In conversation, referential form is influenced by the immediate (local) context, which may include entities in the physical environment as well as recently mentioned information. The discourse history, including past referents and how they were described, plays a role in shaping future referential form as well. While it is widely known that interlocutors form representations of the discourse history, the veracity and similarity of these representations among interlocutors has not been widely explored. Through the study of referential form in conversation, combined with explicit measures of recognition memory for past referents, I show that interlocutors are likely to walk away from a conversation with distinct memories for the contents, and in some cases the context of conversation. In general, speakers tend to remember what was said better than listeners do. Studies of 3- and 4-party conversation investigate the ability of speakers to keep track of the common ground they hold with multiple conversational partners, and design language accordingly. Complementary studies of individuals with severe memory impairment investigate the biological memory systems that support these processes. The findings have implications for how common ground is formed in conversation, and suggest that there are limits on the degree to which interlocutors can achieve coordinated representations of the discourse history. More generally, this work demonstrates that memory assessments can complement language measures in revealing the means by which conversational partners encode and track common ground in conversation.