

JOHN L. RUDOLPH

Dept. of Curriculum and Instruction
226D Teacher Education Bldg.
University of Wisconsin-Madison
225 N. Mills Street, Madison, Wisconsin 53706

john.rudolph@wisc.edu
<http://www.amscied.net>

POSITIONS HELD

Department Chair, Department of Curriculum and Instruction, University of Wisconsin-Madison
(2011-2014, 2017-present)

Professor, Department of Curriculum and Instruction, University of Wisconsin-Madison (2009-present) [Associate Professor (2005-2009), Assistant Professor (1999-2005)]

Director, Masters Program for Secondary Teacher Certification, University of Wisconsin-Madison
(2015-2019)

Editor in Chief, *Science Education*, John Wiley & Sons (term 2011-2016)

Director of Graduate Training/Doctoral Research Program, University of Wisconsin, Wisconsin Center for Educational Research, School of Education Doctoral Research Program
(2010-2012)

Faculty Affiliate

Department of Educational Policy Studies, University of Wisconsin-Madison (2012-present)

Robert F. and Jean E. Holtz Center for Science and Technology Studies, University of Wisconsin-Madison (2002-present)

Department of the History of Science, University of Wisconsin-Madison (2007-2017)

EDUCATION

Ph.D., Curriculum and Instruction, University of Wisconsin-Madison (1999)

History of Science minor

M.A., History of Science, University of Wisconsin-Madison (1991)

B.S., Secondary Science Education, University of Wisconsin-Milwaukee, *Summa Cum Laude* (1987)

SCHOOL TEACHING EXPERIENCE

Biology Teacher, Oconomowoc High School, Oconomowoc, Wisconsin (1992-1994)

Physics and Chemistry Teacher, Hortonville High School, Hortonville, Wisconsin (1991-1992)

Science Teacher, Mitchell Middle School, Racine, Wisconsin (1988-1989)

[Wisconsin State Teaching Certifications – Physics, Chemistry, Biology, and Broad Field Science]

HONORS AND AWARDS

History of Education Society Best-Article Prize, 2006

Awarded for the best article in the history of education published in any English-language journal from 2004-2005. "Epistemology for the Masses: The Origins of 'the Scientific Method' in American Schools." *History of Education Quarterly* 45 (2005): 341-376.

National Academy of Education-Spencer Foundation Postdoctoral Fellowship, 2004-2005

History of Education Society Outstanding Book Award, Honorable Mention

for *Scientists in the Classroom: The Cold War Reconstruction of American Science Education*, 2003

AERA New Scholar's Book Award in the History of Education, Honorable Mention

for *Scientists in the Classroom: The Cold War Reconstruction of American Science Education*, 2003

Outstanding Dissertation Award Finalist

National Association for Research in Science Teaching, 2001

Tashia F. Morgridge Wisconsin Distinguished Graduate Fellowship, 1998-1999

Spencer Foundation Dissertation Fellowship, Semi-Finalist, 1996, 1997

National Science Foundation Graduate Fellowship, Honorable Mention, 1990

Wisconsin Alumni Research Foundation University Fellowship, 1989-1990

GRANTS AND RESEARCH FUNDING

WCER Faculty Research Support Award, Spring 2015

"School Science in the Standards Era, 1980-1996," \$2,500.

Holtz Center for Science and Technology Studies Scholar Integration Grant, Spring 2010

Funding for a visiting speaker series and seminar participation on the topic of "Science Technology Studies and Science Education" (with Noah Feinstein), \$5,000.

Spencer Foundation Research Grant Award, 2006-2008

"Modern Science and the American High School: Portrayals of Scientific Process from 1887-2061," (Grant #200600144), \$40,000.

National Academy of Education/Spencer Foundation Postdoctoral Fellowship, 2004-2005

"Epistemology and the Material Dimensions of School Science: Classroom Apparatus in the 1960s," \$50,000.

Spencer Foundation Small Research Grant Award, 2004-2005

"Epistemology and the Material Dimensions of School Science: Classroom Apparatus in the 1960s," (Grant #200400152), \$30,150 (awarded, but declined).

GRANTS AND RESEARCH FUNDING (CONT.)

University of Wisconsin-Madison Graduate School Research Award, 2004-2005

"Apparatus and Epistemology: The Material Dimension of the School Science Classroom in the 1960s," summer 2004, \$6,317.

National Science Foundation Research Grant, 2001-03

"School Science Epistemology and the American Public in the Twentieth Century," \$64,064. Funded jointly by the Program in Science and Technology Studies and the Program in the Societal Dimensions of Engineering, Science, and Technology (SES #0114542).

University of Wisconsin-Madison Graduate School Research Award, 2001-2002

"School Science in the Progressive Era," summer 2001, \$11,674

National Science Foundation Dissertation Research Grant, 1996-97

"Scientists in the Classroom: The Structure of the Disciplines Movement in American Science Education, 1949-1964," \$4,968. Funded by the Program in Science and Technology Studies.

RESEARCH AND PUBLICATIONS

Books

Rudolph, J. L. *Historical and Philosophical Justifications for Science Education in the United States*. Book manuscript in progress.

Rudolph, J. L. *How We Teach Science: What's Changed, and Why It Matters*. Cambridge: Harvard University Press, 2019.

Nelson, A. R., and J. L. Rudolph (Eds.), *Education and Print Culture in Modern America*. Madison: University of Wisconsin Press, 2010.

Rudolph, J. L. *Scientists in the Classroom: The Cold War Reconstruction of American Science Education*. New York: Palgrave Macmillan, 2002.

Articles and Other Scholarly Publications

Rudolph, J. L. and S. Horibe. "What Do We Mean by Science Education for Civic Engagement?" *Journal of Research in Science Teaching* 53 (2016): 805-820.

Rudolph, J. L. "'Science as Method' a Century Later: Reviving Science Education for Civic Ends." *American Educational Research Journal* 51 (2014): 1056-1083.

Rudolph, J. L. and D. Meshoulam. "Science Education in High Schools." In *The Oxford Encyclopedia of the History of American Science, Medicine, and Technology*, edited by Hugh R. Slotten, 503-523. New York: Oxford University Press, 2014.

Articles and Other Scholarly Publications (cont.)

Rudolph, J. L. "Why Understanding Science Matters: The IES Research Guidelines as a Case in Point." Invited contribution for a special section on "What Should Count as Quality Education Research in Education? Continuing the Discussion." *Educational Researcher* 43 (2014): 15-18.

Rudolph, J. L. "Instructional Materials and the Fate of Dynamic Biology in American Classrooms after Sputnik." *Technology & Culture* 53 (2012): 1-36.

Rudolph, J. L. "Historical Writing on Science Education: A View of the Landscape." *Studies in Science Education* 44 (2008): 63-82.

Duschl, R., S. Erduran, R. Grandy, and J. Rudolph (Eds.). "Science Studies and Science Education." Special Issue of the journal *Science Education* 92, no. 3 (2008): 385-565.

Rudolph, J. L. "The Inquiry Legacy of the Biological Sciences Curriculum Study." In *Measuring Our Success: The 50th Anniversary of BSCS*, ed. R. W. Bybee. Colorado Springs: Biological Sciences Curriculum Study, Kendall/Hunt, 2008.

Rudolph, J. L. "Turning Science to Account: Chicago and the General Science Movement in Secondary Education, 1905-1920." *Isis* 96 (2005): 353-389.

Rudolph, J. L. "Inquiry, Instrumentalism, and the Public Understanding of Science." *Science Education* 89 (2005): 803-821.

Rudolph, J. L. "Epistemology for the Masses: The Origins of 'the Scientific Method' in American Schools." *History of Education Quarterly* 45 (2005): 341-376.

Stewart, J., C. Passmore, J. Cartier, J. L. Rudolph, and S. Donovan. "Modeling for Understanding in Science Education." In *Understanding Mathematics and Science Matters*, edited by T. Romberg, T. Carpenter, and F. Dremock, 159-184. Mahwah, NJ: Lawrence Erlbaum, 2005.

Rudolph, J. L. "Portraying Epistemology: School Science in Historical Context." *Science Education* 87 (2003): 64-79.

Rudolph, J. L. "From World War to Woods Hole: The Use of Wartime Research Models for Curriculum Reform." *Teachers College Record* 104 (2002): 212-241.

Stewart, J., and J. L. Rudolph. "Considering the Nature of Scientific Problems when Designing Science Curricula." *Science Education* 85 (2001): 207-222.

Rudolph, J. L. "Reconsidering the "Nature of Science" as a Curriculum Component." *Journal of Curriculum Studies* 32 (2000): 403-419.

Rudolph, J. L., and J. Stewart. "Evolution and the Nature of Science: On the Historical Discord and Its Implications for Education." *Journal of Research in Science Teaching* 35 (1998): 1069-1089.

Minor Publications, Reports, and Book Reviews

Rudolph, J. L. Review of *Innocent Experiments: Childhood and the Culture of Popular Science in the United States*, by Rebecca Onion. *Technology & Culture* 59 (2018): 197-199.

Rudolph, J. L. "Hard-science research models as a way to improve education: A call for caution." Translated into Swedish as "Experimentell och evidensbaserad forskning om skolan – en återvändsgränd?" *Skola och samhälle* (21 January 2016). <http://www.skolaochsamhalle.se/tavlan/john-l-rudolph-experimentell-och-evidensbaserad-forskning-om-skolan-en-atervandsgrand/>.

Rudolph, J. L. "Scholarly Norms for Writing History." *American Journal of Physics* 83 (2015): 911. <http://dx.doi.org/10.1119/1.4930894>.

Rudolph, J. L. Foreword to *Challenging Science Standards: A Skeptical Critique of the Quest for Unity*, by Charles R. Ault, pp. ix-xi. Lanham, MD: Rowman & Littlefield, 2015.

Rudolph, J. L. "Go Beyond Method To The Civic Purposes of Science." Invited blog entry for the *On California* blog column in *Education Week* at EdWeek.org, ed. Charles T. Kerchner. http://blogs.edweek.org/edweek/on_california/2015/01/go_beyond_method_to_the_civic_purposes_of_science.html

Rudolph, J. L. "Myth 23: That the Soviet Launch of Sputnik Caused the Revamping of Science Education." In *Newton's Apple and other Myths about Science*, ed. by Ronald L. Numbers and Kostas Kampourakis, pp. 186-192. Cambridge: Harvard University Press, 2015.

Rudolph, J. L. "Science Studies." Invited medium-length entry for the *Springer Encyclopedia of Science Education*, ed. Richard Gunstone, pp. 914-917. London: Springer Publishing, 2015.

Rudolph, J. L. Review of *Creating the Market University: How Academic Science Became an Economic Engine*, by Elizabeth Popp Berman. *Journal of American History* 99 (2013): 1320-1321.

Rudolph, J. L. Review of *Learning by Doing: Experiments and Instruments in the History of Science Teaching*, edited by Peter Heering and Roland Wittje. *Technology & Culture* 54 (2013): 225-227.

Rudolph, J. L. Review of *More than Science and Sputnik: The National Defense Education Act of 1958*, by Wayne J. Urban. *Journal of Southern History* 77 (2011): 1044-1045.

Rudolph, J. L. "Science Education: History at the Edge." Invited essay review of *Teaching Children Science: Hands-On Nature Study in North America, 1890-1930*, by Sally Gregory Kohlstedt. *Studies in History and Philosophy of Biological and Biomedical Sciences* 42 (2011): 270-273.

Rudolph, J. L. "Review Report on the *Draft Report of the ICSU [International Council for Science] Ad Hoc Review Panel on Science Education*." Commissioned by the Society for Social Studies of Science (4S). Submitted February 2, 2011.

Rudolph, J. L. Review of *The Race between Education and Technology*, by Claudia Goldin and Lawrence F. Katz. *Technology and Culture* 50 (2009): 970-971.

Minor Publications, Reports, and Book Reviews (cont.)

Rudolph, J. L. "History of Science Education in America: A Map of Historical Resources for Educators and Historians." Website clearinghouse for materials related to the history of science education (2008). URL - http://www.amscied.net/History_of_Science_Education_in_America/Home.html

Wiles, Bradley J. and J. L. Rudolph, "Register of the National Association for Research in Science Teaching Records (c. 1928-2008)." Prepared with funding from the Executive Board of the National Association for Research in Science Teaching.

Wiles, Bradley J. and J. L. Rudolph, "Register of the National Association for Research in Science Teaching Records Digital Collection (c. 1928- 2008)." Prepared with funding from the Executive Board of the National Association for Research in Science Teaching.

Rudolph, J. L. "An Inconvenient Truth about Science Education." Invited commentary for publication on *Teachers College Record.org* electronic site. [<http://www.tcrecord.org/Content.asp?ContentID=13216>]. April, 2007.

Rudolph, J. L. Review of *Biotech: The Countercultural Origins of an Industry*, by Eric J. Vettel. *American Historical Review* 112, no. 4 (2007): 1230-1231.

Rudolph, J. L. Commentary on "Inquiry, Activity, and Epistemic Practice." In *Teaching Scientific Inquiry: Recommendations for Research and Implementation*, ed. R. A. Duschl and R. E. Grandy, 118-122. Rotterdam, NL: Sense Publishers, 2008.

Rudolph, J. L. "PSSC in Historical Context: Science, National Security, and American Culture during the Cold War," PSSC 50th-Anniversary Website (http://www.aapt.org/Publications/PSSC_Rudolph.cfm). American Association of Physics Teachers.

Rudolph, J. L. Review of *Pedagogy and the Practice of Science: Historical and Contemporary Perspectives*, edited by David Kaiser. *History of Education Quarterly* 46 (2006): 628-630.

Rudolph, J. L. Review of *Science Education as/for Sociopolitical Action*, edited by Wolff-Michael Roth and Jacques Désautels. *Science Education* 88 (2004): 292-294.

Rudolph, J. L. "Some Thoughts on Portraying Epistemology in Today's Classrooms: A Reply to Garrison." *Science Education* 87 (2003): 90-93.

Rudolph, J. L. "National Science Foundation Act, 1950." In *The Greenwood Dictionary of Education*, edited by J. W. Collins and N. P. O'Brien. Westport, CN: Greenwood Press, 2003, p. 237.

Rudolph, J. L. Review of *Biologists and the Promise of American Life: From Meriwether Lewis to Alfred Kinsey*, by Philip J. Pauly. *History of Education Quarterly* 42 (2002): 274-275.

Rudolph, J. L. "Problem Solving in Evolutionary Biology: An Exploration of Student Use of Natural Selection Models to Explain Anomalous Adaptations." *BioQuest Notes* 10, no. 3 (2001): 1-7.

Minor Publications, Reports, and Book Reviews (cont.)

Cartier, J. L., J. L. Rudolph, and J. Stewart. "The Nature and Structure of Scientific Models." Technical Paper. Madison, WI: National Center for Improving Student Learning and Achievement in Mathematics and Science, 2000.

SELECT INVITED PRESENTATIONS

Rudolph, J. L. "On the Myth of Sputnik and Science Education Reform." Invited presentation given at the international meeting, *Newton's Apple and Other Historical Myths about Science*, Washington and Lee University, Lexington, VA, May 8-11, 2014.

Rudolph, J. L. "On the Myth that the Scientific Method Accurately Reflects What Scientists Actually Do." Invited commentary given at the international meeting, *Newton's Apple and Other Historical Myths about Science*, Washington and Lee University, Lexington, VA, May 8-11, 2014.

Rudolph, J. L. "Symposium: Publishing in Science Education Research Journals." Invited Session. National Association for Research in Science Teaching Annual Meeting, Indianapolis, IN, March 26, 2012.

Rudolph, J. L. "The Narrowing of Inquiry in the 21st Century." Invited talk given at the Department of Science and Mathematics Education, University of Georgia College of Education, Athens, GA, December 2, 2010.

Rudolph, J. L. "Scientists in the Classroom: Past, Present, and Future Contributions." Invited lecture given at the Center for Science and Mathematics Education at Stony Brook University, New York, NY, November 18, 2010.

Rudolph, J. L. and N. Ruggeri. "The NARST Digital Archives Project: A Repository and Resource for the History of Science Education Research." Invited Presidential Session. National Association for Research in Science Teaching Annual Meeting, Philadelphia, PA, March 22, 2010.

Rudolph, J. L. "How Understandings of Scientific Practice are Built: The Case of High School Biology in the 1960s." *The Waterbury Lecture* given by invitation at the College of Education, Pennsylvania State University, State College, PA, April 30, 2009.

Rudolph, J. L. "The Launch of Sputnik and Its Impact on Science Education in the United States." Keynote lecture given at the Harvard University Graduate School of Education Askwith Education Forum on the 50th anniversary of Sputnik, Cambridge, MA, October 4, 2007.

Rudolph, J. L. "Reclaiming Method: Scientists and Science Education after the War." Invited paper for the conference, "The Scientist as Educator and Public Citizen: Linus Pauling and His Era," sponsored by Oregon State University Horning Endowment and the Valley Library, Oregon State University, Corvallis, OR, October 29, 2007.

Rudolph, J. L. "Epistemology for the Masses: The Origins of 'the Scientific Method' in American Schools." Invited talk presented at the Best-Article Prize session at the annual meeting of the History of Education Society, Ottawa, Canada, October 28, 2006.

Invited Presentations (cont.)

Rudolph, J. L. "The Nature of Science and the Preparation of Science Teachers." Invited talk presented at the *Conference on Essential Research on the Preparation of Secondary Science Teachers* sponsored by the Knowles Science Teaching Foundation and the Johnson Foundation, Wingspread Conference Facility, Racine, WI, September 20, 2006.

Rudolph, J. L. "Ward's Dynavue and the Hybridization of Classroom Apparatus in the Post-Sputnik Era." Invited talk presented at the annual meeting of the National Academy of Education, New York, NY, October 21, 2005.

Rudolph, J. L. "Designing Inquiry for Greater Public Participation in Science." Inaugural lecture of the Center for Curriculum and Materials in Science lecture series, School of Education and Social Policy, Northwestern University, Evanston, IL, June 20, 2005.

Rudolph, J. L. Commentary on "Inquiry: Conceptual Change and Constructivism," by Gregory Kelly. Invited paper presented at the National Science Foundation-funded *Inquiry Conference on Developing a Consensus Research Agenda*, Rutgers University, New Brunswick, NJ, February 16-19, 2005.

Rudolph, J. L. "The Politics of Classroom Inquiry: Instrumentalism and Public Engagement in Science." Invited paper presented at the Graduate School of Education, University of Pennsylvania, Philadelphia, PA, December 6, 2004.

Rudolph, J. L. "Inquiry in Curricular Context: A Design for Greater Public Participation in Science." Invited paper presented as part of the Delaware Colloquium Series, *Preparing Teachers as Curriculum Practitioners*, University of Delaware, Newark, DE, May 13, 2004.

Rudolph, J. L. "The Process of Science and the American High School: The Case of Progressive-Era Chicago." Invited paper presented at the School of Education, University of Colorado-Boulder, January 13, 2004.

Rudolph, J. L. Commentary on "Scientists, Civil Society, and Totalitarianism in Cold War America," by Jessica Wang. Invited comments presented at the National Science Foundation-funded conference, *Science and Civil Society: Historical Perspectives*. University of Wisconsin-Madison, April 14-16, 2000.

COURSES TAUGHT

Graduate Program

- C&I 704 – Curriculum Planning
- C&I 732 – Foundations of Science Education
- C&I 916 – Doctoral Research Program Proseminar in Education Research
- C&I 960 – Research Seminar in Science Education
- C&I 975 – General Seminar: Conceptual Writing in Education Research
- C&I 975 – General Seminar: The Nature of Science and Science Education
- C&I 975 – General Seminar: Education and the Public Understanding of Science
- C&I 975 – General Seminar: The History of Science in Science Teaching

Teacher Certification Program

C&I 390 – Teaching Science in the Secondary Schools
C&I 590 – Advanced Practices in the Teaching of Science

PROFESSIONAL SERVICE

Science Education Editorial and Board Member Service

Editor in Chief (2010-2016)
Co-Editor, “Science Studies and Science Education” section (2007-2011)
Co-Editor, Special Issue “Science Studies and Science Education” (May 2008)
Book Review Editor (2004-2010)
Board of Reviewers (2001-2011)
Member, Ad Hoc Committee to Select the Next Editor (2005)

Editorial Board Member, *Science & Education* (2014-present)
Editorial Board Member, *Journal of Research in Science Teaching* (2002-2007)
History of Science Society, Joseph H. Hazen Education Prize Committee (2015-2017, Chair 2017)
History of Education Society Outstanding Book Award Committee (2008-2010, Chair 2011)
Director, Digital Archives Project, National Association for Research in Science Teaching (2008-present)

Planning Committee Member, *Conference on Education and the Culture of Print*, held September 29-30, 2006. Sponsored by the Center for the History of Print Culture in Modern America.

Program Committee, History of Education Society Annual Meeting

St. Louis, MO (November 2015)	Chicago, IL (November 2011)
Indianapolis, IN (November 2014)	Cambridge, MA (November 2010)
Nashville, TN (November 2013)	Kansas City, MO (November 2004)
Seattle, WA (November 2012)	

Program Chair, American Educational Research Association, Division B, Section 4 – Curriculum History, for the 2003 annual meeting in Chicago, IL.

<p>Journals (ad hoc reviewer)</p> <p><i>American Journal of Education</i> <i>Cognition and Instruction</i> <i>History of Education Quarterly</i> <i>History of Education Researcher</i> <i>International Journal for the Historiography of Education</i> <i>Isis</i> (journal of the History of Science Society) <i>Journal of American History</i> <i>Journal of Curriculum Studies</i> <i>Journal of Environmental Policy & Planning</i> <i>Journal of the History of Biology</i> <i>Journal of the History of the Behavioral Sciences</i> <i>Journal of Research in Science Teaching</i> <i>Paedagogica Historica</i> <i>Review of Educational Research</i> <i>Spontaneous Generations: A Journal for the History and Philosophy of Science</i></p>	<p><i>Science Communication</i> <i>Science Education</i> <i>Science & Education</i> <i>Science and Public Policy</i> <i>Teachers College Record</i> <i>Technology & Culture</i></p> <p>Book Publishers (ad hoc reviewer)</p> <p>Johns Hopkins University Press Palgrave Macmillan Temple University Press University of Alabama Press University of Chicago Press</p>
---	--

PROFESSIONAL ASSOCIATIONS

History of Science Society
History of Education Society
National Association for Research in Science Teaching
American Educational Research Association