

On the Nature of Colloquial Egyptian Arabic Stem Structure

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1. Introduction

It has been noticed that several attempts have been introduced to describe the structure of Arabic stems. Unfortunately, those attempts have been characterized by uncertainty, ambiguity, and inconsistency. This study is devoted to state the views said by Arab linguists on the structure of Arabic stems, the definition of Colloquial Egyptian Arabic stems (henceforth referred to as CEA stems) and the internal structure of the CEA stem, i.e. its constituents and cohesion that binds them ; then to the results that sum up the findings of the study.

2. Views of Arab Linguists on

the Structure of Arabic stems :

Views of Arab linguists on the structure of Arabic stems are of some interest.

To begin with Erwin (1963:47), any form to which an affix may be added is a stem. Consequently, the form /yiktib/ ⁽¹⁾ 'he writes' contains the stem /-ktib/; similarly, the form /šifitha/ 'I saw her' contains the stem /šifit/which in turn is a complex stem consisting of the simple stem /šif-/ 'saw' and the suffix /-it/. The suffix /-it/ is later identified as an inflectional affix (ibid.: 84).

About Fetouh (1969:21-23) defines three sets of "stem formatives" which combine with a root or a monomorphemic stem to produce a stem. Since the author states explicitly that stem formatives are derivational morphemes (ibid.:21), one must conclude that inflectional affixes are not stem constituents. It is interesting that in

Aboul- Fetouh's analysis /bi-/ and /ha-/ are considered stems (ibid.:35) while in Harrell's analysis(1963 :7.6 ,7.7)they are considered prefixes .

Gamal- Eldin's view (1967:18-22) is similar to Aboul Fetouh's in excluding inflectional affixes from stem constituents.

Abboud (1971: 8-11, 37-41) advocates that stems are divided into two types: those which contain no similar stems, and those which consist of a smaller stems plus at least one derivational affix (ibid. :8,41). With the exception of "solid stems"⁽²⁾, all stems consist of a root and a pattern (ibid.: 9-11, 134-38). For this reason, a stem pattern can contain derivational but not inflectional affixes. In spite of these statements, the affixes which occur in broken plural are considered both inflectional and constituents of stem patterns (ibid.: 252).

It is worth noting that the contradictions cited cannot be explained in terms of the differences which exist among Arabic dialects; they result from the need for clearer, more precise definitions of Arabic stems. It is hoped that the following section is devoted to state an adequate definition of CEA stems.

3. Definition of CEA Stems

A stem is a morphological unit whose constituents are bound together by cohesion; it may be a free morpheme or a multimorphemic unit (Lyons, 1968:201-2); (Bolinger, 1975:113); (Sledd and Scott, 1959:72,249).

4. Cohesion of Stem Constituents

Obviously, the cohesion of stem constituents implies two kinds:

4.1 Cohesion within Monomorphemic (Free) Stems "Solid Stems"

As far as the cohesion within monomorphemic stems is concerned, it is found that monomorphemes are represented by allomorphs which consist of phonemes. Harris (1964:42) describes the cohesion which binds together the phoneme of an allomorph as follows:

If after the first n phonemes the number of different phonemes which follow the n *th* (in the associated utterances) is greater than the

number after the first $n - I$ phonemes or the first $n + I$, then we place a tentative morpheme boundary after the n *th*.

4.2. Cohesion within Multimorphemic Stems

It is stated that a multimorphemic stem is either a "root-and-pattern" or a "complex stem" (Crystal, 1980:330).

4.2.1. Root-and-Pattern Stem

A root-and-pattern stem is analyzable into a root and a pattern. Solid stems as well as root-and-pattern stems will be called, and as Abboud (1971:8-11, 37-41) calls them, "simple stems".

The root is defined as a bound, discontinuous morpheme represented by two, three, four, or five consonants (typically three) in a certain order, which interlocks with a pattern to form a simple stem and which has a lexical meaning as opposed to the grammatical meaning of the pattern (op.cit. :308-9). "Discontinuous" in this definition means that there are no instances where all the consonants of the root follow each other in immediate succession in the stem. A pattern is defined as a bound morpheme consisting of (a) one or more vowels and (b) slots for the root phonemes, which interlocks with a root to form a simple stem which has a grammatical meaning in contrast with the lexical meaning of the root. Consequently, /faʕlal/ is a pattern in which /f/, /ʕ/, and /l/ represent slots for the root phonemes; some examples of this pattern are the verb forms tat/, etc., tar/, /šah/, /šarmat/, /bah

As understood by their definitions, the root and the pattern are interdependent: neither can occur without the other; this fact will be referred to as a type of cohesion.

4.2.2. Complex Stems⁽³⁾

Complex stems are those which consist of a simple stem plus at least one affix: the simple may be either a solid stem or a root-and-pattern stem; the affix belongs to a set which we shall call "cohesive affix" and which will be defined below. A pattern plus at least one cohesive affix will be referred to as a "pattern complex"⁽⁴⁾; thus some complex stems are analyzable into a root plus a pattern complex, and the rest are analyzable into a solid stem plus at least one cohesive

affix. The term "measure" will be used to designate either a pattern or a pattern complex; thus all stems, except for those which consist of or contain a solid stem, are analyzable into a root and a measure.

An affix is a bound form which can be added to a stem. Thus in /'ilkita:b/ 'the book', /'il-/ is an affix and /kita:b/ is a simple stem; in /'itkatab/ 'to be written', /'it-/ is an affix and /katab/ is a simple stem. Affixes are three types: lexical, inflectional, and derivational (Abdel-Malik, 1973:32-33). The following section is devoted to the discussion of these affixes.

4.2.2.1. Lexical Affixes

Lexical affixes are those which correspond to full words in distribution (ibid.); examples are the prepositional prefixes /bi-/ and /li-/ which can be replaced by free prepositions. Some lexical affixes belong to morphemes which have at least one free allomorph (e.g., pronominal affixes); the rest belong to morphemes which have no free allomorphs (e.g., the prepositions /bi-/and /li-/).

4.2.2.2. Inflectional Affixes

Inflectional affixes are those which consist of morphemes which function as markers of grammatical relationships and which indicates inflectional categories (e.g., number, gender, comparison, etc.), (ibid.).

4.2.2.3. Derivational Affixes

Derivational set consists of morphemes which change the form class of the word, the grammatical construction (at least in some contexts), or both (ibid.). Consequently, the affixes in /ti-ktib-i/ 'you (fem. sing.) write' are inflectional since they indicate agreement between the subject and the verb in number, gender, and person. On the other hand, the two prefixes in /mit'allim/ 'educated (adj.)'are derivational since the first produces an adjective from the verb /it'allim/ 'to get educated ', and the second changes the grammatical construction as can be seen from comparing the following pair of sentences:

med,/'ah ~allim sali:m /	'Ahmed taught Saleem'
/Sali:m 'it~allim/	'Saleem learned'

It is worth noting that "grammatical construction", as used here, should be understood in terms of Hockett's definition (1963:183-97). Thus the two sentences /'il-kita:b f ilbi:t/ 'The book is at home' and /f ilbi:t kita:b/ 'There is a book at home' are examples of a single construction (the predicative) since each contains the same immediate constituents (topic and comment). Thus it would be incorrect to argue that using the definite article (which is prefixed to /kita:b/ in the first sentence but not in the second) produces a change in word order and that the definite article is therefore a derivational affix.

Generally, when derivational, inflectional, and lexical affixes co-occur, the first are the closest to the simple stem and the last are the most distant from it. Thus /l-il-mi-fawwad-iyy-a:t/ 'for the legations' is analyzable into the following sequence:

Lexical (prepositional) prefix+ inflectional prefix+ derivational prefix+ simple stem+ derivational suffix+ inflectional suffix

5. Cohesion within Affixes

Affixes differ according to the cohesion they manifest.

5.1. Cohesion in Simple Stems

Certain affixes manifest cohesion to simple stems. The word /'itkatabu/ 'were written', for example, should be represented by (/it-/ + /katab/)+ /-u/ rather than by /it-/+ (/katab/+/-u/) or /it-/+ /katab/+/-u/ ;in other words, there is more cohesion between /it-/ and /katab/ than between /katab/ and /-u/ as can be seen from the fact that /'itkatab/ but not /katabu/ can be replaced by a simple stem not marked for the meaning which /it-/ signals:

/'iddarsi:n 'itkatabu/	'The two lessons have been written'
/'iddarsi:n <u>h</u> ilšu/	'The two lessons have been finished'
etc.	

5.2. Cohesion in Broken Plural

In cohesion provided by some broken plurals, the vowel change co-occurs with certain inflectional affixes. In the following examples,

(٣١)

the singular forms are listed on the left and corresponding broken plural forms listed on the right; in each case a hyphen separates the inflectional affix from the base (i.e. the rest of the plural form):

/ism/	'name'	/'asm-a:/'
/nahr/	'river'	/'a-nha:r/
/ġura:b/	'crow'	/ġirb-a:n/
/usta:z/	'professor'	/'asatz-a/

So strong is the cohesion between the base and the inflectional affix in each of the above plural forms that, given the base, the affix is predictable. On account of that cohesion, the affixes are considered stem constituents. In the plural forms listed above, /-a:/'/, /a-/, /-a:n/, and /-a/ are considered affixes because each is an isolable partial which has a specific function. It must be emphasized, however, that it is the whole broken plural measure, rather than the affix alone, which signals the meaning 'plural'.

5.3. Cohesion in the Comparative Form of Adjectives

Obviously, the cohesion of the inflectional affix /a-/ in the comparative form of adjectives (i.e., the form /'af'al/) which is considered a stem constituent, is similar to that discussed in the above two kinds. Thus, it should be pointed out that cohesion between the prefix /a-/ and the base of the comparative form (i.e., /-f'al/) is not always obvious when there is a verb corresponding to the adjective; thus given /-kbar/, /-ktar/, /-wsa~/, the prefix can be the verbal /yi-/ rather than the comparative /a-/. On the other hand, cohesion is usually clear when there is no verb corresponding to the adjective; e.g., /'a-nbah/ 'more intelligent ', /'ahkam/ 'wiser', /'a-nfas/ 'more precious'. Besides, cohesion is usually clear when the base of the comparative form is phonemically distinct from that of the corresponding verb as is the case in the following examples (the base follows the hyphen):

Comparative forms	Verb forms
/'a-gda~/ *'more clever'	/'it-gad'an/, /yit-gad'an/
/'a-řtar/ 'smarter'	/'it-řařtar/, /yit-řařtar/
/'a-fřah/ 'more eloquent'	/'it-fa:řah/, /yit-fa:řah/

All derivational affixes and some inflectional ones occur as constituents of complex stems. Unlike affixes, which do not occur as stem constituents, these affixes are characterized by the cohesion described above and will therefore be referred to as "cohesive affixes". Cohesive inflectional affixes are almost limited to the affixes which occur in the comparative form /afˤal/.

What is important to know is that most patterns in CEA are portmanteau morphemes. The form /talami:z/ 'students', for example, may seem to consist of the root /tlmz/, the pattern /fiˤli:l/ (which occurs in the singular /tilmi:z/) meaning 'singular', and vowel changes (which produce /faˤali:l/ from /fiˤli:l/) meaning 'plural';⁽⁵⁾ such an analysis, however, would be difficult to defend: the shape /fiˤli:l/ is typical of singular nouns rather than singular parts of speech in general, and the shape /faˤali:l/ is typical of plural nouns rather than plural parts of speech in general; thus the change in forms must designate a change from the meaning 'singular noun' to the meaning 'plural noun'. Furthermore, it would be impossible to show that the shape /faˤali:l/ consists of more than one morpheme: on the other hand, /faˤali:l/ contains no recurrent partials which can be considered affixes⁽⁶⁾, on the other hand, /faˤali:l/ cannot be divided into two parts of which the first designates the meaning 'plural' and of which the second designates the meaning 'noun'. It is therefore preferable to consider each of the two shapes /fiˤli:l/ and /faˤali:l/ a portmanteau pattern (i.e., a morpheme with two meanings), /fiˤli:l/ meaning 'singular noun' and

/faˤali:l/ meaning 'plural noun'.

6. Conclusions

The major conclusions that can be drawn from the study are the following:

A CEA stem is a morphological unit which is composed of constituents bound together by cohesion. Cohesion, in turn, implies two kinds, i.e., (1) cohesion within monomorphemic stems, in which monomorphemes are represented by allomorphs which consist of phonemes; (2) cohesion within multimorphemic stems which is either a root-and-pattern or a complex stem.

A root-and-pattern stem is analyzable into a root and a pattern. These two are interdependent: neither can occur without the other.

Complex stems consist of a simple stem plus at least one affix which implies three types: lexical, inflectional, and derivational. These affixes differ according to the cohesion they manifest. They manifest cohesion to simple stems, to broken plural, and to the comparative form of adjectives.

A pattern complex, which is a pattern plus at least one affix, may or may not result from changing the form of a pattern: a pattern complex results if (a) the change can be divided into distinct cohesive affixes corresponding to the distinct meanings which the change signals, or (b) if it can be shown that the change contains at least one isolable partial which has a specific function; when this is impossible, the result of the change is a portmanteau pattern which interlocks with the root to produce a simple stem. Thus each of the plural shapes /fuːl/, /fuːl/, and /fiːl/ (in /buyu:t/, 'houses', /kutub/ 'books', and /bila:d/ 'countries' respectively) should be considered a portmanteau pattern (rather than a combination of morphemes), and each of the forms /buyu:t/, /kutub/, and /bila:d/ should be considered a simple (rather than a complex) stem. On the other hand, each of the shapes /faːil/ (in /ˈallim/ 'to teach') and /faːil/ (in /kaːtib/ 'writer'), is a pattern complex containing a derivational affix which recurs in other measures (in /faːil/ the derivational affix is the doubling of the /ː/; in /faːil/ the affix is the lengthening of the vowel which follows the /f/).

Notes :

(1) Arabic examples are transcribed broadly, using the standard IPA symbols as far as possible. The following are the symbols used for representing Arabic examples given throughout this study:

(a) Consonants: / ʔ / - /ب/ b - /ت/ t - /ث/ ṭ - /ج/ ġ -
 /ح/ ḥ - /خ/ ḫ - /د/ d - /ذ/ ḏ - /ر/ r - /ز/ z - /س/ s - /ش/ š - /ص/ ṣ -
 /ṣ/ - /ض/ ḏ - /ط/ ṭ - /ظ/ ṣ - /ع/ ʿ - /غ/ ġ - /ف/ f - /ق/ k - /ك/ k
 - /ل/ l - /م/ m - /ن/ n - /ه/ h - /و/ w - /ي/ y .

(b) Vowels :

- 1) /a/ short half-open front unrounded
- 2) /a:/ long open front unrounded
- 3) /i/ short half- close front unrounded
- 4) /i:/ long close front unrounded

- 5) /u/ short half-close back rounded
 6) /u:/ long close back rounded
- (2) Solid stems are those which are not further analyzable into smaller constituent elements.
- (3) Also referred to as "secondary stems", see Abboud (1971:8-11, 37-41).
- (4) A pattern is discontinuous if it is combined with at least one infix; thus both /'itfa~lal/ and /'ifta~al/ are pattern complexes, but only in the second is the pattern discontinuous. Some examples of the pattern complex /'itfa~lal/ are the verb forms /'itšarmat/, /'itbaħtar/, and /'itšaħtat/; some examples of the pattern complex /'ifta~al/ are the verb forms /'iħtakam/, /'irtakab/, and /'iktatab/.
- (5) Hanna (1967:12) favors this analysis as can be seen from his comment on the form /wila:d/ 'boys'.
- (6) In the case of /tilmi:z/ 'student': /talami:z/, the change is / -i- - / → / -a-a- / while in the case of /mandi:l/ 'handkerchief'; /manadi:l/ the change is
 /-a- -/ → / -a-a- /.
- ❖ The English letter (g) is used in the examples transcribed in CEA to refer to the Egyptian /ç/ as is pronounced in the English verb (give).

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