CONTENTS

List of contributors  page viii
Acknowledgements  x

PART I  Introduction  1

1 Autonomous weapons systems: living a dignified life
and dying a dignified death
CHRISTOF HEYNS  3

PART II  Meanings of autonomy and human cognition
under automation  21

2 Staying in the loop: human supervisory control of weapons
NOEL SHARKEY  23

3 The autonomy of technological systems and responsibilities
for their use
GIOVANNI SARTOR AND ANDREA OMICINI  39

4 Human–machine autonomies
LUCY SUCHMAN AND JUTTA WEBER  75

PART III  Autonomous weapons systems and human
dignity  103

5 Are autonomous weapons systems a threat to human
dignity?
DIETER BIRNBACHER  105
## Table of Contents

6 On banning autonomous weapons systems: from deontological to wide consequentialist reasons  
**Guglielmo Tamburrini** 122

**PART IV**  
**Risk, transparency and legal compliance in the regulation of autonomous weapons systems** 143

7 Judgment, liability and the risks of riskless warfare  
**Pablo Kalmanovitz** 145

8 Autonomous weapons systems and transparency: towards an international dialogue  
**Sarah Knuckey** 164

9 A human touch: autonomous weapons, DoD Directive 3000.09 and the interpretation of ‘appropriate levels of human judgment over the use of force’  
**Dan Saxon** 185

10 Autonomous weapons systems: managing the inevitability of ‘taking the man out of the loop’  
**Geoffrey S. Corn** 209

**PART V**  
**New frameworks for collective responsibility** 243

11 The obligation to exercise discretion in warfare: why autonomous weapons systems are unlawful  
**EliaV Lieblich and Eyal Benvenisti** 245

12 Autonomy and uncertainty: increasingly autonomous weapons systems and the international legal regulation of risk  
**Nehal Bhuta and Stavros-Evdokimos Pantazopoulos** 284
PART VI New frameworks for individual responsibility 301

13 Autonomous weapons systems: new frameworks for individual responsibility
NEHA JAIN 303

14 Refining responsibility: differentiating two types of responsibility issues raised by autonomous weapons systems
HIN-YAN LIU 325

PART VII Conclusion 345

15 Present futures: concluding reflections and open questions on autonomous weapons systems
NEHAL BHUTA, SUSANNE BECK AND ROBIN GEIß 347

Index 384