United St
IN CONGRESS
We the People

The Project on Foresight and Democracy:
A Systems Approach

Report to the Rockefeller Brothers Fund

Leon S. Fuerth

Sheila R. Ronis

February 2020

Co-researchers' Statement

The comments that follow represent the views of the Co-researchers, Leon Fuerth and Sheila Ronis. Their views do not necessarily reflect substantive positions of the Rockefeller Brothers Fund, which funded this project or of Walsh College, which provided the auspices for this work with respect to those who took part in the project, as participants in its various panels and discussions, Chatham House rules applied. The co-researchers are responsible for characterizations in this report of the outcomes of meetings. These characterizations should not be imputed to the personal views of specific participants in those meetings.

Walsh College served as the record-keeper and overall administrative home of the Project. Walsh is a private, not-for-profit 501 (c)(3) institution of higher education offering courses and services at locations in Troy, Novi, Clinton Township, and Port Huron, Michigan and online. Walsh College is accredited by The Higher Learning Commission. Specific degree programs are accredited by the Accreditation Council for Business Schools and Programs (ACBSP). Dr. Ronis is a member of the faculty and has been teaching at the institution for more than a decade. In June 2018, Mr. Fuerth served as the Commencement Speaker receiving an Honorary Doctor of Laws Degree.

Origins of this Effort

The seeds of this project were cast in the spring of 2015, when we began a series of informal conversations about the increasingly fractious state of political discourse in America, and it's consequences.

Democratic practice was under-performing: it no longer seemed to have the ability to see and plan for the Big Picture; it suffered from chronic short-termism; it was unresponsive to the linkages between social progress, economic equity, and the requirements of national security – including the protection of the global commons upon which all else depends. Confidence in the efficacy and even the legitimacy of democratic practice – pragmatism about what works, and openness to compromise as a necessary and honorable part of the political process – was eroding. Public discourse had become an arena for competing, dogmatic systems of belief, and dismissive of facts and immune to reason.

The trajectory, in our opinion, pointed towards systems-failure: an inability to keep pace with emergent forms of societal disruptions: the unintended consequences of technology; the legacy societal divisions of the nation's "commons;" and chronic political deadlock caused by rigid ideological frameworks. Against this background, the growing diversity of American society, which had hitherto been a source of resilience and strength, now appeared to be a source of division and weakness. It was our impression, moreover, that the world – not just our own country – had entered a period of such rapid and profound change as to raise doubts that democracy, even in societies where it was deeply established, still possessed the vitality needed for 21st century conditions.

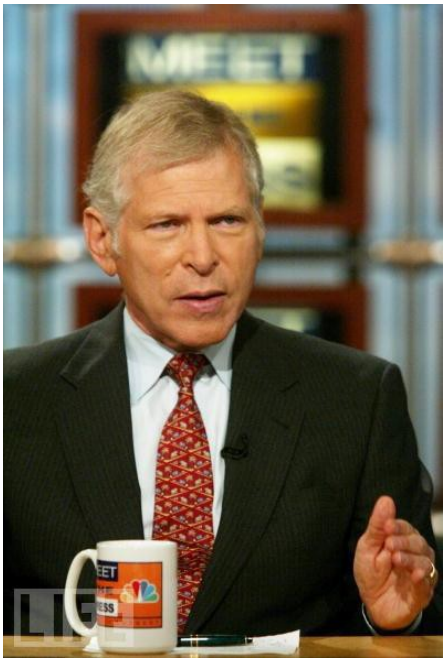
For many years, each of us had advocated — following our own particular approaches — changes in government systems to help America keep up with an accelerating rate of societal change. We had each written, taught, and advised about the need to bridge the disconnect between systems for long-range foresight and systems for planning and executing policy. We each enjoyed access to persons of influence in business and in government. Nevertheless, we had each seen our best efforts, and those of many other colleagues, run up against the tremendous inertia of "things-as-they-are." And so, we began to discuss collaborating in yet another effort to propound our ideas about the essential need for foresight as an intimate part of the policy process. The presidential election of 2016 added urgency, because its outcome seemed to us to represent an historical discontinuity: a major challenge to accepted assumptions about the future.

From previous work, we knew the Rockefeller Brother's Fund might be interested in the study of foresight, so we decided to develop a proposal for ways to apply foresight analysis as a means to help democracies withstand and respond to the forces released by massively disruptive forms of change. The Fund's response was encouraging, and by the summer of 2017, we were in discussions about a project we called: Foresight and Democracy. In the course of these discussions, we were encouraged to broaden our approach and we were encouraged to think deeply about how this project would accomplish two of its stated goals: (1) to find a way to reach out to citizens in general with an emphasis on paths to concrete actions; and (2) to make sure that our approach reflects the reality that America is now a nation of minorities, held together by common values — albeit with differing perspectives as to how those values have been realized in the present, and as to how they may be affected by major changes coming our way from the future.

The Fund gave us a go-ahead in the summer of 2018, and since then we have focused on standing up a project consistent with these expanded goals. That effort is now complete, and this is our report.

Leon S. Fuerth Sheila R. Ronis

Co-researchers: Leon S. Fuerth



Professor Leon Fuerth's career in government spanned thirty years, including positions in the State Department, House and Senate staff, and the White House. His most recent government service was as Vice President Gore's National Security Adviser for the eight years of the Clinton administration, where he served on the Principals' Committee of the National Security Council and the National Economic Council, alongside the Secretary of State, the Secretary of Defense, and the President's own National Security Advisor.

During his twelve years as a Foreign Service Officer with the State Department, Professor Fuerth served in the U.S. Consulate General in Zagreb, Yugoslavia; the office of the Counselor of the Department; the Bureau of Intelligence and Research; and in both the Bureau of Political Military Affairs and the Bureau of European Affairs in several capacities. He became a resource for strategic intelligence (chemical, biological, radiological and nuclear weapons); arms control; Soviet and Warsaw Pact affairs; and NATO.

On the Hill, Professor Fuerth worked for the late Congressman Les Aspin as staff director of the sub-committee on covert action, in the House Permanent Select Committee on Intelligence; for Al Gore during the last two years of his term as a member of the House; and for Gore during both his terms as a Senator. In the course of this twelve-year period, Professor Fuerth was the Select Committee's expert on arms control verification, in addition to operating as its primary staff resource for monitoring covert action; he was deeply involved in the development of arms control positions by Congressman Gore; and in the Senate, he served as Gore's staff link to both the Senate Armed Services Committee and the Senate Committee on Science and Technology (Space sub-committee). He was responsible to Senator Gore for all aspects of national security, including international trade.

In the White House, Professor Fuerth served as Vice President Gore's National Security Adviser for both of his terms in office. During this time, he operated – by Presidential order – as a full member of the Principals and Deputies Committees in both the National Security Council and the National Economic Council, where he participated in the formation of national policy as an advisor to both the Vice President and the President. He was the senior administration staff member responsible for the operation of bi-national commissions with Russia, Ukraine, Kazakhstan, Egypt, and South Africa, as well as the U.S.-China Environmental Forum, which he personally negotiated. For three years, he coordinated sanctions against Serbia on behalf of the U.S. government, at the request of the Principals Committee. Throughout the Clinton-Gore administration, Professor Fuerth also led efforts to develop the International Space Station with the Russians and other partners; to raise awareness and take action to prevent the spread of HIV/AIDS in Africa; to denuclearize former Soviet states by providing alternative energy sources for the replacement of certain nuclear reactors and by providing alternative employment opportunities for nuclear scientists in Russia; to win China's cooperation in protecting the environment and reducing pollution; and to spur foreign investment in Egypt, offering a positive example for other Arab nations involved in the Middle East peace process.

After retiring from government service at the conclusion of the Clinton Administration, Professor Fuerth came to The George Washington University to serve as the J.B. and Maurice C. Shapiro Professor of International Affairs from January 2001 to January 2003. He also then served simultaneously as a research professor at the Elliott School of International Affairs. In addition, from 2011-2013 he served as a Distinguished Research Fellow at the National Defense University. Lastly, he served as a Practitioner in Residence at the George Washington University's Institute for Global and International Studies from 2013 - 2016.

During this period, Professor Fuerth served as a member of the National Academy of Science Committee on Climate, Energy and National Security, and to The Alliance on Climate Change, and as a consultant to former Vice President Al Gore.

Leon Fuerth is the founder and director of the project on Forward Engagement®. The Project on Forward Engagement promotes the use of Anticipatory Governance to improve the federal policy process by incorporating: foresight as an actionable component of the policy process; networked systems to support whole-of-government responsiveness; and feedback systems to monitor performance and speed-up learning from results. The Project was funded by the MacArthur foundation, the National Defense University and the George Washington University. More information is available at www.forwardengagement.org.

Currently, Professor Fuerth serves as a co-researcher on a Project on Foresight and Democracy funded by Rockefeller Brothers Fund.

Fuerth holds a bachelor's degree in English and a master's degree in history from New York University, as well as a master's degree in public administration from Harvard University.

Sheila R. Ronis, Ph.D.

Dr. Sheila R. Ronis is President of The University Group, Inc., a management consulting firm and think tank specializing in strategic management, visioning, leadership, national security and public policy. She is also an Adjunct Professor of Management at Walsh College where she retired as Distinguished Professor of Management and Director of the Center for Complex and Strategic Decisions (CCSD). In addition, Dr. Ronis is an Associate with Argonne National Laboratory University of Chicago. She serves on the National Defense University Foundation Board of Directors as Chairman Emeritus and serves on the John Glenn College for Public Affairs Advisory Board at The Ohio State University. Dr. Ronis is an active member of the Federal Foresight Community of Interest in Washington, D.C. Along with Professor Fuerth, she is Co-Director of the Project on Foresight and Democracy funded by the Rockefeller Brothers Fund. Her B.S. is in Physics, Mathematics and Education. Her M.A. and Ph.D. are from The Ohio State University in Large Complex Social System Behavior.

Dr. Ronis participates in the OECD Foresight Community in Paris and has published two United States Government foresight case studies for the OECD. Visionarios[1] have been developed and published with her colleague, Dr. Richard J. Chasdi for the U.S. Army. She has also developed visionarios for the National GeoSpatial Intelligence Agency, several academic conferences, *The International Journal of Intelligence, Security, and Public Affairs*, in Europe, the Government of Finland, The U.S. Government Accountability Office, Nanyang Technological University, Singapore, The International Management Institute, Nahalal, Israel, the Royal United Services Institute of Defense and Security Studies (RUSI) in London, UK.

Dr. Ronis served as guest speaker on the use of foresight methodologies to improve public policy on 12 September 2014 at The Royal Society in London, U.K. She traced the Center's work on the Project for National Security Reform. It included details on how the CCSD experimented with judgment and decision sciences for a conceptual set of capabilities for the Executive Office of the President of the United States. On 12 June 2013, Dr. Ronis was awarded the Chairman of the Joint Chiefs of Staff's Outstanding Public Service Award in a formal ceremony in Washington, D.C.

Dr. Ronis is the former chair of the Vision Working Group of the Project on National Security Reform (PNSR) in Washington, D.C., which was tasked by Congress to rewrite the National Security Act of 1947. As a Distinguished Fellow at PNSR, Dr. Ronis was responsible for the plan and processes to develop The Center for Strategic Analysis

and Assessment; the place where the President of the United States will conduct "grand strategy" on behalf of the nation working with LTG Brent Scowcroft and Professor Leon Fuerth as Advisors. On 30 July 2010, she chaired a conference at the Center for Strategic and International Studies, CSIS, where she presented the findings of the PNSR Vision Working Group Report and Scenarios which she edited, that outlines why foresight capabilities are essential to the workings of the Executive Office of the President of the United States. She was awarded a Fulbright Specialist Scholarship and studied these issues in Singapore in August and October 2011.

On 24-25 August 2010, Dr. Ronis chaired the conference: "Economic Security: Neglected Dimension of National Security" at the National Defense University that explored a "grand strategy" for a healthy U.S. economy. A publication based on that conference, edited by Dr. Ronis was published December 2011. Dr. Ronis facilitated a workshop entitled Energy as Grand Strategy on 7-8 May 2012 at the National Defense University co-sponsored by the Department of Energy's Argonne National Laboratory and the Center for Technology and National Security Policy. On 8-9 November 2011, Dr. Ronis chaired a symposium at the National Defense University, Institute for National Strategic Studies, "Forging an American Grand Strategy: Securing a Path Through a Complex Future," in Washington, D.C. A publication based on that conference, edited by Dr. Ronis was published in 2013.

In her career of more than four decades, Dr. Ronis has worked with many organizations in the public and private sectors. Known as a complex systems security strategist, Dr. Ronis has authored hundreds of papers and several books.

[1] "A ***visionario*** is a scenario developed using a disciplined foresight process that marries the art of story telling and the science of complexity and systems." From Ronis, Sheila R., *Center for Complex and Strategic Decisions*, Walsh College, Troy, Michigan.

Table of Contents

EXECUTIVE SUMMARY.....8

THE NARRATIVE REPORT.....10

CHAPTER 1: PROGRESS MADE: ORGANIZING THE PROCESS.....10
CHAPTER 2: OUTPUT OF ROUND TABLE DISCUSSIONS.....28
CHAPTER 3: LESSONS LEARNED.....52
CHAPTER 4: FINDINGS AND CONCLUSIONS.....55
CODA.....57
CHAPTER 5: SOME IDEAS ABOUT FURTHER APPLICATIONS.....59

APPENDIXES.....60

APPENDIX 1: FORESIGHT METHODS.....60
APPENDIX 2: BIBLIOGRAPHY.....62
APPENDIX 3: INVITATIONS + ANNOTATED MINUTES + PRESENTATIONS.....70
STANDING ADVISORY GROUP 1.....71
STANDING ADVISORY GROUP 2.....75
STANDING ADVISORY GROUP 3.....78
ROUND TABLE 1.....83
ROUND TABLE 2.....87
ROUND TABLE 3.....89
ROUND TABLE 4.....91
ROUND TABLE 5.....93
VISIONARIO.....94
ROUND TABLE 6.....96

LIST OF FIGURES

FIGURE 1. THE OVERALL PROCESS.....20
FIGURE 2. THE SAG PROCESS.....21
FIGURE 3. THE ROUND TABLE PROCESS SHOWING ARCHIVING.....25
FIGURE 4. EXAMPLE OF ANNOTATED MINUTES FROM APPENDIX 3: INVITATIONS + ANNOTATED MINUTES + PRESENTATIONS.....27
FIGURE 5. UNIFIED FIELD.....48
FIGURE 6. TOYOTA CHART.....49
FIGURE 7. ANTICIPATORY GOVERNANCE.....50
FIGURE 8. VENN DIAGRAM.....51

Executive Summary

The Project on Foresight and Democracy was proposed to the Rockefeller Brothers Fund on 28 May 2018. On 13 July 2018, the Fund decided to support it with a grant, which it awarded to Leon Fuerth and Sheila Ronis, designated as Co-researchers. Their final report was submitted to the Fund on 12 February 2020. This is an executive summary of the main features of that report.

Premise

Hyper-partisanship is gravely undermining the norms and procedures that are essential for effective democratic governance. It will not be possible to counter these effects in the absence of a demand from the "grass roots" for a return to common sense and practicality. The desire for such a return exists, but the means to express it need to be developed. This can be done by encouraging the development of networked communications between self-initiated groups at the grass-roots level, comprised of citizens who are interested in fact-based approaches to present and on-coming issues, but who presently lack a common analytic framework for considering them.

Objectives

To demonstrate on a test-basis how such a group would function, using methods suitable for use on a larger scale.

Organization

The test model had four components: (1) the "Round Table," comprised of persons selected to represent the polity; (2) the "Standing Advisory Group", comprised of experts on systems analysis and foresight methodologies; (3) a briefers' panel, comprised of experts on an array of issues relating to technological and demographic trends; and (4) a communications team, consisting of rapporteurs and the Co-researchers, to record discussions and to distill them into themes for circulation to the Round Table participants.

Methodology:

- Series of three meetings of the Standing Advisory Group to decide upon an agenda for presentation of foresight concepts to the Round Table.
- Series of briefings to the Round Table on foresight concepts.
- Series of briefings to the Round Table on major drivers of change relating to technology and demography.
- Series of Round Table discussions to explore the views of members.

Preliminary Inputs for Round Table meetings

- Complexity (systems, non-linear behavior of systems, implications for policy, and multiple possible future consequences).
- Foresight methodologies (overview of basic types and exercise).
- Trends arising from technology (advanced artificial intelligence, synthetic biology, climate disruption, mass social surveillance).
- Trends arising from demographic change (transition of the United States from dominant white majority to majority of minorities).

Key themes discussed by participants in Round Table

- The continuing impacts of white supremacy and male dominance.
- The gaps between the universal values expressed in the Declaration of Independence and the Bill of Rights, and the experiences of minorities within the population.
- Prospects and means for eliminating these gaps and reforms of the system needed for this purpose.
- The implications of technologically and demographically driven change for fundamental values from the perspective of the nation as a whole and from the perspective of minorities within that whole.
- Prospects for sustaining core values in the presence of very rapid, discontinuous forms of change.

Co-researchers Findings

- Round Table discussions evolved over time in the direction of expanded awareness of the difference between issues presented in isolation and issues understood as interactive within complex systems.
- Shifting balance of views from traditional faith in common values to growing skepticism as to the possibility of sustaining these values in the presence of forces from both the past and the future.
- Consensus that if democratic values are to be preserved and advanced, impediments to effective political representation (e.g., gerrymandering, obstacles to voting) must be eliminated as the only way to promote adaptation within a democratic system. "Democracy is not a location; it is a process."
- A view that the alternative to that kind of reform will be a continuation of the drift towards authoritarian forms of government.

Next steps

The Co-researchers believe that the next logical step is to expand the scope of their approach by encouraging the development of Round Table processes that are networked. This would constitute a second phase of activity, not within the scope of the test program agreed with the Rockefeller Brothers Fund, but consistent with its purposes and outcomes. A final meeting of the Round Table discussed possible ways forward, in cooperation with other sources of support. Co- researchers are developing a proposal for such a phase, and a plan for its implementation.

The Narrative Report

Chapter 1: Progress Made: Organizing the Process

Setting Up the Working Parts of the Project

The Project on Foresight and Democracy was approved by the RBF on 13 July 2018. Once authorized to proceed, Co-researchers proceeded to stand up the project by establishing three functioning bodies:

1. The Round Table (RT) was comprised of six persons, selected because of their involvement with a broad range of societal issues. The RT was an effort to create, in miniature, a dynamic model of the Commons: a group which at one moment might reflect divisions corresponding to the concerns and goals of specific sectors of society, and, at another moment, on the needs of society as a whole.

2. The Standing Advisory Group (SAG) was comprised of seventeen foresight specialists. This group helped us develop a set of five major drivers of change, which we defined as having transformative, and very possibly, disruptive consequences for the social system — for which we used the term "Commons."[2]

3. A core team, comprised of the Co-researchers, our rapporteur, Brandon Schwartz, and a SAG volunteer, Margaret Cope, who took charge of operations. This unit produced verbatim records of SAG and RT meetings, and then processed these into thematic minutes (organized according to subjects discussed as opposed to chronological order). The thematic minutes were used as connecting links between meetings, and served in effect as a system for learning, not just for remembering. A distilled version of these minutes appears below.

- We wish to thank, especially, Margaret Cope, a member of the Standing Advisory Group who assisted us tremendously in helping to make the project run, including the critical problem of finding meeting space.
- We also would wish to acknowledge the service of student rapporteurs, in particular Mr. Brandon Schwartz, who enabled us to capture with precision the output of dozens of hours of discussion.

[2] We borrowed the term "commons" from the paper, "Tragedy of the Commons," published in *Science* by biologist Garrett Hardin in which, he defined the concept (as described in Wikipedia) as "a situation in a shared-resource system where individual users, acting independently according to their own self-interest, behave contrary to the common good of all users by depleting or spoiling the shared resource through their collective action." American democracy is, in our view, such a system --- the survival of which depends on awareness of collective interest in its preservation. One cannot take the existence of that awareness for granted. Clearly, there is reason for deep concern that various forms of societal stress are threatening that awareness.

Round Table Participants: The "Virtual" Commons

Mieke Eoyang

As the Vice President for Third Way's National Security Program, Mieke Eoyang is committed to closing the credibility gap between Democrats and Republicans on security issues and crafting a national security strategy that is both tough and smart. She works on every major national security issue—from the details of military personnel policy to electronic surveillance laws—while still making time to mentor the next generation of women in national security. Mieke had a long career on Capitol Hill, most recently serving as Chief of Staff to Representative Anna Eshoo (D-CA). Prior to that, she was the Defense Policy Advisor to Senator Kennedy, the Subcommittee Staff Director on the House Permanent Select Committee on Intelligence, and a Professional Staff Member on the House Armed Services Committee. Mieke began her career as a legislative assistant in the office of Representative Pat Schroeder (D-CO), where she handled the congresswoman's armed services and foreign policy work. Mieke earned her J.D. at the University of California and graduated from Wellesley College.

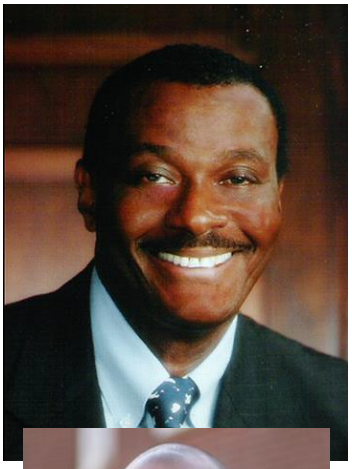
Charlene Drew Jarvis

In her long and distinguished career, Charlene Drew Jarvis has held positions as a neuroscientist, legislator, and university president. Responding to the need to help rebuild the economy of Washington, D.C. after the riots that followed the death of Martin Luther King, Jr., Jarvis ran for public office and was elected six times to the Council of the District of Columbia (1979-2000). Her work as Chair of the Committee on Economic Development for more than 20 years was pioneering. Dr. Jarvis was appointed in 1996 as president of Southeastern University. Thirteen years later, in 2009, she orchestrated a unique merger of Southeastern University with the USDA Graduate School in Washington, D.C. She was named one of the most powerful women in Washington by "Washingtonian Magazine" in 1989, 1994, and 2007, and by "The Washington Business Journal" in 1985. She received a B.S. from Oberlin College, an M.S. from Howard University, and a Ph.D. in neuropsychology from the University of Maryland.

Charlotte Resing

Charlotte Resing is a Policy Analyst focusing on criminal justice for the American Civil Liberties Union (ACLU). Her work there focuses on criminal justice reform, including the overcriminalization of marijuana and drug law reform. Previously, she has worked on political campaigns and as a legal and legislative aid. Resing has a J.D. from the University of the District of Columbia and a B.A. from Tulane University.

Allen Sessoms



Allen Sessoms is the Managing Partner of Higher Education Innovation Group, LLP. Sessoms is a physicist, a former diplomat, and a seasoned education administrator. Sessoms served as the ninth president of Delaware State University prior to his appointment as president of the University of the District of Columbia in 2008. Sessoms began his career as a scientific associate at the European Organization of Nuclear Research (CERN). He joined the U.S. State Department as a senior technical advisor in the Bureau of Oceans and International Environmental and Scientific Affairs, subsequently serving there as Director of the Office of Nuclear Technology and Safeguards before becoming the Counselor for Scientific and Technological Affairs at theU.S. Embassy in France. Sessoms was then assigned to Mexico, where he served as its Deputy Chief of Mission (Deputy Ambassador). Following his government service, Sessoms became the Executive Vice President and Vice President for Academic Affairs at the University of Massachusetts. He left UMASS to accept an appointment as president of Queens College of the City University of New York. He later spent time at Harvard University as a visiting scholar, then as a fellow of the Belfer Center for Science and International Affairs, and as a lecturer in public policy. He was recently a senior vice president with The Hollins Group, an executive search firm, where he managed the higher education practice. Sessoms received a B.S. in physics from Union College, an M.S. in physics from the University of Washington, and both a Master of Philosophy (M.Phil.) and a Ph.D. from Yale University.

Ian Solomon

Ian H. Solomon left the round table on September 1st to become Dean of Frank Batten School of Leadership and Public Policy at the University of Virginia. Solomon is a lifelong student of negotiation, conflict, and cooperation, having worked as a businessman, policymaker, diplomat, and educator, with 20 years of experience in more than 40 countries. Ian created SolomonGlobal to advance the art and science of working together to address our greatest challenges. Formally educated at Harvard College and Yale Law School, Ian's cross-sectoral experience includes consulting with McKinsey & Company, creating common ground on Capitol Hill, negotiating global agreements at the World Bank, and fostering innovation from senior positions at Yale and the University of Chicago. Ian is also a Lecturer at the University of Chicago Law School, a member of the Council on Foreign Relations, a Senior Fellow on Africa at the Chicago Council on Global Affairs, and a member of the Board of Visitors at National Defense University.

Larry O. Spencer

Larry O. Spencer is a retired 4-star United States Air Force General who served in many commands, comptroller, and other leadership roles during the course of his career. Some of his leadership roles included being the Vice Chief of Staff of the United States Air Force, Commander of the 75th Air Base Wing at Hill Air Force Base, Commander of the 72nd Support Group at Tinker Air Force Base, and the Commander of the 4th Comptroller Squadron at Seymour Johnson Air Force Base. He retired with more than 44 years of distinguished service to the United States. Today, he serves as the top executive at the Air Force Association, directing the association's staff, and holds the position of Publisher for Air Force Magazine. He received a B.S. in electrical engineering technology from Southern Illinois University, an M.S. in business management from Webster College, and an M.S. in resource strategy from the National Defense University. He is also the recipient of numerous awards from throughout his career of service, including the Defense Distinguished Service Medal, the Air Force Distinguished Service Medal, and the Legion of Merit.

Standing Advisory Group (SAG): Foresight Experts

Hans Binnendijk

Hans Binnendijk is currently a Senior Fellow at the SAIS Center for Transatlantic Relations and at the RAND Corporation. He has held a variety positions at the National Defense University, National Security Council, State Department, Office of Management and Budget, and Senate Foreign Relations Committee. He has published numerous articles and regularly speaks on related to U.S. national security. He received his M.A.L.D. and Ph.D. in international relations from the Fletcher School of Law and Diplomacy at University.

Elizabeth Boles

Elizabeth M. (Beth) Boles has been a professor of political science and law for more than 25 years, teaching at U.C. Berkeley, Sarah Lawrence College, Pomona College, Ohio State University, and currently with American University's Washington College of Law. She was the founding director of two innovative programs in experiential education for U.C. Berkeley and for the John Glenn School of Public Affairs. She has written and spoken widely about issues in civic education, international education, and comparative politics and foreign policy. She speaks frequently with visiting foreign delegations of senior scholars and government officials and serves as an enrichment lecturer examining the nexus among history, politics, and culture, most recently in Russia, Spain, Southern and East Africa. She is a Member of the Board of The Cultural Treasures Foundation, a non-profit organization dedicated to enhancing international understanding through art and culture, and preserving treasures in conflict zones. Dr. Boles earned her B.A. at Stanford University and her M.A. and Ph.D. at U.C. Berkeley.

John Bordeaux

John Bordeaux is a Senior Management Scientist at the RAND Corporation. For nearly 20 years, Bordeaux has provided research and advisory services in strategy, knowledge management, information integration, and governance for federal and private sector interests. Primary areas of interest include strategic planning, organizational decision-making, teaming structures, and risk analysis/assessment. Prior to this, he was a Senior Program Analyst with the RAND Corporation, supporting defense policy analysis and wargaming events for the U.S. Department of Defense. John served in the U.S. Air Force as an Intelligence Analyst from 1982-1990. He has a Ph.D. in public policy and an M.S. in management information systems from George Mason University, as well as a B.S. in governmental administration from Christopher Newport University.

management. His initial career was in the Air Force, followed by a long stint at TASC, Inc., a leading provider of enterprise systems engineering, mission-enabling architectures, and value-based solutions for the national security and public safety markets. Burke received an M.S. from Virginia Tech in science and technology studies and an M.P.A. from the University of N. Colorado.

Margaret Cope

Margaret Cope, USAF Colonel (Ret) is an independent consultant. She has over 25 years of success as a leader and executive in the U.S. government, including 15 years of senior logistics management experience leading national strategic plans. Her specialties focus on national security, including gender gap issues, national service, and national security transformation, and she has a range of technical expertise, including international transportation, supply distribution, systems engineering, program management, policy development and implementation, industrial safety, public/private partnerships, quality control programs, and strategic vision. She received an M.A. in strategy and policy from the U.S. Naval War College and a B.A. in microbiology and M.S. in clinical laboratory science.

James Burke

ke
nd

ne

Carol Dumaine has over 30 years of experience as a U.S. Intelligence Community analyst with an emphasis on strategic and emerging global security issues, including climate change. She created the "Global Futures Partnership" in the early 2000s as an early example of engaging with external, non-government expertise in efforts to improve strategic foresight on unclassified transnational security issues. From 2007 to 2010, she served as the Deputy Director for Energy and Environmental Security in the Office of Intelligence and Counterintelligence at the U.S. Department of Energy. She is a graduate of Georgetown University's School of Foreign Service and holds an M.A. in International Public Policy from Johns Hopkins University's SAIS.

dev
crea
tech
inn
Virg
a l
wor
and
tech
assessment,
innovation, and
change

Banning Garrett

Banning Garrett is a Washington-based strategic thinker, writer, and entrepreneur who focuses on the impact of exponential technologies and their intersection with long-term global trends, urbanization, and geopolitics. Garrett is a consultant to the World Bank; Senior Fellow at the Global Federation of Competitiveness Councils; Senior Fellow for Global Urban Development; co- founder of the nano RFID company nR LLC; and an adviser to several Singularity technology startups. Garrett has also worked extensively on U.S.-China relations since the 1970s, working with the Atlantic Council, the Asia Society, and publishing several influential publications. Garrett received his B.A. in the history of social thought and institutions from Stanford University and his Ph.D. in politics from Brandeis University.

Jerome C. Glenn

Jerome C. Glenn is the Co-founder (1996) and CEO of the Millennium Project (on global futures research) and lead-author with Elizabeth Florescu and the Millennium Project Team of the **State of the Future 19.1** report, as well as 18 other **State of the Future** reports over the past 20 years. He was the Washington, D.C. representative for the United Nations University (UNU) as executive director of the American Council for the UNU from 1988 until 2007. He has over 40 years of futures research experience working for governments, international organizations, and private industry in science and technology policy, environmental security, economics, education, defense, space, futures research methodology, international telecommunications, and decision support systems. Glenn has a B.A. in philosophy from American University, an M.A. in teaching social science from Antioch Graduate School of Education (now Antioch University New England), and was a doctoral candidate in general futures research at the University of Massachusetts.

Sherri Goodman

Sherri Goodman is Senior Strategist at the Center for Climate and Security, a member of its Advisory Board, Chair of the Board of the Council on Strategic Risks (CSR), and Secretary General of the International Military Council on Climate and Security (IMCCS). She is also a Senior Fellow with the Wilson Center. She was previously CEO and President of the Ocean Leadership Consortium, and Senior Vice President, General Counsel, and Corporate Secretary of CNA. Ms. Goodman served as Deputy Undersecretary of Defense (Environmental Security) and has received the DoD medal for Distinguished Public Service, the Gold Medal from the National Defense Industrial Association, and the EPA's Climate Change Award. She has a B.A. from Amherst College, a J.D. from Harvard Law School, and an M.P.P from Harvard's John F. Kennedy School of Government.

Sharaelle Grzesiak

Sharaelle Grzesiak is Co-Chair of the Federal Foresight Community of Interest, a forum based on the discipline and application of foresight. Grzesiak is also a Foresight and Strategic Analyst Foresight and Strategic Analyst within the Strategic Planning and External Liaison office of the U.S. Government Accountability Office (GAO), where she helps lead and support strategic planning and has helped increase the GAO's foresight capabilities. She is an experienced foresight strategist and policy analyst, having also previously worked with the Department of Homeland Security, the Department of Health & Human Services, and the Department of Veterans Affairs. In 2018, Ms. Grzesiak was added to a list of the world's top female futurists, making her one of two futurists listed from the U.S. federal government. She has M.A. in strategic security studies from the National Defense University.

Kenneth W. Hunter

Kenneth W. Hunter (Ken) is a retired long-time senior executive of the U.S. Government Accountability Office, and has contributed mightily to the advancement of futurology. Ken is currently a Senior Advisor at the University of Maryland's Office of China Affairs. Over the past forty years, Ken has served in various leadership roles at the World Future Society, including as Chair of the Board of Directors. Ken is the author of *Navigating the Frontiers of the 21st Century: Governance with Accountability and Foresight*, and was co-editor of *International Rights and Responsibilities for the Future* (1996).

John F. Meagher

John F. Meagher is a Certified Industrial Hygienist with over 30 years of experience in occupational and environmental health and currently working to provide strategic and technical support for manufacturing plants within the U.S. Federal government to ensure worker health and regulatory compliance. Mr. Meagher is a current member of the Federal Foresight Community of Interest, a forum based on the discipline and application of foresight. He previously worked with TASC, Inc. in the areas of risk management, industrial base analysis, international management systems, futures analysis, strategic planning, and homeland security. He was a core contributor to the Project on National Security Reform Vision Working Group Report and Scenarios (2010) and was Past-President (2000–2002) for the Washington DC Metropolitan Chapter of the World Future Society. He has been active in a variety of futures studies for many years. Mr. Meagher received his B.S. in chemistry from Kent State University.

Joseph S. Moore

Joseph (Joe) S. Moore is Co-Chair of the Federal Foresight Community of Interest, a forum based on the discipline and application of foresight. He is also currently a Senior Management Analyst at the Department of Veterans Affairs (VA) within the Office of Enterprise Integration, Strategic Foresight & Risk Management, in Washington, D.C., and has been with the VA since 2010. Previously, he worked on the VA's Quadrennial Strategic Planning Process (QSPP), looking out 10 to 20 years to assist in being able to anticipate, operate, and look for emerging risks in diverse future environments. Mr. Moore's past work included being a senior analyst and process improvement team member for 3Com; a Facility Manager and Operations Manager for GENCO Distribution Systems, one of the largest 3rd Party Logistics companies in the nation; and a Logistics Officer, Strategic Planner, and Division Chief recruiting, building, and sustaining Coalition forces in U.S. Central Command's Coalition Operations for Iraq, Afghanistan, and the Horn of Africa. Mr. Moore retired from the Marine Corps as a Colonel with 27 years of service.

Elton Parker

Elton is a Specialist Leader with Deloitte, serving as an SME for a wide range of strategic risk, crisis management, and strategic communications/ stakeholder management projects for commercial and government clients. Elton served for 23 years in the military as a Naval Aviator, spending the last 9 years directing anticipatory long-term strategy development and risk and crisis management war games and simulations for senior US and NATO leaders. Prior to joining Deloitte, Elton served as the Special Assistant and Strategic Advisor to the Chairman of the Joint Chiefs of Staff, and then as Strategic Policy Advisor and Special Assistant to the Supreme Allied Commander, Europe. He is currently Adjunct Faculty at National Defense University, where he teaches courses in foresight, risk analysis, and scenario planning to senior US and foreign military and civilian leaders, as well as advising senior Department of Defense and Department of State officials on strategic risk, crisis management, and geopolitical planning considerations through the use of war gaming and simulations.

Eric Popiel

Eric Popiel is a Strategic Foresight Analyst at the U.S. Office of Personnel Management (OPM). He is responsible for the long- term futures program that informs federal workforce policy for OPM. Popiel is also Co-Chair of the Federal Foresight Community of Interest, a forum based on the discipline and application of foresight. He holds a B.A. in civil engineering from the U.S. Coast Guard Academy and an M.A. in national security and strategic studies from the U.S. Naval War College.

Trooper Sanders

Trooper Sanders is the CEO of Benefits Data Trust, an organization that uses data, targeted outreach, policy change, and new technologies to connect people with benefits and services, ultimately with the aim of reducing poverty. Trooper has worked at the crossroads of policy, business, and philanthropy, both internationally and domestically. Lately, he has focused especially on frontier technologies, such as artificial intelligence, and the public interest. Trooper served on the White House staff, was a senior advisor to former U.S. President Bill Clinton, and managed initiatives for a variety of mission-driven organizations. Trooper has an L.L.M. from the University of London, an M.Sc. from the London School of Economics, and a B.A. from the University of Michigan.

Linton Wells II

Dr. Linton Wells II brings more than 20 years of civilian leadership experience in national security affairs. He is particularly familiar with cybersecurity issues, networked capabilities, and the uses of technology, media, and data in defense environments, having served as acting Assistant Secretary of Defense for Networks and Information Integration (ASD NII) and Department of Defense (DoD) Chief Information Officer (CIO). Other senior positions have been related to Command, Control, Communications and Intelligence (C31), and the interface between policy and technology. As Assistant Secretary (acting) and DoD CIO he oversaw the DoD's $30 billion budget for information technology and related areas and was responsible for enhancing the DoD's networked capabilities and support structures. He holds a B.S. in physics and oceanography from the United States Naval Academy, as well as an M.S. in engineering, and a Ph.D. in international relations from Johns Hopkins University. He is Executive Advisor to the C4I & Cyber Center and the Center for Resilient and Sustainable Communities (C-RASC) at George Mason University.

Briefers:

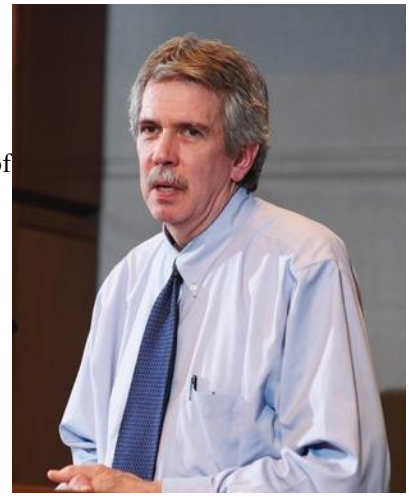
Mark Lopez

Mark Hugo Lopez is director of global migration and demography research at the Pew Research Center. He leads planning of the center's research agenda on international demographic trends, international migration, U.S. immigration trends, and the U.S. Latino community. He is an expert on immigration globally and in the United States, world demography, U.S. Hispanics, and Asian Americans. Prior to joining Pew Research Center, Lopez served as a research assistant professor at the University of Maryland's School of Public Policy and as research director of the Center for Information and Research on Civic Learning and Engagement (CIRCLE). Lopez received his Ph.D. in economics from Princeton University and has authored a number of reports about the Hispanic electorate, Hispanic identity, and immigration.

Carmen A. Medina

Carmen A. Medina is a former CIA Deputy Director of Intelligence with 32 years of experience in the Intelligence Community. She is a recognized expert on intelligence analysis, strategic thinking, diversity of thought, and innovation. She co- authored the book *Rebels At Work: A Handbook for Leading Change from Within*, as well as a landmark Deloitte University Press paper on Diversity's New Frontier "Diversity of Thought and the Future of the Workplace." She had a long career at the CIA, where she oversaw the CIA's Lessons Learned program and led the Agency's first efforts to address the challenges posed by social networks, digital ubiquity, and the emerging culture of collaboration. She received a M.A. in foreign service from Georgetown University and a B.A. in comparative government from the Catholic University of America

Dave Rejeski

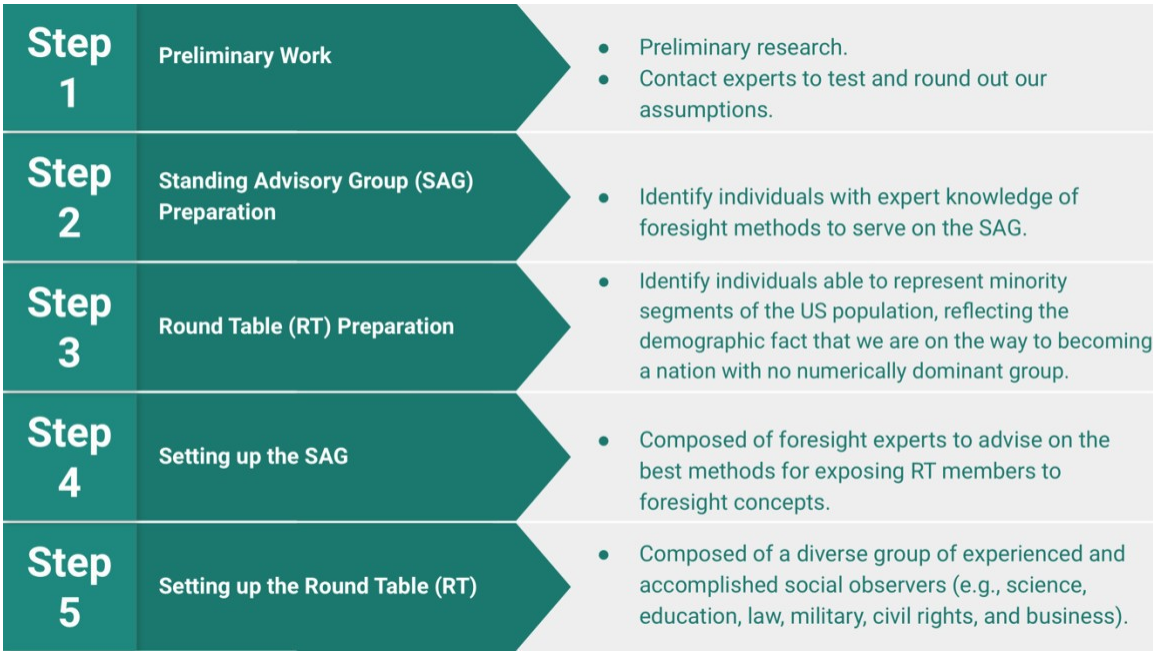


Dave Rejeski is Director of the Technology, Innovation and the Environment Project at the Environmental Law Institute, where his research focuses on better understanding the environmental impacts and opportunities created through emerging technology and innovation, structural change, and new public roles for environmental protection. He previously worked as director of the Science, Technology and Innovation Program at the Woodrow Wilson Center and served in the White House Office of Science and Technology Policy, the Council on Environmental Quality, and the Environmental Protection Agency. He received a B.A. from the Rhode Island School of Design, an M.A. in environmental design from Yale, and an M.P.A. from Harvard University.

In the course of establishing these panels, Co-researchers conducted nine direct meetings and extensively researched the literature on the dynamics of groups comprising what we called the national commons (See Appendix 2: Bibliography).

SAG and RT meetings were sequential. Each SAG meeting flowed into the next, and then the overall output of the SAG meetings flowed into the series of Round Table sessions. Thematic minutes established continuity. Flow charts beginning with Figure 1 illustrate the process.

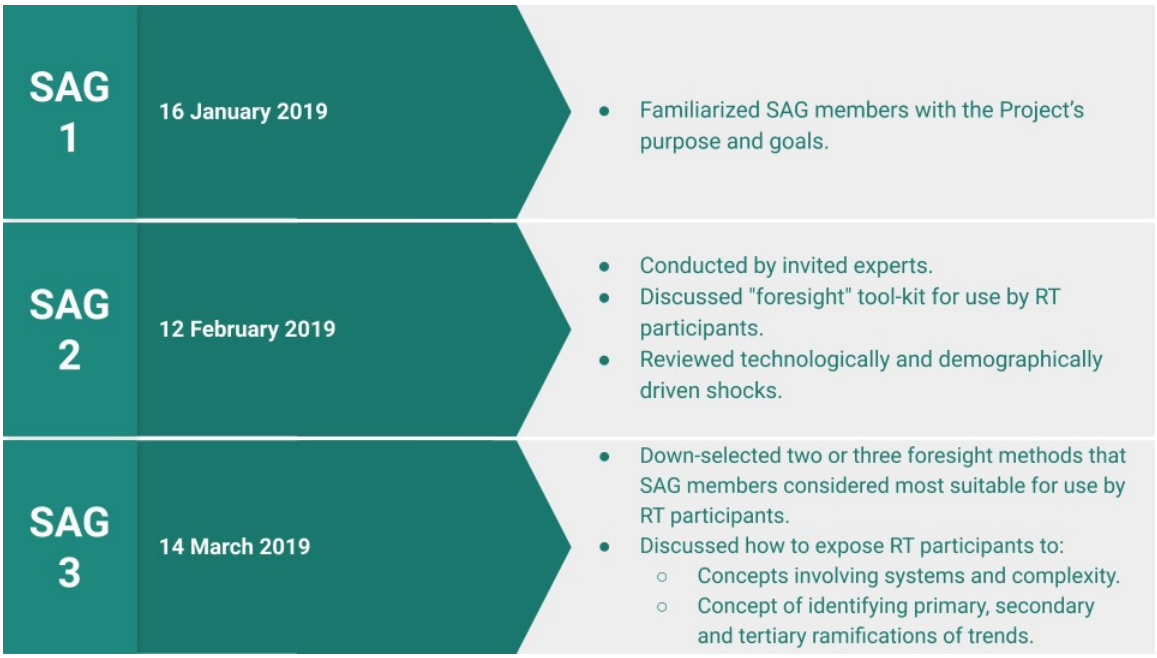
Figure 1. The Overall Process



Standing Advisory Group (SAG): Foresight

Co-researchers used the SAG to: (a) identify a set of long-range developments deemed by experts to present the greatest potential for rapid, discontinuous societal change; and (b) to identify the most effective ways to present this information to members of the Round Table. There were, for these purposes, a series of three meetings of the SAG (See ***Figure 2. The SAG Process***, below).

Figure 2. The SAG Process



Five developments were agreed by means of this process. They were:

- Advanced artificial intelligence (AAI). Artificial intelligence (AI) is in what may be thought of as its spoon-fed infancy, in the course of which it depends upon humans for programming and "education"; beyond that it will surge into a period of adolescent growth – characterized by its loss of dependence on humans for further development as it acquires the ability to teach itself, and reciprocally, humans will lose their ability to exert influence over subsequent developments. This stage is referred to as AAI.

- Synthetic biology. Synthetic biology has acquired a series of capabilities – e.g. notably, CRISPR gene editing – which, in combination with AI, promises to accelerate the ability of science to understand and manipulate complex biological processes. Beyond that is a stage of development when the only limit on what can be done to life forms – including human life — is imagination. The capacity will exist to make human beings stronger, smarter, healthier. The tendency will also exist for these improvements to be delivered primarily to the wealthy and the powerful, who alone will be able to afford them. Synthetic biology, in that case, will become an accelerant to the process of economic and social inequality.

- Extreme levels of climate change. Not long ago thought of as tomorrow's problem, climate change is manifesting itself globally at rates that exceed what were once high-end estimates. Damage to eco-systems is approaching levels at which these systems cannot be repaired, such that when and if they eventually reach their new equilibriums, the continuity of industrial civilization – and perhaps the continuity of human life – will be endangered. There may well be tipping points in these processes – and it is within the realm of the possible to consider extreme forms of social stress as triggers for human conflict, up to and including the use of weapons of mass destruction: noting that of seven acknowledged nuclear weapon states, three share strategically critical water resources originating in the Tibetan plateau (China, Pakistan and India

- "Pan-opticon." This is a term for virtually complete levels of surveillance and thought control which we adapted from an 18th century plan for prisons, according to which control could be achieved over prisoners who — because of the design of the prison — could be observed by a single security guard without the prisoners being able to know whether they were being watched at any given time. Accelerating advances in a collection of technologies (e.g. facial recognition, predictive behavioral analysis, etc.,) place panopticon within reach not only of wardens running prisons, but dictators running countries — with China in the lead.
- Demographic Transition. The United States is rapidly, and irrevocably, transitioning from a "white" numerical majority to a nation of minorities (including the white population as one of the minorities), with profound social, economic and political consequences in prospect.

As a set, these "drivers of change" share a common profile: each of them is already present, and developing rapidly; the present rate of development is close to linear, although on a steep rising slope; the prospect for each is that development will pass a transition point, after which the rate of development will accelerate, beyond which point standard measures of governance will lose their effectiveness; this transition point will occur within the next ten to twenty years.

The SAG meetings were also used by the Co-researchers to identify a set of basic concepts and methodologies that are central to foresight analysis. These were:

- Complexity theory applied to social development, including behavior of non-linear systems. Complexity theory is an outgrowth of theoretical physics which seeks to discover the rules of behavior for non-linear systems (i.e. systems in which changes of output are not proportional to changes in input). Fundamentally, such systems cannot be described by classical equations: they display discontinuities and randomness. The same concepts are well suited for a description of social systems in which humans are the prime movers. They are therefore a corrective for every deterministic theory of history.

- A systems analytic approach. Systems analysis is a powerful method for understanding complex systems in action. Democracy is a complex system (not just complicated, but complex), which requires an understanding of the whole as a unity, as opposed to the whole as a collection of pieces and parts. Complexity theory recognizes the existence of nested complex systems, perhaps best visualized on the model of Russian Matryoshka dolls in which successively smaller versions of the same doll are stacked one with the other. The image is not entirely accurate because such dolls are static, whereas "stacked" complex systems all interact with each other. Again, this approach, borrowed from physics, is a gift to the study of societal behavior which consists of multiple systems interacting with each other.

- Examples of basic foresight methods. The popular conception of foresight is that it is quasi-mystical, meretriciously prescriptive, and a lot closer to fortune telling than truth- telling. It is in fact an array of techniques that are designed to facilitate exploratory thinking about alternative futures. See Appendix 1: Foresight Methods[3]

At a subsequent series of meetings of the Round Table, SAG members introduced RT participants to these concepts.

The Round Table (RT): "Simulating The Commons"

Early on in the formulation of our terms of reference, we needed a term of art to capture the sense of that part of our experience of life as Americans which emphasizes values we hold in common, defining us as a nation: values that must be understood as a complex whole; as an identity, and not just a collection of hyphenated pieces and parts, differentiated by race, ethnicity, gender, and history. For this purpose, we borrowed the word "commons", defined as "the cultural and natural resources accessible to all members of a society"[4]. In so doing, we also had in mind the term "tragedy of the commons"[5] — the destruction of these common assets as a result of a social free-for-all by stakeholders who consume the commons rather than conserve them.
The Round Table was intended to function as a "virtual commons," and to be a vehicle for testing the impact of foresight methods on the quality of public discourse: specifically, to see if foresight would counter-act strong tendencies to polarization around the needs, ambitions, fears, prejudices, etc. of specific sectors of the public, along fracture lines created by differences over race/ethnicity; gender; age; social status, etc. For this purpose, the co-researchers' original plan was to invite representation from organizations that are formally engaged in advocating the interests of specific sectors of the population.

This plan of action failed to attract interest on the part of such organizations and had to be abandoned after four months of effort. We suspect that the reasons were:

- Tightly defined organizational missions
- Crises generated by the emerging positions and programs of the Trump administration.
- A tendency to distinguish between the immediate present and the longer-term future, by treating them as separable.
- A belief in the adequacy of present organizational systems as a means to deal with longer-term issues.

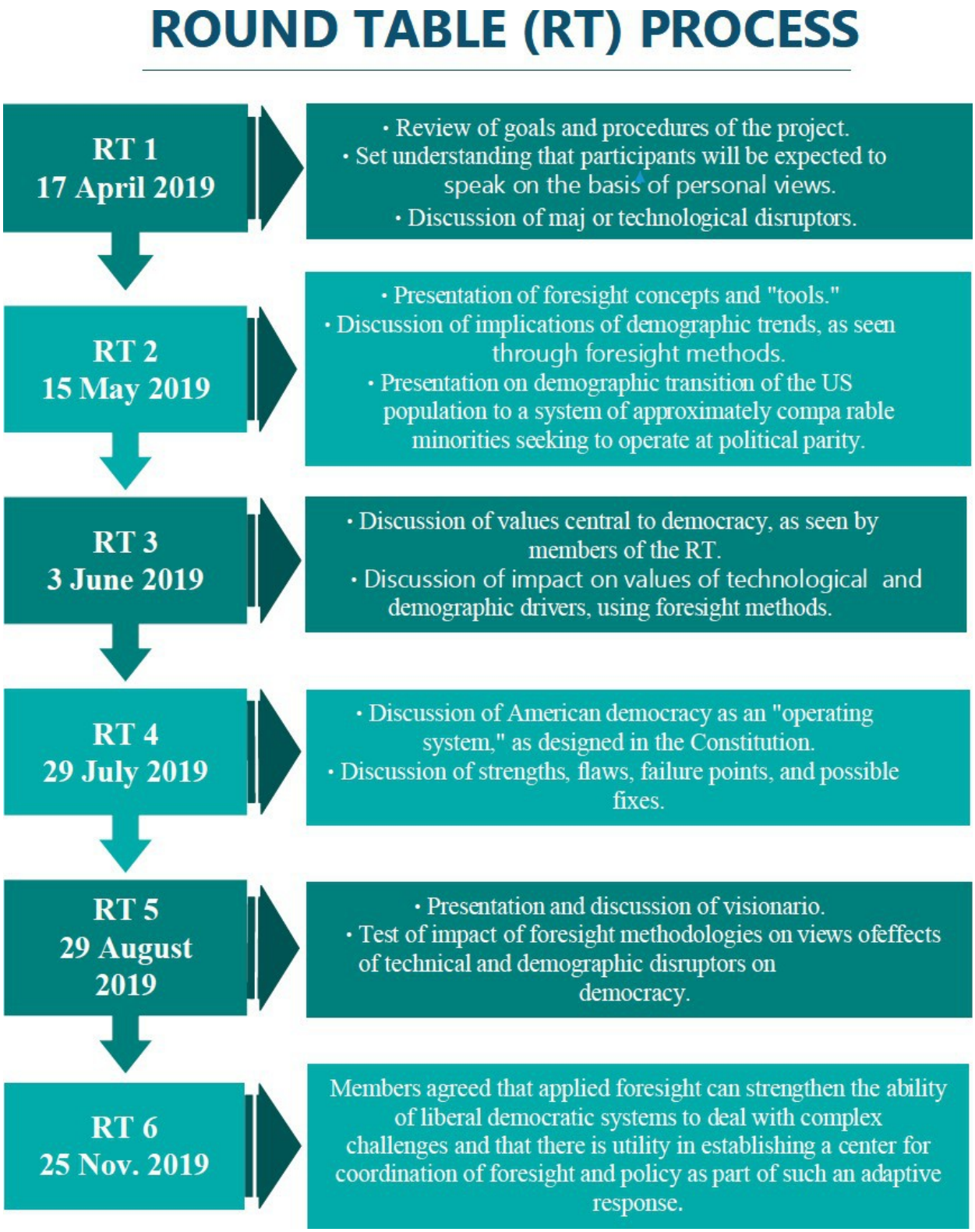
Ultimately, the Co-researchers decided to try a work-around, involving approaches to persons who, by virtue of their personal experiences and accomplishments could be called upon to comment not so much on what divides the Commons, but on the interests of the Commons in finding ways to overcome divisive forces. In short, we looked for persons who would address what unites, and how to preserve it, notwithstanding their knowledge of what divides it. On this basis, it was possible to recruit participants for the Round Table and to work with them through a series of six Round Table meetings.

3 Fuerth, Leon S., *Anticipatory Governance: Practical Upgrades*, Project on Forward Engagement, Washington, D.C., pages 80-81.
4 Definition/Explanation of "Commons" (See Footnotes 1 and 2 above).
5 Definition/Explanation of "Commons" (See Footnotes 1 and 2 above).

Core Team: (CT) Information Flow and Organization

The core team made sure that all participants were informed of the general objectives of the Project, its intended design, and of shifts made necessary in order to correct for new understandings of the subject at hand. (See Overview Flow Chart, above, ***Figure 1. The Overall Process***). All participants were notified in writing of each next session, with references to past and future meetings. Issues were identified in advance, subject to the views of the participants; power point charts were provided during discussions. Near-verbatim minutes were taken, names stripped in accordance with Chatham House procedures; a set of thematic minutes were distilled from these, and circulated for comment; and a final version of these, with marginal notes for comments submitted subsequent to meetings was circulated. (See ***Figure 3. The Round Table Process Showing Archiving***, below). This process assured that all members, including those who had to miss sessions, could be kept current – and that there would be a sense of continuity. The thematic minutes were a basic part of our process. The fact that we circulated these minutes and then allowed time for discussion of them at ensuing meetings is what allows us to assert that our descriptions of what emerged are accurate. After circulating the minutes and receiving feedback and comments from the participants, the Co-researchers are confident that they represent a check on the accuracy of our views.

Figure 3. The Round Table Process Showing Archiving



PROCESS BETWEEN ROUND TABLES

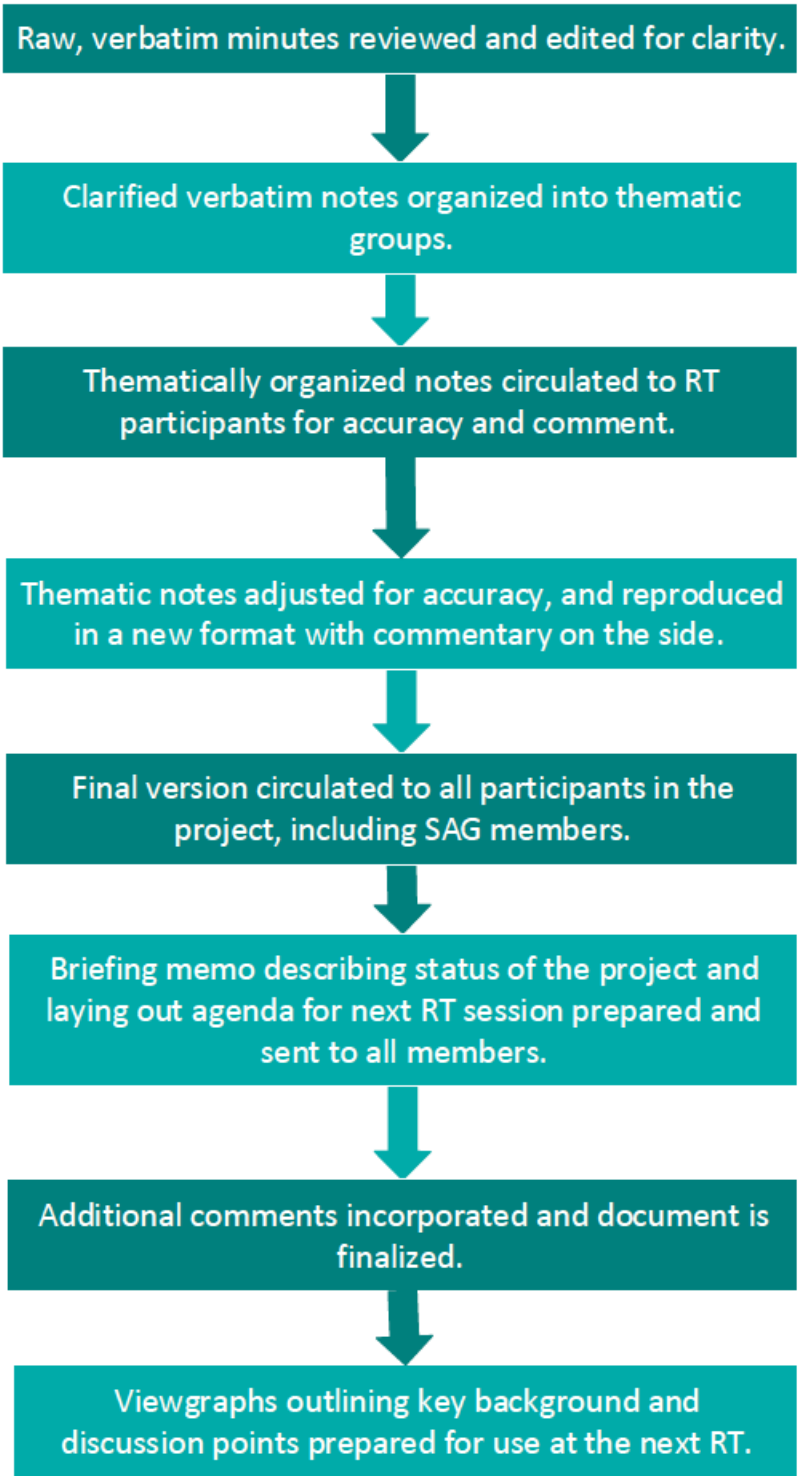


Figure 4. Example of Annotated Minutes From Appendix 3: Invitations + Annotated Minutes + Presentations

Roundtable 3 Questions with Post-Meeting Comments

****

1.

- How well do Americans understand the value of ? Does their understanding vary according to geography? To what extent is it ?
- ~~Definition as used by Round Table participants~~: "A relationship between a responsible citizenship and a responsive government that encourages participation in the political process." per pg 25 of verbatim notes,* cited by a participant from (name of official document)..
- democracy as a network of people who share a common, abstract .

* We are retaining the verbatim minutes but cannot share them due to the use of Chatham House Rules.

2. What are the foundational values of a democratic system?

- foundational values (religious freedom, and the right to private property)
- what rights are universal values for a democracy?
- does America have a collective value system?
- broader statement of values as applied to Americans: freedom of conscience; the right to flourish .
- need for truth as the outcome of reasoned discourse
- expansion of values from restricted application (as to race, gender, class) to universalized for the nation, and ultimately all nations.
- rule of law
- justice
- equal opportunity or equality of outcome?
- definition of opportunity as the opportunity to prosper., which should belong to all.
- dealing with the disadvantages of the young owing to poverty
- value of diversity to the nation

3. What is the status of our democracy, as understood by sectors of society?

- The base-line: where democracy stands: unfinished business? Grievously flawed from the beginning? A work forever in progress?
- Intentionality of not allowing black Americans to share in the right to prosper.
- Denial of rights institutionalized against black Americans.
- Continuing into the present time: voter suppression targeting black citizens.
- Continued survival of white supremacy as white privilege.
- Critical role of black vote at this juncture, could be game changer.

Commented [A1]: Person #6: 1. What is democracy. Definition as used by Round Table participants, clipped the last part. The full definition is: "…a relationship between a responsible citizenry and a responsive government that encourages participation in the political process and guarantees basic rights." This comes from years of discussion and RTD feedback and has now changed in the State of the Future reports for probably the last ten years. It is available in context online like https://themp.org/#group_id=4f98b183e3dfc62b2e00018a§ion=reportclick on "Short Overview" then scroll down past the infographics. The "official document" would be either the State of the Future 19.1 page 24 or the Global Futures Intelligence System, Global Challenge 4: How can genuine democracy emerge from authoritarian regimes? Menu selection: Report, Short Overview..... [1]

Commented [A2]: Person #2: Another issue is the definition of democracy as understood by Americans—what is it? That could include an understanding of the values of [2]

Commented [A3]: Person #2: We also talked about the populist response to liberalism. That is not generational, per se, but ideological

Commented [A4]: Person #3: Public education lack, diminishment or failure was discussed in terms of civics and government, critical thinking for younger … [3]

Commented [A5]: Person #2: I don't recall the group voting on this as the agreed to definition. Without taking issue with the participant who offered it, it is a reasonable definition [4]

Commented [A6]: Person #3: What is this belief-may be defined in other notes.
Does this describe any nation Democratic or non?

Commented [A7]: Person #2: We also discussed the question of who is responsible for educating students on the meaning of democracy, with two groups, one … [5]

Commented [A8]: Person #2: We looked again at the idea of a democratic commons and it would seem that this idea would fit under the definition of democracy

Commented [A9]: Person #6: 2. I would add respect for the other and equal justice under the law. We do need more focus on the citizen's responsibilities as well as … [6]

Commented [A10]: Person #3: Include secular or non-religious freedom

Commented [A11]: Person #6: 3. We talked a bit about the purpose of the US, I brought of the great seal of the USA on the back of the one dollar bill, the purpose is … [7]

Commented [A12]: Person #3: Examination of FDR's 1941 Four Freedoms speech in context of modern times and for the 21st century could be useful for some … [8]

Commented [A13]: Person #3: Related to the future of work and technology discussed in other RTs and elsewhere, this is a foundational democracy challenge … [9]

Commented [A14]: Person #2: Some others mentioned in the discussion: belief in the worth and dignity of … [10]

Chapter 2: Output of Round Table Discussions

Our incoming concern was the embitterment and paralysis of public discourse in America, which in our view not only compromised the effectiveness of democracy as a means to deal with major issues in the present and near term, but also in the longer-term. Our premise was that foresight is a mode of thinking which — assuming it could be harnessed — would help sustain open-minded inquiry, and hence support a fundamental precondition for liberal democracy. Our process was designed as an experiment to test this proposition, and to determine if it might be scalable. The steps involved in this process were:

- Build a scale model of the American "commons," capturing its diversity. That was the Round Table (RT)
- Expose its members to foresight concepts we developed with the help of the SAG (Standing Advisory Group).
- Provide its members with expert briefings about a set of major, transformative forces: some arising as consequences of technological change; others as the consequences of demographic change.
- Conduct a series of RT meetings, designed to explore the impact of these advancing forces on the social commons, as members of the Round Table might perceive these impacts to be.
- Evaluate the output of these discussions in terms of the stated objectives.
- Think about applications of this approach, at scale.

Outcome of Discussions:

The definition of democracy, as proposed by a Round Table participant in Round Table 3 (19 June 2019), was: "A relationship between a responsible citizenry and a responsive government that encourages participation in the political process." **The foundational values of democracy** were identified as: religious freedom, and the right to private property. The latter component (right to private property,) was redefined by the group more broadly as the right to flourish. Other basic qualities were identified as: the need for truth as the outcome of reasoned discourse; expansion of values from restricted application as to race, gender, class to a universalization for the nation, and ultimately all nations; rule of law; justice; equal opportunity, further defined as the opportunity to prosper, which should belong to all. This linked to the disadvantages of the young owing to poverty, and the economic value of diversity to the nation.

There was a discussion of the status of democratic development as of the present time — an effort to define a baseline: Where does democracy stand? Is there unfinished business? Has it been grievously flawed from the beginning? Is democracy a work forever in-progress? The focal points of this discussion were: denial of the right to prosper, in the form of a system of economic and financial barriers institutionalized against black Americans, buttressed by voter suppression targeting black citizens and the continued survival of white supremacy as a foundational part of the system. With regard to politics, members of the Round Table underscored the politically critical role of the black vote at this juncture, as a likely game changer. They also noted a trend in which the politics of cynicism replace the politics of trust, which could permanently damage the system. Some, however, felt that we have "been there/done that" and survived, during the crises experienced in the course of previous epochs of turmoil in American history. Nevertheless, there was concern about the implications of the loss of public faith in the veracity of government, deemed to be especially noticeable during the current administration.

There followed a discussion about oncoming, transformational forces, arising from demographic shifts: the decline of whites and white privilege; the rise of black political power; the rise of Hispanics and cultural duality; the rise of women; the impact of radical acceleration of technologies that displace human labor, human management, human intelligence and human values.

As to the possible impact of these forces on democracy, key points were:

- Scope and velocity of change raises questions about whether democracy as we know it can keep pace. Can democratic systems be reinforced?
- Different cultural values in America as regards democracy, churning, etc.
- Democracy means churning, not stability
- Has democracy already failed because of inequality?
- World-wide populist uprising against the liberal political order.
- Authoritarians climbing to power by courting the under-served in their societies with shows of an insincere respect. To some extent, by promising to deliver what the establishment has failed to provide, e.g. free medical service for the poor.

Finally, there was a discussion about how foresight could influence the outcome of the interaction of these forces on the evolution of democracy: there is a need for predictive forms of defense of identity, and predictive analysis supported by AI. For example, issues raised include:

- What does it take to be a good citizen in a democracy?
- Ownership of personal digital data taken by corporations.
- Right to ownership of one's personal data.
- The need for positive memes about American democracy.
- Alternative forms of democracy?
- Are we selling democracy short.....is it alive and well at the local level?
- Are we losing faith in the process beyond what the facts might indicate?

Round Table 4 analyzed democratic governance as a system comprised of a mission statement focused on permanent values (the Declaration of Independence), and an operating system (the Constitution) designed for the governance of an experimental polity — a re—public of laws, deriving its legal and moral authority from the consent of the governed. There was discussion of the role of foresight in the maintenance of this system, particularly in light of oncoming disruptive trends originating in revolutionary technological/economic change, and in fundamental demographic transitions that are underway.

American Democracy as Value System:

The Declaration of Independence was understood by Round Table members to encapsulate the value system of the United States: but as its drafters aspired it to be, rather than as it was at the time—or, for that matter, rather than it is even today. As such, the Declaration speaks ahead of its time (in fact, ahead of ours) to the universal rights of human beings, as birthrights rather than grants from authority. That assertion — framed in the Declaration in universalist language — did not distinguish between races, creeds, or classes of persons.

The Constitution, on the other hand, was a reflection of political and economic realities at the time of its drafting — most notably, the institution of human slavery as a condition precedent for the Republic. And yet, the Constitution was also seen, to use a modern term, as the operating system for a republic, with provisions intended to make the system self-correcting over time: either by way of a balancing of powers among its co-equal branches; or by way of processes capable of reflecting changing views in society regarding values, laws, and methods of regulation— permitting evolutionary change, but discouraging forms of change deemed to be clearly counter-constitutional, using the law and electoral processes as forces to be arrayed against corruption and abuse of power, which were clearly viewed by the Founders as inherent qualities of human nature.

The Round Table discussions ranged from what could be termed the inherited social challenges of our time (e.g. white supremacy, male privilege, economic inequality) to challenges of the future, and on to interactions between the two. Core values were seen to be currently at risk to trends and events foreseen by the Founders, based on their direct experience of life and affairs. The Constitutional system of balanced powers was seen by Round Table participants as having evolved into a system where powers are distributed on a gradient, ranging from absolutely distinct to shared/blurred. Some believed that this process has reached its possible limit, involving a direct philosophical clash between Originalists and advocates of "unitary" presidential power—resulting in a presidency which regards itself as essentially beyond the reach of the Congress and the Courts. Meanwhile, it was observed that public opinion is already extremely exposed to forms of manipulation that are depleting its confidence in the reality of fact as distinguished from falsehood, while its faith in the integrity of key institutions is being undermined.

Participants discussed challenges both to the values and to the system arising from events beyond the experience and the imaginations of the Founders. Included among these:

- artificial intelligence advanced to the point where it is displacing human judgment from the direction of basic societal functions;
- to synthetic biology, influencing human evolution by means of genetic modification, and beyond that to man-machine unions;
- to climate change, disruptive enough to threaten the continuity of civilization as we now know it; and
- to methods of social control involving the progressive effacement of individual moral and intellectual autonomy.

Some members stressed the continued vitality of existing forces for rational adaptation, citing the constitutional "operating system" that makes it possible for societal change to be accommodated by elections, legislation, judicial actions, and regulatory processes. Others cited the ability of regions, states, cities, and local groups to devise and experiment with new models of democratic processes. Others counseled awareness of the tremendous adaptive power within the capitalist system. And most others stressed the potential of American youth to break down institutional resistance to change.

These discussions then turned to the possible utility of foresight as a means to reinforce the power of democratic governance to adapt to changes of great magnitude while retaining its essential values. All participants saw foresight as having the potential to preserve focused, open- minded discourse about these matters, and thereby to help sustain the existence of a national commons, even in the presence of both legacy issues and new oncoming forces of great divisive power.

On the following pages there are short summaries of all three of the SAG Meetings and all six of the Round Table meetings.

Round Table discussions of these themes were very rich. Key points were:

- American Democracy as Value System
  - The value system for democracy in America is contained in the Declaration of Independence. The operating system for democratic governance in America is written in the Constitution.
  - The Declaration was written in universalist language, in terms meant to apply for all times to all nations. But the operating system of the nation — its Constitution — was written by and for the white population, with tiers of privilege based on economic standing.
  - The Civil War established the principle that the rights and protections of the Constitution are universal for all citizens (and that the former slaves were citizens), but the execution of this principle has been the subject of a continuous effort to reverse that outcome: resulting in a battle which is ongoing to the present moment.
  - Nevertheless, although the values presented in the Declaration are accepted to be universal for all American citizens; the issue remains the persistent gap between aspiration and realization.
  - Whether and how to close this gap is the object of a continuing battle, which has been conducted mostly through the formal political system, but with intervals when it has been fought at levels of violence up to and including the Civil War.
  - There is also a reading of the Declaration which leads to a peculiarly American conviction that American societal values extend to all peoples, as embodied in the Universal Declaration of Human Rights.
  - This, too, has been and remains the object of controversy about the conduct of American foreign policy, including its legitimacy as a basis for the use of coercive force against foreign governments.
  - The pursuit of American societal values remains and will always be, a work in progress.
  - A reading of the Declaration of Independence leads to a distilled list of <u>general</u> values (as distinguished from specific rights, such as are in the first ten amendments to the Constitution).
  - These values can be thought of as "ur-laws" of democratic society, from which specific rights are formed: they are the template by which laws are written, and in the light of which the justice of the system is gauged. For example:
- The underlying unity of the human species.
- The moral equality of all people.
- Respect for differences among people, from the individual to the national.
- Respect for human dignity.
- Primary value of truth.
- Truth is the outcome of search and debate.
- The temporary nature of political power
- Constraints on the exercise of power.
- Resistance to absolutism.

- American Democracy as Operating System

  - The entire operating system of democratic governance in America is derived from these values. To the extent that the actual operation of the system is destructive of these values, those who are responsible can be replaced. If replacing persons does not correct the discrepancy, the system can be modified. If modifying the system does not correct the discrepancy, abolishing it is — in principle — possible.
  - The Constitution of the United States is, in effect, the Operating System for a re public in the form of a federation.
  - The framers of the Constitution were students of both classical and the contemporary history of their own times. They could not foretell the future, but they were able to isolate from their scholarship, and from the accumulated experience of British rule, a knowledge of the kinds of issues that would have to be dealt with by a Constitution.
  - These parameters were identified and exhaustively discussed in the Federalist Papers. There are eighty-five Federalist Papers. Each one addresses a specific design problem to be anticipated in the governance of the republic that the founders were consciously working to create — and then to enact with the support of a dubious and fractious group of newly independent and sovereign states — done, in a little under four months, in Philadelphia.
  - There was no precise antecedent for this endeavor, and every question they dealt with was revolutionary in its origins and consequences. Examples are:

- Where is the sovereign power of this entity?
- What is to prevent that power from disintegrating into chaos?
- What is to prevent that power from escalating into tyranny, whether by a single individual or a mob?
- How shall laws be made?
- How shall they be enforced?
- What prevents the federal entity from overpowering the states; the states from overpowering the localities, and the localities from becoming fiefdoms?
- Who has the power to make war? Prevent it? Who has the power to make peace?
- Who is to be chief executive, and in what way is that office to be kept from evolving from a temporary grant of power to a permanent reign?

- How did the Constitution build American societal values into the system of governance?
  - Constrains the powers of the Federal government viz. the powers of the states.
  - Within the Federal Government, the system of checks and balances.
  - The Office of the President,
  - An electoral system to translate the public will into law through selection of the President and members of the legislature.
  - The Bill of Rights. The power of amendment of the Constitution.
  - The power of Impeachment.
  - The Right to Bear Arms.

Capsule summaries of these discussions are presented below.

The following section is the final outcome of meeting #6.

Center (proposal for an institutional basis for long-range scanning and foresight/policy integration).

The idea of a center of coordination was discussed in terms of the generic functions that a center would carry out. This led to a comparative analysis of functionally similar systems used in industry (Toyota) or proposed for application in government. From there, the conversation moved to the subject of scalability drawn from one of the principles of complexity theory.

The functions to be accomplished by a center to integrate foresight, policy, and to monitor execution would include the following capabilities:

Foresight

- Situational awareness: State of the World; State of the Union.
- Near-term decisions with potentially significant long-term impact.
- Selected "vital" trends.
- Globalized issues.
- Very long-range issues.
- Ability to use complete set of foresight tools.

Policy Design

- Inventory of issues for decision, needed in the immediate present, middle-term and longer term.
- Possible policy responses: including anticipated costs and consequences.

Feedback

- Periodic monitoring of policy outcomes and projections for the future.
- Whole of system interactions.

The Center would be used by policy-makers to improve key decisions by using the complete suite of foresight tools needed. This would permit alternative futures to be considered for second, third, and fourth-order effects of those decisions

Visionario Use

The Co-researchers tested a design concept for a center by using it in round table discussions of possible major-scale societal disruptions (e.g., climate change; artificial intelligence; permanent, non-reversible genetic modifications to species) and possible anticipatory responses to these (e.g., geo-engineering; biological engineering), with special reference to feasibility, as opposed to doctrinal orthodoxy. The approach used a "visionario," as previously described on page 237. This experiment was designed to test the proposition — central to the Project — that applied foresight can be used to identify major oncoming challenges to democratic governance in time to promote relatively unbiased discussion of their likely consequences and longer-range (and hence, less clear) implications for public policy.

Capsule Summaries

SAG Meetings 1-3 Summaries:

Standing Advisory Group: Meeting # 1 of 3 Date:
16 January 2019

The meeting considered a range of major drivers of change deemed capable of producing disruptive levels of social change. Note: the word "disruptive" is meant to connote abrupt as opposed to gradual change. The hyper-polarization of political discourse was identified as a threat to the adaptive capacity of the system as a whole. It was agreed that a need exists for a mode in which stakeholders across the political spectrum may more meaningfully engage with one another. The premise of the project was that utilizing foresight-based analysis (an objective systematic visualization and critical comparison of alternative courses of action) would help create a space for new ideas to survive in an otherwise ideologically polarized environment. The history of various efforts along this line was reviewed.

Past government-funded foresight projects undertaken within the executive branch, have not survived turnover from one presidential administration to the next. Efforts to bring systematic foresight into the legislative branch have repeatedly failed. Accordingly, the Project will attempt to create a foresight engagement model, which can be utilized by the general public.

This foresight model will be underpinned by a series of assumptions: that the general public sees the need to escape political gridlock; that foresight is a system of thought that can be made accessible to the general public, and that foresight is a discipline which, if properly practiced, requires people to leave their preconceptions at the door.

Standing Advisory Group Meeting #2 of 3 Date:
12 February 2019

Members began a discussion on the nature of foresight methodology, discussing both the need for taking a scientific approach to democracy and governance, and the dangers involved in an excessively narrow use of such an approach. Project leadership summarized this dichotomy through the use of a quote by Carl Sagan:

> "…Democracy can also be subverted more thoroughly through the products of science than any pre-industrial demagogue ever dreamed. Finding the occasional straw of truth awash in a great ocean of confusion and bamboozle requires intelligence, vigilance, dedication and courage. But if we don't practice these tough habits of thought, we cannot hope to solve the truly serious problems that face us—and we risk becoming a nation of suckers, a world of suckers, up for grabs by the next charlatan who comes along."[6]

Members stressed that foresight is an approach for identifying long-range problems, not for crisis management. Foresight methodology is designed to be a tool of anticipatory governance, something that can be applied by policy-makers to help influence the longer-term future. In discussing the application of foresight analysis to policy, a central question was: "how long does it take to change course, and how can that lag time be accommodated in an anticipatory response?"

SAG members discussed examples of foresight methodology in action, including historical United States initiatives and policies that employed foresight as a tool. Certain instances were mentioned, such as the land grant system created after the American Civil War, the Louisiana Purchase, the Marshall Plan, the purchase of Alaska, and the Panama Canal Treaty. All of these instances displayed a great deal of foresight in decision-making; however, they were mostly the result of individual leadership, not an institutionalized system of governance. The purpose of the Project is to provide a foresight engagement model which can be utilized by the wider public and can survive the turnover of presidential administrations or dynamic political priorities.

[6] Sagan, Carl. *The Demon-Haunted World: Science as a Candle in the Dark*, Paw Prints, 2013. Pg. 4

Standing Advisory Group Meeting #3 of 3 Date:
14 March 2019

The meeting focused on technologies with a high potential for disruptive consequences.

(1) **Artificial Intelligence**. The Boeing 737 MAX. Suspicions (not yet proven as of the date of the meeting) that this aircraft's two crashes might be the result of a shift of executive control of the aircraft from its human pilots to a form of artificially intelligence control system. From this point about flight safety, the discussion moved to the general concern that as artificial intelligence continues to develop it can be used in ways that will increasingly displace humans from critical decision-making processes. Members called attention to the role of algorithms in machine performance: noting that at present algorithms are created by humans, and may therefore reflect unconscious biases. One of the members noted the increasing involvement of artificial intelligence in the criminal justice system, citing examples such as algorithmic policing, automation in pre-trial administration, and risk-assessment systems in the process for considering paroles.

Artificial Intelligence and algorithmic learning seem to have been implemented rapidly in order to address severe efficiency problems and backlogs in the criminal justice system. However, as politicians and governmental organizations embrace these emerging technologies, human regulators are not keeping pace. As the velocity of innovation quickens, governmental institutions will either need to restructure to match the pace, or risk entirely losing the capacity to exercise oversight of emerging technologies.

(2) **Climate Change:** The US military already views climate change as a challenge to national security in the form of a "threat multiplier". The 2014 Quadrennial Defense Review was cited as an example: identifying climate change as a force that "will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions – conditions that can enable terrorist activity and other forms of violence".[7] This definition can also be extended to include the ways in which climate change exacerbates strategic tensions, such as the emergence of new maritime passageways as factors in a competition to exploit the Arctic for geopolitical and economic reasons. In discussing the need for application of foresight methodology in governance, members noted the discrepancy of perspectives between generations in their approaches to climate change. Younger generations tend not to see climate change as a distant problem or as a secondary priority, but as something they will be forced to confront in their lifetimes.

In the United States, this generational gap is now beginning to have an impact on national politics, but the political majority has yet to adopt the same sense of urgency that many younger millennials and members of Generation X exhibit. Members noted that, as a result of social media and other emerging technologies, the capacity for futures modeling and for implementation of foresight methodology as a factor in policy, has never been greater, though it has yet to be fully utilized by those in positions of power. This generational discrepancy is contributing to distrust in government: a trend that some members believe is likely to worsen without a major shakeup of the political system.

Discussion shifted to the (then) pending first meeting of the Round Table, focused on best practices to employ in order to familiarize RT members with basic foresight concepts. Members agreed on the importance of allowing room for the participants to voice their own thoughts and opinions, rather than setting up a "field day for futurists" by overly populating the RT session with SAG members. It was agreed that this interaction should be designed to encourage and equip participants to discuss issues related to foresight, learn from the discussions, and potentially, to change their perspectives on how to address future issues.

One member suggested that round-table discussions should be opened by asking participants "what are your thoughts about the future?" and then tracking the progression of their responses to that question over the course of the discussions. Members emphasized that SAG members will still play a vital role because although participants may be familiar with individual issues associated with ultra-rapid technological change, exposure to these issues in isolation from each other may not be enough to change ways of thinking. Any discussion of the future needs to be supported by giving the participants basic foresight tools and processes and assisting the participants to apply them. This manner of arranging the discussions will therefore require that futurists in the room should act as coaches, guiding the participants with advice on foresight methodology. SAG members agreed that the objective of the project is to provide foresight methodology to the RT participants as a means to bypass a shift to early polarization.

[7] United States Department of Defense. Quadrennial Defense Review 2014, report, March 2014; Washington, D.C. 2014, Pg. 12.

Round Table Meeting Summaries

Round Table 1 Meeting #1 of 6 Date:
17 April 2019

The purpose of RT1 was to launch discussions of long-range societal implications of major oncoming trends, reflecting disruptive forms of technology, and other disruptive trends reflecting major oncoming changes in the demographics of the United States. Foresight methodologies were to be introduced to help structure discussions. The primary question to be addressed was whether our system of democratic governance has the capacity to sustain itself in the presence of multiple forms of profoundly disruptive change, under conditions where political discourse is polarized and responsiveness is blocked by stalemate.

RT1 began with the issue: what is the present condition of democratic governance, as a baseline for discussion? Round Table members immediately stressed very high levels of inequality among different components of the population existed. High levels of inequality were manifested in unequal access to education, health care, justice, political representation. Large sectors of the populace believe, correctly, that the dominant system works to disenfranchise them. Elected representatives are seen as primarily interested in office, rather than service. Corporations are seen as super-empowered individuals. Pessimism about the system depresses political engagement to the detriment of groups that should be highly involved in political activities both for the sake of their own interests, and related national concerns.

Three technology driven disruptors were identified: Artificial Intelligence, synthetic biology, climate change.

1. Algorithms, which are the souls of computers, are created by persons (although at a later stage of development AI may write its own algorithms). Machine learning and AI will incorporate and magnify the effects of biases (whether conscious or not) of the specialists who prepare the algorithms. The ability to detect and neutralize bias imbedded in algorithms is critical, but such capabilities are not in existence. Chinese experimentation with AI as a basis for social control on a mass basis is deeply troubling.

2. Synthetic biology, accelerated by CRISPR, can add a new dimension to the advantages of the 1% and their offspring. It is nearly impossible to develop enforceable guidelines to monitor the ethics and deal with the speed of change likely to come from AI, especially as AI capabilities and applications multiply geometrically.

3. Climate change will injure sectors of the population least able to adapt or escape. The younger generation is fatalistic. Many do not believe the human species will last through the next half century absent major change, which they see as very problematic.

General observations: the rate of change begins as linear, but if one analyses the probable arc of development of each of the technological drivers, there will be a sharp acceleration over the next twenty years, and these trends will be highly interactive. Government will lag behind in coming to grips with all this. Meanwhile, corporations will move out fast to anticipate and manipulate social responses. More anticipatory forms of governance are possible, but unlikely because of our political system. An impulse from the grass roots might get us moving, but that impulse depends on leadership, not yet in evidence.

Some participants believed that the overall tone of the discussion was too pessimistic.

Round Table Meeting #2 of 6
Date: 15 May 2019

The objectives of the meeting were:

1. Presentation of PEW Foundation analyses of demographic trends in the United States by Dr. Mark Lopez, presentation of foresight methods;
2. Discussion of foresight applied to major change drivers (technology and demographics related) led by Co-researchers.

Presentation on Demographics:

- The Immigration and Naturalization Act (INA) of 1965 was a watershed in U.S. demographics. It opened channels for much higher numbers of immigrants, with lower educational accomplishments and lower skill levels. Mexico was the largest source of immigrants for a generation. This has shifted to Asia, as the Mexican share declined. The U.S. population is aging, but less so than in other countries, due to the lower age of immigrants. The white working population is declining and is close to or just below 50%, with a continuing trend.

- Public Attitudes are split between those who value diversity, and those who deplore it. There is a souring of public attitudes about the future. The trend is most pronounced among whites.

- American youth are less patriotic than previous generations, viewing the United States as good but not best.

Discussion of Foresight Methods:

A presentation was given of selected basic methods based on prior discussion of the Co- researchers with members of the Standing Advisory Group (SAG).

- **Demonstration of "Futures Wheel – Artificial Intelligence"** As applied to the subject of Artificial Intelligence, RT members pointed out the potential for new scientific discoveries and a new capacity for managing complex issues. However, profound concerns were expressed regarding the impact on democratic governance was called the "tyranny of the algorithm" as a concealed form of bias – specifically, white bias; damage to values; downward pressure on less well-trained; downward pressure on white collar workers; possible unforeseen changes to brain structure (epigenetics); rendering educational system obsolete; perfected forms of surveillance and social compulsion at the disposal of political and corporate power.

- **Demonstration of "Futures Wheel – Synthetic Biology"** As applied to the subject of synthetic biology, there will be new products with radically improved characteristics. However, there is also a high risk of the uncontrolled proliferation of genetic innovations with no effective standards of review and control. Great strides in health, longevity, and increased capabilities are coming. However, these are likely to flow towards the wealthiest states and individuals, including the offspring of the wealthiest. This will reinforce class divisions. "Natural evolution disruption" means you can have a negative, [such as] eroding the oceans, but you could also have a reversal and a prevention of extinctions.

  AI and its expansion of our knowledge of the biome suggests that no single technology is developing in isolation. You can see how AI affects synthetic biology. AI and synthetic biology are biased toward people who are highly-educated. We know about epigenetics, that it will change the next generation. Trauma changes the immune, hormonal, and other systems. If you're in a state of anxiety, there's more cortisol in your system and it will affect your brain. These changes get passed on genetically.

- **Demonstration of "Futures Wheel – Climate Change"** As applied to climate change, some benefits may accrue at early stages, largely flowing to the richest states and wealthiest individuals. However, even at early stages, and with mounting effect, major overall economic losses as a result of declining fertility and productivity in agriculture and aquaculture can occur. Major losses and costs associated with rising sea levels are also possible. At more advanced stages, uncontrollable migration levels; international tensions tilting odds towards warfare and possible triggers for nuclear weapons use by poorer states that have already acquired them. At extreme levels, eco-system collapse could occur.

- Civilizational disorder can occur, creating a need for dramatic anticipatory action increasingly clear to younger persons, who may succeed in stimulating a more vigorous response. But they will be working against entrenched interests.
- **Demonstration of "Futures Wheel - Panopticon"** As applied to Panopticon (the perfection of surveillance and behavior modification techniques based on AI). There may be greater security, but at the expense of suppression of dissent and loss of freedom at every level. "1984" may be realized. Round Table Observations regarding foresight methods applied to change drivers: "We began to see that none of these disruptive technological trends will develop in isolation from the others." Artificial intelligence is the common denominator. All produce changes biased towards the most powerful and the wealthiest, who emerge as a super-class in the midst of a democratic order trending towards decline.

Round Table Observations of Implications for Governance:

There is a need to beef up expertise in government on foresight and knowledge of how to couple foresight to formulation of long-range policy and how to strengthen regulatory systems. There is also a need for legislators to be much more highly aware of and knowledgeable about disruptive trends, and how to upgrade civics education as well as a need to train young students to navigate the information system, to look for links to values.

Selected Quotes from Participants:

As we started to look at the four areas, we began to see the connection that none of these technologies will be developed in isolation from the other three. We are considering more complex relationships.

It can take a catastrophe before someone does something. We need to beef up the regulatory presence or capability. We need to beef up the government expertise. And it needs to be well funded.

Expecting a U.S. legislator to understand it is currently highly unlikely. You need educated legislators. Do you make them smart after they're elected or can the democratic process allow you to pick smart legislators?

There's a need for greater Federal agency-corporation relations.

The egregiousness of political decisions often allows people to take things into their own hands.

"There may be a way to emerge from this with an enhancement of democracy. For example, we've just now begun teaching children how to just barely navigate the financial system. We don't have anything to teach them how to navigate the information system; sure they know how to get into it, but they don't know how to discern what is and isn't the right information."

"Look at school children and climate change. This goes back to the question of how do we educate the public? If you wait for the decision-makers to start educating the public, then it won't happen. You want to get the public to start educating themselves by spontaneous methods. Don't underestimate children who say you screwed up and we're going to fix it."

Round Table Meeting #3 of 6
Date: 19 June 2019

RT3 began with a discussion of values that can be considered as central to democracy. This was followed by a discussion covering the possible effects on these values by their intersections with the technological and demographic drivers that were discussed in earlier sessions.

The definition of democracy, as proposed by a Round Table participant was: "A relationship between a responsible citizenship and a responsive government that encourages participation in the political process." The foundational values of democracy were identified as: religious freedom, and the right to private property. The latter component (right to private property,) was redefined by the group more broadly as the right to flourish. Other basic qualities were identified as: the need for truth as the outcome of reasoned discourse; expansion of values from restricted application limited specifically to race, gender, or class, etc. to a universalization for the nation, and ultimately all nations; rule of law; justice; equal opportunity, further defined as the opportunity to prosper, which should belong to all. This linked to the disadvantages of the young owing to poverty, and the economic value of diversity to the nation.

There was a discussion of the status of democratic development as of the present time — an effort to define a base-line: Where does democracy stand? Is there unfinished business? Has it been grievously flawed from the beginning? Is democracy a work forever in progress? The focal points of this discussion were: impediments to the right to prosper, by way of a system of economic and financial barriers institutionalized against black Americans and other minorities, buttressed by voter suppression. With regard to politics, members of the Round Table underscored the politically critical role of the black vote at this juncture, as a likely game changer. They also noted a trend in which the politics of cynicism replace the politics of trust, which could permanently damage the system. Some, however, felt that we have "been there/done that" and survived, during the crises experienced in the course of previous epochs of turmoil in American history. Nevertheless, there was concern about the implications of the loss of public faith in the veracity of government, deemed to be especially noticeable during the current administration.

There followed a discussion about oncoming, transformational forces, including demographic shifts: The decline of whites and white privilege? Rise of black political power? Rise of Hispanics and cultural duality? Rise of women? Impact of radical acceleration of technologies that displace human labor, human management, human intelligence and human values, and which potentially endanger human existence. Synthetic biology can create new forms of inequality.

As to the possible impact of these forces on democracy, key points were:

- Scope and velocity of change raises questions about whether democracy as we know it can keep pace. Can democratic systems be reinforced?
- Different cultural values in America as regards democracy, churning, etc.
- Democracy means churning, not stability
- Has democracy already failed because of inequality?
- World-wide populist uprising against the liberal political order.
- Authoritarians climb to power by courting the under-served in their societies with shows of respect. To some extent, they build credibility with these sectors by promising to deliver what the Establishment has failed to provide, e.g. free medical service for the poor.

Finally, there was a discussion about how foresight could influence the outcome of the interaction of these forces. There is a need for predictive forms of defense of identity, and predictive analysis supported by AI. For example, issues raised include:

- What does it take to be a good citizen in a democracy?
- Ownership of personal digital data taken by corporations.
- Right to ownership of one's personal data.
- The need for positive memes about American democracy.
  Alternative forms of democracy? Are we selling democracy short.....is it alive and well at the local level? Are we losing faith in the process beyond what the facts might indicate?

Round Table Meeting #4 of 6
Date: 30 July 2019

Round Table 4 analyzed democratic governance as a system comprised of a mission statement focused on permanent values (the Declaration of Independence), and an operating system (the Constitution) designed for the governance of an experimental form of government—a republic of laws, deriving its legal and moral authority from the consent of the governed. There was discussion of the role of foresight in the maintenance of this system, particularly in light of oncoming disruptive trends originating in revolutionary technological/economic change, and in fundamental demographic transitions that are underway.

American Democracy as Value System:

The Declaration of Independence was understood by Round Table members to embody the value system of the United States; but as its drafters aspired it to be, rather than as it was—or, for that matter, rather than it is even today. As such, the Declaration speaks ahead of its time (in fact, ahead of ours) to the universal rights of human beings, as birthrights rather than grants from authority. That assertion did not distinguish between races, creeds or classes of persons. The Constitution, on the other hand, is a snap-shot of political and economic realities—most notably, the institution of human slavery as one of the pillars of the Republic, and a condition precedent for its creation. The Constitution, on the other hand, was seen (in modern terms) as the operating system for a republic, with provisions intended to make the system self-correcting over time, either by way of a balancing of powers among its co-equal branches, or by way of processes capable of reflecting changing views in society regarding values, laws, and methods of regulation—permitting evolutionary change, but discouraging forms of change deemed to be clearly counter-constitutional, using the law and electoral process as forces to be arrayed against corruption and abuse of power, which were clearly viewed by the Founders as inherent qualities of human nature.

The Round Table discussion ranged from what could be termed the inherited social challenges of our time (e.g. white supremacy, male privilege, economic inequality) to challenges of the future, and on to interactions between the two. Core values were seen to be currently at risk to trends and events foreseen by the Founders, based on their direct experience of life and affairs. The Constitutional system of balanced powers has gradually evolved into a system where powers are distributed on a gradient, ranging from absolutely distinct to shared/blurred. That process has reached its possible limit, involving a direct philosophical clash between originalists and advocates of "unitary" presidential powers—resulting in a presidency which regards itself as essentially beyond the reach of the Congress and the Courts, to the extent that it cannot manipulate both through the appointments and electoral processes. Meanwhile, public opinion is already being manipulated in ways that are depleting its confidence in the reality of fact as distinguished from falsehood, while its faith in the integrity of key institutions is being undermined.

Participants discussed challenges both to the values and to the system arising from events beyond the experience and the imaginations of the Founders. Included among these: advanced artificial intelligence displacing human judgment from human affairs, expanding from administration to fundamental questions of ethics and justice; synthetic biology influencing human evolution towards deep genetic modification, and beyond that to man-machine unions; climate change disruptive enough to threaten the continuity of civilization as we know it; and to methods of social control involving the progressive effacement of individual moral and intellectual autonomy.

Some members stressed the continued vitality of existing forces for rational adaptation, citing the constitutional "operating system" that makes it possible for change to be accommodated by elections, legislation, judicial actions, and regulatory processes. Others cited the ability of regions, states, cities, and local groups to devise and experiment with new models of democratic processes. Others counseled awareness of the tremendous adaptive power within the capitalist system. And most others stressed the potential of American youth to break down institutional resistance to change. These discussions also dealt with the possible utility of foresight as a means to reinforce the power of democratic governance to adapt to changes of such magnitude while retaining its values and its essential essence as a form of political and social life. All participants saw foresight as having the potential to preserve focused, open-minded discourse about these matters, and thereby to help sustain the existence of a national commons, even in the presence of both legacy and oncoming forces of great divisive power.

Round Table Meeting #5 of 6
Date: 29 August 2019

The RT5 was organized around a discussion of a "visionario." The term "visionario" was developed by Dr. Ronis. A visionario is an advanced form of scenario: designed to present higher-order complex systems that more closely resemble the experience of reality. The specific visionario used for RT5 was developed and presented to RT members by the Co-researchers.

Round Table participants found the visionario to be realistic, but some felt that it depicted a future in such a pessimistic light that it might discourage thinking about possible responses— thereby defeating its own purpose. Participants focused on three major challenges: (a) the populist revolt against liberal democracy; (b) technological shocks; and (c) demographic pivot points. There was a question whether liberal democracy has the capacity to resolve the kinds of issues postulated in the visionario: partly because of their sheer complexity, and partly because any credible plan of action would require tenacity over a longer period of time than our political system will provide.

A consequence of the polarization of our society is that we tear down rather than seek to perfect what has been accomplished. There was concern that because of this trend, and out of the deepening pessimism that it inspires, an outcome could be growing support for authoritarian rule—probably cloaked in the external appearances of democracy. On the other hand, some members thought that the visionario undervalued possibilities for achieving favorable outcomes within the framework of democratic governance. However, participants thought that such an outcome would require the kind of idealism and activism to be found only in younger persons, or possibly as the result of spontaneous, creative activity at regional, state, and local levels.

Participants were especially pessimistic about chances for a successful response to climate change. There was a general sense that the present administration has significantly damaged democracy and that, were there to be a second term, the damage would be irrevocable. Some participants felt that risk of a large-scale war was growing, looking at interconnections between climate change, regional water crises across international boundaries, cyber war, space warfare, etc.

On a more positive side, participants thought that emerging demographic factors will perhaps sooner rather than later bring to an end the political staying power of white supremacy and male dominance. However, it was noted that even if white supremacy and male dominance were to be driven out or fade away, other forces would remain, in particular the clash between conservative and liberal approaches to social policy. Some members thought it possible that the accelerating pace of science and technology would lead to favorable outcomes of seemingly disastrous trends. Possibilities for repairing and improving democratic governance were also discussed, including: reversing gerrymandering; removing impediments to voting; restoring constraints on political spending; reforming social media, etc. However, it was also noted that, at least currently, trends are heading the other way. Some reforms, moreover, would require amending the Constitution (e.g., in particular, either abolishing or changing the mandate for the electoral college). On perhaps a more pragmatic side, there was discussion of restoring respect at least for scientific fact, perhaps by restoring an apolitical congressional entity such as the Office of Technological Assessment (OTA), which was de-funded as a Republican initiative in 1995. Changes to budgetary processes that would enforce the integration of foresight analysis and policy (a requirement theoretically established by the Government Performance and Results Act or GPRA were touched upon).[8]

Co-researchers' Comments: The project Co-researchers consider this (the RT5) discussion to have been a threshold event: substantively coherent, displaying an ability to think across categories normally reserved for specialists, and for linking past developments to alternate future possibilities. They believe that the use of the visionario was effective in this regard, but noted that this required a preliminary investment of time needed to prepare a basis for structured learning, as opposed to an immediate dive into opinion.

[8] One of the provisions of GPRA is a requirement for a foresight process to be used in the formulation of policy (a legal requirement, but so far aspirational.)

Round Table Meeting # 6 of 6
Date: 25 November 2019

RT6 was the last meeting in the process. It was designed to test the impact of the Project in terms of its effect on the tone and content of discourse among the Round Table participants. Co- researchers opened the session by recalling the apparent lack of response of public advocacy groups to the need for longer-range thinking. Round Table participants noted that they have met with similar problems within their organizations, and some believed that it was a matter of limited resources. Others returned to the theme—taken up in earlier meetings—of youth and its impatience with the gradualism.

Climate change was a special case in point: there was an observation to the effect that younger persons have fatalistically accepted that very disruptive levels of climate change are already "baked" into the future, as the result of the failure of the elders to act upon foreknowledge. That, in turn, was linked to the question of whether liberal democracy has the capacity to deal with major, complex, disruptive forms of change. And this in turn opened into a discussion of whether a challenge such as out-of-control climate change would lead to acceptance of a political authority capable of imposing solutions/responses not only on a national, but a global level.

At this juncture, the question arose — "Is there a way to improve the responsiveness of a democratic system?" which triggered a discussion of manifold ways in which the system has historically been run by and for a privileged racial group, which has been able to protect its advantages by blocking full use of the franchise and by diluting its meaning even when it can be exercised.

Some participants then took up the question of whether advanced artificial intelligence would either seal off access to improved forms of democratic governance, or facilitate it. This, in turn, led to a direct discussion of whether foresight can work to strengthen democratic practice. There was, in fact, strong agreement among the Round Table members that "foresight is a mechanism for the improvement of democracy." It is fair to say that some Round Table members had already expressed themselves at disheartening levels of pessimism, so that expressions of optimism about the utility of foresight were noteworthy. The conversation then turned to modalities by which foresight could be systematically coupled to public-policy making and to the execution of such policies.

Scalability. The principle of "nested systems" — drawn from classical complexity theory — holds that there can be systems that may seem to be unrelated, but which in fact are linked and display the system characteristics of complexity. Applied to governance, this suggests that systems operating at regional, national, and even global levels are fully understandable only as elements of an overarching complex system. We believe that this idea provides an essential clue to the kind of thinking that is needed and to the kinds of operations required in order to influence complex systems. According to this principle, complex systems—like the figurines in the Matrioshka doll — can be scaled up or down without fundamentally destroying the system design. This suggested that concepts for applying foresight to governance at the corporate or the national level could be scaled up to the global level or down to the level of localities and even small groups of interested citizens. At all levels, the integration of foresight and the making and execution of policy would potentially be an important means for restoring a sense of mutual openness to persuasion on the strength of factual analysis, thereby reinforcing democratic practice.

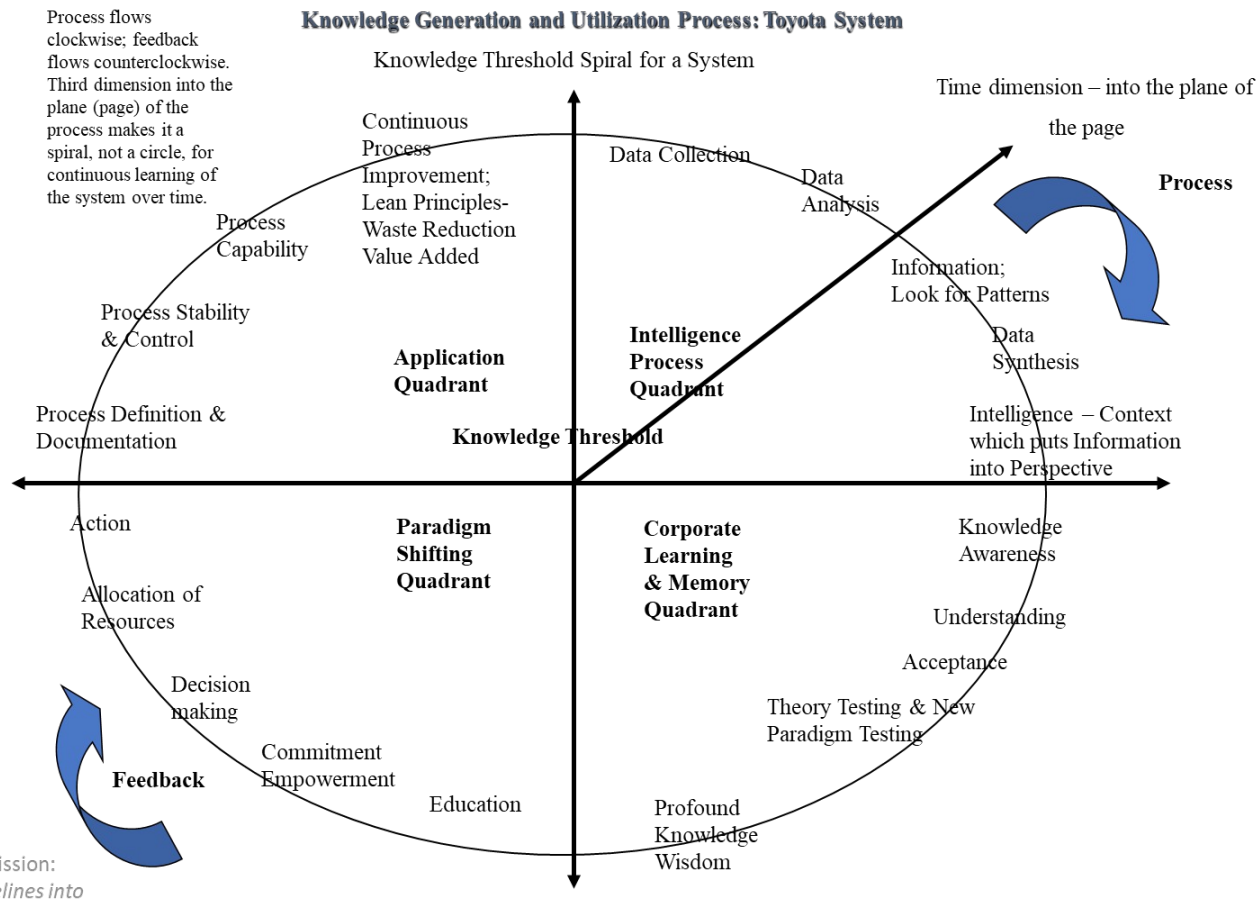
Commonality. The Co-researchers then presented a principle of their own devising: namely, that any form of governance capable of managing complex systems will be comprised of four sequentially linked functions; Intelligence, Learning, Paradigm Shifting and Application. In the process of developing these concepts, the Co-researchers realized how similar their respective foresight efforts over decades were similar and related. ***Figure 5. Unified Field***, below, describes how these two approaches really represented a "Unified Field" concept. Charts representing two such systems were examined. The first of these was a chart capturing Dr. Ronis' study of the Toyota Corporation, aimed at identifying what it was about their system that accounted for its persistent excellence over time (***Figure 6. Toyota Chart***, below).[9] The second chart applied this analysis to Leon Fuerth's concept of "Anticipatory Governance" (***Figure 7. Anticipatory Governance***, below).

[9] Ronis, Sheila R., *Timelines into the Future: Strategic Visioning Methods for Government, Business and Other Organizations*, University Press of America, Lanham, 2006, page 151.

Figure 5. Unified Field

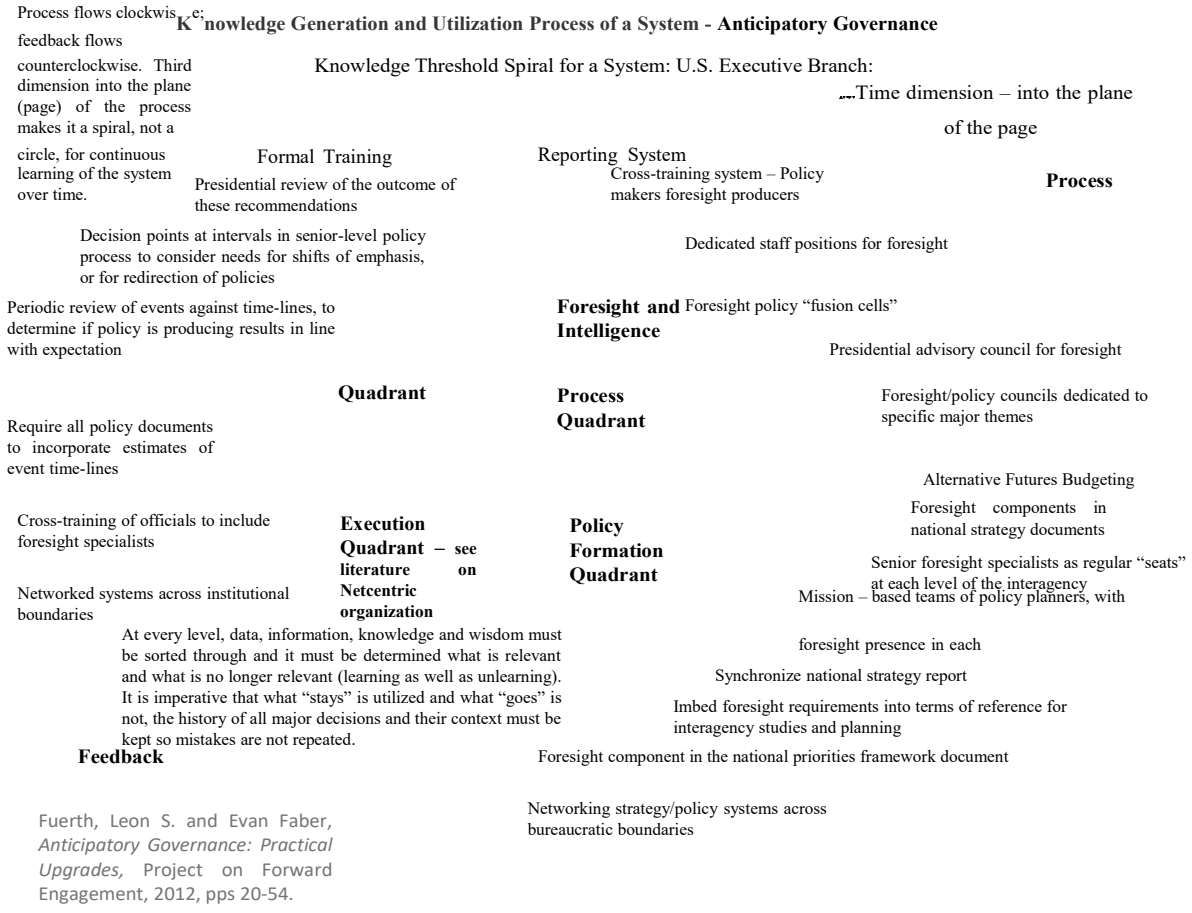
Learning Process Cycle	Anticipatory Governance
Intelligence - information about the future	Foresight - information about the future
Policy Formation - nexus between policy makers and the foresight -"machers"	Policy Formation – nexus between policy makers and the foresight -"machers"
Application - whole of system	Execution - whole of system
Corporate Learning – distilled, applied experience	Feedback – distilled, applied experience

Figure 6. Toyota Chart



Reprinted with permission: Ronis, Sheila R., *Timelines into the Future*, Hamilton Press, 2006.

Figure 7. Anticipatory Governance



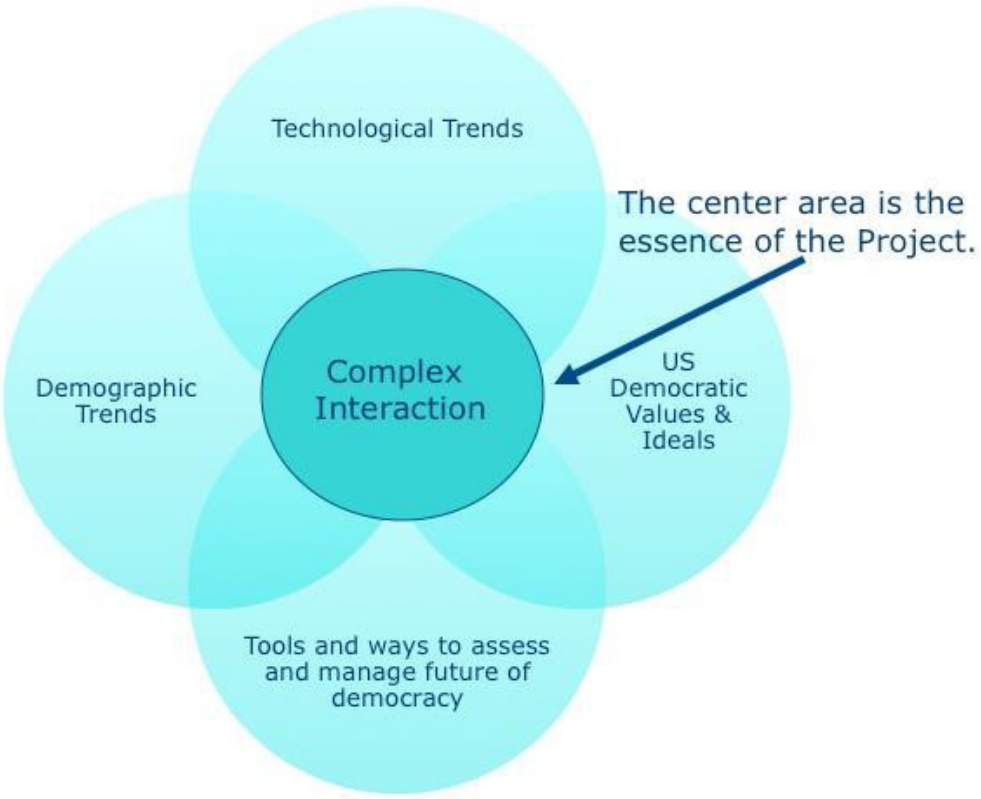
Fuerth, Leon S. and Evan Faber, *Anticipatory Governance: Practical Upgrades,* Project on Forward Engagement, 2012, pps 20-54.

Both of these diagrams represent systems that are designed to generate knowledge, learn from it, and use it as a means to formulate policy, execute that policy, monitor the consequences, and adapt future behavior in light of that information. One of them applies to a real corporation, the other applies in principle to the executive branch of the United States Government. It is possible to scale such an approach to the level of systems required for the management of issues of global scope.[10]

The same approach could be scaled to issues of local or global concern. In either case, we believe that this kind of fusion of knowledge and application requires a specific methodology and that, in turn, suggests the need for a center – a locus, where all relevant factors could be brought into the same plane of vision as suggested by our Venn diagram logo (**Figure 8. Venn Diagram**). The idea of a center was raised by the Co-researchers who demonstrated its possible application.

10 Fuerth, Leon S., "Planetary Security and Anticipatory Governance: Climate Change and Other APEC Challenges, Clingendael Policy Brief, *Planetary Security Initiative* October, 2017.

Figure 8. Venn Diagram[11]



11 Thank you Jim Burke, a member of the Standing Advisory Group, for suggesting this logo.

Chapter 3: Lessons Learned

What Didn't Work

The Co-researchers' original model for their research envisaged a Round Table, the members of which would serve as proxies for sectors of the "American Commons." They proposed to do this by bringing together representatives of non-governmental organizations specialized as representatives of major social groups that comprise the Commons (e.g., covering race/ethnicity; gender; labor; youth; etc.) Responses to those invitations were limited.

The common denominator appears to have been an intense — "all hands on deck" — focus on near-term organizational priorities, especially those subjected to immediate and profound challenges by the Trump administration. Another major factor was a strong element of denial that established plans and concepts were threatened not only by the current administration, but by the future itself. Some organizations appeared to believe that their strategic planning processes already accounted well enough for multiple possibilities, and that a new approach based on longer range foresight was not necessary.

Ultimately, the Co-researchers decided to try a work-around involving approaches to persons who, notwithstanding their origins and personal experiences, could be called upon to comment not so much on what increasingly divides the Commons, but on the residual interests of the Commons in finding ways to overcome divisive forces. In short, we looked for persons who would address what continues to unite the commons and how to preserve it, notwithstanding their acute awareness of what divides it. On this basis, it was possible to recruit participants for the Round Table and to work with them through a series of six Round Table meetings[12] (See **Figure 3. The Round Table Process Showing Archiving**.)

What Worked Well:

Creation of the Standing Advisory Group, comprised of expert specialists in foresight, and use of that group to help the Round Table acquire a common, basic understanding of foresight methodologies and their characteristics was effective. This group helped the Co-researchers to plan how best to present to lay participants the basic concepts and techniques used in the expert foresight community. Participants in the Round Table have expressed to the Co-researchers the view that this information exposed them, for the first time, to the concept of foresight as a discipline — specifically valuable as a means for imagining alterative futures, and for evaluating these by dispassionate means, in terms of possible impact on values, clearly identified and how this process may be used in planning, decision-making and potential actions that must be taken.

Briefings by outside experts on subjects such as technologically and demographically driven trends were essential. These briefings enabled participants to appreciate the possible consequences — both intended and unintended — of trends in major categories of technological change, looking towards a period of sharp acceleration to be anticipated in each field as well as social disruptors. The disruptors used in the discussions included artificial intelligence, synthetic biology, global climate change, the surveillance state, and the massive changes in demographics that are changing the composition of the U.S. population. The briefings enabled participants to recognize the magnitude of profound demographic transitions that are "baked in" to the national future, and the challenges that these changes will present to the strength of common values that make democracy possible, and which, in turn, democracy facilitates.

[12] We are indebted to Steven Trachtenberg, President Emeritus of George Washington University for suggesting persons who subsequently accepted our invitations to participate in our Round Tables.

Limiting the Round Table to a relatively small number of persons, invited to participate on the basis of direct experience at high levels personally and/or professionally, with legacy issues arising from societal fractures owing to race, religion, age, and socio-economic standing was an effective approach to this effort. Our initial plan for a Round Table would have brought together a large number of persons, each of whom would have been deeply invested in the perspectives of specific segments of the population. The results might have been gridlock. We were, therefore, induced to resort to an alternative approach involving a small group of persons whose backgrounds produced broad awareness of the complexity of societal issues. That turned out to be serendipitous because it created an atmosphere conducive to flexibility.

Establishing "thematic minutes" as a way to capture and circulate the essence of successive Round Table discussions, including ways to capture after-thoughts and comments, post-dating the actual sessions worked very well. These minutes avoided the usual approach, keyed to the clock, and in place of this approach, allowed us to experiment with presenting the evolution of ideas in the course of discussion. The minutes also made it possible for members who could not always be present, to remain current with the direction of a meeting, and able to pick up readily when able to resume participation. The thematic minutes for each meeting can be found in Appendix 3: Invitations + Annotated Minutes + Presentations.

Over time, expanding participation in the Round Table meetings to include interested members of the Standing Advisory Group was extremely useful. Our initial thought had been to phase out the Advisory Group, and focus on the Round Table. Instead — and this was another serendipitous development — the continued presence of Advisory Group members helped expand the "dynamic range" of discussion.

If the objective is to encourage creative new thinking, care must be taken in the selection of participants. Persons whose views are deeply polarized are already satisfied that they have sole possession of what is right, and of what works. The right kind of participants are those whose opinions will differ, but whose attitude is open to discussion, and who are looking for new approaches to replace those which they see as entrenched and unresponsive to major challenges ahead.

Time must be spent to acquaint participants in a Round Table process with some new "tools" for exploration of issues: foresight methodologies; the concepts of complexity and non-linearity; the objective specifics of forces at work in society, and of forces gathering ahead.

Experienced facilitators are a requirement for the kind of engagement that is necessary for an effort like this where there is a plethora of opinions and ideas are flowing. Accurate and timely reporting of discussions is essential. For this purpose, verbatim reporting is needed to capture a chronological record of what takes place (remarks of participants recorded in the order in which they were produced). We processed these reports into a finished product that captured themes that emerged in the course of the meetings. These "thematic minutes" served as a bridge between sessions.

The use of complex scenarios ("visionarios") worked well for the discussion of future possibilities. In order to facilitate a discussion of the future, it helped to postulate a future to serve as the basis of analysis of possible consequences and responses. Moreover, a visionario — in contrast to a scenario — serves to present an image of the future that reflects a complex reality, as opposed to an oversimplified model.

An integral part of using foresight methodologies is defining the system that the participants are exploring. Drawing a "system map" or use of relatively simple foresight devices such as a "futures wheel" enables discussions of the future. System Values are also critical to define and use as a framework for future efforts.

Co-researchers' Observations on Process: Round Table Participants' Contribution

Participants in the round table process contributed a sense of depth and authenticity to the discussions of foresight and democracy, drawing upon their personal experience and expertise. For example, they substantiated not only the omnipresence of racism in American history, but its continuing pervasiveness in American life. That positioned them to explore the oncoming disruptive trends arising from technology and demography, that will reinforce existing fractures in our society.

The end of white male supremacy stands out as both a crisis and an opportunity. It is a crisis because there is no model for how to manage the emerging power relationships among major groups that define themselves almost exclusively by race, ethnicity, gender, etc. Moreover, the kinds of change that foresight illuminates will also exacerbate existing ("legacy") fractures in society: accentuating inequality, intensifying disparities in terms of education, and creating unprecedented levels of change driven by "the dark side" of brilliant scientific attainments in fields such as artificial intelligence, synthetic biology, etc.

Participants articulated the central importance of the protection of democratic values as the goal and measure of merit of long-range foresight analysis. Participants believed that there is an increasing danger from algorithms that are sources of concealed bias, whether instilled consciously or unconsciously by human programmers. The participants were deeply concerned that the Chinese long-game will overtake the chronic lack of strategic content in the American short-game. There was a view among some participants, not shared by most, that a massive, complex threat like climate change cannot be dealt with by democratic means and will usher in authoritarian government. There was a view, shared by most participants, to the effect that American capitalism is on the wrong path and needs to be redirected if it is to survive. On the other hand, there was a minority view that the Round Table was under-valuing the adaptive potential of capitalism, and that the general sense of pessimism needs to be tempered by acknowledgment of the social, economic, and political accomplishments of capitalism, operating within the framework of liberal democracy. Participants agreed that the institutions of democratic governance require an upgrading if the future is to be dealt with in ways that sustain core values. This view centered on measures such as reinforcing voting rights by eliminating manifold impediments that now exist to the full exercise of the franchise, as a combination of partisan political interests often operating on behalf of a desire to preserve white supremacy.

Chapter 4: Findings and Conclusions

The Co-researchers of the Project periodically summed up for themselves what they believed was being accomplished, and then circulated these summaries to all participants for their comments — which were received either in the course of actual meetings of the Round Table or as e-mailed responses. In effect, we vetted our estimates of the effects of the process, by cross- checking them with participants. We therefore believe that it is fair to present the following set of findings as an accurate distillation of results of the process, as experienced by those who participated. Note that in describing these results, we frequently use the term, "heightened awareness." That is, because we are well aware that our process has not created these ideas de novo: but we do believe that the Project on Foresight and Democracy describes a new way to think about them in ways that promote synthesis and resist polarization.

- Awareness of democracy as a conjoined system of values (captured in universalist language in the Declaration of Independence), and presented as an operating system for a self-correcting system of self-government (in the form of the Constitution).
- Heightened awareness of the central importance of values at the core of democratic governance.
- Heightened awareness of the existence of alternative sets of values among different groups within the population (to centrifugal effect), counter-balanced by other values deeply held across the population as a whole (to centripetal effect).
- Awareness that equilibrium between these forces is the basis for a sense of national identity and the basis for mutual acceptance of the legitimacy of the social order (aka "The Commons").
- Recognition that values are meant to be perdurable, while the operating system is designed to adjust itself, based on systems that enable it to "learn" from experience.
- Heightened awareness that values representing the Commons are severely challenged as the result of "legacy" issues representing as yet incompletely resolved issues pre-dating the foundation of the country.
- Awareness that values representing the Commons are also subject to an emergent set of new issues: some generated by the unprecedented (and very often, the unintended) consequences of technological change; and others generated by profound changes in the demographic composition of the United States that are "baked" into the next several decades.
- Awareness that societal challenges that appear at first to be domestic problems are manifestations of global problems, for which global solutions are going to be needed.
- Awareness that the global environment is becoming increasingly competitive.
- Heightened awareness of the very short window for action in the present, for the purpose of influencing outcomes in the longer-term future.
- Awareness that, notwithstanding the gravity of challenges facing democratic governance in the present and continuing on into the future, the United States has experienced periods of intense polarization and crisis at intervals, which it has survived.

  Recognition that there is a tension between pessimistic and optimistic biases that needs to be taken into account insofar as neither of these dispositions entirely captures the truth of our circumstances.
- Need for re-vitalization of democratic governance.
- Agreement that this revitalization must include structural measures in the form of new systems designed to manage the complex, non-linear nature of the challenges we are facing.
- Agreement that existing systems for linking foresight, policy formation, and policy execution are deficient for the task, but that practical methods for overcoming this are available.
- Agreement that the defining characteristic of the resulting system would be that it would be anticipatory.

Based on comments of the Round Table participants and our analysis of major trends in their comments, we conclude that:

1. Exposure to foresight methodology adds a critical dimension to discourse: ability to make connections between seemingly disparate subjects, along timelines that connect – rather than subdivide – the past, the present, and the future.
2. The project, with limited resources, demonstrated on an experimental scale that a combination of foresight and expert data can create the basis for disciplined consideration – within a group of diverse individuals – of the potential for creative synthesis, and for engaging complex issues on the basis of mutual tolerance. We believe that this method can be scaled upwards towards the global level, and scaled downwards towards the grass roots.
3. As a result of the process, participants were better able to acknowledge serious failures of democracy in America, while retaining belief in the possibility of change to the democratic process…although that attitude is shadowed by current trends in American political life. Participants sense that a crisis is not just pending, but has arrived. Their thoughts about how to evaluate and respond to these crises now tend to be "whole of system;" based on an awareness of the complex nature of interactions among seemingly distinct forces; resulting in an interest not just to reforms per se, but to reforms whose broadest implications and interactions have been thought through.
4. Optimism about the future is present, but heavily qualified by awareness that the political system is falling behind the requirements of adaptation needed if democracy is to survive what is coming.

Coda:

We believe that our project has demonstrated in a small-scale experiment that foresight can strengthen democracy as a political system fit to deal with accelerating rates of change. The alternative is a drift towards authoritarian methods.

The question we set out to answer was how to better equip democracy to influence its own future, in ways that reflect its defining values. Five years ago, when we were still formulating ideas that would later evolve into this project, we recognized an increasingly dangerous threat to democratic governance in the form of converging and interacting societal challenges, together with sharply increasing polarization about the future, at increasingly high cost to the nation's ability to cohere as a Commons.

Democracy is committed to the proposition that the people have the innate wisdom to rule themselves, and therefore the means to preserve the Republic. The quintessential expression of that wisdom is foresight. The presence of foresight is not a given. It is, however, a capability that can be cultivated. The Project on Foresight and Democracy has demonstrated that this approach is workable, in circles of people from widely differing backgrounds and experiences. It remains to be demonstrated whether such circles can be expanded to reach out to the "grass roots." We believe that this is possible and that a method for accomplishing this can be demonstrated at scale. Our next effort will be to do so.

In the period of time since our earliest discussions between ourselves about these matters, many of our deepest concerns about the future of democracy have become urgent matters in the present. It is clear that a simple restoration of things as they were is not feasible. America will need to think fresh about democratic governance in order to keep it. The central issue is, as it has been since the very beginning, how to secure the willing and informed consent of the governed. We believe that our Round Table process shows that it can be done in principle, and our intention is to move on to a demonstration of how it can be done in practice, even under radically changed circumstances, that are in the offing.

The title of this study makes a point of noting that it is a systems approach to democracy and the problems it faces. There are some very important implications to that, and we wish to make sure to have addressed them as we conclude.

A system is an entity comprised of parts that are interactive with each other, such that a change affecting one part affects all others. The "Commons" of which we have written (see Footnote 2) is a system, comprised of citizens interacting with each other collectively, within certain norms of association (e.g., to maintain resources on a sustainable basis, rather than to use them up). A democracy such as our republic is a "commons." Its norms of association are based on values that are broadly and deeply enough respected by citizens to enable them to face challenges successfully — meaning by means of solutions that are consistent with these basic values (see Chapter 2: Output of Round Table Discussions). That is, basically, what the concept of political center-ground is all about.

Periodically in American history there have been crises when it looks as if the center would collapse. It once did collapse utterly and beyond repair, and that was the Civil War. We are currently experiencing a crisis of the center: the possibility that the American System is near the limits within which it can exist. That system is beset by forces — to some extent from the far left, but especially, at this time, from the far right — that reject what it offers in response to their deepest values. The defense of the American system requires a good offense in the form of new methods for confronting new problems, within the system's basic parameters: mutual respect; argument based in fact; willingness to find areas of agreement upon which to build the future.

The Project on Foresight and Democracy demonstrated a system of analysis that can be used to help sustain these qualities. It was, to be sure, a demonstration on a limited scale. But we believe that the results are positive enough to warrant testing its ability to be effective on a larger scale— specifically, the "grass roots," where American democracy grows.

And our idea is this: to make it possible for groups of people who are already networked to apply the Round Table methodology on their own, as a means of exploring for themselves what the future holds, and for thinking about how to respond to its challenges outside the boundaries established by rigid ideology.

We are extremely grateful to the Rockefeller Brothers Fund for its support in getting us this far, and to Walsh College for its expression of confidence in us and for its service as our administrative "home."

Chapter 5: Some Ideas About Further Applications

It seems clear to us that the next logical step is to demonstrate that our approach can be applied at scale. Complexity theory, as noted above, offers the theory of "nested systems" according to which the elements of complex systems can be scaled up or down, but the rules of complexity will apply. This suggests that it is possible to apply our approach at scales ranging from grassroots to global. We are considering a second phase aimed at promoting this approach at the grassroots, working with one or more nation-wide networks that promote discussion at the local level.

If it is possible to scale this idea down, it is also possible to scale it up to regional and ultimately global levels. In November, Dr. Ronis was invited to present our ideas at the Organization for Economic Cooperation and Development (OECD) Foresight Community in Paris. Subsequently, we both were invited to present at a European Union (EU) meeting in Brussels (the European Strategy and Policy Analysis System, ESPAS). We came away from those meetings knowing that in other parts of the world there is a recognition of the need for a locus between foresight, policy, and execution, and also a recognition that when the problems are both complex and global in scope, then the organizational response must also be global. The EU, for example, has just created the office of European Commission Vice-President for Institutional Relations and Foresight, headed by a senior official, with whom we were able to have extended discussions.

We have also realized through side-conversations that took place in Brussels, that there is a subset of governments that look upon the incorporation of foresight as an existential requirement. These are governments of physically small states that feel that their national existence is always on the line (like Singapore, Finland, South Korea, and Israel). We think that the comparative study of their approaches would yield important results at both the theoretical and operational levels, where each of these governments has been working to develop systems capable of integrating foresight, short, mid, and long-term policy, and execution. We hope to be able to carry out such a study.

There is a common denominator, and it is the ability of democratic governance to maintain its vitality in the face of enormously challenging developments. Failure to respond will fuel public unease about the future, and thereby encourage the global trend towards the hyper-polarization of politics, and with that, the falling apart of nations both within and without.

Appendixes

Appendix 1: Foresight Methods

Back-casting: a method of working backward from a hypothetical future event (typically a desired goal) to the present in order to visualize short- and medium-term steps, necessary and sufficient conditions, and possible sequences of events that would lead there.[13]

Course of action analysis: a method for assessing the cost, impact and risk associated with alternative action plans. Beginning with a set of alternative plans (courses of action or COAs), the costs, impact and risks of each alternative are expanded upon and then assigned weights that are then measured and compared against each other based on decision rules that reflect priorities.[14]

Cross-impact analysis: a method for forecasting the probabilities of events based on their potential interactions with each other. Each hypothetical in a set is assigned an initial probability; conditional probabilities are determined using a matrix to consider their potential interactions with each other.[15]

Delphi survey method: a method of forecasting by committee that uses a questionnaire to accumulate foresight analysis by experts whose responses are compiled and then recirculated (anonymously) in order to reduce the range of responses and close in on expert consensus about the future.[16]

Environmental scanning: systematic monitoring of an internal and/or external environment in order to detect opportunities and threats in advance so that early action can be taken.

Futures Wheel: a structured brainstorming technique that uses a wheel-and-spoke like graphic arrangement to consider the primary and secondary impacts around a central trend or hypothetical event. This technique was chosen to be used for this study.[17]

Gaming: a structured exercise for stress-testing decisions in a simulated complex environment based on a scenario, which permits participants to test in the mind at minimal cost what may otherwise have to be tested in reality at incalculable cost.

Historical analogy: a method of using the dynamics of events in the past to understand the dynamics underlying current and future events.

Horizon scanning: systematic monitoring and examination of current events (across categories) in order to detect early signs of potential major impending developments and how they may influence the future so that early action can be taken.

Implications Wheel: a structured brainstorming technique that arranges second, third and fourth order events around a central trend or hypothetical events, and uses probabilities to score potential implications.[18]

13 Backcasting. World Future Society, available at http://www.wfs.org/node/172.
14 "A Policy Analysis Approach to Operational Level Course of Action Analysis," Defense Science and Technology Organization, Australia, available at http://www.dodccrp.org/events/5th_ICCRTS/papers/Track2/018.pdf.
15 Theodore Jay Gordon, "Cross-Impact Method," in Futures Research Methodology Version 3.0, ed. Jerome C. Glenn and Theodore J. Gordon (Washington, DC: Millennium Project, 2009).
16 RAND Corporation, "Delphi Method," available at www.rand.org/topics/delphi-method.html
17 Jerome Glenn, "The Futures Wheel," in Futures Research Methodology Version 3.0.
18 Joel A. Barker, "Implications Wheel," Implications Wheel, 2011, available at http://implicationswheel.com.

Issues-analysis: a method of systematically "unpacking" the dilemmas, cross-category implications, and unasked questions that arise from trends, hypothetical future events, and alternative policy choices.[19]

Figure 3 Foresight Methods (Continued).

Morphological analysis: a method for structuring and investigating sets of relationships contained in multi-dimensional, non-quantifiable problem spaces.[20]

Real-Time Delphi: an online version of the Delphi questionnaire that harnesses expert opinion about the future on an accelerated basis.[21]

Roadmapping: a technique of planning that identifies a sequence of goals, prospective future developments, and future "on-ramps" and "off-ramps" for decisionmaking.

Robust decisionmaking: a method of relating short-term policy interventions to different clusters of long-term futures.[22]

Scenarios: case studies of the future that depict in detailed narrative how events might lead from the present to an envisioned future. Scenarios should come in sets covering a range of possible futures that provide a means to visualize outcomes of alternative courses of action, analyze their hypothetical consequences under different combinations of assumptions, and link logical sequences of events.

Simulation/Modeling: a quantitative method for understanding the interactions of a system using a prototype, computer program, or other simplified representation of a real system. Models and simulations permit decisionmakers to experiment with interactive variables (often with large data sets) for a specified duration so as to gain understanding about a system's behavior, probabilities, and range of possible outcomes.

State of the Future Index: an index that measures the 10-year outlook for the future based on key variables and forecasts that collectively depict whether the future promises to be better or worse.[23]

STEEP Implication Analysis: a method for systematically analyzing the social (S), technological (T), economic (E), environmental (E) and political (P) implications and issues[24] related to a trend, event, decision or policy.[25]

SWOT analysis: a method of analyzing and assigning weight to an operations' internal factors—strengths (S) and weaknesses (W)—and external factors—opportunities (O) and threats (T)—so as to strategically match resources and capabilities to the environment.[26]

Trajectory Analysis: a method of assessing the directionality of trends and oncoming events so as to create manageable pathways that can aid policymakers in identifying engagement opportunities.[27]

Trend Projection: an extrapolation of a current trend line into the future based on historical data, rates of change, and other variables.[28]Projections are based on an assumption that factors will be held constant with no looming discontinuities.

19 "House Annual Commission on Forward Engagement Annual Report," Fall 2006 Forward Engagement Class Report, available at http://forwardengagement.org/images/stories/pdfs/graduate_seminar/fall_2006_final_report.pdf.
20 Tom Ritchey, "General Morphological Analysis," General Morphological Analysis, June 2011, available at www.swemorph.com/ma.html.
21 Jerome C. Glenn and Theodore J. Gordon, "Real-Time Delphi," available at www.millennium-project.org/millennium/RTD-general.html.
22 Robert J. Lempert, Steven W. Popper, and Steven C. Bankes,"Shaping the Next One Hundred Years: New Methods for Quantitative, Long-Term Policy Analysis," RAND, available at www.rand.org/content/dam/rand/pubs/monograph_reports/2007/MR1626.pdf .
23 Jerome C. Glenn and Theodore J. Gordon, "State of the Future Index," available at www.millennium-project.org/millennium/SOFI.html.
24 See "Issues Analysis."
25 STEEP Analysis Outputs, Glasgow and the Clyde Valley Strategic Development Planning Authority Futures Group, available at www.gcvcore.gov.uk/downloads/futures/STEEPanalysisOutputs.pdf.
26 Quick MBA, "SWOT Analysis," available at www.quickmba.com/strategy/swot/.
27 "First Annual Report to the Deputies Committee on Complex Priorities," Fall 2008 Forward Engagement Class Report, available at http://forwardengagement.org/images/stories/pdfs/graduate_seminar/fe_fall08_final.pdf.

[28] "Trend Projection," World Future Society, available at www.wfs.org/node/403.

Appendix 2: Bibliography

Achen, C., & Bartels, L. (2016). *Democracy for Realists: Why Elections Do Not Produce Responsive Government*. Princeton, NJ: Princeton University Press.

Albright, M. (2018). *Fascism: A Warning*. New York, NY: Harper Collins.

Anderson, K. (2017). *Fantasyland: How America Went Haywire: A 500-year History*. New York, NY: Random House.

Azari, J. (2019). It's the Institutions, Stupid: The Real Roots of America's Political Crisis. *Foreign Affairs*, 98(4). Retrieved from https://www.foreignaffairs.com/articles/united- states/2019-06-11/its-institutions-stupid

Baconi, T. (2019, May 3). The False Promise of Protest. *Foreign Affairs*. Retrieved from https://foreignpolicy.com/2019/05/03/the-false-promise-of-protest-israel-palestinians-hebron- hills-david-shulman-taayush-idf/

Barber, G. (2019, September 16). Artificial Intelligence Confronts a 'Reproducibility' Crisis. *Wired*. Retrieved from https://www.wired.com/story/artificial-intelligence-confronts- reproducibility-crisis/

Bateson, N. (2016). *Small Arcs of Larger Circles: Framing Through Other Patterns*. Axminster, UK: Triarchy Press.

Benson, T. (2019, April 29). White Liberals Share Some of the Same Racist Fears as Trump's Biggest Supporters. *Pacific Standard*. Retrieved from https://psmag.com/ideas/the-dirty-truth- about-white-liberal-racism

Benton, A. (2019, September 6). An AI-Run World Needs to Better Reflect People of Color. *Wired*. Retrieved from https://www.wired.com/story/an-ai-run-world-needs-to-better-reflect- people-of-color/.

Bierman, F. (2014). *Earth System Governance: World Politics in the Anthropocene*. Cambridge, MA: MIT Press.

Bisen, A. (2019, April 24). Disinformation Is Drowning Democracy. *Foreign Policy*. Retrieved from https://foreignpolicy.com/2019/04/24/disinformation-is-drowning-democracy/

Brigida, A. (2019, May 13). 'He Went Seeking Life But Found Death.' How a Guatemalan Teen Fleeing Climate Change Ended Up Dying in a U.S. Detention Center. *Time*. Retrieved from http://time.com/5587817/juan-de-leon-gutierrez-guatemala-migrant/

Brill, S. (2018). *Tailsprin: The People and Forces Behind America's Fifty-Year Fall – and Those Fighting to Reverse It*. New York, NY: Alfred A. Knopf.

Brooks, D. (2019). *The Second Mountain: The Quest for a Moral Life*. New York, NY: Random House.

Brown, Austin. (2018). *I'm Still Here: Black Dignity in a World Made for Whiteness.* New York, NY: Convergent Books.

Cashin, S. (2014). *Place, Not Race: A New Vision for Opportunity in America*. Boston, MA: Beacon Press.

Cass, O. (2018). *The Once and Future Worker: A Vision for the Renewal of Work in America*. New York, NY: Encounter Books.

Castells, M. (2019). *Rupture: The Crisis of Liberal Democracy*. Cambridge, UK: Polity Press. Cornell University

(2019, August 28). Chance, not ideology, drives political polarization. Retrieved from https://www.newswise.com/articles/chance-not-ideology-drives-political- polarization/sc-sphn

Daily, J. (2019, June 7). Heat Waves Could Kill Thousands of People in U.S. Cities if Climate Goals Aren't Met. Retrieved from https://www.smithsonianmag.com/smart-news/heat-waves- will-kill-thousands-people-us-cities-if-climate-goals-arent-met-180972368/

Danforth, N. (2019, May 15). The United States' Problems Aren't What You Think They Are. *Foreign Policy*. Retreieved from https://foreignpolicy.com/2019/05/15/the-united-states- problems-arent-what-you-think-they-are/

Diamond, J. (2019). *Upheaval: Turning Points for Nations in Crisis*. New York, NY: Little, Brown and Company.

Diangelo, R. (2016). *White Fragility: Why It's So Hard For White People to Talk About Racism*. Boston, MA: Beacon Press.

Douglass, F. (2018). *The Narrative of the Life of Frederick Douglas*. London UK: Arcturus Publishing.

Dror, Y. (2017). *For Rulers: Priming Political Leaders For Saving Humanity From Itself*. Washington, DC: Westphalia Press.

Dunlevy, L. (2019, May 22). Washington State Faces a Drought Emergency While Much of the U.S. Is Having a Wet Spring. Is This Normal? *Pacific Standard*. Retrieved from https://psmag.com/news/washington-state-faces-a-drought-emergency-while-much-of-the-us-is- having-a-wet-spring

Ellis, J. (2018). *American Dialogue: The Founders and Us*. New York, NY: Knopf.

Fabiani, L. (2019, June 3). What If Climate Change and Rising Nationalism Both Had the Same Solution? *Pacific Standard*. Retrieved from https://psmag.com/ideas/what-if-climate-change- and-rising-nationalism-both-had-the-same-solution

Frey, W. H. (2015). *Diversity Explosion: How New Racial Demographics are Remaking America*. Washington, DC: Brookings Institution Press.

Frum, D. (2018). *Trumpocracy: The Corruption of the American Republic*. New York: NY. HarperCollins Publishers.

Fuerth, L. S. (2017, October). Planetary Security and Anticipatory Governance: Climate Change and Other Apex Challenges. Retrieved from Planet Security Initiative website: https://www.planetarysecurityinitiative.org/news/planetary-security-and-anticipatory-governance

Fuerth, L. S., & Faber, E. M. H. (2012, October). Anticipatory Governance Practical Upgrades: Equipping the Executive Branch to cope with Speed and Complexity of Major Challenges. Project on Forward Engagement. Retrieved from National Defense University Press website: https://ndupress.ndu.edu/Publications/Article/1216573/anticipatory-governance-practical- upgrades-equipping-the-executive-branch-to-co/

Fukuyama, F. (2018). *Identity: The Demand for Dignity and the Politics of Resentment*. New York, NY: Farrar, Straus and Giroux.

Gajanan, M. (2019, May 22). AI Voice Assistants Reinforce Gender Bias: UN Report. *Time*. Retrieved from http://time.com/5593436/ai-voice-assistants-gender-bias/

Gearan, A., Morello, C., & Hudson, J. (2019, May 2). Trump administration pushed to strip mention of climate change from Arctic policy statement. *Washington Post*. Retrieved from https://apple.news/ABE8NIlpcQbyRcj-7cePtxg

Gest, J. (2016). *The New Minority: White Working Class Politics in an Age of Immigration and Inequality*. New York, NY: Oxford University Press.

Ghaffari, G. P., (2019, May 28). Myths America Lives By: White Supremacy and the Stories That Give Us Meaning. Diverseeducation.com. Retrieved from https://diverseeducation.com/article/146501/

Giridharada, A. (2018). *Winners Take All: The Elite Charade of Changing the World*. London, UK: Allen Lane.

Goodkind, N. (2019, July 15). Republicans Largely Fail to Condemn Trump for Tweet. *Newsweek*. Retrieved from https://www.newsweek.com/trump-racist-tweets-republicans- alexandria-ocasio-cortez-1449348

Gonzalez, J. (2011). *Harvest of Empire: History of Latinos in America*. London, UK: Penguin Books.

Greer, J. M. (2016). *Dark Age America: Climate Change, Cultural Collapse, and the Hard Future Ahead*. Gabriola Island, BC, Canada: New Society Publishers.

Groth, O. J., Nitzberg, M. J., & Russell, S. J. (2019, August 15). AI Algorithms Need FDA-Style Drug Trials. *Wired*. Retrieved from https://www.wired.com/story/ai-algorithms-need-drug-trials/

Hackler, J., & Pierson, P. (2016). *American Amnesia: How the War on Government Led Us To Forget What Made America Prosper*. New York, NY: Simon and Schuster.

Haidt, J. (2012). *The Righteous Mind*. New York, NY: Vintage Books.

Hamilton, A., Madison, J., & Jay, J. (2017). *The Federalist Papers*. New York, NY: Fall River Press.

Handunnetti, D. (2019, May 22). 'There's No Fish to Catch': Global Warming Upends Traditional Livelihoods in Sri Lanka. *Pacific Standard*. Retrieved from https://psmag.com/environment/global-warming-is-changing-traditional-livelihoods-in-sri-lanka

Harari, Y. N. (2017). *Homo Deus: A Brief History of Tomorrow*. New York, NY: HarperCollins Publishers.

Harari, Y. N. (2018). *21 Lessons for the 21st Century*. New York, NY: Spiegel and Grau.

Hardin, Garrett, "The Tragedy of the Commons," *Science* 13 Dec 1968:Vol. 162, Issue 3859, pp. 1243-1248 DOI: 10.1126/science.162.3859.1243

Harris, B. J., (2019). *The History of The Future: Oculus, Facebook, and the Revolution That Swept Virtual Reality*. Sydney, Australia: Harper Collins Publishers.

Hazelrigg, N. (2019, July 15). Idaho Republicans Asking Boise State to Abandon Inclusion. Retrieved from Inside Higher Ed website: https://www.insidehighered.com/quicktakes/2019/07/15/idaho-republicans-asking-boise-state- abandon-inclusion

Heimans, J., & Timms, H. (2018). *New Power: How Power Works in Our Hyperconnected World – and How to Make it Work for You*. New York, NY: Doubleday.

Helderman, R. S., & Zapotosky, M. (2019). *The Mueller Report: Presented with Related Materials by the Washington Post*. New York, NY: Scribner Books.

Hochschild, A. R. (2016). *Strangers in Their Own Land: Anger and Mourning on the American Right*. New York, NY: The New Press.

Inglehart, R. F., (2018). *Cultural Evolution: People's Motivations Are Changing, and Reshaping the World*. Cambridge, UK: Cambridge University Press.

Irving, M. (2019, April 17). CRISPR used to build dual-core computers inside human cells. Retrieved from New Atlas website: https://newatlas.com/crispr-cell-computer/59336/

Jacobs, T. (2019, April 29). A New Study Confirms (Again) That Race, Not Economics, Drove Former Democrats to Trump. *Pacific Standard*. Retreived from https://psmag.com/news/new- study-confirms-again-that-race-not-economics-drove-former-democrats-to-trump

Jacobs, T. (2019, May 28). One Reason Why White People in Southern States Still Have a Higher Rate of Bias Against Black Americans. *Pacific Standard*. Retrieved from https://psmag.com/news/why-white-people-in-southern-states-still-have-a-higher-rate-of-bias- against-black-americans

Judis, J. (2016). *The Populist Explosion: How the Great Recession Transformed American and European Politics*. New York, NY: Columbia Global Reports.

Judis, J. (2018). *The Nationalist Revival*. New York, NY: Columbia Global Reports.

Kaku, M. (2018). *The Future of Humanity: Terraforming Mars, Interstellar Travel, Immortality and Our Destiny Beyond Earth*. New York, NY: Doubleday.

Kalaichandran, A. (2019, April 21). AI Could Predict Death. But What If the Algorithm Is Biased? *Wired*. Retreieved from https://www.wired.com/story/ai-bias-predict-death/

Kaplan, S., & Guskin, E. (2019, September 16). Most American teens are frightened by climate change, poll finds, and about 1 in 4 are taking action. *Washington Post*. Retrieved from https://www.washingtonpost.com/science/most-american-teens-are-frightened-by-climate- change-poll-finds-and-about-1-in-4-are-taking-action/2019/09/15/1936da1c-d639-11e9-9610- fb56c5522e1c_story.html

Karpukhin, S. (2019, April 24). Military & Defense – Russia's security chief calls for regulating use of new technologies in military sphere. Retrieved from TASS website: http://tass.com/defense/1055346

Keller, J. (2019, July 18). The Most Disturbing Thing About Trump's Racism Is How American It Is. *Pacific Standard*. Retrieved from https://psmag.com/ideas/the-most-disturbing-thing-about- trumps-racism-is-how-american-it-is

Khanna, P. (2017). *Technocracy in America: Rise of the Info-State*. Scotts Valley, CA: CreateSpace.

Kheel, R. (2019, April 30). Top admiral nominee: Climate change 'going to be a problem' for Navy. *The Hill*. Retrieved from https://thehill.com/policy/defense/441361-top-admiral-nominee- climate-change-going-to-be-a-problem-for-navy

Kolata, G. (2019, April 17). Scientists revive cells in brains from dead pigs, discovering 'partly alive' middle ground. *New York Times*. Retrieved from https://apple.news/AIrcyXNNHQmmo8nH_UEOcgA

Kott, A., Théron, P., Drasar, M., Dushku, E., Le Blanc, B., Losiewicz, P., Guarino, A., Mancini, L. V., Panico, A., Pihelgas, M., & Rzadca, K. *Autonomous Intelligent Cyber-defense Agent (AICA) Reference Architecture Release 2.0*. Adelphi, MA: Devcom Army Research Laboratory. Retrieved from https://www.arl.army.mil/arlreports/2019/ARL-SR-0421.pdf

Lee, K. (2018). *AI Powers: China, Silicon Valley, and the New World Order*. Boston, MA: Houghton Mifflin Harcourt.

Lepore, J. (2019). A New Americanism: Why a Nation Needs a National Story. *Foreign Affairs,* 98(2). https://www.foreignaffairs.com/articles/united-states/2019-02-05/new-americanism- nationalism-jill-lepore

Levitsky, S. & Zilblatt, D. (2018). *How Democracies Die*. New York, NY: Crown Publishing Group.

Lewis, S. (2019, April 25). The Racial Bias Built Into Photography. *New York Times*. Retrieved from https://www.nytimes.com/2019/04/25/lens/sarah-lewis-racial-bias-photography.html

Lilla, M. (2017). *The Once and Future Liberal: After Identity Politics*. New York, NY: HarperCollins Publishers.

Lukianoff, G., & Haidt, J. (2018). *The Coddling of the American Mind*. (London, UK: Penguin Press).

MacDonald, H. (2018). *The Diversity Delusion: How Race and Gender Pandering Corrupt the University and Undermine Our Culture*. New York, NY: St. Martin's Press.

Martinez, A. G. (2016). *Chaos Monkeys: Obscene Fortune and Random Failure in Silicon Valley*. New York, NY: Harper Collins.

Matthews, D. (2019, April 23). New Research Alliance Cements Split on AI Ethics Europe and Japan differ from the U.S. and China on potential risks. Retrieved from Inside Higher Ed website: https://www.insidehighered.com/news/2019/08/23/new-research-alliance-cements-split- ai-ethics

Mattis, J. N., & West, F. J. (2019). *Call Sign Chaos: Learning to Lead*. New York, NY: Random House.

Mazzucato, M. (2018). *The Value of Everything. Making and Taking in the Global Economy*. London, UK: Penguin Books.

McGuinness, S., Pouliakas, K., & Redmond, P. (2019, August). Skills-Displacing Technological Change and Its Impact on Jobs: Challenging Technological Alarmism? (Discussion Paper No. 12541). Retreived from IZA Institute of Labor Economics website: http://ftp.iza.org/dp12541.pdf?mc_cid=af753b946e&mc_eid=31a0f8ffbc

McKibben, B. (2019). *Falter: Has the Human Game Begun to Play Itself Out*. New York, NY: Henry Holt and Company.

Meacham, J. (2018). *The Soul of America: The Battle for Our Better Angels*. New York, NY: Random House.

Metzl, J. (2019). *Hacking Darwin: Genetic Engineering and the Future of Humanity*. Naperville, IL: Source Books.

Miller, G. (2018). *The Apprentice: Trump, Russia and the Subversion of American Democracy*. New York, NY: HarperCollins.

Moon, E. (2019, June 6). 'The Fields Are Washing Away': Midwest Flooding Is Wreaking Havoc on Farmers. *Pacific Standard*. Retrieved from https://psmag.com/environment/the-fields- are-washing-away-midwest-flooding-is-wreaking-havoc-on-farmers

Morales, E. (2018). *Latinx: The New Force in American Politics and Culture*. New York, NY: Verso Publishing.

Mufon, S., Mooney, C., Ellperin, J., & Muyskens, J. (2019, April 13). 2°C: Beyond the limit: Extreme climate change has arrived in America. *Washington Post*. Retrieved from https://www.washingtonpost.com/graphics/2019/national/climate-environment/climate-change- america/

Newsom, G., & Dickey, L. (2013). *Citizenville: How to Take the Town Square Digital and Reinvent Government*. New York, NY: Penguin Press.

Norris, P. (2017). *Why American Elections are Flawed (And How to Fix Them)*. Ithica, NY: Cornell University Press.

Norris, P., & Inglehart, R. (2019). *Cultural Backlash: Trump, Brexit, and Authoritarian Populism*. Cambridge, MA: Cambridge University Press.

Okrent, D. (2019, May 3). Opinion | A Century Ago, America Built Another Kind of Wall. *New York Times*. Retrieved from https://www.nytimes.com/2019/05/03/opinion/sunday/anti- immigrant-hatred-1920s.html

Omand, D., & Phythian, M. (2018). *Principled Spying: The Ethics of Secret Intelligence*. Washington, DC: Georgetown University Press.

Parker, P. (2018). *The Art of Gathering: How We Meet and Why It Matters*. New York, NA: Riverhead Books.

Payne, K. (2018). *The Broken Ladder: How Inequality Affects the Way We Think, Live and Die*. New York, NY: Penguin Books.

Pinker, S. (2018). *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress*. New York, NY: Random House.

Rather, D., & Kirschner, E. (2019). *What Unites Us: Reflections on Patriotism*. Chapel Hill, NC: Algonquin Books.

Rees, M. (2018). *On The Future: Prospects for Humanity*. Princeton, NJ: Princeton University Press.

Ronis, S. R. (2006). *Timelines into the Future: Strategic Visioning Methods for Government, Business, and Other Organizations*. Lanham, MD: University Press of America.

Ronis, S. R., ed., (2010). *Project on National Security Reform Vision Working Group Report and Scenarios*. Carlisle, PA: U.S. Army Press, Strategic Studies Institute.

Sagan, Carl. (2013). *The Demon-Haunted World: Science as a Candle in the Dark*, Paw Prints, 2013. Pg. 41.

Schoonover, R. (2019, July 30). The White House Blocked My Report on Climate Change and National Security. *New York Times*. Retrieved from https://www.nytimes.com/2019/07/30/opinion/trump-climate-change.html

Schuessler, J. (2019, May 5). Medieval Scholars Joust With White Nationalists. And One Another. *New York Times*. Retrieved from https://www.nytimes.com/2019/05/05/arts/the-battle- for-medieval-studies-white-supremacy.html

Schwab, K. (2016). *The Fourth Industrial Revolution*. New York, NY: Crown Publishing Group.

Sclove, R. (1995). *Democracy and Technology*. New York, NY: Guilford Press.

Scott, J. C. (2012). *Two Cheers for Anarchism: Six Easy Pieces on Autonomy, Dignity and Meaningful Work and Play*. Princeton, NJ: Princeton University Press.

Sharpe, B. (2013). *Three Horizons: The Patterning of Hope*. Devon, UK: Triarchy Press.

Sherwood, M.L. (2017, December 6). City of Las Vegas: Customer Case Study [Video]. Retrieved from Vimeo website: https://vimeo.com/246099561

Simonite, T. (2019, May 1). Open AI Wants to Make Ultra-Powerful AI. But Not in a Bad Way. *Wired*. Retrieved from https://www.wired.com/story/company-wants-billions-make-ai-safe- humanity/

Smith, B. (2019). *Tools and Weapons: The Promise and the Peril of the Digital Age*. New York, NY: Penguin Books.

Smith, J. E. H., (2019). *Irrationality: A History of the Dark Side of Reason*. Princeton, NJ: Princeton University Press.

Solly, M. (2019, September 24). Art Project Shows Racial Biases in Artificial Intelligence System. Retrieved from https://www.smithsonianmag.com/smart-news/art-project-exposed- racial-biases-artificial-intelligence-system-180973207/#ZSrDvrWrl4195Puu.99

Snyder, T. (2018). *The Road to Unfreedom: Russia, Europe America*. New York, NY: Tim Duggan Books.

Snyder, T. (2017). *On Tyranny: Twenty Lesson from the 20th Century*. New York, NY: Tim Duggan Books.

Solly, M. (2019, June 12). Artificial Intelligence Generates Humans' Faces Based on Their Voices. Retrieved from https://www.smithsonianmag.com/smart-news/artificial-intelligence- generates-humans-faces-based-their-voices-180972402/

Straits Times. (2019, April 20). China may outlaw deepfake AI technology that alters faces of people. Retrieved from https://www.straitstimes.com/asia/east-asia/china-may-outlaw-deepfake- ai-technology-that-alters-faces-of-people

Thulin, L., (2019, April 25). How To Prepare for a Future of Gene-Edited Babies—Because It's Coming. *Smithsonian Magazine*. Retrieved from https://www.smithsonianmag.com/innovation/how-to-prepare-for-future-gene-edited-babies- 180972027/

Tobar, H. (2005). *Translation Nation*. New York, NY: Riverhead Books.

United States Department of Defense. *Quadrennial Defense Review 2014*, report, March 2014; Washington, D.C. 2014, Pg. 12.

Venkataraman, B. (2019). *The Optimist's Telescope: Thinking Ahead in a Restless Age*, New York, NY: Riverhead Books.

Walsh, B. (2019). *End Times: A Brief Guide to the End of the World*. New York, NY: Hachette Books.

White House. (2019, September). Summary of the 2019 White House Summit on Artificial Intelligence in Government. Retrieved from https://www.whitehouse.gov/wp- content/uploads/2019/09/Summary-of-White-House-Summit-on-AI-in-Government-September- 2019.pdf.

Wan, W. (2019, August 2). Racism has devastating effects on children's health, pediatrician s warn. *Washington Post*. Retrieved from https://www.washingtonpost.com/health/racism-has- devastating-effects-on-childrens-health-pediatricians-warn/2019/08/02/ce5fc96a-b313-11e9- 8f6c-7828e68cb15f_story.html

Watts, E. J. (2018). *Mortal Republic: How Rome Fell into Tyranny*. New York, NY: Basic Books.

Worland, J. (2019, April 22). Climate Change Has Already Increased Global. *Time*. Retrieved from http://time.com/5575523/climate-change-inequality/

Yang, W. (2018). *The Souls of Yellow Folk: Essays*. New York, NY: W. W. Norton & Company.

Yarrow, A. (2018). *Man Out: Men on the Sidelines of American Life*. Washington, DC: Brookings Institution Press.

Zaretsky, R. (2019, July 24). Max Weber Diagnosed His Time and Ours: A Political Ethic for a Disenchanted Era. *Foreign Affairs*. Retrieved from https://www.foreignaffairs.com/articles/central-europe/2019-07-24/max-weber-diagnosed-his- time-and-ours

Zaretsky, R. (2019, June 28). Rooting for a New Patriotism: Simone Weil Is More Relevant Than Ever, 70 Years On. *Foreign Affairs*. Retrieved from https://www.foreignaffairs.com/articles/france/2019-06-28/rooting-new-patriotism

Appendix 3: Correspondence

Standing Advisory Group 1

Correspondence

SAG 1

Invitation to Fuerth - Ronis Project on Foresight and Democracy January Meeting (SAG 1 Invitation)

Dear Colleagues:

Sheila Ronis and I are setting up our project on Foresight and Democracy, thanks to a grant from the Rockefeller Brothers Fund. As a basic component of our process, we wish to establish a standing advisory group of experts on foresight. For this purpose, we are inviting you to join us for a preliminary meeting, to be held on January 16th at the Morgan Lewis Law firm, 1111 Pennsylvania Ave., N.W., Washington, D.C. from 10am-3pm. Parking is available in the basement of this building and we will cover the cost for you. We will be providing light refreshments and a lunch.

BACKGROUND. The premise of this proposal is that foresight can be used to restore vision and creativity to democratic discourse about public policy, which is otherwise threatened by ideologically supercharged politics. We would demonstrate this by assembling a "round table" process that would gather persons who are deeply engaged in today's societal issues -- i.e. inequalities based on race/ethnicity, gender, age, economic status, and political agency -- for discussions about the societal implications of oncoming major changes, such as: those arising from high technology (eg., the Crispr revolution in genetics; advanced AI; anthropocene phenomena including climate change and geoengineering; and a completely material basis for the understanding and therefore the potential manipulation of "mind"; and those arising from fundamental and irreversible demographic changes).

We plan a series of round table meetings, from February through June, each meeting to be two days duration. Successive sessions would focus on: (1) the implications of these trends for each of the societal issues identified above; (2) their overall potential impact on democratic governance; and (3) the use of foresight as a means to improve the performance of democratic governance in the face of these challenges.

We will be using the round table process to test the proposition that foresight can broaden discourse about public policy and governance, by linking it more firmly to facts, and by loosening ideological constraints that limit consideration of practical solutions to foreseeable issues.

AGENDA of MEETING.

- Background, rationale and overall structure of the project
- Schedule and time-line
- Role of standing advisory group
- Output of the process
- Discussion, comments, recommendations
- After-meeting report to participants (by e-mail) indicating adjustments made based on suggestions

We are aware that this represents a significant "ask," but to our knowledge it is the only effort of its kind to ask the question: can democracy survive radical changes owing to discontinuous, complex events resulting from the pace of technology, and of unprecedented demographic change in the United States?

We hope very much that you can join us for this discussion, and, thereafter in the process we seek to establish. Please RSVP for January 16 to: joanna.nicoletti@forwardengagement.org if you can join us or contact either Sheila or me if you have any questions.

All the Best.
Leon Fuerth
Website: http://www.forwardengagement.org/

PROJECT ON FORESIGHT AND DEMOCRACY 16 JANUARY 2019 MEETING SUMMATION

Introduction:

The Project on Foresight and Democracy (PFD) convened its first membership group meeting on Wednesday, January 16, 2019. Following brief comments by the group's leadership, PFD members took turns introducing themselves and summarizing their professional backgrounds and connection to the project. Most group members had substantial government experience and had worked on foresight and strategic planning issues previously. PFD leadership emphasized that meetings will adhere to "Chatham House" rules: The PFD may utilize the information discussed in meetings, but will not attribute ideas and affiliations to specific individuals.

Project Mission:

PFD leadership began the discussion by noting that today's extreme political polarization has contributed to a crisis in democracy, as public discourse has not been able to keep pace with disruptive developments in society. This crisis predates the political and social tumult associated with the current presidential Administration, as a combination of political polarization and societal disruptors have strained the democratic process for several years, contributing to a growing sense that governments are unable to adequately address contemporary challenges. This crisis is likely to be exacerbated in the coming decades by truly profound disruptors, such as the future of work in an era of artificial intelligence, accelerating economic inequality, demographic changes associated with race, ethnicity, age, and religion, as well as meaningful access to the political process by all groups in civil society.

The present political environment is unprepared to adequately address these challenges. To promote a method of discourse in which stakeholders throughout the political spectrum may more meaningfully engage with one another, the PFD will attempt to utilize foresight-based analysis (an objective systematic visualization and critical comparison of alternative courses of action) to help create a space for new ideas to otherwise ideologically polarized solutions.

Past government-funded foresight projects have generally not survived turnover in presidential administrations. Accordingly, the PFD will attempt to create a foresight engagement model which can be utilized by the general public. The PFD foresight model will be underpinned by a series of assumptions: that the general public is more politically sensible than the major political parties, that analytic foresight is a tool which can be distributed for public use, and that foresight is a discipline which, if properly practiced, requires people to leave their preconceptions at the door.

The PFD's work is funded by the Democratic Practice Program of the Rockefeller Brother's Fund (RBF). The RBF is interested in supporting an experiment in which people from specific populations within the broader political spectrum engage in foresight exercises to see if they can learn to constructively communicate and engage with one another. The PFD will have to structure interventions to encourage frank conversation between people who would normally never speak with one another. The RBF will fund an approach which brings together organizations which represent race and gender issues, with a particular emphasis on ensuring representation for groups which are particularly affected by deficiencies in the current democratic process.

Project Strategy:

The PFD will consist of six roundtable discussion meetings of foresight-focused engagement between political and social groups in the coming months. A final meeting will take place June 19-20, in which participants will share what they have learned and provide feedback to the PFD. PFD will then compose a report of its findings to be drafted in July – August 2019. In accordance with discussions between the PFD and RBF, groups will be based on topical political and social issues (gender, age, religion, race and ethnicity, socioeconomic status). The final meeting in June will be used to discuss lessons from the previous six meetings and to propose ways to use the experiment's findings to promote foresight-based approaches to political and social challenges

Project Challenges/Issues:

The remainder of the meeting concerned discussions regarding the project's structure, composition, and challenges associated with capturing diverse political and social groups to discuss consequential societal disruptors.

As a threshold matter, the group considered whether foresight analysis is a tool which can be propagated to large numbers of people, or if it requires experts to propagate more generally. Although data is limited, past experience with groups in academic settings (such as Model United Nations) indicates that foresight analysis holds promise if effectively communicated and applied. Another group member mentioned that it might be worthwhile for PFD to examine the Foreign Policy Association's "Great Decisions" program. The goal of this project is to see what happens when groups who are deeply engaged in contemporary political and social issues are brought together and use foresight analysis to examine the significant disruptors PFD believes are on the horizon.

A significant amount of discussion focused on how to best structure a subject group composed of a limited number of people from a diverse spectrum of political and social groups. Particular focus was placed on ensuring that subjects were not from the academia or think tanks, but rather had spent careers meaningfully engaged with their constituent issues.

Similarly, subjects would ideally not be selected from "elite" political, social, or economic backgrounds and positions, as the aim of the PFD's project is to try and use foresight analysis to reach as broad an audience as possible.

Standing Advisory Group 2

Correspondence

SAG 2

Project on Foresight and Democracy February Round Table (SAG 2 Invitation)

Dear Project on Foresight and Democracy Standing Advisory Board:

You are invited to participate in the February 12, 2019 Round Table from 1000 – 1400, at the Morgan Lewis Law Firm, 1111 Pennsylvania Avenue, N.W. Washington, D.C. for a discussion with us of how best to present foresight theory and basic "foresight tools" to planned Round Table sessions. Lunch will be provided and parking fees will be reimbursed.

The tentative calendar of round tables is below.

February 12, 2019, 1000-1400
First Round Table Meeting

Present on basics of foresight, including the simplest of its tools, such as System Identification, STEEP, Futures Wheel three-step (primary, secondary, tertiary framework). Includes practice session. 3 ½ to 4 hour total duration.

- Morning: presentation to participants on premises of the project; layout of calendar; basic foresight theory and basic tools
- Afternoon: presentation and demonstration of basic tools

March 14, 2019, 1000 - 1500
Second Round Table Meeting

Deals with impact of technology drivers. One day total duration.

- Morning: presentation(s) on specific tech drivers (Artificial intelligence, artificial biology; artificial climate) twenty-year time horizon.
- Afternoon: participants apply basic tools, in three segments: (1) primary = near-term and local; (2) secondary = middle term and national; (3) tertiary = long-term and global.

April 16, 2019, 1000 - 1500
Third Round Table Meeting

Deals with impact of demographic drivers. One day duration.

- Morning: presentation(s) on specific trends relating to demographic drivers. Twenty – year time horizon.
- Afternoon: participants apply basic tools in three segments; (1) primary = near- term and local; (2) secondary = medium term and national; (3) tertiary = longer term and global.

May 15, 2019, 1000 - 1500
Fourth Round Table Meeting

Deals with parameters for an extended process. One day duration.

- Morning: presentations on two elements of an extended process (a) Anticipatory governance; (b) Center and/or networked equivalent.
- Afternoon: discussion of the premises that extended foresight processes can work to support of democracy.

June 19, 2019, 1000 - 1500
Fifth Round Table Meeting:

Preliminary findings overall. Output of this session is input for our work on draft report to RBF. ONE DAY

This report will then be circulated to participants for comment. Final draft will be sent to RBF by the end of September.

Please RSVP to Sheila at sheilarr@aol.com if you can attend the February meeting. Feel free to call either Sheila on 248-425-1430 or me on 703-898-0463 if you have any questions.

All the best.
Leon S. Fuerth & Sheila R. Ronis, Ph.D.

Standing Advisory Group 3

Correspondence

SAG 3

Next SAG Meeting 14 March 2019, 1000 - 1500 (SAG 3 Invite and Agenda)

Dear SAG members:

Proposed Shift in Schedule

We've had two highly successful meetings of the SAG, well attended and productive. Upon reviewing the outcome of those meetings, and after some more thought about the schedule going forward, Sheila and I want to propose that we schedule a third, which will link the SAG directly into the scheduled series of Round Table discussions. We have in mind to use the proposed SAG meeting for two purposes: to have a discussion about the trends we intend to present to members of the Round Table; and to discuss which are the best ways to introduce the Round Table members to foresight concepts and methods, for their use in assessing the future impact of these trends. We have designed these objectives into our draft schedule for SAG #3.

1000 - 1200 Morning

Status report on the project.

- Review principle results of SAG#2; review the proposed Round-Table series; report on efforts to recruit a panel for the Round Table series.
- Discuss the intended structure of the series, i.e., dealing sequentially technology- driven changes and demographically driven changes.

1200 - Lunch

- Review the tech-drivers of change (reference to Dave Rejeski's comments at SAG #2; Carmen Medina to lead the discussion.)

1300 - 1500 Afternoon

- Discuss a basic set of two or three Foresight Methodologies suitable for use by Round Table Participants.
- Apply these methods to one or more (time permitting) of the selected trends (objective -- how best to expose Round-Table participants to concepts of systems, complexity, and to awareness of primary, secondary, tertiary ramifications).

The meeting will take place on 14 March, from 1000 - 1500 at 1111 Pennsylvania Ave., N.W. at the Morgan Lewis Law firm office. There will be coffee at the start, and lunch will be served.

Please indicate whether you are able to attend this session by responding to this email.

Leon Fuerth
Sheila R. Ronis

Project on Foresight and Democracy 14 March 2019 SAG Meeting Summation

Introduction:

The meeting began with a review of ongoing efforts to populate the round-table discussions, which will take up three further sessions. The first meeting, scheduled for 17 April 2019 will focus on scientific and technological drivers of change in democratic systems; the second meeting scheduled for 15 May 2019 will focus on demographic drivers and the third, scheduled for 19 June 2019 will focus on recapping and assessing changes in participants' outlooks as a result of exposure to foresight methodology. Laura Maristany of The Democracy Fund and the Dr. Steven Trachtenberg (former President of GW University) have provided a combined list of 16 possible names, of which seven have responded affirmatively. Leon and Sheila are following up.

Some SAG members emphasized the need for balanced ideological representation, and the meeting recognized a representative from the Charles Koch Institute, who said that she would consult others at the Institute, to determine whether there would be ongoing participation.

Artificial Intelligence as a Disrupter:

The meeting moved on to discussion of certain emerging technologies and their potential effects on society. This conversation naturally gravitated towards discussion on the Boeing 737 MAX, in light of suspicions that this aircraft's two crashes might be the result of excessive reliance on highly – perhaps too highly – automated features of the flight control system.

One member reminded the room that the Boeing 737 MAX is actually less complex than Airbus' equivalent model, and features more circuit breakers to allow for human intervention. The takeaway that this participant had from meetings with both Boeing and Airbus is that the airline industry is aiming to make flying "90%" automated. This trend, he said, reflects a belief that complex, high-performance aircraft cannot fly safely without the aid of artificial intelligence and automated systems. That belief, however, may turn out to have effectively neutralized human capacity to correct for malfunctions within the control system itself.

From this specific point about flight safety, the discussion moved to the general concern that as artificial intelligence continues to develop, it will be important to take into account the diminishing role of humans in machine decision-making. In this connection, members discussed the increasing involvement of artificial intelligence in the criminal justice system, citing examples such as algorithmic policing, automation in pre-trial administration, and risk- assessment systems. One member explained that in some cases, the entire pre-trial process is being determined by algorithmic methods (e.g. a pre-trial release board has been replaced by an automated system that decides what the bail amount should be.) The algorithms for these systems process data from a questionnaire, which can be written in such a way as to retain human bias.

Artificial Intelligence and algorithmic learning seem to have been implemented rapidly in order to address severe efficiency problems and backlogs in the criminal justice system. However, as politicians and governmental organizations embrace these emerging technologies, human regulators are not keeping pace. As the velocity of innovation quickens, governmental institutions will either need to restructure to match the pace, or risk entirely losing the capacity to exercise oversight of emerging technologies.

Climate Change:

Members began the discussion on climate change by addressing climate change as a challenge to national security in the form of a "threat multiplier". The 2014 Quadrennial Defense Review was cited as an example: identifying climate change as a force that "will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions – conditions that can enable terrorist activity and other forms of violence". (Department of Defense. Quadrennial Defense Review 2014, Chuck Hagel.) This definition can also be extended to include the ways in which climate change exacerbates existing strategic tensions, such as the emergence of new maritime passageways as factors in a competition to exploit the Arctic for geopolitical and economic reasons. Framing issues around climate change in this manner has allowed the Department of Defense to take a proactive approach to the topic, and one member mentioned that the military will soon be advising civilian organizations on methods to combat these problems.

In discussing the need for application of foresight methodology in governance, members discussed the discrepancy of perspectives between generations in their approaches to climate change. From Stockholm, Sweden, a 15-year-old Greta Thunberg organized a global climate change awareness school strike involving children in over 9000 locations in more than 100 countries. This phenomenon exemplifies how younger generations tend not to see climate change as a distant problem or as a secondary priority, but as something they will be forced to confront in their lifetimes.

In the United States, this generational gap is now beginning to have an impact on national politics, but the political majority have yet to adopt the same sense of urgency that many younger millennials and members of Generation X exhibit. Members noted that, as a result of social media and other emerging technologies, the capacity for futures modeling and for implementation of foresight methodology as a factor in policy, has never been greater, though it has yet to be fully utilized by those in positions of power. This generational discrepancy is contributing to distrust in government: a trend that some members believe is likely to worsen without a major shakeup of the political system.

Emerging and Converging Technologies:

In understanding emerging technologies, members agreed that the greatest impact of distinct technologies occurs when they converge.

SAG Meeting members opened discussion of emerging technology trends by first presenting the findings from the Future Today Institute's "2019 Emerging Technology Trends" report, and the subsequent lectures given by Future Today Institute's Amy Webb. In assessing the effectiveness of the Future Today Institute's forecasting, one SAG member presented the following graph, which lists disruptive technologies mentioned in the 2009 and 2019 reports, and which were mentioned in both. (FTI Tech Trends Report 2019. Report. 12th ed. Future Today Institute.) This analysis serves to exhibit the velocity of technology change, and also demonstrate that despite the best forecasting, some technologies can burst into view spontaneously without much warning.

Traits and eliminate genetic diseases but will also produce a host of ethical and scientific dilemmas. Indoor plant factories and micro farms have already become popular in China and Japan, and will become increasingly essential in the United States as it continues to urbanize. The likely impact of this will be the elimination of much of the need for long-distance food production, and the destruction of traditional agricultural and transportation economies, as companies with the financial resources to develop the new forms of cultivation will increasingly control the means of production. Reference was made here to the efforts of major vendors of seeds to substitute variants that do not replicate, and thus force farmers to purchase seed annually, rather than re-seed from existing stocks.

A further take-away from the discussion of Amy Webb's presentation was her categorization of issues into near term, medium term, and long term. Near term issues are defined as those that can arise and require addressing in the next two to three years; medium term issues are within the next ten years; and long-term issues will require attention in ten years and beyond.

Roundtable Discussion Formatting:

The meeting concluded with a discussion of the make-up of the pending roundtable discussions, centering on best practices to employ with "lay" participants. Members agreed on the importance of allowing room for the participants to voice their own thoughts and opinions, rather than setting up a "field day for futurists" by overly populating the room with SAG members. It was agreed that this interaction should be designed to encourage and equip participants to discuss issues related to foresight, learn from the discussions, and potentially, to change their perspectives on how to address future issues.

One member suggested that round-table discussions should be opened by asking participants "what are your thoughts about the future?" and then tracking the progression of their responses to that question over the course of the discussions. Members emphasized that SAG members will still play a vital role, because although participants may be familiar with individual issues associated with ultra-rapid technological change, exposure to these issues in isolation from each other may not be enough to change ways of thinking. Any discussion on thinking about the future needs to be supported by giving the participants basic foresight tools and processes and assisting the participants to apply them. This manner of arranging the discussions will therefore require that futurists in the room should act as coaches, guiding the participants and giving them direction, but taking care not to influence their substantive conclusions.

One member suggested the use of a simple device consisting of a stack of cards imprinted with images of different categories needed in foresight analysis, including technologies, social issues, societal institutions, etc. titled on each card. Participants would then select cards from different categories and talk about how these factors may impact a widening circle of persons, expanding from community to state, to nation, etc. One member will need to record and aggregate these responses so as to track how foresight may affect recognition and analysis of different converging factors among participants.

Another member recalled seeing a video clip of animals in the savanna, with the camera frame centered on two antelope fighting. As the clip continued, a distant shape slowly approached the frame of view, and eventually it became clear that a lion is about to attack the antelopes. The antelopes were so preoccupied with their own rivalry that they do not notice the lion until it was too late, and the lion inevitably caught and killed one of them. This video illustrated how groups can become hyper-focused on the issues immediately in front of them, to the exclusion of foresight that might otherwise have helped them prevent catastrophe.

SAG members agreed that the objective of the project is to provide foresight methodology to the participants as a means to bypass polarization, and thereby to explore issues related to the future of democracy, resulting also in evidence that civil discourse is still possible in an increasingly diverse society.

Round Table 1

Correspondence

Project on Foresight and Democracy Round Table 17 April 2019 (RT 1 Invitation/Agenda)

Sheila Ronis and I want to thank you for your interest in the project on Foresight and Democracy.

Basic information about the project was contained in an e-mail sent out to then-prospective participants, on 5 April 2019 and which we are attaching below, as a reference. The purpose of today's message is to provide specific information concerning the project's first "round table," which you are scheduled to attend on 17 April 2019 from 1000-1500 at 1111 Pennsylvania Ave. N.W., Washington, D.C. Parking is available under the building and parking costs will be reimbursed with your receipt. Refreshments and lunch will be served.

Round Table Purpose

The purpose of the round table is to promote systematic discussions of the long-range societal implications of major oncoming trends owing to disruptive forms of technology and to shifts in the demographics of the United States. These discussions will touch upon the potential consequences of such trends for the specific interests of various sectors of American society, and upon the collective interests of American society as a whole, complex entity. Foresight methodologies will be introduced to help structure the discussions. The major focus of this process will be on the capacity of our system of democratic governance to sustain itself in the presence of multiple forms of profound, disruptive change, under conditions when political discourse has become polarized and the responsiveness of society to change is blocked by stalemate. Participants will be expected to speak on the basis of personal views, rather than to the specific interests of organizations with which they may be (or may have been) associated.
Chatham House rules will apply to all discussions.

Participants

- Dr. Allen Sessoms: physicist; diplomat; former president Queens College of the City University of New York.
- Larry Spencer: US Air Force General (4 star, retired), engineer, budget and financial management.
- Ian H. Solomon: founder, CEO of Solomon Global LLC, former Executive Director of World Bank Group, associate dean at Yale Law School.
- Dr. Charlene Drew Jarvis, neuropsychology, educator, elected member of Council of the District of Columbia.
- Sherri Goodman: former Deputy Undersecretary of Defense (environmental security), Board Chair, Council of Strategic Risks, Senior Strategist, Center for Climate and Security.
- Charlotte Resing, attorney, ACLU.
- Eric Popiel: Commander, US Coast Guard (ret). Program Manager for USCG Strategic Foresight Initiative, OPM Strategic Foresight Manager.
- Margaret Cope, Founder, ServeUSA.
- Trooper Sanders: Technologist.
- John Meagher: Futurist.
- Jim Burke: Futurist.
- Sheila Ronis: Project Co-Director
- Leon Fuerth: Project Co-Director

Sequence

The schedule for the day's discussions has been arranged to promote an exploration of the round- table's views of the future in circumstances that are designed to test the effects of foresight methods when applied by members of the panel to an assessment of important trends over the longer term. Of interest will be: (1) how the group thinks about the future at the outset of the process; (2) how the group thinks about the future as a result of the process; (3) what the group thinks about the future in substantive terms; and (4) what the group thinks -- if indeed there is consensus---about specific challenges to democratic governance, and the utility (or lack thereof) of foresight as a supporting element.

Agenda

The agenda will be fluid but include four topics. Times are approximate.

State of Democracy: falling confidence in its adaptive capacity; growing demand for change; grid-lock over policy responses. Support for authoritarian solutions is growing. Eyes not on the future. (one hour)

Next Generation Challenges: Both technology driven and demographic. Hockey-stick interactive. Concurrent. Complex. Global. May sharply intensify anti-democratic trends. Could bring to an end the chapter of human development that began in the West, with the Enlightenment . (one hour)

Anticipatory response/theory: (1) Foresight methods to provide earlier alert based on first signals. Tracking. (2) Systems-based approach to promote awareness of primary, secondary, tertiary consequences of trends; (3) Systems approach for better understanding of actions taken and not taken. (working lunch) (one hour)

Anticipatory response/demonstrate: (1) system map; (2) future's matrix (afternoon session).
(3) Evaluation (two hours)

Follow on

The second round table on 15 May 2019 will examine the impact of profound demographic change on democratic processes, again using foresight methodologies to assist. The third round table on 19 June 2019 etc. At the conclusion of this sequence, Ronis and Fuerth will prepare a draft summary of findings. These will be presented to the Round Table at a meeting with the project's advisory panel of foresight experts, for a plenary discussion and critique.

5 April 2019 Email:

Thank you again for your interest in the Project on Foresight and Democracy. Sheila and I look forward to your participation. This note provides an overview of the process, including its schedule.

Project Rationale

Ideological polarization endangers democracy by sharply diminishing its responsiveness to urgent societal needs. Systematic foresight is an analytic technique for generating earlier awareness of major future contingencies, along with more time to prepare for purposeful, anticipatory action. This is especially necessary in view of the acceleration of major challenges in coming years, as the result of new technologies that will deeply affect the public, along with shifting demographics that will profoundly change the characteristics of the public itself. The project is designed to test this proposition, and to explore ways to apply the results of that test on a larger scale, in a subsequent phase.

Round Table Process

The project is based on a Round-Table process, intended to simulate public thinking in microcosm. Participants in the Round-Table will, by virtue of their professional experience, be able to speak to issues such as: the range of disruptive trends that can reasonably be projected over the next one to two decades; foresight methodologies for characterizing the societal impact these trends may have; challenges these trends may present to democratic governance; and methods for bolstering the adaptive capacity of democratic governance in light of these challenges. These persons will engage on the basis of their personal knowledge and concerns, rather than as spokespersons for institutions. We now have a pool of ten talented people who are ready to contribute their time and imaginations to the process. We are checking to make sure that all parties are willing to have their names and professional histories made available within the group. Meanwhile, we can say that within this group are: educators, entrepreneurs, scientists, managers, demographers, civil rights advocates, foresight specialists, and systems analysts -- some with deep experience in government, others coming from the private sector including NGOs and not- for-profits.

There are three planned meetings of the Round Table: 17 April, 15 May and 19 June. The first session will focus on the implications of technological change. The second session will focus on the implications of demographic change. The third session will focus on prospects for improving the vitality of democratic governance over the longer term.

At each of these meetings, there will be a sequence, as follows:

- The "state" of democracy, reflecting the aspirations and concerns of Americans as seen by sector (race/ethnicity; gender; generational; socio-economic status), and by the society as a whole ("the commons").
- Disruptive trends and forces over a period of 10-20 years (artificial intelligence, synthetic biology, climate disorientation, demographic transitions, disruption of global power relationships).
- Foresight methods.
- Application of foresight methods to trends.
- Assessment of prospects for democratic governance in light of the foregoing, with discussion of measures to improve the odds for its survival over time.
-

The Round Table discussions will be fluid and interactive, to take advantage of the scope of its participants' professional backgrounds. We will limit the size of these meetings in order to make possible more sustained dialog. Minutes will be circulated rapidly after each session, in order to make sure that persons who cannot participate are kept current. Chatham House rules will be applied to the proceedings.

After the Round Tables

After the third meeting of the Round Table, Sheila and I will work with participants to prepare a final summary report of the project for submission to you for comment, and recommendations for further action before we prepare our final report to the Rockefeller Brothers Fund and a release of information to the public. The project is set to run until September or October. By then, we will have made a decision whether to pursue a second phase in the form of an effort to encourage the interested public to replicate the round-table process spontaneously, by making use of internet-based exchanges of information at the level of local civic organizations. Please RSVP to Sheila regarding your availability to attend 17 April at sheilarr@aol.com or simply respond to this email.

Leon Fuerth

Round Table 2

Correspondence

Invitation to Project on Foresight and Democracy Round Table 2

You are invited to attend the second Project on Foresight and Democracy Round Table meeting to take place on 15 May from 1000 - 1500 at 1111 Pennsylvania Avenue., N.W. Washington, D.C. We are hoping that all six members will be able to attend. Expertise on demographic trends will be provided by Dr. Mark Lopez. Dr. Lopez is a senior member of the Pew Foundation staff. He will, however, be speaking for himself, rather than representing the Foundation.

Members of the Standing Advisory Group (SAG) who intend to come are requested to let us know, since that has an impact on everything from our sense of resources around the table to our count of the number of sandwiches for lunch.

We intend to send all interested parties a detailed schedule for the date. Essentially, however, the discussion will occur in two "passes."

- In the morning, participants will be briefed by Dr. Lopez regarding the transformation of the United States' population from a system based on a majority plus minorities, to a system comprised of minorities, in need of new ways of thinking about itself as a collection of specific interests on the one hand, and a commonwealth on the other.
- In the afternoon, participants will discuss long-range ramifications of these changes. SAG members will assist from a foresight perspective, taking into account complex interactions.
- We will aim to have detailed minutes in circulation to participants for comment, to be followed by an adjusted version that takes these comments into account..

Please RSVP to Sheila Ronis at sheilarr@aol.com as to your availability. You may call her at 248-425-1430 with questions. Parking costs will be reimbursed and lunch will be provided.

--

Leon Fuerth
Website: http://www.forwardengagement.org/

Round Table 3

Correspondence

Round Table 3 Invitation

Dear Members of the Round Table and the Standing Advisory Group:

This Wednesday, Sheila and I will hold the third Round Table meeting from 1000 - 1500 at 1111 Pennsylvania Ave., N.W. Washington, DC. The meeting will begin with an overview of what the Project on Foresight and Democracy has done so far, and more importantly, we will present for discussion, our plan for the path ahead leading to completion of the Project this Fall. Thanks to your enthusiasm and insights, we now have a much clearer idea of what has to be done, than was the case -- truth be told -- when we began. To our knowledge, no one has done something like this before, and it has been as they say " a learning process." One thing we have learned is that we need a total of five Round Table meetings (two more than originally planned) in order to do justice to the subject. We have enough money in the budget to do this. The question is whether we can have your continued engagement.

We will go into this in detail at the meeting, this Wednesday, 19 June. For now, however, we think we should focus on the basics, which are:

- Round table 3 (June 19): use the morning for a discussion of values central to democracy; use the afternoon for a discussion of the possible effects on these values of the technological and demographic "drivers" that we have covered in earlier sessions.
- Round table 4 (tentatively, July 30) use the morning for a discussion of democracy as an "operating system", as designed in the Constitution, including its flaws and failure points; use the afternoon for a discussion of "fixes" to democracy as an operating system, including the training of Americans for 21st century citizenship.
- Round table 5 (tentatively August 29 or Sept (TBD)). Use the morning for presentation of a visionario (which will have been prepared by a working group of SAG members), designed to test the implications of changes to democracy as an operating system. Use the working lunch and afternoon to apply the visonario, looking for emergent ideas from participants about ways to strengthen democracy for the future. Three major challenges will be considered: (a) the populist revolt against liberalism;* (b) technological shocks; (c) demographic pivot points.
- Sheila and I will integrate the results of this process into a final report on the project, to be submitted to the Rockefeller Brothers Fund. We will first circulate that report in draft form to participants in the project (SAG plus RT members); and then submit a final text.

* This is a new topic we have not yet discussed but will in Round Table 3. Leon Fuerth

Round Table 4

Correspondence

Round Table 4 Invitation: July 30th, 2019

Dear SAG and Round Table Participants:

The 4th Round Table will take place on Tuesday 30 July from 1000 - 1500 at the Morgan Lewis Law Firm, 1111 Pennsylvania Ave., NW. Lunch and parking reimbursements will be provided.

The morning will be reserved for discussion of American democracy as an "operating system," as designed in the Constitution, and modified by amendments, and judicial findings to the present time. We will discuss its strengths as well as its flaws and failure points.

The afternoon will be reserved for discussion of possible "fixes" to the operating system of American democracy, including: (a) those which address urgent current deficiencies; and (b) those which address ways to strengthen the ability of the system to handle oncoming major transitions for the longer term, as described in foresight-based discussions at previous Round Tables. Details to follow.

This is the next to last session of the Round Table. To remind, the last session will take place on August 29th, and will involve the use of a "visionario," to facilitate discussion of alternative futures where challenges arising from coming shocks (technological, demographic) are handled successfully in terms of democratic values, and other futures, with undesirable outcomes in terms of basic democratic values.

Please RSVP to Sheila at sheilarr@aol.com and let her know if you can attend if you have not already done so.

--

Leon Fuerth
Website: http://www.forwardengagement.org/
E-mail: hdpf@msn.com OR leon.fuerth@forwardengagement.org

Round Table 5

Correspondence

Round Table 5 Invitation: The Visionario; Project on Foresight and Democracy

Dear Colleagues:

As you know, on 29 August, we will have the last projected meeting of the Round Table (RT5). Per usual, the meeting will take place at the Law Offices of Morgan Lewis at 1111 Pennsylvania Ave., N.W. It will be built around a "visionario" which Sheila and I are attaching to this e-mail. Our purpose in sending it to you ahead of the actual meeting is to allow time for you to digest its contents and to think about the discussion that we hope will emerge from it. We thank Jim Burke and John Meagher for their advice and comments along the way, including the attachments.

A little history

Towards the end of WWII, Germany unveiled some stunning advances in military technology, including the first operational ballistic and cruise missiles, and the first operational jet aircraft. Too late to save the Reich. But shocking to the United States, nonetheless (a foreshadowing of other technological surprises involving the Soviet Union during the Cold War.) At any rate, the fledgling United States Air Force (established in 1947) felt the need for some system of forward looking analysis that could provide advance warning of potentially decisive surprises of this kind. Towards that end, it established the RAND Corporation, locating it in Santa Monica, California, not far from Hollywood.

The scenario

The proximity to Hollywood had real consequences. RAND -- borrowing from studio practice -- began to employ scenarios as a methodology for constructing credible alternative futures, so as to explore the future: a kind of long-range intellectual radar to search out potential game changers. There are many other methodologies for doing this, but the scenario remains one of the most important because it was designed to involve participants and to engage their imaginations so as to overcome the assumptions and biases that they otherwise bring with them.

The key to the successful scenario is what the 18th century British critic and poet, Samuel Taylor Coleridge, called a "suspension of disbelief" -- a moment at which the spectator at a play, or the participant in a war game -- accepts a fictitious account as a real event, at least for a brief time, and gives it complete attention. It is more than a teaching device: it is a means to create a credible artificial experience.

The Visionario

The term, "visionario" is Sheila's personal contribution to the art: one that she has employed as a consultant and as a teacher. It is an advanced form of scenario, specially designed to have a particular quality that may or may not be present in any given scenario. That special quality is that a visionario is built to facilitate thinking about social systems that display the characteristics of complexity: many forces and events interacting concurrently, simultaneously affecting the system to which they belong, characterized by surprise, discontinuity, disproportionality between inputs and outputs --in other words, the actual behavior of the world, as opposed to over-simplified stock-models we so often rely upon to our subsequent regret.

The Democracy/Foresight Visionario

The Project on Foresight and Democracy is based on a premise: namely, that foresight is a discipline that can help democracy deal with complex societal issues, by enabling discussions of public policy to escape the effects of extreme partisanship. The Visionario that we are presenting to you aims to test that proposition, by inspiring a discussion of the effects of oncoming, foreseeable consequences, in which the simultaneity of events is accommodated, as is the possibility of multiple consequences arising from the same actions. It is intended to be a way of capturing the fluidity of events: much closer to the living beast itself, than to a taxidermist's model.

The Schedule

Slide #2 presents a schedule that sequences discussions at the pending Round Table in a manner that we think flows logically. For each topic, we have identified the pertinent slides by their numbers.

What happens afterwards?

Per usual, Our rapporteur for the day, Maria Sinclair, will produce a near-verbatim record of the discussion. That record will then be condensed into a thematically organized version, which will be circulated to participants for comments. The incorporated comments will become the final version of the record of this Round Table, on the model of earlier accounts that you have seen.

Sheila and I will then begin to draft a final report to capture what can be fairly said for the results of the Project. Circa the beginning of October, a draft of that report will be circulated to participants for comment. Circa November 1, an amended, final report will then be sent to the Rockefeller Brothers Fund, in fulfillment of an obligation that Sheila and I accepted as a condition of the grant. Once that is done, we will find ways to distribute the report as widely as possible. That will involve an effort to establish links to both US and foreign entities that are active in the field of foresight and governance. It will also involve an effort to find a new source of financial support, since the Fund was very clear that this would be a one-time venture for them. In the event that we are able to continue, we have a second phase in mind, which we think we are going to call "Grassroots Foresight and Democratic Engagement." Its goal would be to demonstrate methods by which networks of citizen organizations can engage at their own initiatives in discussions of the sort that we have had. It's about time for lay people to have a way to think on their own about the future, independently of all the forces that seek to herd them into one partisan camp or another.

What about the Round Table?

We would like to sustain the relationships that we have formed with all of you , and we will surface some low to no- cost ideas for doing that. Nothing fancy unless the Project can find resources. But perhaps enough to keep us in communication with each other.

Leon

Round Table 6

Correspondence

Round Table 6 Invitation and Briefing Memo
Dear Colleagues:

To remind: RT6 will occur on 25 November at 9am - 3pm. Lunch will be served. As of now, Sheila and I view this as the last such gathering, and also the most consequential. We hope to see many of you there, to add value to the discussion -- but also in order to be able to thank as many of you in person, as possible.

In our message to you of 12 November, we laid out two goals for RT6:

- to discuss the idea of an institutional center focused on practical ways to use foresight a s a means to bolster the capacity of democratic governance to deal with the kinds of disruptors that have been the subject of our meetings; and
- to talk with you about a second phase to this project, in which we would look at the scaleability of our ideas: upwards to the global level, and downwards to the "grass roots."

A Center

In an ideal case, governance should (and in our opinion, can) be organized to integrate foresight, the policy process, and the execution of policy. Sheila has dealt with this through her "visionario" processes and I have worked on a different approach, called "anticipatory governance." Either way, our proposals begin from the same premise: that foresight is a discipline for strategic thinking, and that it ought to be systemically integrated with the policy process. Both of us, in our own ways, have proposed methods for accomplishing this. Moreover, despite our differences over operational details, we are in broad agreement about the characteristics that a center would have and the functions it would serve, and it is these -- rather than anything like a detailed contractor's blueprint --that we would like to discuss with you at RT6:

Characteristics

- Continuity of effort.
- Whole of government
- Whole of system.
- Near, middle and long term
- Primary, secondary and tertiary consequences
- Advisory
- Professional
- Processes need to work continuously, not episodically.
- Processes need to be routinized, rather than left to happenstance.

Foresight function

- Situational awareness: State of the World; State of the Union.
- Near-term decisions with potentially significant long-term impact.
- Selected "vital" trends.
- Globalized issues.
- Very long-range issues.

Policy design function

- Inventory of issues for decision, needed in the immediate present, middle-term and longer term.
- Possible policy responses: including anticipated costs and consequences.

Feedback function

- Periodic monitoring of policy outcomes and projections for the future.
- Whole of system interactions System integration function
- Adapted version of Round Table processes for fusing streams of information bearing on trends, disruptive events, values, policy issues, etc.
- Use of "high-band-width" visionarios to deal with complex interactions on realistic basis.
- Study of netcentric organizational concepts for execution of policy, such as Art Cebrowsky's work on netcentric warfare and anticipatory governance, etc.)

Scaleability Phase 2

In complexity theory, there is a concept of "nested systems." Applied to the question of foresight and governance, this would mean that whether one is thinking at the local, national or global level, the process remains the same: only its scale changes. Sheila and I believe that if there were to be a phase 2 in this project, it ought to explore the scaleability of our ideas involving scale- ability up, in which we would explore the global dimension of most of these issues, and scale- ability down, in which we would explore at the level of "grassroots foresight." The link between these segments is: without American leadership, chances of global responsiveness to global challenges are zero -- and without domestic public support in the US, chances for that kind of American leadership are also zero.

We have been thinking about this for some time, but our ideas crystalized as the result of a string of discussions we have had in recent months, with experts working on the problem of foresight and governance in several key overseas groups: Singpore's Horizon Scanning and Risk Assessment Center; the OECD, and a recent high level discussion with EU officials. We will fill you in on these discussions in a follow-on to this memo.

Wrap-up Assessment

This project began four years ago, when Sheila and I began a conversation -- as colleagues of long standing, and as citizens -- about the intensifying polarization of public opinion, and its effects on our system of liberal democracy. Before long, however, we began to think about this trend from the perspective of foresight, and, in due course we decided to pull together a research proposal which -- thanks to the Rockefeller Brothers Fund -- became the Project on Foresight and Democracy.

A fundamental premise of the project was that foresight could take people from different mental models and value systems to a place where they might be able to articulate shared values and a shared vision: of a better place in the future towards which they could work together. Meanwhile, however, that sense of a shared "commons" has deteriorated with alarming speed over the period during which we and you have been working on this project. Our country, and in fact our civilization, has entered the outer bands of a perfect storm, from which there is no assurance of a safe exit. The ability of reason to master complexity is in doubt.

Sheila and I believe that foresight can help light the way. We plan to end RT-6 by asking for your views.

Leon Fuerth

United St
begun and held at the City of New-York, on
IN CONGRESS
We the People