

**THE GEORGE WASHINGTON UNIVERSITY**  
IAFF/HONR 720.80

**“Forward Engagement:  
Study of Long-Range Developments as Factors  
in Contemporary National Policy”**

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Fall Semester 2003  
Thursdays, 3:30-6:00pm  
Class meets: Monroe Hall, Room B07  
For appointments: contact Jill  
Phone: 202-994-4543

Class meets: 9/4; 9/25; 9/30; 10/9; 10/16; 10/23; 10/30; 11/6; 11/13; 11/20; 12/4; 12/9.

Also scheduled is an October 8 joint meeting with Al Gore. Attendance for this is voluntary. (*Meetings with additional guest speakers may be scheduled throughout the semester. We will notify you of these dates*)

*Note: All examinations, reports, and other graded work products and assignments are to be completed in conformance with The George Washington University Code of Academic Integrity.*

**Course Mission Statement:**

The rate of major historical change appears to be accelerating, in ways that could challenge our democratic society's ability to perceive events in time to debate and decide upon appropriate responses. If so, then there is a need to combine methods of forecasting with mechanisms for policy making, to create a process that could be called "Forward Engagement." The concept of "Forward Engagement," is that early awareness and early preparations for potentially major events is preferable than awaiting their unambiguous onset.

Students will explore long-range trends and events in science, economics, defense and governance that could have a major impact on our society and on the world in general, by the time today's students reach positions of senior responsibility. Participants in this course will explore whether such events could prove particularly challenging to democratic governance. They will also analyze ways in which it would be possible, starting now, to modify policy in the hope of favorably influencing the course and impact of these developments. Finally, they will consider ways to improve the capacity of the

government of the United States to perceive and respond to the accelerating rush of future events. Emphasis will be on students reasoning to firm personal and group conclusions.

### **Methodology:**

Readings, lectures, guest speakers, class discussion.

### **Output:**

Five short individual reports and one group report and briefing. Briefing to be delivered to an invited guest who has held senior policy-level responsibility in government. Effort will be made to publish the final briefing in a journal for outside consumption.

### **Course Structure:**

The course is organized into periods during which students progressively:

- (1) Form their views on what may be major future issues in four policy domains (Security; Economics; Science & Technology; and Governance);
- (2) Form their views on major policy issues relating to these potential future developments;
- (3) Form their views of ways to institutionalize a synthesis of long-range futures assessment and policy formation;
- (4) Prepare and deliver a final overall report in the form of a summary report and a power-point briefing. Report to be delivered to an invited guest. (If possible, this report will be published.)

*Note:* During the first half of the semester, Professor Fuerth will also be conducting a one-credit Skills course, IAFF 202.12 “Long-Term Forecasting,” on the subject of forecasting and policy. Students in that course will be preparing a series of reports in two categories: (1) the application of forecasting techniques to certain domains of policy; and (2) analysis of institutional methods for integrating these long-range forecasting techniques and policy formation. Cross-contact between students in the skills course and students in the 700 course will be provided for. The skills course reports will be inputs for the 700 course, as they become available.

### **Course Roadmap:**

#### **SESSION #1 – September 4:**

*Introduction to the course; organization; discussion.* In the period between this meeting and Session #2 (September 18), students will draft individual reports presenting their

first-cut ideas about major future issues in each of the four policy domains. **Preliminary (draft) reports are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on September 16.** There will be separate scheduled discussions with Professor Fuerth for those working in each domain during the drafting period. (Students will work with Jill to schedule these out-of-class discussions with Prof. Fuerth.)

#### **NO CLASS SESSION – September 11**

#### SESSION #2 – September 25:

*Preliminary reports on major future issues are discussed.* The objective is critical analysis and cross-fertilization among students working in each of the four policy domains. In the interim period between this class session and Session #3, students will continue to work on their individual reports on major future issues.

#### SESSION #3 – September 30:

*Students will meet with experts to explore major potential issues of the future.* In the interim period between this class session and Session #4, students will work on the final versions of their major future issues reports. **These are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on October 7.**

#### SESSION #4 – October 9:

*Discussion of students' final reports on major future issues.* There will also be an introductory talk by experts on techniques of long-range forecasting.

#### SESSION #5 -- October 16:

*Students will meet with experts on substantive policy issues.* In the period following this meeting, the students will: operate as a group entity and produce a collective view of what the most important future contingencies of concern (FCCs) are likely to be (whoever is chosen from the class will have responsibility of chairing this effort); as well produce preliminary individual reports outlining their views on policy issues relating to specific FCCs. **The group report and individual reports are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on October 21.**

By this time, students will also have received (via e-mail and GWU's "Blackboard" system) all final reports from the IAFF 202.12 "Long-Term Forecasting" Skills Course, covering past, present and possible future institutional systems for tying forecasting and planning together. **Students should review the Skills Course reports and be prepared to discuss them for Session #6.**

#### SESSION #6 – October 23:

*Discussion of students' preliminary reports on their views on policy issues; oral & discussion of reports from Prof. Fuerth's Skills Course on possible integrative institutional methods.* In the period following this meeting, students will work on final individual reports presenting their conclusions as to major policy issues.

SESSION #7 – October 30:

*Students will meet with additional experts on policy issues.* In the period following this meeting, students will compose a group paper outlining their final views on FCCs (it is the class' choice whether they feel the need to revise the group FCC paper from Oct. 21), along with a collective review of “nodes” that the class as a whole considers to be particular significant for analyzing policies dealing with the FCCs. Students will also compose their final individual reports on policy issues relating to FCCs at this time. **These group and individual reports are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on November 4.**

SESSION #8 – November 6:

*Discussion of final reports on policy issues.* In the interim period following this meeting, students will begin work on individual reports presenting their views as to ways to institutionalize an integrated approach to forecasting and policy.

SESSION #9 – November 13:

*Students will meet with experts on institutional methods for combining forecasting and policy.* In the period following this meeting, students will be working on individual reports concerning the design of such institutions. **These reports are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on November 18.**

SESSION #10 – November 20:

*Discussion of student reports on policy formation institutions.* In the interim period following this meeting, students will be working in committee on a combined report and power-point briefing. This group report should be a collaborative effort at compiling all previous student, to be supplemented with new interpretive language and final connective conclusions. **Draft of the group report and power-point briefing are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) due by noon on December 3.**

SESSION #11 – December 4:

*Dry run and critique of group report and power-point briefing with Professor Fuerth.*

SESSION #12 – December 9:

*Delivery of final group report and power-point briefing to invited guest.*

**Key Assignments & Dates:**

- Major Futures Issues preliminary reports (individual reports on first-cut ideas about major future issues in each of the policy domains) ..... **September 16**
- Major Futures Issues final reports (final version of above report)... **October 7**
- Group FCC Report & Policy Issues preliminary reports (collective class view of what the most important FCCs are likely to be & preliminary individual reports on views concerning policy issues relating to FCCs) ..... **October 21**
- Group FCC (optional) + Nodes Report & Policy Issues final reports (final version of above report) ..... **November 4**
- Policy Formation Institutions reports (individual reports on ways to institutionalize integrated approaches to forecasting and policy) ... **November 18**
- Draft of Group Report and Power-Point Briefing ..... **December 3**
- Final Group Report and Power-Point Briefing..... **December 9**

**Readings:**

- Key illustrative books and publications (see attached Reading List)
- “Welcome Kit” of readings to be loaned out on CD
- Final reports of five previous capstone courses on “Forward Engagement”
- Suggested reading list materials, as needed

## READING LIST:

HONR/IAFF 720.80

*“Forward Engagement:  
The Study of Long-range Developments  
as Factors in Contemporary National Policy”*

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### **Reports:**

Challenges of the Global Century: Report of the Project on Globalization and National Security. *Institute for National Strategic Studies, National Defense University*, 2001. <http://www.ndu.edu/inss/books/ChallGlobCen/GloCenCont.html>

Global Trends 2015: A Dialogue About the Future With Nongovernment Experts. *Central Intelligence Agency: National Intelligence Council*, December 2000. Available at: <http://www.cia.gov/cia/publications/globaltrends2015/>

Long-Term Global Demographic Trends: Reshaping the Geopolitical Landscape, *Office of Transnational Issues, Strategic Assessments Group, Directorate of Intelligence, CIA*, July 2001. Available at: [http://www.cia.gov/cia/reports/Demo\\_Trends\\_For\\_Web.pdf](http://www.cia.gov/cia/reports/Demo_Trends_For_Web.pdf)

New World Coming: American Security in the 21<sup>st</sup> Century, *The United States Commission on National Security/21<sup>st</sup> Century*, September 15, 1999. <http://www.nssg.gov/Reports/reports.htm>

(Read sections (1) Major themes and implications and (1a) Supporting research. Look over sections (2) and (3).)

Societal Implications of Nanoscience and Nanotechnology. Mihail Roco and William Bainbridge, Editors. NSET Workshop Report. *National Science Foundation*. March 2001. Available at: <http://itri.loyola.edu/nano/NSET.Societal.Implications/>

The United States and the Third World Century: How Much Will Demographics Stress Geopolitics? *Office of Transnational Issues, Strategic Assessments Group, Directorate of Intelligence, CIA*, February 2002.

### **Required Books:**

Freeman J. Dyson, *The Sun, The Genome, and The Internet* (New York, NY: Oxford University Press, 1999.)

Francis Fukuyama, *Our Posthuman Future : Consequences of the Biotechnology Revolution* (New York, NY: Picador USA, 2002.)

Howard Rheingold, *Smart Mobs: The Next Social Revolution* (Cambridge, MA: Perseus Publishing, 2003.)

Michael S. Loescher, Chris Schroeder & Charles W. Thomas, *Proteus: Insights from 2020* (The National Reconnaissance Office: The Copernicus Institute Press & Michael S. Loescher, 2000.)

Michael J. Mazarr, *Global Trends 2005: An Owner's Manual for the Next Decade* (New York, NY: Palgrave Publishing, 1999.)

John L. Petersen, *Out of the Blue: Wild Cards and Other Big Future Surprises* (Arlington, VA: The Arlington Institute, 1997.)

Robert J. Lempert, Steven Popper, and Steven C. Bankes, *Shaping the Next One Hundred Years: New Methods for Quantitative, Long-Term Policy Analysis* (RAND Pardee Center, Arlington, Virginia, 2003.) <http://www.rand.org/publications/MR/MR1626/>

#### **Recommended Books:**

Kurzweil, Ray. *The Age of Spiritual Machines*. New York: Penguin Group, 1999.

Broderick, Damien. *The Spike*. New York: Tom Doherty Associates Book, 2001

Dyson, George B. *Darwin Among the Machines*. 1997.

Friedman, George and Meredith. *The Future of War*. 1996.

Friedman, Thomas. *The Lexus and the Olive Tree*. 1999.

Hardt, Michael. *Empire*. 2000.

Huntington, Samuel P. *The Clash of Civilizations and the Remaking of World Conflict*. 1996.

Kaplan, Robert. *The Coming Anarchy*. 2000.

Kennedy, Paul. *Preparing for the Twenty-First Century*. 1993.

Lake, Anthony. *6 Nightmares*. Boston: Little, Brown and Company, 2000.

Lomborg, Bjorn. *The Skeptical Environmentalist*. Cambridge, United Kingdom: Cambridge University Press, 2001.

Mazarr, Michael J. *Global Trends 2005*. New York: Palgrave, 1999.

Micklethwait, John. A Future Perfect: The Challenge and Hidden Promise of Globalization. New York: Crown Publishers, 2000.

Morrison, Reg. The Spirit in the Gene: Humanity's Proud Illusion and the Laws of Nature. Ithaca, NY: Cornell University Press, 1999.

Our Global Neighbourhood: The Report of the Commission on Global Governance. Oxford: Oxford University Press, 1995.

Rosecrance, Richard. The Rise of the Virtual State: Wealth and Power in the Coming Century. New York: Basic Books, 1999.

Rosen, Jeffrey. The Unwanted Gaze: The Destruction of Privacy in America. New York: Random House, 2000.

Soros, George. George Soros on Globalization. Public Affairs: 2002.

Van Creveld, Martin. The Transformation of War. 1991.

Wilson, Edward O. The Future of Life. New York: Alfred A. Knoff, 2002.

Wright, Robert. Nonzero: The Logic of Human Destiny. 2000.

### **Book Chapters:**

The Dangers of Peace (Ch. 9). The Coming Anarchy. Robert Kaplan, 2000.

Fiddling While Rome Burns (Ch. 12). Darwin Among the Machines. George B. Dyson, 1997.

Future War (Ch. 7). The Transformation of War. Martin van Creveld, 1991.

If You Want to Speak to a Human Being, Press 1 (Ch. 17) The Lexus and the Olive Tree. Thomas Friedman, 1999.

Last and First Men (Ch. 11) Darwin Among the Machines, George B. Dyson, 1997.

The Multitude Against Empire (Ch. 4.3). Empire. Michael Hardt & Antonio Negri, 2000.

A New Foundation (Ch. 13) The Future of War. George & Meredith Friedman, 1996.

Preface. Empire. Michael Hardt & Antonio Negri, 2000.



Preparing for the Twenty-First Century (Ch. 14). Preparing for the Twenty-First Century. Paul Kennedy, 1993.

The Shape of Things to Come (Postscript). The Transformation of War. Martin van Creveld, 1991.

Space and the Future of American Strategy (Ch. 14) The Future of War. George & Meredith Friedman, 1996.

There is a Way Forward (Ch. 18). The Lexus and the Olive Tree. Thomas Friedman, 1999.

The West, Civilizations, and Civilization (Ch. 12). The Clash of Civilizations and the Remaking of World Conflict. Samuel P. Huntington, 1996.

Articles:

“A Globe Clothing Itself With a Brain.” *Wired*. 1995.

“Artificial Intelligence for the New Millennium.” *The New York Times*, Jun 29, 2001.

“A Watchful State.” *The New York Times*. 10/7/01. Section 6, page 38.

“Battlefield Space.” *The New York Times Magazine*, Aug 5 2001.

“Big Brother or Friendly Coach?” *Exploring Your Future*, World Future Society, 2000.

“Bush’s Advisers on Ethics Discuss Human Cloning.” *The New York Times*. 1/18/02.

“Bush’s No Win Choice.” *Time*. 7/23/01.

“Can the I.M.F. Tame the Capital Beast?” *The New York Times*. 10/14/01. Section 3, page 5.

“Danny Hillis’s Vision.”

[http://white.ece.ncsu.edu/nresearch/Items/danny\\_hilliss\\_vision.htm](http://white.ece.ncsu.edu/nresearch/Items/danny_hilliss_vision.htm)

“Dehydrating Conflict.” Postel, Sandra L. *Foreign Policy*. Sept/Oct 2001.

“Disputes on Electronic Message Encryption Take On New Urgency.” *The New York Times*. 9/25/01. Section C, page 1.

“Doomsday Scenarios.” *The Futurist*. Nov/Dec 2001.

“Economic Scene.” *The New York Times*. 1/31/02.

“Efforts to Transform Computers Reach Milestone.” *The New York Times*. 12/20/01.

"The Emergent Kingdom: Machines that Think like People." *Exploring Your Future*, World Future Society, 2000.

"Euro Deposits the Mark, Grieving Many Germans." *The New York Times*. 8/30/01.

"Evolution Revolution." *Wired*, January 1997.

"Fertility Ethics Authority Approves Sex Selection." *The New York Times*. 9/28/01. Section A, page 16.

"Five Forces Transforming Communications." *The Futurist*, Sep-Oct 2001.

"Fliers' Private Lives Face New Screening." *The International Herald Tribune*. 2/2/02.

"Foreign Policy, Values and Globalisation." *Financial Times*. 1/31/02.

"Four Visions of the Century Ahead: Will it be Star Trek, Ecotopia, Big Government, or Mad Max?" Robert Costanza.

"A Globe Clothing Itself With a Brain." *Wired*. 1995.

"Health Aid for Poor Countries." *The New York Times*. 1/3/02.

"IBM creates a Tiny Circuit Out of Carbon." *The New York Times*, August 27, 2001.

"In the Next Chapter, Is Technology an Ally?" *The New York Times*. 9/27/01. Section G, page 1.

"Liquid Logic." *Wired*. September 2001.

"Living Under an Electronic Eye." *The New York Times*. 9/27/01. Section G, page 1.

"Mr. Order Meets Mr. Chaos." *Foreign Policy*, May-Jun 2001.

"On the Threshold: Environmental Change as Causes of Acute Conflict." *International Security*, 1991.

"Scientists Find That Tiny Pipes Offer Big Payoffs." *The New York Times*. 1/1/02.

"Sometimes the Luddites are Right." *The Futurist*, Sep-Oct 2001.

"Surveillance: From 'Big Brother' to Safety Tool." *The New York Times*. 12/6/01.

"Technical Glimpses from the Future: Scanning the Science Press." *Futures Research Quarterly*, Summer 2001.

“The CIA Widens Its Domestic Reach.” *The New York Times*. 1/20/02.

“The Faceless Enemy.” *The New York Times*. 10/14/01. Section 7, page 11.

“The Increase in Chip Speed is Accelerating, Not Slowing.” *The New York Times*. 2/4/02.

“The Recycled Generation.” *The New York Times Magazine*, January 30, 2000.

“The Top Ten Technologies for the Next 10 Years.” *Exploring Your Future*, World Future Society, 2000.

“Threat of National ID.” *The New York Times*. 12/24/01.

“Touch of Evil.” Reviewed by Jeff Stein. *The Washington Post*. 10/21/01. Book World Section, page T05.

“What’s Next?” *Popular Science*, Summer 2001.

“Why the future doesn’t need us.” *Wired*, April 2000.

“Will Globalization Go Bankrupt?” *Foreign Policy*. Sept/Oct 2001.

**Other:**

David Rejeski. Slide Presentation “The Changing Environment for Governance.”  
<http://wwics.si.edu/mediaguide/rejrschint.htm#plan>

Leon Fuerth, Annual Shapiro Lecture, “*Revisiting the End of History, the Coming of the New Historical Era*,” November 6, 2001.  
<http://www.gwu.edu/~elliott/news/transcripts/shapiro.html>

Leon Fuerth, Annual Shapiro Lecture, “*Networking and the Future of Democracy: Mastering the Future Before it Masters Us*,” November 21, 2002.  
<http://www.gwu.edu/~elliott/news/transcripts/shapiro1.html>