

Integrating Physiological, Emotional, Rational, and Social Cognition

William Kennedy

George Mason University, Fairfax, Virginia, United States

Jim Thompson

George Mason University, Fairfax, Virginia, United States

Abstract

Our poster will facilitate discussion of cognition driven primarily by physiology, emotions, sociality, and reason, i.e., the rational and beyond rational. First, we take cognition to be the origin of all observable behavior. There is a growing literature on emotional and social determinants of behavior. Physiological contributions to behavior (e.g., hunger, thirst, arousal/fatigue) are also being incorporated into recent cognitive models. We offer an approach to integrate these types of cognition that can explain behavior over a much wider range of situations than current approaches. Their integration ranges from a recognition that one of the four is the overwhelming driver in extreme conditions, but otherwise their integration is more nuanced with evidence of a general ordering. We will present and discuss approaches for their integration based on their relative severity leading to a cognitive architecture that can represent the full spectrum of behavior, i.e., behavior outside the laboratory.