The Rationality of Informal Argumentation:
A Bayesian Approach to Reasoning Fallacies

Prof. Dr. Mike Oaksford
Birkbeck College London, School of Psychology

Classical informal reasoning "fallacies", e.g., begging the question or arguing from ignorance, while ubiquitous in everyday argumentation, have been subject to little systematic investigation in cognitive psychology. In this talk it is argued that these "fallacies" provide a rich taxonomy of argument forms that can be differentially strong dependent on their content. A Bayesian theory of content dependent argument strength is presented. Possible psychological mechanisms are identified. Experiments are presented investigating whether people's judgments of the strength of three fallacies—the argumentam ad ignorantiam, the circular argument or petitio principii, and the slippery slope argument—are affected by the factors a Bayesian account predicts. This research suggests that Bayesian accounts of reasoning can be extended to the more general human activity of argumentation.