

Aspectual Effects on Pronoun Interpretation

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The question of whether pronouns are interpreted based primarily on surface-level morphosyntactic cues (subjecthood, recency, parallelism) or as a byproduct of deeper discourse-level processes and representations (inference, event structure) remains unresolved in the literature. These two views come together in a sentence-completion study by Stevenson et al. (1994; see also Arnold 2001), in which ambiguous subject pronouns in passages such as (1) were resolved more frequently to the (*to*-phrase object) Goal of a previous transfer-of-possession event rather than the (matrix subject) Source. Stevenson et al. considered two explanations for this result: a thematic-role-level preference for Goals over Sources, and a deeper event-level bias toward focusing on the end state of transfer events, where the Goal entity is presumably more central than the Source. To tease these hypotheses apart, we designed an experiment in which completions for passages like (1) were compared to versions with the imperfective verb form as in (2). The thematic role relations are equivalent between the two versions, but the imperfective, by describing an event as an ongoing process, is incompatible with a focus on the end state of the event.

(1) COMPLETED EVENT (PERFECTIVE): John_{SOURCE} handed a book to Bob_{GOAL}. He _____.

(2) INCOMPLETE EVENT (IMPERFECTIVE): John_{SOURCE} was handing a book to Bob_{GOAL}. He _____.

A similar percentage of Goal interpretations for (1) and (2) would therefore support the thematic role preference, whereas a greater number of Source interpretations for (2) would support the event structure hypothesis.

Method: Monolingual English speakers (N=48) wrote continuations for 21 passages similar to (1) and (2). The setup sentences contained a transfer-of-possession verb with the Source as the matrix subject and the Goal as the object of a *to*-phrase, followed by an ambiguous pronoun prompt. (An additional 29 distractors were all non-transfer verbs, with adverbs, proper nouns, and unambiguous pronouns as prompts). Each participant saw half the sentences in the perfect and half in the imperfect. Judges determined the participants' pronoun interpretations in light of the story context and the elicited continuation.

Results: As predicted by the event structure hypothesis, sentences in the imperfect yielded significantly more Source resolutions than those in the perfect ($F=51.597$, $p<0.0001$). For the imperfective prompts, 71% of pronouns resolved to the Source compared to 48% for the perfective. (11% of the continuations were judged to be ambiguous and set aside, but either interpretation for these still resulted in a significant effect.) Further, for sentences in the perfect, only verbs that describe a direct transfer (*kick, pass, hand*), as opposed to those for which transfer is not guaranteed (*send, mail, fax*), had a greater number of resolutions to the Goal.

Conclusion: Participants' interpretations of ambiguous pronouns appear to reflect deeper event-level biases rather than superficial thematic role preferences. We situate these results within a broader model of discourse coherence and reference that makes additional predictions about the contextual circumstances in which such event-level biases would be expected to arise.