that, compound numerals will be
discussed in section (3). Finally, fractions will be compared in the two varieties in section (4).

1. Cardinal Numerals:

In SA, the cardinal numerals for ‘one’ and ‘two’ have two shapes depending on the gender of the numbered noun, as shown in Table (1). The table also shows that ECA has two forms for ‘one’, /waaḥid/ for the masculine and /waḥda/ for the feminine but it has one form for ‘two’, used for both genders.

<table>
<thead>
<tr>
<th>Masc</th>
<th>Fem</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>ECA</td>
<td>SA</td>
</tr>
<tr>
<td>waaḥid(-un)</td>
<td>waaḥid</td>
<td>waaḥid-at(-un)</td>
</tr>
<tr>
<td>?iṭnaani (Nom)</td>
<td>?iṭteen</td>
<td>?iṭnataani (Nom)</td>
</tr>
<tr>
<td>?iṭnayni (Acc &amp; Gen)</td>
<td></td>
<td>?iṭnatayni (Acc &amp; Gen)</td>
</tr>
</tbody>
</table>

For ‘one’ in SA, there is a second form /?aḥad (m.) ~ ?iḥdāa (f.)/ used in the formation of the compound numeral for ‘eleven’ and before nouns or suffixes (cf. Al-Toma 1969: 80),
e.g. /ʔaʔad-u lʔawlaad/ ‘one of the boys’ and /ʔiʔdaa-hunna/ ‘one of them (f.)’.

The change from SA /waaʔid-at(-un)/ ‘one’ to ECA /waʔd-a/ can be accounted for by regular phonology and morphology. Final /t/ is lost by a morphological rule that can be called “[-a ~ -t] Suppletion” (Gadalla 1999: 146). It explains the changes occurring to SA [-at] in ECA as follows:

(1) [-a ~ -t] Suppletion in ECA:
   - at → -a / at the end of a phrase
   - at → -t / elsewhere

After the loss of final /-t/, two phonological processes occur in order to change SA /waaʔid-at(-un)/ into ECA /waʔd-a/. The first is the loss of the vowel /i/ by a high-vowel deletion rule proposed by Broselow (1976: 20) and reformulated as follows:

(2) High-Vowel Deletion in ECA:

\[
\begin{array}{c}
V \\
+ hi \\
- long \\
- stress
\end{array} \rightarrow \emptyset / VC \longrightarrow CV
\]
This rule ensures that a short unstressed high vowel is deleted in medial open syllables in the word or phrase domain. The second process involves the shortening of the long vowel in /waahid-at/ by Closed-Syllable Shortening (Gadalla 1999: 25):

(3) Closed-Syllable Shortening:

\[(V)VV \rightarrow (V)V / — C]_\sigma\]

This rule indicates that an extra-long vowel becomes a long one and a long vowel becomes a short one in a closed syllable. Thus, the three changes involved in /waahid-at > waahd-a/ are:

(4) a. waahid-at \rightarrow waahid-a (by [-a ~ -t] Suppletion)
   b. waahid-a \rightarrow waahd-a (by High-Vowel Deletion)
   c. waahd-a \rightarrow waahd-a (by Closed-Syllable Shortening)

The Colloquial cardinal /?itneen/ ‘two’ is followed by the singular form of inanimate nouns and the plural form of animate nouns (cf. El-Tagoury 1989: 53). Compare the ECA phrases in (5a) and (5b):

(5) a. ?itneen 9aSiir burtu?aan
   “Two orange juices”.
b. ?itneen muwaZZaf-iin

“Two employees”.

Sometimes, the numeral for ‘two’ is replaced by the dual form of the noun in both varieties, e.g. /kitaab-aani (Nom) ~ kitaab-ayni (Acc & Gen) > kitab-een/ ‘two books’, and /masTarat-aani (Nom) ~ masTarat-ayni (Acc & Gen) > masTart-een/ ‘two rulers’.

Table (2)

The Cardinal Numerals (three - ten)

<table>
<thead>
<tr>
<th>Masc</th>
<th>Fem</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>ECA</td>
<td>SA</td>
</tr>
<tr>
<td>0alaa0</td>
<td>talat</td>
<td>0alaa0-at</td>
</tr>
<tr>
<td>xams</td>
<td>xamas(t)</td>
<td>xams-at</td>
</tr>
<tr>
<td>sitt</td>
<td>sitt</td>
<td>sitt-at</td>
</tr>
<tr>
<td>sab9</td>
<td>saba9(t)</td>
<td>sab9-at</td>
</tr>
<tr>
<td>0amaani</td>
<td>taman(t)</td>
<td>0amaaniy-at</td>
</tr>
<tr>
<td>tis9</td>
<td>tisa9(t)</td>
<td>tis9-at</td>
</tr>
<tr>
<td>9ašr</td>
<td>9ašar(t)</td>
<td>9ašr-at</td>
</tr>
</tbody>
</table>

As Table (2) indicates, SA has two shapes for each of the cardinal numerals from ‘three’ to ‘ten’, according to the gender
of the numbered noun. Before masculine nouns they have the suffix [-at], which disappears before feminine nouns. According to Thackston (1984: 66) those numbers exhibit a phenomenon called “chiastic concord” whereby the masculine form is employed if the singular form of the numbered noun is feminine, as in /ʔarba9-u ward-aat/ ‘four roses’ and /sab9-u duwal/ ‘seven countries’; the feminine form is employed if the singular form of the numbered noun is masculine, as in /θalaaθ-at-u muhandis-iin/ ‘three engineers’ and /θamaaniy-at-u ʔaqlaam/ ‘eight pens/pencils’. However, it seems peculiar to say that the ‘feminine’ form of a numeral is used with the ‘masculine’ noun and vice versa. Thus, one can dissociate the marker [-at] from [+fem] as proposed by Gadalla (1999). Then, instead of asserting that numerals take the opposite gender of their noun complements, one can assume that:

(6) Complement N $\rightarrow$ Numeral

$$[+\text{masc}] \rightarrow [+\text{-at}]$$

$$[+\text{fem}] \rightarrow [-\text{-at}]$$

In other words, the ‘feminine’ numerals can be treated on a par with masculine nouns which exceptionally take [-at], e.g. /ʔamz-at(-u)/ ‘a man’s name’, while ‘masculine’ numerals are
treated on a par with feminine nouns which exceptionally fail to have [-at], e.g. /?umm(-un)/ ‘a mother’. This scheme has the advantage of not requiring the grammar to have ‘anti-agreement’ rules. Instead, the disagreement in ‘gender’ between a numeral and its complement is only morphological, not syntactic. That is to say, agreement will function normally, a numeral will in fact have the same gender as its complement. However, the ‘Complement N → Numeral’ rules stated in (6) assign the idiosyncratic morphological class (not gender) to the numeral.

In ECA, on the other hand, the masculine form is used before all nouns disregarding their gender, with the final /-t/ added before vowels. For example, /?arba9 da?aayi/? ‘four minutes’, but /?arba9-t u?shur/ ‘four months’; /xamas sa9aat/ ‘five hours’ but /xamas-t iyyaam/ ‘five days’. Though Badawi & Hinds (1986) assume that the /-t/ is used with plural nouns ordinarily having an initial glottal stop, this has many counterexamples, among which are /?arba9 ?awlaad/ ‘four boys’ and /xamas ?adawaat/ ‘five tools’. Hence, it is safer to propose that the /-t/ is added before vowels and that the glottal stop is not underlying in nouns like /(?)u?shur/ and /(?)iyyaam/. The /-t/ even syllabifies with the following vowel, i.e. /?ar.ba9.t u?sh.hur/ and /xa.mas.t iy.yaam/.
Thus, the Colloquial variety has simplified the complex rule controlling the use of the cardinal numerals (three - ten) in SA. This is accomplished by assigning the masculine set to the numbering of a following noun irrespective of its gender (Abdel-Hafiz 1994: 25). Exceptionally, the feminine form is used in the Colloquial variety in compound numerals, as will be shown in section (3), and “whenever the numeral does not enumerate a following noun, e.g. when the numeral occurs in isolation” (Mitchell 1956: 60). This is represented in counting, as in (7), or replying to an inquiry about numbers, as in (8), in which cases it is considered a noun. The feminine form is also used before masculine singular nouns referring to weights, measures or units of currency, as in (9), in which case it is also considered a noun and the following noun a (genitive) modifier.

(7) talaat-a, ?arba9-a, xams-a, … 9ašar-a
   “three, four, five, … ten”
(8) Q: ?ištar-eet kam kitaab
   “How many books did you buy?”
   A: sab9-a
   “seven”.
(9) sitt-a kiilu/mitr/gneeh
   “six kilos/meters/pounds”.

9
The numerals from ‘eleven’ to ‘nineteen’ have compound forms in SA in contrast to their contracted forms in ECA. Another distinction is that in SA they have two shapes in relation to gender, whereas in ECA they are noted for their single shape disregarding gender. As Table (3) illustrates, the Standard compound forms are composed of two elements, the first of which is one of the cardinals (one - nine) discussed above and the second is /9ašara (m.) ~ 9ašrata (f.)/ ‘ten’. However, SA /waaḥid(-un) (m.) ~ waaḥid-at(-un) (f.)/ ‘one’ is replaced by /?aḥada (m.) ~ ?iḥdaa (f.)/. Also, ECA /waaḥid (m.) ~ waḥd-a (f.)/ is shortened to ḥid-/ and /?itneen/ is shortened to /?itn/. The Colloquial forms for ‘eleven’ and ‘twelve’ end in the suffix [-aašar] and those for the ‘teens’ end in the suffix [-Taašar].

Table (3)
The Cardinal Numerals (eleven - nineteen)

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>ECA</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masc</td>
<td>?aḥada 9ašara</td>
<td>?iḥdaa 9ašrata</td>
<td>ḥidaašar</td>
</tr>
<tr>
<td></td>
<td>?iṇnaa 9ašara (Nom)</td>
<td>?iṇnataa 9ašrata</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>?iṇnay 9ašara (Acc, Gen)</td>
<td>?iṇnatay 9ašrata</td>
<td>talaTTaašar</td>
</tr>
<tr>
<td>Fem</td>
<td>?alaaḥata 9ašara</td>
<td>?alaaθa 9ašrata</td>
<td></td>
</tr>
</tbody>
</table>
In both varieties, the cardinals (eleven - nineteen) are followed by singular nouns. These nouns have the accusative case marker [-an] in SA. Nevertheless, it must be stressed that both elements of the SA forms (eleven - twelve) only must agree in gender with the numbered noun, as in the following phrases:

(10) a. ʔaḥada 9ašara kitaab-an

   “eleven books”.

   b. ʔiḥdāa 9ašrata kurraasat-an

   “eleven notebooks”.

(11) a. ʔiʔnaa 9ašara qalam-an

   “twelve pens”.

   b. ʔiʔnataa 9ašrata masTarat-an

   “twelve rulers”.

<table>
<thead>
<tr>
<th>?arba9ata 9ašara</th>
<th>?arba9a 9ašrata</th>
<th>?arba9Taašar</th>
<th>fourteen</th>
</tr>
</thead>
<tbody>
<tr>
<td>xamsata 9ašara</td>
<td>xamsa 9ašrata</td>
<td>xamastaašar</td>
<td>fifteen</td>
</tr>
<tr>
<td>sittata 9ašara</td>
<td>sitta 9ašrata</td>
<td>sittaašar</td>
<td>sixteen</td>
</tr>
<tr>
<td>sab9ata 9ašara</td>
<td>sab9a 9ašrata</td>
<td>saba9Taašar</td>
<td>seventeen</td>
</tr>
<tr>
<td>ʔamaaniyata 9ašara</td>
<td>ʔamaaniya 9ašrata</td>
<td>tamanTaašar</td>
<td>eighteen</td>
</tr>
<tr>
<td>tis9ata 9ašara</td>
<td>tis9a 9ašrata</td>
<td>tisa9Taašar</td>
<td>nineteen</td>
</tr>
</tbody>
</table>
However, the forms (thirteen - nineteen) have different rules of agreement in SA. The first element must be masculine if the following noun is feminine and vice versa; the second element must be compatible in gender with the numbered noun, as in the following phrases:

(12) a. ?arba9ata 9ašara mu9allim-an
    “Fourteen teachers (m.)”.
   b. ?arba9a 9ašrata mu9allimat-an
    “Fourteen teachers (f.)”.

Thus, since the ‘teen’ part is not actually in the same syntactic relationship with the numbered noun as would, for example, the numeral /?arba9-at/ in /?arba9-at-u mu9allim-iin/ ‘four teachers’, the ‘Complement N → Numeral’ rules given in (6) will not apply. However, any number (three - nine) in conjunction with the ‘teen’ part will be subject to the ‘Complement N → Numeral’ rules, but with the ‘teen’ part as the complement. The phrases in (12) illustrate that the numbered noun of numerals (thirteen - nineteen) is in the accusative singular because it functions like an accusative of specification, what is called in Arabic /tamyiiz-u 1-9adad/ ‘(lit.) the noun specifying a number’.
By contrast, ECA does not have the masculine-feminine dichotomy observed in SA for numerals (eleven - nineteen). A single form is employed whether the numbered noun is masculine or feminine, e.g. /saba9Taašar kitaab/kurraas-a/ ‘seventeen book(s)/notebook(s)’.

Concerning the multiples of ten, from twenty to ninety, the main difference between SA and ECA springs from the absence of case markers in the latter, which has one shape for each numeral in contrast to two in SA. It is noticeable from Table (4) that these numerals are morphologically analyzable into two elements, the second of which is the sound masculine plural morpheme [-uuna / -iina > -iin].

Table (4)
The Cardinal Numerals (twenty - ninety)

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>ECA</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom</td>
<td>Acc &amp; Gen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9išr-uuna</td>
<td>9išr-iina</td>
<td>9išr-iin</td>
<td>twenty</td>
</tr>
<tr>
<td>0alaa0-uuna</td>
<td>0alaa0-iina</td>
<td>talat-iin</td>
<td>thirty</td>
</tr>
<tr>
<td>xams-uuna</td>
<td>xams-iina</td>
<td>xams-iin</td>
<td>fifty</td>
</tr>
<tr>
<td>sitt-uuna</td>
<td>sitt-iina</td>
<td>sitt-iin</td>
<td>sixty</td>
</tr>
</tbody>
</table>

13
The SA cardinal /mi?-at(-un)/ ‘a hundred’ has the Colloquial counterpart /miyya/ in isolation, as in the response to a question about number:

(13) Q: ma9aak kam ward-a
    “How many roses do you have?”
A: miyya
    “A hundred”.

The change from SA /mi?-at(-un)/ into ECA /miyya/ can be accounted for by morphological and phonological rules. The word /mi?-at(-un)/ undergoes the loss of final /-t/ by “[a ~ -t] Suppletion” and the replacement of a vowel and glottal stop sequence by a long vowel via the rule of Compensatory Lengthening (Gadalla 1999: 20), which applies before the suffixation of [-a]. Such a rule proposes that “a glottal stop becomes similar to the preceding vowel if both come together at the end of a syllable”, as follows:
(14) Compensatory Lengthening:

\[ ? \rightarrow V_i / V_i — ]_\sigma \]

This changes the form /mi?-a/ into /mii-a/ which then undergoes the addition of /y/ as an onset to the vowel /a/ by the rule of Onset Formation (Gadalla 1999: 30) that has the following form:

(15) Onset Formation:

\[ \emptyset \rightarrow \{y\} / \{i\} \rightarrow a \]

This results into /miiya/. Finally, the replacement of /ii/ with /iy/ by a transcriptional convention of /i/ in coda as /y/ leads to /miyya/. The phonological processes involved in this change are shown in (16a) and the moraic representation of the final form is provided in (16b) - ‘σ’ is used for ‘a syllable’ and ‘μ’ symbolizes ‘a mora’ (See McCarthy & Prince 1990):

(16) a. mi?-at(-un) → mi?-a → mii-a → miyy-a
However, /miyya/ should have the allomorph /miit/ before numbered nouns. This is due to the fact that the numbered noun acts as the second element in a construct. So, the number /miyya/ has the allomorph [-t] of the feminine class marker [-at]. Thus, one finds that the Colloquial counterpart of the Standard (17a) is (17b):

(17) a. mi?at-u kitaab/ward-ah
b. miit kitaab/ward-a

“A hundred books/roses”.

The dual form of /mi?-at(-un)/ has two forms in SA in agreement with the case of the numeral in the sentence: /mi?at-aa(ni)/ in the nominative and /mi?at-ay(ni)/ in both the accusative and the genitive. It is treated like dual nouns in respect
to the final [-ni], i.e. the [-ni] part is deleted when the numeral represents the first element in a construct phrase. In ECA, it has one form ending with the suffix [-een], namely /mit-een/. This form is obviously derived from /miit-een/ by a regular rule of Atonic Shortening, (Gadalla 1999: 27) that accounts for the shortening of all unstressed vowels in ECA, as follows:

(18) Atonic Shortening in ECA:

\[ VV \rightarrow V \] when stressless

The nouns following /mi?at-aan > mit-een/ are always singular in both varieties, e.g. /mi?ataa kitaab-in > mit-een kitaab/ ‘two hundred books’.

The numeral for ‘a hundred’ is pluralized by the regular suffix [-aat], i.e. as /mi?-aat(-un)/ in SA and /miyy-aat/ in ECA. The plural form is used before nouns defined by [al- > 1-] in SA, but not in ECA:

(19) a. 9inda-hu mi?-aat-u 1-kutub
    *b. 9and-u miyy-aat il-kutub
    “He has hundreds of books”.

17
The multiples of one hundred (three hundred - nine hundred) are formed by the addition of the numeral /mi?-at/ ‘a hundred’ to the [--at], traditionally called ‘masculine’, form of the numerals (three - nine) in the Standard variety. This is a consequence of the fact that /mi?-at/ is itself [+fem] and can be said to function here as a noun not as a numeral. The ‘Complement N → Numeral’ rules will therefore assign [--at] to the numeral preceding /mi?-at/ though the two numerals are collapsed into one form.

In ECA, the hundreds are formed by the attachment of the numeral /miyya ~ miit/ to the form [Fu9L], derived from the numerals (three - nine), after adding an extra vowel /u/ to it to break the long ensuing consonant cluster. This extra vowel is called a “ghost” vowel by Zoll (1996: 31). Compare the Standard numerals with their Colloquial counterparts in Table (5):

<table>
<thead>
<tr>
<th>SA</th>
<th>ECA</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ḥalaaṭu-mi?a(t)</td>
<td>tultu-miyya</td>
<td>three hundred</td>
</tr>
<tr>
<td>ḥarba9u-mi?a(t)</td>
<td>rub9u-miyya</td>
<td>four hundred</td>
</tr>
<tr>
<td>xamsu-mi?a(t)</td>
<td>xumsu-miyya</td>
<td>five hundred</td>
</tr>
</tbody>
</table>

Table (5)

The Cardinal Numerals (three hundred - nine hundred)
| sittu-mi?a(t) | suttu-miyya | six hundred |
| sab9u-mi?a(t) | sub9u-miyya | seven hundred |
| 0amaani-mi?a(t) | tumnu-miyya | eight hundred |
| tis9u-mi?a(t) | tus9u-miyya | nine hundred |

Table (5) reveals that there is a similarity between both varieties in relation to the first element in the numerals for ‘five, six, seven and nine hundred’ with the change of the first vowel from /a/ in SA to /u/ in ECA.

In the Colloquial variety, the second element in the hundreds has two allomorphs: /miyya/ when used as a nominal in isolation and /miit/ when followed by another noun because it forms a construct phrase with that noun, i.e. one domain for the rule of “[a ~ -t] Suppletion”. Consider the ECA example in (20b):

(20) a. 0alaa0u-mi?at-i rajul(-in)
    b. tultu-miit raagil

    “Three hundred men”.

However, when other cardinals are added to /miyya/ and its multiples to form compound numerals by means of the conjunction /w(i)/ ‘and’, they do not change in form (El-Tagoury 1989: 56). This is because the numbered noun is not in the same domain with /miyya/ or its multiples.
(21) a. miyya w-arbi9-iin raagil
    “One hundred and forty men”.
    b. sub9umiyya w-xams-iin walad
    “Seven hundred and fifty boys”.

The cardinal for ‘one thousand’ is /?alf(-un)/. Its dual form has two shapes in SA in accordance with its case /?alf-aa(ni)/ in the nominative and /?alf-ay(ni)/ in the accusative and genitive. It is treated like dual nouns in relation to the final [-ni]. In ECA, it has one form, /?alf-een/. The nouns following it are always singular in both varieties. The numeral /?alf(-un)/ is pluralized as /?aalaaf(-un)/ in SA and /(?)alaaf/ or /(?)uluf-aat/ in ECA. The glottal stop is underlying in the SA form but not in its ECA counterparts, as proved by the fact that it is not present in (22b) below. The shortening of the first vowel in /?aalaaf/ is due to Atonic Shortening in ECA.

In both varieties, the plural form /?aalaaf(-un) > alaaf/ should be employed when preceded by other cardinals from ‘three’ to ‘ten’; i.e. it is treated like a numbered noun rather than a numeral, triggering the addition of the genitive marker [-i] in SA, as in (22a). Since the glottal stop is not underlying in ECA, the cardinal preceding /alaaf/ has the /-t/ which is used before vowels and syllabifies with them, as in (22b):
(22) a. sab9at-u ʔaalaaf-i šajar-ah  
b. saba9t alaaf šagar-a  

“Seven thousand trees”.

When /ʔalf(-un)/ is preceded by one of the cardinals (eleven - ninety nine), it is also treated like a numbered noun, leading to the SA use of the accusative singular in final position, as in (23a) and the genitive singular when followed by a numbered noun, as in (24a). In ECA, the singular is used invariably, as in (23-24b):

(23) a. ?iʔnaa 9ašara ʔalf-an  
b. ?itnaašar ʔalf  

“Twelve thousand”.

(24) a. tis9at-un wa tis9-uuna ʔalf-i rajul  
b. tis9a w-tis9-iin ʔalf raaqil  

“Ninety-nine thousand men”.

When /ʔalf/ ‘a thousand’ is preceded by the cardinal ‘a hundred’, the genitive singular is used in SA and the singular is used in ECA:

(25) a. miʔat-u ʔalf-in  
b. miit ʔalf  

“A hundred thousand”.  

21
The numerals for ‘a million’ and ‘a billion’ are /milyuun > milyoon/ and /bilyuun > bilyoon/, and are followed by singular nouns in both varieties:

(26) a. miʔat-u  ?alf-i  rajul
    b. miit  ?alfī  raagil
    “A hundred thousand men”.

(27) a. dafaʔa  milyuun-a  junayh
    b. dafaʔa  milyoon  gineeh
    “He paid a million pounds”.

The dual forms of ‘million’ and ‘billion’ are treated like dual nouns in SA, i.e. /milyuun-aa(ni)/ and /bilyuun-aa(ni)/ in the nominative; /milyuun-ay(ni)/ and /bilyuun-ay(ni)/ in both the accusative and genitive. In ECA, they are dualized by putting the numeral /ʔitneen/ ‘two’ before them.

(28) a. zaraʔa  milyuun-ay  šajarah
    b. zaraʔa ʔitneen milyoon  šagara
    “They planted two million trees”.

22
The broken plural forms /malaayiin/ and /balaayiin/ are used for ‘millions’ and ‘billions’ in SA, having their pre-final vowels shortened in ECA, in accordance with the general rule of Atonic Shortening:

(29) a. jama9-uu balaayiin-a l-junayh-aat
b. gama9-u balayin il-ginih-aat

“They collected billions of pounds”.

However, these plural forms are not used after any cardinal numeral in ECA, though they are used after the numerals (three - ten) in SA. The Colloquial variety uses the singular forms instead:

(30) a. tis9ata malaayiin
b. tis9a milyoon

“Nine million”.

(31) a. 8alaa8ata 9ašara bilyuun-an
b. talaTTaašar bilyoon

“Thirteen billion”.

At the end of the discussion of cardinals, it must be stated that the facts about the agreement relations between numerals
and nouns are so complicated that it might be worthwhile giving
a schematic summary table like that in Table (6).

Table (6)

<table>
<thead>
<tr>
<th>Numeral</th>
<th>SA Noun</th>
<th>ECA Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>three - ten</td>
<td>genitive plural</td>
<td>plural</td>
</tr>
<tr>
<td>eleven - nineteen</td>
<td>accusative singular</td>
<td>singular</td>
</tr>
<tr>
<td>tens</td>
<td>accusative singular</td>
<td>singular</td>
</tr>
<tr>
<td>hundreds</td>
<td>genitive singular</td>
<td>singular</td>
</tr>
<tr>
<td>thousands</td>
<td>genitive singular</td>
<td>singular</td>
</tr>
<tr>
<td>millions, etc.</td>
<td>genitive singular</td>
<td>singular</td>
</tr>
</tbody>
</table>

2. Ordinal Numerals:

Ordinals are numerical adjectives that generally modify
singular nouns to show their order or position in a series. By
‘singular’ here I mean singular in meaning, rather than in form.
Thus, one finds little or no difference between the SA sentences
in (32a) and (33a) or between the ECA sentences in (32b) and
(33b):

(32) a. ?al-walad-u l-?awwal-u daxal-a l-madrasah
     b. ?il-walad il-?awwalaani daxal il-madrasa

“The first boy joined school”.

24
Both SA and ECA have two shapes for each of the ordinal adjectives from ‘first’ to ‘tenth’, depending on the gender of the qualified noun, as can be noticed from Table (7).

Table (7)
The Ordinal Numerals (first - tenth)

<table>
<thead>
<tr>
<th>Masc.</th>
<th>Fem.</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>ECA</td>
<td>SA</td>
</tr>
<tr>
<td>&quot;</td>
<td>?awwalaani</td>
<td>&quot;</td>
</tr>
<tr>
<td>ʔaani</td>
<td>taani</td>
<td>ʔaani-y-a(t)</td>
</tr>
<tr>
<td>ʔaali</td>
<td>taalit</td>
<td>ʔaali-y-a(t)</td>
</tr>
<tr>
<td>raabi9</td>
<td>raabi9</td>
<td>raabi9-a(t)</td>
</tr>
<tr>
<td>xaamis</td>
<td>xaamis</td>
<td>xaamis-a(t)</td>
</tr>
<tr>
<td>saadis</td>
<td>saadis</td>
<td>saadis-a(t)</td>
</tr>
<tr>
<td>saabi9</td>
<td>saabi9</td>
<td>saabi9-a(t)</td>
</tr>
<tr>
<td>ʔaamin</td>
<td>taamin</td>
<td>ʔaamin-y-a(t)</td>
</tr>
<tr>
<td>taasi9</td>
<td>taasi9</td>
<td>taasi9-a(t)</td>
</tr>
<tr>
<td>9aašir</td>
<td>9aašir</td>
<td>9aašir-y-a(t)</td>
</tr>
</tbody>
</table>

“The first boy joined school”.

(33) a. ?awwal-u l-ʔawlaad-i daxal-a l-madrasah
b. ?awwal walad daxal il-madrasa
As Table (7) displays, the change from ‘masculine’ to ‘feminine’ ordinals is entirely regular, except for ‘first’. For example, the derivation of ‘second’ can be shown in (34a) for SA and (34b) for ECA:

(34) a. θaanii → θaanii-a(t) → θaa.ni.y-a(t)

   b. taani → taani-a → taa.ni.y-a → taan.y-a → tan.y-a.

Thus, the shape of the feminine ordinals undergoes two regular phonological changes in ECA after the morphological loss of final /t/ by “[-a ~ -t] Suppletion”: High-Vowel Deletion and Atonic Shortening - see section (1) above.

In SA and ECA, the ordinals can function as adjectives, usually following the modified nouns. In that case, they inflect for gender and definiteness, as in the Standard examples in (35-36a) and their Colloquial parallels in (35-36b):

(35) a. ?al-yawm-u s-saabi9

   b. ?il-yoom is-saabi9

   “The seventh day”.

(36) a. ?al-layl-at-u 1-9aašir-ah

   b. ?il-leel-a 1-9ašr-a

   “The tenth night”.
The ordinals (first - tenth) may precede nouns to form construct phrases with them. Nevertheless, only in SA do they undergo inflection for gender, whereas in ECA they remain invariable in the masculine form. Compare the SA phrases in (37-38a) and their ECA equivalents in (37-38b), respectively:

(37) a. saabi9-u walad(-in)
   b. saabi9 walad
   “The seventh boy”.

(38) a. saadisat-u bint(-in)
   b. saadis bint
   “The sixth girl”.

The only distinction in this respect is that when ordinals precede nouns the numbered noun in SA can be either indefinite singular as in (37-38a) or definite plural as in (39-40a); while in ECA the numbered noun must only be singular indefinite, as in (37-38b) compared to the ungrammaticality of (39-40b):

(39) a. saabi9-u l-?awlaad(-i)
   *b. saabi9 il-?awlaad
   “The seventh of the boys”.

27
The ordinal ‘eleventh’ has the masculine form /hāadiī 9ašar/ and the feminine form /hāadiyata 9ašar/ in SA, whereas it has one form in ECA which is identical with its cardinal counterpart /aiddašar/. The ordinals from ‘twelfth’ to ‘nineteenth’ in SA have compound forms that are composed of two elements, the first of which is one of the ordinals ‘second’ to ‘ninth’ in compatibility with the gender of the modified noun, and the second is /9ašar/. In ECA, on the other hand, they have contracted forms identical with their cardinal counterparts stated in Table (3). Compare the Standard phrases in (41-42a) and their Colloquial equivalents in (41-42b), respectively:

(41) a. ?ad-dawr-u 1-xaamis-a 9ašar
    b. ?id-door il-xamasTaašar
    “The fifteenth floor”.

(42) a. ?al-ḥujrat-u 1-xaamisata 9ašar
    b. ?il-?ooDa 1-xamasTaašar
    “The fifteenth room”.

(40) a. saadisat-u l-banaat(-i)
    *b. saadis il-banaat
    “The sixth of the girls”.

(41-42a) and (41-42b)
The ordinals for ‘twentieth’ to ‘ninetieth’ as well as for ‘hundredth’ and ‘thousandth’ and their multiples have the same form as their cardinal equivalents discussed in section (1) with the addition of the definite article [?al- > l-].

3. Compound Numerals:

These numerals are formed by linking the cardinals together by using the conjunction /wa/ ‘and’ before each numeral in SA. This conjunction has the form /w(i)/ and is inserted just before the last cardinal in ECA. The nouns following compound numerals are always singular in both varieties, though they have the accusative suffix [-an] in SA only. Compare the Standard phrases in (43-45a) with their Colloquial counterparts in (43-45b), respectively:

(43) a. sab9at-un wa 9išr-uuna kitaab-an
   b. sab9a w-9išr-iin kitaab
      “Twenty-seven books”.
(44) a. mi?at-un wa xamsat-un wa ?arba9-uuna waraqat-an
   b. miyya xamsa w-arbi9-iin wara?a
      “One hundred and forty-five papers”.
(45) a. ?alf-un wa sab9umi?-at-un wa 0alaa0-at-un wa 0alaa0-uuna rajul-an
b. ?alf sub9umiyya talaata w-talat-iin raagil
   “One thousand, seven hundred and thirty-three men”.

4. Fractions:

Fractions from ‘one-half’ to ‘one-tenth’ have the singular form [Fu9L] with its vowel changed to /i/ in the Standard form for ‘one-half’ and the Colloquial form for ‘one-third’, as in Table (8):

<table>
<thead>
<tr>
<th>SA</th>
<th>ECA</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>niSf(-un)</td>
<td>nuSS</td>
<td>one half</td>
</tr>
<tr>
<td>0ul0(-un)</td>
<td>tilt</td>
<td>&quot; third</td>
</tr>
<tr>
<td>rub9(-un)</td>
<td>rub9</td>
<td>&quot; fourth</td>
</tr>
<tr>
<td>xums(-un)</td>
<td>xums</td>
<td>&quot; fifth</td>
</tr>
<tr>
<td>suds(-un)</td>
<td>suts</td>
<td>&quot; six</td>
</tr>
<tr>
<td>sub9(-un)</td>
<td>sub9</td>
<td>&quot; seventh</td>
</tr>
<tr>
<td>0umn(-un)</td>
<td>tumn</td>
<td>&quot; eighth</td>
</tr>
<tr>
<td>tus9(-un)</td>
<td>tus9</td>
<td>&quot; ninth</td>
</tr>
<tr>
<td>9ušr(-un)</td>
<td>9ušr</td>
<td>&quot; tenth</td>
</tr>
</tbody>
</table>

To dualize such fractions, they are treated like dual nouns. Hence, in SA they have the suffix [-aa(ni)] in the nominative case and [-ay(ni)] in the accusative and genitive. In ECA, they simply
have the suffix [-een]. The plural pattern is [?aF9aaL] in SA which has its /?a-/ deleted in ECA, i.e. [F9aaL]. The ECA form then has initial an /i/ and a glottal stop inserted by two regular phonological rules: Word-Initial Epenthesis and Glottal Stop Insertion. The first rule was proposed by Broselow (1976: 20) and reformulated by Gadalla (1999: 15) as follows:

(46) Word-Initial Epenthesis:

\[ \emptyset \rightarrow i / \# \rightarrow CC \]

The second rule, Glottal Stop Insertion, was proposed by Broselow (1976: 23) as follows:

(47) Glottal Stop Insertion:

\[ \emptyset \rightarrow ? / \# \rightarrow V \]

After the application of the two rules above, the Colloquial form [F9aaL] becomes [?iF9aaL] in utterance-initial positions.

In fractions whose nominator exceeds ‘two’ and denominator is less than ‘ten’, the SA feminine form and the ECA masculine form of the cardinals (three - nine) are followed by the plural form of the fraction. In the Colloquial variety, the /?/ is not inserted because the plural form is not initial in the
sentence. Only /i/ is inserted at the beginning of the plural form to syllabify the first consonant. Compare the Standard fraction in (48a) with its Colloquial parallels in (48b):

(48) a. ?arba9at-u ?axmaas  
     b. ?arba9t ixmaas  
     “Four fifths”.

If the denominator is more than ‘ten’, it is usually preceded by the preposition /min/ in decimal fractions and /9ala/ in common fractions in both varieties:

(49) a. tis9at-un min mi?ah / ?alf  
     b. tis9a min miyya / ?alf  
     “Nine out of a hundred / a thousand”.

(50) a. xamsat-un 9ala sab9at-in wa ?arba9iin  
     b. xamsa 9ala sab9a wa rba9iin  
     “Five over forty-seven”.

5. Conclusion:

Egyptian Colloquial Arabic exhibits a simplified system of numerals in contrast to the complexity of numeral formation in Standard Arabic. This is represented in the loss of case markers
used with all numerals. There is also a tendency in the ECA system to eliminate the gender distinctions that are connected with the numbered noun. On the other hand, it is noted that all ECA numerals are based on SA ones. However, some of them have slight formal differences which can be accounted for by regular phonology and morphology.

References


الأعداد في العربية الفصحى والعربية العامية المصرية: دراسة مقارنة

إعداد

د. حسن عبد الشفيق حسن جاد الله
مدير اللغويات - جامعة أسيوط

يقدم هذا البحث دراسة مقارنة للنظام العددي في العربية الفصحى والعربية المصرية. ويفهد إلى توضيح أوجه الاختلاف والاختلاف بين مستوى اللغة من ناحية الأصوات والصرف والخصائص النحوية. حيث تم تقسيم الأعداد في العربية إلى أربعة أصناف: الأعداد الأصلية والأعداد الترتيبية والأعداد المركبة والكسور، وتتم تناول كل صنف منها في جزء مستقل من البحث. ويوضح البحث كيف أن العامية المصرية تحتوي على نظام مبسط للأعداد بعكس النظام المعقد للتراكيب العددية في العربية الفصحى. فبالإضافة إلى اختفاء علامات الإعراب، نجد أن النظام العددي في اللهجة المصرية يكاد يخلو من التفريق بين الجنسين في الأعداد بناء على جنس الاسم المعدد كما هو الحال في العربية الفصحى.