

Agency and lexical decomposition of Biblical Hebrew verbs

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Role and Reference Grammar (RRG) offers a syntax-semantics interface for determining semantic roles of linguistic references (Van Valin 2005). Following a strict procedure, the linguist begins by analysing the internal temporal aspect of the verb (the *Aktionsart*), then constructs so-called logical structures according to the *Aktionsart*, and, finally, determines the degree of agency by the position of the argument in the logical structure.

The syntax-semantics interface has proven effective for numerous languages. One basic assumption of the interface is the researcher's intuitive knowledge of the language he/she investigates. The verbal *Aktionsart* is determined by applying a set of interrogative questions (cf. Dowty 1979) by which the researcher can classify the verbs by excluding awkward constructions. In other words, the researcher has the freedom to match any verb and any adverb to judge the adequacy of any particular construction.

But what if the researcher had no direct access to the language under investigation? And what if there were no living language-users to consult? Biblical Hebrew is one such language. The entire corpus of the canonical Hebrew Bible comprises no more than 400,000 words and we cannot expect all possible verb-adverb matches to actually exist in the ancient corpus. For these reasons, the RRG syntax-semantics interface is hard to apply to Biblical Hebrew using a traditional procedure.

In a new project, the syntax-semantics interface is reconsidered. If the aim is to predict the degree of agency of literary participants in the Biblical corpus, which parameters are important for this task? In the paper it is argued that at least two inherent verbal features are important: dynamicity (stative vs. active) and causativity, as also evidenced by the morphology of Biblical Hebrew. The finer distinctions of causativity was not developed in the original interface (Van Valin 2005, 42 n. 5) but has later received much more attention (e.g. Nolan, Rawoens, and Diedrichsen 2015; Copley and Martin 2014). The task is two-fold: First, to explore quantitative methods as to their efficiency of predicting dynamism and causativity on the basis of syntactic patterns. And second, to create logical structures of Hebrew verbs and determine the degree of agency of the semantic arguments.

To carry out the research, an open corpus of the Hebrew Bible is used, namely the ETCBC database developed at Vrije Universiteit, Amsterdam, in the Netherlands (Roorda et al. 2018). Open source technologies, such as Jupyter Notebooks and Python 3, are used to extract syntactic constructions from the ETCBC database and to carry out statistical analyses.

References

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