

The formation of deverbal nouns in Arabic

Joost Kremers

University of Frankfurt, Germany

j.kremers@em.uni-frankfurt.de

Arabic morphology includes a nominal form, traditionally called *maṣdar*, whose meaning and form is related to that of a verb. The form relation, although clearly visible, is complex, the meaning relation is straightforward: the masdar is a complex event nominal (GRIMSHAW 1990). The present paper attempts to account for both the syntax and the morphology of the forms.

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|-----|---|-----------------|-------------|--------------------|-------------|
| (1) | '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' | | | | |
| (2) | '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' | | | | |

Syntactically, masdars behave much like English gerunds (ABNEY 1987): they can express an indirect object through the preposition *li* 'to, for', or they can assign accusative to the object. The subject always takes genitive case.

Similarly, a masdar that assigns accusative case allows an adverbial, while a masdar that uses *li* can be modified by an adjective. These structures correspond to Abney's Poss-ing and Ing-of, and are analysed by FASSI FEHRI 1993 and KREMERS 2003 in a similar manner: a nominalising affix attaches to V (for Poss-ing) or to VP (for Ing-of). However, this accounts for the syntax, but not for the morphology.

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|-----|--|-----------------|-------------|----------------------|-------------|
| (3) | 'aqlaqa-nī | -ntiqād-u | -l-rağul-i | bi | -stimrār-in |
| | annoyed-me | criticising-NOM | the-man-GEN | with persistence-GEN | |
| | hādā | -l-mašrūf-a | | | |
| | this | the-project-ACC | | | |
| | 'the man's persistently criticising the project annoyed me' | | | | |
| (4) | 'aqlaqa-nī | -ntiqād-u | -l-rağul-i | -l-mustamirr-u | li |
| | annoyed-me | criticising-NOM | the-man-GEN | the-persistent-NOM | to |
| | | | | -l-mašrūf-i | |
| | | | | the-project-GEN | |
| | 'the man's persistent criticising of the project annoyed me' | | | | |

ACKEMA & NEELEMAN 2004 retain Abney's basic idea for English gerunds, but make it more explicit: in their analysis, the *-ing* affix is a non-finiteness marker, and the nominaliser is phonologically null. The core idea of their analysis is that one must distinguish between a syntactic affix on the one hand (the AFFIX) and its morphological realisation on the other (the /affix/). Syntactic selectional restrictions apply only to the AFFIX, morphophonological selectional restrictions only to the /affix/. The mapping of the AFFIX to the /affix/ is subject to two principles:

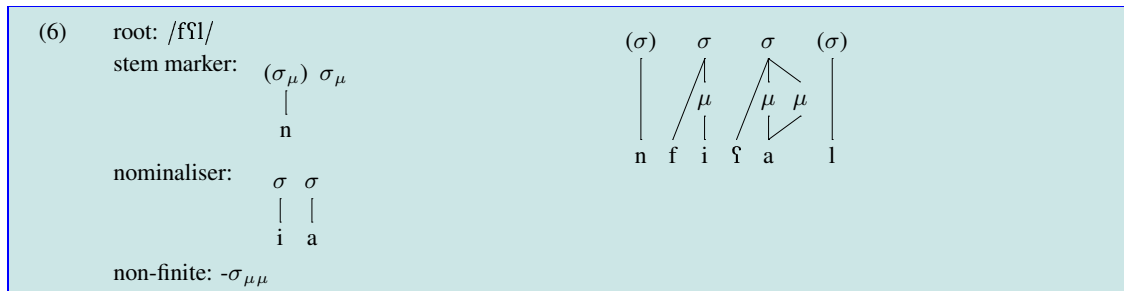
- | | | |
|-----|----|---|
| (5) | a. | Linear Correspondence: |
| | | If X is structurally external to Y, then /x/ is linearly external to /y/. |
| | b. | Input Correspondence: |
| | | If an AFFIX selects (a category headed by) X, then /affix/ takes /x/ as its host. |

If in English, *-ing*, or rather ING, were the nominalising affix, its mapping onto the suffix /-ing/ would violate Linear Correspondence: in *John singing the Marseillaise*, the nominaliser attaches to VP, which means that /-ing/ should follow all material in the VP, which it obviously does not. Therefore, ING is assumed to be a non-finiteness suffix (which accounts for the fact that it also occurs in participles), and the nominaliser is null (as also assumed by YOON 1996).

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

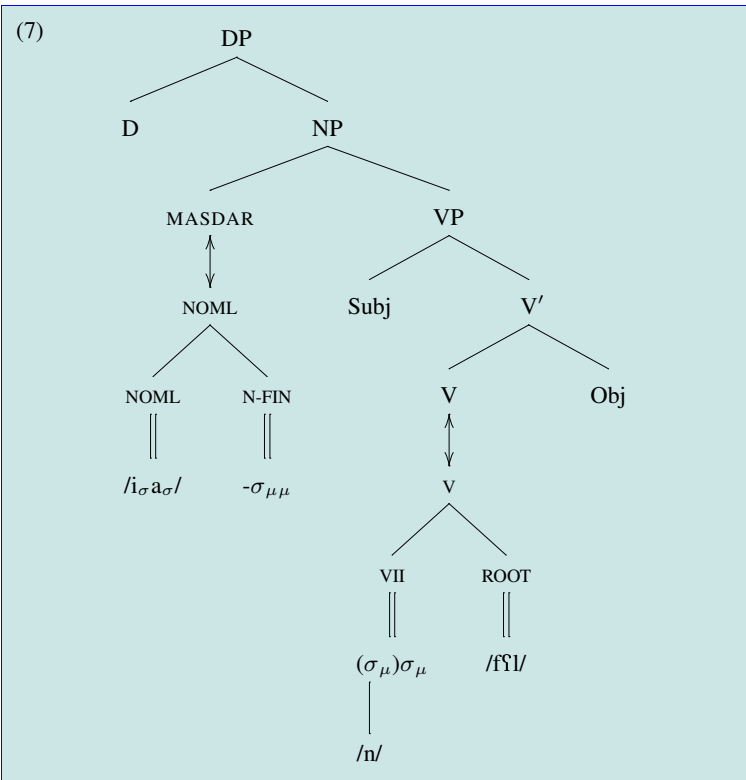
Arabic masdars pose a problem for this analysis: the nominaliser morphology is overt, and attaches onto the verb. In structures where the masdar assigns accusative, MASDAR attaches to VP. Nonetheless, /masdar/ appears *inside /vp/*, in violation of Linear Correspondence.

Looking at the table of masdar forms, we notice that the vowel pattern /i-a:/ is predominant, and can be taken to be the masdar marker. Following MCCARTHY & PRINCE 1990, I argue that it consists of two separate morphemes: a non-finiteness marker $-\sigma_{\mu\mu}$, and the actual nominaliser /i σ a σ /. Masdar forms further contain a triconsonantal root and a stem marker. In (6), the stem VII form *infiʕal* is given as example.



The syntactic analysis for the masdar+acc construction is given in (7). The arrows indicate morphological insertion, the double lines represent mapping to morphophonology. The MASDAR morpheme is a syntactic affix that is associated with a morphological structure consisting of the nominaliser and the non-finiteness morpheme. Because it is a *syntactic* affix, we can account for the fact that the verb assigns accusative: if it were a morphological affix, we would have a syntactic N head, which would not be able to do so.

The masdar+li construction is similar, except that MASDAR attaches to V, rather than VP. The result is that the object cannot be assigned accusative, and must be licensed with a preposition. The mapping to phonology does not differ, however, so that the masdar form is identical in both types of constructions.



The stem VII masdar used in the examples above is a regular masdar. The table of masdar forms shows that stems II, III, V and VI have idiosyncratic masdar forms. Under the current analysis, we can account for these forms with minimal assumptions. We must assume the following mapping rules:

general		idiosyncratic	
NOML	↔ /i σ a σ /	NOML/V	↔ /u σ a σ /
N-FIN	↔ /- $\sigma_{\mu\mu}$ /	N-FIN/V	↔ σ_{μ}
		NOML/VI	↔ /u σ a σ /
		N-FIN/VI	↔ σ_{μ}
		NOML/II	↔ /ta σ i σ /
		[_{NOML} NOML N-FIN]/III	↔ F(PRT.PASS.f)

The general mapping rules are in fact lexical items that connect a certain bundle of syntactic features to a morphophonological form. The idiosyncratic mapping rules are much the same, except that they make reference to the specific context in which they apply: in the current case, the verbal stem.