

# Experimentally extracting implicit instruments

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## Abstract

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 an instrument, e.g., a knife, must interact with the chef and the onion. In this study, we investigate the extent to which people model different implicit instruments in event representations. We find that people’s representations of events reliably include instruments that are implied to be involved even when they are not explicitly stated in the event description. These findings are consistent across different sentence constructions of events, 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.