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Constructions as the Main Determinants of Sentence Meaning

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Introduction

What types of linguistic information do people use to construct the meaning of a sentence? Most linguistic theories and psycholinguistic models of sentence comprehension assume that the main determinant of sentence meaning is the verb. In this study, a sorting paradigm (Healy and Miller, 1970) was used to explore the possibility that the main determinant of sentence meaning is the argument structure construction: a pairing of form and meaning at the clausal level (Goldberg, 1995; Jackendoff, 1997; Kay & Fillmore, 1999; Rappaport Hovav & Levin, 1998). Examples of English argument structure constructions with their form and meaning are shown in Table 1. Healy and Miller (1970) asked participants to sort sentences according to their meaning and found that participants were more likely to sort sentences according to the main verb in the sentence than according to the subject argument. On the basis of these results the authors concluded that the verb is the main determinant of sentence meaning. The study reported here was aimed at determining whether the morphological form of the verb or the argument structure provides the better indicator of overall sentence meaning.

The Experiment

Sixteen English sentences were used, obtained by crossing 4 verbs and 4 constructions. Participants sorted the sentences into four piles, each pile consisting of four sentences. They were asked to place sentences with the same overall meaning into the same pile.

The results showed that participants were more likely to perform a constructional sort than a verb-based sort: 41% of the participants sorted entirely by construction, no one sorted entirely by verb. Participants' sorts were overall closer to a constructional sort than to a verb sort. The average number of changes required for a sort to be entirely by construction was significantly smaller than the average number of changes required for the sort to be entirely by verb ($p<.0002$).

Conclusion

The results of this study suggest that argument structure constructions are better predictors of overall sentence meaning than the morphological form of the verb. Participants in this study frequently sorted entirely by construction and never wholly by the morphological form of the verb; averaging across all subjects, sorts were significantly closer to a constructional sort than to a verb sort.

The most important contribution of this study is that it provides a sufficiency proof for the fact that people recognize abstract relationships between formal phrasal patterns and meaning: i.e. constructions. The fact that people in our experiment sorted by construction suggests that argument structure constructions may be 'natural' linguistic categories that speakers have access to in comprehension.

Acknowledgements

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Construction	Form	Meaning	Example
Transitive	Subject Verb Object	X act on Y	*Anita threw the hammer.*
Ditransitive	Subject Verb Object1 Object2	X causes Y to receive Z	*Beth got Liz an invitation.*
Resultative	Subject Verb Object Complement	X causes Y to become Z	*Nancy sliced the tire open.*
Caused motion	Subject Verb Object Oblique	X causes Y to move Z	*Kim took the cat into the barn.*

Table 1: Examples of English Argument Structure Constructions