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A constructionist approach to Arabic active participles

Ayman Yasin[a] and Osama Abdelghafer[b]

[a]Coordination Unit for Service Courses, Princess Sumaya University for Technology, Amman, Jordan; [b]Department of English, Jordan University of Science and Technology, Irbid, Jordan

ABSTRACT

This paper aims at analyzing the active participle in Modern Literary Arabic. In this type of nominalization, the active participle is ambiguous between a nominal and a verbal reading. We first show how this construction is similar to nominal structures; then we explain how it exhibits verb-like properties; we further argue that, in spite of the verbal properties, this construction is best analyzed as an instance of non-verbal predication. Last, using Distributed Morphology, we show how the active participle projects into a root clause.

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1. Introduction

Traditional approaches classify words into different categories (parts of speech or word classes). The most common of these categories is 'verb' and 'noun'; however, in spite of this traditional dichotomy, human languages seem to make use of 'mixed categories' (Carnie, 2011). Despite the fact that these categories are very common cross-linguistically, it is the very existence of these categories that has proved to be quite challenging from a theoretical perspective because they have both verbal and nominal properties. Consider, for example, English –ing, –ion, and –al forms in (1).

(1) a. the professor's translating the poem/him translating the poem
b. professor's translation *(of) the poem
c. the manager's refusal *(of) the offer

In these types of nominalizations, the deverbal nouns 'translating', 'translation', and 'refusal' are syntactically and semantically similar to the verb from which they are derived. In other words, the nominalized forms maintain both the argument structure of and the meanings of the verbs 'translate' and 'refuse'. Similar scenarios arise in a variety of languages (Bulgarian Greek, Serbian, Spanish), including Arabic. In Arabic, there are different types of nominalization, e.g. 'maSdar' (gerundive forms) forms that are similar to the English examples in (1). Another form of nominalization in Arabic is the so-called Active Participle (ActP). Both gerundive forms and ActPs have an identical distribution when used nominally (2). Further, both forms appear in the construct state. However, there are important differences between the two forms; semantically, the ActP is interpreted as 'agent' while the gerundive form is interpreted as 'process'; more importantly, only the ActP projects into a root clause while the gerundive form does not. It is this

CONTACT Ayman Yasin a.yasin@psut.edu.jo, aymanolu@gmail.com Coordination Unit for Service Courses, Princess Sumaya University for Technology, Amman Jordan

latter difference that we deem significant syntactically. That is why, this paper focuses on the morpho-syntax of ActPs.

(2) a. gaadar-a kaatib-u l-qiSaS-i
leave.pst-3S writer-Nom the-stories
'The writer of stories left'.
b. ʔuħibb-u kitaab-ata l-qiSaS-i
love.pres-1S writing the-stories
'I love writing stories'.

In Arabic, the ActP exhibits properties similar to English-type[1] derived nominals; that is, they show both nominal and verbal properties. Besides, this type of nominalization in Arabic is unique because it projects into a matrix CP. To account for the ambiguous nature of ActPs in Arabic (e.g. Standard, Egyptian, Syrian, and Jordanian Arabic), ActPs have been approached as nouns, (de-) verbal adjectives, or under-specified categories (Wager, 1984; Caubet, 1991; Cuvalay-Haak, 1997; Brustad, 2000; Holes, 2004; Mughazy, 2004; Ryding, 2005; Boneh, 2010; Hallman, 2017; Al-Raba'a, 2021; Al-Jarf, 2024; among others). What this basically shows is that the syntactic status of the ActP in Arabic is far from settled. Therefore, in this paper, we seek to explain what kind of predication holds in this particular type of nominalization in Modern Literary Arabic.

The rest of the paper is organized as follows. Section two explains data collection and categorization, the background, the theoretical approach, and the morphological system of Arabic nouns, verbs, and ActPs. Section three discusses the syntax of ActPs; in particular, we show how ActPs exhibit syntactic features that are similar to both nouns and verbs; we also show how ActPs are best approached as an instance of non-verbal predication, and then we explain how ActPs are derived. The last section concludes the paper.

2. Data collection and categorization, background, theoretical framework, and the language investigated

2.1. Data collection and categorization

The data is based on a huge set of examples that were collected from various types of written Arabic texts, including literary works, academic studies, and corpora containing spoken and formal Arabic. The selection of the examples is meant to illustrate the key morpho-syntactic features, including inflection for person, number, gender, and case. For the purpose of validation, reputable Arabic grammar references were consulted (e.g. McCarthy & Prince, 1990; Wright, 1967) and cross-checked against current linguistic research on Arabic (e.g. Mashaqba et al., 2022).

The examples were systematically categorized based on their morphological and syntactic properties. The morphological categorization focused on nominal declensions (person, number, gender, and case). For example, the noun morphology highlighted included the three-way distinctions in person (first, second, and third), number (singular, dual, and plural), gender (masculine, feminine, and neuter), and case (nominative, accusative, genitive). Verbal morphology was similarly examined with a focus on tense/aspect (perfective and imperfective) and voice (active and passive). To capture their syntactic distribution, ActPs were evaluated in various sentence positions to identify their nominal and verbal characteristics.

2.2. Background

Ever since Chomsky's (1970) 'Remarks', the division of labor between the lexicon and syntax has been under generative scrutiny. In 'Remarks', Chomsky discusses two types of nominalization (3–4: 15): gerundive nominals and derived nominals.[2]

(3) John's refusing the offer.
(4) John's refusal of the offer

The major differences between the two types relate to how productive the process is; whether the relation between the nominal and the associated proposition is generalizable; and how the noun

phrase is internally structured. Gerundives have a structure that is identical to a corresponding sentence: both have a subject-predicate structure; both the corresponding sentence and the gerundive form have a meaning relation that is quite regular; and the structure of gerundives is different from that of referential noun phrases. In the case of derived nominals, what we have is quite the opposite: these are far less productive; the semantic relations between the derived nominal and the corresponding proposition are 'quite varied and idiosyncratic' to the extent that derived nominals exhibit a range of variation with few sub-regularities that can only be accounted for if a variety of meanings are assigned to the base and last, the internal structure of both derived nominals and other noun phrases is the same. To account for these differences, Chomsky's conclusion, therefore, is that the derivation of both types of nominals is quite different: whereas gerundives are 'transformationally derived' (the transformationalist position), derived nominals are taken care of in the lexicon (the lexicalist position).

Whether such structures are lexically or syntactically derived has far-reaching consequences for the theory of grammar. The challenge is to figure out the nuts of bolts of the computational system, i.e.– how the different bits and pieces are put together. A lexicalist (aka projectionist, Rappaport & Levin, 1998) approach that assigns some derivational processes to the lexicon amounts to a reduction of the derivational burden at the syntactic side; hence, it paves the way for a parsimonious theory that may elegantly reveal the exact nature of the initial state of the language faculty. Argument structure in this approach is based on the lexico-semantic properties of the verb. For example, Grimshaw's (1990) seminal work maintains the lexicalist perspective. Grimshaw argues that nominalizations fall under two main categories; the first comprises complex event nominals (CEN) while the second consists of result nominals (RNs) and simple event nominals (SEN)), as illustrated in (5).

(5) CEN

a. The instructor's (intentional) examination of the student
b. The frequent collection of mushrooms (by students)
c. The monitoring of wildflowers to document their disappearance
d. The destruction of Rome in a day

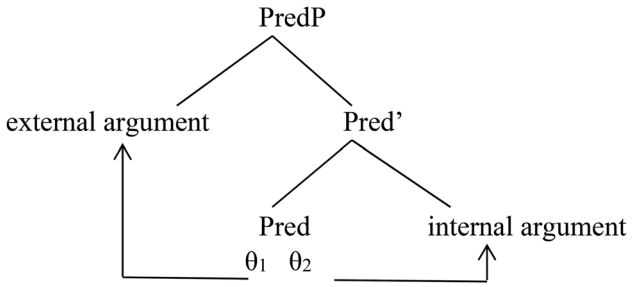
RN

a. The instructor's examination/exam
b. John's collections
c. These frequent destructions took their toll

Whereas the former has an argument structure, the latter does not have one. The fact that CENs have an argument structure by virtue of being theta-marking[3] heads account for the obligatoriness of their arguments. Whether or not a nominalization has an argument structure solely depends on the presence of an 'associated' event structure that requires an 'internal' event analysis. Under this view, argument structure is a reflection of the aspectual and thematic composition of the predicate. Lack of this composition, therefore, amounts to a lack of an argument structure. Eventually, there are six major differences between CENs and RNs. First, CENS accept modification with frequent/constant; second, subject-like possessives and by-phrases are licit with CENs; it follows that agent-oriented modifiers (intentional or deliberate) are licensed by CENs; third, CENS isincompatible with the indefinite article, numeral one, and demonstratives; CENS, therefore, are expected to resist indefinite subjects; fourth, CENS do not occur with predicative or equative 'be'; fifth, CENS allow control; last, CENS are fine with aspectual modifiers, such as 'for x' and 'in x'.

In short, the lexical approach sketched above assumes that the semantics of the verb determines the projection of arguments (Levin, 1993; Levin & Rappaport, 1986). The verb as such has an argument structure that determines the number of arguments it semantically selects (S-selection, Grimshaw, 1979). Once projected, the arguments are assigned the theta roles carried by the predicate (Chomsky's Theta Criterion, 1981).

(5)



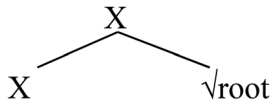
For example, the verb 'find' is a two-place predicate that carries 'agent' and 'theme'; it follows that it will be merged with an internal argument to which it assigns 'theme' and an external argument to which it assigns agent. The resulting PredP is then merged with the relevant functional projections (T and C) to form a matrix clause.

A syntactic (constructionist) approach, on the other hand, reduces the lexicon to a list of lexical items with or without phonological matrices and allows the computational system to handle all the derivational processes, a move that complicates syntactic computation and leads to a less elegant theory as it adds to the acquisitional burden (the issue of explanatory adequacy). Unattractive as it may seem, though, this move has its own merits, considering the growing body of empirical evidence that leans towards the constructionist approaches (Borer, 2005a, 2005b, 2013; Halle, 2008); Halle & Marantz, 1993; Harley & Noyer, 1999, 2000; Kratzer, 1996; Marantz, 1984, 1997; Pylkkänen, 2008; Ramchand, 2008, to name just a few).

2.3. Theoretical approach

Distributed Morphology (henceforth DM) (Halle & Marantz, 1993, 1994; Harley & Noyer, 1999, 2000; Marantz, 1997) is mainly concerned with the phonology-morphology-syntax interface and rests on the assumption that structure-building operations at the word and phrasal levels are exclusively syntactic. DM dispenses with the lexicon in the traditional sense and instead posits three sub-component lists: narrow syntax (list 1), vocabulary (list 2), and encyclopedia (list 3). The first contains lists of (formal) morpho-syntactic features (i.e. morphemes) provided by Universal Grammar (UG) and in limited cases parameterized (language-specific); the second contains vocabulary items, a set of rules that match phonological indices with morphosyntactic features and contextual instructions, and the last is a list of encyclopedic entries that match phonological indices with world knowledge. Whereas the first is generative in nature, the last two are not. It follows that the computational system operates on formal features; formal features are fleshed out post-spell-out in the phonological component through the operation of Late Insertion. Concurrently, the structure generated in narrow syntax is interpreted in logical form (LF) via the pairing of the formal features and structural configurations.

In DM, the morphological processes traditionally ascribed to the lexicon are distributed through other components. Therefore, morphological operations take place in narrow syntax or the computation of the phonological component in a separate component called Morphology, which can manipulate syntactic objects. In this model, therefore, morphemes consist of syntactic-semantic information that lacks any phonological matrices. These morphemes that function as the atoms of syntactic computation fall into two different types: l-morphemes and f-morphemes (Harley & Noyer, 1999, 2000). In this model, traditional categories are not syntactic primitive but 'derivative' terms; in other words, l-morphemes represent a non-decomposable categoriless root whose category is defined locally by the f-morphemes because a phonological expression or a Vocabulary Item (VI) is underspecified. It follows that the same VI may have different morphological realizations based on its syntactic distribution. Take, for example, the VI 'translate'; this VI may be realized as a noun if licensed by a c-commanding determiner, or as a verb if c-commanded by Aspect which itself is c-commanded by Tense. Glossing over the different functional projections between the functional head (X), (6) provides a simplified schema.

(6) 

The presence or absence of an argument structure in (6) depends on the functional structure which projects above √root. If a VP projects above √root, a deverbal nominal is assumed to inherit the argument structure of the verbal layer. Otherwise, it has a referential interpretation.

2.4. The morphology of Arabic

In this section, we discuss the morphology of both nouns and verbs. Then, we discuss the morphology of ActPs to show how ActPs have both verbal and nominal properties.

2.4.1. The morphology of nouns and verbs

The morphology of Arabic is relatively rich; words inflect for person, number, gender, case, tense/aspect, and voice (Alkhudair & Aljutaily, 2022; Al-Sughaiyer & Al-Kharashi, 2004; Azmi, 1988; Badawi et al., 2004; Benmamoun, 1999; Benmamoun & Choueiri, 2013; Fassi-Fehri, 2013; Issa, 2023; Mashaqba et al., 2022; McCarthy & Prince, 1990; Watson, 2007; Wright, 1967). Number, gender, and case exhibit a three-way system: number could be singular, dual, or plural; gender could be feminine, masculine, or neuter; case could be nominative, accusative, or genitive. Tense/aspect morphology is either perfective or imperfective (Hallman, 2015); voice has two forms: active and passive. Nouns, in Arabic, generally inflect for numbers and cases when they are inherently specified for gender (i.e. feminine or masculine). Verbs, on the other hand, inflect for tense/aspect and voice. When used in a sentence, verbs also exhibit person, number, and/or gender agreement with the subject; agreement in this case could be complete or partial depending on the position of the subject. The tables below exemplify the different nominal and verbal forms.

2.4.2. The morphology of ActPs

ActPs derive from a root consisting of three or more consonants √C1C2C3…; eventually, the ActP appears in one of two distinct morphological forms: in the first form (tri-consonantal), vowels are added between the consonants C1VC2VC3 (7a); in the second form, 'mu' is prefixed to the root and one or more vowels are added between the other consonants (8b) (Eades & Persson, 2013; Eisele, 1999; Hallman, 2017; Kharma, 1983; Mughazy, 2004; Ryding, 2005; Wright, 1967).

(7) a. kaatib
writer.3SM/writing
b. mu-rsil
sender.3SM/sending

ActPs inflect for number and so they could be singular, dual, or plural (Table 1). Table 2 shows tense/aspect inflections of the root 'k.t.b' (to write), and Table 3 shows that verbs in Arabic inflect for voice. Each one of these three forms could be feminine and masculine; the masculine forms are formed as follows: in the singular form, no other affixes are added to the stem; to form the dual, a long vowel and

Table 1. Feminine and masculine forms of the nouns 'bint' (girl) and 'walad' (boy).

	Gender	Feminine	Masculine
Singular	Nom	bint-un	walad-un
	Acc	bint-an	walad-an
	Gen	bint-in	walad-in
Dual	Nom	bint-aan	walad-aan
	Acc	bint-ayn	walad-ayn
	Gen	bint-ayn	walad-ayn
Plural	Nom	banaat-un	ʔa-walad-un
	Acc	banaat-an	ʔa-walad-un
	Gen	banaat-in	ʔa-walad-un

Table 2. Tense/aspect of the root 'k.t.b' (to write).

Tense/ aspect	Perfective	Imperfective
1SF/M	katab-tu	ʔa-ktub-u
1PF/M	katab-naa	na-ktub-u
2SF	katab-ti	ta-ktub-iina
2SM	katab-ta	ta-ktub-u
2DF/M	katab-tumaa	ta-ktub-aani
3SF	katab-at	ta-ktub-u
3SM	katabt-a	ta-ktub-u
3DF	katab-taa	ta-katub-aani
3DM	katab-aa	ya-ktub-aa
3PF	katab-uu	ya-kyub-uuna
3PM	katab-na	ya-ktub-na

Table 3. Voice forms of the root 'k.s.r' (to break).

	Active		Passive	
Voice	Perfective	Imperfective	Perfective	Imperfective
1SF/M	kasar-at	ta-ksir-u	kusir-at	tu-ksar-u
1PF/M	kasar-a	ya-ksir-u	kusir-a	yu-ksar-u

Table 4. The feminine ActP forms of the root 'ʕ.l.m' (to teach).

	Feminine forms		
	Nom	Acc	Gen
Singular	muʕallim-ah-tun	muʕallim-ah-tan	muʕallim-ah-tin
Dual	muʕallim-ah-taan	muʕallim-ah-tayn	
Plural	muʕallim-aat-un	muʕallim-aat-in	

Table 5. The masculine ActP forms of the root 'ʕ.l.m' (to teach).

	Masculine forms		
	Nom	Acc	Gen
Singular	muʕallim-un	muʕallim-an	muʕallim-in
Dual	muʕallim-aan	muʕallim-ayn	
Plural	muʕallim-uun	muʕallim-iin	

a consonant are added to the stem; the vowels are sensitive to the case of the ActP: 'aa' for the nominative forms and 'ii' for both the accusative and genitive forms; the same is true for the plural forms, but in this case, 'uu' is used for the nominative form. The feminine forms are almost identical to the masculine forms with a few differences: the singular and dual feminine forms have 'ah' sandwiched between the stem and the case ending; the plural forms have 'aat' instead of 'ah' (Gadalla, 2000). Table 4 shows that ActP can have feminine forms, and Table 5 gives an example of masculine ActP forms with regard to number (singular, dual or plural) and case (NOM, ACC or GEN).

Al-Subaihawi (2024) points out that there are other morphological forms that carry the meaning of the active participle, including the passive participle, some adjective forms, hyperboles, and the base form (masdar). When the active participle takes any of these forms, it generates different connotations. Furthermore, Younis (2024) notes that the Holy Quran contains derivatives in the form of the active participle and passive participle).

3. The syntax of ActPs

When used in a sentence, ActPs exhibit a behavior that is identical to the other non-derived nominals: they appear in almost any position where other nominal expressions do; when indefinite, they carry nunation; further, they can be prefixed by the definite article.

(8) a. ʃariba l-kaatib-u/l-walad-u
drink.pst.3SM the-writer/boy
'The writer/boy drank'.

b. ʔal-kaatib-u/ʔal-wala-du ʃariba
the-wirter/the boy drink.pst.3SM

(9) a. daxala kaatib-un/walad-un ….

enter.pst.3SM writer/boy
'A writer/boy entered'.

b. *kaatib-un/walad-un daxala
writer/boy enter.pst.3SM

(10) a. raʔai-tu l-kaatib-a/l-walad-u
'I saw the writer/boy'.

b. raʔai-tu kaatib-an/walad-an

(11) a. maʕa l-kaatib-in/l-walad-i
'with the writer/boy'

b. maʕa kaatib-in/walad-in
'with a writer/boy'

(12) a. haaða l-kaatib-u/l-walad-u laTiif-un
this the-writer/boy nice
'This writer/boy is nice'.

(13) a. waSal-a kaatib-u l-qiSSat-i
arrive.past-3SM writer-Nom the-story-Gen
'The writer of the story arrived'.

b. raʔait-u kaatib-a l-qiSSat-i
see.past-1S writer-Nom the-story-Gen
'I saw the writer of the story'.

c. maʃait-u maʕa kaatib-i il-qiSSat-i
walk.past-1S with writer-Gen the-story-Gen
'I walked with the writer of the story'.

d. kaatib-u l-qiSat-i Sadiiq-i
writer-Nom the-story-Gen friend-my
'The writer of the story is my friend'.

The sentences above show that the ActP may appear in verbal sentences as the subject or object (8 and 9); (8) shows that the ActP is fine as a definite subject whether it occurs pre- or post-verbally; an indefinite subject is only licit post-verbally (9). Additionally, indefinite and definite ActPs could appear in the object position (10). An ActP may also be the object of a preposition (11). Moreover, ActPs appear as the subject of a non-verbal sentence (aka 'nominal' sentence) (12). Last, ActPs also appear in the construct state (13). What all the sentences above clearly show is that ActPs have a distribution similar to that of other nominals.

However, in spite of all these nominal features, ActPs also seem to have verbal properties; in particular, their c-selection and c-selection requirements are identical to their verbal counterparts.

(14) a. χaalid-un mursil-un risaalat-an
χaalid-Nom sending-Nom letter-Acc

b. χaalid-un sa-yu-rsil-u risaalat-an
χaalid-Nom will-send letter-Acc

(15) a. Sadiiq-i naaʔim-un bil-ħadiqat-i
friend-my sleeping-Nom in.the-garden-Obl

b. Sadiiq-i sa-ya-naam-u bil-ħadiqat-i
friend-my will-sleep in.the-garden-Obl

In (14a) and (15a), the ActP is followed by a DP and PP, respectively; this is also the case with the verbal counterparts in (14b) and (15b). In (14a) and (14b), the (external and internal) arguments are identical. Furthermore, notice the case and agreement patterns in both structures.

(16) a. χaalid-un mursil-un risaalat-an
χaalid-Nom sending-Nom letter-Acc

b. χaalid-un sa-yu-rsil-u risaalat-an
χaalid-Nom will-send letter-Acc

c. ʔinna χaalid-an mursil-un risaalat-an
that χaalid-Acc sending-Nom letter-Acc

	d.	ʔinna	χaalid-an	sa-yursil-u	risaalat-an
		that	χaalid-Acc	will-send	letter-Acc
(17)	a.	χaalid-un	mursil-un	risaalat-an	
		χaalid-Nom	sending-Nom	letter-Acc	
	b.	ʔasdiqaaʔ-i	mursil-uu-na	risaalat-an	
		friends-my	sending-Nom	letter-Acc	
	c.	χaalid-an	sa-yursil-u	risaalat-an	
		χaalid-Nom	will-send	letter-Acc	
	d.	ʔasdiqaaʔ-i	sa-yursil-uu-na	risaalat-an	
		friends-my	will-send	letter-Acc	

In Arabic, subjects usually carry nominative case while objects carry accusative case; the subject carries accusative case when preceded by the complementizer 'ʔinna' (that). In (16a), the subject before the ActP carries nominative case, and so does the subject in the verbal counterpart (16b); however, when preceded by 'ʔinna', the subject before the ActP carries accusative case (16c). The agreement pattern with ActPs is also similar to the verbal counterparts: the verb agrees in person, number, and gender with the subject; this is also the case when the predicate is an ActP: here the ActP also agrees with the subject in person, number, and gender (17).

In addition, the behavior of wh-phrases with both ActPs and verbs seems to be identical; yes/no questions are also similar in both cases.

(18)	a.	Sadiiq-i	mu-rsil-un	risaalat-an	
		friend-my	sending-Nom	letter-Acc	
	b.	man	mu-rsil-un	risaalat-an?	
		who	will-send	letter-Acc	
	c.	maaðaa	Sadiiq-i	mursil-un?	
		what	friend-my	sending-Nom	
	d.	hal	Sadiiq-i	mursil-un	risaalat-an?
		Q-particle	friend-my	sending-Nom	letter-Acc
	e.	ʔ-mursil-un	Sadiiq-i	risaalat-an?	
		sender-Nom	friend-my	letter-Acc	
(19)	a.	Sadiiq-i	sa-yursilu	risaalat-an	
		friend-my	will-send	letter-Acc	
	b.	man	sa-yursilu	risaalat-an?	
		man	will-send	letter-Acc	
	c.	maaða	sa-yursilu	Sadiiq-i?	
		friend-my	letter-Acc	will-send	
	d.	hal	sa-yursilu	Sadiiq-i	risaalat-an?
		Q-particle	will-send	friend-my	letter-Acc
	e.	ʔ-sa-yursilu	Sadiiq-i	risaalat-an?	
		will-send	friend-my	letter-Acc	

Both (18b & c) and (19b & c) show that the subject and object can be questioned. (18d & e) and (19d & e) further show that yes/no questions are also formed the same way in ActP and verbal contexts. As a first approximation, therefore, one may be tempted to conclude that ActPs are verbal predicates whose syntactic behavior is almost identical to other instances of verbal predication. However, we will show in the following section that this is the wrong conclusion.

4. Discussion

4.1. How ActPs are different from their verbal counterparts

We show below that there are significant differences between the use of ActPs and verbs in clauses. To begin with, 'ʔinna' can introduce sentences with an ActP (20a), but this is never the case in VSO sentences (20b).

(20) a. ʔinna χaalid-an kaatib-un risaalat-an
that χalid-Acc writer-Nom letter-Acc
b. *ʔinna sa-ya-ktub-u χaalid-un risaalat-an
that will-3-write χaalid-Nom letter-Acc
c. *ʔinna χaalid-un sa-ya-ktub-u risaalat-an
that χaalid-Nom will-3-write letter-Acc

For a verbal sentence to be licit with 'ʔinna', the subject has to be fronted (20c); in this case, however, the semantics of the proposition considerably changes; with a fronted subject, the structure has a categorical interpretation: the speaker is interested in the subject, not the event itself. Second, in verbal predication, the negative particles that could be used are 'lam', 'laa', 'lan', and 'maa' (not); with ActPs, however, only 'laysa' is used.

(21) a. kataba
write.pst
b. lam ya-ktub
Neg 3-write
c. maa kataba
Neg write.pst
d. ya-ktub-u
3-write.pres-
e. laa ya-ktub
Neg 3-write.pres
f. sa-ya-ktub-u
will-3-write-
g. lan ya-ktub-a
Neg 3-write-
h. *laysa katab-a /ya-ktub-u/sa-yaktub-u
(22) a. χaalid-un laysa kaatib-an l-risaalat-a
χaalid-Nom Neg writing-Acc the-letter-Acc
b. χaalid-un *lam/maa/laa/lan kaatib-an l-risaalat-a

In Arabic, the negative particles are tense-oriented: 'lam' is used to negate perfective forms (21a), and when it is used, only the imperfective form (21b) is used; 'maa' negates perfective forms, and the perfective form is maintained (21c); 'laa' and 'lan' are used to negate perfective forms that are present or future oriented (21d, e, & f); (21e) and (21 g) show that the perfective and imperfective forms are both incompatible with 'laysa'. (22) shows that the opposite holds with ActPs. Third, the ActP can never be placed before the subject (23). When placed before the subject, the resulting structure is ill-formed.

(23) a. χaalid-un mursil-un risaalat-an
χaalid-Nom sending-Nom letter-Acc
b. *mursil-un χalid-un risaalat-an

When the predicate is verbal, however, placing the verb before the subject is the unmarked order (24).

(24) a. χaalid-un sa-yu-rsil-u risaalat-an
χaalid-Nom will-send letter-Acc
b. sa-jursil-u χaalid-un risaalat-an

Fourth, unlike verbal predicates (25), ActPs (26) are incompatible with the particles 'qad' and 'laqad'.

(25) a. qad/laqad ɣadara l-muʕallim-u.
indeed leave.past the-teacher
b. qad juɣaadiru l-muʕallim-u.
indeed leave.present the-teacher

(26)	*qad	l-muʕallim-u	mu-ɣadir-un.
	indeed	the-teacher	leaving-Nom

In (25a) the perfective form the verb is used with either 'qad' or 'laqad'; in (25b), 'laqad' is used with the imperfective form. (26), however, shows that neither particle can be used with an ActP or in non-verbal predication. Fifth, the behavior of ActPs in interrogatives is also different. Consider the following sentences:

(27)	a.	χaalid-un	sa-ya-ktub-u	risaalat-an
	b.	maaða	sa-ya-fʕal-u	χaalid-un?
(28)	a.	χaalid-un	kaatib-un	risaalat-an
	b.	maaða	*sa-ya-fʕl-u	χaalid-un?

It is clear that, when inquiring about what 'χaalid' intends to do, use of the verbal form along with the future suffix is fine (27b); however, the same verbal form cannot be used to ask about a sentence with the ActP (28b).

4.2. ActP as a non-verbal predicate

We argue below that all the properties characteristic of non-verbal predication are also exhibited by Arabic ActPs; non-verbal predication in Arabic has the following characteristic features: first, in declarative sentences, the subject of the non-verbal predicate (nominal, adjectival, or prepositional) carries nominative case (29a, b, c); if, however, it is preceded by the complementizer 'ʔinna' (indeed), it carries accusative case (30a, b, c). This is also the case with ActPs (31a, b)

(29)	a.	haaða	l-walad-u	Taalib-un
		this.3PS	the-boy-Nom	student-Nom
		'This boy is a student'.		
	b.	haaða	l-walad-u	Tawiil-un
		this.3PS	the-boy-Nom	tall-Nom
		'This boy is tall'.		
	c.	ʔal-walad-u	fil-ħadiiqa-ti	
		the-boy-Nom	in-the-garden–Nom	
		'The boy is in the garden'.		
(30)	a.	ʔinna	haaða	l-walad-a	Taalib-un
		that	this.3PS	the-boy-Acc	student-Nom
	b.	ʔinna	haaða	l-walad-a	Tawiil-un
		that	this.3PS	the-boy-Acc	tall-Nom
	c.	ʔinna	l-walad-a	fil-ħadiiqa-ti	
		that	the-boy-Acc	in-the-garden-Nom	
(31)	a.	χaalid-un	kaatib-un	risaalat-an	
		Khaled-Nom	writing-Nom	letter-Acc	
	b.	ʔinna	χaalid-an	kaatib-un	risaalat-an
		that	Khaled-Acc	writing-Nom	letter-Acc

Second, in non-verbal predication, the negative particle used is 'laysa' (32); with ActPs, 'laysa' is also used (33a, b):

(32)	haaða	l-walad-u	laysa	Tawiil-an
	this	the-boy-Nom	Neg	tall-Acc
(33)	χaalid-un	laysa	kaatib-an	risaalat-an
	χaalid-Nom	Neg	writing-Acc	letter-Acc

Third, ActPs can never be placed before the subject (34). When placed before the subject, the resulting structure is ill-formed.

(34) a. χaalid-un mursil-un risaalat-an
χaalid-Nom sending-Nom letter-Acc
b. *mursil-un χaalid-un risaalat-an

This property also characterizes non-verbal predicates; in (35) placing the adjective predicate (35a) and the predicate nominal (35b) before the subject renders the sentences unacceptable.

(35) a. χaalid-un Tawiil-un
χaalid-Nom tall-Nom
b. *Tawiil-un χaalid-un
c. χaalid-un muʔallim-un
χaalid-Nom teacher-Nom
d. *muʔallim χaalid-un

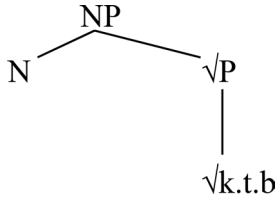
Fourth, ActPs (36a) and non-verbal predicates (36b) both do not license the use of the particles 'qad' and 'laqad'. Last, both ActPs (37a) and non-verbal predicates (37b) are used with 'ʔinna' (that).

(36) a. *qad l-muʕallim-u mu-ɣadir-un.
indeed the-teacher leaving-Nom
b. *qad l-muʕallim-u Tawiil-un.
indeed the-teacher tall-Nom
(37) a. ʔinna l-muʕallim-u mu-ɣadir-un.
indeed the-teacher-Nom leaving-Nom
b. ʔinna l-muʕallim-u Tawiil-un.
indeed the-teacher-Nom tall-Nom

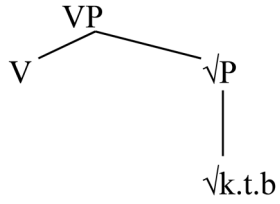
4.3. How ActPs project into a root clause

In what follows, we use DM to explain how ActPs project into a matrix CP. In DM, the basic building block of the syntactic derivation is the categories root. Being underspecified, this root projects into a nominal or verbal category. The nominal or verbal identity acquired by this root depends on the projection which c-commands it; the end result, therefore, is a NP or VP, respectively (38–39).

(38)



(39)



To explain how the ActP projects into a root clause, we outline a bottom-up derivation of the Arabic ActP. This derivation is meant to show how the unspecified root combines with the relevant substantive and functional projections to form a sentence. Consider the following example.

(40) χaalid-un kaatib-un qiSSat-an ɣadan
khalid-Nom writing-Nom story-Acc tomorrow

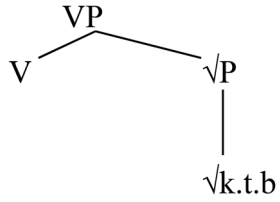
In (40), the tri-consonantal root 'k.t.b.' (to write) represents an abstract terminal that has no phonological content. In Harley and Noyer (1999, 2000) terminology, 'k.t.b.' is an l-morpheme that gets 'verbalized' or 'nominalized': how it is eventually realized depends on the closest c-commanding head. This root heads its own projection √P: [$_{√P}$ [$_{√k.t.b}$]]; since this root is underspecified, it must merge with a nominalizer or a verbalizer; obviously, the root in (40) has verbal qualities as evidenced by the fact it appears with two arguments and an adverbial of time on a par with its verbal counterpart (41). This shows that the root in (40) is merged with V to form a VP (42).

(41)

χaalid-un	sa-ya-ktub-u	qiSSat-an	ɣadan
khalid-Nom	fut-write.pres.3SM	story-Acc	tomorrow

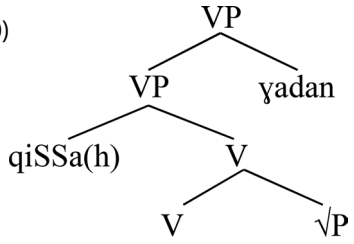
'Khalid will write a story tomorrow'.

(42)



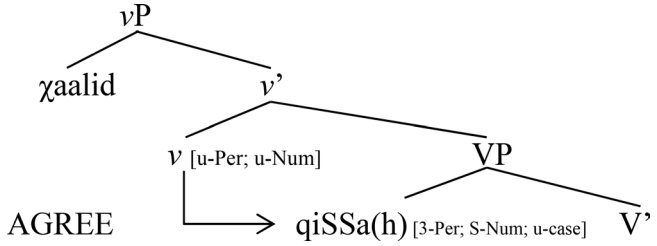
In approaches where the arguments are severed from the verb (Chomsky, 1995; Kratzer, 1996; Landau, 1999; Marantz, 1984, 1997; Pylkkänen, 2008), the (internal and external) arguments are projected as specifiers of the functional layers, in particular V, little v, Aspect, or Voice. On this account, we assume that the internal argument 'qiSSa(h)' merges as the specifier of VP. The time adverbial is right-adjoined to the VP projection (40).

(40)



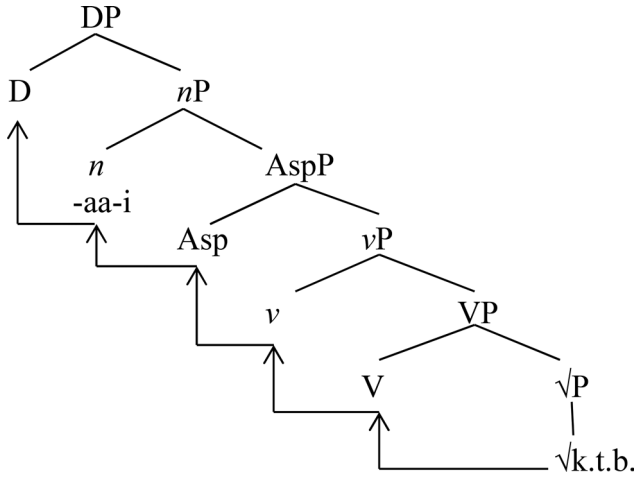
The resulting structure is merged with little *v*; on standard minimalist terms (Chomsky, 2000, and subsequent work), little *v* has unvalued person, number, and gender features (u-Per; u-Num; u-Gen) that are uninterpretable; these features render little *v* as an active probe; to get its features valued, little *v* looks for an active goal with matching features in its search domain; little *v* locates 'qiSSa(h)' which has valued person, number, and gender features (3-Per; S-Num; Neut-Gen), as well as an unvalued case feature (u-Case). AGREE takes place, whereby 'qiSSa(h)' values the features of little *v*, and little *v* in turn assigns the accusative case to 'qiSSa(h)'. The external argument (χaalid) is merged as the specifier of *v*P (41).

(41)



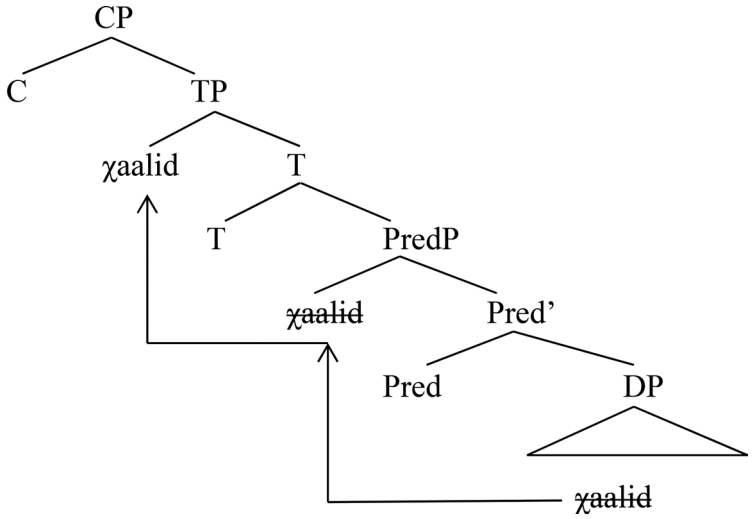
The resulting structure merges with Aspect, forming AspP; that an aspectual phrase project above *v*P is evidenced by the fact that the ActP has a present or future reading (Fassi-Fehri, 1993); Fassi-Fehri further argues that the source of the present/future reading cannot be attributed to inflection; rather, it stems from the sensitivity of the structure to 'lexical or situation aspect (aktionsart)' because the fact that these structures license present/future adverbs as evidenced by the use of 'ɣadan' (tomorrow) in (38). AspP is then merged with the nominalizer (little *n*), forming *n*P. *n*P then merges with D, forming DP (42).

(42)



The tri-consonantal root '√k.t.b.' undergoes head raising to D through V, *v*, Asp, and *n*. In *n*, this root gets nominalized. The predicate nominal (DP) is then merged with a predicate head (Pred) to form PredP. Pred P merges with T, forming a TP, and TP is merged with C to form a matrix CP (43).

(43)



The external argument (χaalid) raises successive cyclically to the left edge of PredP. Matrix T has unvalued person, number, and gender features. T probes for an active goal. It locates Arg2, which has valued person, number, and gender features. AGREE holds between T and Agr2; the features of T get valued; at the same time, assigns the nominative case to Arg2. To satisfy the EPP feature of T, Arg2 is internally merged in the specifier of TP.

The analysis above clearly shows how DM better captures the relevant facts about the ActP in Arabic. Evidently, the Arabic ActP alternates between a nominal reading and a verbal one; what this amounts to is the fact that the same form can be referential or eventive. In DM, roots are assumed to be categories, and the root is verbalized or nominalized based on the functional layers that c-command it. It follows that the nominal or verbal nature of the ActP can be easily accounted for based on its syntactic distribution, a feature that the discussion and analysis above have attempted to highlight.

5. Conclusion

One important aspect of nominalization in human language is the fact that it gives rise to ambiguous structures. It so happens that when a verbal element is de-verbalized, its verbal properties are maintained along with the nominal character it acquires. It follows that nominalization is of the essence because it sheds light on the very nature of syntactic computation; in particular, it helps figure out the input to syntactic derivations. That's why, this paper focused on a particular type of nominalization in

Arabic, known as the Active Participle, to show that, in languages that exhibit a root-and-pattern morphology (e.g. Semitic), the claim that consonantal roots are lexically specified for a certain grammatical category is untenable. Rather, only a syntactic approach captures the relevant features of nominalization in Arabic. Utilizing DM, we argued that the eventive reading of ActPs stems from the fact that these deverbal structures have an extended verbal projection, inside which the arguments are projected as specifiers of the functional layers that project above an atomic, non-decomposable root.

Notes

1. The citation form of ActP is similar to English –er agentive nominals, but when used in a sentence, its most natural English equivalent is the progressive form.
2. A third type of nominalization, the mixed form (Chomsky, 1970: 60), seems to also be lexically derived, though less clearly: 'John's refusing of the book'.
3. Their ability to theta-mark is contingent on the presence of a preposition.

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About the authors

Ayman Yasin is currently the head of the Coordination Unit for Service Courses at Princess Sumaya University for Technology in Jordan. He studied linguistics at Purdue University in Indiana, USA (2008-2012). He is interested in social sciences in general and in linguistics in particular. He has published a number of papers in syntax, phonology, translation, and prosody. Dr. Yasin has also taught MA and PhD courses in linguistics and translation at the University of Jordan (part timer). He is supervisor and an external examiner for many MA and PhD theses in various Jordanian universities. He has experience in IELTS testing and he serves as a reviewer in several journals. Dr. Yasin has taught different language courses at university and at language centers that focus on the four skills: listening, reading, writing and speaking. He adopts the communicative approach which makes his classes very fun and interactive.

Dr. Osama Abdelghafer is an Assistant Professor in the Department of English Language and Linguistics at Jordan University of Science and Technology (JUST) in Irbid, Jordan. He earned his Ph.D. in Theoretical Linguistics with a focus on Generative Grammar from the University of Kansas in 2003. Dr. Abdel-Ghafer's teaching career includes positions at JUST since 2004 and at Applied Science Private University in Amman from 2014 to 2017. His research interests encompass syntactic theory and Optimality Theory, with publications such as "An existential expletive: fii of Jordanian Arabic" and "The Arabic quantifier 'kull'. His work has been cited in various linguistic studies, reflecting his contributions to the field. In addition to his teaching and research, Dr. Abdel-Ghafer has served in editorial roles, including as Senior Editor for the *Kansas Working Papers in Linguistics* during his time at the University of Kansas. He has also been involved in academic workshops focusing on problem-based learning and online learning design, contributing to the advancement of educational methodologies at JUST.

ORCID

Ayman Yasin http://orcid.org/0000-0002-0734-2930

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