

## **UC Merced**

### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

Establishing a communication system: Miscommunication drives abstraction

#### **Permalink**

<https://escholarship.org/uc/item/7gk573d2>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 36(36)

#### **ISSN**

1069-7977

#### **Author**

Mills, Gregory

#### **Publication Date**

2014

Peer reviewed

# Establishing a communication system: Miscommunication drives abstraction

Gregory Mills

University of Groningen, Groningen, Netherlands

**Abstract:** One of the central findings in research on the emergence of communication systems is that interlocutors rapidly converge on a shared set of contracted referring expressions (Krauss and Weinheimer, 1966; Clark, 1996; Galantucci, 2005).

To investigate in closer detail how referential coordination develops, we report a variant of the “maze task” (Pickering and Garrod, 2004). Participants communicate with each other via an experimental chat tool (Healey and Mills, 2006), which interferes with the unfolding dialogue by inserting artificial signals of miscommunication that appear, to participants as if they originate from each other.

Participants who received these signals performed better at the task, and converged more rapidly on more abstract and more systematized referring expressions. We demonstrate how this beneficial effect is due to the amplification of naturally occurring signals of miscommunication,