

# The Way We Will Be 50 Years from Today Contributing Authors

## **1 Vint Cerf, As We May Live**

*Vint Cerf is vice president of Google. Known as a “Father of the Internet,” his honors include the Presidential Medal of Freedom and the US National Medal of Technology.*

## **2 Francis S. Collins, A Revolution in Medicine**

*Francis S. Collins, MD, PhD, is a geneticist who led the Human Genome Project, the audacious effort that read out all three billion letters of the human DNA instruction book. He continues to lead the National Human Genome Research Institute and is also a leader in emphasizing the importance of addressing the ethical, legal, and social implications of genome research. In his recent book, The Language of God, he argues that science and faith are not opposing worldviews but actually are highly complementary.*

## **3 George F. Smoot, A Tiny Dot in Cosmic Time; A Big Period in Human Time**

*George F. Smoot, an astrophysicist, shares the 2006 Nobel Prize in Physics with John Mather. He is on the faculty of the physics department at the University of California at Berkeley and conducts research in astrophysics and observational cosmology at the Lawrence Berkeley National Laboratory. He is co-author (with Keay Davidson) of Wrinkles in Time.*

## **4 Christian de Duve, What’s Ahead: “Figures Don’t Lie”**

*Christian de Duve, founder of the International Institute of Cellular and Molecular Pathology in Belgium, shared the Nobel Prize in Medicine in 1974 for describing the structure and function of organelles in biological cells.*

## **5 John R. Christy, What a Climatologist Cannot Know about the Next 50 Years (but What He Does Believe)**

*Dr. John R. Christy is professor of atmospheric science and director of the Earth System Science Center at the University of Alabama in Huntsville, where he studies global climate issues. He and Dr. Roy W. Spencer were awarded NASA’s Medal for Exceptional Scientific Achievement for developing a global temperature data set from microwave data observed from satellites. Dr. Christy has served as a contributor and lead author for the UN reports by the Intergovernmental Panel on Climate Change in which the satellite temperatures were included as a high-quality data set for studying global climate change.*

## **6 Louis J. Ignarro, NO More Heart Disease**

*Louis J. Ignarro, PhD, is Distinguished Professor of Pharmacology at the UCLA School of Medicine. He and two other researchers received the Nobel Prize in Medicine in 1998 for their three major discoveries involving nitric oxide as a unique signaling molecule in the cardiovascular system. He is the author of NO More Heart Disease: How Nitric Oxide Can Prevent—Even Reverse—Heart Disease and Strokes.*

## **7 E. Fuller Torrey, The End of Psychiatric Illnesses**

*Dr. E. Fuller Torrey is a research psychiatrist specializing in schizophrenia*

*and manic-depressive illness. Called “the most famous psychiatrist in America” by the Washington Post, Dr. Torrey is president of the Treatment Advocacy Center and is associate director for Laboratory Research at the Stanley Medical Research Institute. Among his many awards are two commendation medals from the US Public Health Service and a humanitarian award from the National Alliance for Research on Schizophrenia and Depression.*

### **8 Arthur Caplan, Simon Caplan’s Day 24**

*Arthur Caplan is chair of the Department of Medical Ethics and director of the Center for Bioethics at the University of Pennsylvania. He writes a column on bioethics for MSNBC.com and is a frequent commentator on various media outlets. He is the author of Smart Mice, Not So Smart People: An Interesting and Amusing Guide to Bioethics and Who Owns Life?*

### **9 Wanda Jones, Fifty Years from Now: Today’s Baby Reaches Middle Age**

*Dr. Wanda Jones is the director of the Office on Women’s Health at the U.S. Department of Health and Human Services, where she oversees ten areas of women’s health, including HIV/AIDS, cardiovascular disease, violence against women, diabetes and obesity, lupus, breastfeeding, and mental health. She was previously at the Centers for Disease Control, where she was active in policy issues related to HIV laboratory testing, women and AIDS, HIV vaccine development, and healthcare workers.*

### **10 Craig Newmark, Blogging from the Future**

*Craig Newmark is an Internet pioneer and founder of craigslist, the community bulletin board of the Internet.*

### **11 Ray Kurzweil, Progress Accelerates Exponentially**

*Ray Kurzweil is an inventor whose developments include the first print-to-speech reading machine for the blind and the first text-to-speech synthesizer. He was inducted into the National Inventors Hall of Fame and is the recipient of the Lemelson-MIT Prize, the nation’s largest award in invention and innovation, and the National Medal of Technology, the nation’s highest honor in technology. His latest book is The Singularity Is Near: When Humans Transcend Biology.*

### **12 Thomas C. Schelling, An Economist Predicts**

*Thomas C. Schelling, Distinguished University Professor at the University of Maryland School of Public Policy, shared the Nobel Prize in Economics in 2005 for having enhanced our understanding of conflict and cooperation through game-theory analysis. Other honors include the National Academy of Sciences Award for Behavioral Research Relevant to the Prevention of Nuclear War.*

### **13 Chandrasekhar (Spike) Narayan, Diary Entry: 2058**

*Spike Narayan holds a PhD in materials science and has been with IBM’s Research Division for over twenty years. His research interests are primarily in the area of materials and process technologies relevant to the semiconductor industry, and he has extensive experience in science and technology at the nanoscale.*

### **14 James E. Cartwright, Deciphering the Mega-Trends**

*General James E. Cartwright is commander of United States Strategic Command, Offutt Air Force Base, Nebraska. He is responsible for the global command and control of US strategic forces to meet decisive national security objectives. USSTRATCOM provides a broad range of strategic capabilities and options for the president and secretary of defense.*

### **15 Jody Williams, Will We Be 50 Years from Today?**

*Jody Williams is a human rights activist who was awarded the Nobel Peace Prize in 1997, along with the International Campaign to Ban Landmines (ICBL), for her role as the founding coordinator of the ICBL, which achieved its goal of an international treaty banning antipersonnel landmines. She is now campaign ambassador of ICBL and founder of Nobel Women's Initiative, a united effort to help strengthen work being done in support of women's rights around the world. Forbes Magazine has named her one of the 100 most powerful women in the world.*

### **16 Kim Dae-jung, The Era of Great Change Is Coming**

*Kim Dae-jung is the former president of the Republic of Korea. He was awarded the Nobel Peace Prize in 2000 for his work for democracy and human rights in South Korea and in East Asia in general, and for peace and reconciliation with North Korea in particular.*

### **17 Ronald Noble, The Future of Crime**

*Ronald Noble is secretary general of Interpol, the world's largest international police organization.*

### **18 Norman E. Borlaug, The Future of Food**

*Norman E. Borlaug is an agricultural scientist who was awarded the Nobel Peace Prize in 1970 for his contributions to world peace through increasing food supply. Called "the Father of the Green Revolution," he has contributed to the growth of high-yielding wheat varieties, based partly on his research, on 200 million acres in the world. He is the recipient of the US Presidential Medals of Freedom and Science, the US Congressional Gold Medal, and the National Service Medal of the US National Academies of Science.*

### **19 Richard Clarke, What Does It Mean to Be Human?**

*Richard Clarke served as national coordinator for security and counterterrorism for President Clinton and President George W. Bush. He was the special adviser to the president for Cyberspace Security and chairman of the president's Critical Infrastructure Protection Board. He is chairman of Good Harbor Consulting and the author of *Against All Enemies* and *Scorpion's Gate*, a novel of espionage and counterterrorism set in a not-too-distant future.*

### **20 Richard Restak, A Brain Scientist's Perspective**

*Richard Restak is a neurologist and neuropsychiatrist and the author of eighteen books on the human brain, including *The Naked Brain: How the Emerging Neurosociety Is Changing How We Live, Work, and Love*. He is president of the American Neuropsychiatric Association.*

### **21 Sandra Postel, In Harmony with Earth's Water Cycle**

*Sandra Postel is director of the Global Water Policy Project and current*

*director of the Center for the Environment at Mount Holyoke College. She is the author of Last Oasis: Facing Water Scarcity, the basis of a PBS documentary, Pillar of Sand: Can the Irrigation Miracle Last?, and co-author of Rivers for Life: Managing Water for People and Nature. Postel is a 1995 Pew Scholar in Conservation and the Environment and, in 2002, was named one of the "Scientific American 50" by Scientific American magazine, an award recognizing contributions to science and technology.*

## **22 Gerardus 't Hooft, How Will Science Transform Human Society?**

*Gerardus 't Hooft, professor of theoretical physics at Utrecht University in the Netherlands, shared the Nobel Prize in Physics in 1999 for having placed particle physics theory on a firmer mathematical foundation.*

## **23 Shigeo Hirose, Where Are All the Robots?**

*Shigeo Hirose is a multi-award-winning professor in the Department of Mechanical and Aerospace Engineering at the Tokyo Institute of Technology. He specializes in the creative design of robotic systems.*

## **24 Peter Doherty, Wind Farming in Pollyanna Land**

*Peter Doherty is an immunologist who shared the Nobel Prize in Medicine in 1996 for discoveries concerning the specificity of the cell-mediated immune defense. He studies viral immunity and splits his life between St. Jude Children's Research Hospital, the University of Melbourne, and the beaches of southeastern Australia. His recent books include The Beginner's Guide to Winning the Nobel Prize and A Light History of Hot Air.*

## **25 Stuart L. Pimm, Letters to My Grandchildren and Great-Grandchildren**

*Stuart L. Pimm is a conservation biologist whose focus is the study and prevention of species extinctions worldwide. He is the recipient of the Dr. A. H. Heineken Prize in Environmental Sciences from The Royal Netherlands Academy of Arts and Sciences.*

## **26 Malcolm Bricklin, Future Cars and the Jetsons**

*Malcolm Bricklin, founder and CEO of Visionary Vehicles, is recognized as one of the automobile industry's foremost entrepreneurs. He is also the founder of Subaru of America and Yugo America and is currently working on the design, engineering, import, and distribution of a "signature" line of electric cars and light trucks from China into North America.*

## **27 Abdulla Salem El-Badri, A World without Borders**

*Abdulla Salem El-Badri is secretary general of the Organization of the Petroleum Exporting Countries (OPEC).*

## **28 Lee H. Hamilton, Technology, Security, and Liberty in 50 Years**

*Lee H. Hamilton is director of the Woodrow Wilson International Center for Scholars and the Center on Congress at Indiana University. He was vice-chair of the 9/11 Commission and co-chair of the Iraq Study Group. He served for thirty-four years in the United States Congress and chaired the House Committees on Foreign Affairs and Intelligence.*

### **29 Steven Beckwith, Our Place in the Universe**

*Steven Beckwith is an astronomer and director of the Space Telescope Science Institute at Johns Hopkins University, which runs the science operations for the Hubble Space Telescope.*

### **30 Tim Mack, Snapshot of a World with the New Nation of California**

*Tim Mack is president of The World Future Society, a non-profit, nonpartisan scientific and educational association of people interested in how social and technological developments are shaping the future.*

### **31 Marian Wright Edelman, Our Children, Our Future**

*Marian Wright Edelman is founder and president of the Children's Defense Fund (CDF), the nation's strongest independent voice for children and families. She was the first black woman admitted to the Mississippi Bar, where she directed the NAACP Legal Defense and Educational Fund. Honors include the Presidential Medal of Freedom, a MacArthur Foundation Prize Fellowship, and the Robert F. Kennedy Lifetime Achievement Award for her writings, which include eight books.*

### **32 Valli Moosa, Landscapes and Living Conditions**

*Valli Moosa is president of The World Conservation Union (IUCN), the world's largest conservation network. The union brings together 83 states, 110 government agencies, more than eight hundred non-governmental organizations, and ten thousand scientists and experts from 181 countries in an effort to influence, encourage, and assist societies to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.*

### **33 Leon E. Panetta and James D. Watkins, Go Green by Thinking Blue**

*The Honorable Leon E. Panetta and Admiral James D. Watkins are co-chairs of the Joint Ocean Commission Initiative.*

*Leon E. Panetta served as chief of staff for President Clinton and was chairman of the Pew Oceans Commission. He is also director of the Leon & Sylvia Panetta Institute for Public Policy, California State University at Monterey Bay.*

*Admiral James D. Watkins's forty-year naval career culminated in attaining the Navy's highest uniformed office, chief of naval operations. He is a former secretary of energy.*

### **34 Aaron Ciechanover, The Paradox**

*Dr. Aaron Ciechanover, a Distinguished Research Professor at Technion-Israel Institute of Technology, was awarded the Nobel Prize for Chemistry in 2004 for his work with two other scientists in discovering ubiquitin-mediated protein degradation. This discovery creates an opportunity to develop more effective drugs against cervical cancer, cystic fibrosis, and other diseases.*

### **35 Elias A. Zerhouni, The Transformation**

*Elias A. Zerhouni, MD, is director of the National Institutes of Health, the nation's medical research agency.*

### **36 Nancy G. Brinker, A World without Breast Cancer**

*Nancy G. Brinker is founder of Susan G. Komen for the Cure, the world's*

*largest grassroots network of breast cancer survivors and activists. She has served on the president's Cancer Panel and as US Ambassador to the Republic of Hungary and currently serves as Chief of Protocol at the US Department of State.*

### **37 Stanley B. Prusiner, Hope for People with Brain Diseases**

*Dr. Stanley B. Prusiner, a neurologist at the University of California, San Francisco, was awarded the Nobel Prize in Medicine in 1997 for his groundbreaking discovery of a new class of disease-causing agents called prions.*

### **38 Victor Sidel, A Physician's View of the Future**

*Victor Sidel, a physician and professor of social medicine at Montefiore Medical Center, was co-founder and co-president of International Physicians for the Prevention of Nuclear War (IPPNW), the organization that received the Nobel Peace Prize in 1985. A former president of the American Public Health Association, he is co-editor with Dr. Barry Levy of War and Public Health, Terrorism and Public Health, and Social Injustice and Public Health, all published by Oxford University Press.*

### **39 Claude Mandil, Clean Energy for Progress**

*Claude Mandil is executive director of the International Energy Agency. He is the former chairman and CEO of the Institut Français du Pétrole (The French Oil Institute) and has held many high-level positions in the French government and in the energy and research sectors.*

### **40 Nancy Ho, CO2 for Good**

*Nancy Ho is a leading scientist in ethanol energy research. She received the R&D 100 Award for genetically modifying yeast to convert sugar into fuel. She is a research molecular biologist and group leader of the Molecular Genetics Group at the Laboratory of Renewable Resources Engineering at Purdue University.*

### **41 Michael Shermer, To Open the World to All People**

*Dr. Michael Shermer is executive director of the Skeptics Society and the author of Why Darwin Matters: Evolution and the Case Against Intelligent Design and How We Believe: Science, Skepticism, and the Search for God. He is the founding publisher of Skeptic magazine and a monthly columnist for Scientific American.*

### **42 Joseph L. Bryant, The View as I Glide By**

*Joseph L. Bryant, DVM, is director of the Animal Model Division of the Institute of Human Virology at the University of Maryland School of Medicine. As a researcher, his primary responsibility is developing animal models for studying the pathogenesis of AIDS and cancers.*

### **43 Barry Marshall, One Tuesday in Australia**

*Barry Marshall, senior principal research fellow in the School of Biomedical, Biomolecular & Chemical Sciences at the University of Western Australia, shared the Nobel Prize in Medicine in 2005 with Robin Warren for their discovery of the bacterium Helicobacter pylori and its role in gastritis and peptic ulcer disease.*

#### **44 Carl Pope, Daniel Becker, and Allison Forbes, Wake-Up Call on Global Warming**

*Carl Pope is executive director of the Sierra Club, America's oldest, largest, and most influential grassroots environmental organization. Daniel Becker and Allison Forbes are director and conservation organizer, respectively, of Sierra Club's Global Warming Program.*

#### **45 Keith B. Richburg, Dateline: 50 Years into the Future**

*Keith B. Richburg is a longtime reporter and foreign correspondent for the Washington Post, serving as Bureau Chief in Manila, Nairobi, Hong Kong, and Paris. During his nineteen years abroad for the Post, he covered the war in Afghanistan and the invasion of Iraq, the start of the 2001 Palestinian intifada, the 1997 Hong Kong handover to China, the 1992 US intervention in Somalia, and the 1994 genocide in Rwanda. He is the author of Out of America: A Black Man Confronts Africa and a member of the Council on Foreign Relations.*

#### **46 Gregory A. Poland, Leaps and Eurekas**

*Gregory A. Poland is professor of medicine, infectious diseases, and molecular pharmacology and experimental therapeutics at the Mayo Clinic College of Medicine, and director of the Mayo Vaccine Research Group and the Program in Translational Immunovirology and Biodefense.*

#### **47 Earl G. Brown, Snapshots of the Future with Infectious Disease: Living in a Brave New World with Age-Old Scourges**

*Earl G. Brown, a specialist in influenza virus evolution, is a virologist in the Department of Biochemistry, Microbiology and Immunology Faculty of Medicine at the University of Ottawa.*

#### **48 Carol Bellamy, The Age of the Global Citizen**

*Carol Bellamy served as the executive director of UNICEF and was the first former volunteer to serve as director of the Peace Corps. She is currently president and CEO of World Learning, an international nonprofit organization with operations in seventy-seven countries that fosters global citizenship through experiential education and community-based development work.*

#### **49 James Canton, Some Words from "Dr. Future"**

*James Canton is CEO and chairman of the Institute for Global Futures and author of The Extreme Future: The Top Trends That Will Reshape the World for the Next 5, 10 and 20 Years and Technofutures: How Leading-Edge Innovations Will Transform Business in the 21st Century. Named "The Digital Guru" by CNN and "Dr. Future" by Yahoo, he is an authority on future trends in innovation.*

#### **50 Douglas Osheroff, Some Warnings, Some Worries, and a Call for Leadership**

*Douglas Osheroff, professor of physics and applied physics at Stanford University, shared the Nobel Prize in Physics in 1996 for discovery of superfluidity in helium-3.*

#### **51 Lyman Page, How Our Knowledge Will Increase**

*Lyman Page is a cosmologist and professor of physics at Princeton University, where he measures the spatial temperature variations in the cosmic microwave background, the thermal afterglow of the big bang.*

### **52 Carol M. Browner, We Will Have Learned Our Lesson**

*Carol M. Browner is the former administrator of the Environmental Protection Agency, where she championed common-sense, cost-effective solutions to the world's most pressing environmental and public health challenges. She is now a principal of The Albright Group LLC, a global strategy firm.*

### **53 Richard Dawkins, The Future of the Soul**

*Richard Dawkins, FRS, is an evolutionary biologist at the University of Oxford. He is the author of nine books, including The Selfish Gene and Unweaving the Rainbow.*

### **54 Peter Marra, A Bird's-Eye View of the Next 50 Years**

*Peter Marra is a research scientist at the Smithsonian Migratory Bird Center of the National Zoological Park and a leading researcher in the area of migratory bird ecology.*

### **55 Nsedu Obot-Witherspoon, Global Climate Change and Our Children**

*Nsedu Obot-Witherspoon is executive director of The Children's Environmental Health Network, a national nonprofit organization whose mission is to protect the child and the fetus from environmental health hazards and promote a healthy environment.*

### **56 William H. Meadows, A Way Back to Wilderness**

*Bill Meadows is president of The Wilderness Society, whose mission is to protect and conserve America's wilderness and roadless areas, including the Arctic National Wildlife Refuge and national forests.*

### **57 Lawrence M. Krauss, Future World: The Bad, the Good, and the Ugly**

*Lawrence M. Krauss is a theoretical physicist and director of the Center for Education and Research in Cosmology and Astrophysics at Case Western Reserve University. He is the author of numerous bestselling books, including The Physics of Star Trek, Atom, and, most recently, Hiding in the Mirror.*

### **58 John C. Mather, Always So Much More to Discover**

*Dr. John C. Mather, who shares the 2006 Nobel Prize in Physics with George Smoot, is a senior astrophysicist in the Observational Cosmology Laboratory at NASA's Goddard Space Flight Center. He is senior project scientist of the James Webb Space Telescope.*

### **59 Ahmed Zewail, The World in Fifty Years: Revolutions and Repercussions**

*Ahmed Zewail was awarded the 1999 Nobel Prize in Chemistry for his pioneering development in femtosience, making possible the observation of phenomena in a millionth of a billionth of a second. He is chair professor of chemistry and physics and director of the Center for Physical Biology at Caltech. Postage stamps have been issued to honor his contributions to science and humanity.*



**60 Ross Gelbspan, *The Earth in 50 Years: Rescue . . . or Ruin?***

*Ross Gelbspan was an editor and reporter for thirty years with the Philadelphia Bulletin, the Washington Post, and the Boston Globe, where he won a Pulitzer Prize for editing in 1994. He is the author of two books on the global climate, *The Heat Is On* and *Boiling Point*. Now retired from daily journalism, Gelbspan is the creator and author of the Website [www.heatisonline.org](http://www.heatisonline.org).*