

# Kathryn M. Olesko

## ADDRESS

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## DEGREES

1980            PhD, History, Cornell University  
1978            MA, History, Cornell University  
1973            AB with Distinction in All Subjects, Physics and Mathematics, Cornell University

## ACADEMIC APPOINTMENTS

2010-13        Director, Master of Arts in German & European Studies Program, BMW Center for German & European Studies, School of Foreign Service, Georgetown University  
2006-07        Director, Program in Science, Technology, & International Affairs, School of Foreign Service, Georgetown University  
2004-06        Director, Master of Arts in German & European Studies Program, BMW Center for German & European Studies, School of Foreign Service, Georgetown University  
1996-97        Co-Director, Center for the Environment, Georgetown College and School of Foreign Service, Georgetown University  
1995-            Joint appointment in the Department of History and the BMW Center for German & European Studies, Georgetown University  
1993-97        Director, Program in Science, Technology, & International Affairs, School of Foreign Service, Georgetown University  
1989-            Associate Professor, Department of History, Georgetown University  
1988            Visiting Assistant Professor, Department of History, Princeton University  
1984-89        Adjunct Assistant Professor, Community & Family Medicine, Georgetown University School of Medicine  
1983            Visiting Assistant Professor, Department of History, Cornell University  
1981-89        Assistant Professor, Department of History, Georgetown University  
1980-81        Assistant Professor, Department of Social Sciences, Clarkson University  
1979            Lecturer, Department of History, Cornell University

## FELLOWSHIPS & GRANTS

### FOUNDATIONS

1991-93        National Endowment for the Humanities Grant (PI)  
1991-92        National Science Foundation Grant (PI)  
1991            National Endowment for the Humanities Summer Stipend (PI)

1990 Exxon Foundation Educational Program Development Grant  
 1987 National Science Foundation Conference Grant (PI)  
 1987 Exxon Foundation Educational Program Development Grant  
 1986-87 Cornell Society for the Humanities, Junior Fellow (declined)  
 1984-85 National Endowment for the Humanities Grant (PI)  
 1984-85 National Science Foundation Grant (PI)  
 1984 National Endowment for the Humanities Travel to Collections Grant (PI)  
 1982 Andrew Mellon Research Associate in History of Medicine  
 1981 German Academic Exchange Service (DAAD) Goethe-Institute Language Fellowship

## HOME INSTITUTION

2000 Georgetown University School of Foreign Service Summer Grant  
 1999 Georgetown University Senior Faculty Fellowship  
 1999 Georgetown University Graduate School Competitive Grant-in-Aid  
 1998 Georgetown University School of Foreign Service Research Grant  
 1998 Georgetown University Summer Academic Grant  
 1996-97 Georgetown University President's Interdisciplinary Initiative Grant  
 1996 Georgetown University School of Foreign Service Research Grant  
 1991 Georgetown University Summer Academic Grant  
 1990 Georgetown University School of Foreign Service Research Grant  
 1988 Georgetown University School of Foreign Service Research Grant  
 1986 Georgetown University School of Foreign Service Curriculum Grant  
 1984 Georgetown University Summer Academic Grant  
 1980-81 Clarkson University Faculty Research Grant

## GRADUATE STUDY

1979-80 Smithsonian Institution Fellow-in-Residence  
 1977-78 American Association for University Women Fellowship  
 1978 Josephine de Kármán Fellowship  
 1977 Western Societies Program Travel Grant (Cornell)  
 1976-77 Gertrude A. Gilmore Fellowship (Cornell)  
 1973-76 National Science Foundation Graduate Fellow

## HONORS &amp; AWARDS

2009-10 Dibner Distinguished Fellow, The Huntington Library, San Marino, California  
 2008 Visiting Scholar (short-term), Max-Planck-Institut für Wissenschaftsgeschichte, Berlin  
 1998 Fellow of the American Association for the Advancement of Science  
 "For contributions to scholarship and teaching in the history of science and for leadership in AAAS and the History of Science Society"  
 1998 Visiting Scholar (long term funded), Max-Planck-Institut für Wissenschaftsgeschichte, Berlin  
 1997 Constantine E. McGuire Award for Outstanding Service (GU School of Foreign Service)  
 1980 Messenger-Chalmers Dissertation Award (Cornell University)\  
 1977 Phi Kappa Phi National Honor Society  
 1973 Phi Mu Epsilon National Mathematics Honor Society

## EDITORIAL BOARDS

*Osiris*: Past Editor, 2009-2012, Editor, 2002-2008; Associate Editor, 1999-2001; Editorial Board, 1997-98

*Isis* : Associate Editor, 2002-2008; Editorial Board, *ex officio*, 2002-08

*Reviews of Policy Research*, Editorial Board, 2006-07

*Nuncius-Annals of the History of Science (Italy)*: International Advisory Board, 2005-13

*Oxford Companion to the History of Modern Science*, Editorial Board, 1997-2002

## PUBLICATIONS

### BOOKS

*Physics as a Calling: Discipline and Practice in the Königsberg Seminar for Physics*. (Ithaca and London: Cornell University Press, 1991).

### EDITED VOLUMES

Ash, Eric, Guest Ed. *Expertise: Practical Knowledge in the Early Modern State*. Edited by Kathryn Olesko. Vol. 25, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2010.

Harrison, Carol and Ann Johnson, Guest Eds. *National Identity: The Role of Science and Technology*. Edited by Kathryn Olesko. Vol. 24, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2009.

Gordin, Michael D., Karl Hall and Alexei Kojevnikov, Guest Eds. *Intelligentsia Science: The Russian Century, 1860-1960*. Edited by Kathryn Olesko. Vol. 23, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2008.

Eghihan, Gregg, Andreas Killen and Christine Leuenberger, Guest Eds. *The Self as Project: Politics and the Human Sciences in the Twentieth Century*. Edited by Kathryn Olesko. Vol. 22, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2007.

Krige, John and Kai-Henrik Barth, Guest Eds. *Global Power Knowledge: Science, Technology & International Affairs*. Edited by Kathryn Olesko. Vol. 21, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2006.

Sachse, Carola and Mark Walker, Guest Eds. *Politics and Science in Wartime: Comparative Perspectives on the Kaiser Wilhelm Institute*. Edited by Kathryn Olesko. Vol. 20, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2005.

Mitman, Gregg, Michelle Murphy, and Christopher Sellers, Guest Eds. *Landscapes of Exposure: Knowledge and Illness in Modern Environments*. Edited by Kathryn Olesko. Vol. 19, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2004.

Dierig, Sven, Jens Lachmund, and J. Andrew Mendelsohn, Guest Eds. *Science and the City*. Edited by Kathryn Olesko, Vol. 18, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2003.

Broman, Thomas, and Lynn K. Nyhart, Guest Eds. *Science and Civil Society*. Edited by Kathryn Olesko, Vol. 17, *Osiris*, 2<sup>nd</sup> ser. Chicago: University of Chicago Press, 2002.

Olesko, Kathryn M., Guest Ed. *Science in Germany: The Intersection of Institutional and Intellectual Issues*. Edited by Arnold Thackray, Vol. 5, *Osiris*, 2<sup>nd</sup> ser. Philadelphia: History of Science Society, 1989.

## ARTICLES

“Science Education in the History of Science,” *Handbook of History, Philosophy, and Science Teaching Research* (Berlin: Springer: forthcoming).

“Physics and Metrology,” *Oxford Handbook on the History of Physics*, ed. Jed Z. Buchwald and Robert Fox (Oxford: Oxford University Press, forthcoming).

“Geopolitics and Prussian Technical Education in the Late-Eighteenth Century,” *Actes d’ Història de la Ciència i de la Tècnica* 2(2) (2009): 11-44.

“Wissen: Universität und Forschung,” *Wettlauf um die Moderne: Die USA und Deutschland 1890 bis Heute*, ed. Christof Mauch and Kiran Patel (Berlin: Pantheon, 2008), 393-423 (with Christoph Strupp). Also published as:

“Wissen: Universität und Forschung,” *Wettlauf um die Moderne: Die USA und Deutschland 1890 bis Heute*, Bundeszentrale für politische Bildung Schriftenreihe Bd. 715, ed. Christof Mauch and Kiran Patel (Bonn: Bundeszentrale für politische Bildung, 2008).

“Education: Universities and Research,” *The United States and Germany During the Twentieth Century: Competition and Convergence*, ed. Christof Mauch and Kiran Patel (Cambridge: Cambridge University Press, 2010), 211-226 (with Christoph Strupp).

“The World We Have Lost: History as Art,” *Isis* 98 (2007): 760-768.

“Aesthetic Precision,” *Tensions and Convergences: Technological and Aesthetic Transformations of Society*, ed. Reinhard Heil, Andreas Kaminski, and Marcus Stippak (Bielefeld: transcript-Verlag/Piscataway, NJ: Transaction Publishers, 2006), 37-46.

*Göttinger Kostbarkeiten: Handschriften, Drucke und Einbände aus zehn Jahrhunderten*, Göttinger Bibliotheksschriften 35 (Göttingen: Niedersächsische Staats- und Universitätsbibliothek, 2006). Entries on: Die Farbe des Lichts (24-25), Kunst als mathematische Wissenschaft (32-33), Die Vermessung des Menschen (82-83), Andreas Vesalius—Begründer modernen Anatomie (94-95), Die Revolution der Himmelsphären (170-171). Also published in CD format.

“Science Pedagogy as a Category of Historical Analysis: Past, Present, & Future,” *Science & Education* 15 (2006): 863-880.

“The Century of Science,” *A Companion to Nineteenth-Century Europe*, ed. Stefan Berger (Oxford: Blackwell Publishers, 2005), 333-344.

“Der Praktische Gauss: Präzisionsmessung für den Alltag,” *„Wie die Blitz anschlägt, hat sich die Räthsel gelöst“: Carl Friedrich Gauss in Göttingen*, ed. Elmar Mittler (Göttingen:

Niedersächsische Staats- und Universitätsbibliothek, 2005), 236-258. Also published as: <http://webdoc.sub.gwdg.de/ebook/e/2005/gausscd/html/Katalog.pdf>

“The Foundation of a Canon: Kohlrausch’s *Practical Physics*,” in *Pedagogy and the Practice of Science: Historical and Contemporary Perspectives*, ed. David Kaiser. (Boston: MIT Press, 2005), 323-356.

*Oxford Guide to the History of Physics and Astronomy*, ed. J. L. Heilbron (New York: Oxford University Press, 2005). Entries on: Friedrich Wilhelm Bessel (28-29), Error and the Personal Equation (107-108), Alexander von Humboldt (157-159), Humboldtian Science (159-162).

“L’ innovazione istituzionale, 1870-1920,” *Storia della scienza*, ed. Sandro Petruccioli, v. 8°: *Fisica*, ed. J. L. Heilbron et al. (Roma: Istituto della Enciclopedia Italiana, 2004), 334-343.

*Oxford Companion to the History of Modern Science*, ed. J. L. Heilbron et al., (New York: Oxford University Press, 2003). Entries on Art & Science (45-49), Cameralism (120-121), Disciplines (213-14), Error & the Personal Equation (271-73), Historiography of Science (366-370), Alexander von Humboldt 383-84, Humboldtian Science (384-87), Institute (402-4), Kaiser Wilhelm/Max Planck Gesellschaft (433-34), Marxism (488-89), Modernity & Postmodernity (540-41), Nazi Science (568-70), Precision & Accuracy (672-73), Probability & Chance (677-78), Schools (731-733), Science & Daily Life (199-200), Seminar (749), Textbook (796-97), University (812-15).

“Le origini del seminario di ricerca e la fisica teorica ,” *Storia della scienza*, ed. Sandro Petruccioli, v. 7°: *La scienza dell’Ottocento*, ed. Jed Buchwald et al. (Roma: Istituto della Enciclopedia Italiana, 2003), 315-326.

“History and History of Science *Redux*,” *Osiris* 17 (2002): i-iv.

“Cuando los instrumentos se pierden de vista,” in *Abriendo las Cajas Negras. Colección de instrumentos científicos de la Universita tde València*, ed. José Ramón Bertomeu Sánchez and Antonio García Belmar (València: Universitat de València, 2002), 21-32. Also published as:

“When instruments disappear from view,” in *Abriendo las Cajas Negras. Colección de instrumentos científicos de la Universitat de València*, ed. José Ramón Bertomeu Sánchez and Antonio García Belmar (València: València, 2002), 409-414.

“Quan els instruments es perden de vista,” in *Obrient les caixes negres. Col·lecció d’instruments científics de la Universitat de València*, ed. José Ramón Bertomeu Sánchez and Antonio García Belmar (València: Universitat de València, 2002), 21-33.

“The Politics of Fin-de-Siècle Physics Pedagogy in Europe,” *History of Physics Newsletter: A Forum of the American Physical Society* VII, Nr. 3, Fall 1998, 9-10; published online at <http://www.aps.org/units/fhp/olesko.cfm>

“Science in Germanic Europe,” *Cambridge History of Science*, Vol. 8, *Science in National and International Contexts*, ed. Ronald Numbers and David Lindberg (Cambridge: Cambridge University Press), *in press* (submitted 1998).

“Technology, Efficiency, & Gender in *Evangelium Vitae*,” in *Choosing Life: A Dialogue on Evangelium Vitae*, ed. Kevin William Wildes, S.J. (Washington, DC: Georgetown University Press, 1997), 105-120.

“Franz Ernst Neumann (1798-1895),” in *Die Großen Physiker*, 2 Bände, Band I: *Von Aristotle bis Kelvin*, ed. Karl von Meyenn (München: C. S. Beck, 1997), 384-395.

“Precision, Tolerance, Consensus: Local Cultures in German and British Resistance Standards,” *Archimedes* 1 (1996), 117-156.

“Der Physiker als Lehrer: Zur hundertsten Wiederkehr des Todestages von Franz Neumann (1798-1895),” *Physikalische Blätter*, 51 (1995): 522-24. Also published as:

“Der Physiker als Lehrer: Zur hundertsten Wiederkehr des Todestages von Franz Neumann (1798-1895),” in *Franz Ernst Neumann (1798-1895): Physiker und Lehrer an der Universität Königsberg. Ausstellung zum 200. Geburtstag im Foyer des historischen Gebäudes der Bibliothek. 2. November bis 23. Dezember 1998*. (Göttingen: Niedersächsische Staats- und Universitätsbibliothek, 1998).

“Franz Neumann,” in *Die Albertus-Universität zu Königsberg und ihre Professoren: Aus Anlass der Gründung der Albertus-Universität vor 450 Jahren [Jahrbuch der Albertus-Universität zu Königsberg, 29 (1994)]*, ed. Dieter Rauschnig and Donata v. Nerée (Berlin: Duncker & Humblot, 1995), 489-497.

“The Meaning of Precision: The Exact Sensibility in Early Nineteenth Century Germany,” in *The Values of Precision*, ed. M. Norton Wise (Princeton: Princeton University Press, 1995), 103-134.

“The Images of Precision: Helmholtz and the Graphical Analysis of Data,” in *The Values of Precision*, ed. M. Norton Wise (Princeton: Princeton University Press, 1995), 198-221 (with Frederic L. Holmes).

“German Models, American Ways: The ‘New Movement’ Among American Physics Teachers, 1905-1909,” in *German Influences on Education in the United States to 1917*, ed. Henry Geitz, Jürgen Heideking, & Jürgen Herbst (Cambridge: Cambridge University Press, 1995), 129-153.

“Civic Culture & Calling in the Königsberg Period” in *Universalgenie Helmholtz: Rückblick nach 100 Jahren*, edited by Lorenz Krüger (Berlin: Akademie Verlag, 1994), 22-42.

“Experiment, Quantification, and Discovery: Helmholtz’s Early Physiological Experiments,” in *Hermann von Helmholtz and the Foundations of Nineteenth-Century Science*, ed. David Cahan (Berkeley: University of California Press, 1993), 50-108 (with Frederic L. Holmes).

“Tacit Knowledge and School Formation,” *Osiris* 8 (1993): 16-29.

“The Humboldtian Reforms, Economic Factors, and Discipline Shaping: The Case of the Königsberg Physics Seminar,” in *“Einsamkeit und Freiheit” Neu Besichtigt: Universitätsreformen und Disziplinenbildung in Preußen als Modell für Wissenschaftspolitik im Europa des 19. Jahrhunderts*, ed. Gert Schubring (Stuttgart: Franz Steiner Verlag, 1991), 92-109.

“Physics Instruction in Prussian Secondary Schools before 1859,” in *Science in Germany*, ed. K. M. Olesko, *Osiris* 5 (1989): 92-118.

“Introduction,” in *Science in Germany*, ed. K. M. Olesko, *Osiris* 5 (1989): 6-12.

“Michelson and the Reform of Physics Instruction at the Naval Academy in the 1870s,” in *The Michelson Era in American Science, 1870-1930*, ed. S. Goldberg and R. Stuewer (New York: American Institute of Physics, 1988), 111-132.

“On Institutes, Investigations, and Scientific Training,” in *The Investigative Enterprise: Experimental Physiology in Nineteenth-Century Medicine*, ed. W. Coleman and F. L. Holmes (Berkeley: Univ. of California Press, 1988), 295-332.

“The Pedagogical Imperative,” *British Society for the History of Science and the History of Science Society: Programs, Papers and Abstracts for the Joint Conference*, ed. R. N. Numbers and J. V. Pickstone (Madison, WI: Omnipress, 1988), 93-100.

“NSF Support for HST in High School Courses,” *History of Science Society Newsletter* 16, no. 3 (July 1987): 1-2.

“The Mental World of Physiklehrer: Subject and Method in History of Mentalities,” *Recherches en didactique des mathématiques* 6, no. 2/3 (1985): 347-62.

“Jesuit Contributions to Physics,” *Encyclopedia of Jesuit History*, ed. Francisco de Borja Medina, S.J. and Charles E. O’Neill, S.J. (Rome: Institutum Historicum Societatis Jesu, submitted 1983).

“Employment Trends in History of Science,” *Isis* 72 (1981): 477-79.

#### BOOK REVIEWS

##### TITLED REVIEWS:

“Training for the Tripos,” [Review of Andrew Warwick, *Masters of Theory: Cambridge and the Rise of Mathematical Physics*], *American Scientist*, 92 (2004): 276-279.

“Nobelists and Company,” [Review of Elisabeth Crawford, *Nationalism and Internationalism in Science, 1880-1939*]. *Science* 256 (1992):1040-41.

“Republics of Science” [Review of *Solomon’s House Revisited*, ed. Tore Frängsmyr]. *Science* 252 (1991): 976-978.

“The Civics of Science,” [Review of *Teaching the History of Science*, ed. Michael Shortland and Andrew Warwick]. *Science* 248 (1990): 1242-43.

“Planck’s Demon Caught between Good Science and Bad Politics,” [Review of J. L. Heilbron, *Dilemmas of an Upright Man*], *Physics Today* (March 1988): 89-90.

## BOOK REVIEWS IN:

*American Historical Review, American Scientist, Annals of Science, Isis, Metascience, Physics Today, Reviews of Metaphysics, Science, Social Science History,* and other journals.

## PRESENTATIONS, INCLUDING INVITED LECTURES AND CONFERENCE PAPERS

“Modernizing Easter: Astronomy, Foreign Affairs, and Confessional Conflict,” History of Science Society Annual Meeting, Montreal, Canada, 4-7 November 2010.

“Roundtable: *The United States and Germany in the Twentieth Century: Competition and Convergence*,” German Studies Association Annual Meeting, Oakland, CA, 7-10 October 2010.

“Commentary: Science and Its Histories,” Huntington Library, San Marino, CA, 24-25 September 2010.

“Water in the Prussian Frontier,” Dibner Fellow Distinguished Lecture, The Huntington Library, San Marino, CA, 17 February 2010.

Other versions also presented at: University of California, Los Angeles, 8 March 2010; University of California, San Diego, 12 April 2010; University of Maryland, 9 September 2010; Rachel Carson Center, Ludwigs-Maximilians-Universität München, 2 June 2011.

“Politics and Prussian Technical Education, 1740-1799,” Invited Plenary Lecture, Catalan Society for the History of Science & Technology, Lleida, Spain, 13-16 November 2008.

“Public Works in 18<sup>th</sup>-Century Prussia,” Historisches Institut—Abteilung für Geschichte der Naturwissenschaften und Technik, Universität Stuttgart, 23 May 2008.

“Daniel Kehlmann’s *Die Vermessung der Welt*,” Book Conversation, Goethe Institute, Washington, DC, 29 November 2007.

“Science, Technology, & National Identity [Commentary],” Conference on Science, Technology, & National Identity, University of South Carolina, Columbia, SC, 22 September 2007.

“The Competing Modernities Project: Knowledge,” [with Christoph Strupp] BMW Center for German & European Studies, Georgetown University, Washington, DC, 13 February 2006; also presented at German Historical Institute, 16 February 2006.

“Science and Georgetown’s Identity,” Georgetown University Board of Governors, Washington, DC, 1 October 2005.

“Aesthetic Precision,” Conference on Technisierung/Ästhetisierung: Technical and Aesthetic (Trans)Formations of Society, Darmstadt Technische Universität, Germany, 12-14 October 2005.

“Competing Modernities: Science and Education in Germany and America,” German Historical Institute Conference on Competing Modernities, German Historical Institute, Washington, DC, 23-24 September 2005.

“The Forgotten Past: Other Cultures of Science and Technology in German History,” University of Pennsylvania, 28 March 2005; also presented at German Historical Institute, Washington, DC, 2 December 2004.

“Science & Technology in Daily Life,” U.S. Department of Commerce, Washington, DC, 8 December 2004.

“Competing Modernities: Science and Education in Germany and America,” German Historical Institute Conference on Competing Modernities, The American Academy, Berlin, 17-19 September 2004.

“Science & Technology in the Definition of Western Civilization,” Provost’s Series on Western Civilization, Georgetown University, 25 February 2004.

“ . . . for the welfare of the people and the state . . .”: Public Works and Exactitude in Early Modern Germany,” Yale University, 8 December 2003.

“The Legacy of Gregor Mendel: Nature’s Regularities,” Smithsonian Resident Associate Program, Embassy of the Czech Republic, Washington, DC, 4 December 2003.

“Commentary: Professionalization: Beyond the Public Sphere and toward Politics,” History of Science Society Annual Meeting, Boston, 21 November 2003.

“Galileo: The Man, The Myth,” Panel Discussion on Bertolt Brecht’s *Life of Galileo*, Studio Theater (co-sponsored by AAAS), Washington, DC, 9 November 2003.

“Aesthetic Precision,” BMW Center for German & European Studies Faculty Seminar, Georgetown University, 2 December 2002.

“Deceptions of Vision: Optical Illusions in German Society,” History of Science Society Annual Meeting, Milwaukee, Wisconsin, 7-10 November 2002.

“Universal Standard Time: Beyond Technological Systems,” Program in Science, Technology, & International Affairs Faculty Seminar, Georgetown University, 7 October 2002.

“Training Generations: The Foundations of Kohlrausch’s Practical Physics,” Conference on Training Scientists, Crafting Science: Putting Pedagogy on the Map of Science Studies, MIT, 19-20 September 2002.

“Vision and Culture in the Romantic Era: Helmholtz’s Sources,” National Library of Medicine of the National Institutes of Health, Bethesda, MD, 8 May 2002.

“The Social Function of Knowledge,” Conference on Training Scientists, Crafting Science: Putting Pedagogy on the Map of Science Studies, MIT, 24-26 January 2002.

“The Measures of Reality: The Histories of Metrology,” Centre de Recherches historiques et épistémologiques sur les sciences exactes les institutions scientifiques, Université Paris, 18 December 2001.

“Student Culture and the Production of Theorists in Physics [Commentary],” History of Science Society Annual Meeting, Denver, Colorado, 9-11 November 2001.

“Stabilizing Boundaries: Nature, Material Culture, and Political Identity in Germany, [Commentary],” German Studies Association, Washington, DC, 4-6 October 2001.

“Biology and the Crisis of Ethics in Imperial Germany [Commentary],” German Studies Association, Washington, DC, 4-6 October 2001.

“Reason for Profit: Post-Reunification Developments in German Science,” University of Delaware, 25 September 2001.

“What is Reason in Everyday Life? Indigenous vs. Scientific Knowledge from a Phenomenologist’s Perspective,” Workshop on Science and Indigenous Knowledge, U.S. National Committee for the International Union of History & Philosophy of Science of the National Academy of Sciences, Honolulu, Hawaii, 26-27 May 2001.

“German Science in the 21<sup>st</sup> Century: Crises and Challenges”, Center for the History of Recent Science, George Washington University, 27 April 2001.

“Aesthetic Precision: Particularity and Social Fact,” Invited Plenary Lecture, History of Science Society Annual Meeting, Vancouver, British Columbia, 2-5 November 2000.

“Freedom-Community-Responsibility”, Georgetown University Convocation Address, 27 August 2000.

“Student Protest, Gutenberg, and ‘Green Cards’: Historical Roots of Germany’s Present Crisis in Science,” Center for German and European Studies Faculty Seminar, Georgetown University, 10 April 2000.

“The Deceptions of Vision: Optical Illusions in German Society,” Nineteenth Century Studies Association Conference, Arlington, VA, 23-25 March 2000; revised versions presented at a conference on “Romanticism and Visual Culture”, St. Hugh’s College, Oxford University, 10 June 2000.

“Assimilating the Everyday: Ordinary Life and the Production of Scientific Personae,” Conference on Scientific Personae, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, 4-6 June 1999.

“Numberless Precision and Civil Society in Early Modern Germany” Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, 13 October 1998.

“The Politics of Fin-de-Siècle Physics Pedagogy in Europe,” American Physical Society and American Association of Physics Teachers, Columbus, Ohio, 19 April 1998.

“Commentary: Creating Cultures of Calculation: Academic Institutions and Pedagogical Practices in the History of Mathematics & Physics”, Program in History of Science, Princeton University, Princeton, NJ, 30 August 1997.

“What does ‘Precise’ Mean? Fine Grained Views of Reality without Numbers,” Program in History of Science and Technology, University of Minnesota, Minneapolis, MN, 2 May 1997.

“Precision and Accuracy in German Society,” Center for the History & Philosophy of Science, University of Maryland, College Park, 21 November 1996.

“Interpretation and Historical Explanation in *Wissenschaftsgeschichte*,” History of Science Society Annual Meeting, Atlanta, Georgia, October 1996.

“Precision and Accuracy in German Society: The Issues Behind the Numbers,” Center for German and European Studies Faculty Seminar, Georgetown University, 16 September 1996.

“Precision, the Cadaster, and Property Rights in Pre-Imperial Germany,” Joint Meeting of the British Society for the History of Science and the History of Science Society, Edinburgh, Scotland, July 1996.

“Why Science Studies?,” Georgetown University Alumni Club of West Palm Beach, 10 May 1996.

“Technology, Efficiency, and Gender in *Evangelium Vitae*,” Conference on *Evangelium Vitae*, Georgetown University, Washington, DC, 10-12 November 1995.

“The Laboratory and the Classroom: Education Reform in England, Germany, and Sweden, Circa 1900 [Commentary]”, History of Science Society Annual Meeting, Minneapolis, MN, 26-29 October 1995.

“Mathematical Physics and Quantitative Science at Königsberg: A Review of the Literature and Directions for Future Research,” Conference on Mathematics and the Mathematical Sciences at Königsberg, Mathematisches Institut, Oberwolfach, Germany, 30 June-2 July 1995.

“Rethinking Mathematical Physics at Königsberg: Mathematical Traditions and the Ethics of Research,” Mathematisches Institut, Universität Mainz, 29 June 1995.

“History and the Sciences *Redux*”, Phi Alpha Theta Annual Meeting, Georgetown University, 8 April 1995.

“The Meaning of Precision,” Invited Lecture and Seminar at the University of Oklahoma, Norman, OK, 9-10 December 1994.

“Teaching Disciplines & Shaping Identities: Reflections on the Origin of Modern Science,” History of Science Society Annual Meeting, New Orleans, LA, 13-16 October 1994.

“Franz Neumann and the Königsberg School of Mathematical Physics,” 450-jährige Jubiläum der Albertus-Universität Königsberg, Kaliningrad (Königsberg), Russia, 26-30 September 1994.

“The Global Future of Science and Technology,” Key Global Issues Seminar, Institute for the Study of Diplomacy, Georgetown University, 25 April 1994.

“Technology and Measurement: Berlin’s Experimental Culture before Hertz,” Conference on Heinrich Hertz, sponsored by the University of South Carolina, 18-20 March 1994.

“Experiment, Civic Culture, and Practice: Helmholtz’s Early Career,” Conference on Hermann von Helmholtz, sponsored by Forschungsschwerpunkt Wissenschaftsgeschichte und Wissenschaftstheorie, Max Planck Gesellschaft, Tegernsee, Germany, 3-8 January 1994.

“Resistance, Tolerance, & Consensus in Britain & Germany,” History of Science Society, Annual Meeting, Santa Fe, New Mexico, 11-14 November 1993.

“Learning Mathematical Physics at Cambridge and Königsberg,” Conference on Science Education sponsored by The Achievement Project, Johns Hopkins University, 30 September-2 October 1993 [co-authored with Andrew Warwick].

“Precision and Practice in German Resistance Measures: Some Comparative Considerations,” Conference on Practical Electricians, High Science, and the Third Way, Dibner Institute for the History of Science and Technology, Massachusetts Institute of Technology, 16-18 April 1993.

“The Culture of Precision in Science: Historical Perspectives,” Georgetown University Medical School Bioethics Seminar, 10 November 1992.

“Science and Power in Nineteenth Century Germany and France [Commentary],” Southern Historical Association Annual Meeting, Atlanta, GA, 4-7 November 1992.

“A Classic Experiment as Cheshire Cat: Teaching Helmholtz’s Nerve Experiments,” Joint Meeting of the British Society for the History of Science and the History of Science Society, Toronto, Canada, 26-28 July 1992 (co-authored with Frederic L. Holmes).

“The Exact Sensibility,” Institut für Wissenschaftsgeschichte, Georg-August-Universität zu Göttingen, Göttingen, Germany, 16 June 1992; also presented at History of Science Society Annual Meeting, Washington, DC, 27-30 December 1992.

“The Culture of Precision in Nineteenth Century Germany,” German Historical Institute, Washington, DC, 21 May 1992.

“The Meaning of Precision: Precision’s Early Sensibilities,” Princeton University Workshop in the History of Science, Princeton, NJ, 8 February 1992; also presented at Department of Science Studies, Cornell University, Ithaca, NY, 6 April 1992.

“Experiment, Quantification, & Discovery: Helmholtz’s Early Physiological Researches,” Department of History of Science and Medicine, Johns Hopkins University, Baltimore, MD, 21 November 1991.

“The Laboratory and the Workplace,” Joint Meeting of the History of Science Society and the Society for the History of Technology, Invited Plenary Session Lecture, Madison, WI, 30 October-3 November 1991.

“Tacit Knowledge and School Formation,” History of Science Society Annual Meeting, Madison, WI, 30 October-3 November 1991.

“The Meaning of Precision,” Semiotic Society of America Annual Meeting, College Park, MD, 24-27 October 1991.

“Industrial Demands and the Political Economy of Exact Experiment,” Conference on Writing the History of Physics, St. John’s College, Cambridge University, 3-5 April 1991.

“Exact Experiment and the Formation of Schools of Physics at Berlin and Göttingen,” Conference on Research Schools, Yale University, November 1990.

“Helmholtz’s Early Physiological Experiments,” History of Science Society, Seattle, WA, 25-28 October 1990.

“Experiment and Discovery in Helmholtz’s Muscle and Nerve Investigations,” Conference on Hermann von Helmholtz: Scientist and Philosopher, University of Chicago, 11-14 October 1990.

“German Science Seminars and Teacher Training in America,” Conference on German Influences on American Education, Madison, WI, 13-16 September 1990.

“The Humboldtian Reforms and the Königsberg Physics Seminar,” XVIII International Congress of History of Science, Hamburg-Munich, 1-9 August 1989.

“Secondary School Physics Instruction in America, 1870-1930,” History of Science Society, Cincinnati, OH, 27-30 December 1988.

“Toward a History of the Prussian Seminar System,” Washington Area German History Seminar, Towson, MD, 29 October 1988.

“The Pedagogical Imperative,” for combined British Society for History of Science & History of Science Society meeting, Manchester, England, July 1988 (submitted for proceedings but not delivered in person).

“German Seminars and the Natural Sciences,” Conference on National Styles in Science, Dibner Institute for History of Science and Technology, Brandeis University, 1-3 June 1988.

“Environments and Strategies for Science Learning: A Historical Perspective,” for the American Association for the Advancement of Science “Forum 87: Students and Science Learning,” Crystal City, VA, November 1987.

“Teaching Physics in the 1870s: A Comparative Perspective on America and Germany,” Conference on The Michelson Era in American Science, 1870-1930, Case Western Reserve

University, October 1987; revised version presented to Princeton University History of Science Seminar, March 1988.

“Physical Laboratory Instruction in Prussian Gymnasien and Realschulen: Sources of Teaching Measurement before 1860,” History of Science Society, Pittsburgh, PA, October 1986; earlier version presented at the Smithsonian Institution, May 1986.

“Teaching Measurement before Kohlrausch,” American Physical Society and American Association of Physics Teachers, Atlanta, GA, January 1986.

“German Archival Research: Journeyman’s Apprenticeship or Superfluous Supplement?” Washington Area History of Science Society, May 1985.

“The Mental World of *Physiklehrer*: An Adventure in Reading *Schulprogramme*,” Forschungsschwerpunkt Wissenschaftsforschung, Universität Bielefeld, West Germany, November 1984.

“Teaching History of Science in Undergraduate History Survey Courses [Commentary]”, American Historical Association, San Francisco, CA, December 1983; revised version presented to high school AP history teachers at an Educational Testing Service regional meeting, Coral Gables, FL, March 1986.

“Science and Society [Commentary]”, German Studies Association, Madison, WI, October 1983.

“Mathematics and Languages in 19th c. Germany,” VIII Symposium on History of Mathematics, National Museum of American History, September 1983.

“Galileo’s Physics,” Junior Science and Humanities Symposium, Washington, DC, 7 January 1983.

“‘*Physiker*’ von Beruf: Institutional Reforms, Intellectual Changes, and Personal Expectations, 1830-1875,” Conference on *Wissenschaft als Beruf: The Context and Content of Academic Learning in Germany, 1780-1850*, Princeton University, April 1982; also presented to the Washington Area German History Seminar, October 1982.

“Mechanics and the Center of German Physics, 1790-1840,” American Physical Society, Washington, DC, April 1982; earlier version presented at the Midwest Junto History of Science Society, St. Louis, MO, March 1979.

“What’s History in the History of Science?,” Junior Science and Humanities Symposium, Washington, DC, 9 January 1982.

“Theoretical Physics on Trial,” Committee on History and Philosophy of Science, University of Maryland, 26 October 1981.

“Reactions to the Königsberg School,” Institut d’histoire et de sociopolitique des sciences, Université de Montreal, 3 February 1981.

“Teaching Physics at Königsberg, circa 1840,” Department of History of Science, Johns Hopkins University, 10 April 1980; earlier versions presented at the Nineteenth Century Seminar of the Smithsonian Institution and at the National Museum of American History.

“The Königsberg School of Physics: A Profile,” History of Science Society, New York, 29 December 1979.

“The Politics and Pedagogy of Physics: The Königsberg Seminar and the Prussian Ministry of Education,” Joint Atlantic Seminar in the History of the Physical Sciences, University of Pennsylvania, 7 April 1979.

“Franz Neumann and the Emergence of Theoretical Physics in Germany,” History of Science Society, Madison, WI, 27-29 October 1978.

#### MEDIA

“DNA Discoveries, Now and Then,” *The Washington Post*, Saturday, 22 December 2007, A16 (Letter to the Editor).

“Decoding Nostradamus,” *Discovery Channel*, originally aired 9, 10, and 15 September 2007. (Interview; appeared with GU colleague David Collins)

“Gender and Science”, Interview by Georgetown Forum (WMZQ), originally aired 4 June 2000; rebroadcast on National Public Radio, Voice of America, and other programs.

#### NATIONAL & INTERNATIONAL REVIEW BOARDS AND PANELS

2010	Huntington Library, Dibner Fellows Review Panel
2010	Smithsonian Institution, Dibner Fellows Review Panel
2000-03	International Union for the History and Philosophy of Science: U. S. National Committee, Member. (National Academy of Sciences appointment)
1995-98	National Science Foundation, Science and Technology Studies Review Panel
1991-97	Harvard University Board of Overseers, Committee to Visit the Department of History of Science, Member
1995	National Endowment for the Humanities, Fellowship Review Panel [Division of Research Programs: Humanities, Science, & Technology]
1994	National Endowment for the Humanities, Grant Review Panel [Division of Education Programs: Leadership Opportunity in Science and Humanities Education]
1989	National Endowment for the Humanities, Grant Review Panel [Division of Research: Humanities, Science, & Technology: Guided Texts]
1989	National Academy of Sciences, National Research Council: Review Panel for NSF Graduate Fellowships, Behavioral and Social Sciences, Section C, Chair
1987	National Academy of Sciences, National Research Council: Review Panel for NSF Graduate Fellowships, Behavioral and Social Sciences, Section C, Chair
1984	National Academy of Sciences, National Research Council: Review Panel for NSF Graduate Fellowships, Behavioral and Social Sciences, Section C, Member

#### EVALUATOR OF PROGRAMS OR FELLOWSHIP APPLICATIONS FOR

National Science Foundation, National Science Foundation Graduate Fellowships, National Science Foundation Dissertation Fellowships, National Endowment for the Humanities, American Council of Learned Societies, Social Science Research Council, Alexander von Humboldt Foundation, German Academic Exchange Service, Howard Foundation, American Association for the Advancement of Science Fellows, Fulbright-Hays Commission, University of Wisconsin Institute for Research in the Humanities, Institute for Advanced Study (Princeton), Romnes Faculty Fellowship at University of Wisconsin, Max Planck Institut für Wissenschaftsgeschichte (Berlin), Woodrow Wilson Graduate Fellowships, MacArthur Foundation Fellows (evaluator & nominator), Newcombe Fellowship, American Association for the Advancement of Science Fellows, Elizabeth Searle Visiting Professorship (Caltech)

#### REFEREE OF MANUSCRIPTS FOR

Publishers: Bedford/St. Martin's, Berghahn Publishers, Cambridge University Press, Cornell University Press, Houghton Mifflin, Johns Hopkins University Press, Princeton University Press, Rutgers University Press, University of California Press, University of Chicago Press

Journals: *American Historical Review*, *Annals of Science*, *British Journal for the History of Science*, *East Asian Science Technology and Medicine*, *Isis*, *Osiris*, *Perspectives in Physics*, *Reviews of Policy Research*, *Science & Education*.

#### PROFESSIONAL SOCIETIES

History of Science Society. Member (1974-)

Editor, *Osiris*, 1998-2008 (volumes 17 (2002)-27 (2012))

Associate Editor, *Osiris*, 2009-2012

Associate Editor, *Isis* 1998-2008

Executive Council (Elected 2000-02; 1987-89)

American Association for the Advancement of Science Representative (1996-99)

Committee on Publications (Member, 1992-97; Secretary, 1995; Chair, 1996; *Ex officio*, 1997)

Nominating Committee (Elected 2000; 1993)

Committee on Meetings and Programs (Member, 1990-93)

Local Arrangements Co-Chair, 1992 Annual Meeting, Washington, DC

Washington Representative (1989)

Committee on Research and the Profession (*ex officio*, 1989)

Committee on Education (*ex officio*, 1989; Chair, 1985-88; Member, 1982-88)

Ad hoc Committee on the Executive Secretary (1986)

Schumann Prize Committee (Chair, 1982; Member 1981)

Committee on Women (Acting Chair, 1982; Chair, 1981; Vice-Chair, 1980; Member, 1974-84).

Annual Employment Market Report (1975-80, 1984)

American Association for the Advancement of Science. Member (1987-); Fellow (elected 1998)  
Section L: History and Philosophy of Science

Chair (Chair-Elect, 1995-96; Chair, 1996-97; Council Member & Retiring Chair, 1997-98)

Electoral Nominating Committee (Elected 2007-10, 1988-91; Chair, 1991)  
Member-at-Large (Elected 2001-05)

American Historical Association. Member (1979-)  
Local Arrangements Committee (1982)

British Society for the History of Science. Member (1990-)

German Studies Association. Member (2010-)

Society for the History of Technology. Member (1993-)

12 November 2010