

Testing a semantic account of children's retreat from
argument-structure overgeneralization errors

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The defining characteristic of human language is that it allows speakers to generate entirely novel utterances, as opposed to simply repeating memorized utterances verbatim (Chomsky, 1957). A key question in the study of language acquisition, then, is how children acquire this capacity for generalization, yet eventually learn not to produce ungrammatical overgeneralizations. For example, a child must be able to generate sentence (a) by analogy with sentences such as (b), yet avoid producing sentences such as (c) by analogy with sentences such as (d)

- (a) The man rolled the ball <-- (b) The ball rolled
(c) *The funny man laughed Lisa <-- (d) Lisa laughed

Previous studies have found support for two proposals. Theakston (2004) found that participants rated overgeneralization errors as more acceptable for low than high frequency verbs, thus supporting the (‘entrenchment’) hypothesis that repeated use of a verb in one construction (d) leads to the inference that the use of this verb in non-attested constructions (c) is not permitted. In support of Pinker’s (1989) semantic-verb-class hypothesis, Brooks & Tomasello (1999) found that children were reluctant to use in transitive sentences novel verbs that were semantically consistent with intransitive-only verb classes (e.g., similar to verbs such as disappear).

Although both entrenchment and semantic-verb-class effects are well-established, to date no researcher has proposed a learning mechanism that yields both these effects, and hence allows the child to retreat from overgeneralization errors. In the present study we test the predictions of a new proposal for such a mechanism: Children acquire from repeated exposure to a construction (e.g., transitive causative) a semantic representation of the construction (e.g., entity causes another entity to perform action by means of direct, unmediated contact). Repeated presentation of a verb (e.g., laugh) in non-causative situations entrenches for the child the non-causative semantics of the verb, rendering its usage in the transitive causative construction increasingly ungrammatical.

One prediction from this account is that ñ all other things being equal ñ causative overgeneralization errors denoting an event with a high degree of direct, unmediated causation should be regarded as more acceptable than errors denoting a similar event with a lower degree of such causation.

To test this prediction, seventeen children (Mean age 9;8) rated ñ using a five-point scale - transitive causative overgeneralization errors denoting events of

direct, unmediated causation (e.g., e, f) and similar errors denoting events of more indirect causation, mediated by an unspecified instrument (e.g., g, h):

- (e) The funny man's joke giggled Lisa (f) The magician's spell disappeared Bart
(g) The funny man giggled Liza (h) The magician disappeared Bart

As predicted by our new *entrenchment of construction-semantics* account, participants rated the direct-causation sentences ($M=3.19$ on the 5-point scale, where 1=unacceptable, 5=acceptable; $SD=1.15$) as significantly more acceptable than the indirect-causation sentences ($M=2.90$, $SD=1.03$; $F_{1,16}=6.62$, $p<0.05$).

This finding suggests that a plausible way for children to retreat from argument-structure overgeneralization errors would be to incrementally acquire the semantics associated with particular syntactic constructions and particular verbs/events; overgeneralization errors ceasing when the child has learned enough about both to detect a mismatch