

Experimentally extracting implicit instruments

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Models of events represent the interactions of the entities involved. In the event “The chef chopped an onion”, a chef and an onion are explicitly involved, and the event results in a chopped onion. However, it is also implied that a knife must interact with the chef and the onion. In this study, we investigate the extent to which people model implicit instruments and other items related to the event. We find that people’s representations of events include instruments that are implied to be involved in the event even when they are not explicitly stated in the event description, and despite other items being primed. These findings are consistent across different sentence constructions of event descriptions, suggesting that implicit instrument representation is robust in comprehension of events. We also show that implicit instrument representation persists despite lexical priming of other items, and that the representations provide evidence for the disambiguation of the Instrument semantic role from other semantic role categories.