

## **Thematic Relations as a Cue to Verb Class: 2-Year-Olds Distinguish Unaccusatives from Unergatives**

Previous work shows that children use syntactic information to guide their hypotheses about verb meaning (Naigles 1990, 1996; Fisher 1996). Bunger & Lidz (2006) demonstrated that 2-year-olds map a novel unaccusative verb only onto the result subevent of a complex causative event and a novel transitive verb onto the entire causative event. It remains unclear precisely what information drives this mapping. Do children base their interpretations strictly on the number of arguments in a sentence or are they also aware of the semantic roles played by those arguments? We show that 2-year-olds map a novel unergative verb onto the means subevent of a complex causative, indicating that they use the specific roles played by event participants together with argument number to guide interpretations.

We conducted a preferential looking experiment to test 2-year-olds' interpretation of novel verbs paired with causative events. During a familiarization phase, children saw four causative events labeled with novel verbs. Two of the events involved direct mechanical causation (e.g., a girl bouncing a ball with a tennis racquet), and two were more indirect (e.g., a boy using a bicycle pump to spin a flower). Children ( $n=24$ ; mean age 24.54m) were assigned to one of two experimental conditions, distinguished by the syntactic frame containing the novel verb: transitive or unergative (1).

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|-----|------------------------------------|------------|
| (1) | a. The boy is blicking the flower. | Transitive |
|     | b. The boy is blicking.            | Unergative |

During the test phase, children were simultaneously shown two noncausative events involving the same participants as the familiarization event. In one, only the means subevent of the familiarized causative was repeated (Repeated Means), and in the other, the agent made some new kind of contact with the patient (New Means) (Fig.1). Children were asked to determine which of these events the novel verb could be extended to include.

Participants in the Transitive condition demonstrated no significant preference for either test event during a salience period ( $p=0.54$ ) or when asked to find the referent of the novel verb ( $p=0.45$ ). This supports the view that novel transitive verbs map onto causative events: because both test events were noncausative, neither provided a suitable match for the verb. If 2-year-olds only use argument number to drive their interpretations of novel verbs, we would expect participants in the Unergative condition, like those presented with novel unaccusatives in Bunger & Lidz 2006, to map these 1-argument verbs onto the result subevent. Because the result subevent is not repeated in either test event here, neither should provide a suitable match. Instead, participants mapped unergative verbs onto the means subevent of the complex causative, as demonstrated by a novelty preference for the New Means test event ( $p=0.008$ ) and a shift to the Repeated Means test event when asked to find the novel verb (significant only for familiarization events involving indirect causation: indirect,  $p=0.03$ ; direct,  $p=0.8$ ). We conclude that 2-year-olds use information about the semantic role of event participants in addition to syntactic information to determine which subpart of a complex event is labeled by a novel verb.

**Fig. 1—Examples of familiarization and test events**

Causative event	Test events	
	Repeated means	New means
<b><u>Direct</u></b>		
girl hits ball with tennis racquet; ball bounces	girl hits ball with racquet; ball does not bounce	girl hits ball with her hand; ball does not bounce
<b><u>Indirect</u></b>		
boy pumps bicycle pump attached to garden flower; flower spins	boy pumps; flower does not spin	boy taps flower with his hand; flower does not spin

## References

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