

Scientific reasoning is—and ought to be—conducted in accordance with the axioms of probability. This Bayesian view—so called because of the central role it accords to a theorem first proved by Thomas Bayes in the late eighteenth century—has, in the last twenty years, experienced a huge upsurge of interest among statisticians, scientists, and philosophers, and is fast becoming the new methodological paradigm.

*Scientific Reasoning: The Bayesian Approach* explains, in an accessible style, those elements of the probability calculus that are relevant to Bayesian methods, and argues that the probability calculus is best regarded as a species of logic.

Howson and Urbach contrast the Bayesian with the 'classical' view that was so influential in the last century, and demonstrate that familiar classical procedures for evaluating statistical hypotheses, such as significance tests, point estimation, confidence intervals, and other techniques, provide an utterly false basis for scientific inference. They also expose the well-known non-probabilistic philosophies of Popper, Lakatos, and Kuhn as similarly unscientific.

*Scientific Reasoning* shows how Bayesian theory, by contrast with these increasingly discredited approaches, provides a unified and highly satisfactory account of scientific method, an account which practicing scientists and all those interested in the sciences ought to master.