

Contents

Preface ix

1

Virtually Safe

Cybersecurity and National Security 3

Cybersecurity 9

U.S. Department of Homeland Security, March 2021

New US Infrastructure Bill Includes \$1.9 Billion for Cybersecurity Funding:
More Than Half Goes to State and Local Governments 14

Scott Ikeda, CPO Magazine, August 17, 2021

Prof. Claire Finkelstein Discusses Ukraine NATO membership as Well as
U.S. Ethical, Legal, and Cybersecurity Concerns 18

Penn Law, February 25, 2022

Scoop: Top Senator Warns Putin Cyberattacks Could Trigger Bigger War 22

Jonathan Swan and Zachary Basu, Axios, February 23, 2022

NATO Adds Cyber Commitments, Potential Ransomware Responses 25

Dan Lohrmann, Government Technology, June 20, 2021

News Corp Cyber Attack by Alleged Chinese Hackers Targets
Wall Street Journal Reporters 29

Scott Ikeda, CPO Magazine, February 9, 2022

2

The Biotech Debate

Biotechnology, Security, and National Values 35

Why Our Values Should Drive Our Technology Choices 41

Dr. Ulf Ehlert, NATO Review, December 16, 2021

Warnings about “Brain Control” Weapons Reflect Growing
US Concern about China’s Military Research 47

Stavros Atlamazoglou, Insider, February 14, 2022

China’s Unexpected Advantage in the Global Competition over
Brain-Computer Interfaces 50

Lucille Tournas Nalbach and Nicholas Shadid, Slate, November 23, 2021

Biden Administration Places Top Chinese Military Institute and
Other Entities on Export Blacklist 53

Ellen Nakashima, The Washington Post, December 16, 2021

Biotechnology: The Pentagon’s Next Big Thing Jingyuan Liu and Kai Liao, <i>OUPblog</i> , December 17, 2020	56
---	----

3

Intelligence Issues

Artificial Intelligence in American Culture	61
NATO Ups the Ante on Disruptive Tech, Artificial Intelligence Vivienne Machi, <i>Defense News</i> , November 3, 2021	67
General Says Artificial Intelligence Will Play Important Role in Network Defense David Vergun, <i>DOD News</i> , October 8, 2021	71
UN Addresses Lethal Autonomous Weapons—aka “Killer Robots”— Amid Calls for a Treaty Amanda Miller, <i>Air Force Magazine</i> , December 14, 2021	73
Technology Is Revolutionizing How Intelligence Is Gathered and Analyzed— and Opening a Window onto Russian Military Activity around Ukraine Craig Nazereth, <i>The Conversation</i> , February 14, 2022	76
NATO Wants to Set AI Standards. If Only Its Members Agreed on the Basics Melissa Heikkilä, <i>Politico</i> , March 29, 2021	79

4

Future Tech

What Is Next on the Technological Horizon for America?	85
Quantum Technologies in Defence and Security Michiel van Amerongen, <i>NATO Review</i> , June 3, 2021	91
Defense Primer: Quantum Technology Kelley M. Saylor, <i>Congressional Research Service</i> , January 25, 2022	98
NATO Cyber Security Unit Tests Post-Quantum VPN Alex Scroxton, <i>Computer Weekly</i> , March 3, 2022	103
Coming Soon: The Internet of Military Things Peter Suciu, <i>National Interest</i> , December 23, 2021	105
The State of U.S.-China Quantum Data Security Competition Tom Stafanick, <i>Brookings Institute</i> , September 18, 2020	107
Emerging Technology, Evolving Threats—Part II: The Asymmetry Effect John McClurg, <i>Security magazine</i> , September 2, 2021	114

5

The American Role

America's Place in the Global Community	119
The Ironclad U.S. Commitment to NATO <i>U.S. Department of State, November 29, 2021</i>	125
NATO Hopes to Launch New Defense Tech Accelerator by 2023 <i>Vivienne Machi, Defense News, June 22, 2021</i>	129
Will Deterrence Work, When Our Foes Wage War Disguised as Peace? <i>Sean McFate, The Hill, May 8, 2021</i>	132
U.S.-China Technology Competition: A Brookings Global China Interview <i>Ryan Haas, Patricia M. Kim, Emilie Kimball, Jessica Brandt, David Dollar, Cameron F. Kerry, Aaron Klein, et al., Brookings Institute, December 23, 2021</i>	135
The Dominance Dilemma: The American Approach to NATO and Its Future <i>Joshua R. Shiffrinson, Quincy Institute for Responsible Statecraft, January 28, 2021</i>	149
Bibliography	161
Websites	165
Index	169