

# CBI

## Charles Babbage Institute: Publications of the Institute Staff

### Historical and Archival Scholarship

#### Books:

Jeffrey R. Yost, ed., *The IBM Century: Creating the IT Revolution* (IEEE Computer Society Press, 2011).

Thomas J. Misa, ed., *Gender Codes: Why Women Are Leaving Computing* (Wiley/IEEE Computer Society Press, 2010).

Thomas J. Misa and Robert W. Seidel, eds., *College of Science and Engineering: The Institute of Technology Years (1935-2010)* (Charles Babbage Institute, 2010).

Thomas J. Misa and Mikael Hård, eds., *Urban Machinery: Inside Modern European Cities* (MIT Press, 2008).

Arthur L. Norberg and Jeffrey R. Yost, *IBM Rochester: A Half Century of Innovation* (IBM, 2006).

Arthur L. Norberg, *Computers and Commerce: A Study of Technology and Management at Eckert-Mauchly Computer Company, Engineering Research Associates, and Remington Rand, 1946-1957* (MIT Press, 2005).

Jeffrey R. Yost, *The Computer Industry* (Greenwood Press, 2005).

Thomas J. Misa, *Leonardo to the Internet: Technology and Culture from the Renaissance to the Present* (Johns Hopkins University, 2004; second edition, 2011).

#### Articles:

Jeffrey R. Yost, Editor-in-Chief, *IEEE Annals of the History of Computing* (2008 - 2012).

Jeffrey R. Yost, "History of Computing Technology," *Encyclopedia of Life Support Systems* (UNESCO, 2011).

Ulf Hashagen, Reinhard Keil-Slawik, and Arthur L. Norberg, eds., *History of Computing: Software Issues* (Springer-Verlag, 2002).

Jeffrey R. Yost, *Bibliographic Guide to Resources in Scientific Computing, 1945-1975* (Greenwood Press, 2002).

Arthur L. Norberg and Judy E. O'Neill, *Transforming Computer Technology: Information Processing for the Pentagon, 1962-1986* (Johns Hopkins University Press, 1996, Paperback edition, 1999).

William F. Aspray, *John von Neumann and the Origins of Modern Computing* (MIT Press, 1990).

Bruce H. Bruemmer and Sheldon Hochheiser, *The High-Technology Company: A Historical Research and Archival Guide* (CBI, 1989).

William F. Aspray, ed., *Computing Before Computers* (Iowa State University Press, 1989).

Bruce H. Bruemmer, ed., *Resources for the History of Computing: A Guide to U.S. and Canadian Records* (CBI, 1987).

William F. Aspray and P. Kitcher, eds., *History and Philosophy of Modern Mathematics* (University of Minnesota Press, 1987).

Rachel D. Little, Cecilia D. Williams, and Jeffrey R. Yost, "Airline Travel: A History of Information-Seeking Behavior by Leisure and Business Passengers," in William Aspray and Barbara M. Hayes, eds., *Everyday Information* (Cambridge: The MIT Press, 2011): 121-156.

Stephanie H. Crowe and Karen Spilman, "MPLP@5: More access, less backlog?" *Journal of Archival Organization* 8:2 (November 2010): 110-133.

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Jeffrey R. Yost, "Programming Enterprise: Women Entrepreneurs in Software and Computer Services," in Thomas J. Misa, ed., *Gender Codes: Why Women Are Leaving Computing* (New York: Wiley-IEEE Computer Society, 2010): 229-250.

Jeffrey R. Yost, "Material Command and the Materiality of Commands: An Historical Examination of the US Air Force, Control Data Corporation, and the Advanced Logistics Systems," in Arthur Tatnall, ed., *History of Computing: Lessons from the Past* (Berlin: Springer, 2010): 89-100.

Thomas J. Misa, "Organizing the History of Computing: Lessons Learned at the Charles Babbage Institute," in John Impagliazzo, Timo Järvi, and Petri Paju, eds., *History of Nordic Computing 2. Second IFIP WG 9.7 Conference, HiNC2, Turku, Finland, August 21-23, 2007*. (Boston: Springer, 2009), 1-12.

Thomas J. Misa, "Findings Follow Framings: Navigating the Empirical Turn," *Synthese* 168 no. 3 (2009): 357-375.

Thomas J. Misa, "History of Technology," in Jan K.B. Olsen, Stig A. Pedersen, and Vincent F. Hendricks, eds., *Companion to the Philosophy of Technology* (Chichester: Wiley-Blackwell, 2009), 7-17.

Jeffrey R. Yost, "Manufacturing Mainframes: Component Fabrication and Component Procurement at IBM and Sperry Univac, 1960-1975," *History and Technology* 25:3 (September 2009): 219-237.

Robert W. Seidel, "From Factory to Farm: Dissemination of Computing in High-Energy Physics," *Historical Studies in the Natural Sciences* 38:4 (November 2008): 479-507.

Jeffrey R. Yost, "Internet Challenges for Nonmedia Industries, Firms and Workers: Travel Agencies, Realtors, Mortgage Brokers, Personal Computer Manufacturers, and Information Technology Services Professionals," in William Aspray and Paul Ceruzzi, eds., *The Internet and American Business* (Cambridge: MIT Press, 2008): 315-350.

"The Future and the Past: New Thoughts on the History of Computing," Misa, ed. A special issue of *IEEE Annals of the History of Computing* 29:4 (October-December, 2007): 6-63.

Thomas Haigh, Elisabeth Kaplan, and Carrie Seib, "Sources for ACM History," *Communications of the ACM*, 50 #5 (May 2007): 36-41.

Jeffrey R. Yost, "A History of Computer Security Standards," in Karl de Leeuw and Jan Bergstra, eds., *The History of Information Security: A Comprehensive Handbook* (Amsterdam: Elsevier, 2007): 595-622.

Joe A. Hewitt and Stephanie A. Horowitz, "Documenting the American South and the Public Library User: A Proposal to Improve Access for the General Public to a Database of Southern and North Carolina Materials," *North Carolina Libraries*, 65 (Winter/Fall 2007): 70-75.

Jeffrey R. Yost, "Maximization and Marginalization: A Brief Examination of the History and Historiography of the U.S. Computer Services Industry," *Entreprise et Histoire* 40 (November 2005): 87-101.

Jeffrey R. Yost, "Computers and the Internet: Braiding Irony, Paradox, and Possibility," in Carroll W. Pursell, ed., *Companion to American Technology* (Blackwell Publishers, 2005): 340-360.

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Arthur L. Norberg, "The Shifting Interests of the U.S. Government in the Development and Diffusion of Information Technology Since 1943," in Richard Coopey, ed., *Information Technology Policy: An International History* (Oxford University Press, 2004): 24-53.

Jeffrey R. Yost, "Reprogramming the Hippocratic Oath: A Historical Examination of Early Medical Informatics and Privacy," in W. Boyd Rayward and Mary Ellen Bowden, eds., *The History and Heritage of Scientific and Technological Information Systems* (Information Today, Inc. for Chemical Heritage Foundation and ASIS&T, 2004): 46-55.

Philip L. Frana, "Before the Web There Was Gopher," *Annals of the History of Computing*, 26 (January-March 2004): 20-41.

Jeffrey R. Yost, Editor, *Iterations: An Interdisciplinary Journal of Software History* (2002 - 2004).

Arthur L. Norberg, "Software Development at the Eckert-Mauchly Computer Company Between 1947 and 1955," *Iterations: An Interdisciplinary Journal of Software History* (Charles Babbage Institute, 2003).

Arthur L. Norberg, "Table Making in Astronomy," in Martin Campbell-Kelly, et al., eds., *History of Mathematical Tables: From Sumer to Spreadsheets* (Oxford University Press, 2003): 177-207.

Elisabeth Kaplan, "Many Paths to Partial Truths: Archives and the Objectivity Question," *Archival Science: International Journal of Archival Studies* (2003): 209-220.

"Legacy of the Tomashes to Computing History," A Special issue of *IEEE Annals of the History of Computing* 23: 4 (October-December, 2001): 2-104.

Elisabeth Kaplan, "We Are What We Collect, We Collect What We Are: Archives and the Construction of Identity," *The American Archivist* 62 (2) (Spring 2000): 126-151.

Elisabeth Kaplan, "Mind and Sight: Visual Literacy and the Archivist," (co-author), *Archival Issues: Journal of the Midwest Archives Conference* 21(2) 1997: 73-97.

Robert W. Seidel, "Reconstructions, Historical and Otherwise: The Challenge of High-Tech Artifacts," in R. Rojas and U. Hashagen, eds., *The First Computers—History and Architectures* (MIT Press, 2000): 33-52.

Robert W. Seidel, "The Golden Jubilees of Lawrence Berkeley and Los Alamos National Laboratories," *Osiris* 14 (1999): 187-202.

Robert W. Seidel, "Secret Scientific Communities: Classification and Scientific Communication in the DOE and DoD," in M. E. Bowden, T. B. Hahn, and R. V. Williams, eds., *Proceedings of the 1998 Conference on the History and Heritage of Scientific Information Systems* (Information Today, 1999): 46-60.

Robert W. Seidel, "Crunching Numbers: Computers in the AEC Laboratories," *History and Technology* 15 (1998): 31-68.

Arthur L. Norberg, "The United States Government and the Development of Computer Technology," in Langdon Crane, ed., *Special Report to the U.S. Congress* (Electric Power Research Institute, 1996).

Arthur L. Norberg, "New Engineering Companies and the Evolution of the United States Computer Industry," *Business and Economic History* 22 (1993): 181-193.

Bruce H. Bruemmer, "Access to Oral History: A National Agenda," *American Archivist* 54 (Fall 1991): 494-501.

Arthur L. Norberg, "High-Technology Calculation in the Early 20th Century: Punched-Card Machinery in Business and Government," *Technology and Culture* (October 1990): 753-779.

# Charles Babbage Institute: Publications of the Institute Staff

## Historical and Archival Scholarship

William F. Aspray, "The Mathematical Reception of the Computer," in Esther R. Phillips, ed., *Studies in the History of Mathematics* (Mathematical Association of America Studies Series, 1987): 166-194.

William F. Aspray, "International Diffusion of Computer Technology, 1945-1955," *Annals of the History of Computing* (October 1986): 351-360.

William F. Aspray and D. Beaver, "Marketing the Monster: Advertising Computer Technology," *Annals of the History of Computing* (April 1986): 127-143.

William F. Aspray, "The Scientific Conceptualization of Information: A Survey," *Annals of the History of Computing* (April 1985): 117-140.

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## Charles Babbage Institute: Publications of the Institute Staff

### Selected Popular History (Since 2000)

Thomas J. Misa, "Computer Science: Digital Dawn," review of *Turing's Cathedral: The Origins of the Digital Universe* by George Dyson, *Nature* 483 (01 March 2012): 32-33.

Thomas J. Misa, "Retrospective: Steven P. Jobs (1955–2011)," *Science* 334 (18 November 2011): 919.

Thomas J. Misa, "The Medium is the Message" review of *The Information: A History, A Theory, A Flood* by James Gleick, *Nature* 471 (17 March 2011): 300-301.

Thomas J. Misa, "An Interview with Edsger W. Dijkstra," *Communications of the ACM* 53 no. 8 (August 2010): 41-47.

Jeffrey R. Yost, "The Computer Industry," *Encyclopedia of Business History* (New York: Facts on File, 2004).

Jeffrey R. Yost, "International Business Machines," *Encyclopedia of Business History* (New York: Facts on File, 2004).

Arthur L. Norberg, "David Packard," *The Scribner Encyclopedia of American Lives* (Scribner's, 2001).

Jeffrey R. Yost, "Nasdaq," in Raul Rojas, ed., *Encyclopedia of Computers and Computer History* (Fitzroy Dearborn Publishers, 2001).

Jeffrey R. Yost, "Edward A. Feigenbaum," in Raul Rojas, ed., *Encyclopedia of Computers and Computer History* (Fitzroy Dearborn Publishers, 2001).

Jeffrey R. Yost, "Edgar Codd," in Raul Rojas, ed., *Encyclopedia of Computers and Computer History* (Fitzroy Dearborn Publishers, 2001).

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### CBI-Tomash Fellows

CBI regularly sponsors historical research by outside scholars, primarily through the Institute's Adelle and Erwin Tomash Fellowship in support of dissertation research in the history of information technology. Often CBI historians are readers and advisors of these projects. Many of the doctoral theses below were revised and published as books,\* or were the basis for scholarly articles.

Christopher F. McDonald, "Building the Information Society: A History of Computing as a Mass Medium." (2009-2010 fellow) Ph.D. Dissertation, Princeton University, 2011.

Ian J. Walsh, "The Role of Organizational Identification in Post-Death Organizing." (2008-2009 fellow) Ph.D. Dissertation, Boston College, 2009.

Corinna Schlombs, "Productivity machines: Transatlantic transfers of computing technology and culture in the Cold War." (2007-2008 fellow) Ph.D. Dissertation, University of Pennsylvania, 2010.

Andrew L. Russell, "'Industrial Legislatures': Consensus Standardization in the Second and Third Industrial Revolutions" (2006-2007 fellow) Ph.D. Dissertation, The John Hopkins University, 2008.

Marie E. Hicks, "Compiling Inequalities: Office Computerization in the British Civil Service and Nationalized Industries, 1940-1979." (2005-2006 fellow) Ph.D. Dissertation, Duke University, 2009.

Ronald Frazzini, "The Development of Italian Informatics: Technology Development of Olivetti S. p. A. Computing Machines as a Competitive Strategy in the Global Business Machine Market." (2004-2005 fellow) Ph.D. Dissertation, University of Minnesota, 2006.

Eden Miller, "The State Machine: Politics, Ideology, and Computation in Chile, 1964-1973." (2003-2004 fellow) Ph.D. Dissertation, MIT, 2005.

Gualtiero Piccinini, "Computations and Computers in the Sciences of Mind and Brain." (2002-2003 fellow) Ph.D. Dissertation, University of Pittsburgh, 2003.

Nathan Ensmenger, "From 'Black Art' to Industrial Discipline: The Software Crisis and the Management of Programmers." (2000-2001 fellow) Ph.D. Dissertation, University of Pennsylvania, 2001.

Thomas Haigh, "Technology, Information and Power: Managerial Technicians in Corporate America, 1917-2000." (1999-2000 fellow) Ph.D. Dissertation, University of Pennsylvania, 2003.

Leslie Berlin, "Entrepreneurship and the Rise of Silicon Valley: The career of Robert Noyce, 1956-1990." (1998-1999 fellow) Ph.D. Dissertation, Stanford University, 2001.

Mark D. Bowles, "Crisis in the Information Age: How the Information Explosion Threatened Science, Democracy, the Library, and the Human Body, 1945-1999." (1997-1998 fellow) Ph.D. Dissertation, Case Western Reserve University, 1999.

Christophe M. P. Lécuyer, "Making Silicon Valley: Engineering Culture, Innovation, and Industrial Growth, 1930-1970." (1996-1997 fellow) Ph.D. Dissertation, Stanford University, 2000.\*

Atsushi Akera, "Calculating a Natural World: Scientists, Engineers, and Computers in the United States, 1937-1968." (1995-1996 fellow) Ph.D. Dissertation, University of Pennsylvania, 1998.\*

Irving F. Elichirigoity, "Towards a Genealogy of Planet Management: Computer Simulation, Limits to Growth and the Emergence of Global Spaces." (1993-1994 fellow) Ph.D. Dissertation, University of Illinois, 1994.

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Michelle H. Jackson, "Application of an Integrated Definition of 'Artifact' through an Historical Analysis of Computer-Based Technologies to Support Group Communication." (1992-1993 fellow) Ph.D. Dissertation, University of Minnesota, 1994.

Mark H. Clark, "The Magnetic Recording Industry, 1878-1960: An International Study in Business and Technological History." (1991-1992 fellow) Ph.D. Dissertation, University of Delaware, 1992.\*

Janet Abbate, "From ARPANET to Internet: A History of ARPA-Sponsored Computer Networks, 1966-1988." (1990-1991 fellow) Ph.D. Dissertation, University of Pennsylvania, 1994.\*

Anthony Gandy, "A Comparison of the British and American Computer Industries." (1989-1990 fellow) Ph.D. Dissertation, London School of Economics, 1992.

Shane Greenstein, "Computers, Compatibility, and Economic Choice." (1988-1989 fellow) Ph.D. Dissertation, Stanford University, 1989.

Frederik Nebeker, "The 20th-Century Transformation of Meteorology." (1987-1988 fellow) Ph.D. Dissertation, Princeton University, 1989.\*

Clifford I. Nass, "Society as a Computer: The Structure and Skill of Information Work in the United States, 1900-1980." (1986-1987 fellow) Ph.D. Dissertation, Princeton University, 1986.

Stuart Shapiro, "Computer Software as Technology: An Examination of Technological Development." (1985-1987 fellow) Ph.D. Dissertation, Carnegie-Mellon University, 1990.

Larry Owens, "Straight-Thinking Vannevar Bush and the Culture of American Engineering." (1983-1984 fellow) Ph.D. Dissertation, Princeton University, 1987.

William McHenry, "The Absorption of Computerized Management Information Systems in Soviet Enterprises (Hardware, Software, Social Impact)." (1981-1983 fellow) Ph.D. Dissertation, University of Arizona, 1985.

Paul Ceruzzi, "The Prehistory of the Digital Computer, 1935-1945: A Cross-cultural Study." (1979-1980 fellow) Ph.D. Dissertation, University of Kansas, Lawrence, 1981.\*

William F. Aspray, "From Mathematical Constructivity to Computer Science: Alan Turing, John Von Neumann, and the Origins of Computer Science in Mathematical Logic." (1978-1980 fellow) Ph.D. Dissertation, University of Wisconsin, Madison, 1980.\*

Stephen Christian Lutze, "The Formation of the International Computer Industry, 1945-1960." M.A. Thesis, University of California, Santa Barbara, 1979.