

Uncertainty in Science, Statistics

Encyclopedia Article

Uncertainty in Science, Statistics

The following sections of this BookRags Literature Study Guide is offprint from Gale's For Students Series: Presenting Analysis, Context, and Criticism on Commonly Studied Works: Introduction, Author Biography, Plot Summary, Characters, Themes, Style, Historical Context, Critical Overview, Criticism and Critical Essays, Media Adaptations, Topics for Further Study, Compare & Contrast, What Do I Read Next?, For Further Study, and Sources.

(c)1998-2002; (c)2002 by Gale. Gale is an imprint of The Gale Group, Inc., a division of Thomson Learning, Inc. Gale and Design and Thomson Learning are trademarks used herein under license.

The following sections, if they exist, are offprint from Beacham's Encyclopedia of Popular Fiction: "Social Concerns", "Thematic Overview", "Techniques", "Literary Precedents", "Key Questions", "Related Titles", "Adaptations", "Related Web Sites". (c)1994-2005, by Walton Beacham.

The following sections, if they exist, are offprint from Beacham's Guide to Literature for Young Adults: "About the Author", "Overview", "Setting", "Literary Qualities", "Social Sensitivity", "Topics for Discussion", "Ideas for Reports and Papers". (c)1994-2005, by Walton Beacham.

All other sections in this Literature Study Guide are owned and copyrighted by BookRags, Inc.

Contents

Uncertainty in Science, Statistics Encyclopedia Article.....	1
Contents.....	2
Uncertainty in Science, Statistics.....	3

Uncertainty in Science, Statistics

Uncertainty in **statistics** is measured by the amount of error in an estimate of the mean or average value of a population. The sample mean is the average of a group of measurements or parameters taken from the population, and the standard deviation of the mean provides an estimate of the uncertainty that any one measurement will represent the true mean of the population. In **environmental science**, it is often very difficult to make enough measurements of interacting processes so that uncertainty in the estimate of the mean values of important parameters is low enough to prove whether hypotheses are correct or not. Bayesian statistical analysis is a statistical method that estimates the **probability** that a hypothesis is true, then modifies and updates the probability as more studies are conducted and more information becomes available.