| abortion rights, 77, 85 | Anti-Privatization Forum (APF), 26 |
|--|---|
| accountability | apartheid, 28 |
| algorithms and, 191 | Arab Charter on Human Rights, 219 |
| Bitcoin and, 299 | Arduino project, 302 |
| criminal framework, 113–22 | Arendt, Hannah, 120, 122 |
| for human rights violations, 7, 9–13 | armed conflict, 93–96 |
| introduction to, 3 | ART cases. See assisted reproductive technologies |
| legal accountability, 44-45 | artificial intelligence (AI), 1, 161, 296–99 |
| acculturation process, 12 | Asia Pacific Economic Cooperation Privacy |
| Adaptation Fund, 62–63 | Framework, 233 |
| adaptive capacity and resilience, 62, 66 | assisted reproductive technologies (ART) |
| affect-laden conception of humanity, 181 | |
| Afghanistan, 94 | introduction to, 72–74 |
| Agreement on Trade-Related Aspects of | law/law-making in, 86–90 |
| Intellectual Property Rights (TRIPS | S), 54–55 margin of appreciation and, 83–86 |
| agriculture, industrial, 69 | overview of, 78–83 |
| Al Qaeda, 102, 110 | summary of, 90–92 |
| algorithms | Austria, ban on IVF donors, 79, 84 |
| computer vision algorithms, 180 | autonomous weapons |
| in data collection, 171–72 | capability, 93 |
| social media, 202–5 | criminal accountability, 115–17 |
| transparency/accountability problems | with, 191 defined, 117 |
| American Association for the Advancem | ent of international humanitarian law, 113-15 |
| Science, 76, 174 | introduction to, 1, 14 |
| American Civil Liberties Union (ACLU |), 280–81 legal implications of deploying, 93 |
| American Convention on Human Right | |
| Amnesty International | principles of humanity and, 94 |
| data visualization reports, 163, 177 | private contractors and, 122-23 |
| education in digital literacy, 209 | separation of powers framework, |
| human rights technology, 291 | 101–2 |
| interactive data websites, 185 | war and, 22 |
| Twitter communication issues, 201 | |
| user-generated video, 194 | Bali Conference of the Parties (COP), |
| violations by Boko Haram and Nigeri | |
| 141–45, 172 | Ball, Patrick, 153, 170–71 |
| anonymity, 157, 196, 216, 225, 293, 304 | bar charts, 181 |
| 2 31 -211 -1-1 -1-1 2- 73 3- T | , |
| | |

| Bellingcat investigative team. See Russian | cholera deaths, mapping of, 165 |
|--|--|
| intervention in Ukraine | citizen videos, 9 |
| Belmont Report, 36-38, 41-43 | civic engagement online, 244 |
| beneficence, 41–42 | civil responsibility in tort, 116 |
| beneficiaries of action, 68-69 | civil rights, 28, 266 |
| Benetech, 209 | civil society organizations, 223 |
| bias in big data reporting, 154 | Civilian Joint Task Force (JTF) (Nigeria), 142–45 |
| bias in data collection, 171 | civilian witnesses, 193 |
| big data | classification of data, 152 |
| analytics and, 151, 153, 157 | clickbait content on social media, 204 |
| applications for human rights, 159–61 | climate change |
| collection of, 151–52 | beneficiaries of action, 68–69 |
| ethics considerations, 173 | development approach, 60–69 |
| human rights violations, 157–59 | impact on human rights, 65–69 |
| introduction to, 7, 125, 127, 149–51 | introduction to, 1, 8, 21, 46–48 |
| permissible limitations on privacy, 155–56 | modernization and development, 48–55 |
| privacy tradeoffs, 153–57 | summary of, 70 |
| use of, 151, 153 | UNFCCC framework, 55–60 |
| bioethics and human rights, 2–3, 71–78, 86–90 | climate change law, 56 |
| biosurveillance, 158 | Clinton, Bill, U.S. President, 102–6 cluster munitions, 135 |
| Bitcoin, 299 Blockchain, 299–302 | Code of Conduct for social media, 16–17 |
| Boko Haram, 141–42 | code-sharing websites, 186 |
| The Book of Trees: Visualizing Branches of | Cold War, 49 |
| Knowledge (Lima), 164 | colonialism, 49–50, 53, 56 |
| Bretton Woods Institutions, 50, 54 | Comitato Nazionale per la Bioetica (Italy's |
| Buk missile launcher, 139–41 | National Bioethics Committee), 75 |
| Bureau of Democracy, Human Rights and Labor | command responsibility, 118 |
| (U.S. Department of State), 291 | Committee on Economic, Social and Cultural |
| Bureau of Investigative Journalism, 98 | Rights (CESCR), 66–67 |
| bureaucratization of human rights, 13 | common but differentiated responsibilities |
| | (CBDR) |
| call detail records, 155 | ineffectiveness of, 57, 60 |
| Cambodia's Family Trees, 179 | overview of, 60-63 |
| Cameras Everywhere, 130 | solving problems with, 64–69 |
| CameraV app, 172 | communication risks, 192–94, 198–200 |
| Cannataci, Joseph, 223. See also UN Special | communication technology. See also digital |
| Rapporteur on Privacy | communications |
| carbon emissions, 46 | advocacy communication risks, 198–200 |
| Carnegie Mellon University, 180 | anonymity rights in communication, 225 |
| Center for Human Rights Science, 298 | bulk collection of communications data, 217 |
| Carter Center. See Syria Conflict Mapping Project | fact-finding and advocacy, 190–92 |
| cell phone data tracking, 270 | fact-finding risks, 192–94 |
| Center for Applied Legal Studies at the University | introduction to, 5 |
| of Witwatersrand (CALS), 31 | privacy rights in, 221 |
| Center for Economic and Social Rights (CESR), | surveillance communication rights, 219–20 |
| 176 Contar for Stratogic and International Studies | transparency and, 10 Communications Decency Act, 250, 260 |
| Center for Strategic and International Studies (CSIS), 201 | |
| Charter of Fundamental Rights of the European | community values, 2–3 computer vision algorithms, 180 |
| Union, 219, 233 | constitutional precepts, 2–3 |
| child soldiers, 142 | contact-chaining, 221 |
| China, 183, 262 | contextual integrity frame for privacy, 151 |
| chlorofluorocarbon (CFC) emissions, 56 | conventional weapons, 94 |
| | · · · · · · · · · · · · · · · · · · · |

| corporate social responsibility (CSR), 249, 254 | Dickson v. United Kingdom, 73, 84 |
|---|---|
| corporate surveillance, 158–59 | digital communications. See also communication |
| cost-benefit calculations, 47-48 | technology |
| Costa and Pavan v. Italy, 73, 80-81, 89-90 | legality, necessity, and proportionality, 225-30 |
| Council of Europe's Committee on Bioethics, 75, | privacy rights and human rights law, 224-33 |
| 84 | to publics, 200 |
| Council of Europe's Data Protection Convention, | surveillance rights, 219–20, 230–31 |
| 233 | Digital Millennium Copyright Act (DMCA), 260 |
| Court of Justice of the European Union (CJEU), | digital security, 196 |
| 225, 234–35, 239–40 | digitization, 10, 19 |
| crisis reporting, 154 | dignity rights, 26–27, 34, 81–82 |
| cryopreserved embryos, 84-85 | discovery, defined, 152 |
| cultural rights, 71 | discretion of demandeur developing countries, 48 |
| currency exchange technology, 299-302 | discrimination in targeting of minority groups, 11 |
| cyberlaw, 2, 5–6 | disease surveillance, 158 |
| cystic fibrosis, 80–81 | DIY Geiger counters, 302–3 |
| | DNA technology in forensics, 295 |
| Daiichi Nuclear Power Plant in Fukushima, | Doctors' Trial at Nuremberg, 75 |
| Japan, 302–3 | documentation technologies, 9 |
| data analysis, 167 | donor gamete ban, 79, 84 |
| data-driven policing, 171–72 | Draft Code of Conduct of International Transfer |
| data journalism, 186 | of Technology, 53–54 |
| data protection laws, 216, 233-35 | drone technology |
| data sharing, 153, 176 | autonomous functioning of, 99 |
| data visualization | international humanitarian law, 113–15 |
| access and inclusion, 182–83 | introduction to, 11–12, 123 |
| brief history of, 163–67 | against ISIS, 110–11 |
| bulk collection, 217 | in Kosovo, 103–4 |
| challenges to, 171–73 | in Libya, 107–8 |
| defined, 162 | overview of, 96–98 |
| distortion techniques in, 175–76 | principles of humanity and, 94-95 |
| encoding techniques, 180–81 | separation of powers framework, 101–2 |
| interactive, 182 | Dropbox, 294 |
| introduction to, 7, 125–27, 162–63 | drought events, 59, 68 |
| mapping of, 183–84 | Drupal, 294 |
| meanings from technical decisions, 180–82 | dual use technologies, 38 |
| mobilization and outreach, 184–85 | due process, 117 |
| qualitative data, 177–80 | |
| quantitative data, 173–77, 182 | e-governance, 301 |
| summary of, 187 | E-ZPass, 271 |
| technical sustainability, 185–86 | Ebola crisis, 154 |
| datafication of human rights, 163, 167–71 | econometrics, 167 |
| Deep Mind, 297 | economic rights, 33, 252 |
| Deepwater Horizon oil spill, 303 | economies in transition, 51 |
| deforestation, 67–68 | emerging economies, 51 |
| demand-management technology, 25, 28–31, | encoding techniques, 180–81 |
| 35 Democratic Republic of Congo (DRC), | encryption technology, 279, 287, 289 |
| | energy management software, 69 |
| 178 Detroit Geographic Expedition, 183 | Engine Room, 209 environmental law, 56 |
| Deutscher Ethikrat, 75 | |
| developing countries, 49–51, 55–60 | epidemiology data and human rights, 167 equality principle, 3 |
| development approach to climate change | Ethereum, 301 |
| technology, 48–55 | ethical developments of human fertilization, 89 |
| (cerniology, 40-55) | current developments of numan ferunzation, 99 |

| ethical safeguards, 43 | Russian intervention in Ukraine, 138 |
|---|--|
| ethics and law of war, 21-22 | unlawful content processes, 269 |
| EU Charter of Fundamental Rights, 225, 234 | user-generated content on conflicts, |
| EU General Data Protection Regulation, 160, 233, | 134 |
| 239–42, 259 | fact-finding and advocacy. See also human rights |
| EU Regulation on Privacy and Electronic | advocacy |
| Communications, 233 | communication and mediation, 190-92 |
| EU-US Umbrella Agreement, 239 | communication risks, 192–94, 198–200 |
| European Commission, 16, 75 | discursive approach, 211-12 |
| European Convention for the Protection of | educational approach, 208–9 |
| Human Rights and Fundamental Freedoms | inequality in, 205–8 |
| (European Convention), 72, 219, 224 | introduction to, 12, 188–90 |
| European Convention on Human Rights and | misinterpretation risk with, 194, 196–98 |
| Biomedicine, 71 | reflexive approach, 210–11 |
| European Court of Human Rights (ECtHR) | risk assemblages, pluralism and inequality, |
| artificial intelligence, 298 | 205–8 |
| assisted reproductive technologies cases, 78-83, | silencing risk double-bind, 208–13 |
| 90, 92 | summary of, 212–14 |
| case law of, 256–57 | surveillance risk, 194–96 |
| communication privacy, 221, 226–27 | technical approach, 209–10 |
| digital communication privacy, 224, 235 | fairness claims, 52, 55–60 |
| extraterritorial right to privacy, 236–37, 242 | falsified media, 133 |
| margin of appreciation, 83–86 | First Amendment (U.S.) protection of speech, 250, |
| online domain rights, 253 | 268 |
| overview of, 72–73 | flooding events, 59 |
| surveillance rights, 220, 232 | forced marriages, 142 |
| European Union, 268 | Ford Foundation, 290 |
| Evans v. United Kingdom, 73, 79, 82, 84 | Forensic Architecture, 179 |
| Event Labeling through Analytic Media | Fourth Amendment (U.S.) protection, 276–77, 285 |
| Processing (E-LAMP) project, 180, | Free Syrian Army (FSA), 137 |
| 298–99 | freedom of expression, 19, 261–66, 268 |
| executive branch (president), U.S. government | Freedom of Information, 176 |
| allocation of power, 95 | Front Line Defenders and Tactical Technology |
| ISIS, 110–12 | Collective, 209 |
| Kosovo military action, 102–6 | 0 1 1: |
| Libya, 106–10 | G77 membership, 51 |
| separation of powers framework, 101–2 | G Suite (Google), 294 |
| expert systems (ES), 297 | gamete donation for IVF, 85 |
| extrajudicial killings, 143 | gatekeepers, 14, 251 |
| Extraordinary African Chamber, 148 | General Agreement on Trade and Tariffs (GATT), |
| extraterritorial right to privacy, 236–42 | 54 |
| extreme weather risks, 59 | geolocation, 138–39 |
| E l l | Glad National Leither (CNI) |
| Facebook | Global Network Initiative (GNI) |
| advertising and privacy rights, 265–66 | Accountability, Policy and Learning |
| Code of Conduct with, 16–17 communication issues, 201 | Framework, 262 freedom of expression rights, 261–64 |
| data collection, 152 | Implementation Guidelines for Freedom of |
| First Amendment protection on, 250 | = |
| freedom of expression rights, 243, 261, 264 | Expression, 264 international human rights standards, 246 |
| gatekeepers of, 251 | internet companies and, 258 |
| human rights impact of, 245–46 | overview of, 249, 261 |
| rebel forces against ISIS, 137 | soft law frameworks, 267 |
| restricting access, 275 | Global Positioning System (GPS), 177, 271 |
| restricting access, 2/3 | 5155ai 1 05110111115 575tC111 (O1 5), 1//, 2/1 |

| Global Witness, 179 | justice and, 42–43 |
|--|--|
| Google | as moral claims, 4, 13 |
| de-indexing search results, 240 | practices, 4–5 |
| European Data Protection Directive, 259 | rights restricting/enhancing technology, 38 |
| file management, 294 | safeguards, 36 |
| First Amendment (U.S.) protection on, 250 | scrutiny requirements, 36-38 |
| freedom of expression rights, 261-62, 264-65 | human rights advocacy. See also fact-finding and |
| G Suite, 294 | advocacy; user-generated video |
| human rights impact of, 246 | communication channels, 207 |
| Jigsaw project, 292 | communication risks, 198–200 |
| online domain rights, 243 | democratizing effects for, 126–27 |
| restricting access, 275 | introduction to, 12, 125–26, 128 |
| unlawful content processes, 269 | miscalculations and resources, 202-5 |
| Google apps, 294 | mistakes and reputational integrity, 200-2 |
| Google Earth, 132, 141 | Human Rights Center at the University of |
| Google Maps, 185 | California, Berkeley, 290 |
| Google Street View, 132 | Human Rights Data Analysis Group (HRDAG), |
| graph theory, 179 | 170–71 |
| graphs/graphics data. See also data visualization | human rights law. See also international |
| graph theory, 179 | humanitarian law |
| importance of, 173–74 | assisted reproductive technologies, 90 |
| mapping tools, 174 | bioethics and, 72, 74-78 |
| for medical treatment, 165–66 | introduction to, 2–4, 6 |
| network graphics, 178–79 | new technologies and, 23 |
| racist violence graphs, 166-67 | private actors and online privacy, 253-61 |
| grassroots activists, video use by, 172 | role of, 17–20 |
| Green Climate Fund, 61 | as state-centric in nature, 267 |
| greenhouse gas (GHG) emissions, 56, 60, 67 | violations of, 11 |
| Group Areas Act (South Africa), 28 | human rights protection, 1, 19-20, 215-16, 218-21. |
| Guardian Project, 293 | See also privacy rights |
| guided munitions, 100 | human rights technology. See also technology |
| | rights; user-generated video |
| hacking technology, 278-79, 287 | artificial intelligence, 1, 161, 296-99 |
| Harvard Humanitarian Initiative's Signal Code, 160 | Blockchain technology, 299–302 |
| hate speech, 16-17 | defined, 2, 293–95 |
| Higgins, Eliot, 134–35 | future of, 290–93 |
| High Court of South Africa, 31-33 | introduction to, 1–2, 289–90 |
| Hindu nationalists in India, 181 | open hardware, sensors, and the Internet of |
| Hippocratic principle, 41 | things, 302–6 |
| HIV/AIDS, 32, 35, 185 | summary of, 306–8 |
| homemade barrel bombs, 135 | technological trends in, 295–96 |
| Human Development Index (HDI), 51 | violations with, 44 |
| human rights. See also online domain and human | human rights violations |
| rights | accountability for, 7, 9–13 |
| beneficence, 41–42 | big data collection and, 157–59 |
| big data applications for, 159–61 | effective remedy for violation of, 232-33 |
| bioethics and, 71-78, 86-90 | introduction to, 21 |
| climate change impact on, 65-69 | Nigerian military war crimes, 142–45 |
| datafication of, 163, 167–71 | with technology, 44 |
| dignity rights, 26–27, 34, 81–82 | Human Rights Watch (HRW), 163, 177-78, |
| financial compensation, 39 | 280-81, 291 |
| freedom of expression, 261–66 | Humanitarian Blockchain, 301 |
| informed consent, 38-41 | Humanity United, 290 |
| international treaties 4 22 | hydrological cycle 61 |

| immigrant detainees, mapping data, 174 in vitro fertilization (IVF) Austrian ban on donor gametes, 79, 84 gamete donation for, 85 introduction to, 72, 78 legislation governing, 86–87 | International Military Tribunal (IMT), 118–19 International Monetary Fund (IMF), 54 international treaties, 4, 23 Internet browsing activity tracking, 270 introduction to, 1, 11, 19 |
|--|---|
| inalienability principle, 3 | online hate speech, 16–17 |
| inclusion principle, 3 | surveillance concerns, 15 |
| indexing of data, 152 | Internet of things (IoT), 306 |
| industrial agriculture, 69 | Internet service providers (ISPs), 249, 276 |
| industrialization, 52 | Investigatory Powers Act, 241 |
| information and communication technologies | Iraq, 94, 98 |
| (ICTs). See also user-generated video | Islamic State in Iraq and Syria (ISIS), 98, 102, |
| advocacy communication risks, 198–200 | 110–12, 137 |
| communication issues with, 190–92, 201 | Israeli cyberwarfare company, 196 |
| fact-finding and, 188 | Israel's Harpies, 93, 122 |
| gatekeepers, 14 | Italy, ban on pre-implantation genetic diagnosis, |
| human rights technology, 294 | 80–81 |
| introduction to, 8 | |
| non-state actors, 16 | Jigsaw project (Google), 292 |
| summary of, 212 | Johannesburg Water, 26, 28, 30–33, 37, |
| surveillance risk, 194–96 | 39-40 |
| threat to privacy, 150 | justice and technology, 6–9 |
| transnational nature of online platforms, 268 | justice claims in developing countries, 55-60 |
| transparency and, 10 | |
| informed consent rights, 38–41 | Knecht v. Romania, 73, 84, 89 |
| integrated development environment (IDE), 302 | knowledge-based systems (KBS), 297 |
| intellectual property rights, 8 | knowledge creation, 5 |
| Inter-American Commission on Human Rights, | Korean War, 112 |
| 225 | Kosovo military action, 102–6 |
| Inter-American Court of Human Rights, 225 | Kuziminsky camp, 139 |
| interactive data visualization, 182 | Kyoto Protocol (1997), 47, 58, 62 |
| interactive data websites, 185 | |
| Intergovernmental Panel on Climate Change | La Rue, Frank, 248. See also UN Special |
| (IPCC), 66–67 | Rapporteur on the Promotion and Protection |
| International Bill of Human Rights, 256 | of the Right to Freedom of Opinion and |
| International Committee for the Red Cross | Expression |
| (ICRC), 98 | laws of Caliphate, 142 |
| International Court of Justice (ICJ), 224, 236 | least-developed countries (LDCs), 50, 55 |
| International Covenant on Civil and Political | legal implications of human fertilisation, |
| Rights (ICCPR), 65, 218, 236, 272-74, | 89 |
| 282-85 | lethal force, 12 |
| International Covenant on Economic, Social | Libya, 106–10 |
| and Cultural Rights (ICESCR), 26, 65, 174, | Libya, no-fly zone, 107 |
| 286–87 | line charts, 181 |
| International Criminal Court (ICC), 143, 296 | LinkedIn, 250 |
| International Energy Agency, 61 | Live Leak, 134 |
| international humanitarian law (IHL) | |
| criminal accountability framework, 113-15 | MacArthur Foundation, 290 |
| enforcement strategies from, 4 | Malaysia Airlines Flight 17 (MH17), 138 |
| introduction to, 1, 3–5 | mapping data visualization, 183-84 |
| new technologies and, 22, 245 | mapping tools, 174 |
| overview of, 94 | marginalized communities, 48, 170, 183 |
| violations, 4 | Martus project, 293 |
| | |

| massacres and video evidence, 132 | non-state actors, 14-16, 20, 215 |
|--|---|
| McNaboe, Chris, 135 | nonpublic forums, 249–50 |
| medically-assisted procreation, 90 | North Atlantic Treaty Organization (NATO), 103 |
| Meier, Patrick, 154 | Northrop Grumman contractors, 100 |
| metadata, 172, 197–98, 277 | Nuffield Council on Bioethics (U.K.), 75 |
| micro-grid applications, 69 | Nuremberg trials of Nazi war criminals, 114, 117, |
| Microsoft, 241 | 119–21 |
| middle income countries, 51 | Nuremburg Code, 36 |
| misappropriation of personal data, 235 | |
| mobile phone technology, 7, 9–10, 154–56 | Oak Foundation, 290 |
| mobilization, 184-85 | Obama, Barack, U.S. President, 107-9, 111-12, |
| modalities of regulation, 6 | 287–88 |
| modernization, 48–55 | Office of the Prosecutor at the International |
| monsoon events, 59 | Criminal Court, 143 |
| moral claims, as human rights, 4, 13 | online domain and human rights |
| multilateral environmental treaties (MEAs), 48, | challenges to, 266–69 |
| 53 | gatekeepers, 251 |
| multinational corporations (MNCs), 235 | human rights within, 261–66 |
| * | introduction to, 243-47 |
| National Adaptation Plans (NAPs), 62 | private actors and human rights law, 253-61 |
| national security protection, 226 | role of internet companies in, 247–53 |
| nationally determined contributions (NDCs), | types of forums, 249–50 |
| 58–59 | user expressions, 251–53 |
| natural disaster responses, 154 | Ontario's Human Rights Commission, 157 |
| Nazi Germany, 220 | open data sharing, 176 |
| network graphics, 178–79 | open hardware, 302–6 |
| New International Economic Order, 48, | Open Net Initiative, 253 |
| 63 | Open Society Foundations, 290 |
| New Tactics in Human Rights, 209 | open source intelligence, 146, 296 |
| new technologies. See also big data; | Open Technology Fund, 291 |
| communication technology; drone | OpenEvSys project, 293 |
| technology; human rights technology; | OpenStreetMap, 184 |
| information and communication | Orange Order in Northern Ireland, 181 |
| technologies; technology rights | Orange Revolution in Ukraine, 181 |
| accountability challenges, 9-13 | Organization for Security and Co-operation in |
| advocacy and, 200, 205 | Europe (OSCE), 49, 56–57, 139, 254 |
| cyberlaw and, 5–6 | overseas development assistance (ODA), 63 |
| doctor/patient relationship, 77 | |
| fact-finding and, 194, 205 | Panama Papers, 179 |
| human rights and, 36, 125–28, 159 | parent, in reproduction technologies, 19–20 |
| human rights law and, 18 | parent-child relations, 89 |
| impact of, 102, 164, 216 | Paris Agreement (2015), 58–59 |
| introduction to, 1–2, 8–9, 15, 289, 301 | Parrillo v. Italy, 73, 82–85 |
| normative approaches, 21–24 | participation principle, 3 |
| private authority and, 13 | pie charts, 181 |
| resistance to, 278 | pluralism in fact-finding advocacy, 205–8 |
| of warfare, 104, 112, 209 | poverty and water, 27 |
| New York University's Center for Human Rights | power and technology, 6–9 |
| and Global Justice, 163 | pre-implantation genetic diagnosis (PGD), 72, |
| Nigerian military, 142–45 | 80–81 |
| Nightingale, Florence, 165–66 | Predator drones, 95 |
| non-discrimination principle, 3 | prepaid water meter technology |
| non-governmental organizations (NGOs), 130, 168, | Belmont Report, 37–38 |
| 188, 193, 199, 206 | overview of, 25 |
| | |

| prepaid water meter technology (cont.) | right to free expression, 19 |
|--|---|
| South Africa, 28–29, 31 | right to health, 65–67 |
| United Kingdom, 32 | right to life, 65–66 |
| PRISM Program, 221–22 | right to privacy. See privacy rights |
| privacy rights. See also big data and privacy rights | right to water, 65–67 |
| bulk collection privacy, 227–30 | rights-based approach, 64 |
| data protection laws, 216, 233–35 | human rights-based approach, 2–4, 6, 18, 24, 62 |
| digital communication, 224–33 | 73, 78, 80–81, 90 |
| effective remedy for violation of, 232-33 | rights restricting/enhancing technology, 38 |
| extraterritorial right to privacy, 236-42 | Rio Declaration on Environment and |
| Facebook users against advertisers, 265–66 | Development, 53 |
| introduction to, 19, 22, 217–18 | Royal Statistical Society, 165 |
| legality, necessity, and proportionality, 225–30 | RQ-4 Global Hawk (Northrup Grumman), 97 |
| permissible limitations on privacy, 155–56 | Ruggie, John, 254–55, 257–58 |
| protection of, 218–21 | rule of law principle, 3 |
| Snowden, Edward, impact on, 150, 217, 221–24 | Russian intervention in Ukraine, 138–41 |
| summary of, 242 | |
| unlawful interference with, 272-73 | S. and Marper v. United Kingdom, 78, 234–35 |
| Privacy Shield agreement, 240 | safe motherhood and abortion, 77 |
| private actors and human rights law, 253-61 | satellite imagery, 9, 132, 138, 178, 296 |
| private contractors | science and technology studies (STS), 2-3, 5-7 |
| autonomous weaponry and, 100–1, 122–23 | scraping, defined, 152 |
| criminal accountability, 117-22 | sea-level rises, 61 |
| drones, 97–98 | search, defined, 152 |
| international humanitarian law, 113–15 | second-hand witnessing, 133 |
| against ISIS, 111 | secondary trauma, 146–47 |
| overview of, 28 | Security in-a-Box, 209 |
| separation of powers framework, 101-2 | security training for digital technology, 281 |
| summary of, 123 | semi-autonomous offensive systems, 99-100 |
| use in Kosovo, 104 | separation of powers, 101–2 |
| use in Libya, 108 | sexual violence, 142 |
| privatization of war, 22, 95 | S.H. and Others v. Austria, 73, 79, 84 |
| procreative tourism, 88 | shame/shaming, 4, 11–12 |
| proof of existence attribute, 300 | Silverman, Craig, 129 |
| Provenance company, 301 | SITU Research, 296 |
| public ethics, 75 | Skype, 278, 294 |
| Public Laboratory for Open Technology, 303 | smartphones, 168, 193 |
| Putin, Vladimir, 138 | Smith v. Maryland, 276–77 |
| | Snowden, Edward, 150, 217, 221–24 |
| qualitative data visualization, 177-80 | social developments of human fertilization, 89 |
| quantitative analysis, 7 | social justice mapping, 183-84 |
| quantitative data visualization, 173-77, 182 | social media |
| Qubes OS, 305 | advocacy messages via, 198–200 |
| | clickbait content on, 204 |
| Radio Free Asia, 291 | Code of Conduct, 16-17 |
| Raspberry Pi technology, 304 | content culture, 204 |
| Reaper drones, 95 | human rights violations and, 10 |
| reproduction technologies, 1, 5, 14, 19, 91 | introduction to, 1 |
| Responsible Data Forum (2016), 173 | miscalculations and resources, 202-5 |
| retention of data, 152 | privacy concerns, 284 |
| right to dignity, 26–27, 34 | proofing of, 200–2 |
| right to enjoy the benefits of scientific progress | quantification methods, 199 |
| (REBSP), 26–27, 34–36 | rebel forces against ISIS, 137 |
| right to food, 65–68 | user-generated video, 134 |
| | |

| sociotechnical processes in technology, 151 | technology-enabled surrogacy, 81 |
|--|---|
| soft law frameworks, 267 | technology entrepreneurs, 18 |
| South Africa | technology of distance, 168 |
| apartheid, 28 | Telecommunications Industry Dialogue, 262 |
| free water allowance, 29–30 | Telegram network, 134, 294 |
| litigation, 21 | telephony metadata, 234 |
| prepaid meter technology, 28–29, 31 | terrorism, 93-94 |
| South African Constitution, 26 | third-party doctrine, 276–77, 285 |
| South African Constitutional Court, 26, 43 | traditional public forums, 249–50 |
| special and differential (S&D) treatment, 51-52, | transnational nature of online platforms, 268 |
| 55–60 | transnational solidarity, 293 |
| spyware, 195 | transparency concerns, 10, 191, 299 |
| SSL/TLS security, 302 | truth-claims, manipulation of, 197, 206 |
| Stasi secret police in East Germany, 220 | Twitter |
| state obligation in human rights protection | communication issues with, 191, 201 |
| individual data protection, 286–88 | content removal by, 259 |
| introduction to, 215 | freedom of expression rights, 261 |
| setting privacy limits, 263 | human rights impact of, 245–46 |
| Statistical Breviary (Playfair), 164 | introduction to, 16–17 |
| Statistical Society of London, 165 | overview of, 134 |
| storing data, 152 | rebel forces against ISIS, 137 |
| surrogacy concerns, 81–82 | Russian intervention in Ukraine, 138 |
| surveillance | |
| communication surveillance rights, 219–20, | U.K. Investigatory Powers Act, 224 |
| 230–31 | UN Committee on Development Policy List, 52 |
| extraterritorial right to privacy, 236-39 | UN Conference on Trade and Development |
| government surveillance, 160 | (UNCTAD), 50, 53 |
| risks of, 194–96 | UN Educational, Scientific and Cultural |
| Snowden, Edward, impact on, 150, 217, 221–24 | Organization (UNESCO), 75 |
| surveillant anxiety, 157–58 | UN Framework Convention on Climate Change |
| Syria Conflict Mapping Project (Carter Center) | (UNFCCC), 47–48, 51, 55–60 |
| introduction to, 134–37 | UN General Assembly, 50–51 |
| network dynamics, 136–37 | UN Global Compact, 254 |
| overview of, 134 | UN Global Pulse, 160 |
| weapons tracking, 135–36 | UN Guiding Principles on Business and Human |
| | Rights, 14–16, 247, 255–58, 264, 267 |
| Taliban, 102 | UN Human Rights Committee, 220–21, 225, 236, |
| technological solutionism, 13 | 271, 273 |
| technology. See also communication technology; | UN Human Rights Council (UNHRC), 150–51, |
| human rights technology | 223, 248, 255, 271 |
| challenges for non-state actors, 20 | UN Office of the High Commissioner for Human |
| conclusions about, 282–88 | Rights (OHCHR), 157, 223, 225, 238–39 |
| demand-management technology, 25, 28-31, 35 | UN Security Council, 107 |
| encryption technology, 279, 287, 289 | UN Special Rapporteur on Privacy, 159. See also |
| enforcement of, 125–28 | Cannataci, Joseph |
| hacking technology, 278–79, 287 | UN Special Rapporteur on the Promotion and |
| ICCPR waiver, 283–85 | Protection of the Right to Freedom of |
| individual choice and, 271–77 | Opinion and Expression, 243, 248. See also La |
| introduction to, 270–71 | Rue, Frank (former) |
| new technologies, 21–24 | UN World Summit on the Information Society, |
| non-state actors and, 14–16, 20, 215 | 247–48 |
| power and justice, 6–9 | Unionism in Northern Ireland, 181 |
| third-party doctrine, 276–77, 285 | United Arab Emirates, 195 |
| voluntariness of insecure use of, 277–82 | United Nations (UN), 14, 26, 24, 114 |

| United Nations Declaration for a New | vision-based video analysis system, 298–99 |
|--|--|
| International Economic Order (NIEO), 49, | voluntariness of insecure technology use, |
| 52–53 | 277–82 |
| United States v. Miller, 275–77 | vulnerable populations, 6 |
| Universal Declaration on Bioethics and Human | vaniciable populations, o |
| Rights, 36, 39, 44, 71 | War on Terror, 274 |
| Universal Declaration on Human Rights (UDHR), | War Powers Resolution, 96, 105 |
| 26, 65, 218–19 | Washington Consensus, 28 |
| universality principle, 3 | water |
| unmanned aerial vehicles (UAVs), 96, 103, 294–96. | beneficence, 41–42 |
| See also drone technology | demand management devices, 28–31, 35 |
| U.S. Central Command, 110 | free water allowance, 29–30 |
| U.S. Congress, 95, 101–12 | Free Water Policy, 33 |
| U.S. Department of Justice Office of Legal | informed consent and, 38–41 |
| Counsel (OLC), 105–6, 109 | introduction to, 25–28 |
| U.S. Foreign Intelligence Surveillance Court, 230 | justice and, 42–43 |
| U.S. House of Representatives, 104, 108-9 | Mazibuko Litigation, 31–33 |
| U.S. National Security Agency (NSA), 172, 195, 281 | right to science, 34–36 |
| U.S. Presidential Commission for the Study of | scrutiny requirements with, 36-38 |
| Bioethical Issues, 75 | technologies, 14 |
| U.S Constitution, 101–2 | tokens for, 29 |
| use of force, 20 | weapons tracking, 135–36 |
| user-generated video | WhatsApp, 197, 209, 294, 305 |
| Boko Haram, 141–42 | whistleblowers, 231 |
| case studies, 133 | WikiLeaks, 179 |
| challenges in law/advocacy, 132–33 | Wikipedia, 251 |
| discussion, 145–48 | willful blindness, 120–21 |
| graphic nature of images, 203 | Wiring project, 302 |
| introduction to, 125–26, 129 | WITNESS (NGO), 130 |
| Nigerian military war crimes, 142–45 | Wordpress, 294 |
| role in human rights investigations, | World Bank, 54 |
| 130–32, 194 | World Intellectual Property Organization (WIPO), |
| Russian intervention in Ukraine, 138–41 | 53-54 |
| Syria case study, 134–37 | World Medical Association, 36 |
| video evidence of crimes, 131 | World Trade Organization (WTO), 50, 52, 54 |
| weapons tracking, 135–36 | V. T. I. |
| user welfare and technology, 38 | YouTube |
| Varification Handbook for Investigative Reporting | communication issues with, 191 |
| Verification Handbook for Investigative Reporting (Silverman, Tsubaki), 129 | freedom of expression rights, 264 introduction to, 16–17 |
| video evidence. See user-generated video | metadata doctoring, 197–98 |
| Vienna Convention on the Law of Treaties, 282 | number of monthly visitors, 243 |
| Vienna Declaration and Platform of Action | overview of, 134 |
| indivisibility principle, 3–4 | Russian intervention in Ukraine, 138 |
| inter-dependence principle, 3–4 | Yugoslavian weapons stockpiling, 135 |
| inter-relatedness principle, 3–4 | 0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |
| Vietnam War, 102–3 | Zuckerberg, Mark, 261 |
| , , | <i>J,</i> , |