

Mapping and Transparency in Arabic

A comparative approach¹

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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)².

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.

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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.

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 *εammal* ('working') in Egyptian and Syrian or adjectives like *gaεed* ('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* *qāεidun* (LA)
 Bakr-NOM sitting-NOM
 'Bakr is sitting'
- d *Bakrun* *εammālun* (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) *gaʕed* *yekʔeb* (Moroccan/Tunisian/Lybian/Qatari/...)
 PROGR write-PRES-3SGM
 ‘He is writing’
- (6) *ʕammal* *yekʔeb* (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), *qāʕidun* and *ʕammālun* designate a position and a durative action respectively; their grammaticalized dialectal counterparts *gaʕed* and *ʕammal* 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 *ʕammal*, which may lose their second syllable:

- (7) *gha* *iʕI* (Moroccan)
 FUT come-3SGM
 ‘He will come’
- (8) *ʕam* *yekʔeb* (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) *yažīū* *dāban* (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):

- (15) *kutibat* *r-risālatu*
write-PASS-PAST-3SGM DEF-letter-NOM
'The letter has been written'

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

- (16) *teketbet* *r-risala* (Moroccan)
PASS-write-PAST-3SGM DEF-letter
'The letter has been written'
- (17) *inkatabet* *r-risala* (Egyptian)
PASS-write-PAST-3SGM DEF-letter
'The letter has been written'

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 *āni* and *ayni* in Nominative and Accusative Case, respectively. This is illustrated in the following:

- (18) a *fāza* *T-Tālibāni*
succeed-PAST-3SGM DEF-student-DUAL-NOM
'The two students succeeded'
- b *laqītu* *T-Tālibayni*
meet-PAST-1SG DEF-student-Dual-ACC
'I met the two students'

As for CMA, some of its varieties use lexical units, such as *zuž* ('two') in Moroccan, to fulfil this task, as shown in examples (19) and (20):

- (19) *štaraytu* *kitābayni* (LA)

buy-PAST-1SG book-DUAL-ACC
 ‘I bought two books’

(20) *šrit* *zuž* *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* *ɛaliyyun* *Bakran*
 meet-PAST-3SGM ɛali-NOM Bakr-ACC
 ‘ɛali met Bakr’

b *laqiya* *Bakran* *ɛaliyyun*
 meet-PAST-3SGM Bakr-ACC ɛali-NOM
 ‘ɛali 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) *ɛali* *lqa* *Bakr*
 ɛali meet-PAST-3SGM Bakr
 ‘ɛali 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 ʾažmala* *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 *ʾawa*, 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) *ʾawa nasīta ʾakhāka?! (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) *qaraʾtu 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-ktab (Moroccan)*
 read-PAST-1SG this DEF-book
 ‘I read this book’
- (32) a *qrit l-ktab hada (Tunisian, Lybian)*
 read-PAST-1SG DEF-book this-SGF
 ‘I read this book’
- b. *ʔqrit had l-ktab (Tunisian, Lybian)*
 read-PAST-1SG this DEF-book
- (33) a *ʾarit l-kitab dah (Egyptian)*
 read-PAST-1SG DEF-book this-SGF
 ‘I read this book’
- b. **ʾarit 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) *ikhS* *εala* *di* *sit!*
 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 *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) *Ībrāhīma* *ra ā* *εAliyyun*
 Ībrāhīm-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 Contrastive 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 *ʿa*, which express, roughly speaking, Clause Question and NP Question respectively, as illustrated in examples (38) and (39):

(38) *hal* *raʿayta* *Bakran?*
 INT see-PAST-2SGM Bakr-ACC
 ‘Did you see Bakr?’

(39) *ʿa* *Bakran* *raʿayta?*
 INT Bakr-ACC see-PAST-2SGM
 ‘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) *waš* *εAli* *šaf* *Brahim?*
 INT εAli see-PAST-3SGM Brahim
 ‘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) *qad* *εāda* *Zaydun*
 EMPH come back-PASTPERF.3SGM Zayd-NOM
 ‘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) *Zayd* *ržæ* (Moroccan)
 Zayd come back-PAST-3SGM
 ‘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:

- (44) a *εTat* *Hind* *ktab* *l* *Bakr* (Moroccan)
 give-PAST-3SGF Hind Book to Bakr
 ‘Hind gave a book to Bakr’
- b **εTat* *Hind* *Bakr* *ktab*
 give-PAST-3SGF Hind Bakr book

3.2 Discontinuity

Constructions (45b) are examples of discontinuity:

- (45) a *l-ftātu* *llatī* *štaghalat* *nažaHat* (LA)
 DEF-girl-NOM who-SGF work-PAST-3SGF succeed-PAST-3SGF
 ‘The girl who worked well succeeded’
- b **l-ftātu* *nažaHat* *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-ftātu l-latī štaghalat* is interrupted by the verbal complex *nažaHat*.

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

- (46) *l-ftātu* *nažaHat,* *llatī* *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* *nažHat* (Moroccan)
 DEF-girl-NOM who work-PAST-3SGF succeed-PAST-3SGF
 ‘The girl who worked well succeeded’
- b **l-bent* *nažHat* *lli* *khadmat*
 DEF-girl-NOM succeed-PAST-3SGF who work-PAST-3SGF
- c *l-bent* *nažHat,* *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), respectively⁴:

- (48) a *yaDharu'* *anna'* *Ibrāhīma* *marīDun*
 seem-IMPERS that Ībrāhīm-ACC ill-SGM-NOM
 'It seems that Brahim is ill'
- b *yaDharu'* *Ibrāhīmu* *marīDan*
 seem-3SG Ībrāhīm-NOM ill-SGM-ACC
 'Brahim seems to be ill'
- (49) a *'aDhunnu* ' *anna* ' *Ībrāhīma* *marīDun*
 believe-PRES-1SG that Ībrāhīma-ACC ill-SGM-NOM
 'I believe that Brahim is ill'
- b *'aDhunnu* ' *Ībrāhīma* *marīDan*
 believe-PRES-1SG Ībrāhīm-ACC ill-SGM-ACC
 '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 *nDHon* *blli* *Brahim* *mriD*
 believe-PRES-1SG that Brahim ill-SGM
 'I believe that Brahim is ill'
- b *nDHon* *Brahim* *mriD*
 believe-PAST-1SG Brahim ill-SGM
 'I believe Brahim to be ill'
- (51) a *yDhar* *blli* *Zineb* *mriDa*
 seem-IMPERS that Zineb ill-SGF
 '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 *anna*, which assigns the (non-functional) Accusative case to any nominal constituent following it.

- b **taDhar* *Zineb* *mriDa*
 seem-IMPERS Zineb ill-SGF

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) a *Yanzilu* *l-maTaru* (CA/SMA)
 fall-PRES-3SGM DEF-rain-NOM
 ‘It is raining’
- b **yumTiru*
 rain-PRES-3SGM
- (53) a *š-šta* *kaTTiH* (Moroccan)
 DEF-rain fall-PRES-3SGF
 ‘It is raining’
- b **kayšti* (Moroccan)
 rain-Pres-3SGM

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) a *l-awlādu* *ražεōū*
 DEF-children-NOM come back-PAST-3PLURM
 ‘The children came back’

- b *raḏea* *l-ʾawlādu*
 come back-PAST-3SGM DEF-children-NOM
 ‘The children came back from the school’
- c **raḏaeū* *l-ʾawlādu*
 come back-PAST-3PLURM DEF-children
 ‘The children came back’

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

- (55) a *l-awlad* *raḏeu*
 DEF-children come back-PAST-3PLURM
 ‘The children came back’
- b *raḏeu* *l-awlad*
 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) a (Le₁: [(XP₁) (Cl₁)] (Le₁))
b (Le₁: [(Cl₁) (XP₁)] (Le₁))

- (58) a *l-ʾaTfālu* *ražaεū*
DEF-children-NOM come-back3PLURM
‘As for the children, they came’
- b *ražaεū,* *l-ʾaTfālu*
come back-PAST-3PLURM DEF-children-NOM
‘They came back, the children (I mean)’

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) a *d-drari* *ražeεu*
DEF-children come back-PAST-3PLURM
‘The children came back’
- b *ražeεu* *d-drari*
come back-PAST-3PLURM DEF-children
‘The children came back’

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 *žab* (‘to bring’) in many Arabic varieties:

- (60) *žāʾa* *bi* *l-kitābi* (CA/SMA)
 come-PAST-3SGM with DEF-book-GEN
 ‘He came with a book’
- (61) *žab* *l-ktab* (Moroccan)
 bring-PAST-3SGM DEF-book
 ‘He brought the book’

The amalgamation of the three autonomous units *ʾayyu*, *šayʾin* and *huwa* in the expression *ʾayyu šayʾin huwa* yields interrogative pronouns like *ašnu* in Moroccan Arabic and *šū* in Syrian Arabic. Compare:

- (62) *ʾayyu* *šayʾin* *huwa* *hādhā?* (LA)
 Which thing-GEN it this-SGM
 ‘What is this?’
- (63) *ašnu* *hada?* (Moroccan)
 what this-SGM
 ‘What is this?’
- (64) *šū* *had?* (Syrian)
 what this-SGM
 ‘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:

Criterion	CA/SMA	CMA
discontinuity	-	-
expletive element	-	-
raising	+	-/+
grammatical relations	+	-/+
fusional morphology	+	-/+
agreement	-/+	+

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 ‘hospitable’ 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

NOM.....	nominative
PASS.....	passive
PAST	past tense
PEJOR	pejorative
PERF.....	perfect
PLUR	plural
PRES.....	present tense
PROGR.....	progressive
SG	singular

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