Contents

Lıs	t of Figures	раде 1х
Lis	t of Contributors	xi
Ack	knowledgements	xix
	Introduction Silja Voeneky, Philipp Kellmeyer, Oliver Mueller, and Wolfram Burgard	1
	PART I FOUNDATIONS OF RESPONSIBLE AI	
1	Artificial Intelligence: Key Technologies and Opportunities Wolfram Burgard	11
2	Automating Supervision of AI Delegates Jaan Tallinn and Richard Ngo	19
3	Artificial Moral Agents: Conceptual Issues and Ethical Controversy Catrin Misselhorn	31
4	Risk Imposition by Artificial Agents: The Moral Proxy Problem Johanna Thoma	50
5	Artificial Intelligence and Its Integration into the Human Lifeworld Christoph Durt	67
	PART II CURRENT AND FUTURE APPROACHES TO AI GOVERNANCE	
6	Artificial Intelligence and the Past, Present, and Future of Democracy Mathias Risse	85
7	The New Regulation of the European Union on Artificial Intelligence: Fuzz Ethics Diffuse into Domestic Law and Sideline International Law Thomas Burri	y 104

vi Contents

8	Fostering the Common Good: An Adaptive Approach Regulating High-Risk AI-Driven Products and Services Thorsten Schmidt and Silja Voeneky	123
9	China's Normative Systems for Responsible AI: From Soft Law to Hard Law Weixing Shen and Yun Liu	150
10	Towards a Global Artificial Intelligence Charter Thomas Metzinger	167
11	Intellectual Debt: With Great Power Comes Great Ignorance Jonathan Zittrain	176
	PART III RESPONSIBLE AI LIABILITY SCHEMES	
12	Liability for Artificial Intelligence: The Need to Address Both Safety Risks and Fundamental Rights Risks Christiane Wendehorst	187
13	Forward to the Past: A Critical Evaluation of the European Approach to Artificial Intelligence in Private International Law Jan von Hein	210
	PART IV FAIRNESS AND NONDISCRIMINATION IN AI SYSTEMS	
14	Differences That Make a Difference: Computational Profiling and Fairness to Individuals Wilfried Hinsch	229
15	Discriminatory AI and the Law: Legal Standards for Algorithmic Profiling Antje von Ungern-Sternberg	252
	PART V RESPONSIBLE DATA GOVERNANCE	
16	Artificial Intelligence and the Right to Data Protection Ralf Poscher	281
17	Artificial Intelligence as a Challenge for Data Protection Law: And Vice Versa Boris P. Paal	290
18	Data Governance and Trust: Lessons from South Korean Experiences Coping with COVID-19 Sangchul Park, Yong Lim, and Haksoo Ko	309
	PART VI RESPONSIBLE CORPORATE GOVERNANCE OF AI SYSTEMS	
19	From Corporate Governance to Algorithm Governance: Artificial Intelligence as a Challenge for Corporations and Their Executives Jan Lieder	331

O	
Contents	V11
Contents	VII

20	Autonomization and Antitrust: On the Construal of the Cartel Prohibition in the Light of Algorithmic Collusion Stefan Thomas	347
21	Artificial Intelligence in Financial Services: New Risks and the Need for More Regulation? Matthias Paul	359
	PART VII RESPONSIBLE AI HEALTHCARE AND NEUROTECHNOLOGY GOVERNANCE	
22	Medical AI: Key Elements at the International Level Fruzsina Molnár-Gábor and Johanne Giesecke	379
23	"Hey Siri, How Am I Doing?": Legal Challenges for Artificial Intelligence Alter Egos in Healthcare Christoph Krönke	397
2 4	'Neurorights': A Human Rights-Based Approach for Governing Neurotechnologies Philipp Kellmeyer	412
25	AI-Supported Brain-Computer Interfaces and the Emergence of 'Cyberbilities' Boris Essmann and Oliver Mueller	427
	PART VIII RESPONSIBLE AI FOR SECURITY APPLICATIONS AND IN ARMED CONFLICT	
26	Artificial Intelligence, Law, and National Security Ebrahim Afsah	447
2 7	Morally Repugnant Weaponry? Ethical Responses to the Prospect of Autonomous Weapons Alex Leveringhaus	475
28	On 'Responsible AI' in War: Exploring Preconditions for Respecting International Law in Armed Conflict Dustin A. Lewis	488

