

Table of Contents

<i>List of Abbreviations</i>	<i>xxi</i>
1. Introduction: Textbook and Essay	1
1.1 Middle Ground: Architecture	1
1.2 Law in ‘Speakerspace’	2
1.3 Law in ‘Manuscriptspace’	3
1.4 Law in ‘Bookspace’	5
1.5 Law in Cyberspace: A New ‘Onlife World’	6
1.6 Outline	8
1.6.1 What law does	9
1.6.2 Domains of cyberlaw	9
1.6.3 Frontiers of law in an onlife world	10
1.6.4 Finals	11
 PART I WHAT LAW DOES	
2. Law, Democracy, and the Rule of Law	17
2.1 What is Law?	17
2.1.1 Sources of law	18
2.1.2 What law does	20
2.1.2.1 Legal effect	20
2.1.2.2 Effective and practical individual rights	25
2.1.3 Legal reasoning	28
2.2 What is Law in a Constitutional Democracy?	31
2.2.1 Law, morality, and politics, and the nature of legal rules	32
2.2.2 Legal certainty, justice, instrumentality	34
 3. Domains of Law: Private, Public, and Criminal Law	39
3.1 Private, Public, and Criminal Law: Conceptual Distinctions	39
3.1.1 Absolute rights and relative rights	40
3.1.2 Private law and public law	41
3.1.3 Private law and criminal law	45
3.2 Private Law	47
3.2.1 Property law: transfer of movables	48
3.2.2 Contract law and property law: sale and transfer of real estate	51
3.2.3 Tort liability	54
3.3 Public Law and Criminal Law	57
3.3.1 Public law	58
3.3.1.1 Constitutional law	58
3.3.1.2 Administrative law	58

3.3.2 Criminal law	60
3.3.2.1 Substantive criminal law	60
3.3.2.2 Criminal procedure, including police investigation	66
4. International and Supranational Law	75
4.1 Jurisdiction in Western Legal Systems	76
4.1.1 An example	77
4.1.2 National jurisdiction	78
4.2 International Law	80
4.2.1 Sources of international law	81
4.2.2 Monism and dualism in international law	82
4.3 Supranational Law	86
4.3.1 Transfer of sovereignty	87
4.3.2 Sources of EU law	89
4.3.3 Case law of the CJEU	91
4.4 International Rule of Law	93
 PART II DOMAINS OF CYBERLAW	
5. Privacy and Data Protection	99
5.1 Human Rights Law	99
5.1.1 Human rights as defence rights against the modern state	100
5.1.2 From liberty rights to social, economic, and further rights	101
5.2 The Concept of Privacy	102
5.2.1 Taxonomies and family resemblance	103
5.2.2 Privacy and technology	108
5.3 The Right to Privacy	110
5.3.1 The right to privacy: constitutional law	111
5.3.2 The right to privacy: international law	112
5.3.3 The right to privacy: supranational law	113
5.3.4 Article 8 ECHR	114
5.3.5 Case law Article 8 ECHR regarding surveillance	117
5.3.5.1 Post-crime surveillance	118
5.3.5.2 Pre-crime surveillance (including surveillance by the intelligence services)	121
5.4 Privacy and Data Protection	128
5.4.1 Defaults: an opacity right and a transparency right	129
5.4.2 Distinctive but overlapping rights: a Venn diagram	130
5.4.3 Legal remedies in case of violation	131
5.5 Data Protection Law	132
5.5.1 EU and US data protection law	134
5.5.2 EU data protection law	135
5.5.2.1 Sources of law regarding EU data protection law	136
5.5.2.2 Material and territorial scope	138
5.5.2.3 Personal data and data subject	139
5.5.2.4 Data controller and data processor	142

5.5.2.5	Legal ground for lawful processing of personal data	144
5.5.2.6	Principles of lawful, fair, and transparent processing	148
5.5.2.7	Valid consent	151
5.5.2.8	Special categories of data	153
5.5.2.9	Data protection by design and default (DPbDD)	154
5.5.2.10	Data protection impact assessment	156
5.5.2.11	Compliance and enforcement	158
5.6	Privacy and Data Protection Revisited	160
6.	Cybercrime	163
6.1	The Problem of Cybercrime	164
6.1.1	Computer crime	165
6.1.2	Cybercrime	166
6.2	Cybercrime and Public Law	168
6.2.1	The Cybercrime Convention	168
6.2.1.1	Substantive law	170
6.2.1.2	Procedural law	174
6.2.1.3	Extraterritorial jurisdiction to enforce or investigate	181
6.2.2	Limitations on investigative powers	182
6.2.2.1	Proportionality test for police access to personal data	183
6.2.2.2	Proportionality test, balancing tests, and the image of the scale	184
6.3	The EU Cybercrime and Cybersecurity Directives	187
7.	Copyright in Cyberspace	191
7.1	IP Law as Private Law	192
7.2	Overview of IP Rights	194
7.2.1	Copyright	194
7.2.2	Patents	195
7.2.3	Trademark	197
7.3	History, Objectives, and Scope of Copyright Protection	197
7.4	EU Copyright Law	201
7.4.1	The Copyright Directive and the Enforcement Directive	202
7.4.1.1	The scope of protection (restrictions) and the limitations	202
7.4.1.2	The home copy case of the CJEU	203
7.4.1.3	IP enforcement against intermediaries	204
7.4.1.4	Injunctions to cease unlawful sharing: <i>Sabam v. Netlog</i>	206
7.4.1.5	Injunctions to cease unlawful sharing: <i>Brein v. Ziggo</i>	207
7.4.1.6	The update of the Copyright Directive	210
7.4.2	The Software Copyright Directive	211
7.4.2.1	Exceptions to the exclusionary software copyright: <i>SAS v. WLP</i>	212
7.4.2.2	Exceptions to the exclusionary software copyright: <i>Microsoft</i>	213
7.5	Open Source and Free Access	215
8.	Private Law Liability for Faulty ICT	219
8.1	Back to Basics	220
8.1.1	Chapter 3: private law distinctions	220

8.1.2	Chapter 4: international and supranational law	222
8.1.3	Chapter 5: data protection law	223
8.2	Tort Law in Europe	225
8.3	Third-Party Liability for Unlawful Processing and Other Cyber Torts	229
8.3.1	Privacy harms	231
8.3.1.1	Canadian ‘tort of intrusion upon seclusion’	231
8.3.1.2	UK ‘tort of misuse of private information’	232
8.3.2	Cybertorts?	233
 PART III FRONTIERS OF LAW IN AN ONLIFE WORLD		
9.	Legal Personhood for AI?	237
9.1	Legal Subjectivity	240
9.2	Legal Agency	243
9.3	Artificial Agents	245
9.4	Private Law Liability	246
10.	‘Legal by Design’ or ‘Legal Protection by Design’?	251
10.1	Machine Learning (ML)	252
10.1.1	Exploratory and confirmatory ML research design	253
10.1.2	Implications of micro-targeting	254
10.1.3	Implications of micro-targeting for the rule of law	256
10.2	Distributed Ledger Technologies (DLTs), Smart Contracts, and Smart Regulation	258
10.2.1	Smart contracts and smart regulation	260
10.2.2	The legal status of ‘smart contracts’ under private law	263
10.2.3	The legal status of ‘smart regulation’ under public law	266
10.3	‘Legal by Design’ or ‘Legal Protection by Design’?	267
10.3.1	Legal by design (LbD)	267
10.3.2	Legal protection by design (LPbD)	269
10.3.3	LPbD in the GDPR	270
10.3.3.1	Data protection impact assessment	270
10.3.3.2	Data protection by default and by design (DPbDD)	272
10.3.3.3	Automated decisions	273
 PART IV FINALS		
11.	Closure: On Ethics, Code, and Law	283
11.1	Distinctions between Law, Code, and Ethics	284
11.1.1	Utilitarianism and methodological individualism	285
11.1.2	Deontological reasoning: respect for human autonomy	288
11.1.3	Virtue ethics: perceiving the good and doing what is right	291
11.1.4	Pragmatist ethics: taking into account	293
11.1.5	The difference that makes a difference: closure	295
11.2	The Conceptual Relationship between Law, Code, and Ethics	297
11.2.1	Justice, legal certainty, and instrumentality	298
11.2.2	Law, code, and the rule of law	299

11.3	The Interaction between Law, Code, and Ethics	301
11.3.1	‘By design’ approaches in law and ethics	302
11.3.2	Fairness by design and ‘fair computing’ paradigms	304
11.3.2.1	The case of COMPAS	306
11.3.2.2	A computational ‘fairness by design’ approach to detain/release court decisions	310
11.3.2.3	An ethical ‘fairness by design’ approach to detain/release court decisions	312
11.3.2.4	A legal ‘fairness by design’ approach to detain/release court decisions	314
11.4	Closure: The Force of Technology and the Force of Law	315