

# Contents

|                                                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------------------------|-----|
| <b>Introduction: Artificial Intelligence in Society</b> .....                                                               | 1   |
| Michael Heinlein and Norbert Huchler                                                                                        |     |
| <b>Understanding Artificial Intelligence in Society: Theoretical and Methodological Approaches</b>                          |     |
| <b>Artificial Intelligence and Contingency: A Practice-Theoretical Perspective</b> .....                                    | 15  |
| Michael Heinlein                                                                                                            |     |
| <b>More Than Bias: Social and Technological Selectivities of (Subsymbolic) Artificial Intelligence</b> .....                | 51  |
| Norbert Huchler                                                                                                             |     |
| <b>From Interaction to Transformaction: The Consequences of Artificial Intelligence for Theories of Social Action</b> ..... | 81  |
| Valentin Rauer                                                                                                              |     |
| <b>AI, a Method for Everything?</b> .....                                                                                   | 111 |
| Peter Kahlert, Maryam Tatari, Suzette Kahlert, Silvan Pollozek, Johan Buchholz, Benedict Lang, and Jan-Hendrik Passoth      |     |
| <b>Artificial Intelligence as Image and Myth</b>                                                                            |     |
| <b>The Movable Host of Artificial Intelligence</b> .....                                                                    | 141 |
| Bruno Gransche and Arne Manzeschke                                                                                          |     |

|                                                                                                                                                             |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <b>Images Make People. On the Power of Images in Artificial Intelligence</b> .....                                                                          | 173 |
| Arne Manzeschke and Bruno Gransche                                                                                                                          |     |
| <b>Societal Risks and Social Dynamics of Artificial Intelligence</b>                                                                                        |     |
| <b>Dynamics and Promises of Artificial Intelligence</b> .....                                                                                               | 195 |
| Hartmut Hirsch-Kreinsen                                                                                                                                     |     |
| <b>The Controversy About Risks and Threats in Artificial Intelligence</b> ...                                                                               | 221 |
| Reinhard Kreissl and Roger von Laufenberg                                                                                                                   |     |
| <b>Future Technology as Comfort: Promising Tales About AI</b> .....                                                                                         | 255 |
| Stefan Selke                                                                                                                                                |     |
| <b>The Politics of Artificial Intelligence</b>                                                                                                              |     |
| <b>Machine Learning, Political Participation and the Transformations of Democratic Self-Determination</b> .....                                             | 283 |
| Jeanette Hofmann and Clara Iglesias Keller                                                                                                                  |     |
| <b>Artificial Intelligence and Social Change—A Challenge for Democratic Relations of Power and Domination</b> .....                                         | 307 |
| Peter Imbusch and Joris Steg                                                                                                                                |     |
| <b>Norms, Regulation, Governance: How, by Whom, and by What Means Can the Use of Artificial Intelligence Be Shaped by Society?</b> ...                      | 331 |
| Karsten Weber and Nadine Kleine                                                                                                                             |     |
| <b>Artificial Intelligence in the Workplace</b>                                                                                                             |     |
| <b>AI as a Colleague: A Representative Employee Survey on Artificial Intelligence in the German Workplace</b> .....                                         | 353 |
| Sabine Pfeiffer                                                                                                                                             |     |
| <b>Mixed-Methods Analysis of AI Technology Usage in German Engineering: Quantitative and Qualitative Perspectives from the Viewpoint of Employees</b> ..... | 381 |
| Amelie Tihlarik, Bruno Albert, Romy Blinzler, and Silke Röbenack                                                                                            |     |
| <b>Between Vision and Reality: Rethinking the Role of Employees in AI-Driven Retail</b> .....                                                               | 409 |
| Katja Schönián and Sabine Pfeiffer                                                                                                                          |     |

|                                                                                                                       |     |
|-----------------------------------------------------------------------------------------------------------------------|-----|
| <b>Robots in Surgery: Empirical Findings Through Technification<br/>of Medical Work</b> .....                         | 435 |
| Regina Wittal and Carolyn Hettinger                                                                                   |     |
| <b>AI and Medicine: Separating Fact from Fiction in the Quest<br/>for Effective and High Quality Healthcare</b> ..... | 465 |
| Stephan Graßmann and Sabine Pfeiffer                                                                                  |     |