Mapping and Transparency in Arabic
A comparative approach

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Abstract
The relevance of the notions of mapping and transparency for typological studies has been extensively demonstrated in Hengeveld and Mackenzie (2008 and 2009) and Hengeveld (2011a-b). In this study, my main aim is to show, through an examination of the evolution of Arabic, that these notions can also be useful in the study of language change.

1 Introduction

A number of studies within Functional Discourse Grammar framework (henceforth FDG) have provided insights into the notions of mapping (including ‘alignment’) (see Hengeveld and Mackenzie (2008, 2009), van Rijn (2011)) and transparency (Hengeveld (2011a-b)) and their relevance for language typology.

Along the lines of these studies, I will try to show that these two notions may be relevant not only for language typology but also for the study of the similarities and differences between the varieties of the same language, particularly when some of these varieties result from the evolution of others, as in the case of the different dialects of Colloquial Modern Arabic (CMA), like Moroccan, Tunisian, Egyptian, Syrian etc., and Literary Arabic (LA).

I will proceed as follows. In section 1, I will examine the changes that have taken place within the mapping system and the directionality of these changes. Section 2 will present a comparison between the Arabic varieties in terms of the Transparency criteria defined in Hengeveld (2011a-b). In section 3, the facts and issues discussed in sections 1 and 2 will be re-examined in the light of some general tendencies relating to the interaction between mapping and transparency.

1 I am indebted to Evelien Keizer, Udo Schimanofsky and Iris Vukovics for correcting the English of an earlier version of this article and for their valuable remarks, comments and suggestions.

2 Two main varieties of Arabic are presently used in the Arab world: ‘Literary Arabic’ (Classical Arabic and its contemporary variant referred to as Standard Modern Arabic (SMA)) and Colloquial Modern Arabic. As regards the genetic relations between these two varieties, it is commonly admitted that the latter results from the natural evolution of the former (see Cuvalay 1997). The peculiarity of the linguistic situation in the Arabic world, in comparison with the one that holds for romance languages, is that the original language continues to co-exist, with a different function and use (literary and formal communication), with its descendants.
2 Mapping

2.1 Definition

Within the FDG framework (Hengeveld and Mackenzie 2008, 2009), four kinds of units are distinguished: pragmatic units, semantic units, morphosyntactic units and phonological units. These units are represented in four hierarchically organized levels: the Interpersonal level, the Representational level, the Morphosyntactic level and the Phonological level respectively. The term ‘mapping’ is used to refer to the process of ‘encoding’ pragmatic and semantic units by converting them into morphosyntactic and/phonological ones.

The morphosyntactic organization of an expression can reflect features from one level or features belonging to two different levels. In other words, in some cases the mapping of some units takes place on the basis of information coming from one level (Interpersonal or Representational Level), whereas in other cases mapping requires information from both the Interpersonal and the Representational Level. An example of the latter situation is given in (1), where the emphatic particle qad realizes two features: an Interpersonal feature (Emphasis) and a Representational feature (Perfective Past):

(1) \( qad \ vāda \) Zaydun
    EMPH come back-PASTPERF.3SGM Zayd-NOM
‘Zayd DID come’

Based on the assumption that CMA results from the evolution of LA, the next session will outline the changes that the mapping system has undergone during this evolution and the consequences of these changes for the morphosyntactic structure of the Arabic language.

2.2 Morphology

2.2.1 From fused to non-fused expression

LA is often characterized as a morphologically oriented/rich language in the sense that it uses morphological (rather than other) means to express Interpersonal and Representational features.

As is well known, Arabic morphology is mainly fusional: different features can be rendered at the same time by the same (root-pattern) form. In the CMA, however, another, non-fusional (or at least less fusional) morphological system is gaining ground. The examples discussed below will show that this mutation, which affects the
expression of such features as Tense, Aspect, Passive and Dual, can be characterized as a local move from a fusional morphology to an agglutinating or isolating one.

### 2.2.1.1 Expression of Aspect and Tense

Some of the morphological devices to express Aspect and Tense are originally lexical and have obtained their present form through a process of grammaticalization (as discussed within the FDG framework by Keizer (2007) and Hengeveld (2011c)).

Some predicates designating movement or position in LA behave in CMA as mere auxiliaries expressing Aspectual, Modal or Tense features. They are verbs like *raH* (‘went’) in Egyptian, (active) participles like *ghadi* (‘going’) in Moroccan and *sammal* (‘working’) in Egyptian and Syrian or adjectives like *gæed* (‘sitting’) in Moroccan, Tunisian, Lybian and many Gulf dialects.

Compare in this respect the examples in (2) and (3):

(2) a  *ghadā*  *Bakrun* (LA)  
Go-in-morning-PAST-3SGM Bakr-NOM  
‘Bakr went early in the morning’

b  *rāHa*  *Bakrun* (LA)  
go-in-evening-PAST-3SGM Bakr-NOM  
‘Bakr went in the evening’

c  *Bakrun*  *qâeidun* (LA)  
Bakr-NOM sitting-NOM  
‘Bakr is sitting’

d  *Bakrun*  *sammālun* (LA)  
Bakr-NOM working-NOM  
‘Bakr is working’

(3)  *ghadi*  *iži* (Moroccan)  
FUT come-3SGM  
‘He will come’

(4)  *raH*  *igi* (Egyptian)  
FUT come-3SGM  
‘He will come’
(5)  *gaεd yekteb* (Moroccan/Tunisian/Lybian/Qatari/…)
    PROGR  write-PRES-3SGM
    ‘He is writing’

(6)  *εammal yekteb* (Syrian/Egyptian)
    PROGR  write-PRES-3SGM
    ‘He is writing’

In the constructions exemplified in (2a-b), *ghadā* and *rāHa* are full predicates expressing a movement occurring in the morning and evening, respectively, whereas in (3) and (4), *ghadi* and *raH* behave as mere auxiliaries with a Future Tense value. In (4c-d), *qāεidun* and *εammāλun* designate a position and a durative action respectively; their grammaticalized dialectal counterparts *gaεd* and *εammal* in (5) and (6) express Progressive Aspect. As is well-known from studies on grammaticalization (Li (1975), Heiko (2011), Keizer (2007)), such auxiliaries may undergo a phonological reduction. This is indeed what happens with *ghadi* and *εammal*, which may lose their second syllable:

(7)  *gha iżI* (Moroccan)
    FUT  come-3SGM
    ‘He will come’

(8)  *εam yekteb* (Syrian/Egyptian)
    PROGR  write-PRES-3SGM
    ‘He is writing’

The same phenomenon can, of course, be found in English and French, where the verbs *to go* and *aller* (‘to go’) have two uses: a predicative use and an auxiliary use. As full predicates, they designate a movement; as auxiliaries, they express (near) Future Tense. This becomes clear from examples (9a-b) and (10a-b):

(9)  a  He is going to Amsterdam
    b  He is going to write a letter

(10) a  Il va à Amsterdam
     b  Il va écrire une lettre

According to Hengeveld (2011c), the prospective meaning of constructions like (3), (4), (9b) and (10b) results from a ‘metaphorical extension’ of the meaning of ‘forward movement in space’ to the meaning of ‘forward movement in time’. In the same vein, the durative feature that constructions (5-6) have in common with constructions (2c-d) would suggest that their progressive meaning also arises through a process of
metaphorical extension from the spatial to the temporal domain. Furthermore, it could be argued that the metaphorical semantic nature of the phenomenon at hand could serve as a possible explanation of the fact that it occurs in typologically different languages.

Worthy of notice here is that the evolution of some of the predicates in question supports Hengeveld’s predictions about the paths and the destinations of grammaticalized lexical units (Hengeveld (2011c)). The comparison between (2a) and (11) shows that the auxiliarization of the predicate *ghadā* takes place in two steps. Firstly, it develops into an Aspect marker expressing Ingressive aspect, as in (11):

(11) *ghadā* Bakrun *yaktubu* š-šiera

INGR-PAST-3SGM Bakr-NOM write-PRES-3SGM DEF-poetry

‘Bakr began to write poetry’

‘Bakr became a poet’

Secondly, in its (Active) participle form, it moves up one further layer to express Future Tense as shown above3. Such a two-step diachronic itinerary also holds for other predicates.

The Adverb *da’ban* (‘always’) behaves in LA as a modifier expressing Habitual Aspect. In Moroccan, it becomes a mere particle and moves up to the Tense layer where it indicates Future Tense. This becomes clear when we compare (12) and (13):

(12) *yażīu* *daban* (LA)

come-PRES-3SGM always

‘He always comes’

(13) *daba iži* (Moroccan)

Now come-3SGM

‘He will come now’

What is also interesting is that the elements under examination may behave as modal markers expressing certainty. Thus, examples (2) and (13) could also be interpreted as synonymous with (14):

(14) *Daruri iži* (Moroccan)

sure come-3SGM

‘It is certain that he will come

---

3 The claim made in Hengeveld (2011c: 586) is that the change in the field of TMA “will go from lower to higher scope and not the other way around”. In terms of the hierarchical layered organization of the Representational level, this means that the change will take place according to the following scale:

Situational concept > state of affairs > episode > propositional content
2.2.1.2 Expression of Passive

Another example of the change from fused to non-fused forms is the expression of Passive, which is expressed in LA in the predicate, as illustrated in example (15):

\[
\begin{align*}
\text{(15)} & \quad \text{kutibat} \quad r\text{-risālu}\text{t} \\
& \text{write-PASS-PAST-3SGM} \quad \text{DEF-letter-NOM} \\
& \text{‘The letter has been written’}
\end{align*}
\]

In CMA the passive is expressed by a specific prefix (\text{te} in Moroccan and \text{in} in Egyptian) which attaches to the Active form of the predicate:

\[
\begin{align*}
\text{(16)} & \quad \text{teketbet} \quad r\text{-risala (Moroccan)} \\
& \text{PASS-write-PAST-3SGM} \quad \text{DEF-letter} \\
& \text{‘The letter has been written’}
\end{align*}
\]

\[
\begin{align*}
\text{(17)} & \quad \text{inkatabet} \quad r\text{-risala (Egyptian)} \\
& \text{PASS-write-PAST-3SGM} \quad \text{DEF-letter} \\
& \text{‘The letter has been written’}
\end{align*}
\]

2.2.1.3 Expression of Dual

In LA, many features are rendered by suffixes indicating, for instance, Case, Dual number and verbal Mood. There is a general tendency for these endings to disappear during the process of grammaticalization. Thus, Dual number is expressed in LA by the suffixes \text{āni} and \text{ayni} in Nominative and Accusative Case, respectively. This is illustrated in the following:

\[
\begin{align*}
\text{(18)} & \quad \text{a} \quad \text{fāza} \quad T\text{-Tālibāni} \\
& \text{succeed-PAST-3SGM} \quad \text{DEF-student-DUAL-NOM} \\
& \text{‘The two students succeeded’}
\end{align*}
\]

\[
\begin{align*}
\text{b} \quad \text{laqūtu} \quad T\text{-Tālibayni} \\
& \text{meet-PAST-1SG} \quad \text{DEF-student-Dual-ACC} \\
& \text{‘I met the two students’}
\end{align*}
\]

As for CMA, some of its varieties use lexical units, such as \text{zuž} (‘two’) in Moroccan, to fulfil this task, as shown in examples (19) and (20):

\[
\begin{align*}
\text{(19)} & \quad \text{štaraytu} \quad \text{kitābaynī (LA)}
\end{align*}
\]
buy-PAST-1SG  book-DUAL-ACC
‘I bought two books’

(20) šrit  zuż  ktub (Moroccan)
buy-PAST-1SG  two  books
‘I bought two books’

2.2.2 From morphology to syntax

To illustrate the shift from morphology to syntax, two examples will be used: the expression of the grammatical functions and the formal realization of exclamation.

As is well known, Subject and Object functions are expressed in LA by Nominative and Accusative Case, respectively, as becomes clear from examples (21a-b):

(21) a  laqiya  εaliyyun  Bakran
meet-PAST-3SGM  εali-NOM  Bakr-ACC
‘εali met Bakr’

b  laqiya  Bakran  εaliyyun
meet-PAST-3SGM  Bakr-ACC  εali-NOM
‘εali met Bakr’

In CMA, the expression of these functions is handled by constituent ordering: the Subject constituent occupies the pre-verbal position while the Object constituent is placed in post-verbal position, as illustrated in example (22):

(22) εali  lqa  Bakr
εali  meet-PAST-3SGM  Bakr
‘εali met Brahim’

In other words, LA is a VSO language whereas CMA becomes more and more an SVO language.

As for exclamation, in LA, when it applies to the predicate (see Moutaouakil (2005)), it is rendered through the particle mā placed in the initial position as in (23):

(23) mā  âţmala  hādhihi  l-fatāta!
EXCL-beautiful  this-SGF  DEF-girl-ACC
‘Is this girl beautiful’

In CMA another strategy is used. It consists in placing the predicate in the initial position, as becomes clear from the comparison between (24a-b) and (25a-b):
(24)  a  had  l-bent  zuina  (Moroccan)
      this  DEF-girl  beautiful-SGF
      ‘This girl is beautiful’

        b  zuina  had  l-bent!  (Moroccan)
        beautiful-SGF  this  DEF-girl
        ‘Is this girl beautiful!’

(25)  a  l-benti  di-  Hilwa  (Egyptian)
      DEF-girl  this-SGF  beautiful-SGF
      ‘This girl is beautiful’

        b  Hilwa  l-benti  di!  (Egyptian)
        beautiful-SGF  DEF-girl  this-SGF
        ‘Is this girl beautiful!’

2.3 Syntax

2.3.1 Prefield-to-postfield shift

The positional pattern of the verbal Clause in Arabic can be roughly represented as follows:

(26)  (Cl₁: [Pre-verbal area] [Verb] [ Post-verbal area] (Cl₁))

The pre-verbal area may host interrogative or emphatic particles, interrogative pronouns and Topic or Focus constituents. Certain varieties of CMA exhibit a clear tendency to shift interrogative pronouns as well as some particles from the pre-verbal to the post-verbal area. In Egyptian, for instance, constructions like (27a) are grammatical whereas constructions such as (27b) are not:

(27)  a  šufti  min?
       see-PAST-2SG  whom
       ‘Whom did you see?’

        b  *min  šufti?
         whom  see-PAST-2SG
Similarly, the particle āwa, expressing Mirative illocution, has left the initial position and now occurs in the post-verbal area, as the comparison between (28) and (29) shows:

(28)  āwa nasīta  ākhāka?! (CA/SMA)
     MIR forget-PAST-2SGM brother-ACC-2SGM
     ‘I am very surprised that you forgot your brother!’

(29)  nsiti khuk aw?! (Moroccan, Lybian)
     forget-PAST-2SG brother-2SGM MIR
     ‘I am very surprised that you forgot your brother!’

The pre-field-to-post-field shift is not restricted to the Clause but also holds for the NP domain. In LA, demonstrative elements generally occur before the head noun, as illustrated in (30):

(30)  qaraḥu hādha l-kitāba (CA/ SMA)
     read-PAST-1SG this-SGM DEF-book-ACC
     ‘I read this book’

In Moroccan, demonstrative elements still occupy the pre-head position (see example (31)). In other, colloquial varieties, however, the canonical pattern is noun-demonstrative rather than demonstrative-noun, as shown in examples (32) and (33) (see also examples (24) and (25) above):

(31)  qrit had l-kitab (Moroccan)
     read-PAST-1SG this DEF-book
     ‘I read this book’

(32)  a  qrit l-kitab hada (Tunisian, Lybian)
     read-PAST-1SG DEF-book this-SGF
     ‘I read this book’

     b.  ḥqrit had l-kitab (Tunisian, Lybian)
     read-PAST-1SG this DEF-book

(33)  a  ārit l-kitab dah (Egyptian)
     read-PAST-1SG DEF-book this-SGF
     ‘I read this book’

     b  *ārit dah l-kitab (Egyptian)
     read-PAST-1SG this-SGF DEF-book
Demonstrative elements may occur before the head noun in the colloquial varieties which generally postpone it. For example, Egyptian constructions like (34) are not unacceptable:

(34) \textit{ikhS εala di sit!}
\text{PEJOR on this woman}
‘What a detestable woman!’

Note, however, that the construction exemplified in (34) has the characteristic property of being exclamative and of expressing a (pejorative) subjective modality (realised by the particle \textit{ikhS}), as the English translation shows. It is this property that allows the demonstrative-noun order in this kind of construction.

2.3.2 From word order to special construction

In LA, the constituent bearing Contrastive Focus function is placed in initial position, as in (35):

(35) ۥIbrāhīma ra ۥAliyyun
Ibrāhīm-ACC see-PAST-3SGM εAliyy-NOM
‘It is Brahim that Ali saw’

This strategy is no longer available in CMA, as CMA is characterized by a fixed SVO order. Constructions like (36), where the constituent bearing Constrastive Focus function is placed in the initial position, are therefore ungrammatical:

(36) *Brahim šaf εAli
Brahim see-PAST-3SGM εAli

In order to express Contrastive Focus, CMA uses a pseudo-cleft strategy, as exemplified in (37):

(37) lli šaf εAli Brahim
who see-PAST-3SGM εAli Brahim
‘Whom Ali saw is Brahim’
‘It is Brahim that Ali saw’
2.4 From morphosyntax to prosody

Comparing LA and CMA, we find the tendency (which could hold for language change in general) of morphosyntactic means to be replaced by intonational means in the expression of Interpersonal properties such as illocutionary and emphatic features. LA possesses two initial interrogative particles, *hal* and *ۢا*, which express, roughly speaking, Clause Question and NP Question respectively, as illustrated in examples (38) and (39):

(38) \[\text{hal} \quad \text{ra}^\text{ayta}\quad \text{Bakran?} \]
\[\begin{array}{ll}
\text{INT} & \text{see-PAST-2SGM} \\
\text{Bakr-ACC} & \\
\end{array}\]
‘Did you see Bakr?’

(39) ۢا \quad \text{Bakran} \quad \text{ra}^\text{ayta}? \]
\[\begin{array}{ll}
\text{INT} & \text{Bakr-ACC} \\
\text{see-PAST-2SGM} & \\
\end{array}\]
‘Was it Bakr that you saw?’

These particles are no longer used in CMA. In some dialects of this variety, they are replaced by one (bivalent) particle, such as *waš* in Moroccan:

(40)  \[\text{waš} \quad \varepsilon\text{Ali} \quad \text{šaf}\quad \text{Brahim?} \]
\[\begin{array}{ll}
\text{INT} & \varepsilon\text{Ali} \\
\text{see-PAST-3SGM} & \text{Brahim} \\
\end{array}\]
‘Did Ali see Brahim?’

In a great number of the other dialects, Interrogation is expressed only through a rising intonation.

CMA does not possess morphological emphatic markers like the particle *qad*, occurring in examples like (1) (repeated here for convenience):

(1) \[\text{qad} \quad \varepsilon\text{āda}\quad \text{Zaydun} \]
\[\begin{array}{ll}
\text{EMPH} & \text{come back-PASTPERF.3SGM} \\
\text{Zayd-NOM} & \\
\end{array}\]
‘Zayd DID come’

In order to emphasize the predicate, the main stress is placed on it, as in (41), which is the colloquial counterpart of (1):

(41) \[\text{Zayd} \quad \text{ržə} \quad \text{Zayd-NOM} \]
\[\begin{array}{ll}
\text{Zayd} & \text{come back-PAST-3SGM} \\
\end{array}\]
‘Zayd DID come back!’


3 Transparency and language change

In addition to the mapping means, languages may also differ with respect to their degree of “Transparency” and “Opacity”. In general, a transparent relation is said to hold between two levels if there is a one-to-one mapping between their units. Conversely, an opaque relation is said to hold between two levels if there is a one-to-many or a many-to-one mapping between their units.

According to Hengeveld (2011a-b), transparency/opacity relations can be found between the four levels of the Grammatical Component as well as within each of the encoding levels: the morpho-syntactic level and the phonological level. Hengeveld (2011a-b) proposes and discusses a list of criteria that can be used to determine the degree of transparency of language. Here I will concentrate on a number of these criteria, namely the presence or absence of grammatical relations, discontinuity, raising, expletive elements, agreement and fusional morphology. My main aim here is to show how these parameters can be used in describing language change.

3.1 Grammatical relations

Both Subject and Object are needed in LA since the former can be assigned to non-agent arguments and the latter to non-Undergoer arguments. This becomes clear from the comparison between (42) and (43a-b):

(42)  
εāqabat  
Hindun  
Bakran
punish-PAST-3SGF  Hind-NOM  Bakr-ACC
‘Hind punished Bakr’

(43)  
a  
εūqiba  
Bakrun
punish-PASS-PAST-3SGF  Bakr-NOM
‘Bakr was punished’

b  
manaHat  
Hindun  
Bakran  mālan
give-PAST-3SGF  Hind-NOM  Bakr-ACC  money-ACC
‘Hind gave Bakr money’

As for CMA, Subject function is still needed, as Passive constructions continue to be productive. Object function, however, is no longer needed since it cannot be assigned to a constituent other than the Undergoer. “Dative” constructions like (44b), where Object function is assigned to the Recipient constituent, are ungrammatical:
3.2 Discontinuity

Constructions (45b) are examples of discontinuity:

(45) a l-fiṭātu l-latī štaghalat nażaHat (LA)
    DEF-girl-NOM who-SGF work-PAST-3SGF succeed-PAST-3SGF
    ‘The girl who worked well succeeded’

b *l-fiṭātu nażaHat l-latī štaghalat (LA)
    DEF-girl-NOM succeed-PAST-3SGF who-SGF work-PAST-3SGF

The opacity of such constructions results from the fact that the semantic unit l-fiṭātu l-latī štaghalat is interrupted by the verbal complex nażaHat.

Notice that when the relative clause expresses an autonomous appositive Discourse Act, as in (46), where l-fiṭātu nażaHat and l-latī štaghalat are two distinct intonational units, we can no longer speak of discontinuity:

(46) l-fiṭātu nażaHat, l-latī štaghalat
    DEF-girl-NOM succeed-PAST-3SGF who-SGF work-PAST-3SGF
    ‘The girl, who worked well, succeeded’

The criterion of discontinuity has not undergone any change. It also holds for CMA, as becomes clear from the comparison between (47a), (47b) and (47c):

(47) a l-bent lli khadmat nażHat (Moroccan)
    DEF-girl-NOM who work-PAST-3SGF succeed-PAST-3SGF
    ‘The girl who worked well succeeded’

b *l-bent nażHat lli khadmat
    DEF-girl-NOM succeed-PAST-3SGF who work-PAST-3SGF

c l-bent nażHat, lli khadmat
    DEF-girl-NOM succeed-PAST-3SGF who work-PAST-3SGF
3.3 Raising

Discontinuity and, therefore, opacity can also be caused by raising an element from the embedded Clause to a position within the main Clause. In LA, this displacement can take place in two ways: from Subject to Subject or from Subject to Object, as illustrated in (48b) and (49b), respectively:

\[(48)\] a \(\text{yaDharu’ anna’ Ibrāhīma marīDun}\) 
\(\text{seem-IMPERS that Ibrāhīm-ACC ill-SGM-NOM}\)
\(\text{‘It seems that Brahim is ill’}\)

b \(\text{yaDharu’ Ibrāhīmu marīDan}\) 
\(\text{seem-3SG Ibrāhīm-NOM ill-SGM-ACC}\)
\(\text{‘Brahim seems to be ill’}\)

\[(49)\] a \(\text{’aDhunnu’ anna’ Ibrāhīma marīDun}\) 
\(\text{believe-PRES-1SG that Ibrāhīma-ACC ill-SGM-NOM}\)
\(\text{‘I believe that Brahim is ill’}\)

b \(\text{’aDhunnu’ Ibrāhīma marīDan}\) 
\(\text{believe-PRES-1SG Ibrāhīm-ACC ill-SGM-ACC}\)
\(\text{‘I believe Brahim to be ill’}\)

In CMA, only Subject-to-Object raising is still possible, as a comparison between (50a-b) and (51a-b) shows:

\[(50)\] a \(\text{nDHon blli Brahim mriD}\) 
\(\text{believe-PRES-1SG that Brahim ill-SGM}\)
\(\text{‘I believe that Brahim is ill’}\)

b \(\text{nDHon Brahim mriD}\) 
\(\text{believe-PAST-1SG Brahim ill-SGM}\)
\(\text{‘I believe Brahim to be ill’}\)

\[(51)\] a \(\text{yDhar blli Zineb mriDa}\) 
\(\text{seem-IMPERS that Zineb ill-SGF}\)
\(\text{‘It seems that Zineb is ill’}\)

---

4 Unexpectedly, the Subject argument in (48a) and (49a) bears Accusative instead of Nominative case. This is due to the presence of the subordinator \(\text{anna’}\), which assigns the (non-functional) Accusative case to any nominal constituent following it.
3.4 Expletive elements

Certain languages, like English and French, allow for the insertion of dummy elements at the Morphosyntactic Level, i.e. elements without an Interpersonal or Representational counterpart, such as the English *it* in impersonal expressions like *it rains*. Neither LA nor CMA displays this property. Examples (52) and (53) illustrate this point:

\[(52)\]
\begin{align*}
a & \text{Yanzilu} & \text{l-maTaru (CA/SMA)} \\
& \text{fall-PRES-3SGM} & \text{DEF-rain-NOM} \\
& \text{‘It is raining’} \\
b & \text{*yumTiru} \\
& \text{rain-PRES-3SGM}
\end{align*}

\[(53)\]
\begin{align*}
a & \text{š-šta} & \text{kaTTiH (Moroccan)} \\
& \text{DEF-rain} & \text{fall-PRES-3SGF} \\
& \text{‘It is raining’} \\
b & \text{*kayšti (Moroccan)} \\
& \text{rain-Pre3S-MG}
\end{align*}

3.5 Agreement

In FDG, Agreement involves the copying of a feature of one constituent onto another constituent. In LA, Gender and Number features of the Subject constituent are copied onto the predicate when the Subject precedes the predicate, as in (54a), thus creating double marking and multiple forms for the same meaning. In constructions like (54b), however, where the Subject constituent follows the predicate, only the Gender feature is copied, as illustrated by the ungrammaticality of (54c), where the verb agrees with the subject both in Gender and Number.

\[(54)\]
\begin{align*}
a & \text{l-awlādu} & \text{raże‘ūū} \\
& \text{DEF-children-NOM} & \text{come back-PAST-3PLURM} \\
& \text{‘The children came back’}
\end{align*}
b  *rażeu  l-awlādu  
come back-PAST-3PLURM  DEF-children
‘The children came back’

c  *rażeēa  l-awlādu  
come back-PAST-3SGM  DEF-children-NOM
‘The children came back from the school’

In all the CMA varieties, the verb agrees with the Subject in Gender and Number irrespective of its position:

(55) a  l-awlād  rażeu  
def-children  come back-PAST-3PLURM
‘The children came back’

b  rażeu  l-awlād  
come back-PAST-3PLURM  DEF-children
‘The children came back’

3.6 Fusional morphology

LA displays the properties of a cumulative fusional morphological system. To give an example, the verb kataba (‘to write’) in (56) expresses six features at the same time: Declarative illocution, Past Tense, Perfect Aspect, Third person, Singular Number and Feminine Gender:

(56) kataba  risālatan (CA/SMA)  
write-DECL-PAST-PERF-3SGM  letter-ACC
‘He wrote a letter’

As already shown in section 1.2.1, the fact that Future Tense, Progressive Aspect, and Passive Voice as well as the expression of Dual Number are currently expressed separately in CMA shows that CMA morphology tends to become more and more non-fusional.
4 Some general tendencies

4.1 Less cost

As is well-known, in everyday communicative situations, natural language users tend to be as clear as possible but they also tend to try to achieve this goal with a minimum of effort and time. In the evolution of language, this results in two kinds of phenomena: (a) loss or reduction of linguistic means and (b) amalgamation of contiguous units.

As shown above, during its evolution, the Arabic language has lost various morphological means, including nominal and verbal endings and many of its illocutionary, vocative and emphatic markers.

As for amalgamation, it consists of “mixing” two or more synchronically autonomous elements in one unit. Examples of amalgamation are the integration of Extra-Clausal constituents, the attraction of preposition and the formation of certain interrogative pronouns. In LA, Linguistic Expressions contain, in one of their manifestations, a Clause and an Extra-Clausal constituent which can be in pre-Clausal or post-Clausal position (see Hengeveld and Mackenzie (2008: 308)). The relevant patterns are given in (57a-b); some examples are given in (58a-b):

\[
(57) \begin{align*}
\text{a} & \quad \text{(Le}_1: [(XP_1) (Cl_1)] (\text{Le}_1)) \\
\text{b} & \quad \text{(Le}_1: [(Cl_1) (XP_1)] (\text{Le}_1))
\end{align*}
\]

\[
(58) \begin{align*}
\text{a} & \quad \text{l-àTfālu rażaeū} \\
& \quad \text{DEF-children-NOM come-back3PLURM} \\
& \quad \text{‘As for the children, they came’}
\end{align*}
\]

\[
\begin{align*}
\text{b} & \quad \text{rażaeū, l-àTfālu} \\
& \quad \text{come back-PAST-3PLURM DEF-children-NOM} \\
& \quad \text{‘They came back, the children (I mean)’}
\end{align*}
\]

In CMA, the Extra-Clausal constituent is integrated into the Clause. This process yields constructions like (59a) and (59b), which are simple Clauses and where the verbal suffix is converted into a mere agreement marker with the Subject constituent:

\[
(59) \begin{align*}
\text{a} & \quad \text{d-drari rażeu} \\
& \quad \text{DEF-children come back-PAST-3PLURM} \\
& \quad \text{‘The children came back’}
\end{align*}
\]

\[
\begin{align*}
\text{b} & \quad \text{rażeu} \quad \text{d-drari} \\
& \quad \text{come back-PAST-3PLURM DEF-children} \\
& \quad \text{‘The children came back’}
\end{align*}
\]
In CMA, the verb tends to attract the preposition attached to the NP which follows it. This absorption leads to the formation of a new verb. An example is the verb ġab (‘to bring’) in many Arabic varieties:

(60)  
\[
\begin{array}{ccc}
\text{āyyu} & \text{šayān} & \text{huwa} \\
\text{come-PAST-3SGM} & \text{thing-GEN} & \text{it} \\
\text{hādhā}\ ? & \text{this-SGM} & \text{this-SGM}
\end{array}
\]
‘What is this?’

(61)  
\[
\begin{array}{ccc}
\text{āyyu} & \text{šayān} & \text{huwa} \\
\text{come-PAST-3SGM} & \text{thing-GEN} & \text{it} \\
\text{hādhā}\ ? & \text{this-SGM} & \text{this-SGM}
\end{array}
\]
‘He came with a book’

(62)  
\[
\begin{array}{ccc}
\text{āyyu} & \text{šayān} & \text{huwa} \\
\text{come-PAST-3SGM} & \text{thing-GEN} & \text{it} \\
\text{hādhā}\ ? & \text{this-SGM} & \text{this-SGM}
\end{array}
\]
‘He brought the book’

The amalgamation of the three autonomous units āyyu, šayān and huwa in the expression āyyu šayān huwa yields interrogative pronouns like ašnu in Moroccan Arabic and šu in Syrian Arabic. Compare:

(62)  
\[
\begin{array}{ccc}
\text{āyyu} & \text{šayān} & \text{huwa} \\
\text{come-PAST-3SGM} & \text{thing-GEN} & \text{it} \\
\text{hādhā}\ ? & \text{this-SGM} & \text{this-SGM}
\end{array}
\]
‘What is this?’

(63)  
\[
\begin{array}{ccc}
\text{ašnu} & \text{hada}\ ? \\
\text{what} & \text{this-SGM}
\end{array}
\]
‘What is this?’

(64)  
\[
\begin{array}{ccc}
\text{šu} & \text{had}\ ? \\
\text{what} & \text{this-SGM}
\end{array}
\]
‘What is this?’

An important repercussion of the phenomena discussed here is that they may trigger what could be referred to as ‘change chains’. The most well-known example in Arabic is the loss of Case markers, which results in a non-free, fixed constituent order. This, in turn, leads to the emergence of special constructions for the expression of pragmatic functions.

4.2 More transparency

As regards the transparency vs. opacity issue, two of the properties discussed in the section 2, “discontinuity” and “expletive element”, have not undergone any change in the evolution of the Arabic language; the other properties (“grammatical relations”, “raising”, “fusional morphology” and “agreement”) have been partly modified.
It should be noted that the general tendency in this respect is towards transparency; this is shown in Table 1:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>CA/SMA</th>
<th>CMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>discontinuity</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>expletive element</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>raising</td>
<td>+</td>
<td>-/+</td>
</tr>
<tr>
<td>grammatical relations</td>
<td>+</td>
<td>-/+</td>
</tr>
<tr>
<td>fusional morphology</td>
<td>+</td>
<td>-/+</td>
</tr>
<tr>
<td>agreement</td>
<td>-/+</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 1. Transparency in CA/SMA and CMA

It will be clear that Table 1 only provides a general impression of the way in which the Arabic language develops towards transparency. In order to arrive at a more complete and precise picture, a deeper investigation using further criteria is required.

4.3 Cost and Transparency: how do they interact?

A final question which arises is: What is the impact of the changes taking place in the mapping system of Arabic varieties, more specifically the reduction of opacity (as a result of the tendency to minimize the cost of production and interpretation)?

If we restrict ourselves to the transparency criteria discussed above, we could propose the following provisional answer:

(i) As one can expect, the reduction of (morphological) means (through loss or amalgamation) leads to less transparency. Instances of this are the ambiguities which result from the reduction of illocutionary, vocative and emphatic particles in most varieties of CMA. What could also be expected was the emerging of new forms enhancing transparency. This is indeed what is achieved by the conversion of the fusional expression of some features (Aspect, Tense, Passive, Dual...) into a non-fusional one.

(ii) Unexpectedly, however, some cases of reduction may result in more transparency, as is the case with the total or partial loss of syntactic functions, resulting in re-established access to semantic functions. The reverse phenomenon also turns out to be possible: the generalization of verb-Subject agreement leads to more opacity in the CMA varieties.

(iii) Roughly speaking, what we can say for the time being is that language change takes place under the pressure of two general tendencies: a tendency towards minimal cost (less means) and a tendency towards maximal transparency. The question which
remains open is: How can these two (seemingly incompatible) tendencies co-exist and how do they interact with each other?

5. Conclusion

A large number, if not all, of the changes that have taken place during the evolution of the Arabic language from LA to the CMA varieties can be more clearly described and more adequately accounted for in terms of mapping and transparency than in terms of traditional historical approaches.

As regards mapping, the modern colloquial varieties of Arabic are building a new, less fusional morphological system as well as a new syntactic configuration with a fixed word order and a more ‘hostile’ post-field area. As for transparency, some properties remain unchanged; some are evolving towards less opacity, while in some respect the system becomes more opaque.

Further research, however, will be needed in this respect to deepen our understanding of the exact (probably conflicting) nature of the interplay between cost and transparency.

Although the general tendencies described in this study are primarily true of Arabic, it may be assumed that they could be taken to hold, mutatis mutandis, for other languages as well.

Abbreviations used in glosses

1 ..................first person
2 ..................second person
3 ..................third person
ACC.............accusative
DECL...........declarative
DEF.........definite
EMPH.........emphasis
EXCL........exclamative
F...............feminine
FUT..........future tense
IMPERS........impersonal
INGR.............ingressive
INT............interrogative
M.............masculine
MIR........mirative
References


