

## Constituent Structure and Grammatical Functions in the Hebrew Action Nominal

Hebrew noun phrases in general, and action nominals in particular, pose interesting theoretical and descriptive problems. In NPs in general, there are three types of genitive constructions illustrated in (1). In the free genitive, the possessive nominal is marked by the preposition *šel*. In the construct state genitive, the possessive immediately follows the head noun, and the head noun appears in a special morphological form traditionally called the construct state. The double genitive combines a pronominal suffix on the head noun (in a form phonologically related to the construct state) with a PP headed by *šel*. In action nouns (2), a clearly nominal head can be followed by an accusative object and an adverb.

Such facts about Hebrew noun phrases have been discussed in a series of studies in the Government/Binding (GB) and Minimalist Program (MP) variants of transformational theory (Ritter 1988, Hazout 1995, Siloni 1997, Engelhardt 1998). The analyses, although they differ from each other in details, all posit head movement from N to a functional head position (generally identified with D), and most of them hypothesize V-to-N head movement in the action nominal. For example, nominal phrases like those in (3) are hypothesized to have the structures similar to those in (4).

The claim to be made here is that various aspects of this analysis are unmotivated, in particular details of the constituency and the presence of the functional category D. It will be argued that the standard GB/MP analysis is the consequence of a theory in which grammatical functions are represented in terms of constituent structure, and that an LFG-based approach is better able to account for both the grammatical functions and the constituency. On the other hand, we will support the hypothesis that the structure of the action nominal in Hebrew includes both verbal and nominal projections. The Hebrew action nominal is a “mixed category” in the sense of Bresnan (1997); it will be argued that a lexicalist implementation of the NP-over-VP analysis of mixed categories is superior to the derivational implementation in the analysis of Hebrew action nominals.

The first problem is the positing of a category Determiner. As observed by Wintner (2000), there is no evidence in Hebrew for such a category. The Hebrew “definite article” *ha-* is a prefix, not a word (Engelhardt 1998). It provides what in Hebrew is an inflectional feature of definiteness, one which triggers agreement on modifying adjectives. The only reason for positing D is to provide a landing site for the noun.

Second, as argued by Sadler (2000) for similar analyses of Welsh, the constituency itself is inconsistent with traditional constituency tests, like coordination. Such tests argue for (5) rather than (4). The kinds of structural relations represented in conventional analyses are better represented at f-structure.

Abstracting away from the different methods of realizing a POSS, there are basically two ways for a Hebrew action nominal to express its arguments (6). In one, the subject argument of the corresponding verb is realized as a POSS and the object argument as an accusative-marked phrase. In the other, it is the object argument that is projected into the syntax as POSS, with the subject argument surfacing optionally as a *by* phrase. We will refer to these as the “accusative” and “non-accusative” forms of the action nominal. The non-accusative form is the more common version.

The accusative form of the action nominal has attracted much attention in the literature. Since accusative Case is otherwise attested only in the objects of verbs, it has invited an analysis in which the structure of the NP includes an embedded VP. In a derivational framework, the most straightforward way to implement this is to insert the nominalized verb in V position and for it to undergo head-movement to a higher N. In LFG, following the proposal of Bresnan (1997), this NP-over-VP analysis of mixed categories is treated in terms of head sharing. They result from a mixed argument structure with verbal and nominal characteristics (Bresnan 1997; Bresnan and Mugane 2000). The verbal argument structure requires that its c-structure correspondent be a VP, and the nominal argument structure requires that its c-structure correspondent be an NP (7). As a result, both nominal and verbal projections appear in the c-structure. The word itself is a noun, and thus occupies the structural position of the  $\bar{X}$  head of the NP. The theory of head-sharing stipulates that the head occupy the head position of the highest projection, so the NP dominates the VP.

The NP-over-VP mixed category analysis is superior to alternatives. Siloni (1997) argues against an NP-over-VP analysis of the Hebrew action nominal, but her arguments are invalid. Contrary to her claims, action nominals can be modified by adverbs and the accusative Case on the objects of action nominals is the same accusative Case as on the objects of verbs. Malouf (1998) argues (in HPSG) for an analysis of mixed categories based on a concept of intermediate categories. However, Hebrew action nominals display the phrasal coherence predicted by the NP-over-VP analysis.

The more common non-accusative version of the Hebrew action nominal, which has sometimes been analyzed as a passive, is best analyzed as a noun-like argument mapping, as discussed by Laczko (2000). Such an analysis is plausible under the LFG approach to mixed-categories, but is not implementable under a derivational approach.

## Examples

- (1) a. ha- iša šel ha- politikay  
the- wife of the- politician  
b. ešet ha- politikay  
wife.CONSTR the- politician  
c. išt- o šel ha- politikay  
wife- his of the- politician  
'the politician's wife'
- (2) a. ibud ha- mumxim et pitkey hahacbaa yadanit  
processing the- experts ACC ballots manually  
'the experts' manual processing of the ballots'  
b. sgirat ha- mankal et ha- misrad zmanit  
closure.CONSTR the- director ACC the- office temporarily  
'the director's temporary closure of the office'
- (3) a. ha- gina ha- metupax- at šel ha- more  
the- garden the- cared.for- FSG of the- teacher(M)  
b. ginat ha- more ha- metupax- at  
garden(F).CONSTR the- teacher(M) the- cared.for- FSG  
'the teacher's tended garden'
- (4) a.  $[_{DP} \text{hagina}_i [_{NP} \text{hametupaxat} [_{NP} [\text{šel hamore}] t_i]]]$   
b.  $[_{DP} \text{ginat}_i [_{AGRP} \text{hamore}_j t_i [_{NP} \text{hametupaxat} [_{NP} t_j t_i]]]]]$
- (5) a.  $[_{NP} [_{NP} \text{hagina hametupaxat}] [\text{šel hamore}]]]$   
b.  $[_{NP} \text{ginat hamore hametupaxat}]]$
- (6) a. mexikat ha- maxšev et ha- kvacim  
erasing.CONSTR the- computer ACC the- files  
b. mexikat ha- kvacim (alyedey ha- maxšev)  
erasing.CONSTR the- files (by the- computer)  
'the deletion of the files by the computer'
- (7) a.  $(\uparrow \text{PRED}) = \text{'erase } \langle \langle x, y \rangle_v \rangle_n$   
b.  $v: \text{VP} \in \lambda (\phi^{-1} (\text{PRED } \uparrow))$   
 $n: \text{NP} \in \lambda (\phi^{-1} (\text{PRED } \uparrow))$

## References

- Bresnan, Joan (1997) "Mixed Categories as Head Sharing Constructions." *Proceedings of the LFG97 Conference, University of California, San Diego*. On-line: CSLI Publications.
- Bresnan, Joan, and John Mugane (2000) "Mixed Categories in Gikūyū." Presented at LFG2000, University of California, Berkeley.
- Engelhardt, Miriam (1998) *The Syntax of Nominalized Properties*. PhD dissertation, The Hebrew University of Jerusalem.
- Hazout, Ilan (1995) "Action Nominalizations and the Lexicalist Hypothesis." *Natural Language and Linguistic Theory* 13: 355–404.
- Laczko, Tibor (2000) "Derived Nominals, Possessors, and Lexical Mapping Theory in Hungarian DPs." in Miriam Butt and Tracy Holloway King, eds., *Argument Realization*. Stanford, Calif.: CSLI Publications. 189–227.
- Malouf, Robert (1998) *Mixed Categories in the Hierarchical Lexicon*. PhD Dissertation, Stanford University.
- Ritter, Elizabeth (1988) "A Head-Movement Approach to Construct-State Noun Phrases." *Linguistics* 26: 909–929.
- Sadler, Louisa (2000) "Noun Phrase Structure in Welsh." in Miriam Butt and Tracy Holloway King, eds., *Argument Realization*. Stanford, Calif.: CSLI Publications. 73–109.
- Siloni, Tal (1997) *Noun Phrases and Nominalizations: The Syntax of DPs*. Dordrecht: Kluwer.
- Wintner, Shuly (2000) "Definiteness in the Hebrew Noun Phrase." *Journal of Linguistics* 36: 319–363.