
Referring in the World and in the Lab: Bridging the Gap.

Katharina S. Schuhmann¹ & Susan E. Brennan²

¹ Carl von Ossietzky Universität Oldenburg, ²Stony Brook University, NY
Katharina.Schuhmann@uni-oldenburg.de, Susan.Brennan@stonybrook.edu

Research on referential communication demonstrates great variability in word choice within referring expressions (Brennan & Clark, 1996; Clark & Wilkes-Gibbs, 1986). When speakers refer to a particular referent, they choose how to conceptualize it and how to lexicalize the referring expression. Speakers' choices may be guided by their perspective, salient features of the referent, or common ground experienced with the addressee, among others. When pairs of interlocutors repeatedly refer to an object, they tend to entrain on the same expression (Bortfeld & Brennan, 1997; Brennan & Clark, 1996; Clark & Wilkes-Gibbs, 1986).

Converging referring expressions reflect temporary agreements; interlocutors can adapt their expressions when the referential context changes. In the real world, many potential factors could influence referring, such as goals, being immersed in the 3D world versus referring to objects on a 2D map, or interlocutors sharing differing levels of visual co-presence. We present a parameterized study that bridges the gap between referring in the world and in the lab: we aim to model what factors shape the variability of referring expressions when the same pairs perform multiple tasks in different contexts (extending Brennan et al. (2013a,b)).

In a card-matching task in the laboratory, pairs of partners entrained 69% of the time on the same referring expression they had used earlier in the navigation task in the world. Partners entrained despite differences in the contexts of these two tasks and differences in their more recent, intervening private experiences. Overall, the study reveals that interlocutors do not simply reuse the most recent referring expression for a given referent, nor are they restricted to following a previously established conceptual pact. Instead, referring is flexibly adapted to the context of communication and is influenced by partner-specific constraints.

References: • Bortfeld, H. & Brennan, S. E. (1997). Use and acquisition of idiomatic expressions in referring by native and non-native speakers. *Discourse Processes*, 23, 119-147. • Brennan, S. E., & Clark, H. H. (1996). Conceptual pacts and lexical choice in conversation. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 6, 1482-1493. • Brennan, S. E., Schuhmann, K. S., & Batres, K. M. (2013a). Entrainment on the move and in the lab: The Walking Around Corpus. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 1934-1939). Austin, TX: Cognitive Science Society. • Brennan, S. E., Schuhmann, K., & Batres, K. (2013b). Collaboratively setting perspectives and referring to locations across multiple contexts. In workshop proceedings, *Production of referring expressions: Bridging the gap between cognitive and computational approaches to reference*, 35th Annual Meeting of the Cognitive Science Society, July 31, Berlin, Germany. • Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a collaborative process. *Cognition*, 22, 1-39.