

Arabic deverbal nouns

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1 Introduction

As I discuss in Kremers (in preparation), Arabic deverbal nouns (*masdars*) license their objects either with accusative (1a) or with the preposition *li* (1b):

- (1) a. 'aqlaqa-nī -ntiqād-u -l-rağul-i -l-mašrūf-a
annoyed-me criticising-NOM the-man-GEN the-project-ACC
'the man's criticising the project annoyed me'
b. 'aqlaqa-nī -ntiqād-u -l-rağul-i li -l-mašrūf-i
annoyed-me criticising-NOM the-man-GEN to the-project-GEN
'the man's criticising of the project annoyed me'

Masdar+acc allows adverbials (2a), masdar+*li* allows adjectives (2b):

- (2) a. 'aqlaqa-nī -ntiqād-u -l-rağul-i bi -stimrār-in hādā -l-mašrūf-a
annoyed-me criticising-NOM the-man-GEN with persistence-GEN this the-project-ACC
'the man's persistently criticising the project annoyed me'
b. 'aqlaqa-nī -ntiqād-u -l-rağul-i -l-mustamirr-u li -l-mašrūf-i
annoyed-me criticising-NOM the-man-GEN the-persistent-NOM to the-project-GEN
'the man's persistent criticising of the project annoyed me'

In contrast, masdar+acc does not allow adjectives:¹

- (3) *'aqlaqa-nī -ntiqād-u -l-rağul-i -l-mustamirr-u -l-mašrūf-a
annoyed-me criticising-NOM the-man-GEN the-persistent-NOM the-project-ACC
'the man's persistently criticising the project annoyed me'

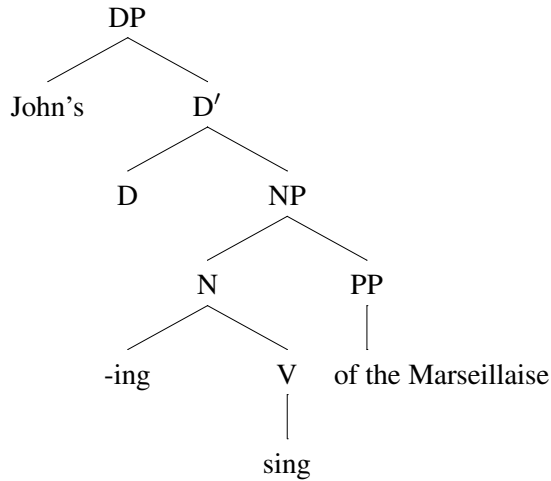
¹Somewhat unexpectedly, however, masdar+*li* does allow adverbial phrases:

- (i) 'aqlaqa-nī -ntiqād-u -l-rağul-i bi -stimrār-in li -l-mašrūf-i
annoyed-me criticising-NOM the-man-GEN with persistence-GEN to the-project-GEN
'the man's persistent criticising of the project annoyed me'

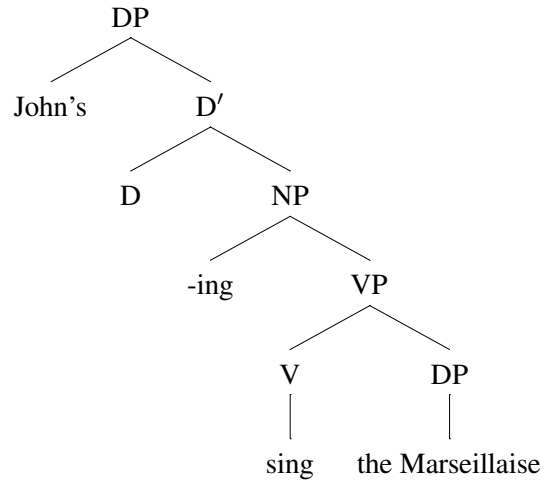
I assume this is due to the status of *intiḳād* as event nominal. Note that essentially only PP-adverbials are allowed.

Following Abney (1987), Fassi Fehri (1993) assumes that there is a masdar affix that can attach at different levels to the verb projection:

(4) Ing-of:



(5) Poss-ing:



The problem with Abney's analysis is that it is not clear what sort of element *-ing* is, and what it means for *-ing* to attach to a syntactic structure. Ackema & Neeleman (2004) make Abney's analysis more explicit:

- The *-ing* affix is a non-finiteness affix (hence its occurrence in participles).
- The actual nominaliser is phonologically null (Yoon 1996).
- An affix must be distinguished in a syntactic AFFIX and a morphophonological /affix/.
- Syntactic subcategorisation requirements apply to the AFFIX, morphophonological restrictions apply to the /affix/.
- The mapping of the AFFIX to the /affix/ is subject to two rules:

(6) a. Linear Correspondence:

If X is structurally external to Y, then /x/ is linearly external to /y/.

b. Input Correspondence:

If an AFFIX selects (a category headed by) X, then /affix/ takes /x/ as its host.

- Given Linear Correspondence, *-ing* cannot be the nominaliser: if attached to VP, Linear Correspondence would require it to follow *all* material in /vp/, which it obviously does not; (i.e., it precedes the object).

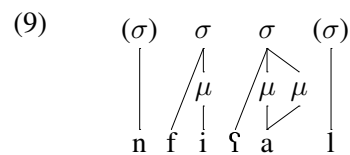
2 The morphophonological make-up of the masdar

Overview of verb stems and masdars:

(7) stem	perfective stem	masdar
I	KaTaB	(irregular)
II	KaT:aB	taKTi:B
III	Ka:TaB	muKa:TaBa(t)
IV	?aKTaB	?iKTa:B
V	taKaT:aB	taKaT:uB
VI	taKa:TaB	taKa:TuB
VII	nKaTaB	nKiTa:B
VIII	KtaTaB	KtiTa:B
IX	KTaB:	KTiBa:B
X	staKTaB	stiKTa:B
XI	KTa:TaB	KTi:Ta:B
XII	KTawTaB	KTiwTa:B
XIII	KTawwaB	KTiwwa:B
XIV	KTanBaB	KTinBa:B
XV	KTanBay	KTinBa:y

The most common vowel pattern is /i-a:/, sometimes /i:-a:/. McCarthy & Prince (1990b) distinguish four morphemes in the Arabic masdar. Taking stem VII as an example:

(8) root: /ffl/
 stem marker: $(\sigma_\mu)\sigma_\mu$
 n
 nominaliser: /ia/
 non-finite: $-\sigma_\mu\mu$



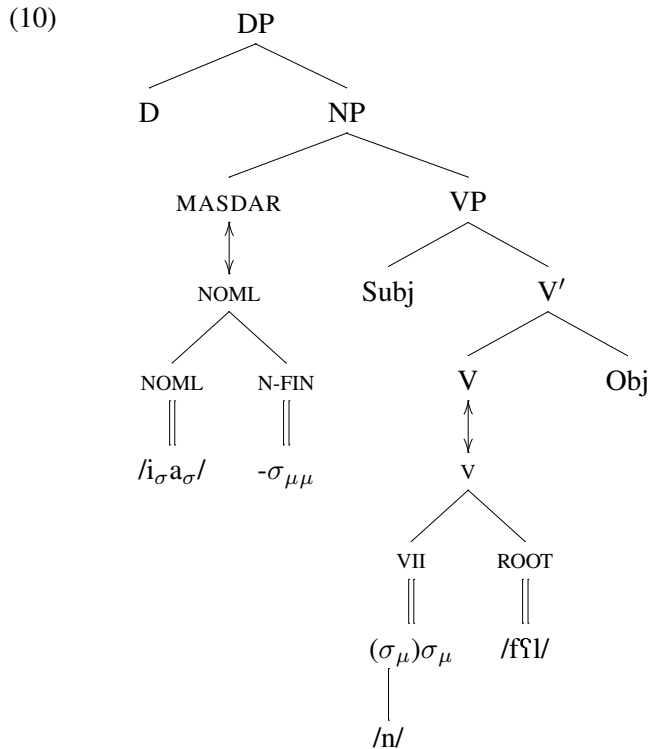
Assumptions:

- The masdar affix is a syntactic affix. (This accounts for accusative assignment.)
- The masdar affix is associated with a morphological structure that consist of the nominaliser and the non-finite affix.
- The syntactic V node is associated with a morphological structure that consists of the V head and the stem marker.

Problem:

- The MASDAR affix is definitely the nominaliser, or at least contains it.
- The /masdar/ affix attaches to the verb stem (in fact, is interwoven with it.)
- Hence, when MASDAR attaches to VP, the mapping to /masdar/ violates Linear Correspondence.

The masdar+acc construction can be assigned the tree in (10):



3 Solution

- Arabic morphology is *prosodic*; prosodic morphemes map onto *autosegmental* tiers in phonology (McCarthy & Prince 1990a, 1990b, following Leben 1973).
- Each tier separately must be linearly ordered. The tiers are then associated with each other through several principles, at least Left-to-Right Association and Input Correspondence (Ackema & Neeleman 2004) but possibly others.
- Linear Correspondence applies to one specific tier only, the tier onto which segmental material is mapped. Call this the *anchor* tier.
- In the Arabic masdar, no morpheme has enough segmental material to form a prosodic word. Therefore we are forced to conclude:
 - Morphemes mapped onto a non-anchor tier may also contain segmental material: cf. the masdar morpheme.
 - Morphemes mapped onto the anchor tier may be segmentally underspecified.
- I assume that in masdars, it is the root morpheme (/fʔl/ above) that maps onto the anchor tier, as it is the only substantive lexical item (member of a semantically open class). The other morphemes are derivational (members of semantically closed classes).

To account for the masdar forms, I propose two general mapping rules for the NOML and N-FIN affixes, and six idiosyncratic mapping rules that make reference to specific verb stems:

(11)

general		idiosyncratic	
NOML	\leftrightarrow /i _σ a _σ /	NOML/V	\leftrightarrow /u _σ a _σ /
N-FIN	\leftrightarrow /-σ _μ μ/	N-FIN/V	\leftrightarrow σ _μ
		NOML/VI	\leftrightarrow /u _σ a _σ /
		N-FIN/VI	\leftrightarrow σ _μ
		NOML/II	\leftrightarrow /ta _σ i _σ /
		[_{NOML} NOML N-FIN]/III	\leftrightarrow F(PRT.PASS.f)

That is:

- Stems V and VI are associated with an idiosyncratic nominaliser /u_σa_σ/, and with an idiosyncratic non-finiteness marker σ_μ.
- Stem II has the regular non-finiteness marker, but an idiosyncratic nominaliser.
- In the context of a stem III marker, the morphological structure [_{NOML} NOML N-FIN] is associated with the feminine passive participle.²

²Which was an alternative masdar formation in Classical Arabic, the so-called *mašdar mīmīy*, ‘m-masdar’.

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