

**MASDARS
AND
MIXED CATEGORY CONSTRUCTIONS**

Kersti Börjars, Safiah Madkhali
and John Payne

The University of Manchester

Proceedings of the LFG15 Conference

Miriam Butt and Tracy Holloway King (Editors)

2015

CSLI Publications

<http://csli-publications.stanford.edu/>

Abstract

In Arabic grammar the term MASDAR is applied to a variety of noun forms derived from verb and other stems according to a set of partially regular but largely irregular morphological patterns (Ryding 2005). Three deverbal masdar forms allow complex event interpretations in which the verbal argument structure is inherited, but at the same time, they display a range of nominal properties. In both transformational and LFG treatments, these phrases have been assumed to have both verbal and nominal syntax. We propose instead that verbal functions be permitted inside what is categorially an NP from top to bottom.

1 Introduction

In Arabic grammar, the term MASDAR is applied to a variety of noun forms derived from verb and other stems according to a set of partially regular but largely irregular morphological patterns (Ryding 2005). The three deverbal masdar forms which potentially allow complex event interpretations are: (i) the basic masdar (BM), which is the most productive and heterogeneous form and has the widest distribution (e.g. *ʔatāba* ‘reward’ ~ *ʔitāba(t)* (reward.BM) ‘rewarding’); (ii) the *mim* masdar (MM), which is less productive and distributionally more restricted, and characteristically prefixed by *mV-* (e.g. *matāba(t)* (reward.MM) ‘rewarding’); and (iii) the non-stem-derived masdar (NSDM), whose formation is essentially unpredictable and does not include all the consonants of the root (e.g. *tawāb* (reward.NSDM) ‘rewarding’).

There are two different constructions involving the masdar which have mixed category properties, we will refer to the two types as Masdar Mixed Construction A (MMC A) and Masdar Mixed Construction B (MMC B). All of the masdar forms mentioned above occur in both MMC A and MMC B.

2 Masdar Mixed Construction A

2.1 *Properties*

We will illustrate here with the BM, but the MM and NSDM show an identical apparent mixture of nominal and verbal characteristics. Like verbs, and unlike nominals generally, masdars derived from transitive verbs characteristically take an accusative object in MMC A as illustrated in the basic monotransitive example in (1).

- (1) **ʔakl-u** **l-walad-i** it-tufāhat-a
 eat.BM-NOM DEF-boy-GEN DEF-apple.ACC
 ‘the boy’s eating the apple’

A further verbal property is that the masdars in the MMC A construction permit **only** adverbial modification, as in (2a), involving a monotransitive verb with a clitic genitive pronoun. The adverb *muʔakkarān* ‘recently’ must follow the object rather than precede it as in (2b), and cannot be substituted by the corresponding adjective in either position (see 2c and 2d):¹

- (2) a. **tansīq-u=hā** iz-zuhōr-a muʔakkarān
 arrange.BM-NOM=3FS.GEN DEF-flowers-ACC recently
 ‘her arranging the flowers recently’
- b. ***tansīq-u=hā** muʔakkarān iz-zuhōr-a
 arrange.BM-NOM=3FS.GEN recently DEF-flowers-ACC
- c. ***tansīq-u=hā** iz-zuhōr-a ʔal-ʔakki:r-u
 arrange.BM-NOM =3FS.GEN DEF-flowers-ACC DEF-last-NOM
- d. ***tansīq-u=hā** ʔal-ʔakki:r -u iz-zuhōr-a
 arrange.BM-NOM =3FS.GEN DEF-last-NOM DEF-flowers-ACC

As shown in (3), the masdar can also inherit two accusative object arguments.

- (3) **taslīm-a=hā** il-muwazaf-īna
 hand.BM-ACC=3FS.GEN DEF-employee-PL.ACC
 rawātib-a=hum fawran wa bidōni taʔxīr
 salaries-ACC=3PL.GEN immediately and without delay
 ‘its [the company’s] handing the employees their salaries immediately
 and without delay’

¹ In Arabic, the vast majority of adverbs are derived from adjectives, in which case they assume the accusative form of the corresponding adjective. Unlike adjectives, they are invariant, and show no agreement in case, gender, number or definiteness. In some cases, as in the examples in (2), the relationship between adjective and adverb is not completely transparent. The adverb *muʔakkarān* ‘recently’ has no direct adjectival source. The adjective *ʔakki:r-* ‘last’ has the same root, but has a different meaning and form. Also, just a handful of adverbs are morphologically simple, e.g. *jiddan* ‘very’.

Example (3) also contains adverbial modification, the adverbial in this case represented by a coordinated adverb and adjunct PP. Adjectival modification would again be impossible.

These essentially verbal properties (accusative objects and inability to take adjectival modification) are combined with a number of nominal characteristics. The whole construction has the external distribution of an NP.² Another salient nominal property of the masdar itself is its ability to be marked for case, e.g. nominative in (1) and (2a) and accusative in (3). Furthermore, the masdar and the immediately following genitive NP (either a clitic pronoun or a full NP) form the tight-knit CONSTRUCT STATE (CS) construction typical of basic possessive NPs in Arabic. In the monotransitive examples in (1) and (2), and the ditransitive example in (3), the genitive NP represents the highest, typically agent, argument, and the accusative NP or NPs represent lower arguments, typically theme or recipient.

The CS construction found in (1), (2) and (3) is the same construction that is used more generally to indicate possessor relations in the NP, as exemplified in (4).

- (4) tufāhat-u l-walad-i
apple-NOM DEF-boy-GEN
'the apple of the boy'

It is also a component of MMC B, as will be shown in Section 3 below.

Some crucial characteristic properties of the CS construction are shared by all the MMC A examples in (1), (2) and (3). Nothing can intervene between the head noun and following genitive NP. In both construction types the head noun itself is not marked definite, even though the whole NP is definite. This property of the CS construction, DEFINITENESS INHERITANCE, has been widely discussed and has received varying analyses in the literature. An LFG analysis of analogous CS constructions in Hebrew is for example to be found in Falk (2001). See also Danon (2008), and the discussion of Arabic CS constructions with adjectival heads in Alsharifi & Sadler (2009). Definite inheritance bears some resemblance to the definiteness effect observed in many languages, where the mere presence of a possessive determiner imposes a definite interpretation on the NP as a whole (see Haspelmath (1999) for a typological discussion). It differs however in that only NPs whose possessive NPs are themselves definite receive a definite interpretation.

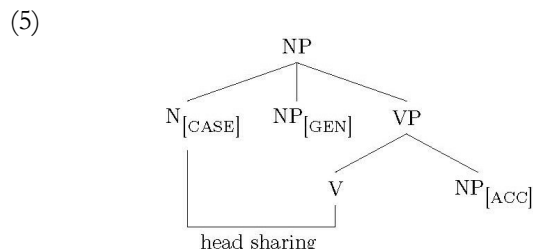
² We assume that full nominal arguments are of the category NP — rather than for instance DP — in Arabic, but nothing hinges on this assumption. See (7) for assumed annotated c-structure rules for Arabic noun phrases.

2.2 Previous analyses

Early analyses of the MMC A construction in Arabic took a transformational form involving movement of a verbal head to a higher nominal head position, e.g. Fassi-Fehri (1993). Such an analysis would in principle not be available within a lexicalist architecture such as LFG. MMC A rather seems to fall squarely within the ambit of LFG head-sharing analyses, and indeed is placed there (though without detailed analysis) by Bresnan (1997). Al-Sharif (2014) makes the same suggestion.

There are some issues, though. In the classic head-sharing analysis of mixed category event nominalizations such as that applied to the Italian *infinito sostantivato* construction in Bresnan (1997), there are, as in the earlier movement analysis, two structural heads of differing categories: a V and an N. The nominalized form of the verb (in the Italian example an infinitive form) is the V head of a VP which also houses any core NP objects and accompanying adverbials. This VP is then the sister of an N which projects to the NP level and houses any properly nominal constituents of the construction such as determiners and adjectives. Technically, the higher N functions as an extended head of the lower V, and it is the lower V which provides the PRED value of the corresponding f-structure.

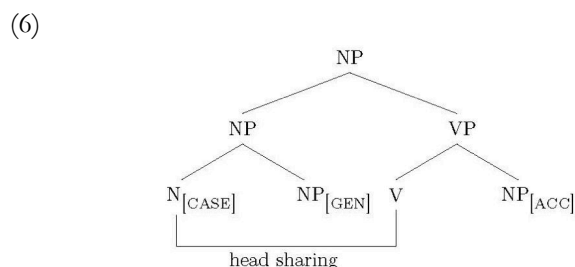
An attempt to apply an analysis of this kind to a monotransitive MMC A might schematically look like (5):



Note that the masdar in MMC A, unlike the Italian infinitive, would have to sit in the higher N position, where it would provide the PRED value of the corresponding f-structure. This is firstly because it is separated from the accusative object by the genitive NP, and secondly because it is clearly a noun. For example, it displays characteristically nominal properties such as being marked for case. This is in itself unproblematic: a configuration in which the extended N head must be analysed as lexically filled in a head-sharing analysis rather than the lower V head is found in the agent nominalisations of Gĩkũyũ (Bresnan & Mugane 2006). The issue with (5) rather rests in the fact that as it stands it fails to capture the tight-knit nature of the CS construction consisting of the head noun and following genitive NP. In particular, in the basic CS construction as illustrated in (4), and indeed in the CS construction found in MMC B, the combination of the head noun and following genitive NP forms a

constituent. The constituency of the CS in MMC B is shown in example (13) below.

An alternative to (5) which preserves the notion of head-sharing, but treats the CS as a constituent, might schematically be represented as (6):



In this analysis, the masdar would similarly sit in the N head position, but the VP housing the accusative object (and any adverbials) would sit in an adjunct position (here represented as sister and daughter of NP). This is analogous to the analysis of Dagaare agent nominalizations in Bresnan (1997), where the posited VP housing objects and adverbials must likewise be separated from the head noun by an overtly nominal constituent (in the Dagaare case a modifying adjective). An analysis of this kind raises both technical and conceptual issues. Firstly, it is difficult to reconcile the notion of extended head with this configuration, where the N does not stand in a sister relation to the VP. Secondly, the adjunct function of the VP does not sit easily with the potential obligatoriness of the object in the construction.

2.3 Proposed analysis for MMC A

Instead therefore of analysing the Arabic masdar constructions as head-sharing constructions in the classic sense, we propose here an analysis in which these constructions are purely nominal from top to bottom. The job of permitting object functions within the NP will fall to f-structure. The masdar forms in question will inherit their functional structure directly from the corresponding verbs, and this will result in a principled extension to the realisational potential of nominal forms denoting complex events, rather than entailing the presence of a concomitant syntactic VP.

This analysis in some ways reflects the HPSG analysis of English verbal gerunds in Malouf (2000). Malouf observes that the oddity of verbal gerunds lies in the fact that they are noun-like in terms of their category, but verb-like in terms of their selectional properties. This is translated in Malouf's analysis into the notion that a verbal gerund head can subcategorize for NP complements, while at the same time preserving nominal characteristics. In LFG terms, subcategorisation principles convert into f-structure principles of argument

selection. Unlike Malouf, however, we will not treat nominalized heads such as masdars as belonging to a separate lexical category (verbal gerund) which inherits its properties from both nouns and verbs. In our analysis, the forms in question are unequivocally nouns.

To be precise, in MMC A the tight-knit CS constituent will be extended to include accusative objects. This captures a generalization that covers all the core arguments: they are sisters of the masdar. It also reflects the fact that these accusative objects are, similarly to the genitive NP representing the highest argument, tightly bound to the masdar. Just as nothing can intervene between a masdar in the CS and the following genitive NP, neither can anything intervene between the genitive NP and a following object NP, or indeed between two object NPs in case of ditransitive forms. To this constituent consisting of the masdar and its core arguments obliques and/or adjuncts can be added in free order.

The annotated c-structure rules which license the proposed structure for MMC A are given in (7):

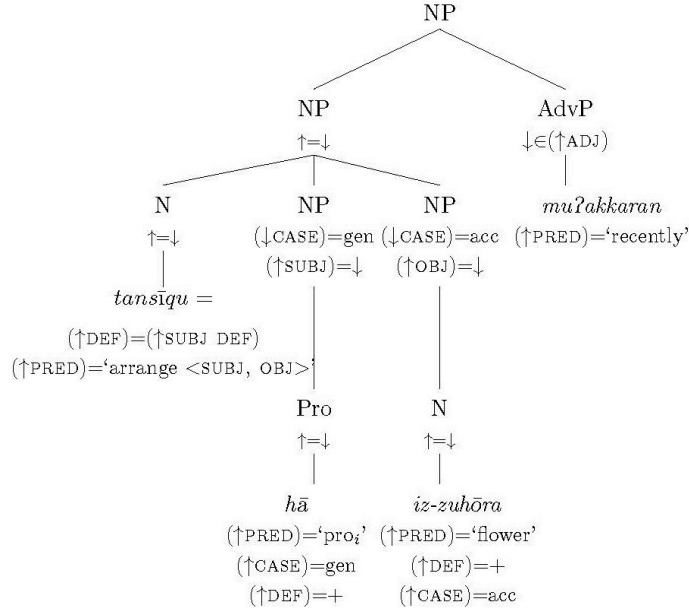
- (7) (i) NP → N NP NP NP
 ↑=↓ (↓CASE)=gen (↓CASE)=acc (↓CASE)=acc
 (↑SUBJ)=↓ (↑OBJ)=↓ (↑OBJ_θ)=↓
- (ii) NP → NP PP
 ↑=↓ (↑OBL)=↓
- (iii) NP → NP XP
 ↑=↓ ↓ ∈ (↑ADJ)

As usual, these rules are to be construed as maximal. In particular, the presence of any of the dependent NPs in (7i) will be licensed by the requirements of the head noun, and in particular its argument structure.³

A proposed analysis for (2a) is then provided in (8).

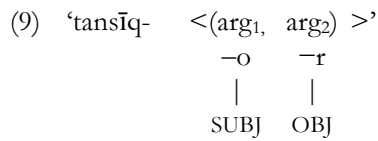
³ A complication here is that the genitive NP in MMC A is optional. The first argument must then be interpreted as a pronominal subject via anaphoric control.

(8)

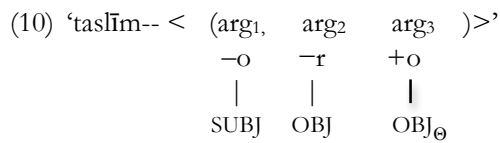


It will be noted that the definiteness inheritance property of the CS emerges in this analysis from the lexical entry of the head noun, which takes a distinctive form marked neither by the definite prefix *il-* and its variants, nor by the indefinite suffix *-n*. Nouns in this distinctive form bear the annotation $(\uparrow\text{DEF}) = (\uparrow\text{SUBJ DEF})$ which will force them to co-occur with a SUBJ, and the definiteness of the NP as a whole will be inherited from this SUBJ. In spirit this follows Alsharifi and Sadler's (2009) lexical treatment of the adjectival construct state in Arabic, though the details of the nominal and adjectival constructions are different.

We assume that the verbal argument structure is inherited in its entirety by the masdar and is as illustrated in (9).



The double object argument structure of the masdar in (3) is also directly inherited:



Following the conventions proposed in Kibort (2014), we label the arguments as arg_1 , arg_2 and arg_3 . The first argument will be realized as a SUBJ, which inside a nominal will be marked by genitive case. The second argument will be an OBJ, and marked accusative. The third argument in the double object construction is an OBJ_θ and likewise accusative.

3 Masdar Mixed Construction B

All the masdar forms in question permit an alternative construction to MMC A in which a second argument is expressed not by the accusative case, but rather by a PP headed by the preposition *li-* ‘of/to’. Also, unlike in MMC A, adjectival modification is permitted (Bardeas 2009: 257). Example (11a) is an instance of MMC B:

- (11) a. ʔakl-u l-walad-i as-sarīʕ-u li-t-tufāhat-i
 eat.BM-NOM DEF-boy-GEN DEF-fast.NOM of-DEF-apple-GEN
 ‘the boy’s fast eating of the apple’
- b. * ʔakl-u l-walad-i li-t-tufāhat-i as-sarīʕ-u
 eat.BM-NOM DEF-boy-GEN of-DEF-apple-GEN DEF-fast.NOM

As shown in (11b), there is an ordering constraint: any adjective in MMC B must occur immediately adjacent to the CS, i.e. directly following the genitive NP. This constraint on adjective ordering is however a constraint which equally applies to the basic CS construction, and is not something which is special to MMC B. We will therefore not discuss it further here.

Adjectival modification is thus an unequivocal indicator that we are dealing with MMC B, just as the presence of an accusative object is an unequivocal indication of MMC A. It should be noted however that MMC B also allows the possibility of modification by adverbs, as illustrated in (12).

- (12) tansīq-u=hā il-mutqan-u li-z-zuhōr-i
 arranging.BM-NOM=3FS.GEN DEF-perfect-NOM of-DEF-flowers-GEN
 muʔakkaran
 recently
 ‘her perfect arranging of the flowers recently.’

It can be seen from this example that the presence of the adjective *mutqan-* ‘perfect’ does not preclude the simultaneous presence of the adverb *muʔakkaran* ‘recently’. Because of the constraint on adjective ordering, the adverb necessarily follows the adjective.

The constituency of the CS unit consisting of the head noun and genitive NP can be neatly demonstrated in MMC B by coordination facts: it is possible

to coordinate instances of the CS and modify this coordinate constituent by a single adjectival modifier, as in (13).

- (13) fayadān-u in-nahr-i wa infijār-u
 flooding.BM-NOM DEF-river-GEN and exploding.BM-NOM
- il-burkāni ʔal- mufājiʔ-āni fī il-bilād
 DEF-volcano.GEN DEF-sudden-NOM.DU in DEF-country
 ‘the sudden flooding of the river and exploding of the volcano in the
 country’

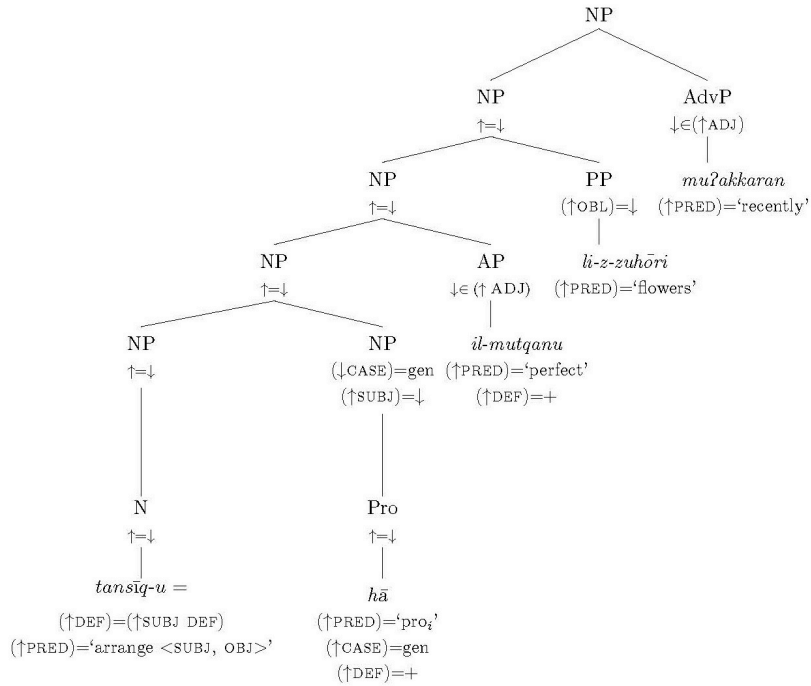
Note that the adjective *mufājiʔ*- ‘sudden’ transparently shows by its dual agreement that it must modify both the coordinates. This fact precludes an analysis of the CS construction in which the adjective is internal to the CS, as suggested by Falk (2001) for the analogous construction in Modern Hebrew.

We propose therefore that MMC B requires no addition to the c-structure rules given in (7).⁴ The core of the construction is a CS consisting of the masdar and following genitive NP. There are no accusative objects, but rather the possibility of a PP argument as licensed by rule (7ii). Adjectives and adverbial modifiers are both licensed by the adjunct rule (7iii). A proposed analysis of (12) is the provided in (14).⁵

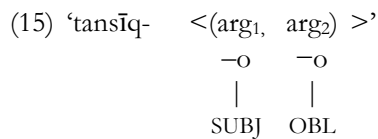
⁴ The first NP is omissible and the SUBJ argument can be interpreted (as in MMC A) via anaphoric control. In this case, however, the masdar must be prefixed by the definiteness marker. We leave a treatment of this non-CS variant to future research.

⁵ Since it is not directly relevant to our argument, we do not analyse the internal structure of the preposition phrase, and we not provide f-structure features beyond the PRED feature of the noun.

(14)



The PP-argument construction is not an alternative permitted by the corresponding transitive verbal argument structure, and will require the postulation of an alternative more consistently nominal functional structure, with the second argument represented by an oblique. Hence we assume that in this mapping, the second argument is [-o], i.e. not an object, and mapped instead to OBL, as in (15).



MMC B is more consistently nominal than MMC A in that it allows adjectival modification and disallows accusative objects. However, like MMC A, it permits the presence of adverbs. In this respect Arabic is similar to English, in which the widespread postmodification of nouns by semantically appropriate adverbs has been documented (Payne, Huddleston and Pullum 2010). We assume that the potential for adjectival modification can be based on the semantic structures assigned to mixed and more consistently nominal constructions. See Section 4 below.

Note then that in the case of a masdar construction derived from an intransitive verb, where the genitive NP of the CS represents the sole argument, it is the presence of an adjectival modifier which signals the presence of MMC B. Otherwise, the structural distinction between MMC A and MMC B is neutralized. In particular, the sole presence of modification by an adverb, as in (16), is not sufficient to signal the presence of MMC A.

- (16) ?inhiyār-u il-ḥālat-i iṣ-ṣiḥiyat-i
deteriorating.BM-NOM DEF-state-GEN DEF-health-GEN
- fajʔatan li il-ṣāhil-i is-suṣṣūd-i
suddenly of DEF-monarch-GEN DEF-Saudi-GEN
‘the deteriorating of the state of health suddenly of the Saudi monarch’

We leave it an open question whether the more mixed MMC A might be considered more marked than the more consistent MMC B. If that were the case, in the absence of a specific indicator of MMC A, i.e. an accusative object, we would have an instance of MMC B.

4 Semantics of Masdar Mixed Constructions

The masdar constructions are transpositions from V to N (cf. Spencer 2005). As such, they reify a verbal structure. However, the two constructions MMC A and MMC B have distinct semantic properties. While MMC B is compatible both with general predicates and temporally specifying predications, MMC A is odd with temporally specifying predications. Compare (17) and (18).

- (17) a. laqad fājaʕa kull-a šākṣin [qatl-u
EMPH surprised every-ACC body killing.BM-NOM
 il-qāʔid-i il-zālimi li-l-junūd-i]
DEF-leader-GEN DEF-unjust-GEN of-DEF-soldiers-GEN
‘The unjust leader’s killing of the soldiers surprised everyone.’
- b. laqad fājaʕa kull-a šākṣin [qatl-u
EMPH surprised every-ACC body killing.BM-NOM
 il-qāʔid-i il-zālimi il-junūd-a]
DEF-leader-GEN DEF-unjust-GEN DEF-soldiers-ACC
‘The unjust leader’s killing the soldiers surprised everyone.’
- (18) a. laqad ḥadaṭa [qatl-u il-qāʔid-i
EMPH happened killing.BM-NOM DEF-leader-GEN
 il-zālimi li-l-junūd-i] $\text{fi is-sādisi min Yōlyō}$
DEF-unjust-GEN of-DEF-soldiers-GEN on DEF-sixth of July
‘The unjust leader’s killing of the soldiers happened on 6 July.’

- b. ?? laqad ḥadaṭa [qatl-u il-qāʾid-i
 EMPH happened killing.BM-NOM DEF-leader-GEN
 il-zālimi il-junūd-a] fi is-sādisi min Yōlyō
 DEF-unjust.GEN DEF-soldiers-ACC on DEF-sixth of July
 ‘The unjust leader’s killing the soldiers happened on 6 July.’

In (17) we have a general predicate *fājʿa kull-a šāḳṣin* ‘surprised everyone’. This is compatible both with an instance of MMC B, as signaled in (17a) by the presence of the PP argument *li-l-junūd-i* (of-DEF-soldiers-GEN), and an instance of MMC A, as signaled in (17b) by the accusative object *il-junūd-a* (DEF-soldiers-ACC). By contrast, the temporally specifying predicate *ḥadaṭa fi is-sādisi min Yōlyō* ‘happened on 6th July’ sits readily with MMC B, as in (18a), but is unnatural with MMC A, as in (18b). In Vendler’s (1967) terms, predicates like “surprised everyone” are loose containers (they accept both kinds of nominalization), while predicates like “occurred on 6th July” are narrow containers (they accept only the more consistently nominal construction).

This suggests that MMC A and MMC B reify the underlying verbal structures in two different ways. The only detailed formal proposal we are aware of which might capture this difference is Hamm and van Lambalgen (2005), building on earlier work in the formalization of event calculi by Feferman (1984) and Shanahan (1997). Hamm and Lambalgen distinguish between reification of a verbal construction as a FLUENT (which HOLDS AT a particular time), and as an EVENT (which HAPPENS at a particular time). Fluents are initiated and terminated by events. In Hamm and van Lambalgen, this distinction is applied to the English verbal and nominal gerund constructions, but it seems equally applicable to MMC A and MMC B.

In this scenario, MMC A would semantically represent the reification of an underlying proposition (containing a verbal predicate, its arguments and a time variable) as a fluent. The technical instantiation of this reification is abstraction over the time variable, so that a fluent essentially represents the set of times at which the underlying proposition holds. The fluent *the unjust leader’s killing the soldiers* would then have the representation in (19a), with *a* being a time variable and \hat{a} the abstraction over it. The relation between a fluent and the underlying proposition is very direct, and in the case of the MMC A in (17a) and (17b) could be represented as in (19b).

- (19) a. kill[l, s, \hat{a}]
 b. HoldsAt(kill[l, s, \hat{a}], t) \leftrightarrow kill[l, s, t]

That is, the fluent *the unjust leader’s killing the soldiers* holds at time *t* if and only if the proposition *the unjust leader killed the soldiers at time t* is true. Fluents are more like propositions, and hence unlike events they resist adjectival modification at a semantic level (see also Nikitina 2011).

The more consistently nominal MMC B would then represent reification of the underlying proposition into an event, or more strictly into an event-type. Event-types are not time-dependent in the same way as fluents, and are derived by Hamm and Lambalgen through existential closure of the time variable. That is, the event-type *the unjust leader's killing of the soldiers* would be represented as in (20a). Event-types can be arguments of the HAPPEN predicate, which converts them into event-tokens, as in (20b):

- (20) a. $\exists a[\text{kill}[l, s, a]$
 b. Happen ($\exists a[\text{kill}[l, s, a], t$)

That is, the event-type *the unjust leader's killing of the soldiers* becomes an event-token when it happens at a particular time t . The HAPPEN predicate is not a truth predicate, like HOLD AT, and thus the direct relationship that we observed in (19b) between a fluent and the underlying proposition is absent.

The details of how fluents and event-types combine with general and temporally-specifying predicates, i.e. loose and narrow containers, are complex, and we refer the reader to Hamm and Lambalgen (2005) for a proposal. Essentially, the type of general predicates such as “surprised everyone” is argued to be such that they take a fluent and a time as their arguments, while temporally-specifying predicates like “occurred on 6th July” denote sets of event-tokens. Associated with each event-type there is also a corresponding canonical fluent, defined as the set of times at which the event-type happens. This essentially allows all event-types to be coerced into functioning as fluents, and hence as possible arguments of a general predicate.

5 Conclusion

In this paper we have argued for a new and alternative approach to mixed category nominalizations. The LFG head-sharing approach requires the postulation of a syntactic VP to house the apparently verbal components of these constructions, in particular accusative objects and adverbs. Instead, we propose that the purely selectional properties of such constructions might be handled at a functional rather than strictly categorial level. That is, a derived nominal will be allowed simply to take over in its entirety the argument structure of the verbal predicate from which it is derived, and thus license accusative objects **as a noun**. The potential for different kinds of modification, in particular modification by adjectives or adverbs, will ultimately depend on the semantic characteristics of the construction rather than its nominal category.

In particular, we have argued that the more mixed of the two Arabic masdar constructions. MMC A, is best treated as categorially nominal from top to bottom, just like the more consistently nominal MMC B. The prime indicator of MMC A is the presence of accusative object arguments. However, the postulation of a syntactic VP in MMC A to house these leads to issues

concerning constituency, and incorrectly predicts that adverb modification should be available solely to MMC A when it is in fact equally possible in MMC B.

One of the prime motivations for postulating the presence of a syntactic VP in the analysis of mixed category nominalizations appears to be an attempt to maintain a division between the complementization potential of verbal and nominal heads. However, the strictness of this division seems to be a meta-theoretical desire rather than necessarily an empirical reality. A second motivation is the observation that mixed category constructions generally manifest phrasal coherence (for the term see Malouf 2000): that is, in the case of mixed category nominalizations the apparently verbal elements of the construction are contiguous. We note that phrasal coherence indeed seems to hold of MMC A: the construction begins with the nominal CS, and this is followed first by the accusative object(s) and then by any further obliques or (non-adjectival) adjuncts. However, in the case of MMC A, this apparent coherence simply results from the addition of accusative objects to a general NP structure which is independently motivated, and indeed manifested in MMC B. The point at which the accusative objects are added, as sisters of the masdar, is a natural position for core arguments.

We leave it an open question whether this new approach to mixed category nominalizations can be applied to all such constructions. This seems not implausible. For example, in the Italian *infinito sostantivato* construction, the infinitive would be treated as categorically a noun which takes an accusative object, rather than as a verb. The potential for modification by compatible adverbs would follow, as in the masdar constructions examined here, from the semantic analysis, rather than from the presence of a syntactic VP. And the adverb would automatically have to be a post-head adjunct because adverbs are generally blocked from the pre-head modifier position in Italian NPs. More work would need to be done however to establish whether the Italian construction has a fluent interpretation or not, and how this relates to the potential for modification by compatible adjectives. Ultimately, the answer to the general question will depend on a detailed analysis of the semantic properties of the individual constructions, and the extent to which phrasal coherence properties can be argued to emerge as an epiphenomenon of more general and language-specific principles of ordering and constituency. Our goal in this paper has been merely to show the plausibility of the analysis for Arabic.

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