

Do verbs with abstract meaning have direction?

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Background: The paper examines the possible direction of abstract verbs (mostly emotion verbs and verbs with grammatical meaning). The prototypical verb is dynamic: it expresses motion. Motion has direction. Language users can usually easily define the direction of the action, which the concrete verb expresses (Meteyard & Vigliocco 2009). But do verbs with abstract meaning have direction, too?

Aims: The direction of metaphorical mapping, and further on, grammaticalization process is from concrete to abstract. The aim of this paper is to find out if language users perceive the direction of abstract verbs. As a secondary aim a directional meaning of the Estonian infinitival suffix *-ma* will be analyzed.

Theory and data: The theoretical framework of this paper is situated within the broad cognitive / functional paradigm. An experimental method is used to achieve the aims of the present research (cf also Spivey et al. (2005), Richardson et al. (2001) and Meteyard & Vigliocco (2009)). Analyses are supported by cognitive metaphor and embodiment approach, grammaticalization and cognitive grammar.

Data for the research comes from three experiments conducted to analyze the direction of abstract verbs. In the first experiment 98 Estonian verbs (in *ma*-infinitive) with abstract and concrete meanings were presented in random order to 101 participants who had to classify the verb as either horizontal, vertical or neutral in direction. The results were used to design a second experiment where 70 verbs (in *ma*-infinitive again, 47 with abstract meaning and 23 fillers (concrete verbs); in random order) were presented to 72 participants who were asked to rank the directions (four directions marked by arrows (up, down, left, right)) for each verb. The third experiment is designed according to the results of the first and second experiment. Abstract verb and fillers in finite form will be presented to the subjects with the figures inspired from cognitive grammar (Langacker 2008) and the experiment designed by Meteyard & Vigliocco (2009).

Results and significance: As a result of the first two experiments it can be said that language users do define the directions of the abstract verbs. The results of the second experiment with 47 abstract verbs showed that orientational metaphors (Lakoff, Johnson 1980) were systematically used for the directions of abstract verbs: verbs with positive meanings (*armuma* 'fall in love', *julgema* 'dare', *meeldima* 'like') had an higher average score for the right and upward directions (GOOD/HAPPY IS UP). The verbs with negative meanings (*kannatama* 'suffer', *jätma* 'leave', *vihkama* 'hate') had an higher average score for downward and left directions (BAD/SAD IS DOWN). The analysis also showed that there are interconnections between the ahead/upward direction and behind/downward direction. It can be the result of our embodied mind: one can see and perceive better the entities ahead and up than the ones behind and down.

This paper contributes to an understanding of the embodied abstract meaning of verbs. It also touches the subtle subject of the meaning of a grammatical unit, an infinitival suffix in comparison with grounded finite verb constructions (e. g. does the directional meaning of the *ma*-infinitive reinforces directional interpretation?).

References

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