

This is a section of [doi:10.7551/mitpress/14065.001.0001](https://doi.org/10.7551/mitpress/14065.001.0001)

War on All Fronts

A Theory of Health Security Justice

By: Nicholas G. Evans

Citation:

War on All Fronts: A Theory of Health Security Justice

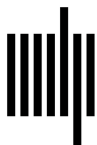
By: Nicholas G. Evans

DOI: 10.7551/mitpress/14065.001.0001

ISBN (electronic): 9780262374224

Publisher: The MIT Press

Published: 2023



The MIT Press

Notes

Chapter 1

1. The title of this book uses the phrase “Health Security Justice,” and not “Just Health Security,” owing to a series of conversations with the marketing team at the MIT Press. In brief, the reason for the title being the former is that from an algorithmic perspective, the weight of Norman Daniels’s *Just Health Care* and *Just Health* was thought to be an impediment to people finding my book in an age of Google. The choice of title is supposed to reflect that—in this, I confess I am somewhat of a novice, and I have taken my cue from the good people at my publisher.

2. Derrick Bryson Taylor, “A Timeline of the Coronavirus Pandemic,” *New York Times*, March 17, 2021, sec. World, <https://www.nytimes.com/article/coronavirus-timeline.html>.

3. World Health Organization, “Novel Coronavirus (2019-NCoV) Situation Report—1,” January 21, 2020, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10_4. Note the WHO inverts the date in this first report, “2019-nCoV.” I largely set aside naming conventions around COVID-19.

4. Jon Cohen and Dennis Normile, “New SARS-like Virus in China Triggers Alarm,” *Science* 367, no. 6475 (January 17, 2020): 234–235, <https://doi.org/10.1126/science.367.6475.234>.

5. World Health Organization, “Novel Coronavirus(2019-NCoV) Situation Report—11,” January 31, 2020, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200131-sitrep-11-ncov.pdf?sfvrsn=de7c0f7_4.

6. World Health Organization, “Statement on the Second Meeting of the International Health Regulations (2005) Emergency Committee Regarding the Outbreak of Novel Coronavirus (2019-NCoV),” accessed November 5, 2021, [https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news/item/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)).

7. Massachusetts Department of Public Health, "Man Returning from Wuhan, China Is First Case of 2019 Novel Coronavirus Confirmed in Massachusetts," February 1, 2020, <https://www.mass.gov/news/man-returning-from-wuhan-china-is-first-case-of-2019-novel-coronavirus-confirmed-in>.
8. World Health Organization, "Novel Coronavirus (2019-nCoV) Situation Report—12," February 1, 2020, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200201-sitrep-12-ncov.pdf?sfvrsn=273c5d35_2.
9. Wudan Yan and Anne Babe, "What Should the U.S. Learn from South Korea's Covid-19 Success?," *Undark Magazine*, October 5, 2020, <https://undark.org/2020/10/05/south-korea-covid-19-success/>.
10. Yascha Mounk, "The Extraordinary Decisions Facing Italian Doctors," *The Atlantic*, March 11, 2020, <https://www.theatlantic.com/ideas/archive/2020/03/who-gets-hospital-bed/607807/>.
11. Erin Cunningham and Dalton Bennett, "Coronavirus Burial Pits in Iran so Vast That They're Visible from Space," *Washington Post*, accessed October 8, 2020, <https://www.washingtonpost.com/graphics/2020/world/iran-coronavirus-outbreak-graves/>.
12. N. Ferguson et al., "Report 9: Impact of Non-Pharmaceutical Interventions (NPIs) to Reduce COVID19 Mortality and Healthcare Demand," Report, 20, March 16, 2020, <https://doi.org/10.25561/77482>; Caitlin Rivers et al., "Public Health Principles for a Phased Reopening During COVID-19: Guidance for Governors" (Baltimore, MD: Johns Hopkins Center for Health Security, 2020). The "hammer and dance term" comes from a blog post by Tomas Pueyo. See Tomas Pueyo, "Coronavirus: The Hammer and the Dance," Medium, May 28, 2020, <https://medium.com/@tomaspueyo/coronavirus-the-hammer-and-the-dance-be9337092b56>.
13. Kevin Escandón, Angela L. Rasmussen, Isaac I. Bogoch, Eleanor J. Murray, Karina Escandón, Saskia V. Popescu, and Jason Kindrachuk, "COVID-19 False Dichotomies and a Comprehensive Review of the Evidence regarding Public Health, COVID-19 Symptomatology, SARS-CoV-2 Transmission, Mask Wearing, and Reinfection," *BMC Infectious Diseases* 21 (2021): 710.
14. Bethiana Palma, "Did President Trump Refer to the Coronavirus as a 'Hoax'?" Snopes.com, accessed November 29, 2020, <https://www.snopes.com/fact-check/trump-coronavirus-rally-remark/>.
15. Yascha Mounk, "Cancel Everything," *The Atlantic*, March 10, 2020, <https://www.theatlantic.com/ideas/archive/2020/03/coronavirus-cancel-everything/607675/>.
16. Nicholas G. Evans, Zackary D. Berger, Alexandra L. Phelan, and Ross D. Silverman. "Covid-19, Equity, and Inclusiveness." *BMJ (Clinical Research Ed.)* 373 (June 2021): n1631, <https://doi.org/10.1136/bmj.n1631>.

17. Dylan Scott, "Flattening the Curve Worked—Until It Didn't," *Vox*, December 31, 2020, <https://www.vox.com/22180261/covid-19-coronavirus-social-distancing-lock-downs-flatten-the-curve>.
18. Jeff Pao, "Wuhan Declares 'State of War' against Virus," *Asia Times*, January 24, 2020, <https://asiatimes.com/2020/01/wuhan-declares-state-of-war-against-virus/>.
19. Jonathan Cheng in Beijing and Chun Han Wong in Hong Kong, "As Virus Spreads, Isolated Taiwan Risks Being a Loophole in War on Epidemics," *Wall Street Journal*, January 22, 2020, sec. World, <https://www.wsj.com/articles/taiwan-virus-case-highlights-chinese-efforts-to-exclude-taipei-from-world-health-organization-11579634031>.
20. Caitlin Oprysko and Susannah Luthi, "Trump Labels Himself 'a Wartime President' Combating Coronavirus," POLITICO, accessed July 22, 2020, <https://www.politico.com/news/2020/03/18/trump-administration-self-swab-coronavirus-tests-135590>.
21. Heather Hollingsworth, "Health Workers on COVID-19 Front Lines Once Saluted as Heroes Now Get Threats," *Boston Globe*, September 29, 2021, <https://www.bostonglobe.com/2021/09/29/nation/health-workers-covid-19-front-lines-once-saluted-heroes-now-get-threats/>.
22. Aishvarya Kavi, "Virus Surge Brings Calls for Trump to Invoke Defense Production Act," *New York Times*, July 22, 2020, sec. U.S., <https://www.nytimes.com/2020/07/22/us/politics/coronavirus-defense-production-act.html>.
23. Meredith Wadman et al., "A Rampage through the Body," *Science* 368, no. 6489 (April 24, 2020): 356–360, <https://doi.org/10.1126/science.368.6489.356>.
24. Tom Brook, "A Run through the Virus 'Warzone' of New York," *BBC News*, 2020, accessed November 5, 2021, <https://www.bbc.com/news/av/world-us-canada-52319184>.
25. Jonathan M. Marron, Don S. Dizon, Banu Symington, Michael A. Thompson, and Abby R. Rosenberg, "Waging War on War Metaphors in Cancer and COVID-19," *JCO Oncology Practice*, July 2020, OP.20.00542, <https://doi.org/10.1200/OP.20.00542>.
26. Matt Bille and Erika Lishock, *The First Space Race: Launching the World's First Satellites* (Lubbock: Texas A&M University Press, 2004), 3–4.
27. W. S. Hotchkiss, "The American Medical Association and the War on AIDS," *Public Health Reports* 103, no. 3 (1988): 282–88; John J. Casey et al., "The War on Severe Acute Respiratory Syndrome: United States Forces Korea's Campaign Plan," *Military Medicine* 171, no. 2 (February 2006): 131–135, <https://doi.org/10.7205/milmed.171.2.131>; Marcus E. H. Ong, "War on SARS: A Singapore Experience," *CJEM* 6, no. 1 (January 2004): 31–37, <https://doi.org/10.1017/s1481803500008873>; Nicholas Greig Evans, "Ebola: From Public Health Crisis to National Security Threat," in *Biological Threats in the 21st Century*, ed. Filippa Lentzos (London: Imperial College Press, 2016), 277–292,

https://doi.org/10.1142/9781783269488_0017; Brigitte Nerlich and Richard James, "'The Post-Antibiotic Apocalypse' and the 'War on Superbugs': Catastrophe Discourse in Microbiology, Its Rhetorical Form and Political Function," *Public Understanding of Science*, November 3, 2008, <https://doi.org/10.1177/0963662507087974>.

28. Colin McInnes, "The Many Meanings of Health Security," in *Routledge Handbook of Global Health Security*, ed. Simon Rushton and Jeremy Youde (New York: Routledge, 2014), 3–17, <https://doi.org/10.4324/9780203078563.ch1>.

29. World Health Organization, "WHO Coronavirus (COVID-19) Dashboard," 2022, <https://covid19.who.int>.

30. Congressional Research Service, "Unemployment Rates during the COVID-19 Pandemic," 2022, <https://sgp.fas.org/crs/misc/R46554.pdf>.

31. Evans et al., "Covid-19," <https://doi.org/10.1136/bmj.n1631>.

32. Robin Blades. "An Unexpected Pandemic Side Effect in Peru: A Comeback For TB," *NPR*, April 28, 2021, <https://www.npr.org/sections/goatsandsoda/2021/04/28/988742791/an-unexpected-pandemic-side-effect-in-peru-a-comeback-for-tb>.

33. Jeffrey Kluger, "Domestic Violence and COVID-19: The Pandemic within the Pandemic," *Time*, accessed January 30, 2022, <https://time.com/5928539/domestic-violence-covid-19/>.

34. World Bank, "Urgent, Effective Action Required to Quell the Impact of COVID-19 on Education Worldwide," 2022, <https://www.worldbank.org/en/news/immersive-story/2021/01/22/urgent-effective-action-required-to-quell-the-impact-of-covid-19-on-education-worldwide>.

35. Congressional Research Service, "Unemployment Rates."

36. Congressional Research Service. "Unemployment Rates," 10–14.

37. Matthew L. Bosworth, Daniel Ayoubkhani, Vahé Nafilyan, Josephine Foubert, Myer Glickman, Calum Davey, and Hannah Kuper, "Deaths Involving COVID-19 by Self-Reported Disability Status during the First Two Waves of the COVID-19 Pandemic in England: A Retrospective, Population-Based Cohort Study," *The Lancet Public Health* 6, no. 11 (November 1, 2021): e817–825, [https://doi.org/10.1016/S2468-2667\(21\)00206-1](https://doi.org/10.1016/S2468-2667(21)00206-1); Ian Sample, "People with Learning Disabilities in England 'Have Eight Times Covid Death Rate,'" *The Guardian*, July 15, 2021, sec. Society, <https://www.theguardian.com/society/2021/jul/15/people-with-learning-disabilities-in-england-have-eight-times-covid-death-rate>; The Health Foundation, "6 out of 10 People Who Have Died from COVID-19 Are Disabled," February 11, 2021, <https://www.health.org.uk/news-and-comment/news/6-out-of-10-people-who-have-died-from-covid-19-are-disabled>.

38. Hereth et. al., "Long Covid and Disability: A Brave New World," *BMJ* (forthcoming).

39. Katrina Megget. "How New Zealand's Covid-19 Strategy Failed Māori People," *BMJ* 376 (January 25, 2022): o180, <https://doi.org/10.1136/bmj.o180>.
40. Anna Rouw, Jennifer Kates, Adam Wexler, and Joshua Michaud, "Tracking Global COVID-19 Vaccine Equity: An Update | KFF," September 22, 2021, <https://www.kff.org/coronavirus-covid-19/issue-brief/tracking-global-covid-19-vaccine-equity-an-update/>.
41. Olivia Goldhill, "We Have Enough Covid Vaccines for Most of the World, but Rich Countries Are Stockpiling More Than They Need for Boosters," *STAT* (blog), December 13, 2021, <https://www.statnews.com/2021/12/13/we-have-enough-covid-vaccines-for-most-of-world-but-rich-countries-stockpiling-more-than-they-need/>.
42. Lorna Weir, "A Genealogy of Global Health Security," *International Political Sociology* 6, no. 3 (September 1, 2012): 333.
43. Lorna Weir, "Inventing Global Health Security, 1994–2005," in *Routledge Handbook of Global Health Security*, ed. Simon Rushton and Jeremy Youde (New York: Routledge, 2014), 24–25.
44. WHO, *Health Security*, 2022, https://www.who.int/health-topics/health-security#tab=tab_1.
45. Nicholas Greig Evans and Thomas Inglesby, "Biosecurity and Public Health Ethics Issues Raised by Biological Threats," in *The Oxford Handbook of Public Health Ethics*, ed. Anna C. Mastroianni, Jeffrey P. Kahn, and Nancy E. Kass (Oxford: Oxford University Press, 2019), 773–785, <https://doi.org/10.1093/oxfordhb/9780190245191.013.67>.
46. There has been a small literature on agro-terrorism, the use of biological weapons on plants and animals. See, e.g., Carl Ungerer and Dallas Rogers, "The Threat of Agroterrorism to Australia: A Preliminary Assessment," *Studies in Conflict & Terrorism* 29, no. 2 (March 2006): 147–163, <https://doi.org/10.1080/10576100500497012>; Njiruh Nthakania and Wakhungu Jacob, "Emergence of Bio/Agro-Terrorism in Kenya," *Annual Research & Review in Biology* 15, no. 6 (2017): 1–12, <https://doi.org/10.9734/arrb/2017/34167>; R. G. Reeves et al., "Agricultural Research, or a New Bioweapon System?," *Science* 362, no. 6410 (October 2018): 35–37, <https://doi.org/10.1126/science.aat7664>.
47. See, e.g., Jonathan B. Tucker, *Scourge: The Once and Future Threat of Smallpox*, reprint ed. (New York: Grove Press, 2002), 191–193.
48. See, e.g., Nicholas Greig Evans, Marc Lipsitch, and Meira Levinson, "The Ethics of Biosafety Considerations in Gain-of-Function Research Resulting in the Creation of Potential Pandemic Pathogens," *Journal of Medical Ethics* 41, no. 11 (November 2015): 901–908, <https://doi.org/10.1136/medethics-2014-102619>; Nicholas Greig Evans, "Models of Scientific and Technological Review for the Biological and Toxin Weapons Convention," *The Nonproliferation Review* 26, no. 3–4 (October 2019): 351–366, <https://doi.org/10.1080/10736700.2019.1662609>; Nicholas Greig Evans,

"Great Expectations—Ethics, Avian Flu and the Value of Progress," *Journal of Medical Ethics* 39, no. 4 (March 2013): 209–213, <https://doi.org/10.1136/medethics-2012-100712>; Evans and Inglesby, "Biosecurity," <https://doi.org/10.1093/oxfordhb/9780190245191.013.67>.

49. "There Are Two Sides to Biodefence," *Nature* 422, no. 6932 (April 2003): 545, <https://doi.org/10.1038/422545b>.

50. Nicholas G. Evans, "'But Nature Started It': Examining Taubenberger and Morens' View on Influenza A Virus and Dual-Use Research of Concern," *MBio* 4, no. 4 (August 30, 2013), <https://doi.org/10.1128/mBio.00547-13>.

51. Alejandra Mancilla, "Samuel Pufendorf and the Right of Necessity," *Aporia* 3 (2012): 47–64.

52. John D. Banusiewicz, "Hagel to Address 'Threat Multiplier' of Climate Change," *Defense News*, October 13, 2014, <https://www.defense.gov/News/News-Stories/Article/Article/603440/>.

53. Sadie J. Ryan et al., "Global Expansion and Redistribution of Aedes-Borne Virus Transmission Risk with Climate Change," *PLOS Neglected Tropical Diseases* 13, no. 3 (March 28, 2019): e0007213, <https://doi.org/10.1371/journal.pntd.0007213>.

54. Megan Scudellari, "Self-Destructing Mosquitoes and Sterilized Rodents: The Promise of Gene Drives," *Nature* 571, no. 7764 (July 9, 2019): 160–162, <https://doi.org/10.1038/d41586-019-02087-5>; US Centers for Disease Control and Prevention, "Fighting the World's Deadliest Animal," 2019, <https://www.cdc.gov/globalhealth/stories/world-deadliest-animal.html>.

55. Larry M. Bush and Maria T. Perez, "The Anthrax Attacks 10 Years Later," *Annals of Internal Medicine* 156, no. 1_Part_1 (January 3, 2012): 41–44, <https://doi.org/10.7326/0003-4819-155-12-201112200-00373>; Thomas V. Inglesby et al., "Anthrax as a Biological Weapon, 2002: Updated Recommendations for Management," *JAMA* 287, no. 17 (May 1, 2002): 2236, <https://doi.org/10.1001/jama.287.17.2236>; Thomas V. Inglesby et al., "Anthrax as a Biological Weapon: Medical and Public Health Management," *JAMA* 281, no. 18 (May 12, 1999): 1735, <https://doi.org/10.1001/jama.281.18.1735>.

56. Evans and Inglesby, "Biosecurity"; Amy L. Fairchild and Ronald Bayer, "Ethics and the Conduct of Public Health Surveillance," *Science* 303, no. 5658 (January 2004): 631–632, <https://doi.org/10.1126/science.1094038>; George J. Annas, *Worst Case Bioethics: Death, Disaster, and Public Health* (New York: Oxford University Press, 2010); James F. Childress et al., "Public Health Ethics: Mapping the Terrain," *Journal of Law, Medicine & Ethics* 30, no. 2 (June 2002): 170–178, <https://doi.org/10.1111/j.1748-720X.2002.tb00384.x>; Nancy E. Kass, "Public Health Ethics From Foundations and Frameworks to Justice and Global Public Health," *Journal of Law, Medicine & Ethics* 32, no. 2 (June 2004): 232–242, <https://doi.org/10.1111/j.1748-720X.2004.tb00470.x>; Lawrence Gostin, "Public Health Strategies for Pandemic Influenza:

Ethics and the Law," *JAMA* 295, no. 14 (April 12, 2006): 1700–1704, <https://doi.org/10.1001/jama.295.14.1700>; Matthew K. Wynia, "Ethics and Public Health Emergencies: Restrictions on Liberty," *American Journal of Bioethics: AJOB* 7, no. 2 (February 2007): 1–5, <https://doi.org/10.1080/15265160701577603>; James G. Hodge, "Bioterrorism Law and Policy: Critical Choices in Public Health," *Journal of Law, Medicine & Ethics* 30, no. 2 (2002): 254–261, <https://doi.org/10.1111/j.1748-720X.2002.tb00391.x>; Lawrence O. Gostin and Madison Powers, "What Does Social Justice Require for the Public's Health? Public Health Ethics and Policy Imperatives," *Health Affairs* 25, no. 4 (July 1, 2006): 1053–1060, <https://doi.org/10.1377/hlthaff.25.4.1053>.

57. Childress et al., "Public Health Ethics."

58. Lawrence O. Gostin, "The Model State Emergency Health Powers Act: Public Health and Civil Liberties in a Time of Terrorism," *Health Matrix*, 2003, http://heinonline.org/hol/cgi-bin/get_pdf.cgi?handle=hein.journals/hmax13§ion=7; Lawrence O. Gostin et al., "The Model State Emergency Health Powers Act: Planning for and Response to Bioterrorism and Naturally Occurring Infectious Diseases," *JAMA* 288, no. 5 (August 7, 2002): 622–628, <https://doi.org/10.1001/jama.288.5.622>.

Chapter 2

1. Jamaji C. Nwanaji-Enwerem, Joseph G. Allen, and Paloma I. Beamer, "Another Invisible Enemy Indoors: COVID-19, Human Health, the Home, and United States Indoor Air Policy," *Journal of Exposure Science & Environmental Epidemiology* 30, no. 5 (September 2020): 773–775, <https://doi.org/10.1038/s41370-020-0247-x>.

2. "Meet the Heroes of the Front Lines," *Time*, 2020, <https://time.com/collection/coronavirus-heroes/>.

3. James J. Kimble, "Perspective | The Real Lesson of World War II for Mobilizing against Covid-19," *Washington Post*, accessed October 19, 2020, <https://www.washingtonpost.com/outlook/2020/03/25/real-lesson-world-war-ii-mobilizing-against-covid-19/>.

4. Rob Copeland, "The Secret Group of Scientists and Billionaires Pushing a Manhattan Project for Covid-19—WSJ," *Wall Street Journal*, April 27, 2020, <https://www.wsj.com/articles/the-secret-group-of-scientists-and-billionaires-pushing-trump-on-a-covid-19-plan-11587998993>.

5. National Institutes of Health, "NIH Director: Defeating COVID-19 Requires Unprecedented Action and Collaboration," National Institutes of Health (NIH), May 18, 2020, <https://www.nih.gov/news-events/news-releases/nih-director-defeating-covid-19-requires-unprecedented-action-collaboration>.

6. Tom Frieden, "Dr. Tom Frieden: There's a Long War Ahead and Our Covid-19 Response Must Adapt—CNN," March 22, 2020, <https://www.cnn.com/2020/03/20/health/coronavirus-response-must-adapt-frieden-analysis/index.html>.

7. Jennifer Khan, "The New York Times," *New York Times*, April 20, 2020, sec. Magazine, <https://www.nytimes.com/interactive/2020/uri/embeddedinteractive/a62994db-13b3-5786-8951-607b6550399b?>

8. Rita Floyd, *The Morality of Security: A Theory of Just Securitization* (Cambridge: Cambridge University Press, 2019).

9. This is related to what effective altruists in health security might call tractability but is not the same: it is less about whether securitization is an effective means to achieve some goal, so much as what its effects are, intended or not. See, e.g., William MacAskill, *Doing Good Better: How Effective Altruism Can Help You Help Others, Do Work That Matters, and Make Smarter Choices about Giving Back* (New York: Norton, 2015).

10. Ian Loader and Neil Walker, *Civilizing Security* (Cambridge: Cambridge University Press, 2007), 10–12.

11. Barry Buzan, Ole Wæver, and Jaap De Wilde, *Security: A New Framework for Analysis*, UK ed. (Boulder, CO: Lynne Rienner Publishers, 1997), 5. See Christian Enemark, *Biosecurity Dilemmas: Dreaded Diseases, Ethical Responses, and the Health of Nations*, illus. ed. (Washington, DC: Georgetown University Press, 2017), 98.

12. The role of speech acts in securitization is also represented by Balzacq, who defines it as a process by which

an articulated assemblage of practices whereby heuristic artefacts (metaphors, policy tools, image repertoires, analogies, stereotypes, emotions, etc.) are contextually mobilised by a securitizing actor, who works to prompt an audience to build a coherent network of implications (feelings, sensations, thoughts, and intuitions) about the critical vulnerability of a referent object, that concurs with the securitizing actor's reasons for choices and actions, by investing the referent subject with such an aura of unprecedented threatening complexion that a customised policy must be immediately undertaken to block it.

See Thierry Balzacq, ed., *Securitization Theory: How Security Problems Emerge and Dissolve* (London: Routledge, 2010), 3.

13. Cf. Michael J. Selgelid and Christian Enemark, "Infectious Diseases, Security and Ethics: The Case of Hiv/Aids," *Bioethics* 22, no. 9 (November 2008): 457–465, <https://doi.org/10.1111/j.1467-8519.2008.00696.x>.

14. J. L. Austin, *How to Do Things with Words: Second Edition*, ed. J. O. Urmson and Marina Sbisa (Cambridge, MA: Harvard University Press, 1975).

15. This construction from Rae Langton, "Beyond Belief: Pragmatics in Hate Speech and Pornography," in *Speech and Harm: Controversies Over Free Speech*, ed. Mary Kate McGowan and Ishani Maitra (Oxford: Oxford University Press, 2012), 72–93, 75.

16. In the positive domain, see, e.g., Ian Loader and Neil Walker, *Civilizing Security* (Cambridge: Cambridge University Press, 2007). Simon Rushton's recent book is not necessarily *positive* about the prospects of health security, but he does not consider it viable to abandon it wholesale, and thus attempts to find what might be useful about

securitizing health. Simon Rushton, *Security and Public Health* (Cambridge, MA: Polity, 2019).

17. See, e.g., Colin McInnes, “The Many Meanings of Health Security,” in *Routledge Handbook of Global Health Security*, ed. Simon Rushton and Jeremy Youde (New York: Routledge, 2014), 11.

18. Lorna Weir, “A Genealogy of Global Health Security,” *International Political Sociology* 6, no. 3 (September 1, 2012), 333.

19. Lorna Weir, “Inventing Global Health Security, 1994–2005,” in *Routledge Handbook of Global Health Security*, ed. Simon Rushton and Jeremy Youde (New York: Routledge, 2014), 24–25.

20. Colin McInnes and Kelley Lee, “Health, Security and Foreign Policy,” *Review of International Studies* 32, no. 1 (January 2006): 5–23.

21. Argentina et al., “Considerations and Points of Consensus between Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela with Regard to Document A/IHR/IGWG/2/2, of 24 January 2005 (Review and Approval of Proposed Amendments to the IHR—Proposal by the Chair)” (Geneva, Switzerland: World Health Assembly, January 2005), <https://www.who.int/ihr/revisionprocess/englishmontevideo.pdf>.

22. Argentina et al., “Considerations and Points of Consensus,” 1.

23. Amanda Moodie and Nima Gerami, *Rethinking Health Security after COVID-19* (Oxford: Blavatnik School of Government, 2021).

24. Christian Enemark, “Ebola, Disease-Control, and the Security Council: From Securitization to Securing Circulation,” *Journal of Global Security Studies* 2, no. 2 (April 1, 2017): 137–149, <https://doi.org/10.1093/jogss/ogw030>; Sarathi Kalra et al., “The Emergence of Ebola as a Global Health Security Threat: From ‘Lessons Learned’ to Coordinated Multilateral Containment Efforts,” *Journal of Global Infectious Diseases* 6, no. 4 (2014): 164–177, <https://doi.org/10.4103/0974-777X.145247>; Anne Roemer-Mahler and Stefan Elbe, “The Race for Ebola Drugs: Pharmaceuticals, Security and Global Health Governance,” *Third World Quarterly* 37, no. 3 (March 3, 2016): 487–506, <https://doi.org/10.1080/01436597.2015.1111136>.

25. Efthimios Parasidis, “Public Health Law and Institutional Vaccine Skepticism,” *Journal of Health Politics, Policy and Law* 41, no. 6 (December 1, 2016): 1137–1149, <https://doi.org/10.1215/03616878-3666204>.

26. Nicholas G. Evans, Kelly Hills, and Adam C. Levine, “How Should the WHO Guide Access and Benefit Sharing During Infectious Disease Outbreaks?,” *AMA Journal of Ethics* 22, no. 1 (January 1, 2020): 28–35, <https://doi.org/10.1001/amajethics.2020.28>.

27. Moodie and Germai, *Rethinking Health Security*, 12–14.

28. Scott Burris and Edwin Cameron, "The Case Against Criminalization of HIV Transmission," *JAMA* 300, no. 5 (August 6, 2008): 578–581, <https://doi.org/10.1001/jama.300.5.578>.
29. Leo Beletsky and Corey S. Davis, "Today's Fentanyl Crisis: Prohibition's Iron Law, Revisited—PubMed—NCBI," *International Journal of Drug Policy* 46 (August 2017): 156–159.
30. Weir, "Inventing Global Health Security," 24. See also Alexander Kelle, "Securitization of International Public Health: Implications for Global Health Governance and the Biological Weapons Prohibition Regime," *Global Governance* 13, no. 2 (2007): 217–235.
31. Weir, "Inventing Global Health Security," 24–25.
32. Sally Haslanger, "What Good Are Our Intuitions?," *Aristotelian Society Supplementary Volume* 80, no. 1 (2006): 95. See also Sally Haslanger, *Resisting Reality: Social Construction and Social Critique* (Oxford: Oxford University Press, 2012), <https://doi.org/10.1093/acprof:oso/9780199892631.001.0001>.
33. Susan Sontag, *Illness as Metaphor and AIDS and Its Metaphors* (New York: Farrar, Straus and Giroux, 2013), 10.
34. Ken Dilanian, "U.S. Intel Agencies Warned of Rising Risk of Outbreak like Coronavirus," NBC News, February 28, 2020, <https://www.nbcnews.com/politics/national-security/u-s-intel-agencies-warned-rising-risk-outbreak-coronavirus-n1144891>; Tal Axelrod, "Intel Reports Going Back to January Warned of Coronavirus Threat | The Hill," The Hill, March 20, 2020, <https://thehill.com/policy/healthcare/488763-intel-reports-going-back-to-january-warned-of-coronavirus-threat>.
35. Clive Seale, "Sporting Cancer: Struggle Language in News Reports of People with Cancer," *Sociology of Health & Illness* 23, no. 3 (2001): 308–329. There is also a parallel literature on medical metaphors used around survivors of physical violence, including in armed conflict. See, e.g., Karmen Erjavec and Zala Volčič, "'Target', 'Cancer' and 'Warrior': Exploring Painful Metaphors of Self-Presentation Used by Girls Born of War Rape," *Discourse & Society* 21, no. 5 (September 1, 2010): 524–543, <https://doi.org/10.1177/0957926510373981>.
36. Ed Yong, "Immunology Is Where Intuition Goes to Die," *The Atlantic*, August 5, 2020, <https://www.theatlantic.com/health/archive/2020/08/covid-19-immunity-is-the-pandemics-central-mystery/614956/>.
37. Caitlin Oprysko and Susannah Luthi, "Trump Labels Himself 'A Wartime President' Combating Coronavirus," POLITICO, accessed July 22, 2020, <https://www.politico.com/news/2020/03/18/trump-administration-self-swab-coronavirus-tests-135590>.
38. James Hohmann, "British, Canadian and U.S. Leaders Cite World War II to Make Very Different Points about Coronavirus," *Washington Post*, accessed August 5, 2020,

<https://www.washingtonpost.com/news/powerpost/paloma/daily-202/2020/04/06/daily-202-british-canadian-and-u-s-leaders-cite-world-war-ii-to-make-very-different-points-about-coronavirus/5e8abef088e0fa101a75b5a8/>.

39. Gregory D. Koblentz and Michael Hunzeker, "National Security in the Age of Pandemics," *Defense One*, accessed July 28, 2020, <https://www.defenseone.com/ideas/2020/04/national-security-age-pandemics/164365/>.

40. Washington, *Medical Apartheid*; Mike Stobbe, *Surgeon General's Warning: How Politics Crippled the Nation's Doctor* (Oakland: University of California Press, 2014).

41. Walzer, *Just and Unjust Wars*, 22.

42. Laura Spinney, *Pale Rider: The Spanish Flu of 1918 and How It Changed the World* (New York: PublicAffairs, 2017), 77.

43. Jeffery K. Taubenberger and David M. Morens, "1918 Influenza: The Mother of All Pandemics," *Emerging Infectious Diseases* 12, no. 1 (January 2006): 15–22, <https://doi.org/10.3201/eid1209.050979>.

44. Donald R. Hopkins, *Princes and Peasants: Smallpox in History* (Chicago: University of Chicago Press, 1983).

45. US Centers for Disease Control and Prevention, "Burden of Influenza," Centers for Disease Control and Prevention, April 17, 2020, <https://www.cdc.gov/flu/about/burden/index.html>.

46. Shad Thielman, "Death by Numbers: How Vietnam War and Coronavirus Changed the Way We Mourn," *The Conversation*, May 15, 2020, <http://theconversation.com/death-by-numbers-how-vietnam-war-and-coronavirus-changed-the-way-we-mourn-137675>.

47. Martin A. Makary and Michael Daniel, "Medical Error—The Third Leading Cause of Death in the US," *BMJ* 353 (May 3, 2016): i2139, <https://doi.org/10.1136/bmj.i2139>.

48. Jonathan Herington, "The Concept of Security," in *Ethics and Security Aspects of Infectious Disease Control*, ed. Christian Enemark and Michael J. Selgelid (London: Ashgate, 2012), 7–26.

49. See Jeremy Youde, *Global Health Governance* (Malden, MA: Polity, 2012), 138–140.

50. Giuliana Viglione, "Tens of Thousands of Scientists Are Redeploying to Fight Coronavirus," *Nature News*, March 27, 2020, <https://www.nature.com/articles/d41586-020-00905-9>.

51. James Hamblin, "The Curve Is Not Flat Enough," *The Atlantic*, March 28, 2020, <https://www.theatlantic.com/health/archive/2020/03/coronavirus-forcing-american-hospitals-ration-care/609004/>.

52. Nolan D. McCaskill and Miranda Ollstein, "Trump Administration Tells States to Step Up as Governors Plead for Aid," *Politico*, April 5, 2020, <https://www.politico.com/news/2020/04/05/white-house-trump-funding-states-coronavirus-165783>.
53. Center for Strategic and International Studies, "A Covid-19 Response Corps Can Help Stop the Pandemic," 2020, <https://www.csis.org/analysis/covid-19-response-corps-can-help-stop-pandemic>.
54. CDC, "Communities, Schools, Workplaces, & Events," Centers for Disease Control and Prevention, April 30, 2020, <https://www.cdc.gov/coronavirus/2019-ncov/php/open-america/staffing.html>.
55. Boston University, "Epidemiology COVID-19 Response Corps," 2020, <https://sites.bu.edu/covid-corps/>.
56. NC Government, "NC Gov. Cooper: NC College Students Help Local Governments, Nonprofits with COVID-19 Response," July 9, 2020, <https://governor.nc.gov/news/nc-college-students-help-local-governments-nonprofits-covid-19-response>.
57. Used here in the economic sense; i.e., an actor that seeks to maximize its profits.
58. Susie Cagle, "How Hospital Monopolies Broke the Health Care System," December 2, 2020, <https://www.thenation.com/article/society/coronavirus-health-care-consolidation/>.
59. P. W. Singer, *Corporate Warriors: The Rise of the Privatized Military Industry*, 2nd ed. (Ithaca, NY: Cornell University Press, 2011).
60. Ned Dobos, *Ethics, Security, and The War-Machine: The True Cost of the Military* (Oxford: Oxford University Press, 2020).
61. Aishvarya Kavi, "Virus Surge Brings Calls for Trump to Invoke Defense Production Act," *New York Times*, July 22, 2020, sec. U.S., <https://www.nytimes.com/2020/07/22/us/politics/coronavirus-defense-production-act.html>.
62. "The Defense Production Act and the Failure to Prepare for Catastrophic Incidents," *War on the Rocks*, April 14, 2020, <https://warontherocks.com/2020/04/the-defense-production-act-and-the-failure-to-prepare-for-catastrophic-incidents/>.
63. Ben Finley, "Obama's Executive Orders," *FactCheck.Org* (blog), September 25, 2012, <https://www.factcheck.org/2012/09/obamas-executive-orders/>.
64. Jim Powell, "Obama's Plan to Seize Control of Our Economy and Our Lives," *Forbes*, accessed August 20, 2020, <https://www.forbes.com/sites/jimpowell/2012/04/29/obamas-plan-to-seize-control-of-our-economy-and-our-lives/>.
65. RT, "Alex Jones: Obama's Executive Order Facilitates Martial Law," *InfoWars* (blog), March 21, 2012, <https://www.infowars.com/alex-jones-obamas-executive-order>

-facilitates-martial-law/. The conversation about EO 13603 from the Obama administration, the subject of the controversy, is found at the end of the third hour of the March 21, 2012, show of Alex Jones in his interview with Jerome Corsi, another conspiracy theorist most famous for being “Person 1” in the trial of Roger Stone in 2018.

66. Though as Dobos notes, “imagine” here does a surprising amount of work. See Ned Dobos, *Ethics, Security, and The War-Machine: The True Cost of the Military* (Oxford: Oxford University Press, 2020).

67. “Dr. Tom Frieden: There’s a Long War Ahead and Our Covid-19 Response Must Adapt—CNN,” accessed July 22, 2020, <https://www.cnn.com/2020/03/20/health/coronavirus-response-must-adapt-frieden-analysis/index.html>.

68. “Prepare Now for the Long War Against Covid-19,” *Bloomberg.com*, March 20, 2020, <https://www.bloomberg.com/opinion/articles/2020-03-20/prepare-now-for-the-long-war-against-coronavirus>.

69. Micah Zenko, “The Coronavirus Is the Worst Intelligence Failure in U.S. History,” *Foreign Policy*, March 25, 2020, <https://foreignpolicy.com/2020/03/25/coronavirus-worst-intelligence-failure-us-history-covid-19/>.

70. There is a long history of discussion of strategic surprise, arguably tracing back (in the Western canon) to Clausewitz. See Michael I. Handel, “Intelligence and the Problem of Strategic Surprise,” *Journal of Strategic Studies* 7, no. 3 (September 1, 1984): 229–281, <https://doi.org/10.1080/01402398408437190>. In contemporary work, the term can be used quite broadly to describe everything from novel advances in technology to overconfidence against asymmetrically weaker powers such as the Iraqi insurgency starting in 2003. See Phil Williams, “Strategic Surprise and Lessons for Future Contingencies,” *Prism* 1, no. 2 (2010): 47068; DOD Defense Science Board, “DSB Summer Study Report on Strategic Surprise” (Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, July 2015).

71. Seth Lazar, *Sparing Civilians* (Oxford: Oxford University Press, 2016).

72. Walzer, 152–153. See also 128–133 for his analysis of Sidgwick’s argument for utility and proportionality, which becomes important later.

73. Nicholas G. Evans, “Covid-19: The Ethics of Clinical Research in Quarantine,” *BMJ* 369 (May 29, 2020), <https://doi.org/10.1136/bmj.m2060>.

74. Kelly Hills, “Rejecting Quarantine,” in *Ebola’s Message*, ed. Nicholas Greig Evans, Tara C. Smith, and Maimuna S. Majumder (Cambridge, MA: MIT Press, 2016), 217–231.

75. Hamblin, “The Curve Is Not Flat Enough.”

76. Yascha Mounk, “The Extraordinary Decisions Facing Italian Doctors,” *The Atlantic*, March 11, 2020, <https://www.theatlantic.com/ideas/archive/2020/03/who-gets-hospital-bed/607807/>.

77. Nicholas Greig Evans and Thomas Inglesby, "Biosecurity and Public Health Ethics Issues Raised by Biological Threats," in *The Oxford Handbook of Public Health Ethics*, ed. Anna C. Mastroianni, Jeffrey P. Kahn, and Nancy E. Kass (Oxford: Oxford University Press, 2019), 773–785, <https://doi.org/10.1093/oxfordhb/9780190245191.013.67>.

78. Nicholas Rescher, "The Allocation of Exotic Medical Lifesaving Therapy," *Ethics* 79, no. 3 (1969): 173–186.

79. Albert R Jonsen, "The God Squad and the Origins of Transplantation Ethics and Policy," *Journal of Law, Medicine & Ethics* 35, no. 2 (June 2007): 238–240, <https://doi.org/10.1111/j.1748-720X.2007.00131.x>.

80. Nicholas Greig Evans and Mohamed A. Sekkarie, "Allocating Scarce Medical Resources during Armed Conflict: Ethical Issues," *Disaster and Military Medicine* 3, no. 1 (2017): 5, <https://doi.org/10.1186/s40696-017-0033-z>; Majd Isreb et al., "Effect of Besiegement on Non-Communicable Diseases: Haemodialysis," *The Lancet* 388, no. 10058 (November 2016): 2350.

81. E. M. M. Bernthal, R. J. Russell, and H. J. A. Draper, "A Qualitative Study of the Use of the Four Quadrant Approach to Assist Ethical Decision-Making during Deployment," *Journal of the Royal Army Medical Corps* 160, no. 2 (2014): 196–202, <https://doi.org/10.1136/jramc-2013-000214>; Evans and Sekkarie, "Allocating Scarce Medical Resources," *Disaster and Military Medicine* 3, no. 1 (2017): 5, <https://doi.org/10.1186/s40696-017-0033-z>; Steven P. Cohen et al., "Diagnoses and Factors Associated with Medical Evacuation and Return to Duty for Service Members Participating in Operation Iraqi Freedom or Operation Enduring Freedom: A Prospective Cohort Study," *The Lancet* 375, no. 9711 (January 2010): 301–309, [https://doi.org/10.1016/S0140-6736\(09\)61797-9](https://doi.org/10.1016/S0140-6736(09)61797-9); Christiane Rochon, "Dilemmas in Military Medical Ethics: A Call for Conceptual Clarity," December 2015, <https://papyrus.bib.umontreal.ca/xmlui/handle/1866/12795>.

82. Floyd, *The Morality of Security*.

Chapter 3

1. Shirley Sze et al., "Ethnicity and Clinical Outcomes in COVID-19: A Systematic Review and Meta-Analysis," *EClinicalMedicine* 0, no. 0 (November 12, 2020), <https://doi.org/10.1016/j.eclinm.2020.100630>.

2. Gene Falk et al., "Unemployment Rates During the COVID-19 Pandemic: In Brief" (Washington, DC: Congressional Research Service, 2020); US Bureau of Labor Statistics, "The Employment Situation—November 2020" (Washington, DC: Department of Labor, December 4, 2020).

3. Mark É. Czeisler, "Delay or Avoidance of Medical Care because of COVID-19—Related Concerns—United States, June 2020," *MMWR: Morbidity and Mortality Weekly*

Report 69 (2020), <https://doi.org/10.15585/mmwr.mm6936a4>; Lisa Rosenbaum, "The Untold Toll—The Pandemic's Effects on Patients without Covid-19," *New England Journal of Medicine* 382, no. 24 (June 11, 2020): 2368–2371, <https://doi.org/10.1056/NEJMms2009984>.

4. Jennifer Clapp and William G. Moseley, "This Food Crisis Is Different: COVID-19 and the Fragility of the Neoliberal Food Security Order," *Journal of Peasant Studies* 47, no. 7 (November 9, 2020): 1393–1417, <https://doi.org/10.1080/03066150.2020.1823838>.

5. Bridget Balch, "54 Million People in America Face Food Insecurity during the Pandemic: It Could Have Dire Consequences for Their Health," AAMC, accessed December 15, 2020, <https://www.aamc.org/news-insights/54-million-people-america-face-food-insecurity-during-pandemic-it-could-have-dire-consequences-their>.

6. Brad Boserup, Mark McKenney, and Adel Elkbuli, "Alarming Trends in US Domestic Violence during the COVID-19 Pandemic," *American Journal of Emergency Medicine* 38, no. 12 (December 1, 2020): 2753–2755, <https://doi.org/10.1016/j.ajem.2020.04.077>; Yasmin B. Kofman and Dana Rose Garfin, "Home Is Not Always a Haven: The Domestic Violence Crisis amid the COVID-19 Pandemic," *Psychological Trauma: Theory, Research, Practice, and Policy* 12, no. S1 (20200601): S199, <https://doi.org/10.1037/tra0000866>; Hayley Boxall, Anthony Morgan, and Rick Brown, "The Prevalence of Domestic Violence among Women during the COVID-19 Pandemic," *Australasian Policing* 12, no. 3 (September 2020): 38.

7. UNICEF, *Preventing a Lost Decade: Urgent Action to Reverse the Devastating Impact of COVID-19 on Children and Young People* (Geneva: United Nations, 2021).

8. Melody Schreiber, "'Headed in a Bad Direction': Omicron Variant May Bring Second-Largest US Covid Wave," *The Guardian*, July 8, 2022.

9. Kirsty Needham, "Australian PM Says His Government Was Too Optimistic before Omicron Surge." *Reuters*, February 1, 2022, sec. Asia Pacific, <https://www.reuters.com/markets/funds/australian-pm-outline-a2-billion-research-boost-2022-01-31/>.

10. June-Ho Kim, Julia Ah-Reum An, SeungJu Jackie Oh, Juhwan Oh, and Jong-Koo Lee, "Emerging COVID-19 Success Story: South Korea Learned the Lessons of MERS," *Our World in Data*, 2021, <https://ourworldindata.org/covid-exemplar-south-korea>.

11. Emma Willoughby, "An Ideal Public Health Model? Vietnam's State-Led, Preventative, Low-Cost Response to COVID-19," *Brookings* (blog), June 29, 2021, <https://www.brookings.edu/blog/order-from-chaos/2021/06/29/an-ideal-public-health-model-vietnams-state-led-preventative-low-cost-response-to-covid-19/>.

12. Blake Hereth, Paul Tubig, Ashton Sorrels, Anna Muldoon, Kelly Hills, and Nicholas G. Evans, "Long Covid and Disability: A Brave New World," *BMJ* (in press).

13. George J. Annas, "Bioterrorism and Public Health Law," *JAMA* 288, no. 21 (December 4, 2002): 2685–2685, <https://doi.org/10.1001/jama.288.21.2685-JLT1204>

-2-1; George J. Annas, "Bioterrorism, Public Health, and Civil Liberties," *New England Journal of Medicine* 346, no. 17 (April 25, 2002): 1337–1342, <https://doi.org/10.1056/NEJM200204253461722>; George J. Annas, "Bioterrorism, Public Health, and Human Rights," *Health Affairs* 21, no. 6 (November 1, 2002): 94–97, <https://doi.org/10.1377/hlthaff.21.6.94>; Lawrence O. Gostin, "Public Health Law in an Age of Terrorism: Rethinking Individual Rights and Common Goods," *Health Affairs* 21, no. 6 (November 2002): 79–93, <https://doi.org/10.1377/hlthaff.21.6.79>; Lawrence O. Gostin et al., "The Model State Emergency Health Powers Act: Planning for and Response to Bioterrorism and Naturally Occurring Infectious Diseases," *JAMA* 288, no. 5 (August 7, 2002): 622–628, <https://doi.org/10.1001/jama.288.5.622>; James G. Hodge, "Bioterrorism Law and Policy: Critical Choices in Public Health," *Journal of Law, Medicine & Ethics* 30, no. 2 (2002): 254–261, <https://doi.org/10.1111/j.1748-720X.2002.tb00391.x>; G. J. Annas, "Blinded by Bioterrorism: Public Health and Liberty in the 21st Century," *Health Matrix*, 2003, http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/hmax13§ion=8; George J. Annas, "Puppy Love: Bioterrorism, Civil Rights, and Public Health Dunwoody Commentary," *Florida Law Review* 55, no. 5 (2003): 1171–1190; Lawrence O. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified," *Florida Law Review*, 2003, http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/uflr55§ion=59; Lawrence O. Gostin, "The Model State Emergency Health Powers Act: Public Health and Civil Liberties in a Time of Terrorism," *Health Matrix: Journal of Law-Medicine* 13, no. 1 (Winter 2003): 3; Lawrence O. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Human Rights Justified," *Journal of Law, Medicine & Ethics* 31, no. 4 (December 1, 2003): 524–528, <https://doi.org/10.1111/j.1748-720X.2003.tb00120.x>; Lawrence O. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified Dunwoody Distinguished Lecture in Law," *Florida Law Review* 55, no. 5 (2003): 1105–1170; J. M. Haas, "Addressing Bioterrorism. What Ethical Issues and Questions Surround Potential Responses to Bioterrorist Attacks?," *Healthcare Executive* 18, no. 3 (2003): 76–79; W. E. Parmet, "Quarantine Redux: Bioterrorism, AIDS and the Curtailment of Individual Liberty in the Name of Public Health," *Health Matrix*, 2003, http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/hmax13§ion=10; Victoria Sutton, "A Multidisciplinary Approach to an Ethic of Biodefense and Bioterrorism," *Journal of Law, Medicine & Ethics* 33, no. 2 (June 2005): 310–322, <https://doi.org/10.1111/j.1748-720X.2005.tb00496.x>; Michael Gross, *Bioethics and Armed Conflict: Moral Dilemmas of Medicine and War* (Cambridge, MA: MIT Press, 2006), http://books.google.com/books?id=7ik3AgAAQBAJ&printsec=frontcover&dq=michael+gross+modern+military+bioethics&hl=&cd=3&source=gbs_api; J. Watkins, "Bioterrorism: Cases When Public Health Agencies Should Have Sweeping Powers," *Internet Journal of Allied Health Sciences and Practice*, 2006, <http://nsuworks.nova.edu/ijahsp/vol4/iss2/8/>; George J. Annas, "Bioterrorism, Public Health, and Civil Liberties," *Dx.Doi.Org.Libproxy.Uml.Edu* 346, no. 17 (October 2009): 1337–1342, <https://doi.org/10.1056/NEJM200204253461722>; Christian Enemark, *Biosecurity Dilemmas: Dreaded Diseases*,

Ethical Responses, and the Health of Nations (Washington, DC: Georgetown University Press, 2017).

14. Enemark, *Biosecurity Dilemmas*; Nicholas Greig Evans and Michael J. Selgelid, "Biosecurity and Open-Source Biology: The Promise and Peril of Distributed Synthetic Biological Technologies," *Science and Engineering Ethics* 21, no. 4 (September 2014): 1065–1083, <https://doi.org/10.1007/s11948-014-9591-3>; Nicholas Greig Evans, Marc Lipsitch, and Meira Levinson, "The Ethics of Biosafety Considerations in Gain-of-Function Research Resulting in the Creation of Potential Pandemic Pathogens," *Journal of Medical Ethics* 41, no. 11 (November 2015): 901–908, <https://doi.org/10.1136/medethics-2014-102619>; Nicholas Greig Evans, "Ebola: From Public Health Crisis to National Security Threat," in *Biological Threats in the 21st Century*, ed. Filippa Lentzos (London: Imperial College Press, 2016), 277–292, https://doi.org/10.1142/9781783269488_0017; Nicholas Greig Evans, "Ethical and Philosophical Considerations for Gain-of-Function Policy: The Importance of Alternate Experiments," *Frontiers in Bioengineering and Biotechnology* 6 (February 2018): e1875, <https://doi.org/10.3389/fbioe.2018.00011>; Nicholas Greig Evans and Thomas Inglesby, "Biosecurity and Public Health Ethics Issues Raised by Biological Threats," in *The Oxford Handbook of Public Health Ethics*, ed. Anna C. Mastroianni, Jeffrey P. Kahn, and Nancy E. Kass (Oxford: Oxford University Press, 2019), 773–785, <https://doi.org/10.1093/oxfordhb/9780190245191.013.67>.

15. Evans and Inglesby, "Biosecurity and Public Health Ethics Issues," <https://doi.org/10.1093/oxfordhb/9780190245191.013.67>.

16. In addition to being the received view of public health ethics for many, this is also a nod to the debate between the "orthodox" and "revisionists" in the ethics of armed conflict.

17. James F. Childress et al., "Public Health Ethics: Mapping the Terrain," *Journal of Law, Medicine & Ethics* 30, no. 2 (June 2002): 170–178, <https://doi.org/10.1111/j.1748-720X.2002.tb00384.x>.

18. See, e.g., A. M. Viens, Cécile M. Bensimon, and Ross E. G. Upshur, "Your Liberty or Your Life: Reciprocity in the Use of Restrictive Measures in Contexts of Contagion," *Journal of Bioethical Inquiry* 6, no. 2 (June 2009): 207–217, <https://doi.org/10.1007/s11673-009-9149-2>; Michael J. Selgelid, "A Moderate Pluralist Approach to Public Health Policy and Ethics," *Public Health Ethics* 2, no. 2 (August 2009): 195–205, <https://doi.org/10.1093/phe/php018>; Timothy Allen and Michael J. Selgelid, "Necessity and Least Infringement Conditions in Public Health Ethics," *Medicine, Health Care and Philosophy* 51 (April 2017): 525–535, <https://doi.org/10.1007/s11019-017-9775-0>.

19. Childress et al., "Mapping the Terrain," 170–171.

20. Childress et al., "Mapping the Terrain," 172.

21. "The Model State Emergency Health Powers Act," 6:n9.
22. World Health Organization, "International Health Regulations–3rd Ed." (Geneva, Switzerland: WHO, 2005), 20. Emphasis added.
23. WHO, "International Health Regulations," 29. Emphasis added.
24. World Health Organization, "Global Health Ethics: Key Issues" (Geneva, Switzerland: World Health Organization, 2015), https://apps.who.int/iris/bitstream/handle/10665/164576/9789240694033_eng.pdf?sequence=1.
25. International Commission of Jurists, "Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights," 1985, §10–11. See Allen and Selgelid, "Necessity and Least Infringement Conditions," 528.
26. Alan O. Sykes, "The Least Restrictive Means," *University of Chicago Law Review* 70, no. 1 (2003): 403.
27. Jonathan D. Moreno, *In the Wake of Terror: Medicine and Morality in a Time of Crisis* (Cambridge, MA: MIT Press, 2003), 19.
28. See John Tobin, "The Right to Health and Health Related Human Rights," in *Foundations of Global Health and Human Rights*, ed. Lawrence O. Gostin and Benjamin Mason Meier (Oxford: Oxford University Press, 2020), 73; Flavia Bustreo and Curtis F. J. Doebbler, "The Rights Based Approach to Health," in *Foundations of Global Health and Human Rights*, ed. Lawrence O. Gostin and Benjamin Mason Meier (Oxford: Oxford University Press, 2020), 90–92; George J. Annas, *Worst Case Bioethics: Death, Disaster, and Public Health* (New York: Oxford University Press, 2010), 187.
29. R. Bayer, C. Levine, and S. M. Wolf, "HIV Antibody Screening. An Ethical Framework for Evaluating Proposed Programs," *JAMA* 256, no. 13 (October 3, 1986): 1768–1774, <https://doi.org/10.1001/jama.256.13.1768>.
30. Stefan Elbe, "Should HIV/AIDS Be Securitized? The Ethical Dilemmas of Linking HIV/AIDS and Security," *International Studies Quarterly* 50, no. 1 (March 1, 2006): 119–144, <https://doi.org/10.1111/j.1468-2478.2006.00395.x>; Dan W. Brock and Daniel Wikler, "Ethical Challenges In Long-Term Funding For HIV/AIDS," *Health Affairs* 28, no. 6 (November 1, 2009): 1666–1676, <https://doi.org/10.1377/hlthaff.28.6.1666>; Lauren M. Broyles, Alison M. Colbert, and Judith A. Erlen, "Medication Practice and Feminist Thought: A Theoretical and Ethical Response to Adherence in Hiv/Aids," *Bioethics* 19, no. 4 (2005): 362–378, <https://doi.org/10.1111/j.1467-8519.2005.00449.x>.
31. Hodge and Gostin in Moreno, 19.
32. For those commentaries see Lawrence O. Gostin, "Public Health, Ethics, and Human Rights: A Tribute to the Late Jonathan Mann," *Journal of Law, Medicine & Ethics: A Journal of the American Society of Law, Medicine & Ethics* 29, no. 2 (2001):

121–130, <https://doi.org/10.1111/j.1748-720x.2001.tb00330.x>; J. M. Mann, “Medicine and Public Health, Ethics and Human Rights.” *The Hastings Center Report* 27, no. 3 (June 1997): 6–13.

For a philosophical grounding of human rights, see John Kleinig and Nicholas Greig Evans. “Human Flourishing, Human Dignity, and Human Rights.” *Law and Philosophy* 32, no. 5 (September 2013): 539–564.

33. Steven H. Miles, “Abu Ghraib: Its Legacy for Military Medicine,” *The Lancet* 364, no. 9435 (August 2004): 725–729, [https://doi.org/10.1016/S0140-6736\(04\)16902-X](https://doi.org/10.1016/S0140-6736(04)16902-X); *Oath Betrayed: America’s Torture Doctors* (Berkeley: University of California Press, 2009); Nicholas Greig Evans, D. A. Sisti, and Jonathan D. Moreno, “Ethical Considerations on the Complicity of Psychologists and Scientists in Torture,” *Journal of the Royal Army Medical Corps* 165, no. 4 (February 2019): 248–255, <https://doi.org/10.1136/jramc-2018-001008>.

34. Annas, “Puppy Love.”

35. Annas, “Puppy Love.”

36. Jens David Ohlin, and Larry May, *Necessity in International Law* (New York: Oxford University Press, 2016).

37. Rebecca Haffajee, Wendy E. Parmet, and Michelle M. Mello, “What Is a Public Health ‘Emergency’?,” *New England Journal of Medicine* 371, no. 11 (September 11, 2014): 988, <https://doi.org/10.1056/NEJMp1406167>.

38. Annas, *Worst Case Bioethics*.

39. George J. Annas, “Bioterrorism, Public Health, And Human Rights,” *Health Affairs* 21, no. 6 (November 1, 2002): 96.

40. George J. Annas, “Bioterrorism, Public Health, and Civil Liberties,” *New England Journal of Medicine* 346, no. 17 (April 25, 2002): 1339.

41. Annas, “Bioterrorism, Public Health, and Civil Liberties,” 1340.

42. Gostin, “When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified,” 1108.

43. Gostin, “Public Health Law in An Age of Terrorism,” 88.

44. James F. Childress and Ruth Gaare Bernheim, “Beyond the Liberal and Communitarian Impasse: A Framework and Vision for Public Health,” *Florida Law Review* 55, no. 5 (2003): 1191–1291.

45. Gostin, “When Terrorism Threatens Health: How Far Are Limitations on Human Rights Justified,” 525.

46. Gostin, “When Terrorism Threatens Health: How Far Are Limitations on Human Rights Justified,” 524. Annas locates the change for Gostin in his work with the US

CDC beginning in 2001 after the anthrax attacks. See Annas, “Puppy Love.” But whatever the reason, it is clear that Gostin retains some of his views on rights, albeit in a restrictive form.

47. Hodge Jr. and Gostin, “Protecting the Public’s Health in an Era of Bioterrorism,” 19.

48. Hodge Jr. and Gostin, “Protecting the Public’s Health in an Era of Bioterrorism,” 24.

49. Allen and Selgelid, “Necessity and Least Infringement Conditions,” 532.

50. UN Universal Declaration of Human Rights, art. 29(2). Benjamin Mason Meier, Thérèse Murphy, and Lawrence O. Gostin, “The Birth and Development of Human Rights for Health,” in *Foundations of Global Health and Human Rights*, ed. Benjamin Mason Meier and Lawrence O. Gostin (New York: Oxford University Press), 35.

51. See, e.g., Childress and Bernheim, “Beyond the Liberal and Communitarian Impasse”; Wendy E. Parmet, “Liberalism, Communitarianism, and Public Health: Comments on Lawrence O. Gostin’s Lecture Dunwoody Commentary,” *Florida Law Review* 55, no. 5 (2003): 1221–1240.

52. Philip Pettit provides a consequentialist account of rights that acknowledges that we may think about the costs of respecting rights, but only in a restrictive view wherein we must think not only about the trade-off between rights and utility but include the trade-off wherein we live with the knowledge that our rights are vulnerable to this kind of calculation. See Philip Pettit, “The Consequentialist Can Recognise Rights,” *Philosophical Quarterly* 38, no. 150 (January 1988): 42–55, <https://doi.org/10.2307/2220266>.

53. An example of a framework that achieves something similar can be found in R. E. G. Upshur, “Principles for the Justification of Public Health Intervention,” *Canadian Journal of Public Health—Revue Canadienne de Santé Publique* 93, no. 2 (March 2002): 101–103, <https://doi.org/10.1007/BF03404547>

54. Bustreo and Doebbler, “The Rights Based Approach to Health,” 73.

55. Jim Childress, in more recent work, has categorized his view as broadly “presumptivist.” See James F. Childress, *Public Bioethics: Principles and Problems* (Oxford: Oxford University Press, 2020), 252–272. This view is broadly supported by a variety of scholars; e.g., James Griffin, *On Human Rights* (Oxford: Oxford University Press, 2009); Kleinig and Evans, “Human Flourishing.”

56. Childress et. al, “Mapping the Terrain,” 172–174.

57. Amy L. Fairchild and Ronald Bayer, “Ethics and the Conduct of Public Health Surveillance,” *Science* 303, no. 5658 (January 2004): 631–632, <https://doi.org/10.1126/science.1094038>.

58. George J. Annas, “Control of Tuberculosis—The Law and the Public’s Health,” *New England Journal of Medicine* 328, no. 8 (February 25, 1993): 586; Mark McClellan et al., “A National COVID-19 Surveillance System: Achieving Containment” (Duke

Margolis Center for Health Policy, April 7, 2020), 9; Upshur, "Principles for the Justification of Public Health Intervention," 102; Lawrence O. Gostin and Madison Powers, "What Does Social Justice Require for The Public's Health? Public Health Ethics and Policy Imperatives," *Health Affairs* 25, no. 4 (July 1, 2006): 1059.

59. Childress et al., "Mapping the Terrain."

60. Nancy E. Kass, "An Ethics Framework for Public Health," *American Journal of Public Health* 91, no. 11 (November 2001): 1776–1782.

61. Nancy E. Kass and Andrea Carlson Gielen, "The Ethics of Contact Tracing Programs and Their Implications for Women," *Duke Journal of Gender Law & Policy* 5, no. 1 (1998): 89–102.

62. The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, "Ethical Principles and Guidelines for the Protection of Human Subjects of Research" (Washington, DC: Department of Health, Education, and Welfare, April 1979), https://www.hhs.gov/ohrp/sites/default/files/the-belmont-report-508c_FINAL.pdf.

63. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified," 1107. Note that there is a paper of the same name produced in the *Journal of Law Medicine and Ethics*; this as I understand it is a précis of the *Florida Law Review* article.

64. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified," n.195, 1141–1145.

65. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified," 1146.

66. Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974), ch. 1.

67. Nozick, *Anarchy, State, and Utopia*, 110n.

68. Michael Davis has an excellent essay on why Nozick *should* be committed to the welfare state; but he acknowledges that Nozick himself and most libertarians would reject that position even at the risk of incoherence. See Michael Davis, "Nozick's Argument for the Legitimacy of the Welfare State." *Ethics* 97, no. 3 (April 1987): 576–594, <https://doi.org/10.2307/2381180?ref=search-gateway:1ca25a54392455b1e7b50f57d8b21e77>.

69. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified," 1148.

70. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Personal and Economic Liberties Justified," 1148.

71. Norman Daniels, *Just Health: Meeting Health Needs Fairly* (Cambridge: Cambridge University Press, 2007).

72. Griffin Trotter, *The Ethics of Coercion in Mass Casualty Medicine* (Baltimore, MD: Johns Hopkins University Press, 2007). Trotter, in conversation at the American Society for Bioethics and Humanities 2014 Annual Conference in San Diego, informed me that he was certainly not Nozickian in a strict sense, but rather more sympathetic to the work of Tristram Englehardt Jr. who, however, is a libertarian about rights in much the same way as Nozick. While Englehardt's libertarianism is often seen as repugnant even by other libertarians in bioethics, this is typically in terms of his treatment of vulnerable groups such as the disabled as nonpersons rather than for public health reasons I discuss here. See, e.g., Sigrid Fry-Revere, "A Libertarian Critique of H. Tristram Englehardt, Jr.'s 'The Foundations of Bioethics,'" *Journal of Clinical Ethics* 3, no. 1 (1992): 46–52.
73. Herington, Dawson, and Draper, "Obesity."
74. Lawrence O. Gostin, "Another Voice: Public Health Emergencies: What Counts?," *The Hastings Center Report* 44, no. 6 (2014): 36.
75. Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford: Oxford University Press, 2014).
76. Michael J. Selgelid, "A Moderate Pluralist Approach to Public Health Policy and Ethics," *Public Health Ethics* 2, no. 2 (August 2009): 195–205, <https://doi.org/10.1093/phe/php018>.
77. Marc Lipsitch, Nicholas Greig Evans, and Owen Cotton Barratt, "Underprotection of Unpredictable Statistical Lives Compared to Predictable Ones," *Risk Analysis*, July 2016, <https://doi.org/10.1111/risa.12658>.
78. This is not to say that mistakenly being one death shy of the "limit" for violating rights would be the same as being 1,000 deaths shy. Rather, the serious wrong a rights infringement represents here is such that we need to be particularly confident in the consequences before we act. Here, I'm separating out the criterion for ranking states of affairs from the cognitive process by which we judge which states of affairs to pursue. See, e.g., Pettit, "Consequentialist."
79. Frederick Schauer, "Slippery Slopes," *Harvard Law Review* 99, no. 2 (1985): 366–367.
80. Fritz Allhoff, Nicholas Greig Evans, and Adam Henschke, "Not Just Wars: Expansions and Alternatives to the Just War Tradition," in *Children of Capital: Eugenics in the World of Private Biotechnology*, ed. Fritz Allhoff and Adam Henschke (New York: Routledge, 2013), 1–8.
81. P. Foot, "The Problem of Abortion and the Doctrine of the Double Effect," in *Virtues and Vices and Other Essays in Moral Philosophy* (New York: Oxford University Press, 1993), 19–32.
82. Daniel P. Sulmasy and Edmund D. Pellegrino, "The Rule of Double Effect: Clearing Up the Double Talk," *Archives of Internal Medicine* 159, no. 6 (March 22, 1999): 545–550, <https://doi.org/10.1001/archinte.159.6.545>.

83. Both Walzer and May have excellent prehistories of just war theory. See Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations* (New York: Basic Books, 2015); Larry May, *Contingent Pacifism: Revisiting Just War Theory* (Cambridge: Cambridge University Press, 2015), ch. 1–2.
84. Centers for Disease Control and Prevention, “SARS, CDC Guidance Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine,” February 8, 2019, <https://www.cdc.gov/sars/guidance/d-quarantine/community.html>.
85. CDC, “SARS, CDC Guidance Supplement D.”
86. Gerhard Øverland, “High-Fliers: Who Should Bear the Risk of Humanitarian Intervention?,” in *New Wars and New Soldiers*, ed. Paolo Tripodi and Jessica Wolfendale (Surrey, UK: Ashgate Publishing, 2011), 69–86.
87. I appreciate the feedback of one of the reviewers of an early version of this project for this feedback.
88. See, e.g., L. Alexander, “Deontology at the Threshold,” *San Diego Law Review* 37 (2000): 893–912; Samuel Scheffler, *The Rejection of Consequentialism: A Philosophical Investigation of the Considerations Underlying Rival Moral Conceptions* (Oxford: Oxford University Press, 1994); David Ross, *The Right and the Good*, ed. Philip Stratton-Lake, 2nd ed. (Oxford: Clarendon Press, 2003).
89. Walzer, “Just and Unjust Wars,” 254–256.
90. Though cf. David Rodin, *War and Self-Defense* (Oxford: Clarendon Press, 2005); Helen Frowe, *Defensive Killing* (Oxford: Oxford University Press, 2014).
91. Larry May, “Human Rights, Proportionality, and the Lives of Soldiers,” in *The Ethics of War*, ed. Saba Bazargan and Samuel C. Rickless (Oxford: Oxford University Press, 2017), 57.
92. James F. Childress, “Just-War Theories: The Bases, Interrelations, Priorities, and Functions of Their Criteria,” *Theological Studies* 39, no. 3 (1978): 427–445, <https://doi.org/10.1177/004056397803900302>.
93. National Academies of Sciences, Medicine, and Engineering, *Exploring Opportunities in Correctional Health, Law, and Law Enforcement, Integrating Responses at the Intersection of Opioid Use Disorder and Infectious Disease Epidemics: Proceedings of a Workshop* (Washington, DC: National Academies Press, 2018), 104–105.
94. “Just-War Theories,” 431–432.
95. See, e.g., Griffin, “On Human Rights,” ch. 1.
96. May, “Contingent Pacifism,” ch. 3.

Chapter 4

1. *New York Times*, <https://www.nytimes.com/2020/10/02/us/politics/trump-covid.html>.
2. Pien Huang, "Trump's Missed Opportunities to Personally Stop the Spread of the Coronavirus," NPR.org, October 6, 2020, <https://www.npr.org/sections/latest-updates-trump-covid-19-results/2020/10/06/920846471/trumps-missed-opportunities-to-stop-the-spread-of-coronavirus>.
3. Dena Grayson, MD, PhD, "!!Even If You Believe the WH's Latest Version of the Timeline, Trump Still *knowingly* Exposed Hundreds of People to the Deadly #coronavirus on Thursday. THAT IS A CRIME. Trump Should Be Charged with Reckless Endangerment, a #felony. #GOPSuperSpreaders #TrumpVirus #TrumpCovid," Tweet, @DrDenaGrayson (blog), October 3, 2020, <https://twitter.com/DrDenaGrayson/status/1312456861669421057>.
4. Anne Margaret Daniel, "It Is a Felony Crime to Expose Others to Communicable Disease in Minnesota: <https://t.co/BfzweEZndO> It Ranges from Misdemeanor to Felony in Ohio: <https://t.co/SpoVZl5PEF> @GovTimWalz and @GovMikeDeWine You Have Grounds for Legal Action. Trump Knew He Had Covid, and Came to You," *Twitter* (blog), October 3, 2020, <https://twitter.com/venetianblonde/status/1312432194862944257>.
5. John Cusack, "Call on Him to Resign If You Hold Public Office." @brianjtrautman: Absolutely Criminal. Not a Political Matter. It's a Matter of Law and Accountability. Total Insanity. In a Democracy, Trump Would Be Charged with a Violent Felony. #TrumpCovid: <https://t.co/FS7a56Kog1> Tweet, @johncusack (blog), October 3, 2020, <https://twitter.com/johncusack/status/1312503640968421377>.
6. Barbara Goldberg, "As People Use COVID-19 as Weapon, U.S. States Mull Criminal Crackdowns," *Reuters*, May 14, 2020, <https://www.reuters.com/article/us-health-coronavirus-usa-weaponization-idUSKBN22Q1PK>.
7. M. Bloom, "How Terrorist Groups Will Try to Capitalize on the Coronavirus Crisis: Just Security," <https://www.justsecurity.org/69508/how-terrorist-groups-will-try-to-capitalize-on-the-coronavirus-crisis/>. Published April 3, 2020. Accessed October 27, 2020.
8. Paul LeBlanc, "People Intentionally Spreading Coronavirus Could Be Charged with Terrorism, DOJ Says," CNN, accessed December 27, 2020, <https://www.cnn.com/2020/03/25/politics/coronavirus-terrorism-justice-department/index.html>.
9. US Centers for Disease Control and Prevention, "HIV and STD Criminalization Laws | Law | Policy and Law | HIV/AIDS | CDC," December 21, 2020, <https://www.cdc.gov/hiv/policies/law/states/exposure.html>.

10. Laura Flanders, "If the President Had HIV He Could Be in Prison," Common Dreams, accessed December 27, 2020, <https://www.commondreams.org/views/2020/10/07/if-president-had-hiv-he-could-be-prison>.

11. For a partial rejection of these views, see, e.g., May, *Contingent Pacifism: Revisiting Just War Theory* (Cambridge: Cambridge University Press, 2015).

12. I've already covered much of this in previous chapters, but a partial list of these criticisms includes Kendall Hoyt, *Long Shot: Vaccines for National Defense* (Cambridge, MA: Harvard University Press, 2012), 142–160; Victoria Sutton, "Biodefense: Who's in Charge?," *Health Matrix: Journal of Law-Medicine* 13, no. 1 (Winter 2003): 117; Christian Enemark, "United States Biodefense, International Law, and the Problem of Intent," *Politics and the Life Sciences* 24, no. 1 & 2 (2005): 32–42, [https://doi.org/10.2990/1471-5457\(2005\)24\[32:usbila\]2.0.co;2](https://doi.org/10.2990/1471-5457(2005)24[32:usbila]2.0.co;2); Enemark, *Biosecurity Dilemmas*, 139–156; Stefan Elbe, *Pandemics, Pills, and Politics: Governing Global Health Security* (Baltimore, MD: Johns Hopkins University Press, 2018); Anne Roemer-Mahler and Stefan Elbe, "The Race for Ebola Drugs: Pharmaceuticals, Security and Global Health Governance," *Third World Quarterly* 37, no. 3 (March 3, 2016): 487–506, <https://doi.org/10.1080/01436597.2015.1111136>; Frank Smith and Frank L. Smith III, *American Biodefense: How Dangerous Ideas about Biological Weapons Shape National Security* (Ithaca, NY: Cornell University Press, 2014).

13. Cf. Enemark, *Biosecurity Dilemmas*; Herrington, "The Concept of Security"; Selgelid and Enemark, "Infectious Diseases, Security, and Ethics."

14. Weir, "Inventing Global Health Security, 1994–2005."

15. David Fidler, "Microbialpolitik: Infectious Diseases and International Relations," *American University International Law Review* 14 (January 1, 1998): 1–53.

16. Margaret P. Battin, Leslie P. Francis, Jay A. Jacobson, and Charles B. Smith, *The Patient as Victim and Vector: Ethics and Infectious Disease* (Oxford: Oxford University Press, 2008).

17. See, e.g., Herrington, "The Concept of Security."

18. <https://www.unaids.org/en/resources/fact-sheet>.

19. World Health Organization (WHO), Global Status Report on Road Safety 2018, December 2018, accessed October 28, 2020, https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/.

20. W. S. Hotchkiss, "The American Medical Association and the War on AIDS," *Public Health Reports* 103, no. 3 (1988): 282–288.

21. Many thanks to Lance Wahlert for pointing this out to me in conversation.

22. See, e.g., Debbie Nathan and Michael Snedeker, *Satan's Silence: Ritual Abuse and The Making of a Modern American Witch Hunt* (New York: Basic Books, 1995). For

those interested in a reliable and free history, drawn in part from Nathan and Sneider's book, see, e.g., Robert Evans, "Part One: The Satanic Panic: America's First QAnon," *Behind the Bastards*, accessed December 27, 2020, <https://www.iheart.com/podcast/105-behind-the-bastards-29236323/episode/part-one-the-satanic-panic-americas-73004015/>.

23. Anders Wimo et al., "The Worldwide Costs of Dementia 2015 and Comparisons with 2010," *Alzheimer's & Dementia* 13, no. 1 (January 1, 2017): 1–7, <https://doi.org/10.1016/j.jalz.2016.07.150>.

24. Michael Moehler, "In Defense of a Democratic Productivist Welfare State," *European Journal of Philosophy* 25, no. 2 (June 2017): 416–439, <https://doi.org/10.1111/ejop.12157>.

25. G. Dennis Shanks, and John F. Brundage, "Pathogenic Responses among Young Adults during the 1918 Influenza Pandemic," *Emerging Infectious Diseases* 18 (2012): 201–207, <https://doi.org/10.3201/eid1802.102042>.

26. Akilah Johnson and Nina Martin, "How COVID-19 Hollowed Out a Generation of Young Black Men" *ProPublica*, December 22, 2020, accessed June 8, 2022, <https://www.propublica.org/article/how-covid-19-hollowed-out-a-generation-of-young-black-men>.

27. *Jacobson v. Massachusetts*, 197 U.S. 11 (1904), periodical, <https://www.loc.gov/item/usrep197011/>.

28. Gerhard Øverland, Gerhard. "Conditional Threats." *Journal of Moral Philosophy* 7, no. 3 (2010): 334–345, <https://doi.org/10.1163/174552410X511400>.

29. Walzer, *Just and Unjust Wars*, 30–33.

30. See, e.g., Seth Lazar, "War's End and the Structure of Just War Theory" in *The Ethics of War*, ed. Saba Bazargan-Forward and Samuel C. Rickless (New York: Oxford University Press, 2017).

31. Judith Jarvis Thomson, "Self-Defense," *Philosophy & Public Affairs* 20 (1991): 283–310, 287; Jeff McMahan, "Innocence, Self-Defense and Killing in War." *Journal of Political Philosophy* 2, no. 3 (1994): 193–221, <https://doi.org/10.1111/j.1467-9760.1994.tb00021.x>.

32. Paul B. Larsen, "Asteroid Legal Regime: Time for a Change," *Journal of Space Law* 39, no. 2 (2013): 275–326.

33. Youde also uses this term, albeit in a slightly different sense. See his *Global Health Governance*, 139–145.

34. Nicholas Greig Evans, "Ebola: From Public Health Crisis to National Security Threat."

35. The other significant work here is Selgelid's "Ethics and Infectious Disease."

36. Battin et al., 90.
37. Battin et al., 90.
38. Battin et al., 107.
39. If this sounds overly paranoid, I invite you to ask an epidemiologist what they think about raw sprouts, or oysters. It may be paranoid, but less uncommon than you might think.
40. Battin et al., ch. 1.
41. Battin et al., 158–159.
42. Battin et al., 322.
43. Jeff McMahan, “Who Is Morally Liable to Be Killed in War,” *Analysis* 71, no. 3 (July 1, 2011): 544–559; Jeff McMahan, *The Ethics of Killing: Problems at the Margins of Life* (New York: Oxford University Press, 2002).
44. McMahan, “Innocence, Self-Defense and Killing in War,” 388.
45. McMahan, “Innocence, Self-Defense and Killing in War,” 388.
46. This is a core component to Helen Frowe’s revision to the tradition. See Helen Frowe, *Defensive Killing* (Oxford: Oxford University Press, 2014).
47. Philip Pettit, “The Consequentialist Can Recognise Rights,” *Philosophical Quarterly* 38, no. 150 (January 1988): 42–55, <https://doi.org/10.2307/2220266>; Philip Pettit, “Consequentialism and Respect for Persons,” *Ethics* 100, no. 1 (October 1989): 116–126, <https://doi.org/10.2307/2381149?ref=search-gateway:f6dfa0368177ed4f28320943db714f48>; Philip Pettit, *Republicanism: A Theory of Freedom and Government* (Oxford: Oxford University Press, 1997), <https://www.oxfordscholarship.com/view/10.1093/0198296428.001.0001/acprof-9780198296423>.
48. For more on proportionate means, see, e.g., Helen Frowe, *Defensive Killing* (Oxford: Oxford University Press, 2014).
49. Most theories, I suspect, agree with this. In consequentialist theories this is simply the inverse of Singer’s famous argument about failing to benefit someone when I could do so easily. Peter Singer, “Famine, Affluence, and Morality,” *Philosophy & Public Affairs* 1, no. 3 (1972): 229–243.

For deontologists, this is captured by Lazar’s work in which he described how imposing additional risk of harm can fail by more grievously undervaluing his standing and interests, and more seriously undermining his security by exposing a disposition to harm him across all counterfactual scenarios in which the probability of killing an innocent person is that high or less. Seth Lazar, “Risky Killing,” *Journal of Moral Philosophy* (February 2017): 1–26, <https://doi.org/10.1163/17455243-46810076>.
50. David Rodin, *War and Self-Defense* (Oxford: Clarendon Press, 2005).

51. Michael G. Rossmann and Venigalla B. Rao, "Viruses: Sophisticated Biological Machines," *Advances in Experimental Medicine and Biology* 726 (2012): 1–3, https://doi.org/10.1007/978-1-4614-0980-9_1.
52. May, "Contingent Pacifism."
53. Saba Bazargan-Forward, "Varieties of Contingent Pacifism in War," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, 2012), <https://papers.ssrn.com/abstract=2914686>.
54. May, "Contingent Pacifism."
55. Crystal Franco et al., "The National Disaster Medical System: Past, Present, and Suggestions for the Future," *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 5, no. 4 (December 1, 2007): 319–326.
56. Donald A. Henderson et al., "A Plague on Your City: Observations from TOPOFF," *Clinical Infectious Diseases* 32, no. 3 (February 1, 2001): 436–445, <https://doi.org/10.1086/318513>.
57. See, e.g., the recommendations in Tara O'Toole, Mair Michael, and Thomas V. Inglesby, "Shining Light on 'Dark Winter,'" *Clinical Infectious Diseases* 34, no. 7 (April 1, 2002): 972–983, <https://doi.org/10.1086/339909>.
58. Franco et al., "The National Disaster Medical System."
59. Luciana Borio, "21st Century Pandemic, Prehistoric Clinical Trials," *BioCentury*, June 26, 2020, <https://www.biocentury.com/article/305565/21st-century-pandemic-prehistoric-clinical-trials>.
60. Amy Maxmen and Jeff Tollefson, "Two Decades of Pandemic War Games Failed to Account for Donald Trump," *Nature* 584 (2020): 26–29, <https://doi:10.1038/d41586-020-02277-6>.
61. Talha Burki, "The Origin of SARS-CoV-2," *The Lancet Infectious Diseases* 20, no. 9 (September 1, 2020): 1018–1019, [https://doi.org/10.1016/S1473-3099\(20\)30641-1](https://doi.org/10.1016/S1473-3099(20)30641-1).
62. Kurt J. Vandegrift et al., "Ecology of Avian Influenza Viruses in a Changing World," *Annals of the New York Academy of Sciences* 1195 (May 2010): 113–128, <https://doi.org/10.1111/j.1749-6632.2010.05451.x>.
63. Andrew P. Dobson et al., "Ecology and Economics for Pandemic Prevention," *Science* 369, no. 6502 (July 24, 2020): 379–381, <https://doi.org/10.1126/science.abc3189>; Jesús Olivero et al., "Recent Loss of Closed Forests Is Associated with Ebola Virus Disease Outbreaks," *Scientific Reports* 7, no. 1 (October 30, 2017): 14291, <https://doi.org/10.1038/s41598-017-14727-9>.
64. Sadie J. Ryan et al., "Global Expansion and Redistribution of Aedes-Borne Virus Transmission Risk with Climate Change," *PLOS Neglected Tropical Diseases* 13, no. 3 (March 28, 2019): e0007213, <https://doi.org/10.1371/journal.pntd.0007213>.

65. Kim Yi Dionne and Laura Seay, "8. American Perceptions of Africa during an Ebola Outbreak," in *Ebola's Message* (PubPub, 2020), <https://covid-19.mitpress.mit.edu/pub/ialzqbqw/release/1>.
66. Nicholas G. Evans, Tara Smith, and Maimuna S. Majumder, "Ebola's Message: A Multidisciplinary Call to Action," in *Ebola's Message* (PubPub, 2020), <https://covid-19.mitpress.mit.edu/pub/mq0e3o9g/release/1>; Chernoh Alpha M. Bah, *The Ebola Outbreak in West Africa: Corporate Gangsters, Multinationals, and Rogue Politicians* (Philadelphia, PA: Africanist Press, 2015).
67. Nicholas G. Evans, Kelly Hills, and Adam C. Levine, "How Should the WHO Guide Access and Benefit Sharing during Infectious Disease Outbreaks?," *AMA Journal of Ethics* 22, no. 1 (January 1, 2020): 28–35, <https://doi.org/10.1001/amajethics.2020.28>.
68. United Nations, "Describing COVID-19 Pandemic as Wake-Up Call, Dress Rehearsal for Future Challenges, Secretary-General Opens Annual General Assembly Debate with Vision for Solidarity | Meetings Coverage and Press Releases," accessed December 27, 2020, <https://www.un.org/press/en/2020/ga12268.doc.htm>.
69. "That Mitchell and Webb Look," Season 1 Episode 1, <https://youtu.be/rWvpvIT9pjU>.
70. There is a military ethics analogy here, but for the sake of brevity I won't cash it out. Jonathan Quong, however, has mounted an argument as to why individuals being shot at by a just attacker might be justified in shooting back. I take it that there is a similar argument that even if we are in some way liable to harm against disease, we aren't simply obligated to lie down and accept our fate.
71. Liang Wang et al., "Inference of Person-to-Person Transmission of COVID-19 Reveals Hidden Super-Spreading Events during the Early Outbreak Phase," *Nature Communications* 11, no. 1 (October 6, 2020): 5006, <https://doi.org/10.1038/s41467-020-18836-4>.
72. Wang et al., "Inference of Person-to-Person Transmission of COVID-19."
73. Michael Worobey et al., "1970s and 'Patient 0' HIV-1 Genomes Illuminate Early HIV/AIDS History in North America," *Nature* 539, no. 7627 (November 3, 2016): 98–101, <https://doi.org/10.1038/nature19827>.
74. See Lazar, *Sparing Civilians*, ch. 4.
75. Farah and Farah, "Sick Days in America," 2020, <https://farahandfarah.com/studies/sick-days-in-america/>.
76. J. Michael McGinnis and William H. Foege, "Actual Causes of Death in the United States," *JAMA* 270, no. 18 (November 10, 1993): 2207–2212, <https://doi.org/10.1001/jama.1993.03510180077038>.

77. M. G. Marmot et al., "Employment Grade and Coronary Heart Disease in British Civil Servants," *Journal of Epidemiology and Community Health* 32, no. 4 (December 1978): 244–249.

78. Anne Barnhill and Tyler Doggett, "Food Ethics I: Food Production and Food Justice," *Philosophy Compass* 13, no. 3 (March 2018): e12479. See also Lawrence O. Gostin, "Another Voice: Public Health Emergencies: What Counts?" *The Hastings Center Report* 44 (2014): 36.

79. See Danielle M. Wenner, "Nondomination and the Limits of Relational Autonomy," *IJFAB: International Journal of Feminist Approaches to Bioethics* 13 (2020): 28–48.

80. See David Rodin, "The Lesser Evil Obligation," in *The Ethics of War*, ed. Saba Bazargan and Samuel C. Rickless (Oxford University Press, 2017), 28–45.

Chapter 5

1. Or at least, wars that are not civil wars—though even then, civil wars are often fought against the state.

2. Seth Lazar, "War's Endings and the Structure of Just War Theory," in *The Ethics of War*, ed. Saba Bazargan and Samuel C. Rickless (Oxford University Press, 2017), 227–242.

3. James G. Hodge Jr. and Lawrence O. Gostin, "Protecting the Public's Health in an Era of Bioterrorism: The Model State Emergency Health Powers Act," in *In the Wake of Terror: Medicine and Morality in a Time of Crisis*, ed. Jonathan D. Moreno (Cambridge, MA: MIT Press, 2003), 19.

4. Allyn L. Taylor, Roojin Habibi, Gian Luca Burci, Stephanie Dagon, Mark Eccleston-Turner, Lawrence O. Gostin, Benjamin Mason Meier, et al., "Solidarity in the Wake of COVID-19: Reimagining the International Health Regulations," *The Lancet* 396, no. 10244 (July 2020): 82–83, [https://doi.org/10.1016/S0140-6736\(20\)31417-3](https://doi.org/10.1016/S0140-6736(20)31417-3); Roojin Habibi, Gian Luca Burci, Thana C. de Campos, Danwood Chirwa, Margherita Cinà, Stéphanie Dagon, Mark Eccleston-Turner, et al., "Do Not Violate the International Health Regulations during the COVID-19 Outbreak," *The Lancet* 395, no. 10225 (February 2020): 664–666, [https://doi.org/10.1016/S0140-6736\(20\)30373-1](https://doi.org/10.1016/S0140-6736(20)30373-1); Jeremy R. Youde, *Global Health Governance* (Malden, MA: Polity Press, 2012); David P. Fidler, "Influenza Virus Samples, International Law, and Global Health Diplomacy," *Emerging Infectious Diseases* 14, no. 1 (January 2008): 88–94, <https://doi.org/10.3201/eid1401.070700>.

5. Nicholas Evans, *The Ethics of Neuroscience and National Security* (New York: Routledge, 2022).

6. Norman Daniels, *Just Health: Meeting Health Needs Fairly* (Cambridge: Cambridge University Press 2007).

7. Victoria Sutton, "Biodefense: Who's in Charge?," *Health Matrix: Journal of Law-Medicine* 13, no. 1 (Winter 2003): 117; Stefan Elbe, *Pandemics, Pills, and Politics: Governing Global Health Security* (Baltimore, MD: Johns Hopkins University Press, 2018); Colin McInnes and Kelley Lee, "Health, Security and Foreign Policy," *Review of International Studies* 32, no. 1 (January 2006): 5–23, <https://doi.org/10.1017/S0260210506006905>.
8. Peter Burnham, "Depoliticisation: Economic Crisis and Political Management," in *Tracing the Political: Depoliticisation, Governance and the State*, ed. Matt Flinders (Bristol, UK: Policy Press, 2015), 79–94.
9. Charles F. Howlett, "Studying America's Struggle against War: An Historical Perspective," *The History Teacher* 36, no. 3 (May 2003): 297–330; Joel Lefkowitz, "Movement Outcomes and Movement Decline: The Vietnam War and the Antiwar Movement," *New Political Science* 27, no. 1 (March 1, 2005): 1–22, <https://doi.org/10.1080/07393140500030766>; David S. Meyer, "Protest Cycles and Political Process: American Peace Movements in the Nuclear Age," *Political Research Quarterly* 46, no. 3 (September 1, 1993): 451–479, <https://doi.org/10.1177/106591299304600302>; Roger A. Coate, "Civil Society as a Force for Peace," *International Journal of Peace Studies* 9, no. 2 (2004): 57–86.
10. James I. Charlton, *Nothing About Us Without Us: Disability Oppression and Empowerment* (Berkeley: University of California Press, 2000), 3.
11. David France, *How to Survive a Plague: The Inside Story of How Citizens and Science Tamed AIDS*. (New York: Knopf, 2016), 413–414.
12. Thomas Hobbes, *Leviathan*, chapter XIII.
13. Jonathan Herington, "The Concept of Security, Liberty, Fear and the State," in *Security: Dialogue Across Disciplines*, ed. Philippe Bourbeau (Cambridge: Cambridge University Press, 2015), 22–44.
14. E.g., Selgelid, "A Moderate Pluralist Approach to Public Health Policy and Ethics," *Public Health Ethics* 2, no. 2 (August 2009): 195–205.
15. Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974). For a brief overview of the central argument Nozick sets out, see Peter Vallentyne, "Robert Nozick, Anarchy, State and Utopia," in *The Twentieth Century: Quine and After* (Vol. 5 of *Central Works of Philosophy*), ed. John Shand (Stocksfield, UK: Acumen Publishing, 2006) 86–103.
16. Michael Davis, "Nozick's Argument for the Legitimacy of the Welfare State," *Ethics* 97, no. 3 (April 1987): 576–594.
17. Allen Buchanan has provided a partial reconstruction of a right to a decent minimum of healthcare based on just this. See. A. E. Buchanan, "The Right to a Decent Minimum of Health Care," *Philosophy & Public Affairs* 13, no. 1 (1984): 67.

18. We can broadly distinguish between contractualist theories that provide an account of what I can pursue based on what I can argue to others with their own interest, and contractarian theories that concern what I can pursue in bargaining with other self-interested parties. See, e.g., Michael Millar, "Constraining the Use of Antibiotics: Applying Scanlon's Contractualism," *Journal of Medical Ethics* 38, no. 8 (August 1, 2012): 465–469, <https://doi.org/10.1136/medethics-2011-100256>; Rahul Kumar, "Risking and Wronging," *Philosophy & Public Affairs* 43, no. 1 (2015): 27–51, <https://doi.org/10.1111/papa.12042>; Madison Powers et al., *Social Justice: The Moral Foundations of Public Health and Health Policy* (Oxford: Oxford University Press, 2006); Cynthia M. Jones, "The Moral Problem of Health Disparities," *American Journal of Public Health* 100, Suppl. 1 (April 2010): S47–51, <https://doi.org/10.2105/AJPH.2009.171181>.
19. Rawls, *A Theory of Justice* (Cambridge, MA: Harvard University Press, 1971), §24; Rawls, *Justice as Fairness: A Restatement* (Cambridge, MA: Belknap Press, 2001), 15–18.
20. Rawls, *Justice as Fairness*, §6.
21. Rawls, *Justice as Fairness*, §13.
22. Charles W. Mills, *Black Rights/White Wrongs: The Critique of Racial Liberalism* (Oxford: Oxford University Press, 2017).
23. Susan Moller Okin, *Justice, Gender, and the Family*, 3rd ed. (New York: Basic Books, 1991).
24. Norman Daniels, *Just Health: Meeting Health Needs Fairly* (Cambridge: Cambridge University Press, 2007).
25. Daniels, *Just Health*, 28–31.
26. A. E. Buchanan, "The Right to a Decent Minimum of Health Care," *Philosophy & Public Affairs* 13, no. 1 (1984): 60–61.
27. Rawls, *Justice as Fairness*, 177.
28. For a concrete example of this in the context of the Syrian Civil War, see, e.g., Nicholas Greig Evans and Mohamed A. Sekkarie, "Allocating Scarce Medical Resources during Armed Conflict: Ethical Issues," *Disaster and Military Medicine* 3, no. 1 (2017): 5, <https://doi.org/10.1186/s40696-017-0033-z>. For arguments applying Rawls to public health specifically, see, e.g., Selgelid, "A Moderate Pluralist Approach."
29. Piers Millett and Andrew Snyder-Beattie, "Human Agency and Global Catastrophic Biorisks," *Health Security* 15, no. 4 (August 2017): 335–336, <https://doi.org/10.1089/hs.2017.0044>.
30. Buchanan, "The Right to a Decent Minimum of Health Care," 60.
31. James Griffin, *Well-Being: Its Meaning, Measurement and Moral Importance* (Oxford: Oxford University Press, 1988), 42–45.

32. E.g., Christopher Boorse, “On the Distinction between Disease and Illness,” *Philosophy and Public Affairs* 5, no. 1 (1975): 49–68.

33. See Owen Cotton-Barratt and Nick Bostrom, “Existential Risk and Existential Hope: Definitions,” Technical Report (Oxford: Future of Humanity Institute, 2015).

34. Nick Bostrom, *Superintelligence* (Oxford: Oxford University Press, 2014).

35. John Stuart Mill, *On Liberty* (Mineola, NY: Dover Publications, 2012), 8.

36. Mill, *On Liberty*, 9.

37. See, e.g., Joel Feinberg, *Harm to Others*, reprint ed. (New York, NY: Oxford University Press, 1987). While Feinberg picks up directly from Mill, I think it’s probably a mistake to consider Feinberg a utilitarian—at least, in the same way as say Peter Singer. Indeed, his at times contractarian and dignitarian leanings seem to come to the fore. See, e.g., J. Angelo Corlett, “The Philosophy of Joel Feinberg,” *Journal of Ethics* 10, no. 1/2 (2006): 131–132.

38. Interestingly, though not critically to this work, the US Libertarian Party’s 2016 manifesto includes a nod to the harm principle: “Criminal laws should be limited in their application to violations of the rights of others through force or fraud, or to deliberate actions that place others involuntarily at significant risk of harm” (emphasis added).

39. Michael Moehler, *Minimal Morality: A Multilevel Social Contract Theory* (Oxford: Oxford University Press, 2018), 6–7.

40. Jennifer Flynn, “Theory and Bioethics,” in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta (Palo Alto, CA: Stanford University Press, 2020), <https://plato.stanford.edu/archives/win2020/entries/theory-bioethics/>.

41. Tom L. Beauchamp and James F. Childress, *Principles of Biomedical Ethics* (New York: Oxford University Press, 2012), ch. 2.

42. Jonathan D. Moreno, “Bioethics Is a Naturalism,” in *Pramgatic Bioethics*, ed. Glenn McGee (Cambridge, MA: MIT Press, 1999), 8. See also Jonathan D. Moreno, *Deciding Together: Bioethics and Moral Consensus* (New York: Oxford University Press, 1995).

It is worth noting—as part of the history of ideas aspect of this project—that the pragmatist tradition in bioethics has been largely silent since the departure of one of its greatest proponents, Glenn McGee. McGee’s departure is controversial and there remain questions about his actions, and his relation to the larger norms of the field. See Brendan Borrell, “An Unethical Ethicist?,” *Scientific American*, 2006, <https://www.scientificamerican.com/article/glenn-mcgee/>; Ivan Oransky, “Updated: Slate Retracts Story on Glenn McGee and Celltex Following Lawsuit Threats, as McGee Resigns from Company,” *Retraction Watch* (blog), March 1, 2012, <https://retractionwatch.com/2012/03/01/slate-retracts-story-on-glenn-mcgee-and-celltex-as-mcgee-resigns-from-company/>; Alice Domurat Dreger, *Galileo’s Middle Finger: Heretics, Activists, and the Search for Justice in Science* (New York: Penguin Press, 2015).

43. Selgelid, "A Moderate Pluralist Approach."
44. Moehler, *Minimal Morality*.
45. Michael Moehler, "The Rawls–Harsanyi Dispute: A Moral Point of View," *Pacific Philosophical Quarterly* 99, no. 1 (2018): 82–99, <https://doi.org/10.1111/papq.12140>.
46. Moehler, *Minimal Morality*, 114.
47. US Centers for Disease Control and Prevention, "Burden of Influenza," April 17, 2020, <https://www.cdc.gov/flu/about/burden/index.html>.
48. Luciana Borio, "21st Century Pandemic, Prehistoric Clinical Trials," *BioCentury*, June 26, 2020, <https://www.biocentury.com/article/305565/21st-century-pandemic-prehistoric-clinical-trials?editionId=ckbx19vog0y5v01678lszox0w>.
49. Kai Kupferschmidt, "One U.K. Trial Is Transforming COVID-19 Treatment: Why Haven't Others Delivered More Results?" *Science*, July 2, 2020, <https://doi.org/10.1126/science.abd6417>.
50. Michael Moehler, "In Defense of a Democratic Productivist Welfare State," *European Journal of Philosophy* 25, no. 2 (June 2017): 416–439, <https://doi.org/10.1111/ejop.12157>.
51. Wayan C. W. S. Putri et al., "Economic Burden of Seasonal Influenza in the United States," *Vaccine* 36, no. 27 (June 22, 2018): 3960–3966, <https://doi.org/10.1016/j.vaccine.2018.05.057>.
52. All data are drawn from public website data at cdc.gov.
53. R. Crawford, "Healthism and the Medicalization of Everyday Life," *International Journal of Health Services: Planning, Administration, Evaluation* 10, no. 3 (1980): 365–388, <https://doi.org/10.2190/3H2H-3XJN-3KAY-G9NY>.
54. See Hereth et al., "Long COVID: Brave New World."
55. Zackary D. Berger et al., "Covid-19: Control Measures Must Be Equitable and Inclusive," *BMJ*, March 20, 2020, m1141.
56. Emily Stewart, "Anti-Maskers Explain Themselves," *Vox*, August 7, 2020, <https://www.vox.com/the-goods/2020/8/7/21357400/anti-mask-protest-rallies-donald-trump-covid-19>.
57. Moehler, *Minimal Morality*, 99–100.

Chapter 6

1. David N. Durrheim, Laurence O. Gostin, and Keymanthri Moodley, "When Does a Major Outbreak Become a Public Health Emergency of International Concern?,"

The Lancet Infectious Diseases 20, no. 8 (August 1, 2020): 887–889, [https://doi.org/10.1016/S1473-3099\(20\)30401-1](https://doi.org/10.1016/S1473-3099(20)30401-1).

2. Michael Levenson, “Scale of China’s Wuhan Shutdown Is Believed to Be Without Precedent,” *New York Times*, January 23, 2020, sec. World, <https://www.nytimes.com/2020/01/22/world/asia/coronavirus-quarantines-history.html>.

3. Roojin Habibi et al., “Do Not Violate the International Health Regulations during the COVID-19 Outbreak,” *The Lancet* 395, no. 10225 (February 29, 2020): 664–666, [https://doi.org/10.1016/S0140-6736\(20\)30373-1](https://doi.org/10.1016/S0140-6736(20)30373-1).

4. *International Health Regulations*, Annex 2.

5. Mark Eccleston-Turner and Adam Kamradt-Scott, “Transparency in IHR Emergency Committee Decision Making: The Case for Reform,” *BMJ Global Health* 4, no. 2 (April 1, 2019): e001618, <https://doi.org/10.1136/bmjgh-2019-001618>.

6. Stafford Act, 1.

7. PHSA, §319.

8. MSEHPA, §104 (m).

9. Indiana Code, §10-14-3. See Rebecca Haffajee, Wendy E. Parmet, and Michelle M. Mello, “What Is a Public Health ‘Emergency’?,” *New England Journal of Medicine* 371, no. 11 (September 11, 2014): 986–988, <https://doi.org/10.1056/NEJMp1406167>.

10. Adam Gaber, “Liberia Adopts Yale Capstone Recommendations for Medical Education Reform,” *YaleNews*, April 30, 2018, <https://news.yale.edu/2018/04/30/liberia-adopts-yale-capstone-recommendations-medical-education-reform>.

11. David K. Evans, Markus Goldstein, and Anna Popova, “Health-Care Worker Mortality and the Legacy of the Ebola Epidemic,” *The Lancet Global Health* 3, no. 8 (August 2015): e439–440, [https://doi.org/10.1016/S2214-109X\(15\)00065-0](https://doi.org/10.1016/S2214-109X(15)00065-0).

12. Kelly Hills, “Rejecting Quarantine,” in *Ebola’s Message*, ed. Nicholas Greig Evans, Tara C. Smith, and Maimuna S. Majumder (Cambridge, MA: MIT Press, 2016), 217–231.

13. Nicholas G. Evans, “Covid-19: The Ethics of Clinical Research in Quarantine,” *BMJ* 369 (May 29, 2020), <https://doi.org/10.1136/bmj.m2060>.

14. See G. M. Reichert, “Jus ad bellum,” in *War*, ed. Larry May (Cambridge: Cambridge University Press, 2008), 13–14.

15. NBC Connecticut, “Governor Declares Cautionary Public Health Emergency Over Ebola,” *NBC Connecticut*, October 7, 2014, <https://www.nbcconnecticut.com/news/local/governor-declares-state-of-emergency-over-ebola-as-a-precaution/59231/>.

16. Sheri Fink, “Connecticut Faces Lawsuit Over Ebola Quarantine Policies (Published 2016),” *New York Times*, February 7, 2016, sec. New York, <https://www.nytimes.com>

/2016/02/08/nyregion/connecticut-faces-lawsuit-over-ebola-quarantine-policies.html.

17. Greg Allen, "From Alaska to Florida, States Respond to Opioid Crisis with Emergency Declarations," NPR.org, accessed December 30, 2020, <https://www.npr.org/sections/health-shots/2017/08/11/542836709/from-alaska-to-florida-states-respond-to-opioid-crisis-with-emergency-declaratio>.

18. Rebecca Haffajee, Wendy E. Parmet, and Michelle M. Mello, "What Is a Public Health 'Emergency'?", *New England Journal of Medicine* 371, no. 11 (September 11, 2014): 986–988, <https://doi.org/10.1056/NEJMp1406167>.

19. Thomas Hurka, "Proportionality and Necessity," in *War*, ed. Larry May (Cambridge: Cambridge University Press, 2008), 127–144.

20. Ruth Chang, *Incommensurability, Incomparability, and Practical Reason* (Cambridge, MA: Harvard University Press, 1997).

21. University of Auckland et al., "COVID-19 among Indigenous Communities: Case Studies on Indigenous Nursing Responses in Australia, Canada, New Zealand, and the United States," *Nursing Praxis Aotearoa New Zealand*, December 2021, 71–83, <https://doi.org/10.36951/27034542.2021.037>; Nikki Moodie et al., "Roadmap to Recovery: Reporting on a Research Taskforce Supporting Indigenous Responses to COVID-19 in Australia," *Australian Journal of Social Issues* 56, no. 1 (2021): 4–16, <https://doi.org/10.1002/ajs4.133>; Gwendolyn Saul, Kerry F. Thompson, and Lisa Hardy, "Tribes Mount Organized Responses to COVID-19, in Contrast to State and Federal Governments," *The Conversation*, December 2, 2020, <http://theconversation.com/tribes-mount-organized-responses-to-covid-19-in-contrast-to-state-and-federal-governments-150627>.

22. Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations*, 4th ed. (New York: Basic Books, 2006), preface, esp. xiv–xv; cf. C. A. J. Coady, *Morality and Political Violence* (Cambridge: Cambridge University Press, 2007).

23. Shannon Brandt Ford, "Jus Ad Vim and the Just Use of Lethal Force Short of War," in *Routledge Handbook of Ethics and War: Just War Theory in the 21st Century*, ed. Fritz Allhoff, Nicholas Evans, and Adam Henschke (London: Routledge, 2013), 63–75; Megan Braun and Daniel R. Brunstetter, "Rethinking the Criterion for Assessing CIA-Targeted Killings: Drones, Proportionality and Jus Ad Vim," *Journal of Military Ethics* 12, no. 4 (December 2013): 304–324, <https://doi.org/10.1080/15027570.2013.869390>.

24. Kelsey D. Atherton, "Trump Inherited the Drone War but Ditched Accountability," *Foreign Policy* (blog), May 22, 2020, <https://foreignpolicy.com/2020/05/22/obama-drones-trump-killings-count/>.

25. Daniel B. Kelly, "The Public Use Requirement in Eminent Domain Law: A Rationale Based on Secret Purchases and Private Influence," *Cornell Law Journal* 92 (2006): 56.

26. Julian Savulescu, "Good Reasons to Vaccinate: Mandatory or Payment for Risk?," *Journal of Medical Ethics*, November 9, 2020, <https://doi.org/10.1136/medethics-2020-106821>; cf. Lawrence O. Gostin, Daniel A. Salmon, and Heidi J. Larson, "Mandating COVID-19 Vaccines," *JAMA*, December 29, 2020, <https://doi.org/10.1001/jama.2020.26553>.
27. Katie Attwell et al., "Financial Interventions to Increase Vaccine Coverage," *Pediatrics* 146, no. 6 (December 1, 2020), <https://doi.org/10.1542/peds.2020-0724>; though cf. Joshua T. B. Williams and Simon J. Hambidge, "Effectiveness and Equity of Australian Vaccine Mandates," *Pediatrics* 146, no. 6 (December 1, 2020), <https://doi.org/10.1542/peds.2020-024703>.
28. Efthimios Parasidis, "Public Health Law and Institutional Vaccine Skepticism," *Journal of Health Politics, Policy and Law* 41, no. 6 (December 1, 2016): 1137–1149, <https://doi.org/10.1215/03616878-3666204>.
29. For issues related to how we structure our priorities around issues of moral will, see, e.g., Regina Brown and Nicholas Greig Evans, "The Social Value of Candidate HIV Cures: Actualism versus Possibilism," *Journal of Medical Ethics*, July 2016, medethics-2015–103125, <https://doi.org/10.1136/medethics-2015-103125>.
30. Marcia Baron, "Self-Defense: The Imminence Requirement," in *Oxford Studies in Philosophy of Law* (Oxford: Oxford University Press, 2011); Daniel Schwartz, "Necessity Historically Considered," *Journal of Moral Philosophy* 17, no. 6 (April 13, 2020): 591–605, <https://doi.org/10.1163/17455243-20203185>.

Chapter 7

1. Donald A. Henderson et al., "A Plague on Your City: Observations from TOPOFF," *Clinical Infectious Diseases* 32, no. 3 (February 1, 2001): 436–445, <https://doi.org/10.1086/318513>; John D. Blum, "Too Strange to Be Just Fiction: Legal Lessons from a Bioterrorist Simulation, the Case of TOPOFF 2," *Louisiana Law Review* 2, no. 64 (2000): 905–917.
2. Kelly Hills, "Rejecting Quarantine," in *Ebola's Message*, ed. Nicholas Greig Evans, Tara C. Smith, and Maimuna S. Majumder (Cambridge, MA: MIT Press, 2016), 217–231.
3. The COVID-LOCAL Analysis and Mapping of Policies lists no state-level distancing measure as "lockdown" during 2020. See <https://covidamp.org/policymaps>.
4. Phil Mercer, "Covid: Melbourne's Hard-Won Success after a Marathon Lockdown," *BBC News*, October 26, 2020, sec. Australia, <https://www.bbc.com/news/world-australia-54654646>.
5. Kun Liu et al., "Population Movement, City Closure in Wuhan, and Geographical Expansion of the COVID-19 Infection in China in January 2020," *Clinical Infectious Diseases* 71, no. 16 (November 19, 2020): 2045–2051, <https://doi.org/10.1093/cid>

/ciaa422; Zheming Yuan et al., “Modelling the Effects of Wuhan’s Lockdown during COVID-19, China,” *Bulletin of the World Health Organization* 98 (2020): 484–494, <https://doi.org/10.2471/BLT.20.254045>.

6. Kai Kupferschmidt and John Cohen, “China’s Aggressive Measures Have Slowed the Coronavirus: They May Not Work in Other Countries,” *Science Insider*, March 2, 2020, <https://www.science.org/content/article/china-s-aggressive-measures-have-slowed-coronavirus-they-may-not-work-other-countries>.

7. Potter, “We Are at War with COVID-19: We Need to Fight It Like a War,” *Globe and Mail*, April 5, 2020. <https://www.theglobeandmail.com/opinion/article-we-are-at-war-with-covid-19-we-need-to-fight-it-like-a-war/>.

8. See, e.g., Seth Lazar, *Sparing Civilians* (Oxford: Oxford University Press, 2016).

9. Seth Lazar, “Morality & Law of War,” in *Companion to Philosophy of Law*, ed. Andrei Marmor (New York: Routledge), 364–379.

10. See, e.g., Gerhard Øverland, “High-Fliers: Who Should bear the Risk of Humanitarian Intervention?” in *New Wars and New Soldiers: Military Ethics in the Contemporary World*, ed. Paolo Tripodi and Jessica Wolfendale (London: Ashgate, 2012).

11. Seth Lazar, *Sparing Civilians* (Oxford: Oxford University Press, 2016).

12. May, *Contingent Pacifism: Revisiting Just War Theory* (Cambridge: Cambridge University Press, 2015), 160.

13. May, *Contingent Pacifism*, 161–163.

14. International Court of Justice, “Legality of the Threat of Nuclear Weapons,” § 24, 17.

15. Famously, Jeff McMahan, “Innocence, Self-Defense and Killing in War,” *Journal of Political Philosophy* 2, no. 3 (September 1994): 193–221; J. McMahan, *The Ethics of Killing: Problems at the Margins of Life* (Oxford: Oxford University Press, 2002); J. McMahan, “Who Is Morally Liable to Be Killed in War,” *Analysis* 71, no. 3 (July 2011): 544–559, <https://doi.org/10.1093/analys/anr072>.

16. Sara Jensen Carr. “The Topography of Wellness: Mechanisms, Metrics, and Models of Health in the Urban Landscape” (PhD dissertation, University of California–Berkeley, 2014), <https://escholarship.org/uc/item/8cg2t860>.

17. Margaret Campbell, “What Tuberculosis Did for Modernism: The Influence of a Curative Environment on Modernist Design and Architecture,” *Medical History* 49, no. 4 (October 1, 2005): 463–488.

18. CDC, “Quarantine & Isolation,” Centers for Disease Control and Prevention, January 27, 2022, <https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html>. For a description of the risks and conflation of the two, see Hills, “Rejecting Quarantine.”

19. Zackary D. Berger, Nicholas G. Evans, Alexandra L. Phelan, and Ross D. Silverman, "Covid-19: Control Measures Must Be Equitable and Inclusive," *BMJ* 368 (March 20, 2020), <https://doi.org/10.1136/bmj.m1141>.

20. WHO Newsroom, "Ciclovías Temporales, Bogotá, Colombia," accessed January 26, 2021, <https://www.who.int/news-room/feature-stories/detail/ciclovías-temporales-bogotá-colombia>.

21. See, e.g., COVID-19 LOCAL for an overview and detail of measures. The comparative effectiveness of these is beyond the scope, unfortunately, of this work.

22. Matthew K. Wynia, "Ethics and Public Health Emergencies: Restrictions on Liberty," *American Journal of Bioethics: AJOB* 7, no. 2 (February 2007): 1–5, <https://doi.org/10.1080/15265160701577603>; Hills, "Rejecting Quarantine"; Lawrence O. Gostin et al., "The Model State Emergency Health Powers Act: Planning for and Response to Bioterrorism and Naturally Occurring Infectious Diseases," *JAMA* 288, no. 5 (August 7, 2002): 622–628, <https://doi.org/10.1001/jama.288.5.622>; Lawrence O. Gostin, "When Terrorism Threatens Health: How Far Are Limitations on Human Rights Justified," *Journal of Law, Medicine & Ethics* 31, no. 4 (December 1, 2003): 524–528, <https://doi.org/10.1111/j.1748-720X.2003.tb00120.x>; Lindsay F. Wiley, "Democratizing the Law of Social Distancing," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, June 24, 2020), <https://doi.org/10.2139/ssrn.3634997>; W. E. Parmet, "Quarantine Redux: Bioterrorism, AIDS and the Curtailment of Individual Liberty in the Name of Public Health," *Health Matrix*, 2003, http://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/hmax13§ion=10; Griffin Trotter, *The Ethics of Coercion in Mass Casualty Medicine* (Baltimore, MD: Johns Hopkins University Press, 2007); Nicholas G. Evans, "Covid-19: The Ethics of Clinical Research in Quarantine," *BMJ* 369 (May 29, 2020), <https://doi.org/10.1136/bmj.m2060>.

23. N. Ferguson, D. Laydon, G. Nedjati Gilani, N. Imai, K. Ainslie, M. Baguelin, S. Bhatia, et al., "Report 9: Impact of Non-Pharmaceutical Interventions (NPIs) to Reduce COVID19 Mortality and Healthcare Demand" (London: Imperial College, March 16, 2020), <https://doi.org/10.25561/77482>; Matteo Chinazzi, Jessica T. Davis, Marco Ajelli, Corrado Gioannini, Maria Litvinova, Stefano Merler, Ana Pastore y Piontti, et al., "The Effect of Travel Restrictions on the Spread of the 2019 Novel Coronavirus (COVID-19) Outbreak," *Science* 368, no. 6489 (April 24, 2020): 395–400, <https://doi.org/10.1126/science.aba9757>.

24. Cameron McWhirter and Valier Bauerlein, "Georgia Reopens but Many Businesses Stay Closed, People Stay Home," *Wall Street Journal*, April 24, 2020, sec. US, <https://www.wsj.com/articles/georgia-reopens-but-many-businesses-stay-closed-people-stay-home-11587754211>.

25. James F. Childress and Ruth Gaare Bernheim, "Beyond the Liberal and Communitarian Impasse: A Framework and Vision for Public Health," *Florida Law Review* 55, no. 5 (2003): 1191–1291.

26. See, e.g., Wynia, "Ethics and Public Health Emergencies."
27. Philip Pettit, "Consequentialism and Respect for Persons," *Ethics* 100, no. 1 (October 1989): 116–126, <https://doi.org/10.2307/2381149?ref=search-gateway:f6dfa0368177ed4f28320943db714f48>; Philip Pettit, "The Consequentialist Can Recognise Rights," *The Philosophical Quarterly* 38, no. 150 (January 1988): 42–55, <https://doi.org/10.2307/2220266>; Phillip Pettit, *Republicanism: A Theory of Freedom and Government*, (Oxford: Oxford University Press, 1997).
28. Frank Shechtman, "Routine Medical Care May Break Down, and Covid-19 Is Behind It," *New York Times*, March 23, 2020, sec. Opinion, <https://www.nytimes.com/2020/03/23/opinion/doctors-coronavirus-patients.html>.
29. Robert E. Goodin, *Protecting the Vulnerable* (Chicago: University of Chicago Press, 1984).
30. Caroline Bettinger-Lopez, and Alexandra Bro, "A Double Pandemic: Domestic Violence in the Age of COVID-19," Council on Foreign Relations, May 13, 2020, <https://www.cfr.org/in-brief/double-pandemic-domestic-violence-age-covid-19>.
31. Michael Grabell and Bernice Yeung, "Meatpacking Companies Dismissed Years of Warnings but Now Say Nobody Could Have Prepared for COVID-19," ProPublica, accessed January 26, 2021, <https://www.propublica.org/article/meatpacking-companies-dismissed-years-of-warnings-but-now-say-nobody-could-have-prepared-for-covid-19?token=8x14roDzBQ5p8Y0hCArCtdwGWCNrGooB>; Michelle A. Waltenburg, "Update: COVID-19 Among Workers in Meat and Poultry Processing Facilities—United States, April–May 2020," *MMWR. Morbidity and Mortality Weekly Report* 69 (2020), <https://doi.org/10.15585/mmwr.mm6927e2>.
32. Linda Moy, Hildegard K. Toth, Mary S. Newell, Donna Plecha, Jessica W. T. Leung, and Jennifer A. Harvey, "Response to COVID-19 in Breast Imaging," *Journal of Breast Imaging*, April 1, 2020, <https://doi.org/10.1093/jbi/wbaa025>.
33. J. Michael McGinnis and William H. Foege, "Actual Causes of Death in the United States," *JAMA* 270, no. 18 (November 10, 1993): 2207–2212, <https://doi.org/10.1001/jama.1993.03510180077038>.
34. See, e.g., Arline T. Geronimus et al., "'Weathering' and Age Patterns of Allostatic Load Scores among Blacks and Whites in the United States," *American Journal of Public Health* 96, no. 5 (May 2006): 826–833, <https://doi.org/10.2105/AJPH.2004.060749>.
35. Berger et al., "Covid-19."
36. Timothy Allen and Michael J. Selgelid, "Necessity and Least Infringement Conditions in Public Health Ethics," *Medicine, Health Care and Philosophy* 20 (April 2017): 525–535, <https://doi.org/10.1007/s11019-017-9775-0>.
37. Seth Lazar, *Sparing Civilians*, 81–83.

38. *Sparing Civilians*, 84–85.

39. Nicholas Greig Evans and Thomas Inglesby, “Biosecurity and Public Health Ethics Issues Raised by Biological Threats,” in *The Oxford Handbook of Public Health Ethics*, ed. Anna C. Mastroianni, Jeffrey P. Kahn, and Nancy E. Kass (Oxford: Oxford University Press, 2019), 773–785.

40. Myah Ward, “We’re Not Ready for the Next Pandemic,” POLITICO, accessed February 4, 2022, <https://politi.co/2Y1l1B7>; Bryan Walsh, “The World Is Not Ready for the Next Pandemic,” *Time*, May 4, 2017, <https://time.com/magazine/us/4766607/may-15th-2017-vol-189-no-18-u-s/>; Andrew C. Heinrich and Saad B. Omer, “The World Isn’t Ready for the Next Outbreak,” September 23, 2021, <https://www.foreignaffairs.com/articles/world/2021-09-06/world-isnt-ready-next-outbreak>; Maggie Fox, “The World Is Unprepared for the next Pandemic, Study Finds,” CNN, accessed February 4, 2022, <https://www.cnn.com/2021/12/08/health/world-unprepared-pandemic-report/index.html>; Andy Plump, “Luck Is Not a Strategy: The World Needs to Start Preparing Now for the Next Pandemic,” *STAT* (blog), May 18, 2021, <https://www.statnews.com/2021/05/18/luck-is-not-a-strategy-the-world-needs-to-start-preparing-now-for-the-next-pandemic/>.

41. Sun Tzu, *The Art of War* (Courier Corporation, 2012), §1.

42. White House, “Opening Up America Again,” The White House, 2020, <https://www.whitehouse.gov/openingamerica/>; Scott Gottlieb, Caitlin Rivers, Mark B. McClellan, Lauren Silvis, and Crystal Watson, “National Coronavirus Response” (Washington DC: American Enterprise Institute, March 28, 2020); Zeke Emanuel, T. Neera, Topher Spiro, Adam Conner, Kevin DeGood, Erin Simpson, Nicole Rapfogel, and Maura Calsyn, “A National and State Plan to End the Coronavirus Crisis,” Center for American Progress, April 3, 2020, <https://www.americanprogress.org/issues/healthcare/news/2020/04/03/482613/national-state-plan-end-coronavirus-crisis/>; Vital Strategies, “Box It In: Rapid Public Health Action Can Box in COVID-19 and Reopen Society,” 2020, <https://preventepidemics.org/wp-content/uploads/2020/04/BoxItInBriefingDoc.pdf>; Danielle Allen, Sharon Block, Joshua Cohen, Peter Eckersley, M. Eifler, Lawrence Gostin, Darshan Goux, et al., “Roadmap to Pandemic Resilience,” 2020, <https://ethics.harvard.edu/covid-roadmap>.

43. Centers for Disease Control and Prevention, “SARS, CDC Guidance Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine,” February 8, 2019, <https://www.cdc.gov/sars/guidance/d-quarantine/community.html>.

44. Vital Strategies, “Box It In.”

45. Allen et al., “Roadmap to Pandemic Resilience.”

46. Ferguson et al., “Report 9.”

47. Evans and Inglesby, “Biosecurity and Public Health Ethics Issues.”

48. Katherine A. Auger et al., "Association Between Statewide School Closure and COVID-19 Incidence and Mortality in the US," *JAMA*, July 29, 2020, <https://doi.org/10.1001/jama.2020.14348>; Jan M. Brauner et al., "Inferring the Effectiveness of Government Interventions against COVID-19," *Science*, December 15, 2020, <https://doi.org/10.1126/science.abd9338>; An Pan et al., "Association of Public Health Interventions with the Epidemiology of the COVID-19 Outbreak in Wuhan, China," *JAMA*, April 10, 2020, <https://doi.org/10.1001/jama.2020.6130>; Bryan Wilder et al., "Modeling Between-Population Variation in COVID-19 Dynamics in Hubei, Lombardy, and New York City," *Proceedings of the National Academy of Sciences*, September 24, 2020, <https://doi.org/10.1073/pnas.2010651117>.

49. Allen and Selgelid, "Necessity and Least Infringement Conditions."

50. May, *Contingent Pacifism*.

51. Heejin Kim, Sohee Kim, and Claire Che, "Virus Testing Blitz Appears to Keep Korea Death Rate Low," *Bloomberg.Com*, March 4, 2020, <https://www.bloomberg.com/news/articles/2020-03-04/south-korea-tests-hundreds-of-thousands-to-fight-virus-outbreak>; Solomon Hsiang et al., "The Effect of Large-Scale Anti-Contagion Policies on the COVID-19 Pandemic," *Nature*, June 8, 2020, 1–9, <https://doi.org/10.1038/s41586-020-2404-8>; June-Ho Kim et al., "Emerging COVID-19 Success Story: South Korea Learned the Lessons of MERS," *Our World in Data*, 2021, <https://ourworldindata.org/covid-exemplar-south-korea>; Derek Thompson, "What's Behind South Korea's COVID-19 Exceptionalism?," *The Atlantic*, May 6, 2020, <https://www.theatlantic.com/ideas/archive/2020/05/whats-south-koreas-secret/611215/>; Wudan Yan and Anne Babe, "What Should the U.S. Learn from South Korea's Covid-19 Success?," *Undark Magazine*, October 5, 2020, <https://undark.org/2020/10/05/south-korea-covid-19-success/>.

52. See, e.g., Evans, "Covid-19."

Chapter 8

1. David von Drehle, "The Ebola Fighters," *Time*, December 10, 2014, <https://time.com/time-person-of-the-year-ebola-fighters/>.

2. David K. Evans, Markus Goldstein, and Anna Popova, "Health-Care Worker Mortality and the Legacy of the Ebola Epidemic," *The Lancet Global Health* 3, no. 8 (August 2015): e439–440, [https://doi.org/10.1016/S2214-109X\(15\)00065-0](https://doi.org/10.1016/S2214-109X(15)00065-0).

3. Julia Lynch et al., "Ignoring Nurses: Media Coverage during the COVID-19 Pandemic," *Annals of the American Thoracic Society*, February 12, 2021, <https://doi.org/10.1513/AnnalsATS.202010-1293PS>.

4. Nicholas Greig Evans, "Balancing the Duty to Treat Patients with Ebola Virus Disease with the Risks to Dialysis Personnel," *Clinical Journal of the American Society*

of *Nephrology* 10, no. 12 (August 2015): CJN.03730415–2267, <https://doi.org/10.2215/CJN.03730415>.

5. National Conference of State Legislatures, “COVID-19: Essential Workers in the States,” January 11, 2021, <https://www.ncsl.org/research/labor-and-employment/covid-19-essential-workers-in-the-states.aspx>.

6. Aaron Mehta, “Pentagon Declares Defense Contractors ‘Critical Infrastructure,’ Must Continue Work,” *Defense News*, March 20, 2020, <https://www.defensenews.com/pentagon/2020/03/20/pentagon-declares-defense-contractors-critical-infrastructure-must-continue-work/>.

7. Nick Brown and Christina Cook, “In Fight for Masks, Hospital Janitors Sometimes Come Last,” *Reuters*, April 6, 2020, <https://www.reuters.com/article/us-health-coronavirus-housekeepers/in-fight-for-masks-hospital-janitors-sometimes-come-last-idUSKBN21O2JF>.

8. Norman Daniels, “Duty to Treat or Right to Refuse?,” *The Hastings Center Report* 21, no. 2 (1991): 36, <https://doi.org/10.2307/3562338>; Torben K. Becker et al., “Ethical Challenges in Emergency Medical Services: Controversies and Recommendations,” *Prehospital and Disaster Medicine* 28, no. 5 (October 2013): 488–497, <https://doi.org/10.1017/S1049023X13008728>.

9. Nicholas Greig Evans, “Balancing the Duty to Treat Patients with Ebola Virus Disease with the Risks to Dialysis Personnel,” *Clinical Journal of the American Society of Nephrology* 10, no. 12 (August 2015): CJN.03730415–2267, <https://doi.org/10.2215/CJN.03730415>.

10. Leigh Turner, “Bioethics, Public Health, and Firearm-Related Violence: Missing Links between Bioethics and Public Health,” *Journal of Law, Medicine & Ethics* 25, no. 1 (March 1997): 42–48, <https://doi.org/10.1111/j.1748-720X.1997.tb01395.x>.

11. Patrick Mileham, “Unlimited Liability and the Military Covenant,” *Journal of Military Ethics* 9, no. 1 (March 1, 2010): 23–40, <https://doi.org/10.1080/15027570903353836>.

12. See Larry May, *Contingent Pacifism: Revisiting Just War Theory* (Cambridge: Cambridge University Press, 2015), ch. 5.

13. Alfred, Lord Tennyson, “The Charge of the Light Brigade” in *Maud, and Other Poems* (1850).

14. Donald A. Henderson et al., “A Plague on Your City: Observations from TOPOFF,” *Clinical Infectious Diseases* 32, no. 3 (February 1, 2001): 436–445, <https://doi.org/10.1086/318513>.

15. Sean McDonald, “Ebola: A Big Data Disaster,” accessed December 31, 2020, https://www.academia.edu/21348760/Ebola_A_Big_Data_Disaster.

16. McDonald, "Ebola."
17. See, e.g., Seumas Miller, *The Moral Foundations of Social Institutions, A Philosophical Study* (Cambridge: Cambridge University Press, 2010).
18. "Dying in a Leadership Vacuum," editorial, *New England Journal of Medicine* 383, no. 15 (October 8, 2020): 1479–1480, <https://doi.org/10.1056/NEJMe2029812>.
19. H. Holden Thorp, "It Ain't Over 'til It's Over," *Science* 376, no. 6594 (May 13, 2022): 675–675, <https://doi.org/10.1126/science.abq8460>.
20. Not institutional leaders, strictly speaking, given my earlier moral characterization of institutions.
21. See Evans, *The Ethics of Neuroscience and National Security* (New York: Routledge, 2022), ch. 8.
22. Derek Thompson, "American Elites Still Don't Understand How COVID-19 Works," *The Atlantic*, December 11, 2020, <https://www.theatlantic.com/ideas/archive/2020/12/americas-bipartisan-covid-19-illiteracy/617368/>.
23. Rachel Martin, "Trump Tells Woodward He Deliberately Downplayed Coronavirus Threat," NPR, September 10, 2020, sec. Politics, <https://www.npr.org/2020/09/10/911368698/trump-tells-woodward-he-deliberately-downplayed-coronavirus-threat>.
24. Lenny Bernstein and Lena H. Sun, "CDC Director Allegedly Ordered Deletion of Email Showing Effort to Interfere with Coronavirus Guidance, Lawmaker Says," *Washington Post*, accessed December 31, 2020, https://www.washingtonpost.com/health/covid-cdc-director-email/2020/12/10/bc72461a-3af3-11eb-9276-ae0ca72729be_story.html.
25. Mike Stobbe, *Surgeon General's Warning: How Politics Crippled the Nation's Doctor* (Oakland: University of California Press, 2014).
26. "Everyone Has an Opinion on Queensland's Border Restrictions, but Who Has the Final Say?," *ABC News*, October 14, 2020, <https://www.abc.net.au/news/2020-10-15/queensland-coronavirus-borders-whos-in-charge/12753776>; "Chief Health Officers Are in the Spotlight Like Never Before: Here's What Goes on behind the Scenes | School of Population Health," n.d., <https://sph.med.unsw.edu.au/news/chief-health-officers-are-spotlight-never-heres-what-goes-behind-scenes>.
27. "Emails Reveal Sutton's Concern about 'Wrong Cohort' Staffing Quarantine Hotels," *ABC News*, September 16, 2020, <https://www.abc.net.au/news/2020-09-16/brett-sutton-victorian-coronavirus-hotel-quarantine-inquiry/12668398>.
28. Lawrence O. Gostin, "Public Health, Ethics, and Human Rights: A Tribute to the Late Jonathan Mann," *Journal of Law, Medicine & Ethics* 29, no. 2 (June 1, 2001): 121–130, <https://doi.org/10.1111/j.1748-720X.2001.tb00330.x>.

Chapter 9

1. Brian Orend, "Jus Post Bellum," *Journal of Social Philosophy* 31, no. 1 (2000): 117–137, <https://doi.org/10.1111/0047-2786.00034>; Brian Orend, *The Morality of War* (Peterborough, ON: Broadview Press, 2006).
2. Gregg Gonsalves, "The Moral Danger of Declaring the Pandemic Over Too Soon," *New York Times*, February 17, 2022, <https://www.nytimes.com/2022/02/17/opinion/aids-pandemic-covid.html>.
3. H. Holden Thorp, "It Ain't Over 'til It's Over," *Science* 376, no. 6594 (May 13, 2022): 675–675, <https://doi.org/10.1126/science.abq8460>.
4. Brian Orend, "Jus Post Bellum."
5. G. Blum and D. Luban, "Unsatisfying Wars: Degrees of Risk and the Jus Ex Bello," *Ethics* 125, no. 3 (2015): 751–780, <https://doi.org/10.1086/679558>; D. Moellendorf, "Two Doctrines of Jus Ex Bello," *Ethics* 125, no. 3 (2015): 653–673, <https://doi.org/10.1086/679560>; D. Statman, "Ending War Short of Victory? A Contractarian View of Jus Ex Bello," *Ethics* 125, no. 3 (2015): 720–750, <https://doi.org/10.1086/679561>.
6. Larry May, *War Crimes and Just War* (Cambridge: Cambridge University Press, 2007).
7. Robert E. Williams, "Jus Post Bellum: Justice in the Aftermath of War," in *The Future of Just War*, ed. Caron E. Gentry and Amy E. Eckert, New Critical Essays (University of Georgia Press, 2014), 167–180, <https://doi.org/10.2307/j.ctt46nbn3.13>.
8. James Pattison, "Jus Post Bellum and the Responsibility to Rebuild," *British Journal of Political Science* 45, no. 3 (July 2015): 635–661, <https://doi.org/10.1017/S0007123413000331>.
9. Pattinson, "Jus Post Bellum," 638–639.
10. Aris Katzourakis, *Nature* 601 (2022): 485, <https://doi.org/10.1038/d41586-022-00155-x>.
11. Martha Lincoln and Lorzenzo Servitje, "Biden's 'New Normal' on COVID Is Neither Normal nor New," *Salon* June 26, 2022, <https://www.salon.com/2022/06/26/biden-new-normal/>.
12. Smriti Mallapaty, "COVID Is Spreading in Deer: What Does That Mean for the Pandemic?" *Nature* 604, no. 7907 (April 28, 2022): 612–615, <https://doi.org/10.1038/d41586-022-01112-4>.
13. Daniel Schwartz, "Necessity Historically Considered," *Journal of Moral Philosophy* 17, no. 6 (April 13, 2020): 591–605, <https://doi.org/10.1163/17455243-20203185>.
14. Abigail Cartus and Justin Feldman, "Motivated Reasoning: Emily Oster's COVID Narratives and the Attack on Public Education," *Protean Magazine*, March 22, 2022,

<https://proteanmag.com/2022/03/22/motivated-reasoning-emily-osters-covid-narratives-and-the-attack-on-public-education/>.

Chapter 10

1. Mike Stobbe, *Surgeon General's Warning: How Politics Crippled the Nation's Doctor* (Oakland: University of California Press, 2014), 137–145.
2. Clifford Marks, “Inside the American Medical Association's Fight Over Single-Payer Health Care,” *New Yorker*, July 11, 2022, <https://www.newyorker.com/science/annals-of-medicine/the-fight-within-the-american-medical-association>.
3. Senate Committee on Health, Education, Labor, and Pensions, “Murray and Burr Release Discussion Draft of Bipartisan Pandemic and Public Health Preparedness and Response Bill,” accessed February 5, 2022, <https://www.help.senate.gov/chair/newsroom/press/murray-and-burr-release-discussion-draft-of-bipartisan-pandemic-and-public-health-preparedness-and-response-bill>.
4. Nidhi Subbaraman, “Science Misinformation Alarms Francis Collins as He Leaves Top NIH Job,” *Nature* 600, no. 7889 (December 3, 2021): 372–373, <https://doi.org/10.1038/d41586-021-03611-2>.
5. Alondra Nelson, *Body and Soul: The Black Panther Party and the Fight against Medical Discrimination* (Minneapolis: University of Minnesota Press, 2011).
6. Justin Feldman, “A Year In, How Has Biden Done on Pandemic Response?,” *Medium* (blog), January 6, 2022, <https://jmfeldman.medium.com/a-year-in-how-has-biden-done-on-pandemic-response-88452c696f2>.

Epilogue

1. See C. Forsythe and J. Giordano, “On the Need for Neurotechnology in the National Intelligence and Defense Agenda: Scope and Trajectory,” 2011, http://www.synesisjournal.com/vol2_no2_t1/Forsythe_Giordano_2011_2_1.pdf; G. K. Gronvall, “US Competitiveness in Synthetic Biology,” *Health Security* 13, no. 6 (2015): 378–389, <https://doi.org/10.1089/hs.2015.0046>.
2. See, e.g., Joel Garreau, *Radical Evolution: The Promise and Peril of Enhancing Our Minds, Our Bodies—and What It Means to Be Human* (New York: Broadway Books, 2005), http://books.google.com/books?id=THGv6naLEu4C&printsec=frontcover&dq=garreau+radical+evolution&hl=&cd=2&source=gbs_api; Nicholas Greig Evans and Michael J. Selgelid, “Biosecurity and Open-Source Biology: The Promise and Peril of Distributed Synthetic Biological Technologies,” *Science and Engineering Ethics* 21, no. 4 (September 2014): 1065–1083, <https://doi.org/10.1007/s11948-014-9591-3>; Robert H. Carlson, *Biology Is Technology: The Promise, Peril, and New Business of Engineering Life* (Cambridge, MA: Harvard University Press, 2010), <https://doi.org/10.2307/j.ctt13x0hz9>.

But cf. Gigi Gronvall *Synthetic Biology: Safety, Security, and Promise* (Baltimore, MD: Health Security Press, 2016).

3. See, e.g., Maryn McKenna, *Superbug: The Fatal Menace of MRSA* (New York: Free Press, 2010).

4. Nicholas G. Evans, "Dual-Use Decision Making: Relational and Positional Issues," *Monash Bioethics Review* 32, no. 3–4 (2014): 268–283, <https://doi.org/10.1007/s40592-015-0026-y>.

5. Schwartz, personal communication, June 2017, Northwestern University.

6. Bipartisan Commission on Biodefense, "The Apollo Program for Biodefense—Winning the Race Against Biological Threats," 2021, <https://biodefensecommission.org/reports/the-apollo-program-for-biodefense-winning-the-race-against-biological-threats/>.

7. Chris McGreal, "Why Joe Lieberman Is Holding Barack Obama to Ransom over Healthcare," *The Guardian*, December 16, 2009, <http://www.theguardian.com/world/2009/dec/16/joe-lieberman-barack-obama-us-healthcare>.

8. Rob Copeland, "The Secret Group of Scientists and Billionaires Pushing a Manhattan Project for Covid-19," *Wall Street Journal*, April 27, 2020, sec. US, <https://www.wsj.com/articles/the-secret-group-of-scientists-and-billionaires-pushing-trump-on-a-covid-19-plan-11587998993>.

9. Peter Navarro, "Memorandum to the Task Force through COS and NSA" February 9, 2020. <https://www.sciencemag.org/sites/default/files/manhattan%20project%20bright%20exhibit%202021.pdf>.

10. Nicholas Greig Evans, Maimuna S. Majumder, and Tara C. Smith, *Ebola's Message: Public Health and Medicine in the 21st Century* (Cambridge, MA: MIT Press, 2016).

11. For the military version of this, see Evans, *The Ethics of Neuroscience and National Security*.

12. Robert Carlson, "Senator Bill Frist's Biological 'Manhattan Project,'" synthesis, accessed January 26, 2021, http://www.synthesis.cc/synthesis/2005/06/senator_bill_frist_biological_manhattan_project.

13. Sharon Weinberger, *The Imagineers of War: The Untold Story of DARPA, the Pentagon Agency That Changed the World* (New York: Vintage, 2017).

14. Robert Carlson and Roger Brent, "DARPA Open Source Biology Letter," synthesis, accessed January 26, 2021, <http://www.synthesis.cc/darpa-open-source-biology-letter>.

15. Bill Frist, "2005: Frist Calls for Manhattan Project for the 21st Century," Bill Frist: public speaker, former Senate majority leader and cardiothoracic surgeon, July 7, 2020, <http://billfrist.com/2005-frist-calls-for-manhattan-project-for-the-21st-century/>.

16. Maryn McKenna, "THE PANDEMIC VACCINE PUZZLE Part 7: Time for a Vaccine 'Manhattan Project'," CIDRAP, accessed January 26, 2021, <https://www.cidrap.umn.edu/news-perspective/2007/11/pandemic-vaccine-puzzle-part-7-time-vaccine-manhattan-project>.
17. Mark Erikson, *Into the Unknown Together: The DOD, NASA, and Early Spaceflight*, report number ADA459973 (Maxwell AFB: Air University Press, 2005); Diane Vaughan, *The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA* (Chicago: University of Chicago Press, 2016); Albert K. Lai, *The Cold War, the Space Race, and the Law of Outer Space: Space for Peace* (Abingdon, UK: Routledge, 2021).
18. Lillian Hoddeson and Gordon Baym, *Critical Assembly: A Technical History of Los Alamos during the Oppenheimer Years, 1943–1945* (Cambridge: Cambridge University Press, 1993), <http://lccn.loc.gov/92036611>.
19. Peter J. Westwick, "Secret Science: A Classified Community in the National Laboratories," *Minerva* 38, no. 4 (2000): 363–391, <https://doi.org/10.1023/A:1004801129528>.
20. See, e.g., Jon Else, *The Day after Trinity*, Documentary, Biography (KTEH, 1981).
21. Eileen Welsome, *The Plutonium Files, America's Secret Medical Experiments in the Cold War* (Delta Press, 2000).
22. Gill Scott-Heron, "Whitey on the Moon," *A New Black Poet—Small Talk at 125th and Lenox*, Flying Dutchman/RCA, 1970, 33 $\frac{1}{3}$ rpm.
23. Alex John London and Jonathan Kimmelman, "Against Pandemic Research Exceptionalism," *Science*, April 23, 2020, <https://doi.org/10.1126/science.abc1731>.
24. Nicholas G. Evans, "Human Infection Challenge Studies: A Test for the Social Value Criterion of Research Ethics," *MSphere* 5, no. 4 (August 26, 2020), <https://doi.org/10.1128/mSphere.00669-20>.
25. Jerry Avorn and Aaron Kesselheim, "Regulatory Decision-Making on COVID-19 Vaccines during a Public Health Emergency," *JAMA* 324, no. 13 (October 6, 2020): 1284–1285, <https://doi.org/10.1001/jama.2020.17101>; Sandra Crouse Quinn et al., "Public Willingness to Take a Vaccine or Drug Under Emergency Use Authorization during the 2009 H1N1 Pandemic," *Biosecurity and Biodefense: Strategy, Practice, and Science* 7, no. 3 (September 1, 2009): 275–290, <https://doi.org/10.1089/bsp.2009.0041>.
26. "Data Show Panic, Disorganization Dominate the Study of Covid-19 Drugs," *STAT* (blog), July 6, 2020, <https://www.statnews.com/2020/07/06/data-show-panic-and-disorganization-dominate-the-study-of-covid-19-drugs/>.
27. Matthew Herper, "Inside the NIH's Controversial Decision to Stop Its Big Remdesivir Study," *STAT* (blog), May 11, 2020, <https://www.statnews.com/2020/05/11/inside-the-nih-controversial-decision-to-stop-its-big-remdesivir-study/>.

28. Sean McDonald, "Ebola: A Big Data Disaster," accessed December 31, 2020, https://www.academia.edu/21348760/Ebola_A_Big_Data_Disaster.

29. David Hunter and Nicholas Evans, "Facebook Emotional Contagion Experiment Controversy," *Research Ethics* 12, no. 1 (January 1, 2016): 2–3, <https://doi.org/10.1177/1747016115626341>.

30. Two National Research Council Reports on "dual-use research," in their ultimate recommendations, make strong mention of the role of open and unfettered life sciences in producing both knowledge and technology. See National Research Council, "Biotechnology Research in an Age of Terrorism" (Washington, DC: National Academies Press, February 2004); National Research Council, "Globalization, Biosecurity, and the Future of the Life Sciences" (National Academies Press, 2006).

31. Ryan Muldoon, "Diversity and the Division of Cognitive Labor," *Philosophy Compass* 8, no. 2 (2013): 117–125, <https://doi.org/10.1111/phc3.12000>; Ryan Muldoon and Michael Weisberg, "Robustness and Idealization in Models of Cognitive Labor," *Synthese* 183, no. 2 (July 2010): 161–174, <https://doi.org/10.1007/s11229-010-9757-8>.

32. Paul P. Glasziou, Sharon Sanders, and Tammy Hoffmann, "Waste in Covid-19 Research," *BMJ* 369 (May 12, 2020): m1847, <https://doi.org/10.1136/bmj.m1847>; Paul Elias Alexander et al., "COVID-19 Coronavirus Research Has Overall Low Methodological Quality Thus Far: Case in Point for Chloroquine/Hydroxychloroquine," *Journal of Clinical Epidemiology* 123 (July 1, 2020): 120–126, <https://doi.org/10.1016/j.jclinepi.2020.04.016>.

33. Daniel P. Oran and Eric J. Topol, "Prevalence of Asymptomatic SARS-CoV-2 Infection," *Annals of Internal Medicine* 173, no. 5 (June 3, 2020): 362–367, <https://doi.org/10.7326/M20-3012>; Jingjing He et al., "Proportion of Asymptomatic Coronavirus Disease 2019: A Systematic Review and Meta-Analysis," *Journal of Medical Virology* 93, no. 2 (February 2021): 820–830, <https://doi.org/10.1002/jmv.26326>; Lucy Rivett et al., "Screening of Healthcare Workers for SARS-CoV-2 Highlights the Role of Asymptomatic Carriage in COVID-19 Transmission," ed. Jos WM van der Meer, *ELife* 9 (May 11, 2020): e58728, <https://doi.org/10.7554/eLife.58728>; Mercedes Yanes-Lane et al., "Proportion of Asymptomatic Infection among COVID-19 Positive Persons and Their Transmission Potential: A Systematic Review and Meta-Analysis," *PLOS ONE* 15, no. 11 (November 3, 2020): e0241536, <https://doi.org/10.1371/journal.pone.0241536>; Andreas Kronbichler et al., "Asymptomatic Patients as a Source of COVID-19 Infections: A Systematic Review and Meta-Analysis," *International Journal of Infectious Diseases: IJID: Official Publication of the International Society for Infectious Diseases* 98 (September 2020): 180–186, <https://doi.org/10.1016/j.ijid.2020.06.052>.

34. Helen Branswell and Megan Thiekling, "Fluctuating Funding and Flagging Interest Hurt Coronavirus Research," *STAT* (blog), February 10, 2020, <https://www.statnews.com/2020/02/10/fluctuating-funding-and-flagging-interest-hurt-coronavirus-research/>.

35. Jason L. Schwartz, "The Spanish Flu, Epidemics, and the Turn to Biomedical Responses," *American Journal of Public Health* 108, no. 11 (September 25, 2018): 1455–1458, <https://doi.org/10.2105/AJPH.2018.304581>.
36. Nicholas B. King, "The Ethics of Biodefense," *Bioethics* 19, no. 4 (2005): 432–446, <https://doi.org/10.1111/j.1467-8519.2005.00454.x>.
37. T. V. Inglesby, R. Grossman, and T. O'Toole, "A Plague on Your City: Observations from TOPOFF," *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America* 32, no. 3 (February 1, 2001): 436–445, <https://doi.org/10.1086/318513>; Tara O'Toole, Mair Michael, and Thomas V. Inglesby, "Shining Light on 'Dark Winter,'" *Clinical Infectious Diseases* 34, no. 7 (April 1, 2002): 972–983, <https://doi.org/10.1086/339909>.
38. Johns Hopkins Center for Health Security, "PUBLIC-PRIVATE COOPERATION FOR PANDEMIC: PREPAREDNESS AND RESPONSE A CALL TO ACTION," 2019, <https://www.centerforhealthsecurity.org/event201/event201-resources/200117-PublicPrivatePandemicCalltoAction.pdf>; Johns Hopkins Center for Health Security, "Implications of Clade X for Policy," 2018, https://www.centerforhealthsecurity.org/our-work/events/2018_clade_x_exercise/pdfs/Clade-X-policy-statements.pdf.
39. Johns Hopkins Center for Health Security, "PUBLIC-PRIVATE COOPERATION"; "Implications of Clade X."
40. Donald A. Henderson, Thomas V. Inglesby Jr., Rita Grossman, and Tara O'Toole, "A Plague on Your City: Observations from TOPOFF," *Clinical Infectious Diseases* 32, no. 3 (February 1, 2001): 436–445, <https://doi.org/10.1086/318513>.
41. Kyle Mizokami, "The U.S. Lost a (Fictional) War with Iran 18 Years Ago," *Popular Mechanics*, January 3, 2020, <https://www.popularmechanics.com/military/a30392654/millennium-challenge-qassem-soleimani/>.
42. Amy Maxmen and Jeff Tollefson, "Two Decades of Pandemic War Games Failed to Account for Donald Trump," *Nature* 584, no. 7819 (August 4, 2020): 26–29, <https://doi.org/10.1038/d41586-020-02277-6>.
43. Ronald Klain, "I Have Growing Doubts about These Glitzy Role-Playing Events: They Create an Illusion of Improving Preparedness, but Do They? What ACTUAL Progress Has Been Made since the Clade X Exercise? People/Institutions Should Be Play Acting Less, Engaging Policy Makers More. #event201," Tweet, @RonaldKlain (blog), October 18, 2019, <https://twitter.com/RonaldKlain/status/1185197319337185280>.
44. Julia Lynch, Nicholas Evans, Erin Ice, and Deena Kelly Costa, "Ignoring Nurses: Media Coverage during the COVID-19 Pandemic," *Annals of the American Thoracic Society*, February 12, 2021, <https://doi.org/10.1513/AnnalsATS.202010-1293PS>.
45. Hugh LaFollette, *In Defense of Gun Control*. In chapter 1, LaFollette defends—again, as a long-time gun owner and hunter—the idea that firearms are explicitly

for taking human lives, and that all other purposes are exaptations to the central evolution of the firearm.

46. C. J. Chivers, *The Gun*, 2011, <https://www.simonandschuster.com/books/The-Gun/C-J-Chivers/9780743271738>; Robert Fisk, "For Patriotism and Profit: An Interview with Mikhail Kalashnikov," *The Independent*, April 22, 2001.

47. Vannevar Bush, *Science, The Endless Frontier* (Washington, DC: United States Government Printing Office, 1945).

© 2023 Massachusetts Institute of Technology

This work is subject to a Creative Commons CC-BY-NC-ND license.

Subject to such license, all rights are reserved.



The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif and Stone Sans by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data

Names: Evans, Nicholas G., 1985– author.

Title: War on all fronts : a theory of health security justice / Nicholas G. Evans.

Description: Cambridge, Massachusetts : The MIT Press, [2023] | Includes bibliographical references and index.

Identifiers: LCCN 2022029551 | ISBN 9780262545433 (paperback) | ISBN 9780262374217 (epub) | ISBN 9780262374224 (pdf)

Subjects: MESH: Communicable Disease Control | Disease Outbreaks—prevention & control | Public Health—ethics | Security Measures—ethics | Social Justice—ethics | Health Policy | Politics

Classification: LCC RA643 | NLM WA 110 | DDC 362.1969—dc23/eng/20221110

LC record available at <https://lcn.loc.gov/2022029551>