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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Concept Learning as Coarse-to-Fine Probabilistic Program Induction

Permalink

<https://escholarship.org/uc/item/52t1w32c>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

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Publication Date

2024

Peer reviewed

Disfluency in Speech and Gestures: Windows into Metacognitive Processes

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Abstract

Speech disfluency refers to the errors, pauses, or repetitions in speech production. Co-speech gestures are known to help resolve disfluency, suggesting a metacognitive involvement. Here we ask whether (1) disfluencies and gestures act as metacognitive cues in speech, and (2) they have different functions in conversational vs. non-conversational settings. Fifty participants responded to trivia questions, and rated their confidence in their answers (i.e. metacognitive judgement), either with a visible or a non-visible listener. They audibly elaborated on their answers during which we measured the frequency and type of disfluencies and co-speech gestures. We predict confidence ratings to change as a function of the rate of disfluency and the gestures produced by the participants. We also expect the rate of disfluencies and gestures change depending on the conversational setting. Our findings will contribute to understanding the multimodal nature of language and the role of metacognition in speech and gesture production.