The social nature of human cognition

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Smith Hall - Room 371A

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(Host: Elizabeth Bonawitz, Rutgers University – Newark, Dpt. of Psychology)

Since the 1950s, research in cognition has primarily focused on understanding learning as a problem of updating beliefs in light of data. Building off recent proposals in philosophy, cognitive development, and anthropology, I will argue that this asocial approach has radically underestimated, and potentially fundamentally misattributed, the power of human learning. Using a combination of computational modeling and behavioral evidence, I will present three lines of argument in support of the social learning hypothesis. First, I will argue that situations in which data are chosen by a knowledgeable and helpful informant lead to inferential affordances not licensed by the data alone, and that children and adults leverage these affordances. Second, I will argue that monitoring who is knowledgeable and helpful is thus critical for learning, attended to by the onset of formal schooling, and a malleable factor for affecting educational outcomes. Third, I will speculate on how a presumption of cooperative informants may lend insight into one of the most basic questions in cognitive science—the origins of human concept learning biases.

Dr. Patrick Shafto is Associate Professor of Psychology and Computer Science at the University of Louisville. A cognitive scientist by trade, his research in his lab focuses on understanding learning from a multidisciplinary perspective, drawing on ideas from Psychology, Computer Science, and Education. The main areas of foci are the implications of intuitive psychological (social) reasoning for learning, and cognitively-natural machine learning tools to facilitate data analysis. His research is supported by an NSF CAREER award and the DARPA XDATA program.