Deverbal nouns as phonological head “movement”?

Joost Kremers
joost.kremers@phil.uni-goettingen.de

University of Göttingen

JeNom 4
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Introduction

- Arabic deverbal nouns (*masdars*).
- Discuss their syntactic and morphological/phonological structure.
- Argue for a structural (and against a lexical) approach, by assuming that word formation is phonological.
Theoretical background

- Bare phrase structure.
- *Merge* as the only structure-building operation.
- $X^\circ$: minimal (non-projecting) head.
- $XP$: maximal projection of $X$. 
Parallel structure building

- A linguistic sign is composed of semantic, syntactic and phonological features (Chomsky 1965: 214, fn. 15).

- Each type of features is subject to its own compositional rules and principles.

- Parallel construction of semantic, syntactic and phonological structures.
Arabic deverbal nouns

(1) a. ʔaqlaqa-nī -ntiqād-u -l-rajul-i -l-mašrūf-a
 annoyed-me criticising-NOM the-man-GEN the-project-ACC
 ‘The man’s criticising the project annoyed me.’

b. ʔaqlaqa-nī -ntiqād-u -l-rajul-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.’

Properties (cf. Fassi Fehri 1993):
▶ Regular form (in most verb stems).
▶ Event structure.
▶ Subject takes genitive case.
▶ Object takes genitive case when no subject is present, otherwise accusative or PP.
▶ In other words: Poss-ing or Ing-or (Abney 1987).
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Morphological structure

Root: KTB

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(cf. McCarthy & Prince 1990, Kremers 2007)
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Phonological structure

McCarthy & Prince’s (1990) account:

Form: ḥantiqād

| Root: /nqd/ | Nominalizer: /i.a/ |
| Stem VIII: (σ)σμ | Non-finite: -σμμ |

Syllabic tier

Segmental tier
Phonological structure

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Segmental tier
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Segments are linearised, *not* morphemes.

Linear order is determined by phonological factors:

- Left-to-Right Association, Alignment, Spreading.
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Syntactic structure

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Syntax/phonology mapping

- The four morphemes in the word form *intiqād* need to be combined.
- A syntactician’s standard tool: head movement.
- Phonology needs to “know” that the four morphemes need to be combined; syntax does not.
- Syntax/phonology correspondence principle:

(2) *Input Correspondence:*
If A selects (a projection of) B, $\Phi(A)$ selects $\Phi(B)$.

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Syntax/phonology mapping

- VIII selects √, N-FIN selects V, and NOML selects N-FIN.
- By IC, all four morphemes must be realised in a single form.
- There is no need for a distinct subtree containing these four heads.
Phonological composition

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JeNom 4  12 / 22
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JeNom 4 12 / 22
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Stems V and VI

(3) \[
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\text{stem} & \text{perfective} & \text{masdar} \\
V & \text{takattab} & \text{takattub} \\
VI & \text{takātab} & \text{takātub} \\
\end{array}
\]

- Stems V and VI have idiosyncratic NOML and N-FIN morphemes:

(4) a. NOML: /a.u/

b. N-FIN: $\sigma_\mu$
Stems V and VI

(3) | stem | perfective | masdar  |
    |------|-----------|--------|
    | V    | takattab  | takattub |
    | VI   | takātab   | takātub |

Stems V and VI have idiosyncratic NOML and N-FIN morphemes:

(4)  a. NOML: /a.u/
    b. N-FIN: σμ
Stem II

(5) Stem II:
   a. perfective: kattab
   b. masdar: taktīb

Stem II has an idiosyncratic NOML morpheme:

(6) NOML: /ta.i/

- The stem II marker is $\sigma_{\mu\mu}$.
- Finiteness and non-finiteness markers are regular: $\sigma_{\mu}$ and $\sigma_{\mu\mu}$, respectively.
Stem II

(5) Stem II:
   a. perfective: kattab
   b. masdar: taktīb

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Stem II word formation

Perfective:

Masdar:
Stem II word formation

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Stem II word formation

Perfective:

Masdar:
Word order issues

- Arabic deverbal nouns have a strict NSO order.
- Possibly: linearisation of the complete form in the position of its highest morpheme.
- This requires that D is included in the masdar form:

(7) ʔaqla qa-nī -ntiqād-u -l-rajl-i li -l-mašrūʕ-i
an noy-me criticising-NOM the-man-GEN to the-project-GEN
‘The man’s criticising of the project annoyed me.’

- In Ing-of, the nominaliser is merged lower, predicting an SNO order.
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A genitive case assigning D head may affect the phonological form of the noun.

Hence, we may assume that $\Phi(D)$ combines with $\Phi(\text{NOML})$, so that the word form is linearised in the position of D, yielding NSO.
Word order issues

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- Hence, we may assume that $\Phi(D)$ combines with $\Phi(\text{NOML})$, so that the word form is linearised in the position of D, yielding NSO.
Word order issues

- Masdars without genitive subject or object:

(8) \( \text{al-} \text{iʕtirāḍ-u} \quad \text{ʕalā} \quad \text{-l-ḥukm-i} \)

\( \) the-objecting-NOM on the-judgment-GEN

‘the objection against the judgment’

- There is no indication that \( \Phi(D) = \text{a} \) requires phonological integration with the noun.

- I assume that \( \Phi(D) \) is realised independently and cliticises onto the noun (cf. Julien 2002, Kremers 2005).
Word order issues

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‘the objection against the judgment’

- There is no indication that \( \Phi(D)=al \) requires phonological integration with the noun.

- I assume that \( \Phi(D) \) is realised independently and cliticises onto the noun (cf. Julien 2002, Kremers 2005).
Word order issues

With neither subject nor object present, $D^\circ$ does not need to license an argument.

$D^\circ$ is therefore mapped to $al$, and the masdar is linearised in the position of $\text{NOML}$.
With neither subject nor object present, D° does not need to license an argument.

D° is therefore mapped to *al*, and the masdar is linearised in the position of NOML.
Summary and conclusions

- The morphemes making up a masdar are assembled by phonology.
- Therefore, there is no need for a morphological word formation process and a structural analysis becomes possible.
- However, there is no word formation in syntax, either.
- A masdar such as *intiqād* is not a complex head in syntax, no head movement takes place.
- In general, the approach allows us to account for morphological processes through the interaction of syntax and phonology, obviating the need for a separate morphology module.
References


