Foraging for Common Ground

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Abstract

How do two minds reach mutual understanding? Meaningful dialogue requires speakers to do more than simply exchanging coherent messages. They must engage in an interactive negotiation over meaning, coordinating on ad hoc interpretations that may not exist outside the conversational context. In this talk, I'll sketch out a computational account of this negotiation process. In the first half of the talk, I'll argue for an inferential model of common ground. In this model, speakers maintain uncertainty about their partners' likely intended meaning and systematically update their beliefs based on feedback from their partner's responses. In the second half of the talk, I'll explore how this learning process may guide conversational dynamics. I examine patterns of topic shifts in a large corpus of natural conversations between strangers, finding that these conversations exhibit foraging dynamics. Speakers consistently begin in regions of broader consensus before dispersing to more specific, idiosyncratic regions. This pattern occurs both within individual topic boundaries and across entire conversations, suggesting that speakers may be guided by the goal of seeking common ground. Together, these findings point to a dynamic feedback loop at the heart of meaningful dialogue: increasing common ground enables speakers to actively steer conversations toward more idiosyncratic domains, while successful navigation of these personal territories licenses stronger social inferences that become part of subsequent common ground. These insights suggest new directions for computational dialogue systems that can engage in more adaptive meaning-making.