

# INDEX

- 24/7 network, 214
- Aadhaar card, 115
- abhorrent violent conduct, 172
- abhorrent violent material, 171–2
- accommodation booking services, 102
- advance fee fraud, 148
- aerial taxis, 109
- algorithmic regulation, 22
- AlphaBay, 152
- anti-competitive behaviour, 103–4
- click fraud, 103
- Pay-Per-Click mechanism, 103
- anti-money laundering and counterterrorism financing, 96–7
- Apple, 18, 160
- patent wars and, 189
- artificial intelligence, 12
- algorithmic regulation and, 22
- challenges of implementation, 89
- definition, 83
- digital pathology and, 88
- ethics principles, 107
- impact on manual labour and routine professions, 106
- medicine and, 65, 88–90
- misdiagnosis, responsibility for, 89–90
- ophthalmology and, 89
- professional and government services, 104–5
- radiology and, 89
- recent developments in, 7–8
- regulation by Therapeutic Goods Administration, 90
- regulation decision-making principles, 106–7
- regulatory challenges, 12–13
- assisted reproductive technology, 10, 30, 65, 78–80
- centre accreditation, 79
- mitochondrial donation, 82–3
- NHMRC Guidelines, 79–80
- oocyte preservation and surrogacy, 83
- pre-implantation genetic diagnosis, 80–2
- regulation, 79
- astroturfing, 164
- ATM interference. *See* card skimming
- Australian Broadcasting Corporation, 55
- Australian Census 2016, 7–8
- Australian Competition and Consumer Commission, 195
- digital platforms and, 103–4
- Australian Criminal Intelligence Commission, 115, 119, 120
- Australian Federal Police, 54, 55, 135, 205
- Australian Federation Against Copyright Theft, 198
- Australian Human Rights Commission, 12, 47, 106, 135
- Australian National Blockchain, 99–100
- Australian National Criminal Investigation DNA Database, 128
- Australian National University data breach, 8–9, 40–1, 142
- Australian Pesticide and Veterinarian Medicines Association, 88
- Australian privacy law, 41–4
- exemptions to, 48
- identification information, 43
- in practice, 48–51
- new technology concerns and, 49
- oversight and investigation, 47–8
- personal information, 43
- sensitive information, 43, 68
- Australian Privacy Principles, 38, 42, 45–6
- genetic information and, 73
- health information and, 68
- Australian Securities and Investments Commission, 96
- Australian Security Intelligence Organisation, 135
- Australian Signals Directorate, 4, 62, 159
- Australian Taxation Office, 95–6
- Australian Transaction Reports and Analysis Centre, 96
- automated decision-making in sentencing, 115–16
- Automated Fingerprint Identification Systems, 118
- Barlow, John Perry, 18
- A Declaration of Independence for Cyberspace*, 17
- Bentham, Jeremy
- utilitarianism and, 32–3
- Berlin, Isaiah, 26
- biobanks, 69–71
- blood, tissue and organ donations and, 70–1
- consent and, 69
- definition, 69
- property rights and, 69–70
- biometric driver licence photographs, 135

- biometric facial templates, 135
  - CCTV and, 139
- biometric identification
  - criminal justice system and, 116–17
  - definition, 112, 113
  - distinctive features of, 112–13
  - evidence, 116–17
- Biometric Identification System, 120
- biometric information, 49–50, 136
  - Europe, 59–60
- biometric passports, 135
- biometric templates, 40, 44
- biometrics, 112
  - CCTV and, 113
  - recent developments in, 9–10
  - seven pillars of, 113
  - three applications of, 113–14
- biotechnology
  - cloning and stem cell technology, 85–7
  - definition, 83
  - gene editing, 84–5
- BitTorrent, 191, 199
- Bitcoin, 2, 94, 99
  - criminal use of, 95–6
  - purchase of illegal items with, 97
- black box data processing, 89
- blockchain technology, 94, 99, 110
  - patentability, 188
- botnets, 147, 151, 164
- Braithwaite, John, 36
  - pyramids of supports and sanctions, 15
- brandjacking, 194–5
- BRCA1 gene, 7, 75–6
  
- Cambridge Analytica, 8, 38, 41, 168
- card skimming, 153–4
- carriage service providers
  - access to overseas websites offering infringing content, 199
  - child exploitation material and, 180
  - cyber harassment and, 173
  - intellectual property rights and, 196
  - prevention of offences and, 166
  - See also* internet service providers
- CCTV
  - biometric facial templates and, 139
  - biometrics and, 113
  - facial mapping and, 132
  - facial recognition technology and, 133–4, 135
  - CCTV surveillance, 9, 40, 49, 61, 77
- child exploitation material, 178–80
  - carriage service providers and, 180
- child grooming. *See* online child grooming
- China
  - cryptocurrency in, 99
  - social credit system, 9, 40, 74, 136
- Christchurch mass shooting, 171, 225
- Civil Aviation Safety Authority, 109
- Clarke, Roger, 39
- click fraud, 103
- cloning
  - induced pluripotent stem cells, 86
  - legislation prohibiting, 85–6
  - situations where an offence, 86
  - somatic cell nuclear transfer, 86
  - stem cell treatments with no therapeutic benefit, 87
- cloud computing regulation, 104
- cloud storage, 160
  - national security and, 160
- Combined DNA Index System, 114
- commercial ancestry databases, 130–1
- Commissioner for the Retention and Use of Biometric Material, 114
- communications
  - legal framework, 5–6
  - privacy of, 38
  - recent developments in, 4–6
- communitarianism, 28–9
- computer crime
  - attribution, 203
  - prosecution, 203
  - See also* cybercrime
- computer crime investigation, 203–9
  - admissibility of illegally or improperly obtained evidence, 208
  - difference between interception and surveillance, 206
  - entrapment, 208
  - forensic imaging, 205–6
  - hackers and, 211–12
  - international cooperation in. *See* international cooperation in computer crime investigation
  - investigative approach, 203–4
  - prosecution decision-making in. *See* prosecution decision-making
  - self-incrimination and, 205
  - sting operations, 207–8
  - Sweetie 2.0 chatbot, 209

- warrants, 204–5, 206–7
- wiretapping, 206
- computer crime jurisdiction, 203, 210
  - Convention on Cybercrime*, 210
  - extended geographical jurisdiction, 212
  - extraterritorial criminal jurisdiction, 212
  - standard geographical jurisdiction, 212
  - territoriality and citizenship and, 211
- Computer Crimes and Intellectual Property Section, 192
- computer hacking, 141–4
  - Australian legislation, 147
  - by state actors, 142
  - defensive hacking, 159
  - ‘exceeds authorised access’, 146
  - ‘illegal access’, 145
  - investigation of, 203
  - legislative provisions, 144–7
  - Love Bug virus, 142
  - militarily sensitive information, 155
  - societal evolution of, 141
  - teenager association, 141–2
  - ‘unauthorised access’, 146
  - unauthorised modification and impairment, 147
- computer implemented inventions, 186–7
- confidentiality
  - biobanks and, 69
  - medical. *See* medical confidentiality
- consent
  - biobanks and, 69
  - organ donations and, 71
  - patient consent. *See* patient consent
- consequentialism, 32
- content service providers, 173
  - intellectual property rights and, 196
- contractualism, 24–6, 36
- Copernicus, Nicolaus, 34
- copyright, 190
  - Convention on Cybercrime* and, 191–2
  - entertainment and. *See* entertainment copyright
  - file-sharing criminal penalties, 192
- Correctional Offender Management Profiling for Alternative Sanctions, 115
- counterfeit goods, 194
- courtroom technology
  - forensic science, 22–3
  - interpretation of scientific evidence, 23–4
  - regulation of technology and, 22–4
- COVID-19
  - Australian smartphone application, 91
  - contact tracing and public health order enforcement, 92
  - fake news and, 164
  - public health surveillance and, 90–2
  - retail services and, 101
  - smartphones and, 90–2
  - technology and, 223–4
- Credit Industry Fraud Avoidance System, 153
- Criminal Cases Review Commission, 127
- criminal investigations
  - DNA evidence in. *See* DNA evidence
- criminal justice system
  - automated decision-making in sentencing, 115–16
  - biometric identification and, 116–17
  - DNA identification. *See* DNA identification
  - facial recognition. *See* facial recognition
  - fingerprint identification. *See* fingerprint identification
  - prosecution decision-making in. *See* prosecution decision-making
  - technology-based identification, 112–17
- CRISPR/Cas9, 6, 85
- crowd scanning, 135
- cryptocurrency, 2, 110
  - anti-money laundering and counterterrorism and, 96–7
  - Australian Securities and Investments Commission and, 96
  - Australian Taxation Office and, 95–6
  - Bitcoin. *See* Bitcoin
  - China, 99
  - impact on financial system, 98
  - Libra, 41, 98
  - pyramid schemes, 96
  - See also* digital currencies
- CSI effect, 132
- cyber harassment, 173–4
- cyberbullying, 175–8
  - ‘intimidation’, 177–8
  - Lori Drew case, 175–6, 219
  - minors and, 177
  - Office of the eSafety Commissioner, 177
  - promotion of suicide, 177
- cybercrime
  - computer hacking. *See* computer hacking
  - cross border cybercrime, 211
  - cyberterrorism, 154–6

- cybercrime (*cont.*)  
 cyberwarfare, 156–9  
 data retention and, 6  
 definition, 141  
 economic change and, 18  
 online fraud. *See* online fraud  
 recent developments in, 8–9  
 sentencing, 217–18  
*See also* computer crime
- cyberpaternalism, 21
- cybersquatting, 195
- cyberstalking, 141, 174–5  
 definition, 174
- cyberterrorism, 154–6  
 computer hacking of militarily sensitive information, 155  
 definition, 154–5  
 extradition and, 155  
 telecommunications networks and, 156  
 ‘terrorist act’, 156
- cyberwarfare, 156–9  
 defensive hacking, 159  
 international law test for, 158  
 Stuxnet malware, 157–8  
*Tallin Manual on the International Law Applicable to Cyber Warfare*, 157  
 WannaCry ransomware, 156–7
- cyborg scenario, 108
- dark web, 143, 152
- Darwin, Charles, 34
- data access, Australia  
 data access law, 55–6  
 encryption legislation. *See* encryption legislation
- data analytics, 7, 8, 12, 50, 73, 74
- data mining  
 Facebook and, 168
- data retention, 5–6
- data retention law, Australia, 51–5  
 interception warrants, 52  
 metadata retention, 52  
 primary function of, 51–2
- databases  
 commercial ancestry databases, 130–1  
 DNA, impact of, 128  
 facial recognition databases, 134–5  
 fingerprint identification databases, 118–20  
 genomic databases, 73–5, 77  
 health, genetic information in, 224–5  
 law enforcement agencies, 114–15
- defamation  
 definition, 168  
 online. *See* online defamation
- defensive hacking, 159
- deontology, 31–2
- Department of Foreign Affairs and Trade, 135
- Department of Immigration and Border Protection, 135
- designer babies, 80
- digital currencies, 94–9  
 Bitcoin. *See* Bitcoin  
 criminal use of, 95–6  
 regulation, 98  
*See also* cryptocurrency
- digital currency exchanges, 96
- digital pathology, 88
- digital platforms  
 anti-competitive behaviour, 103–4
- distributed denial-of-service attacks, 141, 147
- DNA evidence, 2, 22  
 CSI effect, 132  
 issues in, 131–2  
 juries and, 132
- DNA evidence in criminal trials, 126–7  
 evaluation of accuracy of convictions and acquittals by, 126–7  
 innocence projects and, 127  
 risks associated with, 127
- DNA identification, 114, 122–3  
 collection of DNA evidence, 123–6  
 lawfully obtained, 123  
 process, 123  
 United Kingdom, 124–5  
 United States, 125
- commercial ancestry databases and, 130–1  
 demonstration of familial relationships, 129–30  
 DNA phenotyping, 130  
 evidentiary issues, 131–2  
 genomic databases and, 77  
 impact of DNA databases, 128  
 new forms of, 129–31
- DNA theft, 224
- DrinkOrDie, 193, 214
- driverless cars, 102, 108, 109, 110
- drones, 109–10  
 standard operating conditions, 109
- e-commerce. *See* online commerce
- economic change  
 regulation of technology and, 18–19

- encryption, 55–6, 160
  - end-to-end, 161
  - General Data Protection Regulation*, 58
  - national security and, 161
- encryption legislation, 56
  - technical assistance notice, 56
  - technical assistance request, 56
  - technical capability notice, 56
- entertainment copyright, 190,
  - peer-to-peer distribution and, 190–1
  - See also* online piracy
- entrapment, 208
- epigenetics, 71–2
- Etherium, 99
- ethical theory, 30
  - consequentialism, 32
  - deontology, 31–2
  - utilitarianism, 32–3
- European Patent Office, 188
- expert evidence, 24, 101, 121
  - juries and, 137
- expert witnesses, 203
  - calling of, 218
  - codes of conduct for, 24, 218
  - statement of information or assumptions of, 218
- extradition
  - computer crime and, 214–15
  - cyberterrorism and, 155
- Facebook, 18, 22
  - Coordinating Harm and Publicizing Crime Policy, 166
  - data mining and, 168
  - data use by Cambridge Analytica, 41
  - facial recognition tagging, 136
  - regulation of social media and, 165
  - removal of content by, 166
  - review of content guidelines, 225
  - voter psychological profiling and, 8
- facial mapping, 132–3
  - evidentiary issues, 137–8
- facial recognition, 49, 132–4
  - accuracy of, 134
  - verification context, 133
- facial recognition applications, 134–6
  - biometric driver licence photographs, 135
  - biometric passports, 135
  - crowd scanning, 135
  - database implementation, 135
  - databases, 134–5
  - human rights and, 135
  - internet image analysis, 136
  - SmartGate technology, 135
  - street surveillance, 135–6
- facial recognition evidentiary issues, 136–8
  - facial mapping, 137–8
  - juries and, 137
  - specialist knowledge, 138
- facial recognition technology, 9, 114
  - CCTV and, 133–4
- fake news, 164–5, 183
  - definition, 164
- falsificationism, 35
- Federal Bureau of Investigation, 114, 119, 144, 160, 211
- Federal Court of Australia
  - Expert Witness Code of Conduct*, 218
- file-sharing criminal penalties, 192
- file-sharing sites, 185, 190, 192, 196
- Financial Action Task Force, 96
- fingerprint identification, 113, 117–18
  - digital biometric fingerprint recognition, 118
  - evidentiary issues, 120–2
  - history of, 117
- fingerprint identification databases, 118–20
  - Australia, 119–20
  - types of searches available, 118–19
  - United Kingdom, 119
  - United States, 119
- fingerprints, 117–18
- Five Eyes intelligence network, 4, 160
- Food Standards Australia New Zealand, 88
- forensic imaging, 205–6
- forensic science, 22–3
- freedom
  - definition, 27
  - political, development of, 27
- Galilei, Galileo, 34
- Gavison, Ruth, 39
- gene editing, 6, 32, 83, 84–5
- General Data Protection Regulation*, 57
  - encryption and, 58
  - key elements, 58
- genes
  - property rights in, 75–6
- genetic conditions
  - pre-implantation genetic diagnosis and, 81–2
- genetic discrimination, 73
- genetic information
  - Australian Privacy Principles and, 73
  - protection of, 73

- genetic testing, 72–3
- genome mapping, 6
- genomic databases, 73–5
  - arrested persons and, 76
  - data security, privacy and trust, 73–4
  - DNA identification and, 77
  - ethical, legal and policy issues, 74–5, 77
  - future issues, 76–8
  - guidelines for use of, 78
  - potential applications and implications, 74
  - risks associated with, 77
- genomics, 7, 65, 71–2
  - definition, 71
  - future directions in technology law and, 224
- geoblocking, 58–9
- Google, 8, 18, 103
  - General Data Protection Regulation* and, 58–9
  - geoblocking feature case, 58–9
  - Google Spain* case, 57–8
  - misleading search results and, 195–6
  - privacy and, 38
  - regulation of social media and, 165
  - removal of content by, 166
  - third-party cookies and, 41
- Google Maps, 22
- Government Communications Headquarters, 4, 62
- hackers, 141
  - black hat hackers, 142
  - computer crime investigation and, 211–12
  - malware attacks and, 144
  - state actors and, 142
- hacking. *See* computer hacking
- healthcare law
  - autonomy and consent and, 65–7
  - biobanks, 69–71
  - confidentiality, 67–9
  - genomic databases, 73–5
  - property rights in genes, 75–6
  - public health surveillance, 90–2
  - recent developments in, 6–7
  - testing, privacy and discrimination, 72–3
- hijacked hyperlinks, 195
- Hobbes, Thomas, 24
  - Leviathan*, 24–5
- Human Genome Organisation, 73
  - Committee on Ethics, Law and Society, 85
- Human Genome Project, 71
- human rights, 40, 50, 74
  - European Convention on Human Rights*, 59
- human tissue property rights, 70
- IDENT1, 119
- identity fraud, 148–9
- identity theft, 151–2
  - AlphaBay, 152
  - assistance to victims of, 152–3
  - card skimming, 153–4
  - cost of, 153
  - criminal marketplaces, 152
- incitement to violence, 171–3
  - ‘abhorrent violent conduct’, 172
  - ‘abhorrent violent material’, 171–2
  - Christchurch mass shooting, 171
  - regulation, 171
- induced pluripotent stem cells, 86
- Innocence Project, 127
- Integrated Automated Fingerprint Identification System, 119
- intellectual property, 185
  - computational processes exclusion, 186
  - computer implemented inventions, 186–7
  - trade marks. *See* trade marks
- intellectual property rights
  - internet service providers and, 196
  - online enforcement of
    - infringing downloads, 197–8
    - safe harbour provisions, 196
- intermediaries
  - copyright and intellectual property laws and, 196
  - social media regulation and, 167–8
- international cooperation in computer crime
  - investigation, 213–14
  - 24/7 network, 214
  - double criminality and, 215
  - extradition and mutual assistance agreements, 214–15
- internet
  - architecture regulation, 20–1
  - internationalisation of, 19
  - regulation of technology and, 16–17
- Internet Corporation for Assigned Names and Numbers, 195
- internet image analysis, 136
- internet service providers, 20
  - data retention by, 5, 160, 207
  - discovery of infringing customers and, 200
  - infringing downloads and, 197–8
  - intellectual property rights and, 196
  - obligations in relation to abhorrent violent material and conduct, 173
  - termination of customer access by, 199

- See also* carriage service providers; online service providers
- intimate images, 180–2
- civil penalties, 182
  - revenge porn, 180
  - sexting. *See* sexting
- juries
- DNA evidence and, 132
  - expert evidence and, 137
  - facial recognition evidentiary issues and, 137
- justice
- political theory and, 29–30
- Kant, Immanuel
- Fundamental Principles of the Metaphysics of Morals*, 31
- Kuhn, Thomas, 35–6
- law enforcement agency databases, 114–15
- legal profession, 105–6
- legal analytics platforms, 105
  - legal drafting, 106
  - Technology Assisted Review, 105–6
- Lessig, Lawrence, 19, 21, 36, 103
- Code and Other Laws of Cyberspace*, 20
  - cyberpaternalism, 21
- Lex Machina, 105
- liberalism, 170
- libertarianism, 17, 19, 26, 28, 29
- liberty
- definition, 26–7
- Libra, 41, 98
- Locke, John, 24, 25
- Lori Drew case, 175–6, 219
- Love Bug virus, 142
- MacCallum, Gerard, 27
- machine learning, 12, 22, 73, 74, 105
- Mafiaboy, 141–2, 217
- malware, 142–4, 193
- dark web, 143
  - developers, legal liability, 143
  - ransomware, 143–4
  - website defacement, 144
- medical confidentiality, 67–9
- access to medical records, 67–8
  - exceptions to, 67
  - My Health Record, 68–9
  - rationale for, 67
- Megaupload.com, 192–3
- metadata
- access to without warrant, 52, 54–5
  - counterterrorism and, 54
  - distinction between content, 6
  - journalist information and, 55
  - retention, 5
  - URLs and, 54
- metadata retention, 26
- law, Australia, 52
- Mill, John Stuart, 26, 32
- liberty and freedom and, 27–8
  - On Liberty*, 28, 39
  - utilitarianism and, 33
- mitochondrial donation, 82–3
- Murray, Andrew, 36
- active dot matrix, 21
  - network communitarianism, 21
- My Health Record, 68–9
- Myriad Genetics, 6–7, 75
- nanoscale
- definition, 87
- nanotechnology, 87–8
- definition, 83, 87
- National Automated Fingerprint Identification System, 119–20
- National Ballistics Intelligence Service, 114
- National DNA Database, 114, 128
- National DNA Index System, 128
- National Facial Biometric Matching Capability, 135
- National Health and Medical Research Council Ethical Guidelines on the Use of ART in Clinical Practice and Research 2017* (NHMRC Guidelines), 79–80
- sex selection guidelines, 80–2
- National Industrial Chemicals Notification and Assessment Scheme, 88
- National Instant Criminal Background Check System, 114
- National Integrated Ballistics Information Network, 114
- national security, 159–61
- cloud storage and, 160
  - digital surveillance, United States, 61–2
  - encryption and, 161
  - role of technology companies in, 160–1
- National Security Agency, 4, 62
- National Statement on Ethical Conduct in Human Research*, 69
- network communitarianism, 21

- neuro-linguistic programming, 106
- news, 19
  - fake news. *See* fake news
- Next Generation Identification system, 119, 134
- Nigerian 419 email scam, 147–8
- non-invasive prenatal testing, 80
  
- objectionable images
  - reporting of, 182
- Office of the Australian Information Commissioner, 42, 47–8
- Office of the Australian Privacy Commissioner, 68
- Office of the eSafety Commissioner, 177
  - removal of objectionable material and, 182
- online banking, 222–3
- online child grooming, 178, 179–80, 207
  - offences, 179
  - outside Australia, 179–80
  - sextortion, 178–9
- online commerce
  - brandjacking, 194–5
  - counterfeit goods and, 194
  - cybersquatting, 195
  - hijacked hyperlinks, 195
  - trade mark infringement and, 194–5
  - See also* online markets and services
- online defamation, 168–70
  - defamatory social media posts, 169
  - Dow Jones v Gutnick* case, 168–9
  - identification of defamatory poster, 170
  - links to allegedly defamatory material, 169–70
  - Rebel Wilson case, 169
- online fraud, 141, 147–54
  - advance fee fraud, 148
  - document alteration, 149
  - identity fraud, 148–9
  - identity theft. *See* identity theft
  - Nigerian 419 email scam, 147–8
  - romance scams, 148
  - spam emails, 151
  - wire fraud, 150–1
- online harassment, 173, 174,
- online markets and services, 101–3
  - anti-competitive behaviour, 103–4
  - retail sector and, 101
  - risks from deregulated business environment, 102–3
  - user behaviour and, 103
  - See also* online commerce
- online piracy
  - Australia, 192
  - DrinkOrDie, 193, 214
  - Megaupload.com case, 192–3
  - The Pirate Bay, 191
- online service providers
  - safe harbour provisions, 165–6
  - See also* internet service providers
- online victimisation, 219
- online vilification, 170–1
  - racial vilification, 171
- oocyte preservation and surrogacy, 83
- Operation Buccaneer, 214
- ophthalmology, 89
- organ donations, 70–1
  - consent and, 71
  
- passing off, 195–6
- patent thicket, 189
  - development of new technology and, 189
  - market solution to, 189
  - new entrants to market and, 189
- patent trolls, 189–90
- patents
  - Australian threshold for patentability, 187
  - blockchain technology, 188
  - eligibility criteria, 186
  - patent thicket, 189
  - patent trolls, 189–90
  - software. *See* software patents
- patient autonomy, 65–6
  - disclosure of material risk by doctors, 66
- patient consent
  - legal competency, 67
  - valid, 66–7
- Pay-Per-Click mechanism, 103
- peer-to-peer distribution
  - BitTorrent enabled files, 191
  - online copyright and, 190–1
  - The Pirate Bay, 191
- personal information
  - access to, 40
  - collection and disclosure of, 68
  - police access to, 15–16
- philosophy of science, 33–6
  - falsificationism, 35
  - reasoning, 34
- phishing, 147, 150, 195
- police information systems, 115
- Police National Computer, 114



- political theory, 24
  - communitarianism, 28–9
  - contractualism, 24–6
  - justice and, 29–30
  - libertarianism, 29
  - liberty and community, 26–9
- Popper, Karl, 35
- pre-implantation genetic diagnosis, 80–2
  - designer babies and, 80
  - saviour siblings and, 81
  - sex selection and, 80–1
- privacy
  - biobanks and, 69
  - bodily privacy, 38
  - concepts and context of, 38–41
  - cultural understanding of, 40
  - four dimensions of, 39
  - individual rights and, 39–40
  - information privacy, 38
  - law, Australia. *See* Australian privacy law
  - of communications, 38
  - rights, threats to, 41
  - territorial privacy, 39
- privacy and data protection law
  - Europe, 57–60
  - United States, 60–3
- professional and government services, 104–7
  - artificial intelligence and, 104–5
  - legal profession, 105–6
  - regulation of cloud computing and, 104
  - storage virtualisation and, 104
- property rights
  - biobanks and, 69–70
  - genes, 75–6
  - human tissue, 70
  - stored semen, 70
- prosecution decision-making, 216
  - age of defendant, 217
  - calling of expert witnesses, 218
  - policies, 216–17
  - role and experience of victims, 218–19
- public health surveillance, COVID-19 and, 90–2
- pyramid of responsive regulation, 15–16
  
- racial vilification, 171
- radiology, 89
- ransomware, 143–4
- Rawls, John, 31
  - A Theory of Justice*, 29–30
- reasoning, 34, 36
  
- Rebel Wilson case, 169
- regulation of technology, 11, 15–16
  - active dot matrix, 21
  - algorithmic regulation, 22
  - architecture and, 20
  - courtroom technology, 22–4
  - cyberpaternalism, 21
  - economic change and, 18–19
  - internet and, 16–17
  - network communitarianism, 21
  - technological capabilities and, 19–22
- Reidenberg, Joel
  - Lex Informatica*, 19–20
- Reproductive Technology Accreditation Committee, 79
- revenge porn, 17, 180
- ride-sharing services, 102
  - regulation, New South Wales, 102
  - See also* Uber
- Robodebt, 8, 106
- robotics, 107–10
  - increasing use of, 107–8
  - legal liability and, 109
  - legal responsibility and, 108–9
  - regulation, 108
- romance scams, 148
- Rousseau, Jean-Jacques, 24, 25–6
- Russell, Bertrand, 34
  
- safe harbour provisions
  - copyright and intellectual property, 196
  - industry codes of conduct and, 198
  - social media regulation, 165–6
  - United States, 198
- Samsung
  - patent wars and, 189
- saviour siblings, 81
- scientific evidence, 22
  - interpretation of, 23–4
- scientific knowledge, 34–5, 36
- semen property rights, 70
- sentencing
  - automated decision-making in, 115–16
  - cybercrime, 217–18
- sex selection
  - NHMRC Guidelines, 80–2
  - pre-implantation genetic diagnosis and, 80–1
- sexting
  - 'child exploitation material', 180

- sexting (*cont.*)  
 definition, 180  
 summary offences, Victoria, 180–2
- sextortion, 178–9
- Silk Road website, 95, 152
- smart contracts, 99–101, 110  
 Ethereum, 99  
 legal issues, 100–1
- SmartGate technology, 135
- smartphones, 26, 40, 52, 222  
 aggregation of technology in, 18–19  
 COVID-19 and, 90–2  
 data protection and, 57  
 DNA profiling and, 129  
 online markets and services and, 17
- Snowden, Edward, 4, 5, 160
- Snowden revelations, 4–5, 38, 62
- social media, 163–5  
 astroturfing, 164  
 defamatory posts, 169  
 fake news, 164–5  
 features of, 163  
 harmful content, 165  
 recent developments in, 8  
 role and influence of, 225  
 unstructured nature of, 164
- social media regulation, 165–8  
 content policies and guidelines, 166–7  
 content removal rates, 167  
 data mining and, 168  
 Facebook and, 165  
 Google and, 165  
 role of intermediaries, 167–8  
 safe harbour provisions, 165–6
- software as a medical device, 90
- software patents, 187  
 United Kingdom, 188  
 United States, 188
- somatic cell nuclear transfer, 86
- spam emails, 151
- stem cell technology, 22, 65, 70
- sting operations, 207–8
- storage visualisation, 104
- street surveillance, 135–6
- Stuxnet malware, 157–8
- surrogacy, 83
- Sweetie 2.0 chatbot, 209
- Tallin Manual on the International Law  
 Applicable to Cyber Warfare*, 157
- taxi industry  
 regulation, New South Wales, 102  
 Uber and, 101
- technologically based crime. *See* computer crime
- technology  
 definition, 3  
 ethical theory and. *See* ethical theory  
 impact of recent developments in, 4  
 philosophy of science and, 33–6  
 political theory and. *See* political theory  
 regulation of. *See* regulation of technology
- Technology Assisted Review, 105–6
- technology-based identification, 112–17
- technology law  
 conceptualisation of, 2–4  
 definition, 2–4  
 future directions in. *See* technology law, future  
 directions in  
 recent developments in. *See* technology law,  
 recent developments in
- technology law, future directions in  
 access to data, 222–3  
 control issues, 223–4  
 DNA theft, 224  
 genetic information in health databases, 224–5  
 genomics, 224  
 online banking, 222–3  
 role and influence of social media, 225  
 security and privacy, 223
- technology law, recent developments in, 4  
 artificial intelligence, 7–8  
 biometrics, 9–10  
 communications, 4–6  
 cybercrime, 8–9  
 healthcare, 6–7  
 social media, 8
- telecommunications networks  
 cyberterrorism and, 156
- telecommunications operators  
 data retention by, 207
- territorial privacy, 39
- The Pirate Bay, 191
- Therapeutic Goods Administration, 88  
 regulation of artificial intelligence by, 90
- Todd, Amanda, 176, 219
- trade mark infringement, 194–5  
 brandjacking, 194–5  
 cybersquatting, 195  
 hijacked hyperlinks, 195  
 passing off, 195–6

- trade marks, 194
- trolling, 173, 174, 183
- Uber, 101–2
  - aerial taxis, 110
  - driverless car incident, 102
  - taxi industry and, 101
- Unmanned Aerial Vehicles, 109
- URL metadata, 54
- US Patents and Trade Marks Office, 188
- utilitarianism, 32–3
- victim impact statements, 218–19
- Virtual Global Taskforce, 213
- vitrification, 83
- voter social profiling, 8
- WannaCry ransomware, 144, 156–7
- warrants
  - computer access warrants, 207
  - interception warrants, 52
  - retrieval warrants, 207
  - search warrants, 204–5
  - surveillance device warrants, 207
- webcam child sex tourism, 209
- website defacement, 144
- Wikipedia*, 164
- wire fraud, 150–1
- wiretapping, 206
- YouTube, 22, 165, 225
  - soundtrack ripping, 200
  - Transparency Report, 167