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From embedded propositions to complex predicates. The contribution of Arabic dialects to syntactic typology

Abstract: This article examines verbal sequences in Arabic dialects which can correspond either to complex sentences with embedded clauses or to complex predicates with reduction of one or the other verb. The first part is devoted to complex sentences where completives and subordinators of purpose and consequence are introduced by a marker that is generally specific, but sometimes polyfunctional. The second part explores embedding without a subordinator (with distinct or identical subjects), as well as with cases of complex predicates, sometimes with reduction of V_1 (cases of auxiliarization and pragmatization), sometimes of V_2 (rare cases of serial verbs).

Keywords: Arabic; embedded clause; co-reference; auxiliary; serial verb

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1 Introduction

Embedded sentences are perhaps one of the least studied areas of Arabic dialectology. However, some common phenomena in Arabic have attracted the attention of typological linguists, such as the existence of finite verb completives without subordinators, and serial verbs. By finite verb, we mean in particular that –apart from pidgin-creoles– the main aspectuo-temporal forms of the Arabic verb include a personal index that represents the subject of the proposition. This personal index is essentially formed by a prefix in the imperfective and a suffix in the perfective. Most syntactic descriptions of Arabic devote a few chapters to phrasal dependency, and some such as Feghali (1928), Woidich (2006), Holes (2016) and Leung and al. (2021) provide fairly in-depth studies of several types of embedded sentences. Other studies shed light on specific issues such as syndetic vs. asyndetic hypotaxis (Bloch 1965), subordination vs. juxtaposition (Fischer 2002), and serial verbs (Woidich 2002; Versteegh 2005, 2009). However, it remains difficult to obtain a precise idea of the convergences and divergences between the different dialects. The aim here is not, of course, to fill in all the gaps, but to address a number of questions that seem to arise in a similar way in much of the Arabic domain. I propose to tackle them by taking the Arabic dialect Ḥassāniyya (spoken in West-Saharan Africa, and in particular in Mauritania) as a thread, and by relying on articles I have published since 2000 on some of the points addressed here. It will be seen that there is some continuity between embedded sentences with and without subordinators on the one hand, and embedded sentences without subordinators and complex predicates on the other, insofar as finite verb forms are regularly found in V_2 position of as well as in V_1 –unlike in many languages where V_2 takes a non-finite (or infinitive) form. My paper is divided into two parts following this introductory section. In part 2, I study dependent sentences with subordinators, distinguishing the different types of embedded sentences, largely recognizable by the subordinator(s) used, even if some of them are used for several types of dependent clauses. In part 3, I analyse the types of embedded sentences without subordinators, first with distinct subjects, then with identical subjects, and compare these to the different types of complex predicates where one of the two verbs loses its syntactic autonomy and undergoes more or less radical constraints and/or modifications. By focusing on embedded clauses within complex sentences, I exclude a priori circumstantial clauses as well as coordinated clauses (even if some particular cases will have to be discussed)¹ in order to favor a particular type of phrasal dependence for which the completives appear to serve as the prototypical model. Creissels (2006: II, 192) defines them as follows: “Combined with a word from the matrix sentence, the complements form a construction in which the subordinate ‘completes’ the word with which it is combined, i.e. it saturates the valence of this word as a complement in the form of a nominal or adpositional constituent would”. Complementary clauses correspond, most often, to object complements (direct or indirect) and regularly appear after transitive verbs (direct or not). After intransitive verbs, completives are normally excluded, but there are some (final or consequential) clauses that share important similarities with them, both in terms of phrasal dependency and syntactic complexity.

Remark 1: To make the examples easier to understand, the verb (or nominal predicate) on which the embedded proposition depends is in bold and the subordinator is underlined.

Remark 2: Concerning the examples in Ḥassāniyya (mostly borrowed from published literature), the transcription has been homogenised and some examples have been shortened. I am responsible, for the majority of the examples, for the shortening, the juxtapositional analysis as well as for the translation (except where the original documents were written in English).

¹ Circumstantial clauses are therefore outside my scope.

2 Embedded clauses with a subordinator

In addition to the two types of subordinate clauses mentioned above, namely complementary and final/consecutive clauses, it is also appropriate to add indirect interrogative clauses. I will thus distinguish three types of embedded clauses. The type of clause depends partly on the semantics of the predicate of the matrix sentence. In the corpora studied, completives are regularly dependent on a verb, which helps to distinguish them clearly from relative propositions. In spite of this, we will see that subordinator 'transfers' have not only occurred between the three main categories, but also, in some Arabic dialects, with relators.

2.1 Complementation

In Classical Arabic, several factors determine the occurrence and choice of a subordinator. While verbal semantics has a determining influence on the choice between syndetic vs. asyndetic constructions, the choice between *ʔan* and *ʔanna* is determined by whether the fact expressed in the completive is actual/realized or not (Fischer 1978). This does not seem to be the case in dialects. In her thesis, Lentin (1997: 374-416) shows the extent of variation in Middle Arabic writings –variation certainly due, at least in part, to dialectal influence. I will not go into detail here on the case of Classical Arabic.

The embedding of completives in Arabic dialects often involves a subordinator. The subordinator may be specific to certain varieties and/or occur only after certain verbs, but the most frequent subordinator is one of the variants of cl. *ʔan* and *ʔanna* – unless it is an inheritance from the old *ʔinna*.

2.1.1 *ʔn(n)/in(n)* in Ḥassāniyya

In Ḥassāniyya, the transcription of the subordinator changes but never contains a laryngeal. The vowel /a/ or /ə/ depends on the author –thus *ʔn(n)* or *ʔn(n)* in my transcription.² This completive is compatible with verbs (or expressions) of saying, thinking, knowing, appreciating, estimating and even asking, but we will see in 2.1.2 that the most usual subordinator for these is *ʔan*.

- (1) *u šäkku ʔn-hum lāhi yaḏʕlmû-ni*
 and think.PFV.3PL COMP-PR.3PL FUT commit_an_abuse.IPFV.3PL-PR.1SG
 '[...] and they thought they could deceive me' (Tauzin 1993: 38)

The pronoun *-hum* cannot be omitted in (3). When suffixed to *ʔn*, it is in co-reference with the personal index of both verbs, in the main clause and in the completive. However, if the two verbs do not have the same subject, co-reference is made to the subject of the completive, as the following two examples show:

- (2) *tlä ihâwâl ʔn-hä mä twaʕar ʔi-h [...]*
 start.PFV.3M.SG try.IPFV.3M.SG COMP-PR.3F.SG NEG make_difficult.IPFV.3F.SG on-PR.3M.SG
 'He didn't want her to give him any trouble [...]' (Tauzin 1993: 54)

- (3) *vähmät hiyyä ʔnn-u gäl l-hä ʔnšri ʔl-ʕayš [...]*
 understand.PFV.3F.SG she COMP-PR.3M.SG say.PFV.3M.SG to-PR.3F.SG spread.IMP.F.SG DEF-cake
 'She understood that he was saying to her: "spread the cake [...]"' (Tauzin 1993: 12)

The pronoun suffixed with *ʔn* (the *n* being always doubled before a vowel initial pronoun) can undertake the function of subject alone in propositions with a non-verbal predicate as in:

- (4) *iläyn twäsî-hä nâʕrav ʔnn-ak rāžal*
 when do.IPFV.2M.SG-PR.3F.SG know.IPFV.1.SG COMP-PR.2M.SG man
 'When you do, I'll know you're a man' (Tauzin 1993: 20)

The suffixed pronoun *-ak* is anaphoric. When the subject refers to a new item, the pronoun is usually absent, especially in non-verbal predicate clauses, as in the following examples:

- (5) *gäl ʔn ʔl-ʕäzlä ʕäzʕl-t-u*
 say.PFV.3M.SG COMP DEF-heifer heifer[of]-PR.3M.SG
 'he said the heifer was his heifer' (Tauzin 1993: 92)

- (6) *ʕarvi ʔn ʔr-ʕažžälä v aqmâd-hum*
 know.IMP.F.SG COMP DEF-men in sheaths[of]-PR.3PL
 'Know that the men are in their sheaths' (Tauzin 1993: 26)

A noun can be introduced in verbal predicate clauses. This is the case in (7) where the topicalized nominal *lə-gnāvîd* is referenced by the object clitic. It can be seen that the pronoun *-u* suffixed to *en(n)* remains co-referential with the personal index of the verb of the completive (here, it is also co-referential with the personal index of the main verb).

² In Tauzin's transcription (from whom I borrowed the examples cited), these two phonemes are not distinguished when /a/ is in a neutral context (not emphatic). Arbitrarily, I replace her *e* with a schwa. In my dictionary (Taine-Cheikh 1988: 34), however, I chose the variant /a/, perhaps due to the influence of Middle (mixed) Arabic where it is found in abundance.

- (7) *gāl* *l-hā* *ʔann-u* *lāhi* *išədd-hā [...]*
 say.PFV.3M.SG to-PR.3F.SG COMP-PR.3M.SG FUT marry.IPFV.3M.SG-PR.3F.SG
w ʔann-u *gāʕ* *lə-gnāvid* *mā* *yəbqī-hum*
 and COMP-PR.3M.SG certainly DEF-hedgehogs NEG like.IPFV.3M.SG-PR.3PL

‘he said he was going to marry her [...], that he no longer liked hedgehogs’ (Tauzin1993: 88)

The presence of the complementizer (or quotative) is particularly frequent after the verb ‘to say’, but example (3) shows that an asyndetic construction is also possible. Furthermore, it is not uncommon for *ʔn/ən* to be specified by a preposition (*ʕlā* ‘on’ or *bə* ‘with’) after *gāl* ‘to say’, hence the presence of the locutions *ʕlān/ʕlən* and *bān/bən* in:

- (8) *u gāl* *ʔlānn-u* *lāhi* *yətʕarʕas*
 and say.PFV.3M.SG COMP-PR.3M.SG FUT get_married.IPFV.3M.SG

‘And he said he was going to get married.’ (Tauzin1993: 24)

- (9) *gāl-* *l-i* *mūḥammad* *bənn* *hāda* *l* *wāsayt* *āna*
 say.PFV.3M.SG- to-PR.1SG Muhammad COMP this REL do.PFV.1SG I
ən-ha *tqašmiyya* *mā* *tətwāsa*
 COMP-PR.3F.SG stupidity NEG be_done.IPFV.3F.SG

‘M[uhammad] said to me that what I had done was a stupidity that (just) wasn’t done’ (Heath 2003:106)

In the last example, it can be seen that *bənn* is repeated in the form *ən*, with the pronoun suffixed to *ən* taking the feminine gender of *tqašmiyya* (one would find the masculine *-u* if *vsəyyid* ‘idiocy’ replaced *tqašmiyya*). Doubling is frequent in the presence of a topicalized phrase, and is quasi necessary when the expression of the new item is a bit long, as here.

A complementizer can be found after request verbs, as in (10), but this is an unusual case and *ʔnn-ək* could be omitted without any change in meaning.

- (10) *ʕlābt-ək* *l-ʕām* *l-əwwäl* *ʔnn-ək* *txallī-ni*
 ask.PFV.1SG-PR.2F.SG DEF-year DEF-last COMP-PR.2F.SG agree.IPFV.2SG-PR.1SG
nšədd-ək
 marry.IPFV.1SG-PR.1SG

‘Well, last year I asked you to agree to marry me [...].’ (Tauzin1993: 28)

Apart from example (3) where the verb of the complementive clause (*gāl*) is in the perfective form, the verbs are all in the imperfective form –with or without a future tense morpheme. It should be noted that, unlike many other Arabic varieties, Hassāniyya does not mark a difference between the modal imperfective (the subjunctive) and the indicative imperfective.

2.1.2 *ʔān(n)/in(n)* and their variants in other languages

While Beaussier’s dictionary (1958: 20) provides the forms *ʔan* and *ʔanna-* ‘that, so that’ with a vowel *a*, Marçais (1977: 232) considers that *ən(n)*, sometimes *ənnā*, is in use in isolated form only in the Bedouin languages of the Maghreb.³ The absence of this complementizer in the dictionaries of Moroccan Arabic (Colin 1993-1997) and South Tunisian Marazig (Boris 1958) confirms its very limited use, apart from expressions borrowed from classical Arabic (Heath 2002: 493-4, Marçais and Guiga 1958-61: 154). However, examples can be found in more recent studies –for example, Ritt-Benmimoun (2014: 193) gives two examples (in the form *ann-*, with suffix) for the Bedouin dialect of the Douz region and Pereira (2010: 192) provides several examples (in the form *ʔanna* or *ʔann-*) for the Libyan dialect of Tripoli–, without this complementizer ever being given as the only one in use, or even the main equivalent of ‘that’ (see under 2.1.3). In Eastern languages, however, the vocalization in *i/ə* seems to be widespread and goes hand in hand with the affirmation of the non-obligatory use of the complementizer in many languages. In the case of Eastern Arabia as described by Holes, the optional character of *in(n)* is qualified by the semantics of the verb and the nature of the predicate of the complete clause:

It is not possible to give any hard statistics as to the proportion of sentences in the data base which had the complementiser *in(n)* compared with those which did not have it in cases where they could have done, but at a rough estimate there must have been 40 to 50 examples without a complementiser to every one with. I give here some typical examples where *in(n)* did occur. A number of factors may possibly have been influential in this choice of structure. First, semantics: verbs of saying, thinking and knowing, including speech-acts like consenting and swearing account for most of the examples; by contrast, modal verbs/expressions, and verbs expressing wants, wishes, hopes, fears, which are close in their semantic values to modal verbs, hardly ever occurred with a complementiser.

An additional factor favouring a complementiser may be syntactic: equational noun clauses [...]—seemed to favour the use of *in(n)*. (Holes 2016: 375-6).

³ Marçais (1977: 232) reports the use of *bayn* and *bīn* (*ən* preceded by the preposition *bi*) in Moroccan and Oranian after verbs and phrases expressing a somewhat solemn declaration such as ‘swear’. For Heath (2002: 494), *bayn* and *bin* are among the “quotative (or factive) ‘that’ complementizers” attested quite widely in various Moroccan (usually Muslim) languages.

A pronoun appears or not after *in(n)* (sometimes *anna*) in Holes' examples. Its presence and agreement generally seem to obey rules similar to those observed in Ḥassāniyya, as in (11) and (12):

(11) *agūl* *li-k* *in-ha* *wirṭa!*
say.IPFV.1SG to-PR.2M.SG COMP-PR.3F.SG problem
'I tell you this is a real problem!' (Holes 2016: 376)

(12) *ḏannat* *inn-i* *il-yōm* *ana* *ḡfi,* *mā* *ʿind-i* *šay*
think.PFV.3F.SG COMP-PR.1SG today me estrangement NEG at-PR.1SG something
'She thought that I was useless, that I had nothing to offer' (Holes 2016: 376)

Sometimes, however, the present suffix pronoun is not in co-reference with the personal index of the verb, *-ah* then appearing as a possible frozen form:

(13) *rāḏi* *ʿalē-š* *inn-ah* *tīḡi?*
agree.PTCP.M.SG on-PR.2F.SG COMP-PR.3M.SG come.IPFV.2F.SG
'Does he agree that you may come?' (Holes 2016: 377)

(14) *ṭallag* *ʿalē-hum* *inn-ah* *yihawlūn* *killā-hum*
swear.PFV.3M.SG on-PR.3PL COMP-PR.3M.SG divorce_one's_wife.IPFV.3PL each[of]-PR.3PL
mā *ʿalē-hum* *libs*
NEG on-PR.3PL cloth
'He swore to them he would divorce his wife unless they dived without any (protective) clothing' (Holes 2016: 377)

The morphosyntax of the pronoun however varies more in Eastern languages than in Ḥassāniyya. Indeed, the suffix pronoun is in coreference with the personal index of the verb in an example very similar to (14) (so *in-hum* instead *inn-ah*). It is even absent in another example.⁴

Regarding Cairo Arabic, where both constructions –asyndetic or syndetic with *inn-* are attested for the completive, Woidich (2006: 391) points out the factors that make the use of the complementizer mandatory: the presence of a preposition such as *ʿala* in (15) and the fact that the embedded proposition is the subject of the main predicate as in (16).⁵

(15) *yilimmu* *š-šurṭa* *wi* *yṭallaʿū-k* *ʿala-ʿinn-ak*
call.IPFV.3PL DEF-police and drag_out.IPFV.3PL-PR.2SG on-COMP-PR.2M.SG
wiʔiʔti *fī-ha*
fall.PFV.2M.SG in-PR.3F.SG
'they call the police and drag you out, assuming you fell in' (Woidich 2006: 391)

(16) *ana* *mithayyaʔ-* *l-i* *inna-ha* *tiʔraf-ik*
I seem.PTCP.M.SG to-PR.1SG COMP-PR.3F.SG know.IPFV.3F.SG-PR.2F.SG
'it seems to me that she knows you' (Woidich 2006: 391)

On the other hand, he points out that the presence of *inn* is more frequent after certain verbs when they take on a factual, statement meaning, such as *nisi* in (17) or *ballaḡ* in (18).

(17) *nisīt* *inn* *iḥna* *šaʿayda*
forget.PFV.2SG COMP we Upper_Egyptians
'you have forgotten that we are Upper Egyptians' (Woidich 2006: 391)

(18) *ballaḡ-ni* *inn-i* *kasabt* *il-ʔaḏiyya*
inform.PFV.3M.SG-PR.1SG COMP-PR.1SG win-PFV.1SG DEF-case
'he informed me that I had won the case' (Woidich 2006: 391)

On the other hand, Bloch (1965:49-50) considers that the distinction between the declarative (*konstatierend-*) and the modal (*qualifizierend-*), is made in Damascus by the use of the prefix *b-* in front of forms in *y-*, and not by the use of the complementizer. Giving examples for Jerusalem borrowed from Piamenta (1965: 12), he points out that the presence of *ʔinni* is optional in either case:

(19) *ʔraft* *(ʔinn-i)* *ʔalāqī-k*
know.PFV.1SG (COMP-PR.1SG) find.IPFV.1SG-PR.2SG
'I managed to find you' (Bloch 1965: 50)

(20) *ʔraft* *(ʔinn-i)* *b-alāqī-k*
know.PFV.1SG (COMP-PR.1SG) IND-find.IPFV.1SG-PR.2SG
'I knew I would find you' (Bloch 1965: 50)

In contrast to this tendency to delete *inn* (to which I will return in section 3.2.1), there is a tendency in Lebanese Arabic to generalize *ʔanno* as a discourse tag (Germanos 2009). When used as a complementizer, its presence is only obligatory in

⁴ An example almost identical to (16) appears in his dictionary as TLQ and the complementizer is noted as *ʔan*, without a suffix (Holes 2001: 34).

⁵ This finding is present in several works, but Cowell (2005: 451) gives examples with and without subordinators for Syrian Arabic in this case.

certain cases (comparable to Cairo Arabic), but it is notable that the form *ʔanno* has become frozen, with the suffix *o* in PR.3M.SG nonetheless present.⁶

2.1.3 Other complementizers

In Ḥassāniyya, the most frequent complementizer is *ʕan(n)*. Its behaviour with the suffix pronoun is identical to both the subordinator *ən(n)* and the preposition *ʕan*. The prepositional *ʕan* is an ablative that expresses detachment, remoteness, provenance and is constructed, not only with a suffix, but also with a nominal –an infrequent feature that Ḥassāniyya shares with only a few southern Maghrebi varieties (Procházka 1993: 71). The *ʕan* of subjunction is used throughout the Ḥassāniyya area and is given as the usual complementizer both by Cohen (1963: 225) for Gebla (in southwestern Mauritania) and by Heath (2004: 324) for Azawad (in Mali). According to the latter, *ʕan < ənn* (by mutation), but it can also be considered an extension of the uses of the preposition *ʕan*, especially following the pseudo-verb *ʕand-PR*, which, followed by *ʕan*, takes on the meaning of ‘to think’. See example (21), to be compared with (22), where *ʕan* is a subordinator.

(21) *ʕand-i* *ʕann-u*
at-PR.1SG from-PR.3M.SG
‘I think so’

(22) *ʕand-i* *ʕann-i* *ngədd*
at-PR.1SG COMP-PR.1SG can.IPFV.1SG
‘I think I can’

(Cohen 1963: 225)

However, the mutation *ʔ > ʕ* (the *ʔanʔana*) is not improbable, especially since some speakers in eastern Mauritania (Bassiknou region) tend to add a pharyngeal at the beginning of a word, especially before an *a*. Such a mutation has moreover been evoked (Holes 2016: 377 note 176) to explain the appearance of *ʕan* in Bahraini Arabic as a complementizer in some rare examples such as:

(23) *hādi* *l-wakʕa* *mā* *yinʕirif* *ʕan-ha* *tšibb*
DEM DEF-calamity NEG know.PASS.IPFV.3M.SG COMP-PR.3F.SG start.IPFV.3F.SG
bi *l-lēl* *aw* *bi* *n-nahār*
in DEF-night or in DEF-day

‘This calamity, it isn’t known whether it will start at night or in the day time’ (Holes 2016: 377)

Holes furthermore specifies the conjunctive locution *ʕan lā* ‘so that not’ from Bahraini Arabic: “an alternative explanation could be that it is a combination of the preposition *ʕan*, which often has the sense of ‘avoiding’ and *lā*” (2016: 376 note 174).

The example given for *ʕan lā* has as its main verb a verb of fear:

(24) *xayfīn* *ʕala* *awlād-hum* *ʕan lā* *yadrub* *ʕalē-hum* *il-fāliḡ*
fear.PTCP.M.PL for children[of]-PR.3PL lest strike.IPFV.3M.SG on-PR.3PL DEF-polio
‘...fearing for their children lest they be struck down by polio’ (Holes 2016: 376)

The semantics of the verb sheds light on the presence of *lā* (and indirectly that of *ʕan*).⁷ Indeed, this particular use of *lā* is associated with verbs of fear or prohibition after which *lā* is no longer a negation particle. It corresponds to what Forest (1993: 110) describes as a process of restoration of the “empathic continuum”, after the so-called apotropaic verbs which create an “emphatic break”. This phenomenon, better known as “expletive negation”, is attested in many languages of the world (see the *ne* in French). In Arabic, it concerns mainly –but not only– the negation *lā* (see Taine-Cheikh 2000: 68-72). In Ḥassāniyya, this *lā* is hardly used at all except after the idea of fear, whether the verb ‘fear’ is present as in (25) or implied as in (26):⁸

(25) *huwwā* *hārəb* *xāyəv* *lā* *isānti* *l-harəb*
he flee.PTCP.M.SG fear.PTCP.M.SG COMP start.IPFV.3M.SG DEF-war
‘he flees fearing that the war will start’ (Taine-Cheikh 2000: 69)

(26) *hārəb* *lā* *tīṭṭh* *ʕiy-ye* *d-dār*
flee.PTCP.M.SG COMP fall.IPFV.3F.SG on-PR.1SG DEF-house
‘I flee for fear that the house will fall on me.’ (Taine-Cheikh 2000: 69)

In the Middle East, this *lā* is attested for instance in Syrian (Cowell 2005: 352). For Cairo, Woidich gives examples with *la-*, but also with *aḥsan* or *lahsan* (Woidich 2006: 381)⁹ and it is rather *ta* that Feghali (1938: 423) notes in Lebanon after fear verbs:

(27) *xāfet* *ta* *yéqtl-u*
fear.PFV.3F.SG COMP kill.IPFV.3M.SG-PR3M.SG
‘she feared he would kill her’

(Feghali 1938: 424)

⁶ This phenomenon is found elsewhere in the Near East and Classical Arabic shows frozen *ʔannahu* (Jérôme Lentin, *personal communication*).

⁷ The presence of a preposition before the expletive *lā* is probably not exceptional, but prepositions other than *ʕan* are probably more frequent –I am thinking, for instance, of the preposition *li* in the form *lylā* found in Middle Arabic (Lentin 1997: 404 ff). See also *li > la* in Lebanon (Feghali 1938: 358, 423).

⁸ The normal (non expletive) negation in (28) would be *mā*.

⁹ One finds *aḥsan* followed by *yikūn* in wish exclamations with the meaning ‘hoffentlich... nicht’ = ‘hopefully... not!’ (Woidich 2006: 381).

For Feghali, however, this *ta* –derived from the classical *hattā* ‘until’– has many other uses, including expressing a limit in time (‘until’) and the consequence of an intended or unintended action (I will return to this in section 2.2.1). It can also introduce an optative or volitional complementive clause with a verb in the imperfective alone (without a *b* particle). Feghali speaks in this case of an “attenuated subjunctive, a kind of future tense with an idea of convenience”, as in (28) and (29), after the pseudo-verb *bédd*-PR.

(28) *b-etqól-* *l-ak* *el-māra* *ta* *tbi^c-ne* *raʔl* *zait*
 IND-say.PFV.1SG to-PR.2M.SG DEF-women COMP give.IPFV.2M.SG-PR.1PL ratl[of] oil
 ‘my wife (= the...) makes you say to give me a ratl of oil’ (Feghali 1938: 422)

(29) *bédd-ak* *mén-ne* *ta* *qól-* *l-ak* *ed-dégre*
 want-PR.2M.SG from-PR.1PL COMP say.IPFV.1SG to-PR.2M.SG DEF-truth
 ‘do you want me to tell you the truth?’ (=that I speak to you frankly) (Feghali 1938: 422)

Among the non-specialized complementizers, we must mention the case of functionals which were originally relators.

Woidich gives a series of examples where *illi* replaces *inn* when the predicate of the main proposition (often in the 1st person) expresses emotion, as in:

(30) *ana* *mabšūʔ* *illi* *mā-* *gā-š*
 I be_glad.PTCP.M.SG COMP NEG₁ come.PFV.3M.SG-NEG₂
 ‘I’m glad he didn’t come.’ (Woidich 2006: 387)

The two examples given by Pereira (2010: 392) for Libyan Arabic present the same type of predicate with emotional content. Brustad (2000: 104-106), who compares the uses of *illi* as a complementizer in several languages, comes to a similar conclusion and states: “The limited yet strikingly parallel contexts in which /illi/ occurs in Morocco, Egypt, and Syria are worth noting. [...] The ‘relativized’ /illi/ clause is linked to that emotional state in that it contains the underlying reason or cause of that state.”

In the Tunisian Arabic of Takroûna, *elli* introduces completives expressing either the cause or the effect. It also introduces completives expressing the subject or, as in (31), the object (Marçais and Guiga 1958-1961: 126-7).

(31) *e^clām* *u-* *hoq^q* *elli* *ha-l-k^elām* *šâir*
 know.IMP.M.SG and know_well.IMP.M.SG COMP DEM-DEF-speech come_true.PTCP.M.SG
 ‘know and know well that what I say is real’ (Marçais and Guiga 1958-1961: 127)

balli is attested there, but did not replace the conjunctive uses of *elli* as seems to have happened elsewhere. Indeed *balli* ~ *blli* (where the preposition *bi* precedes *elli*, as in *bayn* and *bin*, see note 3) is generally, in the Maghreb, of a much less constrained use than *elli* alone. Marçais (1977: 232) describes it as common in urban and rural Algeria. Heath reports frequent attestations in Morocco, alongside *bayn* and *bin*, and sometimes *bāš*.

baš (where the preposition *bi* is also recognized) is not primarily used as a complementizer (see section 2.2.1), but is found in Tunisia after verbs of intention in the speech of the Jews of Tunis (Cohen 1975: 258) and after verbs of request and fear in Takroûna (Marçais and Guiga 1958-1961: 215). In Morocco, *baš* was notably noted by Colin (1920) in the Taza speech:

(32) *mā* *ʿand-ī-š* *l-ḥabar* *bāš* *ʿaʔēt-* *l-o*
 NEG₁ at-PR.1SG-NEG₂ DEF-new COMP give.PFV.1SG to-PR.3M.SG
 ‘I don’t know that you gave it to him.’ (Colin 1920: 84)

Without claiming to have surveyed all the complementizers, I will end with the specific case of *gāle/gāl* which is the product of the areal grammaticalization of the verb *gāle/gāl* ‘say’ used in various Arabic-based pidgins and creoles –notably in the Arabic pidgin-creole of Juba in South Sudan (Miller 2000, 2001; Manfredi 2017: 142-3)–, as well as in the non-creole Sudanese language of the Baggara (Manfredi 2010: 182-3).¹⁰ In the Juba vernacular the use of *gāle/gāl* as a complementizer seems to be very frequent after declarative verbs, especially *kelem* ‘to speak’, and is optional after verbs of perception, cognition and action (Miller 2000: 215). While it is excluded after the verb *gale*,¹¹ Manfredi gives as possible –and even frequent at the beginning of narrative texts– the sequence *gāl gāl* among the Baggara. While this raises the question of serial verbs (see section 3.2.3), the grammaticalization of ‘say’ is more evident in examples like (33) where the two verbs share neither the same personal index nor the same aspectuo-temporal markers (*gāl* has kept the form of the ACC.M.SG form which is that of the complementizer).

(33) *an-nās* *b-ugūlu* *gāl* *al-xawāji* *ja*
 DEF-people IND-say.IPFV.3M.PL COMP DEF-western.M.SG come.PFV.3M.SG
 ‘The people say that the western man arrived’ (Manfredi 2010: 184)

¹⁰ “There are no doubts that *gāl* introducing sentential argument is due to the African substratum influencing Sudanic Arabic varieties. Notwithstanding, it is not equally clear if Juba Arabic developed its complementizer *gale* independently from other Sudanic dialects.” (Manfredi 2017: 184).

¹¹ After the verb ‘say’, the completive is introduced directly (Miller 2000: 215), except in acrolectal varieties where the subordinator *inu* borrowed from Sudanese Arabic **innu* can be used (Manfredi 2017: 144).

2.2 Propositions of purpose and result

It is frequent in Arabic for a same subordinator to introduce a final or a consequence proposition, or even a simple wish proposition. We find here some of the complementizers seen before, especially with verbs of will or intention. Among these subordinators, some are very common across the Arabic-speaking world, others have a more regional use. I will start with the first ones.

2.2.1 *bāš* and its variants

The etymology of *bāš* is *bi* followed by the interrogative pronoun *āš*. *bāš* (or a variant) is widespread in the Arabic dialects of the Maghreb (it is also a common borrowing in the Berber dialects). It introduces subordinates of purpose and consequence, where the verb is regularly in the imperfective. In Ḥassāniyya it can take the form *bāš* (see (34)) or *bbāš* (see (35)).

(34) *w- dxał* *wust-hum* *bāš* *ɣɾayɟu* *ʕan-hum* *s-sbaʕ*^ʕ
and go_into.PFV.3M.SG the_middle[of]-PR.3M.PL to keep_away.IPFV.3M.PL from-PR.3M.PL DEF-lion
'[...] and went into the middle of them, to keep the lion away from him' (Heath 2003: 114)

(35) *gīs-u* *bbāš* *igūl-* *l-ak* *ða* *lli* *idawɾ*
go_see.IMP.SG-PR.3M.SG so_that say.IPFV.3M.SG to-PR.2M.SG this REL want.IPFV.3M.SG
'go see him so he can tell you what he wants' (Ould Mohamed Baba 2008: 74)

bāš/baš or *bēš* is found as far as Libya, in Muslim Tripoli (see (36))¹² as well as in Jewish Tripoli (see (37)). For Bengasi, Panetta (1943: 319) gives the form *bēš/bēs* (that has become unusual), and for Maltese Aquilina (1987: 121) gives *biex*.

(36) *že* *li* *lībya* *bāš* *ɣətʕalləm* *l-ʕərbi* *l-lībi*
come.PFV.3M.SG to Libya to learn.IPFV.3M.SG DEF-Arabic DEF-Libyan
'He came to Libya to learn Libyan Arabic' (Pereira 2010: 394-5)

(37) *kəl* *məɾɾa* *džia* *baš* *čara-a*
every time come.IPFV.3F.SG to see.IPFV.3F.SG-PR.3F.SG
'every time she comes to see her' (Yoda 2005: 277)

(38) *li* *bʕəč-kəm* *bʕəč-kəm* *baš* *čmuču*
REL send.PFV.3M.SG-PR.2PL send.PFV.3M.SG-PR.2PL in_order_that die.IPFV.2PL
'he who sent you, he sent you in order that you die' (Yoda 2005: 277)

The most frequent examples are with identical subjects, but there are examples, at least in Ḥassāniyya and Jewish Tripoli (see (34) and (38)), where the subject of the subordinate differs from that of the main clause.

2.2.2 *ʕašān* and its variants

ʕašān is attested quite widely outside the Maghreb, in various forms *ʕašan/ašān/šān/ʕalašān*, both as a preposition (especially in the sense of 'for') and to introduce final clauses. As a subordinator, its uses are sometimes extended to express a cause –thus in the Chadian speech of Abbéché (Roth 1979: 201) where the uses of (*a*)*šān/fī šān* seem particularly extensive alongside uses in finals or for consequences.¹³

In Cairo, *ʕašān* (alone or followed by *xāṭir*) is one of the subordinators used for final clauses:

(39) *b-astaʕiddi* *ʕašān* *aʕūm*
IND-prepare.IPFV.1SG to get_up.IPFV.1SG
'I prepare to get up' (Woidich 2006: 379)

But it can also, especially after a question, be interpreted as a consequence as in:

(40) *ana ʕamalt-* *il-ak* *ʔē* *ʕašān* *tišawwaḥ* *l-i*
I do.PFV.1SG to-PR.2M.SG what so_that make_gesture.IPFV.2M.SG at-PR.1SG
'what did I do to you that made you gesture at me like that?' (Woidich 2006: 380)

In Juba Arabic, *ašān* introduces only final clauses, but Manfredi notes the presence of the modality *kedé* after *ašān* when the subjects are different:¹⁴ this is the case in (41), whereas in (42), where the subject of the subordinate is identical to that of the main, *kedé* is absent:

(41) *lázim* *úmon* *bī-wónusu* *le-nas* *ašān* *kedé* *nas* *bi-fāhimu*
need they IRR-talk to-people so MOD people IRR- understand
'They need to talk to people so people can understand' (Manfredi 2017: 138)

¹² Pereira (2010: 395) gives a variant of example (38) beginning with *bāš*. It is quite rare for the subordinate clause to come first in this way.

¹³ Roth (1979: 201) gives examples of causal subjunction and even an example where *ašān* introduces a completive after *irfā* 'to know'.

¹⁴ Manfredi (2017: 139) states that if the subject has already been mentioned, it is modified by the determiner *de* (and *kedé* is not present).

- (42) *ána ázu serír ašán bi-nímu fôgo*
 I want bed to IRR-sleep in.ANAPH
 ‘I want a bed to sleep in.’ (Manfredi 2017: 138)

This marking is an innovation specific to Juba Arabic, as Manfredi points out, but in other languages the identical or different character of the subjects can also play a certain role. Thus in Emirati Arabic, the presence of *‘ašān* is optional with different subjects and mandatory when the subjects are identical, as in (43).¹⁵

- (43) *ʔálaʔna ʔašān nāxəd bīza*
 go_out.PFV.1PL in_order-to buy.IPFV.1PL pizza
 ‘We went out to buy a pizza.’ (Leung and al. 2021: 371)

2.2.3 *hatta* and *ta*

The classical Arabic *hattā*, used as a preposition with the meaning ‘until’ and a conjunction with the meaning ‘in order that, so that’, is often used to introduce a final or consecutive clause, in this form or (with apheresis) in the form *ta*, in Middle Eastern varieties.

hatta (and especially *hatta in*) is the usual conjunction in the Emirates among the Bahraini:

- (44) *axamr-uh u askī-h hatta in*
 compost.IPFV.1SG-PR.3M.SG and water.IPFV.1SG-PR.3M.SG in_order_that
il-milūha tinzil fi l-arḍ
 DEF-salinity diminish.IPFV.3F.SG in DEF-soil
 ‘I compost it and water it, in order that the salinity in the soil will be reduced’ (Holes 2016: 394)

Cowell gives, for Syrian Arabic, the variants *ta*, *hatta* and *lahatta* (as well as *la* alone) with the sense of ‘(in order) to, so that’, in propositions which he calls “optative clauses” and which can follow any main proposition.

- (45) *kallaʔ-ni dabbār- l-o bēt hatta yaskon fi*
 ask.PFV.3M.SG-PR.1SG find.IPFV.1SG to-PR.3M.SG house in_order_to live.IPFV.3M.SG in.PR.3M.SG
 ‘He’s asked me to find him a house to live in’ (Cowell 2005: 353)

- (46) *ʔaḍḍal lahatta ʔarḏī-k hall-i ʔand-i*
 come_in.IMP.M.SG so_that show.IPFV.1SG-PR.2M.SG what-PR.1SG at-PR.1SG
 ‘Come in, so that I may show you what I have’ (Cowell 2005: 353)

We have seen (section 2.1.3) Feghali’s examples where *ta* introduces completives, but *ta* is also very regularly used in Lebanon as the subordinator of final clauses (Feghali specifies that the form *hatta* is not used).

- (47) *nezlu ʔa-l-mḥaṭṭa ta yāxdu t-rân*
 go_off.PFV.3PL at-DEF-station with_the_intention_of take.IPFV.3PL DEF-train
 ‘they went down (= went) at the station with the intention of taking the train’ (Feghali 1938: 420)

In the Arabic variety of Mardin, in south-eastern Turkey, *ta* also introduces goal subordinated clauses, in free variation with *lə-xāṭar* (Grigore 2007: 312).

2.2.4 Other subordinators

In addition to the variants of the three subordinators presented above, other subordinators express purpose and/or consequence. Thus in Ḥassāniyya one finds *iyyāk*, an invariable form which is, moreover, the only subordinator given by Cohen (1963: 226) for this use.

- (48) *mšū iyyāk yāžmaʔ lə-ḥtāb*
 leave.PFV.3M.SG to collect.IPFV.3M.SG DEF-wood
 ‘he left to (intending to) collect wood’ (Taine-Cheikh 2019: 282)

While the origin of *iyyāk* is probably optative (Woidich 2006: 369; Taine-Cheikh 2019: 281), its use in finals has been noted for a few rare speakers: not only in Ḥassāniyya, but also in Cairo (see (50)) and, in the form *yāk* or *yākšī*, among the Moroccan Bedouins of the Zaër (Loubignac 1952: 589, 220/335).

- (49) *ʔumt atmašša fi l-ʔōḍa iyyāk yigī- l-i nōm*
 begin.PFV.1SG pace_up_and_down.IPFV.1SG in DEF-room so_that come.IPFV.3M.SG to-PR.1SG sleep
 ‘I began to pace up and down the room so that sleep might come’ (Woidich 2006: 369)

¹⁵ *‘ašān* ‘in order to’ “is always used to form a control structure (known as adjunct control) [...]. In such cases, the subject of the control clause (e.g. subject pronoun) is not overtly expressed.” (Leung and al. 2021: 371).

Besides *(b)bāš* and *iyyāk*, one also finds in Ḥassāniyya (*yā*)*kān* which can express a value of consecution, even if this is not its most frequent meaning (Taine-Cheikh 2014: 433).

(50) <i>ūftaḥ</i>	<i>əl-bāb</i>	<i>kān</i>	<i>yəmši</i>	<i>əd-daxxān</i>
open.IMP.M.SG	DEF-door	so	go_away.IPFV.3M.SG	DEF-smoke

‘Open the door to let the smoke go away!’

(Taine-Cheikh 2014: 433)

The only equivalent of this subordinator is found in Shukriyya Arabic, where *kān/akān* can take on the values of chaining and consecution (Reichmuth 1983: 305). In Eastern Arabia, several subordinators are also in use. In addition to the regular uses of *hatta* (*in*) and the negative subordinator *ʿan lā* ‘lest, so that not’ seen earlier, Holes points to the rather infrequent use of *ʿala šān/ʿašān* ‘so that’ and *ḥagg/ḥakk* ‘so that, in order to’ (“whose main use is as a preposition meaning ‘to, towards, for’”).

(51) <i>mā</i>	<i>ʿində-na</i>	<i>waqt</i>	<i>ḥagg</i>	<i>ənrawwī-k</i>
NEG	at-PR.1PL	time	in_order_to	show.IPFV.1PL-PR.2SG

‘We haven’t got enough time in order to show you’

(Holes 2016: 394)

In his study of Cairo, Woidich (2006: 379-380) distinguishes finals from consecutives, and while *ʿašān* (seen above) covers both uses, other subordinators seem to be more specialised: *lagl* for finals and *lidaragit inn* ‘so sehr, dass’ for consecutives. As for *lamma*, it is used in both but only introduces finals after an imperative (in which case its variant *amma* is used), as in:

(52) <i>irfaʿ-ha</i>	<i>šwayya</i>	<i>lamma</i>	<i>ašuf-ha</i>
lift_up-IMP.SG-PR.3F.SG	a_little	so_that	see.IPFV.1SG-PR.3F.SG

‘lift her up a little so I can see her!’

(Woidich 2006: 379)

2.3 Embedded questions

Indirect interrogatives depend on verbs that express interrogations more or less directly. They can be global or partial.

2.3.1 Yes-no questions

When the question applies to the embedded proposition as a whole, the embedding can be asyndetic (see Holes 2001: 385), but it is often effected using a specialized subordinator.

In his grammar of Cairo Arabic, Woidich studies interrogatives in detail. The main subordinators of indirect interrogatives (2006: 366), *iza* and *in*, are borrowed from the expression of condition and are, as in conditionals, always followed by *kān*, the verb ‘to be’ in the past tense. But he also observes the use, in addition to the complementizer *inn*, of the two particles used in global questions of direct interrogation: *hal* and *ya tara*.

Feghali’s considerations (1928: 226, note and 271) on the Lebanese languages are largely along the same lines. While *ya tara* is not mentioned and *hal* is given as an unusual classical particle, *ʿen* (or *ʿeza*) is found followed by *kān*. Feghali, however, gives examples where *kān* appears alone and can bear a suffix pronoun.

This is precisely the configuration found in Ḥassāniyya (Taine-Cheikh 2014) where (*yā*)*kān* introduces, optionally, global questions of direct interrogation and, obligatorily, those of indirect interrogation. The frequent and sometimes mandatory presence of a subject suffix pronoun is an indication that it is no longer the temporal auxiliary of verbal origin, but a subordinator resulting from its grammaticalization. In this case, there is also a link between the interrogative particle and the conditional, since *kān* can be used in both cases, although *ilā* is generally preferred for conditionals.

2.3.2 Wh-questions

For partial questions, the wh-words are the same, whether the question is direct or indirect. When they concern a particular element (wh-questions), they are introduced by an interrogative pronoun (‘who?’, ‘what?’), an interrogative adverb (‘how?’, ‘with what?’, ‘where?’...) or a noun phrase (prepositional or not) with an interrogative adjective (‘which one?’) – see for example Cowell (2005: 566-577) for Syrian Arabic.

The homonymy of some subordinators with wh-words has been noted. It is clear for *bāš* ‘so that, in order that’ and *b-āš* ‘with what’ (interrogative and relative) – composed, as we have seen, of two elements: the preposition *b(i)* and the interrogative pronoun (*ā*)*š*. A comparable origin has been proposed by Heath (2002: 494) for *bayn* ‘that’ from *b(i)* and the interrogative place adverb *ayn* – as an alternative to *b(i)* and the complementizer.

2.4 Partial conclusion

In the study of circumstantial clauses (as well as of *ʿašān* and *hatta* here), it has been noted that they can be introduced by the same subordinators. It has also been noted quite often (and here with *ʿan*, *hatta*, *ḥagg*, presumably (*i*)*lā* or (*ʿa*)*la*), that

in which case the pronoun is suffixed to the preposition, as after *gāl* in (54). Finally, it can be a definite nominal, as in (55),¹⁶ and it is then necessarily placed between the two verbs. The verb of the completive clause is always in the imperfective, except in the case of perception verbs. Some verbs (like ‘to run’) are also followed by an imperfective and a participle.¹⁷ One can even have a verb in the perfectivized form (e.g. *gannā* in (56)) which would place the fact in the past). Example (57) therefore contains a completive clause:

- (57) *ānā allā šəvt-ak əntā kšart mən-hā waḥdā*
 I just see.PFV.1SG-PR.2M.SG you cut.PFV.1SG from-PR.3F.SG one.F
 ‘I saw you cut one’ (Tauzin 1993: 50)

In Hassāniyya, various constraints bear on the construction, but embedding is essentially marked by intonation. Indeed the embedded proposition could exist independently of the main clause, with the personal index as the only subject (except for the specific case of participles after a perception verb). This is not the case in all languages, as the imperfective alone is often the subjunctive mode, distinct from the indicative mode.

We saw with Bloch (section 2.1.2) that where verbal modes were distinguished, the use of the complementizer could become secondary, the presence vs. absence of the indicative particle (*b* in his examples) being sufficient to differentiate between the expression of the statement and the modal verb (wish, etc.). This analysis seems to apply to Moroccan Arabic. Indeed, the complementizer *bəlli* is not mandatory if the grammatical subject of the subordinate is expressed by a pronoun in the main clause (Caubet 1993: I, 232). Note in (58) the presence of the particle *ka-* after the declarative verb, whereas the most numerous examples follow a modal verb and have no particle:

- (58) *ka-nʿrəf-u ka-yfhəm ər-rifīya*
 IND-know.IPFV.1SG-PR.3M.SG IND-understand.IPFV.3M.SG DEF-Rifian_Berber
 ‘I know he understands Rifian Berber.’ (Caubet 1993: I, 232)

However, the opposition between syndetic vs. asyndetic constructions depending on the semantics of the main verb has not disappeared in all the languages, even among those which mark the declarative mode.

Thus, Eastern Arabian speakers have retained the difference (Holes 2016: 378 ff.). Many verbs –of saying, ordering, ordaining (see (59)), vowing, truth-telling...; wanting (see (60)), liking; hoping, expecting, fearing; agreeing, consenting, daring; allowing (see (61)), letting, causing, forcing– are constructed without a complementizer (and usually without an indicative particle). The presence between the two verbs of a subject nominal of V1 in (59) and a direct object nominal of V1 in (61) is noteworthy.

- (59) *amarō-na l-ḥukūma nidfīn-ha*
 order.PFV.3PL-PR.1PL DEF-government block_up.IPFV.1PL-PR.3F.SG
 ‘The government ordered us to block it (=a well) up’ (Holes 2016: 378)
- (60) *abgī-h yirūh*
 want.PFV.1SG-PR.3M.SG go.IPFV.3M.SG
 ‘I want him to go’ (Holes 2016: 378)
- (61) *itxallīn bint-ič itxalliš madrasa?*
 let.IPFV.2F.SG daughter-PR.2F.SG complete.IPFV.3F.SG school
 ‘Are you going to let your daughter complete her schooling?’ (Holes 2016: 382)

Similar examples without a complementizer (and usually without an indicative particle) can be found elsewhere (see in particular Woidich 2006: 391 and Pereira 2010: 391), but often in lesser numbers.

Manfredi notes that in declarative completives in Juba Arabic, there is sometimes an asyndetic construction after the verb *gāle* used with its lexical meaning of ‘to say’:

- (62) *úo gāle úmon gi-rówa amarát*
 he say they NPONC-go Amarat
 ‘He said they are going to Amarat neighborhood.’ (Manfredi 2017: 144)

He also notes, in volitional completives, the presence of the modality *kedé* as in (63):

- (63) *ána der ita kedé rówa ma-kál táki fī-kartúm*
 I want you MOD go with-uncle POSS.2SG in-Khartoum
 ‘I want you to go with your uncle to Khartoum.’ (Manfredi 2017: 142)

¹⁶ For our informant, the following example is ungrammatical if the article is not added before *kārš*:

- (i) *lāhi tšowvi [l-]kārš tərgəš, wə mšārīn-hā yəfʿgsu u*
 FUT see.IPFV.2F.SG [DEF]-paunch dance.IPFV.3F.SG and intestines[of]-PR.3F.SG dance.IPFV.3PL and
rāš lə-ḥmār yərgəš
 head[of] DEF-donkey dance.IPFV.3M.SG
 ‘you will see a [the] paunch dancing, and its intestines dancing, and the head of the donkey dancing’ (Tauzin 1993: 56).

¹⁷ Grotzfeld (1965: 103) also observes in Syrian Arabic that the participle frequently replaces the finite verb after verbs of perception:

- (ii) *ʔəza sməʿfī-ni dāyre b-əz-žārūše*
 when hear.PFV.2F.SF-PR.1SG turn.PTCP.F.SG in-DEF-gristmill
 ‘when you hear I’m turning the gristmill’ (Grotzfeld (1965: 103)

This innovative feature, specific to cases where the subjects are different, parallels the one observed in final clauses introduced by *ʿašān* (section 2.2.2).

3.1.2 Propositions of purpose and result

Propositions of purpose and consequence are attested in Ḥassāniyya without subordinators and with different subjects, as for instance in (64) and (65):

(64) *naʾrʒaʿ* *ʿli-k* *lāhi* *təmši [...]* *šōr* *blād* *lə-msīd [...]*
 come_back.IPFV.1SG on-PR.2M.SG FUT leave.IPFV.2M.SG towards place[of] DEF-mosque
 ‘I am coming back to you so that you can go [...] to the mosque [...]

(according to Tazuin 1993: 44)

(65) *ʿayyat* *l-i* *nʿāwn-ak*
 call.IMP.SG to-PR.1SG help.IPFV.1SG-PR.2M.SG
 ‘call me (for) that I come to help you’¹⁸

(Tazuin 1993: 50)

We saw earlier (section 2.2.2) that in Emirati Arabic, the presence of *ʿašān* is only obligatory with identical subjects (Leung and al. 2021: 371), but examples are few. Here are a few, taken from other languages: (66) in Libyan, (67) in Syrian, (68) and (69) in Cairo Arabic.

(66) *ʿiʾt* *əl-məftāh* *l-xū-y* *yəftəh* *əl-bāb* *u* *ixušš*
 give.PFV.1SG DEF-key to-brother[of]-PR.1SG open.IPFV.3M.SG DEF-door and enter.IPFV.3M.SG
 ‘I gave my brother the key to open the door and enter.’

(Pereira 2010 : 391)

(67) *hallaʿ* *b-əbʿat-* *l-ak* *ʿš-šānʿa* *tāxəd-hon*
 right_now FUT-sent_away.IPFV.1SG to-PR.2M.SG DEF-maid get.IPFV.2M.SG-PR.3M.PL
 ‘I’ll send the maid to you right away to get them’

(Cowell 2005: 353)

(68) *gab-ha* *tištaḡal* *maʿā* *hina*
 bring.PFV.3M.SG-PR.3F.SG work.IPFV.3F.SG with.PR.3M.SG here
 ‘he brought her to work here with him’

(Woidich 2006: 379)

(69) *argū-k* *tiddt-* *l-i* *furša* *akkallim!*
 please give.IPFV.2M.SG to-PR.1SG chance speak.IPFV.1SG
 ‘give me a chance to speak!’

(Woidich 2006: 379)

3.2 Full verbs with co-referent subjects

Some clauses (completives as well as finals or consecutives) have a subject which is co-referent with that of the main clause. This happens frequently and the verbs which then appear in the main clause show little semantic variation. The subject of the verb of the embedded clause is represented only by the personal index, but a (pro)nominal subject may be present before V1 (see (76) and (80)) or between V1 and V2 (see (70), (77) and (78)). With the exception of Juba Arabic, in all the languages of the sample, the verb of the embedded clause is usually in the imperfective, while that of the main clause varies.

3.2.1 Complementation

In Ḥassāniyya, the verb *ābā* ‘to refuse’ is constructed with a complementizer if the subjects are different, but the construction is asyndetic when the subjects are identical as in (70):

(70) *ābā* *əl-vākrūn* *yətkällām*
 refuse.PFV.3M.SG DEF-turtle speak.IPFV.3M.SG
 ‘The turtle refused to speak’

(Tazuin1993: 66)

Asyndetic constructions are frequent after verbs or expressions such as *bḡā* and *ḥāmm-PR* ‘to want’.

(71) *gāl-* *l-hā* *ənn-u* *ʿād* *yəbqi* *išədd-hā*
 say.PFV.3M.SG to-PR.3F.SG COMP-PR.3M.SG become.PFV.3M.SG want.IPFV.3M.SG marry.IPFV.3M.SG-PR.3F.SG
 ‘he told her he wanted to marry her.’

(Tazuin1993: 28)

In Emirati Arabic, the same type of construction is found after verbs like *zəba* ‘want’, *ḥabb* ‘like’ and *ḥāwal* ‘try’ described as “control verbs” (Leung and al. 2021: 223-4).¹⁹

¹⁸ Tazuin gives another translation (‘call me, I’ll come and help you’) which is a possible interpretation –implying a different intonation from the one we would have with the translation I give, which remains the most likely one.

¹⁹ When a “control verb” has a direct object (such as *waʿad* ‘promise’), the use of the complementizer *ʿannah* ‘that’ is preferred.

(72) *ʿana bas aḥwāl asāʿd-ək*
 I only try.IPFV.1SG help.IPFV.1SG-PR.2M.SG
 ‘I am just trying to help you.’ (Leung and al. 2021: 224)

The example of a completive (73) provided by Woidich for Cairo Arabic is after *nisi* ‘forget’:

(73) *nisīt asʿal-u*
 forget.PFV.1SG ask.IPFV.1SG-PR.3M.SG
 ‘I forgot to ask him’ (Woidich 2006: 391)

In all of the above examples, the subject of the verb of the completive is expressed only by the personal index. In Juba Arabic (where there are neither personal indices amalgamated with the verb nor clitic pronouns, but only independent pronouns), the subject of the completive is not expressed when it is identical to the subject of the main verb:

(74) *úmon der rówa júba*
 they want go Juba
 ‘They want to go to Juba.’ (Manfredi 2017: 141)

The difference between embedding after a full verb and a complex predicate with an auxiliary first verb (studied in section 3.3) can be tenuous. It is especially so in the last example taken from Juba Arabic where the construction with different subjects is possible –as for the examples taken from other dialects– but implies the presence of the modality *kedé* (see (63)), excluded here.

3.2.2 Final and consecutive clauses

In the absence of a subordinator, constructions correspond more to intention or aim than to the explicit expression of a goal or consequence, but only the translations reflect these nuances. Some verbs, such as movement verbs, appear to be particularly frequent, even if they are not the only ones (see *kṣar* ‘to cut’ in (76) and *ižibu* ‘to bring’ in (77)).

In Ḥassāniyya, the presence of the future auxiliary (*lāhi*) is frequent before the imperfective of the subordinate proposition, but it is not obligatory. One could –without changing the meaning– add *ayyāk* or *bāš* in the following examples, provided that *lāhi* is deleted in (76) and (77) (where there are two embedded goal propositions):

(75) *lāhi tamši šōr blād le-msīd taḥʿlvi*
 FUT go_away.IPFV.2SG towards place[of] DEF-mosque take_oath.IPFV.2F.SG
 ‘You are going to go [...] to the mosque to take an oath’ (Tauzin 1993: 44)

(76) *ānā kənt allā kāṣar mən-hā tātkällit*
 I PAST just cut.PTCP.M.SG from-PR.3F.SG cob.F.SG
waḥdā lāhi nowkāl-hā
 one.F.SG FUT eat.IPFV.1SG-PR.3F.SG
 ‘I just cut off a cob to eat it’ (Tauzin 1993: 52)

(77) *mšāw hūmā lə-xrāyn lāhi ižibu lə-ḥṭab*
 leave.PFV.3PL they DEF-others FUT give.IPFV.3PL DEF-wood
lāhi yəšwū-hā
 FUT roast.IPFV.3PL-PR.3F.SG
 ‘The others went in search of wood to roast it’ (Tauzin 1993: 100)

The use of *lāhi* in Ḥassāniyya can probably be compared to that of *bədd*-PR ‘to want’ in Syrian Arabic. According to Grozfeld (1965: 105-6), *bədd*-PR indeed often introduces the final clause if the subjects are identical, especially after motion verbs where subordinators (*ta*, *ḥatta*, *laḥatta*, *la* and *mənšān*) can be omitted (see (78)).

(78) *ʿəža ʿəbn-ək bədd-o yəʿtəl-ni*
 come.PFV.3M.SG son[of]-PR.2M.SG want-PR.3M.SG kill.IPFV.3M.SG-PR.1SG
 ‘Your son came to kill me’ (Grozfeld 1965: 106)

(79) *fətna la-žūwa nšāʿel əl-wžāʿ*
 go_in.PFV.1PL to-inside light.IPFV.1PL DEF-forge
 ‘we went in to light the forge’ (Grozfeld 1965: 106)

However, in the examples given by Cowell, *bədd*-PR is always absent, including after a “translocative verb”:

(80) *ḥāba rāḥ iṣalli ṣalāt ʿl-ʿīd*
 daddy go.PFV.3M.SG pray.IPFV.3M.SG prayer[of] DEF-holiday
 ‘Daddy has gone to pray the holiday prayer’ (Cowell 2005: 352)

It is again with displacement verbs such as *nizil* ‘go down’, *giri* ‘run’ and *xašš* ‘enter’ that one finds asyndetic final or consecutive propositions with identical subjects in Cairo (Woidich 2006: 379, 380).

3.3 Two (or more) verbs, one predicate

In Arabic, two (or more) verbs with a shared subject often form a monopredicative and monoclausal sequence. In this case, there is only one full verb, the other(s) being reduced, even if reduced verbs can have a finite form with a personal index that is co-referent with the main verb. Three cases of multiverbal monoclausal sequence are to be distinguished: auxiliatization, pragmatization and serialization. The reduced verb –which I underline– comes first (sections 3.3.1 and 3.3.2) or last (section 3.3.3). Moreover, the reduced verb must necessarily present the same basic aspectuo-temporal marker as the main verb in the case of pragmatization and serialization (sections 3.3.2 and 3.3.3), but regularly presents different markers in the case of auxiliatization (section 3.3.1). Finally, the reduced verb may undergo a change in meaning, or even in form, as compared to its use as a full verb.

3.3.1 Auxiliatization

Auxiliatization is an extremely frequent phenomenon which plays a very important role in the history of Arabic and, more broadly, in the history of Chamito-Semitic (see Cohen 1984). It is basically the means by which Arabic dialects have acquired the possibility of expressing epistemic and deontic modalities. It is also through this means that dialects have often enriched the basic system with new aspectual, temporal and aspectuo-temporal values. While the phenomenon is widespread in Arabic dialects and has been the subject of many presentations, details diverge, both in the choice of the full verb at the origin of the auxiliary and in the degree of grammaticalization of the latter.

If we consider, for example, the expression of the future tense in Arabic dialects (Taine-Cheikh 2004), we find that some verbs are used in a finite form, notably those meaning ‘to desire’ –*b(a)gā* ‘to desire’ in Najd, (*a)rād* in Eastern Syria, *dār* in Hassāniyya (by metathesis of (*a)rād?*), *dawwar* in Chad, *šā’a/išta* in Yemen–, but that others, in particular certain displacement verbs meaning ‘to go’ or ‘to leave’, are used in a participial form (variable or not), such as *māši* and *gādi* in the Maghreb, *sēyyer* in Maltese and *rāyāh* in the Middle East. However, these two cases are far from exhausting all possibilities, on the one hand because some morphemes of the future tense originate in non-verbal forms –as is the case of the preposition *hatta(y) > ta-*, on the other hand, because future tense morphemes are very often reduced to invariable particles or preverbs whose etymology is not always as easily identifiable as *gādi* and *šā’a/išta* as being the etymologies, respectively, of Moroccan *ga* and Yemeni *ša-/š-*. I will reserve the term auxiliary here for verbal and related forms only, namely finite forms, participial forms and pseudo-verbs composed of a nominal form or a preposition followed by a pronoun suffix. These three cases are illustrated by the following examples borrowed from Hassāniyya: the invariable participle *lāhi* for the future tense (see in (75) and (82)), the finite verb *gādd* in (81) for internal possibility or capacity, the pseudo-verb *at(ə)r-PR* (< *at(ə)r* ‘trace’) in (82) for external possibility:

- (81) *mā* *tgāddu* *tār^ovdu* *mra* *m^oā-kum* [...] ?
 NEG can.IPFV.2PL lead_away.IPFV.2PL woman with-PR.2PL
 ‘you cannot take a woman with you [...]?’ (Tauzin 1993: 36)
- (82) *ānā* *atr-i* *lāhi nḏūg-u* *mā žā-ni* *mā* *l-gəltā* ?
 I possible_for-PR.1SG FUT tast.IPFV.1SG-PR.3M.SG NEG come_to.PFV.3M.SG-PR.1SG water [of] DEF-pond
 ‘Shall I taste it before they bring me water from the pond [...]?’ (Tauzin 1993: 136)

In Arabic, auxiliarity is often studied in relation to deontic and epistemic modalities (see e.g. the tables in Leung and al. 2021: 254 and 261). An important contribution on this issue can be found in the article by Vanhove, Miller and Caubet (2009) from which I borrow the following data for several dialectal areas. They concern only epistemic modalities, which are less numerous than deontic modalities.

Table 1 : Values of epistemic modal auxiliaries (according to Vanhove, Miller and Caubet 2009)

	Maltese auxiliaries	Moroccan auxiliaries	Egyptian and Levantine auxiliaries
Eventuality	<i>seta’, jaf</i> (rare)	<i>yəmkən</i>	<i>bi-(ḥa-)yi^odar</i>
Feasibility	<i>seta’</i>	<i>qḏər</i>	<i>mumkin, yimkin</i>
Probability	<i>seta’, ikun</i>	<i>qḏər</i> (frozen)	<i>yimkin, bədd-PR + yikūn, lāzim</i> (frozen) + <i>ḥa/bi-</i>
Logical probability	<i>ghand-PR, ikollu, ikun</i>	<i>xəšš-PR, ykūn</i>	<i>bədd- + yikūn, lāzim</i> (frozen) + <i>yikūn</i>
Calculation	<i>kellu</i>	<i>xəšš-PR, ykūn</i>	

Verbal forms are in the majority and can be either frozen (in a single finite form) or inflected –in the perfective (such as *yaf* and *qḏər*), in the imperfective (like *yəmkən* and *ikun/ikūn*) or in the participle form (like *mumkin* and *lāzim*).²⁰ The other forms are constructed with a preposition (like *ghand-*) or a noun preceded by a preposition (like *bədd-*). Of the 90 examples in the article, the vast majority of the main verbs following the auxiliary are in the imperfective (usually alone, exceptionally preceded by the *b-* marker). The only exceptions are some examples with the auxiliary *ykūn* (more rarely *kān*) of the verb ‘to

²⁰ It can also be all three at once like *ʔidir, yi^odar, ʔādir* –auxiliary of potentiality in Cairo Arabic– which inflects and is always followed by an imperfective (Woidich 2006: 319).

be’, on the one hand, and a Maltese construction with *mess* (of the verb ‘to touch’) modelled on vernacular Italian, on the other.

Auxiliaries are also used to express values which depending on the author, are considered as more aspectual or more temporal (see Marcel Cohen 1924: 266, Mitchell and Al-Hassan 1994: 36, Brustad 2000: 144, 193): those of inchoativity, ingressivity, continuity, cessation and resultativity, and here again there is some variation from one speaker to another, both in the choice of auxiliary and in the semantics contributed. Thus the auxiliary *tämm* (INACC *itämm*) which expresses continuity in Ḥassāniyya (see (83)) –next to *mā-zāl* ‘do not cease (to)’–, has a pure inchoative use among the Zaër of Morocco, and a dual meaning, both continuative and terminative (closer to the literary sense of completion), in the Tunisian dialects of Takroûna and the Marazig (see Taine-Cheikh 2017).

(83) *tämmət* *və* *hrītət-hä* *təgžī-hä* *iläyn*
 continue.PFV.3F.SG in field[of]-PR.3F.SG plow.IPFV.3F.SG-PR.3F.SG until
žā-hä *râžəl (...)*
 arrive.PFV.3M.SG-PR.3M.SG man

‘She was there plowing her field when a man arrived’.

(Tauzin 1993: 4)

Moreover, while *baqaʿ* > *bgā* is only used as a stative verb with the meaning ‘to remain’ in Ḥassāniyya, *baqaʿ* gave an auxiliary (with various realizations) in many dialects: e.g. as a continuative in Maltese (Stolz & Amman 2008),²¹ as a continuative and inchoative in Damascus (Lentin 2006: 553) and as an inchoative in Juba Arabic (in which case it is preceded by the irrealis marker *bi*, see Manfredi 2017: 102). Stative verbs are probably, together with desire verbs and verbs of position, movement or displacement (Taine-Cheikh 2018), one of the main semantic subcategories at the origin of auxiliaries. The possible negation (see (81)) is usually carried by the auxiliary. The same is true for the aspectuo-temporal markers of the complex predicate, the main verb being almost always in the imperfective: compare (83) to (83’).²²

(83’) *ttämm* *və* *hrītət-hä* *təgžī-hä* *iläyn (...)*
 continue.IPFV.3F.SG in field[of]-PR.3F.SG plow.IPFV.3F.SG-PR.3F.SG until

‘She is there plowing her field until (...)’

As a result, this first type of complex predicate remains very similar, in its syntactic construction, to the asyndetic complex sentences with identical subjects, and when it clearly differs from them, this is mainly due to the fact that the auxiliary has taken on a specific meaning or that it has become less variable, or even frozen. However, there are particular cases where, in some languages, some auxiliary verbs can be constructed with a verb in the perfective. In the case of Darfur Arabic, this is explained, according to Roset (2018: 261), by the fact that this dialect tends to put both verbs in the same form (ACC, INACC or PTCP), thus with the auxiliary *gabbal* ‘return’:

(84) *tāni* *šugul* *da* *kān* *gabbalta* *amalta,* *la*
 again thing.SG DEM.SG if return.PFV.2SG make.PFV.2SG no

‘If you make that stuff again, no [i.e. don’t make that stuff again]’.

(Roset 2018: 261).

In Cairo Arabic, this case occurs in particular (but not only) with the verb *rigiʿ* ‘return’, which, as an auxiliary, means ‘again’ and is then often accompanied by *tāni*. The replacement of a V₂ in the imperfective with a V₂ in the perfective indicates that it is a fact actually realized in the past as in (85).²³

(85) *rigiʿ* *hirib* *tāni*
 return.PFV.3M.SG flee.PFV.3M.SG again

‘he fled again’

(Woidich 2002: 128)

For a broader overview of the use of a perfective or a participle after an auxiliary in the Near East, see Lentin 1994: 26-27.

3.3.2 Pragmatization

The second type of complex predicate concerns only a very small number of verbs, usually of position, movement or displacement. It is formally characterised by the fact that the two verb forms share the same aspect (the completed form most often, but not only, see Woidich (2006: 329)). Semantically, the first verb changes its meaning to take on an essentially discursive value. Its presence serves to emphasize the suddenness or simply the happening of an event in a narrative.

In Ḥassāniyya, this type of predicate, which arises mostly with the verb *gām* ‘to get up’ and, more marginally, with the verb *gbaḏ* ‘to take’ (Taine-Cheikh 2011, 2018), often occurs as a pseudo-coordination with *w(ā)/u* ‘and’, but it can also occur without a coordinator. There are thus two distinct grammaticalizations with the verb *gām* (both cases are present in (86)): one as an inchoative auxiliary where V₂ is in the imperfective, the other as a discourse marker –with or without a coordinator– where V₂ is in the perfective. As discourse markers, *gām* and *gbaḏ* are not always translated (as in (86) and (87)) and their enunciative role often appears only when the whole text is taken into account (see Taine-Cheikh 2018: 237).

(86) *gām* *lə-mʿallām* *u* *kfā* *əl-gādhān* *ʿlā* *rāš-u*

²¹ Vanhove (1993: 265-6) points out that the meaning changes to ‘fail to’ when the negation precedes not the auxiliary but the main verb.

²² However, this is not an absolute rule and does not prevent the presence of auxiliaries like *lāhi* before the imperfective (see (82)).

²³ On a comparable instance with the verb *ʿād* ‘return’, see *mā-ʿād-š* ‘no longer’ followed by the perfective or imperfective in Tunisian Arabic (Mion 2013: 62).

[*gām*-PFV.3M.SG] DEF-blacksmith and turn.PFV.3M.SG DEF-bowls on head[of]-PR.3M.SG
u gām šārtāt²⁴ itābb^c-u
 and start_to.PFV.3M.SG hyena follow.IPFV.3M.SG-PR.3M.SG

‘[then] the blacksmith turned the bowls on his head and the hyena started to follow him’ (Tauzin 1993: 68)

- (87) *gabḏat umm-u u žām^cət yāsər mən ət-tāvilāt əs-sqārāt [...]*
 [*gabḏ*.PFV.3F.SG] mother[of]-PR.3M.SG and gather.PFV.3F.SG many of DEF-girls DEF-young
 ‘[then] his mother gathered many young girls [...]’ (Tauzin 1993: 24)

These examples show that the subject (*lə-m^callām*, *šārtāt* and *umm-u*) can follow V₁ in both cases and that V₁ agrees with it in gender and number. On the other hand, the presence of a negation seems to be excluded (especially in V₁).²⁵

In other Arabic dialects, the use of the verb ‘to stand up’ (*qām/gām/ʔām* or *nād/nāḏ*) is relatively frequent as an inchoative auxiliary,²⁶ and its use with the meaning ‘and then’ (in a structure with or without a coordinator) is pointed out by Marcel Cohen (1924: 267).²⁷ In fact, the absence of a coordinator is common among non-Ḥassāniyya speakers and Fischer (2002) considers it a *nebenordnende Komposition* –as opposed to the *unterordnende Komposition* where *gām* is followed by a V₂ in the imperfective or a participle. The presentation adopted by Reichmuth for the West Sudanese dialect (with a slash between the two verbs) also points in the direction of an apposition:

- (88) *gāman/ rawwaḥan kullahin*
 [*gām*-PFV.3F.PL] go_away.PFV.3F.PL all
 ‘Then they all went away’ (Reichmuth 1983: 295)

However, this apposition does not seem to be marked either by a pause between V₁ and V₂ or by specific intonation.

This same *gām* construction, with or without a coordinator, is found notably in Eastern Arabia (Holes 2001: 442), while in the Bedouin Arabic of West Syria (Bettini 2006), we find examples with *gām* but especially with *giḏab* ‘to seize’ (corresponding to the Ḥassāniyya *gbaḏ* with metathesis):

- (89) *gḏuban gālan*
 [*giḏab*-PFV.3F.PL] say.PFV.3F.PL
 ‘So they said’ (Bettini 2006: 117)

Comparable discourse uses are also found with other verbs, such as ‘to come’: *ža/ḡa/gih* in Egyptian Arabic (Woidich 2002: 161) and especially *ža* in Moroccan Arabic (Caubet 1995), which tends to be followed by the autonomous pronoun *huwa* (but without a coordinator). The same may have happened in the past with the verb ‘to return’ *ʔad*, which is now found as a frozen particle with adverbial meaning (‘*ad* ‘then, again’ in Moroccan, see Brustad 2000: 160-1), unless it is the grammaticalization of an older auxiliary construction.

3.2.3 Serialization

“The term ‘serial verbs’ is used in the literature to indicate a verbal syntagm consisting of two (or more) finite verbs without a formal coordinating marker but with the same argument structure, one of which is semantically demoted, often grammaticalized, and lexically restricted” (Versteegh 2009: 195, citing Sebba 1987:39). This definition could have been applied to the second type of complex predicate when the coordinator is absent, as in (86) and (87), but I will retain here the “classical” definition of serial verbs according to which “it is the second verb that is lexically restricted” (Versteegh 2009: 197) – it is this one that I underline. As a result, examples of serial verbs in Arabic dialects become much rarer. The first case, reported especially in pidginized and creolized forms of Arabic, is where a more or less grammaticalized and bleached form of the verb ‘to say’ follows a declarative verb without introducing a true complement, as in the example of Juba Arabic:

- (90) *āna bāda kóre gāle la la la*
 I start scream say no no no
 ‘I started screaming: no, no, no!’ (Manfredi 2017: 143)

This example is reminiscent of the constructions of Egyptian Arabic that Woidich describes as “Pseudo-Komplementation”, in particular the one where *ʔal* ‘say’ comes as V₂ after a first verb with which it agrees in person and conjugation:

- (91) *ikkallimti ʔulti ʔē?*
 speak.PFV.2F.SG say.PFV.2F.SG what
 ‘what did you say?’ (Woidich 2002: 183)

²⁴ *šārtāt* is among the (usually borrowed) nominals which do not take the definite article.

²⁵ I have not seen an example with negation before V₂ in Ḥassāniyya, but Woidich (2006: 330) gives one for Cairo Arabic.

²⁶ So is the verb ‘to sit’ (*qʔad/gʔad, žilis/glās* or *gannab*) –although it is even more frequently a concomitant or continuative auxiliary– and so are some displacement verbs originally meaning ‘to go’, ‘to come’ or ‘to return’ which have yielded, among others, inchoativity and iterativity auxiliaries (see Taine-Cheikh 2018: 230-4).

²⁷ For Grotzfeld (1965: 89-90) this use “signals the occurrence of a new, nondurative event in the past” and for Firanescu (2003) it is an “event inchoative” (see Versteegh 2009: 196).

clauses” used by some authors –see for instance Leung and al. 2021: 231-232). In the second case, V_2 is the main verb and it is the one that carries the predicative function, even if it is almost always in the imperfective and thus has a lot in common with the V_2 of the embedded clause.

While auxiliarization is very productive in dialectal Arabic, there are two other complex constructions composed of a sequence of verbs. Such sequences are characterized both by the fact that the two verbs share the same aspectuo-temporal morphemes, and that one of the verbs tends to de-semanticize or even freeze. The bleached verb belongs to a very small list of verbs (mostly position, movement and displacement verbs). When it comes first, it serves as a discursive marker and expresses a more or less sudden sequence. When it comes second, it can have a syntactic function (to introduce a direct complement), an enunciative function (to mark centrifugal or centripetal movement in relation to the speaker) or serve as a discursive final punctuation mark. The first of these two constructions has its origin in a sequence of coordinated verbs and the second, if not derived from it, at least has a close relationship with it.

4 Conclusions

In Arabic dialects, asyndetic constructions are very widespread. As a consequence, a succession of two finite verbs can correspond to a variety of structures. If it is an embedded proposition, it may or may not have the same subject as the verb of the main proposition, and it may be a completive or a subordinate of purpose or consequence. In the case of a single proposition with a main verb accompanied by a bleached, grammaticalised or even frozen verb, the subject is always the same and the structure presents connections either with embedding (for auxiliarization), or with juxtaposition or coordination (for pragmatization and serialization).

In the case of embedded propositions with non-co-referent subjects, the subject of V_2 is frequently a personal pronoun affixed to V_1 . Vincent (1993: 13) provides the example of Maltese and analyzes this construction as a ‘raising’ on the head verb (Head-Marking Complement Strategy) resulting, together with the personal index of V_2 , in double subject marking. This construction –similar to the one found in languages such as English where V_2 is in the infinitive– is very common in Arabic dialects, although it does not prevent the presence of a nominal subject in rarer cases. Regarding the opposition between finite verb vs. infinitive, it should be noted that Arabic is an exception to the universal tendency stated by Haspelmath (1989), with the absence of infinitive in goal propositions, as well as in completives. As for embedded propositions, both asyndetic and syndetic constructions are attested in all Arabic dialects. Sometimes there is a choice in the use of a subordinator or not, but this choice often depends on different factors. The most important one, for completives, is the choice of the main verb and, depending on its meaning, of the declarative~constative or optative~desiderative mode of the subordinate. But other factors may come into play, such as the subject function of the subordinate or the shared identity or not of the subjects. The presence of the subordinator in goal subordinates may correspond to a more explicit aim, but further research is needed. It should be noted that in some languages there is a tendency, in the absence of the subordinator, to use a particular auxiliary (future or intention), especially with identical subjects. On the other hand, it is when the subjects are different that Juba Arabic uses a modality (*kedé*, with optative value –see Manfredi 2017: 112-113) after the subordinator of final clauses (as well as in volitional completives without a subordinator). The study of the different embedding marks (complementizers, subordinators of purpose and consequence, particles of global indirect interrogation) shows that, behind certain specializations, partly common to all dialects and partly specific to particular areas or dialects, there is a non-negligible tendency to shift from one domain to another –including from relators to complementizers or subordinators of purpose and consequence. The combination of a relator and a preposition undoubtedly plays a role in this process, which deserves further investigation. At the end of this study, which has tried to give a detailed account of both the common features and some of the divergences observed, we can indeed see the opening up of other areas of research, such as that of converbs, which could shed light on –or complete– the issue of serial verbs.

Abbreviations

ANAPH anaphoric
COMP complementizer
DEF definite (article)
DEM demonstrative
F feminine
FUT future
IMP imperative
IPFV imperfective
IND indicative
IRR irrealis
M masculine
MOD modal
NEG negation, negative
NPONC non-ponctual
PAST past

PTCP participle
PASS passive
PFV perfective
PL plural
POSS possessive
PR pronoun
REL relative
SG singular

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