

***RuCCS Colloquia: Spring 2022***

***Tuesday, March 29, 2022 | 1PM - 3PM EST***

**The Evolution of Reason**



**Dr. Paul Robinson**

Dr. Robinson is a Post-Doctoral Associate at RuCCS. His research focus is on cognition, rationality, and human origins. The goal of his research is to advance an interdisciplinary understanding of human nature that can be usefully applied in real world settings such as conflict resolution and deliberative democracy initiatives.

**Abstract:** Over the past two decades a growing number of cognitive scientists have argued that human reason evolved as a social competence due to the threat of deception, to help individuals persuade others and justify themselves. I propose that examination of the role of reason in small-scale hunter-gatherer societies suggests an alternative model according to which reason evolved for the social transmission of knowledge through the medium of stories, to help individuals solve problems in the natural environment.

**Impacts of Presentation Format on Mathematical Problem Solving**

Dr. Mielicki received her B.S. in Mathematics Education from Boston University and her Ph.D. in Cognitive Psychology from the University of Illinois at Chicago. As a former high school math teacher, she is interested in the cognitive processes that underlie mathematical learning and problem solving, and passionate about leveraging cognitive principles to improve math learning outcomes. She is currently a postdoctoral teaching professor at RuCCS.

**Abstract:** Mathematical problems can be presented in different formats, such as with graphs, equations, figures, tables, etc. In this talk, I will discuss three studies I conducted with participants of different ages that explore how presentation format impacts mathematical problem-solving performance by either activating different knowledge or eliciting different solution strategies. This line of work speaks to how mathematical knowledge is retrieved and represented, and has important implications for education and for other applied domains where people use math, like health decision making.



**Dr. Marta Mielicki**

**All are welcome to join  
RuCCS Spring 2022  
Colloquium**

**Hybrid event - [Zoom Registration Link](#) OR [In-Person Registration Link](#)  
PSYCH Room 105, Busch Campus**