Record Nr. UNINA9910459599603321 Autore Mayo Deborah G Titolo Error and the growth of experimental knowledge [[electronic resource] /] / Deborah G. Mayo Chicago,: University of Chicago Press, 1996 Pubbl/distr/stampa **ISBN** 1-283-05840-5 9786613058409 0-226-51199-5 Descrizione fisica 1 online resource (512 p.) Collana Science and its conceptual foundations Disciplina 001.4/34 Soggetti Error analysis (Mathematics) Bayesian statistical decision theory Science - Philosophy Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 465-480) and index. Frontmatter -- Contents -- Preface -- 1. Learning from Error -- 2. Nota di contenuto Ducks, Rabbits, and Normal Science: Recasting the Kuhn's-Eye View of Popper -- 3. The New Experimentalism and the Bayesian Way -- 4. Duhem, Kuhn, and Bayes -- 5. Models of Experimental Inquiry -- 6. Severe Tests and Methodological Underdetermination -- 7. The Experimental Basis from Which to Test Hypotheses: Brownian Motion --8. Severe Tests and Novel Evidence -- 9. Hunting and Snooping: Understanding the Neyman-Pearson Predesignationist Stance -- 10. Why You Cannot Be Just a Little Bit Bayesian -- 11. Why Pearson Rejected the Neyman-Pearson (Behavioristic) Philosophy and a Note on Objectivity in Statistics -- 12. Error Statistics and Peircean Error Correction -- 13. Toward an Error-Statistical Philosophy of Science --References -- Index Sommario/riassunto We may learn from our mistakes, but Deborah Mayo argues that, where experimental knowledge is concerned, we haven't begun to learn enough. Error and the Growth of Experimental Knowledge launches a vigorous critique of the subjective Bayesian view of statistical inference,

and proposes Mayo's own error-statistical approach as a more robust

framework for the epistemology of experiment. Mayo genuinely addresses the needs of researchers who work with statistical analysis, and simultaneously engages the basic philosophical problems of objectivity and rationality. Mayo has long argued for an account of learning from error that goes far beyond detecting logical inconsistencies. In this book, she presents her complete program for how we learn about the world by being "shrewd inquisitors of error, white gloves off." Her tough, practical approach will be important to philosophers, historians, and sociologists of science, and will be welcomed by researchers in the physical, biological, and social sciences whose work depends upon statistical analysis.