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Nota di contenuto	Intro -- Foreword -- References -- Preface -- Contents -- Acronyms -- Part I: Foundation -- Chapter 1: Introduction -- 1.1 Background -- 1.2 Book Structure -- References -- Chapter 2: Formally Modeling Users in Information Retrieval -- 2.1 Introduction -- 2.2 Basic Click Models -- 2.3 Advanced Click Models -- 2.4 Clicks and Examinations in Multi-query Search Sessions -- 2.5 Incorporating Users into Click Models -- 2.6 User Models and IR Evaluation Metrics -- 2.7 Summary -- References -- Chapter 3: From Rational Agent to Human with Bounded Rationality -- 3.1 Background -- 3.2 Gaps Between Biased Users and Formal User Models -- 3.3 Hidden Problems Behind Metric-Bias Gaps -- 3.4 Preliminary Bias-Aware Interactive User Modeling and

Evaluation Framework -- 3.5 Summary -- References -- Part II: Beyond Rational Agents -- Chapter 4: Bounded Rationality in Decision-Making Under Uncertainty -- 4.1 Background -- 4.2 Two Systems of Human Cognition: Which One Are We Using? -- 4.3 Reference Dependence -- 4.4 Loss Aversion, Endowment Effect, and Status Quo Bias -- 4.5 Expectation (Dis)confirmation Theory -- 4.6 Framing Effect, Confirmation Bias, and Anchoring Bias -- 4.7 Decoy Effect -- 4.8 Peak-End Rule, Recency Effect, and Remembered Utility -- 4.9 Other Biases and Heuristics in Decision-Making Under Uncertainty -- 4.10 Summary -- References -- Chapter 5: Back to the Fundamentals: Extend the Rational Assumptions -- 5.1 Introduction -- 5.2 Pre-search Stage -- 5.3 Within-Search Stage -- 5.4 Post-search Stage -- 5.5 Summary -- References -- Part III: Toward a Behavioral Economics Approach -- Chapter 6: Behavioral Economics in IR -- 6.1 Introduction -- 6.2 From Rational Agents to Boundedly Rational Decision Makers -- 6.3 Pre-search Stage -- 6.4 Within-Search Stage -- 6.5 Post-search Stage -- 6.6 Behavioral Economics and Recommender Systems -- 6.7 Summary. References -- Chapter 7: Implications and New Directions for IR Research and Practices -- 7.1 Background -- 7.2 Characterizing Bounded Rationality in IR -- 7.3 Development of Bias-Aware Interactive Search Systems -- 7.4 Bias in Multiple Forms and Modalities of Search Interactions -- 7.5 Bias-Aware Evaluation and FATE in IR -- 7.6 Summary -- References -- Chapter 8: Conclusion -- References -- Glossary.

Sommario/riassunto

This book brings together the insights from three different areas, Information Seeking and Retrieval, Cognitive Psychology, and Behavioral Economics, and shows how this new interdisciplinary approach can advance our knowledge about users interacting with diverse search systems, especially their seemingly irrational decisions and anomalies that could not be predicted by most normative models. The first part “Foundation” of this book introduces the general notions and fundamentals of this new approach, as well as the main concepts, terminology and theories. The second part “Beyond Rational Agents” describes the systematic biases and cognitive limits confirmed by behavioral experiments of varying types and explains in detail how they contradict the assumptions and predictions of formal models in information retrieval (IR). The third part “Toward A Behavioral Economics Approach” first synthesizes the findings from existing preliminary research on bounded rationality and behavioral economics modeling in information seeking, retrieval, and recommender system communities. Then, it discusses the implications, open questions and methodological challenges of applying the behavioral economics framework to different sub-areas of IR research and practices, such as modeling users and search sessions, developing unbiased learning to rank and adaptive recommendations algorithms, implementing bias-aware intelligent task support, as well as extending the conceptualization and evaluation on IR fairness, accountability, transparency and ethics (FATE) with the knowledge regarding both human biases and algorithmic biases. This book introduces a behavioral economics framework to IR scientists seeking a new perspective on both fundamental and new emerging problems of IR as well as the development and evaluation of bias-aware intelligent information systems. It is especially intended for researchers working on IR and human-information interaction who want to learn about the potential offered by behavioral economics in their own research areas.
