

## **Logic and Cognition: Towards interdependent methodologies**

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We will start with providing a brief history of the inter-relationship between logic and psychology, moving on to more recent discussion about logic and cognition.

Then we will describe a specific case study related to social cognition, where the focus will be on the higher order theory of mind. We will discuss some experiments on adults in this regard and computational cognitive models validating experimental findings. Finally, we will show how logical study can act as a link between experimental and cognitive modeling studies.

We will provide a bridging technique of the different perspectives on modeling reasoning while playing turn-based games - experiments, logics and computational cognitive models. Empirical studies describe human behavior. Logical studies on one hand facilitate the study of properties of such reasoning processes, on the other hand pave the way for implementation through formal languages. Computational cognitive models explore the essence of cognitive functionalities in the realm of reasoning of players playing the games. Bridging these methodologies will bring out a fresh perspective in terms of integrating different aspects of reasoning in games under one common standpoint.