

Complex Decisions and Performance Under Cognitively Bounded Rationality

This paper analyzes human decision making and decision quality in a setting in which fully rational decisions are ruled out due to cognitive constraints: chess. We develop a novel empirical approach that contrasts human behavior with a computational benchmark of cognitively bounded rationality based on the algorithms contained in modern chess engines. The results document that deviations from the benchmark are not necessarily associated with worse performance and reveal correlates of deviations. Additional evidence shows that faster decisions are associated with more frequent deviations from the benchmark, but also with better performance on average, suggesting an important role for intuition and expertise.