Council on Foreign Relations 58 East 68th Street New York, New York 10021 Phone: 212-434-9745

Fax: 212-434-9813 asegal@cfr.org

Professional Experience

Council on Foreign Relations, New York, New York

2014-	Director, Digital and Cyberspace Program
2003-	Maurice R. Greenberg Senior Fellow in China Studies
2001-2003	Olin Fellow, Asia Studies

Union of Concerned Scientists, Cambridge, Massachusetts

1999- 2001 Arms Control Analyst, China Project

Education

2000	Ph.D., Cornell University, Department of Government
1995	M.A., Cornell University, Department of Government
1993	M.A.L.D., The Fletcher School of Law and Diplomacy, Tufts University
1990	B.A., Cornell University, Department of Government, cum laude

Books

The Hacked World Order: How Nations Fight, Trade, Maneuver, and Manipulate in the Digital Age, (Forthcoming, 2016, Public Affairs)

Advantage: How American Innovation Can Overcome the Asian Challenge, W.W. Norton & Company, 2011

Digital Dragon: High Technology Enterprises in China, Ithaca, N.Y.: Cornell University Press, 2003 (paperback 2010)

Articles, Reports, and Book Chapters

"Holding the Multistakeholder Line at the ITU," *CFR Cyber Brief*, October 21, 2014

"The United States, China, and Cyber Espionage," *Strategic Analysis*, March/April 2014

"The Code Not Taken: China, the United States, and the Future of Cyber Espionage," *Bulletin of Atomic Scientists*, September 1, 2013

"Chine: Le Colosse Aux Clavier Fragiles," *Alternatives Internationales*, June 2013.

"Managing New Security Challenges in Asia: Between Cybercrime and Cyberconflict," in Michael Wills and Robert M Hathaway, eds., *New Security Challenges in Asia* (Johns Hopkins University Press, 2013)

"Addressing Cyber Threats to Oil and Gas Suppliers," *CFR Energy Brief*, June 2013 [with Blake Clayton]

"From TITAN RAIN to BYZANTINE HADES: Chinese Cyber Espionage," in *Fierce Domain: Conflict in Cyberspace, 1986-2012* (Cyber Conflict Studies Association, June 2013)

Defending an Open, Global, Secure, and Resilient Internet, Report of an Independent Task Force sponsored by the Council on Foreign Relations, June 2013

"India, China, and Globalized Innovation," in Denis Fred Simon, ed., *Industrial Innovation in China: Emerging Challenges and New Issues* (Routledge, forthcoming)

"Chinese Computer Games: Keeping Safe in Cyberspace," *Foreign Affairs*, 91, no. 2 (March/April 2012)

Energy Innovation: Driving Technology Competition and Cooperation Among the U.S., China, India, and Brazil, Council on Foreign Relations Press, November 2010 [with Michael Levi, Elizabeth Economy and Shannon O'Neil]

"Globalizing the Energy Revolution: How to Really Win the Clean-Energy Race," *Foreign Affairs*, 89, no. 6 (November/December 2010) [with Michael Levi, Elizabeth Economy and Shannon O'Neil]

"Hong Kong and the Pearl River Delta: Science and Technology Cooperation", in Douglas Fuller, ed., *Innovation Policy and the Limits of Laissez-faire: Hong Kong's Policy in Comparative Perspective* (Palgrave, 2010)

"The G-2 Mirage," *Foreign Affairs*, 88, no. 3 (May/June 2009) [with Elizabeth Economy]

"Autonomy, Security, and Inequality: China, India, the United States, and the Globalization of Science and Technology," *Technology in Society* Vol. 30, Issues 3-4, (August-November 2008)

"China's Olympic Nightmare," *Foreign Affairs*, 87, no. 4 (July/August 2008) [with Elizabeth Economy]

"The Global Diffusion of S&T and the Rise of China," in Titus Galama and James Hosek, eds., *Perspectives on U.S. Competitiveness in Science and Technology* (RAND Corporation, 2007)

"Chinese Economic Statecraft and the Political Economy of Asian Security," in William Keller and Thomas Rawski, eds., *China's Rise and the Balance of Influence in Asia* (University of Pittsburgh Press, 2007).

"China and the Emerging Regional System of Technological Entrepreneurship," in Henry Rowen, Marguerite Gong Hancock, and William Miller, eds., *Greater China's Quest for Innovation* (Brookings Institution Press, 2007)

"Has Globalization Passed Its Peak?" *Foreign Affairs* 86, no. 1 (January/February 2007): 103-114 [with Rawi Abdelal].

Reprinted in Robert Art and Robert Jervis, *International Politics: Enduring Concepts and Contemporary Issues*, ninth edition (Longman, 2009)

"Globalization is a Double-edged Sword: Globalization and Chinese National Security," in Jonathan Kirshner, ed., *Globalization and National Security* (Taylor and Francis, 2006).

"The Siren Song of Technonationalism," Far Eastern Economic Review, March 2006 [with David Kang].

"Trends in China's Transition toward a Knowledge Economy," *Asian Survey*, Vol. 45, No. 6 (December/November 2005): pp. 886-906 [with Ernest Wilson III].

"Chinese Technonationalism: Autonomy and Security in the World Economy," in Saadia Pekkanen and Kellee Tsai, eds., *Japan and China in the World Political Economy* (Routledge, 2005).

"Is America Losing its Edge? Innovation in a Globalized World," *Foreign Affairs*, (November/December 2004): pp. 2-8.

"Practical Engagement: Drawing a Fine Line for U.S.-China Trade," *The Washington Quarterly*, 27, 3 (Summer 2004): pp. 157-173.

Chinese Military Power, Report of an Independent Task Force sponsored by the Council on Foreign Relations, May 2003.

"Technology Development in the New Millennium: China in Search of a Workable Model," in William Keller and Richard Samuels, eds., *Crisis and Innovation in Asian Technology* (Cambridge University Press, 2003) [with Barry Naughton].

"East Asian Responses to Theater Missile Defense," in Matthew Evangelista and Judith Reppy, eds., *The United States and Asian Security* (Occasional Paper # 26, Peace Studies Program, Cornell University, May 2002).

"Thinking Globally, Acting Locally: Local Governments, Industrial Sectors, and Development in China," *Politics & Society* 29, 4 (December 2001), 557-588 [with Eric Thun].

"High Time for High Tech? China's Program for an Indigenous High Technology Capability," *Journal of Northeast Asian Studies* 12, 2 (1993): 47-69.

Congressional Testimony

"The United States, China, and the Globalization of Science and Technology," Committee on Foreign Affairs, Subcommittee on Oversight and Investigations, United States House of Representatives, 1st Session, 112th Congress, November 2, 2011

"Chinese Technology Policy and American Innovation," U.S.-China Economic and Security Review Commission, June 15, 2011

"Innovation, Espionage, and Chinese Technology Policy," House Foreign Affairs Subcommittee on Oversight and Investigations, United States House of Representatives, 1st Session, 112th Congress, April 15, 2011

"The Civilian High-technology Economy: Where is it heading?" U.S.-China Economic and Security Review Commission, March 16, 2006

Opinion Publications

"The Challenge of China as a Science and Technology Superpower," *Guardian*, October 11, 2013

"Shaming Chinese hackers won't work," Guardian, May 30, 2013

"Is Industrial cyber-espionage the biggest threat to relations between America and China?" *Economist.com*, April 1, 2013

"The People's Republic of Hacking," Foreignpolicy.com, Jan 31, 2013

"The Cyber Trade War," ForeignPolicy.com, October 25, 2012

"Chinese Hacking May Slow, But. . .," SC Magazine, March 2012

"Why a Cybersecurity Treaty is a Pipe Dream," *CNN-Global Public Square*, October 27, 2011 [with Matt Waxman].

"The Role of Cybersecurity in US-China Relations," *East Asia Forum*, June 21, 2011.

"Curbing Chinese Cyber Espionage," CNN-Global Public Square, May 9, 2011.

"Innovation Models," Economist Debates, March 11, 2011.

"Why American Innovation will beat China's," *CNN-Global Public Square*, March 10, 2011.

"The Great Invention Race," Foreignpolicy.com, January 27, 2011.

"Joint Efforts for a Secure Cyberspace," *Economic Times* (India), November 30, 2010 [with Cherian Samuel]

"China's Innovation Wall: Beijing's Push for Homegrown Technology," *Foreignaffairs.com*, September 28, 2010.

"Time to Defriend China," *Foreignopolicy.com*, May 24, 2010 [with Elizabeth Economy]

"Google's Lesson: Innovation Has to Be Accompanied by Reliability," *YaleGlobal Online*, February 22, 2010 [with Rob Knake]

"The Chinese Internet Century," Foreignpolicy.com, January 26, 2010

"Is the Stimulus Working for You?" *Nature* 461, 876-878, October 14, 2009 [with Michael Levi]

"Yes, Globalization Passed its Peak," *Foreignaffairs.com*, March 16, 2009 [with Rawi Abdelal]

"New China Worries," The International Economy, Fall 2007

"Forum: China's Drive toward Innovation," *Issues in Science and Technology*, Summer 2007

"One Shot, Many Motives," *International Herald Tribune*, January 25, 2007 [with Michael Levi]

"Our Opportunity with China," *Washington Post*, April 17, 2006 [with Elizabeth Economy]

"Overseas scientists important to U.S. spirit of innovation," *San Jose Mercury*, March 9, 2006 [with Michael Levi]

"The Innovation Burden Must Be Shared," *Financial Times*, January 11, 2006 [with John Yochelson]

"Blocking the Flow of Ideas will not Bring Security," *Financial Times*, September 1, 2005

"Encouraging China to Choose a Peaceful Path," *Asian Wall Street Journal*, August 3, 2005

"China's Luster Fades," *Los Angeles Times*, December 30, 2004 [with Elizabeth Economy]

"How to Persuade China to Trade Fairly," Financial Times, August 20, 2004

"Trade Tensions," *The Baltimore Sun*, December 11, 2003 [with Elizabeth Economy]

"President Bush Faces a Skeptical Asia," *International Herald Tribune*, October 16, 2003 [with Elizabeth Economy].

"Do We Need Missile Defense to defend against the Chinese buildup? No." *Insight Magazine*, May 13, 2002.

"U. S. and China Open a Door," *Newsday*, October 26, 2001 [with Elizabeth Economy].

Research, Teaching, and Advisory Positions

Member of Advisory Board, China Research Center, Japan Science and Technology Agency, 2006 to present

Board Member, Cyber Conflict Studies Association, November 2010 to Present

Visiting Fellow, Hoover Institution, Stanford University, June-July 2015

Adjunct Assistant Professor, Columbia University, Spring 2004 Political Science W4871y: Chinese Foreign Policy

Adjunct Assistant Professor, Vassar College, Spring 2003 Politics 389: Chinese Foreign Policy

Visiting Scholar, 1998-2002 Center for International Studies, Massachusetts Institute of Technology

Visiting Research Scholar, January 1997-August 1997 Institute of Economics and Management, Tsinghua University, Beijing, China

Visiting Research Scholar, February 1996-January 1997 Shanghai Academy of Social Sciences, Shanghai, China

Selected Conferences and Invited Talks

"The Digital Cold War between the U.S and China: Is Cooperation in Cyberspace Possible?" The Kim T. Adamson Lecture, Westminster College, February 12, 2015.

"Cyberspace Competition," Yuval Ne'eman Workshop for Science, Technology and Security, Tel Aviv University, April 28, 2014

"China and Cybersecurity," Instituto de Tecnologica & Sociedade do Rio, Rio, Brazil, February 6, 2014

"The United States, Japan, and Cybersecurity," US Embassy Tokyo, November 25, 2013

"Changing Security Domain and the Japan-US Alliance and Its Partners in the Asia-Pacific Region," Japan-US Kanazawa Conference, November 24, 2013

"Cyber Espionage: A Strategic Threat or an Exaggerated Nuisance?" National Committee on American Foreign Policy, November 6, 2013

"The Cybersecurity Threat and Our Changing National Security Landscape," New America Foundation, New York, May 9, 2013

"Cyber Conflict and International Relations," International Studies Association, San Francisco, April 5, 2013

"Cyber security/Cyberwarfare: Shaping a New Frontier," Monterrey Institute of International Studies, April 3, 2013

"Cyber Battlefield: The Future of Conflict," RSA Conference, San Francisco, February 26, 2013

"Arms Race vs. Relay Race: What Does Innovation Hold for China?" New America Foundation/Slate, Washington DC, October 12, 2012

"Cybersecurity: Public and Private Roles," Technology Policy Institute, Aspen Forum, August 12, 2012,

"Cybersecurity and American Power," American Enterprise Institute, Washington DC, July 12, 2012

"Cyber Battlefield: The Future of Conflict," RSA Conference, San Francisco, February 29, 2012

"The United States and China in Cyberspace: Competing Interests, Evolving Strategies," The Institute of International and European Affairs, Dublin, Ireland, October 18, 2011

"China and Cyber Security," Swiss Re Centre for Global Dialogue, Zurich, Switzerland, September 20, 2011

"China: Can we meet the innovation challenge?" World Affairs Annual Conference, San Francisco, March 19, 2011

Honors

Research Associate, National Asia Research Program, National Bureau of Asian Research and Woodrow Wilson International Center for Scholars, 2010-2012, Postdoctoral Fellow, Lund University, Centre for East and South East Asian Studies, 1999 [Declined]

MacArthur Foundation Fellowship in Technology and Security, 1996-97 C. V. Starr Fellowship, Cornell University, Spring 1996 Mellon Fellowship, Department of Government, Cornell University, 1995-96, 1998-1999

Sage Fellowship, Graduate School of Arts and Sciences, Cornell University, 1993-94

Austin Barclay Fellowship for Academic Excellence, The Fletcher School of Law and Diplomacy, Tufts University, 1992

Languages

Mandarin Chinese