

About the Contributors

General Keith Alexander, founder and CEO of IronNet Cybersecurity, is one of the world's foremost authorities on cybersecurity. A four-star army general, he was previously the first commander and the highest-ranked military official of the US Cyber Command, the National Security Agency, and the Central Security Service. He led these Department of Defense agencies during the conflicts in Afghanistan and Iraq, when attempted cyberattacks against the United States began to increase.

Michael J. Boskin is the Hoover Institution's Wohlford Family Senior Fellow and Stanford University's Tully M. Friedman Professor of Economics, and a research associate at the National Bureau of Economic Research. As chair of the Council of Economic Advisers under President George H. W. Bush, he helped resolve the Third World debt and the savings and loan financial crises, expand regional and global trade, introduce emissions trading in environmental regulation, and control government spending while protecting the defense budget. On Ronald Reagan's Tax Policy Task Force during his presidential candidacy, Boskin helped develop the policies that, during Reagan's presidency, lowered tax rates, indexed tax brackets to inflation, accelerated depreciation, and created IRAs and 401(k)s. He also chaired the CPI Commission, whose report transformed the way government statistical agencies around the world measure inflation, GDP, and productivity.

Captain Corey Braddock is a twenty-seven-year veteran of the military, having served in the US Army and US Coast Guard leading troops, piloting aircraft, and overseeing a myriad of organizational constructs. Braddock has served at Coast Guard Air Stations in San Francisco, Detroit, and Savannah, Georgia; at the Helicopter Interdiction Tactical Squadron in Jacksonville,

Florida; and at coast guard headquarters. In the army, he commanded troops in the Second Infantry Division, the 101st Airborne Division, and the 337th Infantry Regiment (active component to reserve component). He has logged four thousand hours flying military helicopters as an instructor pilot and maintenance test pilot.

Michael Brown is a visiting scholar at the Hoover Institution of Stanford University and a partner at Shield Capital. He serves on the advisory boards of the Center for a New American Security and the US Innovative Technology Fund. Brown previously served as the director of the Defense Innovation Unit (DIU) at the US Department of Defense (2018–22). From 2016 to 2018, he was a White House Presidential Innovation Fellow. Prior to civil service, Brown was the CEO of Symantec Corporation (2014–16), the former chairman and CEO of Quantum Corporation (1995–2003), and the chairman of EqualLogic (2003–8). He received his BA degree in economics from Harvard and his MBA from Stanford University.

David S. C. Chu led the Institute for Defense Analyses as CEO for over ten years, retiring in 2020. His federal career included serving as under secretary of defense for personnel and readiness (2001–9); as director, then assistant secretary of defense, for program analysis and evaluation (1981–93); and as assistant director for national security and international affairs of the Congressional Budget Office (1978–81). Chu served a tour of duty with the US Army and worked for the RAND Corporation, where his responsibilities included directing the Arroyo Center and RAND's Washington, DC, office. He earned his PhD in economics from Yale University.

James M. Cunningham is the coauthor, with David H. McCormick, of *Superpower in Peril: A Battle Plan to Renew America* (Center Street, 2023). He previously served as senior policy advisor to McCormick on his US Senate campaign in Pennsylvania and as an associate in the office of the CEO at Bridgewater Associates. Before that, he was a national security analyst at the Hoover Institution and the American Enterprise Institute.

Commander Bart D'Angelo is a naval intelligence officer with over twenty-one years of active service. D'Angelo completed his undergraduate degree in maritime operations at the US Merchant Marine Academy in Kings Point,

New York, and holds master's degrees from the Naval Postgraduate School and the Naval War College. He has had many varied assignments in the navy, including service aboard two aircraft carriers and three tours of duty in Japan. He has also worked on the staffs of multiple admirals and generals, including the commanders of Task Force 72, Task Force 74, the Seventh Fleet, the Pacific Fleet, and US Northern Command.

Mackenzie Eaglen is a senior fellow at the American Enterprise Institute (AEI), where she works on defense strategy, defense budgets, and military readiness. She is also a regular guest lecturer at universities, a member of the US Army Science Board, and a member of the steering committee of the Leadership Council for Women in National Security. Before joining AEI, Eaglen worked on defense issues in the US House of Representatives, in the US Senate, and at the Pentagon in the Office of the Secretary of Defense and on the Joint Staff.

Eric Fanning is president and CEO of the Aerospace Industries Association, which Fanning joined after serving as the twenty-second secretary of the army, providing leadership and oversight of our nation's largest military service. He previously served as chief of staff to the secretary of defense, as acting secretary and under secretary of the air force, and as deputy under secretary/deputy chief management officer of the navy. He is the only person to hold senior appointments in all three military departments and the Office of the Secretary of Defense. Over more than thirty years of service, Fanning worked on the staff of the House Armed Services Committee, was senior vice president of strategic development for Business Executives for National Security, was deputy director of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, and was associate director of political affairs at the White House.

Joseph H. Felter is a research fellow at the Hoover Institution and director of Stanford University's Gordian Knot Center for National Security Innovation. He has been published widely in top peer-reviewed academic journals and is the coauthor, with Eli Berman and Jacob N. Shapiro, of *Small Wars, Big Data: The Information Revolution in Modern Conflict* (Princeton University Press, 2018). From 2017 to 2019, Felter served as US deputy assistant secretary of defense for South and Southeast Asia. He is a former US Army Special

Forces officer with multiple combat tours and served as director of West Point's Combating Terrorism Center. He received a BS from the US Military Academy, an MPA from Harvard Kennedy School, and a PhD from Stanford.

Michèle Flournoy is cofounder and managing partner of WestExec Advisors, and cofounder, former CEO, and currently chair of Center for a New American Security (CNAS). Flournoy served as the under secretary of defense for policy from 2009 to 2012. She was the principal advisor to the secretary of defense in the formulation of national security and defense policy, oversight of military plans and operations, and National Security Council deliberations. Flournoy serves on numerous boards, including CNAS, Booz Allen Hamilton, Astra, Amida Technology Solutions, CARE, America's Frontier Fund, and the Special Competitive Studies Project.

Vishaal "V8" Hariprasad is the cofounder and CEO of Resilience, a Silicon Valley-based cyber risk management start-up. After graduating from the US Air Force Academy with a BA in mathematics, Hariprasad served as a cyber effects operations officer for the air force, with multiple assignments overseas as well as with the National Security Agency. He then went on to cofound Morta Security (acquired by Palo Alto Networks), serve as the architect for threat intelligence at Palo Alto Networks' Unit 42, and become a partner at the Pentagon's Defense Innovation Unit Experimental (DIUx) in Mountain View, California. Hariprasad is a major in the US Air Force Reserve and is currently the reserve director of operations for the active-duty 90th Cyber Operations Squadron in San Antonio, Texas, where he focuses on tool development for cyber operations.

Lieutenant Colonel James M. Harrington, representing the US Air Force, is a national security affairs fellow for the academic year 2022–23 at the Hoover Institution. Harrington is a cyberspace officer with a background in deployed communications, network engineering, information operations, cyberspace operations, and joint planning. He commanded two separate communications squadrons and served in US Central Command, NATO's Strategic Operational Headquarters, and on the Air Staff. He has deployed several times, supporting various named operations around the world. Most recently, he served as the cyber protection branch chief within the Office of the Air Force Chief Information Security Officer at the Pentagon. Harrington graduated from the US Air Force Academy with a bachelor of science in computer

science. He also holds a master of science in management information systems from the University of Illinois, Springfield.

Tim Kane is president of the American Lyceum and a visiting fellow at the Hoover Institution. Before earning a PhD in economics, Kane cofounded two software firms and served as an intelligence officer in the US Air Force, with two tours of duty overseas. His latest book is *The Immigrant Superpower* (Oxford University Press, 2022). Kane also authored *Total Volunteer Force: Lessons from the US Military on Leadership Culture and Talent Management* (Hoover Institution Press, 2017), *Balance: The Economics of Great Powers from Ancient Rome to Modern America* (with Glenn Hubbard; Simon & Schuster, 2013), and *Bleeding Talent: How the US Military Mismanages Great Leaders and Why It's Time for a Revolution* (Palgrave Macmillan, 2012).

Christopher Kirchoff, PhD, is an expert in emerging technology. He founded the Pentagon's Silicon Valley office, Defense Innovation Unit X, and helped scale \$1 billion in philanthropic programs at Schmidt Futures. Under the Obama administration, he was director for strategic planning at the National Security Council and the senior civilian advisor to the chair of the Joint Chiefs of Staff. Kirchoff has penned four landmark reports: the Obama administration's official lessons learned report from the US response to the Ebola crisis (2016); the White House's "Big Data: Seizing Opportunities, Preserving Values" (2014); the official US history of the Iraq reconstruction experience *Hard Lessons* (2009); and the space shuttle *Columbia* accident investigation report (2003).

Ellen Lord spent August 2017 until January 2021 as under secretary of defense for acquisition and sustainment, reporting to the secretary of defense with oversight of a \$400 billion annual budget. Previously, she spent thirty-three years at Textron, a global multiple industry corporation, finishing as CEO of Textron Systems. During her time at DoD, her team rewrote the Pentagon's acquisition policy, with a focus on speed and simplicity while adding procedures for cybersecurity, intellectual property, and software development. Lord now serves on public, private, and nonprofit boards, as well as advising companies in the aerospace and defense sector.

Oriana Skylar Mastro, PhD, is a center fellow at the Freeman Spogli Institute for International Studies and courtesy assistant professor of political science

at Stanford University, where her research focuses on Chinese military and security policy, Asia-Pacific security issues, war termination, and coercive diplomacy. She was previously an assistant professor of security studies at Georgetown University. She is also a nonresident senior fellow at the American Enterprise Institute and continues to serve in the US Air Force Reserve, for which she works as a strategic planner at US Indo-Pacific Command.

Secretary Jim Mattis was raised in southeastern Washington and graduated from Central Washington State College. He served over forty years in the US Marine Corps as an infantry officer, plus duty in the Office of the Secretary of Defense, as NATO supreme allied commander and as commander of US Central Command, formed of 250,000 US and allied troops in combat across the Middle East and South Asia. Retiring in 2013, he was named a Davies Family Distinguished Fellow at Stanford University's Hoover Institution, a position to which he returned after serving as the twenty-sixth secretary of defense (January 2017–December 2018).

Elaine McCusker is a senior executive with over thirty years of national security expertise developed through complex policy, strategy, budget, and leadership positions in the private sector, academic community, and government service, and on Capitol Hill. As acting under secretary of defense (comptroller), McCusker oversaw the development, justification, and execution of an average annual \$700 billion defense budget supporting the National Defense Strategy. She drove the Pentagon to harness the power of its financial, contracting, personnel, and logistics data through an advancing analytics capability. She led complex engagement strategies with multiple stakeholders, including the US Congress, to explain difficult, sometimes contentious, issues.

Michael McFaul is the director and senior fellow at the Freeman Spogli Institute for International Studies and the Peter and Helen Bing Senior Fellow at the Hoover Institution at Stanford University. He served for five years in the Obama administration as special assistant to the president and senior director for Russian and Eurasian affairs at the White House National Security Council (2009–12), then as US ambassador to the Russian Federation (2012–14). He has authored several books, including the *New York Times* bestseller *From Cold War to Hot Peace: An American Ambassador in Putin's Russia* (Penguin Books Limited, 2018). He is also an analyst for NBC News and a contributing columnist to the *Washington Post*.

H.R. McMaster is the Fouad and Michelle Ajami Senior Fellow at the Hoover Institution, Stanford University, and a distinguished university fellow at Arizona State University. He is also the Bernard and Susan Liautaud Fellow at the Freeman Spogli Institute and lecturer at Stanford University's Graduate School of Business. Upon graduation from the US Military Academy in 1984, McMaster served as a commissioned officer in the US Army for thirty-four years. He retired as a lieutenant general in June 2018 after serving as the twenty-fifth assistant to the president for national security affairs. He holds a PhD in military history from the University of North Carolina at Chapel Hill. At the Hoover Institution, McMaster is the host of *Battlegrounds: International Perspectives on Crucial Challenges to Security and Prosperity* and is a regular on *GoodFellows*.

Casey "Waldo" Miller has been researching, experimenting with, and executing software development teaming and delivery methodologies for seventeen years. He is currently in the US Air Force and serves as the commander of the 90th Cyberspace Operations Squadron, where he leads more than 250 military, civilian, and contractor cyber professionals in developing exploits and malware to enable military objectives across warfighting domains. He entered the air force through the ROTC program at Miami University and began his career in acquisitions before crossflowing to cyberspace operations, and he has held key positions, from squadron to major command levels. He is married to the former Lisa Ingle of Beaver Creek, Ohio, and has six sons.

Admiral Mike Mullen is president of MGM Consulting, which provides counsel to global clients on issues related to geopolitical developments, national security interests, and strategic leadership. He served as the twenty-eighth chief of naval operations from 2005 to 2007 and as the seventeenth chair of the US Joint Chiefs of Staff for presidents Bush and Obama from 2007 to 2011. He led the military during a critical time of change and transition. Admiral Mullen advanced the rapid fielding of innovative technologies, championed emerging and enduring global partnerships, and promoted new methods for countering terrorism. He spearheaded the elimination of the "Don't Ask, Don't Tell" policy, ushering in the open service of gay and lesbian men and women for the first time in US military history.

David L. Norquist is the president and CEO of the National Defense Industrial Association. Norquist has over thirty years of public- and private-sector experience in national security and federal financial management. He has served in three Senate-confirmed positions: as chief financial officer (CFO) of the Department of Homeland Security, as under secretary of defense comptroller/CFO, and most recently as the thirty-fourth deputy secretary of defense.

Michael O'Hanlon is senior fellow, director of research, and Phil Knight Chair in Defense and Strategy in the Foreign Policy program at the Brookings Institution, where he also directs the Strobe Talbott Center on Security, Strategy and Technology. He is also a member of the Defense Policy Board and adjunct professor at Georgetown and Columbia universities. Previously, he worked in the National Security Division at the Congressional Budget Office (1989–94). His latest book is *Military History for the Modern Strategist: America's Major Wars since 1861* (Brookings Institution Press, 2023). His degrees are in the physical sciences and from the School of Public and International Affairs at Princeton; earlier he worked on a dairy farm in upstate New York and was a Peace Corps volunteer in the Democratic Republic of the Congo.

Secretary Leon Panetta has had a fifty-year career in public service, from the US Army to the highest levels of government, including as the twenty-third secretary of defense. As director of the CIA, he successfully led the operation that brought Osama bin Laden to justice. In 1969–70, as director of the Office for Civil Rights, he was responsible for enforcing equal education laws. Panetta represented his California district in US Congress for sixteen years (1977–93) and created the Monterey Bay National Marine Sanctuary. Under President Clinton, he was named director of the Office of Management and Budget (1993–94) and chief of staff (1994–96). In 1997, Panetta established the Panetta Institute for Public Policy, a nonpartisan, nonprofit study center that seeks to inspire men and women to lives of public service. He chronicled his life in public service in his best-selling memoir *Worthy Fights* (Penguin Press, 2014).

John N. Rader is a visiting fellow at the Hoover Institution and the chief operating officer at Affinity Partners Global LLC. Rader previously served at the highest levels of the legislative and executive branches of both state and

federal government, most recently as chief of staff to US senator Bill Hagerty. In the White House, Rader served on the National Security Council as a special assistant to the president and senior policy advisor to the assistant to the president for national security affairs, General H.R. McMaster; and as deputy assistant to the president and advisor for policy and strategy for senior advisor to the president Jared Kushner.

Secretary Condoleezza Rice is the Tad and Dianne Taube Director of the Hoover Institution and the Thomas and Barbara Stephenson Senior Fellow on Public Policy. In addition, she is a founding partner of Rice, Hadley, Gates & Manuel LLC, an international strategic consulting firm. From January 2005 to January 2009, Rice served as the sixty-sixth secretary of state for the United States. Rice previously served as President George W. Bush's national security advisor from January 2001 to January 2005. Rice served as Stanford University's provost from 1993 to 1999. Rice has been on the Stanford faculty since 1981 and has won two of the university's highest teaching honors.

Admiral Gary Roughead is a graduate of the US Naval Academy whose career culminated in serving as the US Navy chief of naval operations and a member of the US Joint Chiefs of Staff. He previously held six operational commands and is one of only two officers in the navy's history to have commanded both the Atlantic and Pacific fleets. Admiral Roughead is the Robert and Marion Oster Distinguished Military Fellow at the Hoover Institution at Stanford University and serves on several corporate, university, and financial-sector boards.

Nadia Schadlow, PhD, is a visiting fellow at the Hoover Institution and a senior fellow at the Hudson Institute. Previously, she served as a deputy national security advisor for strategy. Her book *War and the Art of Governance: Consolidating Combat Success into Political Victory* (Georgetown University Press, 2017) explored the challenges of undertaking postconflict operations and identified optimal practices. She writes frequently on defense, national security, and technology-related issues. Schadlow received a BA from Cornell University and an MA and PhD from the Johns Hopkins School of Advanced International Studies.

Jacquelyn Schneider, PhD, is a Hoover Fellow at the Hoover Institution and an affiliate with Stanford's Center for International Security and Cooperation. She was previously a senior policy advisor to the Cyberspace Solarium Commission and had previous positions at the Center for a New American Security and the RAND Corporation. Before beginning her academic career, she spent six years as an air force officer in South Korea and Japan and is currently a reservist assigned to US Space Systems Command. She has a BA from Columbia University, an MA from Arizona State University, and a PhD from George Washington University.

Raj Shah is the managing partner of Shield Capital, a venture capital firm focused on technologies at the nexus of the commercial and defense markets. He is also the chairman of Resilience, a start-up powering new approaches to cyber insurance. Previously he ran the Pentagon's Defense Innovation Unit Experimental (DIUx), reporting to the secretary of defense. Shah led DIUx in its efforts to strengthen US armed forces through contractual and cultural bridges between Silicon Valley and the Pentagon. Shah serves as a reserve F-16 pilot in the Air National Guard and has completed multiple combat deployments. He holds an AB from Princeton University and an MBA from the Wharton School at the University of Pennsylvania. He is a member of the Council on Foreign Relations and is an adjunct professor at Stanford University.

Kiran Sridhar is the head of strategic initiatives for Resilience, which provides cyber insurance and cyber risk management solutions to enterprises. He also is on the investment team of Shield Capital, which backs companies that solve both commercial and national security problem sets, and the chair of Waste No Food, a nonprofit that serves the food insecure. He received a BA in economics from Stanford University; a master's in global affairs from Tsinghua University, where he was a Schwarzman Scholar; and a master's in operations management from the University of Cambridge, where he was a Gates Cambridge Scholar.

Mac Thornberry served US Congress for twenty-six years and continues to work at the intersection of technology and national security. He serves various companies and nonprofit organizations as a board member and advisor. A former chair of the House Armed Services Committee, he was also a member of the House Intelligence Committee for more than a decade. Prior to his election to Congress, Thornberry served in the State Department during the Reagan

administration and as staff on Capitol Hill, and practiced law. He graduated from Texas Tech University and received a law degree from the University of Texas.

Mark R. Wilson is a professor of history at the University of North Carolina–Charlotte. He is the author of the books *The Business of Civil War* (Johns Hopkins University Press, 2006) and *Destructive Creation: American Business and the Winning of World War II* (University of Pennsylvania Press, 2016). In 2022–24 he holds an Andrew Carnegie Fellowship from the Carnegie Corporation of New York, which is supporting his current work on a history of the US military-industrial complex since 1950.

Roger Zakheim serves as the Washington director of the Ronald Reagan Presidential Foundation and Institute. He previously practiced law at Covington & Burling LLP, where he led the firm's Public Policy and Government Affairs practice group. His government experience includes serving as general counsel and deputy staff director for the US House Armed Services Committee and deputy assistant secretary of defense for coalition affairs. Zakheim is on the board of directors for both the United States Institute of Peace and Marvell Government Solutions. He also serves on the Congressional Commission on the National Defense Strategy of the United States.

Amy Zegart is the Morris Arnold and Nona Jean Cox Senior Fellow at the Hoover Institution and professor of political science (by courtesy) at Stanford University. She is also a senior fellow at Stanford's Freeman Spogli Institute for International Studies, chair of Stanford's Artificial Intelligence and International Security Steering Committee, and a contributing writer at *The Atlantic*. She is an internationally recognized expert in US intelligence, emerging technologies, and global political risk management. Zegart is the author of five books, including the best-selling *Spies, Lies, and Algorithms: The History and Future of American Intelligence* (Princeton University Press, 2022). She has served on the National Security Council staff and as a presidential campaign foreign policy advisor. She received an AB in East Asian studies from Harvard and a PhD in political science from Stanford. She serves on the board of directors of the Council on Foreign Relations.



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The Tennenbaum Program for Fact-Based Policy is a Hoover Institution initiative aimed at improving the quality of information that is shaping the nation's highly debated policy questions, through collecting and analyzing data and providing credible research in readable, nontechnical essays and other educational formats.

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Public opinion polling on subjects Americans want to know more about helped inform the selection of initial projects: national security and the defense budget; US deficits and debt and their effects on inflation, economic growth, and intergenerational equity; the integrity of democratic elections in America; and energy and environmental challenges.

The program is made possible by a generous endowment from Suzanne (Stanford '75) and Michael E. Tennenbaum and organized by Michael J. Boskin, Wohlford Family Senior Fellow at the Hoover Institution and Tully M. Friedman Professor of Economics at Stanford University.