The occurrence of šel in Hebrew Binominal Constructions: A prosodic account

Introduction. Binominal NPs (BNPs) are Noun Phrases involving two nominals, such that the first nominal (N₁) (N-modifier) modifies the second one (N₂) (1). The two nominals are connected by the prepositional element of.

(1) **English BNPs** (adapted from Aarts 1998)
   a. a [N₁ hell] of a [N₂ problem]
   b. that fool of a doctor
   c. a skyscraper of a man

Similarly, in the Hebrew BNP construction the first nominal (N₁) modifies the second one (N₂), and the two are connected by the genitive prepositional element šel ('of').

(2) a. ze [N₁ mótêk] šel [N₂ oto]
    this sweetie of car
    Meaning: This is a very nice car.

b. zelzu xára šel mis'ada
    this shit of restaurant
    Meaning: This is a really bad restaurant.

(3) a. ze mótêk *(šel) oto
    this sweetie of car
    Meaning: This is a very nice car.

b. ze haya pcáca *(šel) mesiba
    this was bomb of party
    Meaning: This was one hell of a party.

c. ze xára *(šel) oto
    this shit (of) car
    Meaning: This is a really bad car.

d. ze šel *(šel) mis'ada
    this doll (of) restaurant
    Meaning: This is a wonderful restaurant.

It is commonly assumed that the P-element šel is obligatory in the Hebrew binominal construction (3a, b), on a par with the obligatoriness of of in its English counterpart (a hell *(af) a problem). This, however, appears to be imprecise (3c, d).

Proposal. Focusing on the occurrence of šel, we argue that its optionality is prosodically driven, and is best accounted for as an instance of morpho-syntactic and prosodic discrepancy, implicating the mechanism of *ambisyllabification* (e.g. Kahn 1976, 1980, Gussenhoven 1986). Specifically, we hypothesize that the role of šel in the Hebrew BNP construction is phonological to a significant extent, rather than being purely syntactic (e.g. Kayne 1994, Den Dikken 1998) or semantic (Asaka 2005); the occurrence of šel before N₂ prosodically disambiguates the symmetric N N sequence, rendering the prosodic constituent of the modified noun (N₂) heavier (higher in the prosodic hierarchy), and thus distinguishable from the prosodic constituent of the modifier (N₁) (4).

(4) **The prosodic structure of (3a)** (schematic)

\[
\Phi \\
|\Phi \Phi \Phi \\
|\Phi \Phi \Phi \\
|\Phi \Phi \Phi \\
\]

Based on (4), and extending the notion of *ambisyllabification* to *ambiprosodification*, we argue that šel can be omitted, to various degrees of acceptance ((3c) vs. (3d)), if the prosodic structure of the BNP (4) remains intact, namely if N₂ is dominated by C. This, we suggest, is possible, if the last syllable of N₁ can be prosodically reanalyzed as the determiner proclitic ha- (which is pronounced as a in colloquial Hebrew), filling the prosodic slot normally occupied by šel, as shown in (5).

---

1 ω = prosodic word; σ = syllable; F = foot; C = clitic group; Φ = phonological phrase.
(5) The prosodic structure of (3c) without šel

```
Φ
/   /
C
/   |
F   F
σ₁  σₚ
xá. τa
σₚ  σₚ
σ₁  σₚ
τo
σ₁  σₚ
N₁  N₂
∅
```

Prediction. Only N-modifiers ending with an unstressed, open syllable headed by a, would allow šel to be optional.

Experimental support. We submitted the hypothesized relation between the prosodic form of the modifier and optionality of šel to an experimental procedure (acceptability ranking on a 1 to 5 scale), involving 49 speakers of Hebrew. Thirteen modifiers were included in the study: 7 modifiers predicted to allow omission of šel (allowing modifiers); and 6 modifiers predicted to require šel (requiring modifiers). Target sentences included either a BNP with šel ([+šel] condition), or a BNP without šel ([−šel] condition). A mean rating based on the ratings of the 49 participants was calculated for each experimental sentence. The mean of these mean sentence ratings for each condition is given in Table 1.

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Number of sentences</th>
<th>Mean rating</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowing [+šel]</td>
<td>5</td>
<td>4.16</td>
<td>3.98 – 4.43</td>
</tr>
<tr>
<td>Requiring [+šel]</td>
<td>7</td>
<td>4.26</td>
<td>3.74 – 4.71</td>
</tr>
<tr>
<td>Allowing [−šel]</td>
<td>27</td>
<td>3.04</td>
<td>1.94 – 4.55</td>
</tr>
<tr>
<td>Requiring [−šel]</td>
<td>28</td>
<td>1.90</td>
<td>1.45 – 2.79</td>
</tr>
</tbody>
</table>

The most revealing finding: There is a significant difference between sentences with the two modifier types in the [−šel] condition (Z = -5.506, p < .001). (We will discuss further results and methodological issues concerning the experiment in the talk).

Additional support. Drawing on the prosodic parallelism between the Hebrew BNP and (a certain variety of) the Hebrew Construct State (CS), namely the fact that both involve the [N N] sequence, we show that the prosodic function we ascribe to the definite article ha- in the Hebrew BNP (without šel) is attested in the CS as well, despite the fact that semantically and syntactically these two constructions are quite different.

Conclusion. Viewing the optionality of šel in the Hebrew BNPs as an instance of morpho-syntactic and prosodic mapping discrepancy, our proposal lends support to the previously proposed mechanism of ambisyllabicity, extending its application to higher-level constituents within the prosodic hierarchy. Ambiprosodic constituents can be taken to successfully bridge the gap between 'purely' phonological requirements (e.g. universal syllabification preferences) and interface requirements (e.g. syntax-prosody mapping), underlying convergence at PF.