Overview

• The current study is primarily interested in English-speaking children’s production of manner and result verbs. Several factors may be at play:

  • Result verbs present an overall more complex event schema compared to manner verbs.
  • Syntactic information such as transitivity conditions the availability of manner/result interpretations. Previous experimental work suggests that transitivity is exploited in children’s comprehension of novel motion verbs.
  • Children’s cognitive biases of events may play a role too.
  • An analysis of the CHILDES corpora that manner verbs are produced in both transitivity contexts, but there are more occurrences of result verbs in the intransitive context than expected, suggesting that the mapping between transitivity and manner/result meanings are partially exploited in 2- to 7-year-old children’s production of motion verbs.

Theoretical Background

• Manner/Result complementarity: evaluating simplicity by the representation of a verb in event schema

  • Levin and Rappaport Hovav have argued that the manner and result components of verbs are in complementary distribution (L & RH, 1992, 1995, 2006; RH & L, 1998, 2010).
  
  (1) a. Mary danced.
      b. *Mary danced her feet.
      c. Mary danced her feet sore.
  
  (2) a. John broke.
      b. John broke his leg.
      c. *John broke his leg bloody.

  • They propose that this complementarity reflects a constraint on how much meaning a verb root can lexicalize: “A [verbal] root can only be associated with one primitive predicate in an event schema, as either an argument or a modifier” (RH & L, 2010, p. 25).

  • This can be schematized in (3):

  
  (3) a. Manner schema: \( \lambda x \lambda e \) [ DO(e, x) & root(e) ]
      b. Result schema: \( \lambda x \lambda e \) [ \( \exists e \) [ BECOME(e, e) & root(e, x) ] ]

  • The event schemas suggest that result verbs represent a more complex schema than manner verbs, which may affect the acquisition of verbal meanings, including the acquisition of new verbal concepts.

  • Transitivity: syntactic information, too, conditions the availability of manner/result interpretations, although this mapping is not perfect.

  • In an intransitive context like (4), climb may get either a manner or a result interpretation:

  
  (4) a. The explorer climbed.
      (manner)
  
  b. The prices climbed.
      (result)

  • In a transitive context, however, the interpretation depends on whether a change of state has happened to the direct object:

  
  (5) a. The explorer climbed the mountain.
      (manner)
  
  b. ??The prices climbed the market.
      (result)

  • The imperfect mapping between transitivity and manner/result meanings is partially exploited during children’s comprehension of motion verbs, even though such a link is, in fact, not warranted by the grammar.

  • Children’s own cognitive biases of events may influence their acquisition of motion verbs.

  • Children seem to find the outcomes of events to be particularly important, e.g. they use them to draw inferences about antecedent processes and environmental constraints.

  • A bias toward the result aspect of verb meanings?

Current Study

• Question: If children are able to actively exploit transitivity information and map it onto the meaning of motion verbs during comprehension, to what extent is this mapping applied during production?

• Methods

  • Using the CHILDES corpus (UK English; MacWhinney, 2000)
  
  • Corpora: Fletcher, Gathburn, Lara, Thomas, Tommerdahl
  
  • Age: 1-9–7-0
  
  • Motion verbs selected from Levin (1993)
  
  • Manner verbs (39 selected, 23 included)
  
  • Result verbs (34 selected, 17 included)

• Results & Analysis

  • Coding was done independently by two researchers.

  • A Chi-square test of independence was performed to examine the relation between transitivity and manner/result verbs.

  • The relation between these variables was significant, \( \chi^2(3, N = 800) = 14.49, p < .01 \).

  • Manner verbs show a relatively higher degree of variability across the corpora in terms of the proportion of transitive vs. intransitive contexts.

Key summaries:

• Children produce more manner verbs overall, and this preference remains strong even in the transitive frame.

• This is not in conflict with Wagner’s (2010) findings for children’s comprehension of motion verbs: some manner verbs are licensed in the transitive frame, e.g. wash, but most results verbs rarely occur in the intransitive frame.

• However, children also produce result verbs in the intransitive context much more frequently than expected (45.9%).

• So the imperfect mapping between transitivity and manner/result meanings is partially exploited during children’s production.

• Manner verbs are easier to acquire as their semantics are represented by a simpler event schema.

Remaining questions:

• English has more manner verbs than result verbs. Perhaps children are just exposed to more manner verbs in their input?

• When do children start acquiring this mapping rule in production? The performance of each age group needs to be examined more closely.