Verb Phrase

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1.   Introduction

The concept of the verb phrase (VP) is central to contemporary theoretical approaches to Arabic, and, indeed, to modern syntactic theory in general, with its status as a theoretical construct being controversial. The controversy revolves around what is being claimed by saying that a language 'has a VP'. The weak claim is simply that in at least some data types, a discrete constituent consisting of a ver stem and its dependents can be identified. In the case of Arabic, as in many languages, establishing this claim is as simple as finding coordination structures in which an auxiliary verb conjoins two verbs combined with their dependents. The stronger meaning of "has a VP" is that every expression containing a verb includes a VP cotegory, regardless of whether a discrete VP constituent can be identified in the pronounced form of the expression.

Section 2 considers arguments for the weak version of the claim that Arabic has a VP, and it is shown that Arabic clearly does. Section 3, on the other hand, considers more abstract conceptions of the VP, and arguments that have been made that Arabic has a VP in the strong sense.

2.   Direct Evidence for a Verb Phrase

A naïve definition of 'verb phrase' is a discrete word group consisting of a verb stem and any of its dependents, such as arguments, complements, or certain kinds adverbial modifiers, such as instrumental, locative, temporal, and aspectual modifiers. The verb is the

'head' of the phrase because it determines the category or type of the phrase and because it provides the semantic 'nucleus' of the phrase.

Traditionally, VP constituents are identified on the basis of constituency tests (c.f. Wells 1947; Harris 1951; Zwicky 1978) including (shown with English examples) coordination (2a), pro-form substitution (2c), and ellipsis (2e):

(1)   a.   His Excellency will [eat lunch] and [take a nap].
          c.   You fell asleep at work? I can't believe you did [that].
          e.   Alice always gets to work before I do.

Of these, coordination is perhaps the most widely used. Coordination involves two word groups being paired as one using a conjunction or disjunction morpheme. Examples of this sort abound in both Standard Arabic and the in dialects.

(2)   *mā ʾamkana-ni ʾan ʾ aʿmala šayʾ-an walā ʾ aqṭaʿa ʾamr-an.*
          not Perf-be.possible.3ms-cl1s that Subj-do.1s thing-Acc or Subj-finish.1s matter-Acc
          "It was impossible that I do anything or finish any matter."
          (Standard Arabic: Wright 1898, 327)

(3)   *ʿam byirūḥu yiḥku w-yitfalsafu w-yithabalu.*
          prog Ind-go.3p speak.3p and-philosophize and-be.stupid.3p
          "They're going to talk and philosophize and be stupid."
          (Levantine Arabic: Maamouri, et.al. 2005, 321.59)

(4)   *rāyiḥ yifaṣṣax w-yilbas d-dišdāša.*
          going.ms undress.3ms and-put.on.3ms the-dishdasha
          "[He's] going to undress and put on his dishdasha."
          (Gulf Arabic: Qafisheh 1977: 181)

(5)   *ṛ-ṛažel ma-ka-ixalli-ni la nexṛož wala nedrež.*
          the-man not-Prog-let.3ms-cl1s neither go.out.1s nor-step.out.1s
          "The man won't let me go out at all."
          (Moroccan Arabic: Harrell 2004, 235)

Predicate ellipsis is frequently used as a test for VP-constituents, on the assumption that ellipsis of this kind targets a VP-category. Ellipsis following a tense auxiliary of the sort found English generally does not seem to occur in Arabic, although Moroccan Arabic appears to be an exception, based on Kortobi's (2002) data:

(6)   *yasin kan ka-ylˤəb l-kura w-yousre kan ḥətta huwa*
        Yasin was.3ms Prog-play.3ms the-ball and-Yousre was.3ms also
        "Yasin was playing football and Yousre was too."
        (Moroccan Arabic: Kortobi 2002, 225)

However, other kinds of example can be found in Standard Arabic and the dialects in which

an ellipse occurs in parallel with a verb phrase in a preceding clause:

(7)   *ḥāwala ʾan yaktuba animay wa-yuxrija-hu fiy nafsi l-waqti lakanna-hu lam yaqdar*
        Pref-try.3ms to Subj-write.3ms Animé and-Subj-direct.3ms-cl3ms in self the-time but
        not.past Juss-be.able.3ms
        "He tried to write Animé and direct it at the same time, but he wasn't able to."
        (Modern Standard Arabic: internet source)

(8)   *ˤāyiza ʾaˤmal kida bass mā baʾdar-š.*
        want.fs do.1s that but not be.able.1s-neg
        "I want to do that but I can't."
        (Egyptian Arabic: internet source)

(9)   *kān b-yəʾdar ykūn ʾawwal wāḥed bˀ-ṣ-ṣaff law rād.*
        was.3ms Ind-be.able.3ms be.3ms first one in-the-class if wanted.3ms
        "He could be the first in the class if he wanted."
        (Syrian Arabic: Stowasser and Ani 1964, 34)

        Substitution tests involve placement of a pronominal form in a subordinated position

that would otherwise be occupied by a verb phrase, and which refers back to a verb-phrase

meaning salient in the discourse. Such examples are also easily found in Arabic. For

example, in (10), the →demonstrative pronoun *ḏālika* "that" occurs as the object of *ˤamala*

"make, do" and refers back to an activity described in a preceding sentence:

(10)   *yujibbu ʾan ʾastaˤadda wa-ʾatamarrana min jadīdin liʾanna-ni lam ʾaˤmal ḏalik xalāla*
        santayn.
        Ind-must.1s to Subj-prepare.1s and-Subj-practice.1s from new-Gen because-I not.past
        Juss-do.1s that since year-dual
        "I must prepare and practice again becauase I have not done that in two years."
        (Modern Standard Arabic: internet source)

Likewise, (11) shows an example from Syrian Arabic in which the demonstrative *hēk* refers

back to action performed by an interlocutor

(11)   *lēš sāwēt hēk?*

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why did.2s that
"Why did you [have to] do that?"
(Syrian Arabic: Stowasser and Ani 1964, 237)

However, the presence of ellipsis and substitution do not present clear, theory-nuetral evidence for VP-constituents, given that there are theories of anophoric reference and ellipsis that do not assume a phrase-structure grammar specification, and for these theories, ellipsis and substitution do not provide evidence for a VP-labelled constituent (c.f. Dalrymple, et.al. 1991; Miller 1992).

To summarize, coordination data clearly show that constituents consisting of a verb stem and its dependents occur in both Standard and dialectal Arabic. This shows that Arabic 'has a VP' in the weak sense. The question is therefore whether there is evidence that Arabic 'has a VP' in the strong sense.

3.   The Abstract Verb Phrase

To see whether Arabic 'has a VP' in the strong sense requires consideration of sentence types other than those mentioned above, and, in particular. clauses in VS word order. Much of the modern structuralist literature on Arabic has includes analyses of Arabic clauses in VSO word order (see → *verbal clause*). Given the order of constituents in VS clauses, there is no direct evidence for the presence of a VP constituent properly contained within the root clause constituent. This has led Bakir (1980), al-Haq (1992), Beller (2006) and others to assume a flat exocentric structure like the following for VSO clauses:

(12)   [$_S$ ʾakala [$_{NP}$ Zaydun] [$_{NP}$ tuffāḥatan]]

Researchers working in the Principles and Parameters (P&P: Chomsky 1981, Rizzi 1990) and Minimalist Program (MP: Chomsky 1995, 2000, 2001, 2004) traditions, have argued that VSO clauses include an abstract VP, which may be only partially pronounced, or unpronounced altogether.

The seminal work on Arabic VP theory is Mohammad (1989), later revised and expanded as Mohammad (2000). Mohammad argues for the presence of an abstract VP in VSO clauses on the bases of evidence indicating hierarchical relationships between the arguments of the verb, and, in particular, asymmetries between subject and object arguments in terms of their extraction potential and scope possibilities. The evidence can be summarized as follows (see →*nominal clause* for more discussion):

(13)   The subject argument is ordered higher than the object in terms of its scope →*binding* potential.
(14)   The object can be extracted more freely than the subject, due to it being a sister to (and hence governed by) the verb.

The implication is that the subject argument in an Arabic VS clause is ordered above the object argument at some level of representation.

A fundamental assumption in P&P/MP is that phrase structure encodes hierarchical relations between arguments in addition to dominance and precedence relations between pronounced constituents. In particular, the C-command relation holding between a node A and its sister node B or B's daughter nodes is argued to be the fundamental relation in the definition of syntactic binding constraints or scopal relationships between operators (c.f. Heim and Kratzer 1998, *inter alia*), and argument hierarchies (c.f. Baker 1988, Grimshaw 1990, Williams 1994, *inter alia*). It follows from these assumptions that asymmetries in scope or binding potential between two constituents A and B indicates a symmetric c-command between them, which in turn indicates that they are ordered in terms of a hierarchical structure.

Based on these assumptions, Mohammad concludes from his observations that an VSO clause must include a partially unpronounced VP constituent in which the hierarchical ordering between the subject and the object is established. For example, (12) above has the

following structure, assuming the widely-adopted 'VP-internal subject hypothesis' (Koopman and Sportiche 1991, *inter alia*):

(15)   [$_{IP}$ ʾakala$_i$ [$_{VP}$ [$_{NP}$ Zaydun] [$_{V'}$ t$_i$ [$_{NP}$ tuffāḥatan]]]]

Mohammad's analysis has been widely assumed and elaborated on in the extensive P&P/MP literature on Arabic (Demirdache 1991; Benmamoun 1992, 1997, 2000; Bahloul and Harbert 1993; Eid 1991, 1993; Fassi-Fehri 1993; Diesing and Jelinek 1995; Khalaily 1997; Shonsky 1997; Harbert and Bahloul 2002; Jelinek 2002; Kortobi 2002; Kremers 2003; Souag 2006, *inter alia*).

However, Mohammad's conclusion rests crucially on the assumption that argument and scope hierarchies are encoded in phrase-structural representations. It follows that Mohammad's arguments for an abstract VP are theory-internal.

Gapping (16-18) and right-node-raising (RNR: 19-20) sentences in different varieties of Arabic provide evidence from which support can be adduced for an abstract VP constituent:

(16)   *Yasin kla t-təffaḥ w-Yousre l-banan.*
       Yasin ate.3ms the-apple and-Yousre the-banana
       "Yasin ate the apple and Yousre the banana."
       (Moroccan Arabic: Kortobi 2002: 220)

(17)   *Su3aad 3and-ha karhba w-Kariim bisklet.*
       Souad at-cl3fs car and-Karim bicycle
       "Souad has a car and Karim a bycicle"
       (Tunisian Arabic: Halila 1992, 237)

(18)   *Aḥmad rāḥ ʿa-ʿammān w-Hishām ʿa-ʾirbid.*
       Ahmad went.3ms to-Amman and-Hisham to-Irbid
       "Ahmad went to Amman, and Hisham to Irbid."
       (Jordanian Arabic: elicited)

(19)   *xaḷḷī yilḥag yrudd-in-na aj-jmāl.*
       let.3ms-cl3ms chase.3ms return.3ms-to-cl1p the-camels
       "Let him chase and bring us back the camels."
       (North Israel Bedouin Arabic: Rosenhouse 1984, 124)

(20)   *badu yən°šu w-yəḥyu l-ʾadab °lʿarabi l-ʾadīm.*

began.3p stimulate.3p and-revive.3p the-culture.ms the-arabic.ms the-old.ms
"They began to stimulate and revive the old Arabic culture."
(Syrian Arabic: Cowell 1964, 392)

The difficulty that gapping and RNR pose to a headed phrase-structure grammar (such as the X'-theory schema) is the lack of rules like the following, that would admit (16-18) and (19-20) respectively:

(21)   XP   →   YP   ZP
(22)   XP   →   X   X   YP

Rule (20) is an exocentric rule, as it does not include a head on the right-hand side, while (21) provides two heads. Both violate the assumptions of X'-theory, and its analogues in more recent Minimalist theory (c.f. Chomsky 1995, 2000, 2001, 2004). Because the grammar does not include rules like these, gapping and right-node-raising are referred to as 'non-constituent' coordination, and challenge the assumption that coordination operates on constituents.

Kortobi (2002) analyzes gapping in Moroccan Arabic as resulting from 'across-the-board' (or ATB) movement, a kind of movement operation in which a verbal head that has two identical instances (modulo →*agreement* marking) in two conjuncts can raise as one instance to a higher position in the first clause, 'stranding' the arguments of the second conjunct:

(23)   [$_{IP}$ kla$_l$ [$_{VP}$ Yasin [$_{V'}$ t$_i$ t-təffaḥ]]
          w-[$_{VP}$ Yousre [$_{V'}$ t$_i$ l-banan]]].

Similarly, right-node-raising can be treated as rightward ATB movement of an object argument:

(24)   [$_{IP}$ yənᵊšu$_l$ [$_{VP}$ pro [$_{V'}$ t$_i$ t-təffaḥ]]
          w-[$_{VP}$ Yousre [$_{V'}$ t$_i$ l-banan]]].

ATB-movement out of an abstract VP is also used by Aoun, et. al. (1994) in their analysis of first-conjunct →*agreement* in Lebanese and Moroccan Arabic. They note that, in a clause with a post-verbal conjoined subject, the verb can either agree in the plural with both conjuncts, or with the first conjunct only:

(25)   *kēn / kēno Karīm w-Marwān ʿam-yilʿabo.*
         was.3ms was.3mp Karim and-Marwan prog play.3mp
         "Karim and Marwan were playing."
         (Lebanese Arabic: Aoun, et. al. 1994, 208)

Aoun, et. al. analyze the first-conjunct agreement pattern as involving both gapping and right-node-raising: the verb undergoes ATB-movement to the left, while the complements or clausal remnant undergoes rightward ATB-movement:

(26)   [IP kēn*I* [AuxP [AuxP Karīm t*i* t*VP*]
         w-[AuxP Marwān t*i* t*VP*]]
         [VP ʿam-yilʿabo]]

Although it is not clear how Aoun, et. al.'s analysis would account for the plural marking on *ʿam-yilʿabo,* they are able, nevertheless, to account for agreement variation on the initial verb by supposing an abstract VP (see Bahloul and Harbert 1993; Harbert and Bahloul 2002 for discussion and a different analysis).

Eid (1993) uses an abstract VP (generalized to all lexical categories: see also Jelinek 2002 and references) to account for patterns of negation marking in Egyptian Arabic (for more on negation in Arabic, see Ouhalla 1990, 1997, 2002; Benmamoun 1992, 1997, 2000; al-Tamari 2001; Hoyt 2007). As in many dialects of Arabic, negation is marked by some permutation of the clitics *ma-* and *-š.* These bracket words marked with agreement morphology expressing person, or occuring in the free allomorph *miš* "not" otherwise:

(27)   *ma-katab-š*

 *miš katab

 "He did not write."

(28)   *ma-b-yiktib-š*

 miš b-yiktib

 "He is not writing."

(29)   *miš ḥa-yiktib*

 *ma-ḥa-yibtib-š

 "He will not write."

(30)   *nadya miš farḥāna*

 *nadya ma-farḥāna-š

 "Nadya is not happy."

(31)   *ma-ˤand-ī-š migalla.*

 *mish ˤand-i migalla

 "I don't have a journal."

Eid claims that cliticization of *ma-* and *-š* to a person-marked stem indicates that the stem

has raised out of the VP (or other category) to the head of IP, where negation is realized:

(32)   [$_{IP}$ pro$_i$ [$_I$ ma-b-yiktib$_j$-š] [$_{VP}$ t$_i$ t$_j$]]

(33)   [$_{IP}$ Nadya$_i$ [$_I$ miš] [$_{AP}$ t$_i$ firhaana]

The optionality in negation marking for the b-marked imperfect stems (see also Jelinek 1981)

thus indicates optionality in verb raising.

(34)   [$_{IP}$ pro$_i$ [$_I$ miš] [$_{VP}$ t$_i$ b-yiktib]]

The abstract VP therefore allows Eid to capture the correspondence between inflectional

properties and negation form (although her analysis unexpectedly implies that the future-

marked imperfect stem in (29) cannot raise to tense).

In sum, several prominent studies have been able to account for a wide variety of data

by supposing that an abstract VP occurs even in Arabic clauses in which no such constituent

can be identified on the basis of a word group.

4.   The Extended Verb Phrase

Since Larson (1988), researchers in the P&P/MP tradition have argued that what was traditionally referred to as a VP actually has a more articulated structure containing one or more functional categeries dominating the VP proper, which is simply the combination of a verbal head with is complement. Proposed categories include Agr(eement)-O(bject) (AgrO-P: Fassi-Fehri 1993; Plunkett 1993, 1996; Shlonsky 1997, *inter alia*); Chomsky's (1995) 'little-*v*' (*v*P: Kremers 2003, i*nter alia*), Aspect (AspP: Diesing and Jelinek 1995, Benmamoun 2000, Kortobi 2002), or Pred(ication) (PredP: Bowers 1993, Harbert and Bahloul 2002). This approach is sometimes called the 'split-VP' hypothesis.

The motivations for the different labels vary, but many proposals follow Chomsky (1995) in using 'little-*v*' and assume it to be the head that both licenses an external theta-role and assigns accusative case to an object argument (some proposals also attribute aspectual meaning to it). Given these assumptions, it has been argued that the presence of an external argument (whether expressed or implicit) and accusative case-marking (i.e., licensing a direct object argument) indicates the presence of a VP-complex. This is particularly the case in the analysis of the Arabic ->*maṣdar* (Fassi-Fehri, Kremers 2003: see also ->noun phrase).

Additional support for the split-VP hypothesis in Arabic can be adduced from examples like the following, in which a proclitic such as the *bi-* used widely in the Levant and Egypt (34: Blau 1960, Cowell 1964, Mitchell and El-Hassan 1994, Eisele 1999, Brustad 2000), the Urban Levantine progressive clitic ʕ*am-* (35: Cowell 1964, Mitchell and El-Hassan, Brustad 2000), or the aspectual proclitic *ka-* used in Moroccan and some western Algerian dialects (36: c.f. Harrell 2004, Benmamoun 2000, Brustad 2000, Kortobi 2002), can take scope over two conjoined verbs phrases:

(35) *ya‘ni n-nās bi-taʾkal wa-tišrab min il-ḥāgāt dī*
mean.3ms the-people Ind-eat.3fs and-drink.3fs from the-things these.fs
"In other words, people eat and drink from these things."
(Egyptian Arabic: internet source)

(36) *halla' ṣar-l-na sanīn ‘am-niḥki wa-n'ūl innu ḥāliyan mudīr a‘māl žūrž wusūf.*
now became.3ms-to-cl1p years Prog-talk.1p and-say.1p that actually director business
George Wasūf
"Now, for years we having been talking and saying that he is actually George Wasūf's
director." (Syrian Arabic: internet source)

(37) *u-fin-emma tfekkeṛ l-baṛaka dyal-ha, ka-ixerrež-ha w-ibus-ha w-ya‘ti le-ḥbabu u-l-*
uladu ibusu-ha m3ah.
and-when think.3ms the-blessing poss-cl3fs Prog-remove.3ms-cl3fs and-kiss.3ms-
cl3fs and-give.3ms to-friends-cl3ms and-children-cl3ms kiss.3mp-cl3fs with-cl3ms
"...and when he thinks of it, he takes it out and kisses it and gives [it] to his friends
and children to kiss with him."
(Moroccan Arabic: Harrel 2004, 242)

Given the assumption that scope relationships correspond to phrase-structural hierarchy, and

that conjunction joins two like constituents, then these example imply an analysis in which

the aspectual particles head a category that takes a VP complement, perhaps with the

morphological attachment of the particle being part of a post-syntactic phonological

readjustment process.

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