VARIATION IN MINDREADING "ON THE GROUND": COMPARING PATTERNS OF MENTAL STATE TALK IN TWO SOCIETIES

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A broad literature in pragmatics has underscored the importance of mindreading to the function of human language (Sperber & Wilson, 1986). Because a given utterance is likely to be semantically underdetermined, successful communication requires individuals to read the minds of their interlocutors and ascertain the intended meaning of the utterance. In brief, much of the expressive power of language is derived from users' ability to read the minds of their interlocutors. These claims accord with the vast psychological literature on mindreading that has suggested mindreading is likely to be an early-developing and ontogenetically canalized core cognitive domain underlying much of human social behavior (e.g., Castelli et al., 2000; Senju et al., 2009). Such findings have bolstered claims suggesting there are few, if any, meaningful differences in adult mindreading ability across both individuals and cultures. However, these same findings often equivocate competence and performance (cf. Wu & Keysar, 2007 for an exception). While human beings may have an implicit and species-typical capacity, or competence, to impute others' mental states, the way in which such imputations structure social behavior, or performance, may differ across populations according to prevailing socioecological conditions. An emerging anthropological literature lends credence to this claim (Robbins & Rumsey, 2008). Given the documented importance of mental-state talk for children's early sociocognitive development (Ruffman, Slade, & Crowe, 2002), understanding whether patterns of mental-state talk are universal or variable may provide indirect evidence about the evolved architecture of the mindreading and language systems. Despite the centrality of these questions, few quantitative studies of mental-state talk across societies have been conducted.

To begin filling this lacuna, we measured mental state language in a small-scale society with implicit norms against attributing mental states to others. A simple response-elicitation task was administered in Achuar to bilingual Achuar / Spanish speakers in a small-scale, hunter-horticulturalist society in Amazonian Ecuador (N=40) as well as in English to a sample of American undergraduates (N=26). Participants were shown a set of nine silent videos ranging in length from 40 to 70 seconds long. Eight of these videos depicted interactions between two or more individuals in a narrative arc derived from one of the following fitness domains – Cooperation, Dangerous Animal, Dominance, Infidelity, Mate Guarding, Norm Violation, Prestige, and Sickness. To the extent that these domains have borne on fitness across human evolutionary history, there ought not to be sizable differences across populations in the extent to which these videos are interpretable by viewers across cultures. Moreover, the criteria according to which the videos were designed minimize reliance on culturally specific information. The ninth video was structured as a classic False Belief task performed in a naturalistic setting. Given the extensive literature demonstrating that four-year-old children succeed in attributing mental states to agents in the False Belief task, we hoped this video would serve as a standard against which to test the efficacy of the new stimuli in eliciting mental-state attributions.

After viewing each video, participants were asked to describe what had happened in the scene. Given previous ethnographic observation about Achuar speech, Achuar participants were expected to describe scenes using less mental-state language than American participants. Verbal responses were transcribed and coded according to a scheme adapted from Castelli et al. (2000) and Ruffman et al. (2002). Counts of words attributing affective states, perceptions, desires, and epistemic states to characters in the video were obtained. Word counts were scaled to control for differences in description length. Hierarchical Poisson Regression models of word counts were run with culture and video type as fixed factors and participant as a random factor.

Pilot studies using a similar methodology, but different stimuli found that American participants used words attributing perception, affective states, and epistemic states to characters significantly more often than Shuar participants, an ethnic group whose language is closely related to Achuar ($p<0.001$). Additionally, Shuar participants used desire words more frequently ($p<0.001$). Analyses of the present study conducted with Achuar participants are expected to demonstrate a similar pattern. Data on cross-cultural differences in mental state talk may illuminate the extent to which human language is constrained or free to vary in the conceptualization and communication of mental states.

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