## ONE WORLD COGNITIVE PSYCHOLOGY SEMINAR



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How Experimental Methods Shaped Views on Human Competence and Rationality

## Abstract:

Within just 7 years, behavioral decision research in psychology underwent a dramatic change. In 1967, Peterson and Beach (1967a) reviewed more than 160 experiments concerned with people's statistical intuitions. Invoking the metaphor of the mind as an intuitive statistician, they concluded that "probability theory and statistics can be used as the basis for psychological models that integrate and account for human performance in a wide range of inferential tasks" (p. 29). Yet in a 1974 Science article, Tversky and Kahneman rejected this conclusion, arguing that "people rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simple judgmental operations" (p. 1124). With that, they introduced the heuristics-and-biases research program, which has profoundly altered how psychology, and the behavioral sciences more generally, view the mind's competences and rationality. How was this radical transformation possible? We examine a previously neglected driver: The heuristics-and-biases program established a experimental protocol in behavioral decision research that relied on described scenarios rather than learning and experience. We demonstrate this shift in methods with an analysis of 605 experiments which shows that the descriptive protocol has dominated post-1974 research. Specifically, we examine two lines of research addressed in the intuitive-statistician program (Bayesian reasoning and the conjunction fallacy) and two lines of research spurred by the heuristics-and biases program (framing and anchoring and adjustment). We conclude that the focus on description at the expense of learning has profoundly shaped the influential view of the error-proneness of human cognition.