

CYNTHIA SELIN

Consortium for Science, Policy and Outcomes
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EDUCATION

- 2006 **PhD in Knowledge and Management**
Copenhagen Business School, Institute for Politics, Philosophy and Management
Dissertation: *Volatile Visions: Transactions in Anticipatory Knowledge*
- 2000 **MA Science and Technology Studies**
Roskilde University, Maastricht University
Thesis: *Professional Dreamers: The Art and Science of Scenario Planning*
- 1996 **BA American Studies**
University of California, Santa Cruz
Honours thesis: *The Promise and Peril of Nanotechnology*

ACADEMIC POSITIONS

- Summer 2010 Visiting Scholar
Institute for the Future, Palo Alto, California
- May 2010- Present Affiliated Faculty
School of Sustainability, Arizona State University
- April 2009- Present Assistant Director for Outreach
Center for Nanotechnology in Society, Arizona State University, Tempe, AZ
- August 2007- Present Assistant Research Professor
Consortium for Science, Policy and Outcomes, Arizona State University,
Tempe, AZ
- July 2006- July 2007 Post Doctoral Research Associate
Center for Nanotechnology in Society, Arizona State University, Tempe, AZ
- December 2000- June 2006 Research Fellow
Risoe National Laboratory, Technology Scenarios Program, Roskilde, Denmark

RESEARCH AREAS

Scenario and foresight methodologies, temporality and technological culture, ethics and new technologies, societal aspects of nanotechnologies, anticipatory governance, organizational learning, innovation, public deliberation

PUBLICATIONS

Books

- 2008 Wetmore, J., Fisher, E., and Selin, C. (Eds.) *Presenting Futures: Yearbook of Nanotechnology in Society*. New York: Springer.
- 2006 Selin, C. *Volatile Visions: Transactions in Anticipatory Knowledge*. Copenhagen, Denmark: Samfundslitteratur.

Book chapters

- 2008 Barben, D. Fisher, E., Selin, C., & Guston, D. "Anticipating Nanotechnology: Governance, Engagement, and Reflexivity." In Hackett, E. J., Amsterdamska, O., Lynch, M. & Wajcman, J. (Eds.). *The New Handbook of Science and Technology Studies*, Third Edition. MIT Press.
- 2007 Selin, C. "Professional Dreamers: The Past in the Future of Scenario Planning." In Sharpe, B. & van der Heijden, K. *Scenarios for Success: Turning Insight into Action*. London: Wiley

- 2003 **Selin, C.** "The Art and Science of Scenario Planning." *Danish Anthology on Research Management*. Aarhus, DK: Danish Institute for Studies in Research and Research Policy: 126-134.

Peer reviewed journal articles (* denotes student co-author)

- 2010 **Selin, C & Hudson, R.*** "Envisioning Nanotechnology: New Media and Future-Oriented Stakeholder Dialogue." *Technology in Society*, 32 (3): 173-182.
- 2008 **Selin, C.** "Sociology of the Future: Tracing Stories of Technology and Time." *Sociology Compass*, 2 (60): 1875-1895.
- 2007 **Selin, C.** "Expectations and the Emergence of Nanotechnology." *Science, Technology and Human Values*, 32 (2): 196-220.
- 2006 **Selin, C.** "Time Matters: Temporal Harmony and Dissonance in Nanotechnology Networks." *Time & Society*, 15 (1): 121-139.
- Selin, C.** "Trust and the Illusive Force of Scenarios." *Futures* 38 (1): 1-14.

Articles Forthcoming and Under Review

Selin, C. "Negotiating Plausibility: Intervening in the Future of Nanotechnology." *Science and Engineering Ethics* (forthcoming).

Selin, C., Boradkar, P, Fischer, A. "Prototyping Nanotechnology: A Pedagogic Approach to Responsible Innovation." *Journal of Nanotechnology Education* (forthcoming).

Molin, M. & **Selin, C.** "Institutionalizing Innovation: Instances of Change in the Danish System of Innovation." *Research Policy* (accepted pending revisions).

Greenwood, P., Wang, X. **Selin, C & Panjwani, A.*** "Privacy or Security? An Evaluative Model of Surveillance, Social Values and Technological Change." *Technological Forecasting and Social Change* (revise and resubmit).

Davies, S. & **Selin, C.** "Should we care about the tortoises? And other difficulties of deliberation on emerging energy technologies." *Environmental Communication: A Journal of Nature and Culture* (under review).

Patel, A. & **Selin, C.** "Scenario Planning at the US Army Corp of Engineers." *Long Range Planning* (under review).

Articles in Preparation

Davies, S., **Selin, C.,** Pereira, A. G., & Gano, G.* "Material Deliberations: Tapping the Dilemmas of Water, Technology and the City." Planned for submission in *Cities*.

Pereira, A. G. & **Selin, C.** "The Signs of Fatigue in Probability and a Plausible Proposal." Planned for submission in *Journal of Risk Analysis*.

Selin, C. "Diagnosing Futures: Producing Scenarios to Support Reflexive Governance of Technology." Planned for submission in *Social Studies of Science*.

Selin, C. "Plausibilistic Reasoning in Nanotechnology Futures." Planned for submission in *International Journal of Foresight and Innovation*.

Selin, C. et al. *The Plausibility Project Workshop Report*. Center for Nanotechnology in Society Report #R10-0001.

Reports:

- 2010 Davies, S., **Selin, C.** & Allen, R.* *Solar to Fuels: Interdisciplinary Energy, Policy and Society Workshop*. Center for Nanotechnology in Society Report #R10-0002.
- 2009 Wiek, A. and **Selin, C.** *The Future of Phoenix- Crafting Sustainable Development Strategies for Phoenix*. School of Sustainability, Arizona State University.
- 2008 **Selin, C.** *The Future of Medical Diagnostics*. Scenario Workshop Report. Center for Nanotechnology in Society Report #R08-0001.
- Selin, C.** *CNS Visioning Workshop: Creating Scenarios about the Future of Anticipatory Governance*. Center for Nanotechnology in Society Report #R08-0003.

Other Professional Writing

- 2010 **Selin, C.** "Anticipation." In Guston, D. (editor). *Encyclopedia of Nanoscience and Society*. Sage: 13-16.
Selin, C. "Foresight." In Guston, D. (editor). *Encyclopedia of Nanoscience and Society*. Sage: 245-253.
- 2009 **Selin, C.** "Does Time Need Saving?" *CSPO Soapbox Blog*. October 30.
Selin, C. "More Than a Policy: The Future of Energy Technologies." *CSPO Soapbox Blog*. August 13.
Selin, C. "Flag Day 2009." *CSPO Soapbox Blog*. June 14.

LECTURES AND CONFERENCE PRESENTATIONS:**Academic audience**

- 2010 "Plausibilistic Reasoning in Nanotechnology Futures." Society for the Study of Nanotechnology and Emerging Technologies. Darmstadt, Germany.
 "Nanotechnology & Plausibility." Society for the Social Studies of Science. Tokyo.
- 2009 "Sustainability meets Anticipatory Governance in Phoenix." CSPO Enlightening Lunch, ASU. With A. Wiek 2009.
 "Diagnosing Futures." Society for the Social Studies of Science. Washington, DC.
 "Deliberation and Anticipation." Society for the Study of Nanoscience and Emerging Technologies. Seattle, WA.
- 2008 "Scenarios for Converging Technologies." Gordon Research Conference on Governing Emerging Technologies. Big Sky, Montana.
 "Evidencing the Future and other Dilemmas Working in the Future Tense." Invited presentation at the Anthropology Department, Rice University.
- 2007 "Between Hope and Prudence: Experiments in Scenaric Learning." Society for the Social Studies of Science, Annual Meeting. Montreal.
 "Hope and Prudence: Experiments in Scenaric Learning." Futures of Life: Acquiring and Creating Anticipatory Knowledge. Cornell University.
 "Anticipatory Governance through Scenarios." Invited presentation Global Environmental Futures: Interrogating the Practice and Politics of Scenarios. Watson Institute for International Studies. Brown University.

Industrial audience

- 2010 "The Future of Sustainable Phoenix." Institute for the Future, Palo Alto, CA.
 "The Future of Organizing." Organization Design Forum Annual Meeting, Denver, CO.
- 2009 "Using Scenarios and Foresight to Manage Turbulence." Organization Design Forum Annual Meeting, Tacoma, WA.
- 2007 "Scenarios for Nanotechnologies Development." Presentation at Nano and Giga Challenges in Electronics and Photonics: From Atoms to Materials to Devices to System Architecture, Tempe, Arizona.
- 2006 "Societal Implications of NSE." Presentation at NanoTX, Dallas, TX.

Government and public audience

- 2010 "Foresight and Scenarios." Nanoscale Informal Science Education Network Annual Meeting. San Francisco, CA.

- 2009 "Nano and the City: Anticipation and Deliberation." Risoe National Laboratory, Denmark.
- 2008 "Democratizing Science: Should the Public Have a Voice in Science Research and Development." *CNS-ASU Science Café*. Arizona Science Center, Phoenix, AZ.
- 2007 "Real Time Technology Assessment: Anticipation, Integration & Engagement." Risoe National Laboratory. Roskilde, Denmark.
- 2006 "Visions of Nanotechnology." *CNS-ASU Science Café*. Changing Hands Bookstore, Tempe, AZ. (with I. Bennett).
 "Volatile Visions: Transactions in Anticipatory Knowledge." Invited Presentation at the European Environmental Agency. Copenhagen, DK.
- 2005 "The Emergence of Nanotechnology: Expectations and Ethics." Invited Presentation at Small Wonders, Big Questions. Danish Centre for Bioethics and Risk Assessment – CeBRA, Copenhagen, DK.
- 2004 "The Emergence of Nanotechnology: Ethical, Legal, Social & Environmental Aspects (ELSA)." Invited Presentation at the European Workshop on Social and Economic Issues of Nanotechnologies and Nanosciences. Research Directorate-General, European Commission. Brussels.

TEACHING

- Justice and the Future** (JUS 394). Justice and Social Inquiry, Arizona State University. Spring 2007.
- Future Scenarios, Anticipatory Governance, and Sustainability – Urban Development in Phoenix** (SOS 594). School of Sustainability, Arizona State University. Co-taught with Arnim Wiek (SOS). Spring 2010.
- InnovationSpace**. School of Architecture + Landscape Architecture, Arizona State University. CNS Liaison for P. Boradkar led course. 2007-present.
- Informal graduate student advising in Human and Social Dimensions of Science and Technology, School of Sustainability, Professional Masters in Science Policy, Arizona State University.

GRANT ACTIVITY

Funded

- Senior Investigator, NSEC/Center for Nanotechnology in Society (\$6.5M) (#0937591)
 (10/01/10-09/30/15)
- Senior Investigator (from 08/07), NSEC/Center for Nanotechnology in Society (\$6.2M) (#0531194)
 (10/01/05-9/30/10)
- Senior Researcher, Reflexive Systems Biology, Norwegian Research Council (\$872K)

Pending

- Co-PI, "Anticipatory Governance of Emerging Vaccine Technologies (AGEVT)" NSF (\$555,274)
 (01/01/11-12/31/13)
- Co-PI, "Climate of Uncertainty" NSF ISE with Science Museum Minnesota (\$4.0M)
 (07/31/11-08/01/15)
- Senior Investigator, "Collaborative Research: Anticipatory Governance of Geoengineering" NSF
 (\$539,322)
 (01/01/2011-12/31/2012)

PROFESSIONAL ACTIVITIES AND SERVICE

- 2010 Roundtable Organizer. Plausibility. Society for the Nanotechnology and Emerging Technologies. Darmstadt, Germany.
 Invited Presenter. Nano2: International Study of the Long-term Impacts and Future Opportunities for Nanoscale Science and Engineering. Evanston, IL.
- 2009 Scenario Practitioner Training. The Future of Organizing. Organization Design Forum (with Claudia Murphy, MS).
 Invited Participant. Living Technology: Initiative for Science, Society and Policy. Humlebaek, Denmark.
 Invited Participant. Berkeley Human Practices Workshop. University of California Berkeley, CA.
- 2008 Convenor. Oxford Futures Forum. Said Business School. Oxford, UK.
 Chair. Managing the Uncertainty of Nanotechnologies. Challenges to Law, Ethics, and Policy Making. University of Padua. Italy.
- 2007 Invited Practitioner. Converging Technologies Scenarios Workshop. James Martin Institute, University of Oxford, UK.

UNIVERSITY SERVICE**Workshops Organized**

- 2010 Practices of Anticipatory Governance: Building Strong Collaborations
 Solar to Fuels: Interdisciplinary Workshop on Energy, Policy and Society
 SOS Facilitation Training Workshop
 NISEnet/CNS Workshop
- 2009 International Workshop on Plausibility
- 2008 Visions of Anticipatory Governance
 National Citizens' Technology Forum – Tempe forum
- 2007 The Future of Medical Diagnostics

Seminar Series Led

- 2010 Synthetic/Systems Biology
- 2008-9 Social Challenge of the Future
- 2008 New Frontiers in Research Communication

Committees

- CSPO Website Committee (2010-present)
- CSPO Professional Master's Degree Planning Committee (2008-2009)
- CSPO Works in Progress Initiative (2007-2009)
- CSPO Outreach and Outcomes Working Group (2007-2008)
- CSPO Strategic Plan Committee (2007)

REVIEW ACTIVITIES

Regular manuscript reviewer for *Science, Technology and Human Values, Social Studies of Science, Futures, Environmental Research Letters, Environmental Science and Policy*.

CONSULTANCY

- 2009 Arizona Public Service. Long Term Strategic Planning (with Dr. Rick Day).
- 2008 Shell. Scenario Planning (with Claudia Murphy, MS).
- 2006 Maersk. Scenario Planning Training.

LANGUAGES

English and Danish