# Contents


**1 The Ambiguity of Errors for Work and Learning: Introduction to the Volume** ..... 1
Johannes Bauer and Christian Harteis

**Part I Errors, Their Learning Potential, and the Processes of Learning from Errors**

**2 Errors and Learning from Errors at Work** ..... 17
Stephen Billett

**3 Tracing Outcomes of Learning from Errors on the Level of Knowledge** ..... 33
Martin Gartmeier and Elke M. Schüttelkopf

**4 Towards a Theory of Negative Knowledge (NK): Almost-Mistakes as Drivers of Episodic Memory Amplification** ..... 53
Fritz K. Oser, Catherine Näpflin, Christine Hofer, and Philipp Aerni

**5 Professional Knowledge Is (Also) Knowledge About Errors** ..... 71
Hans Gruber and Michael Mohe

**Part II Methodological Strategies**

**6 Research on Errors and Learning from Them: Methodological Perspectives** ..... 91
Klaus Mehl and Theo Wehner

**7 Measuring Organizational Climate for Learning from Errors at Work** ..... 107
Daniel Putz, Jan Schilling, and Annette Kluge

**Part III Learning from Errors in the Professions**

**8 Innovation by Learning from Mistakes: The Relationships Between Team Characteristics, Error Orientation and Team Innovation** ..... 127
Marianne van Woerkom

**9 Error Orientation in the Context of Intuitive and Competent Behaviour: Results of an Exploratory Study in the Domain of Emergency Medicine** ..... 141
Christian Harteis and Franziska Frost

**10 Human Fallibility and Learning from Errors at Work** ..... 155
Johannes Bauer, Martin Gartmeier, and Christian Harteis

**Part IV Enabling Learning from Errors**

**11 Managing Errors During Training** ..... 173
Nina Keith

**12 Reflecting on Learning from Errors in School Instruction: Findings and Suggestions from a Swiss-German Video Study** ..... 197
Inger Marie Dalehefte, Tina Seidel, and Manfred Prenzel

**13 Learning from Errors: The Role of After-Event Reviews** ..... 215
Shmuel Ellis

**14 Incident Reporting Systems in Hospitals: How Does Learning Occur Using this Organisational Instrument?** ..... 233
Yvonne Pfeiffer and Theo Wehner

**Part V Conclusion**

**15 Research on Human Fallibility and Learning from Errors at Work: Challenges for Theory, Research, and Practice** ..... 255
Christian Harteis, Johannes Bauer, and Helmut Heid

**Name Index** ..... 267

**Subject Index** ..... 277