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The effect of verb semantic class and verb frequency (entrenchment) on children's and adults' graded judgements of argument-structure overgeneralization errors ☆,☆☆

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Abstract

Participants (aged 5–6 yrs, 9–10 yrs and adults) rated (using a five-point scale) grammatical (intransitive) and overgeneralized (transitive causative)[1] uses of a high frequency, low frequency and novel intransitive verb from each of three semantic classes [Pinker, S. (1989a). *Learnability and cognition: The acquisition of argument structure*. Cambridge, MA: MIT Press]: "directed motion" (*fall, tumble*), "going out of existence" (*disappear, vanish*) and "semivoluntary expression of emotion" (*laugh*, *giggle*). In support of Pinker's semantic verb class hypothesis, participants' preference for grammatical over overgeneralized uses of novel (and English)

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[1] Throughout this paper, the term "intransitive" (whether referring to a verb or construction) refers only to non-causative intransitives – sometimes termed "inchoative intransitives" – (e.g., *The man laughed*) and not to intransitives with unspecified or unexpressed objects (e.g., *The man ate*). The term "transitive causative" (e.g., *The sun melted the snow*) is used to contrast sentences of this type with both transitive non-causatives (e.g., *John saw Bill*) and periphrastic causatives (e.g., *The sun made the snow melt*).

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verbs increased between 5–6 yrs and 9–10 yrs, and was greatest for the latter class, which is associated with the lowest degree of direct external causation (the prototypical meaning of the transitive causative construction). In support of Braine and Brooks's [Braine, M.D.S., & Brooks, P.J. (1995). Verb argument strucure and the problem of avoiding an overgeneral grammar. In M. Tomasello & W. E. Merriman (Eds.), *Beyond names for things: Young children's acquisition of verbs* (pp. 352–376). Hillsdale, NJ: Erlbaum] entrenchment hypothesis, all participants showed the greatest preference for grammatical over ungrammatical uses of high frequency verbs, with this preference smaller for low frequency verbs, and smaller again for novel verbs. We conclude that both the formation of semantic verb classes and entrenchment play a role in children's retreat from argument-structure overgeneralization errors.

Keywords: No-negative-evidence problem; Overgeneralization errors; Entrenchment; Semantic verb classes; Grammaticality judgements; Verb argument-structure; Unaccusativity; Causativity; Transitivity; Syntax

1. Introduction

The *no-negative-evidence* problem has long been recognized as a central issue in language acquisition research (Bowerman, 1988). In order to produce novel utterances, children must use particular lexical items (such as nouns and verbs) in sentence structures in which these items have not appeared in the input data. However, children sometimes overgeneralize, using lexical items in structures in which they are not permitted in the adult grammar (e.g., **Do you want to see us disappear our heads?*, from Bowerman, 1988). Given that children do not appear to receive feedback about which of their utterances are ungrammatical (*negative evidence*), it is unclear how children learn not to produce such errors.

Many overgeneralization errors, for example past-tense overregularization (e.g., *runned*) are relatively non-problematic. As the child acquires the adult form (e.g., *ran*) she will cease to use the overregularized form, via a process such as blocking (Marcus, 1993; Marcus et al., 1992) competition (Bates & MacWhinney, 1987; Macwhinney, 1987) or pre-emption (Braine & Brooks, 1995; Clark, 1987). More problematic for such accounts are *argument-structure overgeneralizations*. These occur when the child uses a particular verb (e.g., the intransitive verb *disappear*) in an argument-structure construction (e.g., the transitive causative construction [SUBJECT][VERB][OBJECT]) in which it is not licensed in the adult grammar (e.g., **The magician disappeared the rabbit*). Such overgeneralizations are problematic, because there is no direct competitor in the input which could block the incorrect use. Many authors (e.g., Clark, 1987; Goldberg, 1995; Macwhinney, 2004) have argued that somewhat indirect competitors (e.g., in this case, a periphrastic causative such as *make disappear*) are sufficient to block the overgeneralized form. If this is the case, however, it is unclear how the child could learn that certain periphrastic causatives [e.g., *John made the baby stand up* (e.g., through giving an order)] do not block the corresponding transitive causative sentence [e.g., *John stood the baby up* (e.g., by propping it up against a wall); examples from Bowerman, 1988].

Some authors have proposed that children do receive corrective feedback from parents, in the form of recasts, requests for clarification and misunderstandings.