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# The English Past Tense and the Child's Conception of Time

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## Introduction

During acquisition of the English past tense, children are observed to 'overregularize' many irregular verbs—for example, saying *falled* instead of *fell*. These speech errors are commonly assumed to be the product of an underlying mechanism which maps the stem of a verb to its past tense form. The meanings of these verbs, it is assumed, play no role in this process. However, some research suggests that past tense acquisition is not independent of conceptual development—the meanings encoded by the past tense change along with the child's conception of temporality. Bloom, Lifter, and Hafitz (1980) found that the initial distribution of past tense morphology in children's speech was sensitive to the lexical aspect of verbs. Children were more likely to use the past tense with telic verbs—that is, verbs denoting bounded events, such as *break* or *fall*—than with activity verbs, which denote unbounded, imperfective events such as *draw* or *play*. They demonstrated that past tense morphology initially refers to the *result* of change-of-state events (such as *break* or *fall*) rather than to pastness *per se*. In this study, we extend these ideas by investigating whether lexical aspect accounts for differences in the overregularization rate among verbs.

As Bloom and others suggest, the temporal displacement which underlies the appropriate use of the past tense is less readily available to children than aspectual distinctions, such as whether or not an event leaves a clear result. Children's focus of attention gradually shifts from event outcomes to temporal displacement. We reason that past tense markers which are more common will come to be associated with true pastness more rapidly than less frequent markers. Thus, the regular morpheme *-ed* should take on the meaning "past" more quickly than the irregular past form of any given verb, given its greater frequency in the linguistic input. In other words, *falled* and *fell* mean different things.

Furthermore, because telic verbs can be used in resultative constructions whereas activity verbs cannot, we reasoned that the use of activity verbs in the past tense by necessity denotes "true past". This, in conjunction with the expectation that *-ed* would be more strongly associated with "true past", led us to predict a higher rate of overregularization for activity verbs than telic verbs.

## Method and Results

The speech transcripts of four children from the CHILDES database (MacWhinney, 1990) were analyzed. These children were Abe (Kuczaj, 1977), Adam, Eve, and Sarah (Brown, 1973). Overregularization rates for each verb for each child were taken from Marcus, et al. (1992). Each verb type was

coded as to whether it referred to a telic or activity event. Verbs which were not clearly telic or activity were excluded.

The prediction was that activity verbs should show an overall greater rate of overregularization than telic verbs. In order to test this prediction, the overregularization rates for telic and activity verbs were compared. To avoid scaling effects, only those verbs which had been overregularized at least once by a child were included in the analysis. The data bear out the prediction: the mean overregularization rate was 0.67 for activity verbs, 0.39 for telic verbs. This difference was significant,  $t(78) = 4.06, p < 0.001$ .

In a regression analysis, lexical aspect was found to be a significant predictor of overregularization rate, explaining 43% of the variance in rate among different verbs. Controlling for the contributions of the frequency of a verb in the child's speech and the age at which it was acquired, lexical aspect accounted uniquely for 6.17% of the variance ( $r^2 = 0.0617, F(3, 76) = 8.4661, p < 0.01$ ). To give a sense of the relative significance of this figure, it should be compared to figures cited by Marcus, et al. (1992) who found that a 13.69% contribution of frequency in parental input and a 2% contribution of phonological neighborhood.

The higher rate of overregularization for activity verbs is not predicted by any extant models of past tense learning. These results lend support to the idea that morphological development is tied to conceptual development and its concomitant shifts in meaning, not just to changes in mappings between the stem and past.

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