

## The Ecological Rationality of Simple Strategic Heuristics

*Patricia Rich*

I aim to synthesize three separate research programs, the combination of which will allow us to address the questions of whether and when it is rational for agents to rely on simple heuristics to make choices in strategic settings. One motivation for addressing these questions is that observed strategic behavior often appears to deviate from the classical theory's predictions. I describe several of the available responses to such observations before describing and defending my own particular combination of three fruitful research programs. The first program is *ecological rationality*. This program advocates evaluating the rationality of processes (especially simple heuristics) relative to particular contexts and on the basis of their performance. This program gives an abstract recipe for normative evaluations, but strategic reasoning poses its own challenges and has not been addressed. The second program is *behavioral game theory*, which provides powerful descriptive models of strategic choice, but typically does not claim to model the actual processes agents use to make their choices and does not make normative judgments. The third program is *classical game theory*; while concepts and results from epistemic game theory may also be useful, what is important is to have available solution concepts such as Nash Equilibrium, dominance, and rationalizability that can be used to evaluate agents' strategies and the outcomes that result. Synthesis proceeds by using behavioral game theory models to construct simple, plausible heuristics, and then using classical solution concepts as well as payoff information to evaluate the rationality of such heuristics.