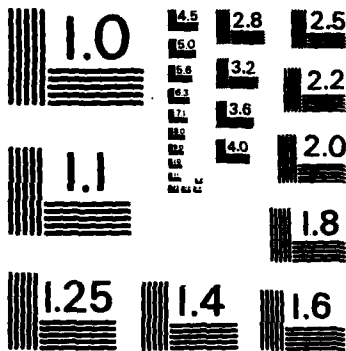


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INTRODUCTION

This bibliography was prepared for the Department of Political Science to assist participants in the 26th Air Force Academy Assembly to be held at the Academy on 6-10 March 1984. It represents a selected portion of the Air Force Academy Library's holdings on the topic indicated.

This bibliography was compiled by Carol J. Mehlhaff and Steven E. Maffeo of the Reference Division of the Air Force Academy Library. The manuscript was prepared for the printer by Sharon E. Johnson.

*Reiner H. Schaeffer*  
REINER H. SCHAEFFER, Major, USAF  
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B

THE SCIENTIFIC EXPERIENCE IN AMERICA

BOOKS

- Barron, Iann. The future with micro-electronics: forecasting the effects of information technology. New York: Nichols, 1979. (QA 76.9 .C66 B37 1979)
- Benson, Ian and John Lloyd. New technology and industrial change: the impact of the scientific-technical revolution on labour and industry. New York: Nichols, 1983. (HD 6331 B54 1983)
- Boserup, Ester. Population and technological change: a study of long-term trends. Chicago: 1981. (HB 871 B587)
- Cooper, C. M. and J. A. Clark. Employment, economics, and technology: the impact of technological change on the labor market. New York: St. Martin's, 1982. (HD 6331 E5 1982)
- Dizard, Wilson P. The coming information age: an overview of technology, economics, and politics. New York: Longman, 1982. (P 92 .U5 D5)
- The employment revolution: young American women of the 1970's. Edited by Frank L. Mott, Cambridge, Ma.: MIT Press, 1982. (HD 6095 .E46 1982)
- Federal R & D and scientific innovation. Edited by Leonard A. Smith, et al. Washington, D.C.: American Chemical Society, 1979. (Q 180 U5 F39)
- Freeman, Christopher, et al. Unemployment and technical innovation: a study of long waves and economic development. Westport, Conn.: Greenwood, 1982. (HC 79 T4 F74 1982)
- Fry, Earl H. Financial invasion of the USA: a threat to American society? New York: McGraw Hill, 1980. (HG 4910 .F8)
- Fusfeld, Herbert I. and Richard N. Langlois. Understanding R & D productivity. New York: Pergamon, 1982. (T 175 U48 1982)
- Hertje, Arnold. Economics and technical change. New York: Wiley, 1977. (HD 45 .H3513 1977b)
- Hyde, Michael J. Communication philosophy and the technological age. University: University of Alabama Press, 1982. (P 96 T42 C6)

- Innovation and U.S. research: problems and recommendations. Edited by Charles F. Larson, et al. Washington, D.C.: American Chemical Society, 1980. (T 173.8 I565)
- Kamien, Morton I. and Nancy L. Schwartz. Market structure and innovation. New York: Cambridge University Press, 1982. (HC 79 T4 K3)
- Li, Yao Tzu, et al. Technological innovation in education and industry. New York: Van Nostrand Reinhold, 1980. (T 173.8 L5)
- The microelectronics revolution: the complete guide to the new technology and its impact on society. Edited by Tom Forester. Cambridge, Ma.: MIT Press, 1981. (QA 76.9 .C66 M52 1981)
- Morishima, Michio. Why has Japan succeeded: western technology and the Japanese ethos. New York: Cambridge University Press, 1982. (HC 462 N634)
- Norman, Colin. Microelectronics at work: productivity and jobs in the world economy. Washington: World-Watch Institute, 1980. (HD 9696 .A2 N65)
- Outlook for science and technology: the next five years. San Francisco: National Academy of Sciences and W. H. Freeman, 1982. (Q 180 .U5 O94)
- Parrott, Bruce. Politics and technology in the Soviet Union. Cambridge, Ma.: MIT Press, 1983. (HC 340 T4 P29 1983)
- Roman, Daniel D. and Joseph F. Puett, Jr. International business and technological innovation. New York: Elsevier, 1983. (HC 79 T4 R63 1983)
- Rosenberg, Nathan. Inside the black box: technology and economics. New York: Cambridge University Press, 1982. (HC 79 T4 R673 1982)
- Taxation, technology and the U.S. economy. Edited by Ralph Landau and N. Bruce Hannay. New York: Pergamon Press, 1981. (HJ 2381 .T393 1981)
- Technological innovation for a dynamic economy. Edited by Christopher T. Hill and James M. Utterback. New York: Pergamon Press, 1979. (T 21 .T42 1979)
- Technology, trade, and the U.S. economy. Washington: National Academy of Sciences, 1978. (HC 110 .T4 T43)



PERIODICAL ARTICLES

- America rushes to high tech for growth. Business Week pp. 84-8+, 28 March 1983.
- Are high-tech stocks flying too high? Business Week pp. 126-7, 21 March 1983.
- Austin, Danforth W. and J. Ernest Beasley. High-tech track. Wall Street Journal 201:1+, 4 April 1983.
- Baldrige raises high-tech hopes. Business Week p. 58, 13 June 1983.
- Ball: reaching beyond mason jars to satellites and high technology. Business Week pp. 76-7, 16 August 1982.
- Bond, G. Boom in high tech just beginning. Advertising Age 53 sec. 2:M12-M13, 23 August 1982.
- Brannon, Phillip R. Electronic listening: defense growth area. High Technology 3(8):75, August 1983.
- Brody, M. High-tech tulips? Why some pros are wary of the group. Barrons 63:16+, 14 March 1983.
- Bylinsky, Gene. DNA can build companies, too. Fortune pp. 144-53, 16 June 1980.
- Cathey, P. Robots will change managing from shop floor to CEO. Iron Age 225:37-9, 19 November 1982.
- Cole, Bernard C. Making genes with machines. High Technology 1(1):60-8, September/October 1981.
- Connell, J. J. Challenge of convergence of technologies. Computer Decisions 14: 74+, August 1982.
- David, Edward E., Jr. By 1990 all industries must be high tech. High Technology 3(4):65-8, April 1983.
- Davis, L. A. New definition of high tech reveals that U.S. competitiveness in this area has been declining. Business America 5:18-23, 18 October 1982.
- Dickson, David. How safe will biobusiness be? Nature 283:126-7, 10 January 1980.

- Fry, L. W. Technology-structure research: three critical issues. Academy of Management Journal 25:532-52, September 1982.
- Goldwater, L. Can hi-tech turn us around? Iron Age 226:47-63, 13 April 1983.
- Haasler, Ruprecht and Hans Goebel. Uneasiness about technological progress in the armed forces. Military Review 62:62-72, October 1982.
- Hochhauser, Steven J. Bringing biotechnology to market. High Technology 3(2): 55-60, February 1983.
- Innovations. Christian Science Monitor, p. 21+, 30 December 1982.
- Johnson, J. Four expert opinions on the direction of computer technology. Datamation 28:143+, December 1982.
- Kelsey, P. A. Seeking a place in the sun. Advertising Age 53 sec. 2:M10, 22 November 1982.
- Kirschten, Dick. Science community still skeptical of Reagan science adviser, but admit that support for basic science remains firm. National Journal 14:1633-6, 25 September 1982.
- Kolcum, E. H. Region seeing advanced technologies as key to growth. Aviation Week and Space Technology 118:56-7+, 21 February 1983.
- Kremlin spies target U.S. electronics knowhow. Business Week p. 77+, 20 September 1982.
- Lee, E. P., Jr. Forging linkages for discovery and innovation. Industry Week 216: 13, 21 February 1983.
- Lepkowski, W. Balance in innovation involvement being sought. Chemical and Engineering News 60:9-14, 24 May 1982.
- Levitan, S. A. and C. M. Johnson. Future of work: does it belong to us or to the robots? Monthly Labor Review 105:10-14, September 1982.
- Major project development stimulates demand for U.S.-made high-technology products and equipment. Business America 5:22-3, 13 December 1982.

- Mansfield, Edwin. Research and development productivity and inflation. Science 209: 1091-3, 5 September 1980.
- Marsh, A. K. Security guidelines proposed for research. Aviation Week and Space Technology 117:18-20, 4 October 1982.
- Miles, M. Dealing with resistance to change. Computer Decisions 15:202+, May 1983.
- Miller, Tim. The coming job crunch: effects of new technologies on the U.S. work force. National Journal 14:865-9, 15 May 1982.
- Morton, M. R. Technology and strategy: creating a successful partnership. Business Horizons 26:44-8, January/February 1983.
- Nelson, R. R. Role of knowledge in R & D efficiency. Quarterly Journal of Economics 97:453-70, August 1982.
- Norris, W. Keeping America first. Datamation 28:280-1+, September 1982.
- Ominous shift to secrecy. Business Week p. 138+, 18 October 1982.
- Panel urges action on technology. Aviation Week and Space Technology 118:49, 18 April 1983.
- Proposed technology push by U.S. schools, business and government viewed. Christian Science Monitor p. 1, 6 October 1982.
- Puppel, D. A. High tech is silver lining in unemployment's dark cloud. Data Management 21:54+, March 1983.
- R & D programs aren't getting short shrift. Industry Week 216:63-4, 24 January 1983.
- Ransom, Harry H. Strategic intelligence: use of new intelligence-gathering technologies. Academy of Political Science Proceedings 34(4): 153-64, 1982.
- Reeves, G. R. and J. R. Sweigart. Multiperiod resource allocation with variable technology. Management Science 28:1441-9, December 1982.
- Rhea, John. U.S. technology edge fades as R & D lags. High Technology pp. 54-61, February 1980.
- Robinson, C. A. De Lauer urges technology spending. Aviation Week and Space Technology 117:257+, 6 September 1982.

- Robinson, C. A. Technology key to strategic advances. Aviation Week and Space Technology 118:23-5+, 14 March 1983.
- Rose, Frederick. Delving deeper: many firms increase basic research outlays after years of neglect. Wall Street Journal 198:1+, 3 September 1981.
- Rostow, W. W. Technology and unemployment in the western world. Challenge 26:6-17, March/April 1983.
- Rubinger, B. Industrial innovation: implementing the policy agenda. Sloan Management Review 24:43-57, Spring 1983.
- Scherer, F. M. Inter-industry technology flows and productivity growth. Review of Economics and Statistics 64:627-34, November 1982.
- Smith, G. W. and W. N. Smallwood. Preparing for breakthroughs: the rewards of technology futuring. Management Review 72:50-3, April 1983.
- Stacey, J. E. Innovation through bankruptcy? Business Horizons 26:41-5, March/April 1983.
- Stasen, George J. Supply-side biotechnology. High Technology 3(4):91, April 1983.
- Strong support for research urged for 1980's. Chemical and Engineering News 59:12-13, 2 February 1981.
- Studies identify challenges to U.S. high tech leadership. Business America 6:7-11, 2 May 1983.
- Technology lag that may stifle growth. Business Week p. 126+, 11 October 1982.
- U.S. plan urged for stimulating high technology. Chemical Engineering News 61:14-15, 25 April 1983.
- Wade, Nicholas. Cloning gold turns basic biology into big business. Science 208:688-93, 16 May 1980.
- Wessel, M. R. For a national information committee. Datamation 28:234-6+, September 1982.
- Whaley, G. L. Impact of robotics technology upon human resource management. Personnel Administration 27:61-3+, September 1982.

Where genetic engineering will change industry. Business Week pp. 160-72, 22  
October 1979.

Why R & D teams go stale on the job. Management Review 71:60, October 1982.

Why Shultz may disappoint Beijing. Business Week p. 378, 24 January 1983.

Wines, Michael. The administration in high tech's name, takes aim at antitrust laws.  
National Journal 15:1000-4, 14 May 1983.

Zuboff, S. New worlds of computer-mediated work. Harvard Business Review 60:142-52,  
September/October 1982.

GOVERNMENT PUBLICATIONS

- U.S. Congress. House. Committee on Science and Technology. Genetic engineering, human genetics and cell biology: evolution of technological issues, biotechnology. Committee print 96/DDD, 96th Cong., 2nd Sess., August 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.Sci2:96/DDD)
- U.S. Congress. House. Committee on Science and Technology. Industrial innovation. Hearing before the Subcommittee on Science, Research and Technology. 96th Cong., 2nd Sess., 21 July 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.Sci2:96/159)
- U.S. Congress. House. Committee on Science and Technology. Local incentives for high technology firms and innovation. Hearings . . . 97th Cong., 2nd Sess., 16 February 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/90)
- U.S. Congress. House. Committee on Science and Technology. National Technology Foundation Act of 1980. Hearings before the Subcommittee on Science, Research and Technology. 96th Cong., 2nd Sess., 9, 10, 16, 17, 18 September 1980. Washington: U.S. Govt. Print. Off., 1981. (Y4.Sci2:96/179)
- U.S. Congress. House. Committee on Science and Technology. Review of 1980 five year outlook report on science and technology. Hearing before the Subcommittee on Science, Research and Technology. 96th Cong., 2nd Sess., 13 June 1980. Washington: U.S. Govt. Print. Off., 1981. (Y4.Sci2:96/180)
- U.S. Congress. House. Committee on Science and Technology. Survey of science and technology issues present and future. Committee print 97/G, 97th Cong., 1st Sess., June 1981. Washington: U.S. Govt. Print. Off., 1981. (Y4.Sci2:97/G)
- U.S. Congress. House. Committee on Science and Technology. Symposium on minorities and women in science and technology. Committee print 97/AA, 97th Cong., 2nd Sess., July 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/AA)
- U.S. Congress. House. Committee on Small Business. Innovation revisited. Hearings . . . 97th Cong., 2nd Sess., 4 May 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sml:In6/4)
- U.S. Congress. Joint Economic Committee. Special study on economic change, vol. 3: research and innovation: developing a dynamic nation. Joint Committee print, 96th Cong., 2nd Sess., 29 December 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.Ec7:Ec7/41/v.3)

U.S. Congress. Senate. Committee on Commerce, Science, and Transportation. Industrial innovation. Hearings . . . 96th Cong., 1st Sess., 31 October and 14 November 1979. Washington: U.S. Govt. Print. Off., 1980. (Y4.C73/7:96-78/pt.1&2)

U.S. Congress. Senate. Committee on the Budget. Industrial growth and productivity. Hearing before the Subcommittee on Industrial Growth and Productivity. 97th Cong., 1st Sess., 3 December 1980-28 January 1981. Washington: U.S. Govt. Print. Off., 1981. (Microfiche Y4.B85/2:1n2/2)

THE AMERICAN EDUCATIONAL SYSTEM AND THE SCIENCES

BOOKS

- Computer assisted learning in science education. Edited by Graham Beech. New York: Pergamon, 1978. (Q 183.4 G7 C65 1978)
- Davis, Richard M. Thesis projects in science and engineering: a complete guide from selection to final presentation. New York: St. Martin's, 1980. (T 65.3 D38)
- Li, Yao Tzu. Technological innovation in education and industry. New York: Van Nostrand Reinhold, 1980. (T 173.8 .L5)
- National Research Council (U.S.). Committee on the Federal Role in College Science Education of Non-specialists. Science for non-specialists: the college years. Washington, D.C.: National Academy Press, 1982. (Q 183.3 .A1 N358 1982)
- Ziman, John M. Teaching and learning about science and society. New York: Cambridge University Press, 1980. (Q 183.4 .G7 Z55)



1  
1  
1

PERIODICAL ARTICLES

- Anderson, R. D. Are yesterdays goals adequate for tomorrow? Science Education 67: 171-6, April 1983.
- Bok, D. Corporation on campus. Change 14:16-29, September 1982.
- Brunschwig, F. and R. D. Breslin. Scientific and technological literacy - a major innovation and challenge. Liberal Education 68:49-62, Spring 1982.
- Buccino, A. and P. L. Evans. Views from the field on needs in precollege science, mathematics, and social studies education. Science Education 65:237-41, April 1981.
- Budget cuts in scientific research area discussed. Christian Science Monitor p. 1, 5 January 1982.
- Bybee, R. W. Science, society, and science education. Science Education 64: 377-95, July 1980.
- Carlson, G. R. Essentials for a scientific environment in an elementary education setting. Education 101:38-40, Fall 1980.
- Editorial on technological education in developing countries. Christian Science Monitor p. 24, 5 November 1982.
- Education Commission explores improvement in science and math achievement. Journal of Metals 34:6-7, August 1982.
- Educators try to bring new information technology into schools. Christian Science Monitor p. B01, 15 April 1983.
- Fensham, P. J. Research base for new objectives of science teaching. Science Education 67:3-12, January 1983.
- Glashow, S. L. Science education and U.S. technology. Physics Today 36:9+, April 1983.
- Hanson, D. Bills attack trend in scientific illiteracy. Chemical and Engineering News 60:22-3, 16 August 1982.

- Hersh, R. H. How to avoid becoming a nation of techno-peasants. Phi Delta Kappan 64: 635-8, May 1983.
- Hurd, P. D. Transformation of science education: challenges and criteria. Science Education 66:281-5, April 1982.
- Kahle, J. B. and R. E. Yager. Current indicators for the discipline of science education. Science Education 65:25-31, January 1981.
- Klopper, L. E. Scientific and technological literacy for all: a national policy? Science Education 65:1-2, January 1981.
- Lewis, D. K. Who is served by undergraduate research? Journal of Chemical Education 59:328-9, April 1982.
- McDermott, Jeanne. Technical education: the quiet crisis. High Technology 2(6): 87-92, November/December 1982.
- McDonald, K. Colleges urged to improve science courses for non-science majors. Chronicle of Higher Education 24:8, 16 June 1982.
- Maerhoff, Gene I. Special network of schools urged: federal panel favors money for a system to upgrade teaching of sciences. New York Times 132:13, 14 September 1983.
- Match, O. G. Education in a postindustrial society. American Education 18:4-7, June 1982.
- Mehlin, G. F. Seven technologies for the 1980's. USA Today 111:62-5, January 1983.
- Mertens, T. R. New directions in science teaching: human genetics education. Phi Delta Kappan 64:628-31, May 1983.
- National Science Foundation Report on teaching of science and math. Christian Science Monitor p. 6, 15 September 1983.
- Neckers, D. C. Threat to undergraduate research. Journal of Chemical Education 59: 329-30, April 1982.
- New directions in science teaching. Phi Delta Kappan 64:613-14, May 1983.

Orr, V. Are we a nation of scientific illiterates? American Education 19:24-5+, April 1983.

Possible future shortage of math & science teachers in U.S. eyed. Christian Science Monitor p. 16, 12 July 1982.

Report of the National Academy of Sciences Panel on scientific communication and national security. Academe 69:supp 13a-14a, January/February 1983.

Rutherford, F. J. Dangerous decline in U.S. science education. Chronicle of Higher Education 26:64, 13 April 1983.

Summary of research in science education - 1980. Science Education 66:305-479, June 1982.

Syracuse's technology program called a model for others. Chronicle of Higher Education 24:8, 16 June 1982.

Thomas, S. C. and R. A. Kydd. University science enrichment program for gifted high school students. Journal of Chemical Education 60:27-8, January 1983.

Voss, B. E. Summary of research in science education - 1981. Science Education 67: 289-419, June 1983.

GOVERNMENT PUBLICATIONS

- U.S. Congress. House. Committee on Education and Labor. Hearings on mathematics and science education, pt. 2. Hearings . . . 98th Cong., 1st Sess., 26-28, 31 January 1983. Washington: U.S. Govt. Print. Off., 1983. (Y4.Ed8/1:M42/2/pt.2)
- U.S. Congress. House. Committee on Science and Technology. Information technology in education: perspectives and potentials. Committee print 96/QQQ, 96th Cong., 2nd Sess., December 1980. Washington: U.S. Govt. Print. Off., 1981. (Y4.Sci2:96/QQQ)
- U.S. Congress. House. Committee on Science and Technology. Science and engineering education and manpower. Hearing before the Subcommittee on Science, Research and Technology, 97th Cong., 2nd Sess., 11 February 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97-93)
- U.S. Congress. House. Committee on Science and Technology. Secondary math and science education. Hearing before the Subcommittee on Science, Research and Technology, 97th Cong., 2nd Sess., 7 May 1982. Washington: U.S. Govt. Print. Off., 1983. (Y4.Sci2:97/169)
- U.S. Congress. Senate. Committee on Labor and Human Resources. Education for economic security act. Report 151, 98th Cong., 1st Sess., 13 June 1983.

REPORT LITERATURE

Baer, Walter S. Strengthening university-industry interactions. Santa Monica, Ca.:  
Rand Corp., 1980. (RAND P-6438)

THE ROLE OF GOVERNMENT AND INDUSTRY IN SCIENTIFIC AND TECHNOLOGICAL INNOVATION

BOOKS

- Ames, Mary E. Outcome uncertain: science and the political process. Washington, D.C.: Communications Press, 1978. (Q 127 .U6 A76)
- Armstrong, Joe E. Strategies for conducting technology assessments. Boulder, Co.: Westview, 1980. (T 174.5 .A75)
- Barfield, Claude E. Science policy from Ford to Reagan: change and continuity. Washington, D.C.: American Enterprise Institute, 1982. (Q 127 .U6 B27 1982)
- Bartlett, Bruce R. Reagonomics: supply side economics in action. Westport, Ct.: Arlington House, 1981. (HC 106.7 .B37)
- Beauchamp, Tom L. Case studies in business, society, and ethics. Englewood Cliffs, N.J.: Prentice-Hall, 1983. (HD 60.5 .U5 B38 1983)
- Behrman, Jack N. and William A. Fischer. Science and technology for development: corporate and government policies and practices. Cambridge, Ma.: Oelgeschlager, Gunn & Hain, 1980. (Q 180 .A1 B394)
- Botkin, James W., et al. Global stakes: the future of high technology in America. Cambridge, Ma.: Ballinger, 1982. (T 23 .B67 1982)
- Bower, Joseph L. Two faces of management: an American approach to leadership in business and politics. Boston: Houghton Mifflin, 1983. (HD 3616 .U46 B68 1983)
- Breyer, Stephen G. Regulation and its reform. Cambridge, Ma.: Harvard University Press, 1982. (HD 3616 .U47 B68)
- Brozen, Yale. Concentration, mergers, and public policy. New York: Macmillan, 1982. (HD 2757 .B76 1982)
- Buck, Trevor W. Comparative industrial systems. New York: St. Martin's, 1982. (HB 90 .B82 1982)
- Burger, Edward J., Jr. Science at the White House: a political liability. Baltimore: Johns Hopkins University Press, 1980. (Q 127 .U6 B83)

- Collingridge, David. Social control of technology. New York: St. Martin's, 1980. (T 14.5 C64 1980)
- Diebold, William, Jr. Industrial policy as an international issue. New York: McGraw-Hill, 1980. (HF 1411 .D48 1980)
- Eells, Richard. Political crisis of the enterprise system. New York: Macmillan, 1980. (HD 3616 .U46 E33 1980)
- Federal R & D and scientific innovation. Edited by Leonard A. Ault and W. Novis Smith. Washington: American Chemical Society, 1979. (Q 180 .U5 F39)
- Feld, Werner J. Multinational corporations and U.N. politics: the quest for codes of conduct. New York: Pergamon, 1980. (HD 2755.5 .F44 1980)
- Fox, Harrison W. Doing business in Washington: how to win friends and influence government. New York: Free Press, 1981. (HD 3616 .U46 F69 1981)
- Friedman, Milton. Free to choose: a personal statement. New York: Harcourt Brace Jovanovich, 1980. (HB 501 .F72)
- Hartley, Keith and Clem Tisdell. Micro-economic policy. New York: Wiley, 1981. (HB 172 H37)
- Heenan, David A. Re-United States of America: an action agenda for improving business, government, and labor relations. Reading, Ma.: Addison-Wesley, 1983. (HD 3616 .U47 H42)
- Herman, Edward S. Corporate control, corporate power. New York: Cambridge University Press, 1981. (HD 2785 H46)
- Hughes, Katherine. Corporate response to declining rates of growth. Lexington, Ma.: Lexington, 1982. (HD 70 .U5 H8)
- Industrial innovation in the Soviet Union. Edited by Ronald Amann and Julian Cooper. New Haven: Yale University Press, 1982. (HC 340 .T4 I52 1982)
- International Colloquium on Science, Technology, and Society. Science, technology, and society: needs, challenges, and limitations. New York: Pergamon, 1980. (Q 124.6 I63 1979)

- Katz, James E. Presidential politics and science policy. New York: Praeger, 1978. (Q 127 .U6 K37)
- Koistinen, Paul A. Military-industrial complex: a historical perspective. New York: Praeger, 1980. (HC 110 .D4 K64)
- Lave, Lester B. Strategy of social regulation: decision frameworks for policy. Washington, D.C.: Brookings, 1981. (HD 3616 .U47 L37)
- Magaziner, Ira C. and Robert B. Reich. Minding America's business: the decline and rise of the American economy. New York: Harcourt, Brace, Jovanovich, 1982. (HD 3616 .U47 M286)
- Meister, David. Behavioral research and government policy: civilian and military R & D. New York: Pergamon, 1981. (BF 76.5 .M44 1981)
- Miller, Jon D., et al. Citizenship in an age of science: changing attitudes among young adults. New York: Pergamon, 1980. (Q 175.52 .U5 M54 1980)
- National Research Council. Committee on Continuity in Academic Research Performance. Research excellence through the year 2000: the importance of maintaining a flow of new faculty into academic research. Washington, D.C.: National Academy of Sciences, 1979. (Q 180 .U5 N332 1979)
- Neal, Alfred C. Business power and public policy. New York: Praeger, 1981. (HC 106.7 N43 1981)
- North, Douglass C. and Roger L. Miller. Economics of public issues. New York: Harper & Row, 1980. (HB 34 N6 1980)
- Reisman, David A. Tawney, Galbraith, and Adam Smith: state and welfare. New York: St. Martin's, 1982. (HD 3611 .R39 1982)
- Rosenzweig, Robert M. and Barbara Turlington. Research universities and their patrons. Berkeley: University of California Press, 1982. (Q 180 .U5 R67)
- Rothwell, Roy and Walter Zegveld. Industrial innovation and public policy: preparing for the 1980's and 1990's. Westport, Ct.: Greenwood Press, 1981. (HC 79 .T4 R68)
- Science, technology and national policy. Edited by Thomas J. Kuehn and Alan L. Porter. Ithaca, N.Y.: Cornell University Press, 1981. (T 21 .S35)



- Science, technology and the issues of the eighties: policy outlook. Edited by Albert H. Teich and Ray Thornton. Boulder, Co.: Westview Press, 1982. (Q 127 .U6 S328 1982)
- Society, technology, and risk assessment. Edited by Jobst Conrad. New York: Academic Press, 1980. (T 174.5 .S62)
- Strategies for Europe: proposals for science and technology policies. Edited by Maurice Goldsmith. New York: Pergamon, 1978. (Q 180 .E9 S77 1977)
- Suttmeier, Richard P. Science, technology, and China's drive for modernization. Stanford, Ca.: Hoover Institution Press, 1980. (Q 127 .C5 S87)
- Sweet, Morris L. Industrial location policy for economic revitalization: national and international perspectives. New York: Praeger, 1981. (HC 110 .D5 S93)
- Technological risk: its perception and handling in the European community. Edited by Meinolf Dierkes, et al. Cambridge, Ma.: Oelgeschlager, Gunn & Hain, 1980. (T 174.5 .T39 1980)
- Technology assessment and development. Edited by Mangalam Srinivasan. New York: Praeger, 1982. (T 174.5 T415 1982)
- Teich, Albert, ed. Technology and man's future. 3rd ed. New York: St. Martin's, 1981. (T 14.5 T45 1981)
- War, business and world military-industrial complexes. Edited by Benjamin F. Cooling. Port Washington, N.Y.: Kennikat, 1981. (HD 9743 .A2 W37)
- Weidenbaum, Murray L. Business, government, and the public. Englewood Cliffs, N.J.: Prentice-Hall, 1981. (HD 3616 .U46 W44 1981)

PERIODICAL ARTICLES

- Aharoni, Y. Toward an age of humility. California Management Review 24:49-59, Winter 1981.
- Assessment of government-business relations worldwide. Business America 5:12-17, 19 April 1982.
- Bartel, R. D. Industrial policy as an international issue. Challenge 23:30-9, January/February 1981.
- Bartel, R. D. Reindustrialization: politics and economics. Challenge 23:39-43, January/February 1981.
- Bowers, E. W. Can all sides agree on an industrial policy? Iron Age 223:27-9, 7 July 1980.
- Bowers, E. W. Election '80: the vote and what it means to business. Iron Age 223: 23-4+, 1 December 1980.
- Bradley, G. E. Strengthening U.S. competitiveness domestically and worldwide. Business America 4:8-12, 15 June 1981.
- Carson-Parker, John. The capital cloud over smokestack America. Fortune 103: 70-2+, 23 February 1981.
- Competition policy in recession: crisis cartels. OECD Observer 114:29-31, January 1982.
- Congress acts to spur innovation. High Technology 1(5):70-1, June 1980.
- Cranberg, Lawrence. Federal R & D - time for reform. High Technology 3(3):67-9, March 1983.
- David, Edward, Jr. Science futures: the industrial connection. Science 203: 837-40, 2 March 1979.
- Dowling, J. B. and N. V. Schaefer. Institutional and anti-institutional conflict among business, government, and the public. Academy of Management Journal 25: 683-9, September 1982.

Editorial on U.S. government control of scientific research. Christian Science Monitor p. 24, 25 August 1983.

Federal support for small business dwindles. High Technology pp. 83-4, May 1980.

Gung ho for big buddy. Fortune 107:33+, 18 April 1983.

High technology bandwagon runs into politics. High Technology 3(7):69-70, July 1983.

Hirschhorn, J. S. Industrial policy and clusters of innovation. Challenge 24: 53-5, May/June 1981.

Hollowman, J. Herbert. Government and the innovation process. Technology Review 81: 30-41, May 1979.

Howenstine, Ned G. Growth of U.S. multinational companies, 1966-77. Survey of Current Business 62:34-46, April 1982.

Industrial policy: is it the answer: Business Week pp. 54-7+, 4 July 1983.

Krueger, A. O. and B. Tuncer. An empirical test of the infant industry argument. American Economic Review 72:1142-52, December 1982.

Leone, R. A. and S. P. Bradley. Toward an effective industrial policy. Harvard Business Review 59:97-7, November/December 1981.

Lepkowski, W. Defense department boosts research funding. Chemical and Engineering News 59:14-15, 27 April 1981.

McClenahan, J. S. National industrial policy? Industry Week 206:17-18, 21 July 1980.

Malmgren, H. B. Notes for a U.S. industrial policy. Challenge 23:19-23, January/February 1981.

Mansfield, E. Tax policy and innovation. Science 215:1365-71, 12 March 1982.

Martin, James. Will over-regulation strangle innovation? High Technology 1(1):95-6, September/October 1981.

Miller, W. H. Defining business, new burdens. Industry Week 211:22+, 19 October 1981.

Muller, R. E. and D. H. Moore. America's blind spot: industrial policy. Challenge 24:5-13, January/February 1982.

The OTA: Congress's early alert system for technology. High Technology 3(3):70-1, March 1983.

Ploch, Margie. Industry invests in research centers. High Technology 3(5):15-18, May 1983.

Quinn, James B. U.S. monetary policy: a heavy hand in technology. Technology Review pp. 39-46, October/November 1976.

Reagan administration seeking to toughen system that U.S. and allies use to control flow of equipment to communist countries. New York Times 3:1, 2 October 1982.

Reich, R. B. Why the U.S. needs an industrial policy. Harvard Business Review 60:74-81, January/February 1982.

Reilly, A. M. Business and Reagan: more blowups ahead? Duns Business Month 120:38-9+, December 1982.

Sagging innovation prompts government programs. High Technology 1(5):60-70, June 1980.

Schmid, C. Productivity and reindustrialization: a dissenting view. Challenge 23:24-9, January/February 1981.

Scott, B. R. Can industry survive the welfare state? Harvard Business Review 60:70-84, September/October 1982.

U.S. plan urged for stimulating high technology. Chemical Engineering News 61:14-15, 25 April 1983.

Universities turn to industry for R & D funds. High Technology 2(1):90-1, January/February 1982.

Western and Asian approaches to science and technology discussed. Christian Science Monitor p. 1305, 19 April 1982.

Which way the business government partnership? Business America 3:10-12, 20 October 1980.

-  
-  
-

GOVERNMENT PUBLICATIONS

- U.S. Congress. House. Committee on Banking, Finance and Urban Affairs. The federal role in private sector productivity. Hearing before the Subcommittee on Economic Stabilization. 97th Cong., 2nd Sess., 27 January 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.B22/1:97-42)
- U.S. Congress. House. Committee on Science and Technology. Analyses of President Carter's initiatives in industrial innovation and economic revitalization. Committee print, 96th Cong., 2nd Sess., December 1980. (Y4.Sci2:96/NNN)
- U.S. Congress. House. Committee on Science and Technology. Long-term planning for national science policy. Hearings before the Subcommittee on Science, Research, and Technology. 96th Cong., 2nd Sess., 28-31 July 1980. Washington: U.S. Govt. Print. Off., 1981. (Y4.Sci2:96/182)
- U.S. Congress. House. Committee on Science and Technology. National engineering and science policy. Hearing before the Subcommittee on Science, Research, and Technology. 97th Cong., 1st Sess., 14 December 1981. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/80)
- U.S. Congress. House. Committee on Science and Technology. Small, high technology firms and innovation. Hearings before the Subcommittee on Science, Research, and Technology. 96th Cong., 1st and 2nd Sess., 10 December 1979; 28 January, 23 February, 21 March, 10 April, 10, 12 June 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.Sci2:96/167)
- U.S. Congress. House. Committee on Science and Technology. University/industry cooperation in biotechnology. Hearings . . . 97th Cong., 2nd Sess., 10-17 June 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/138)

REPORT LITERATURE

Apgar, D. P. Selective human virus and the ethics of research regulation. Santa Monica, Ca.: Rand, 1981. (RAND P-6598)

Hensler, D. and C. P. Hensler. Science policy by referendum: voter choice on the California nuclear energy initiative. Santa Monica, Ca.: Rand, 1981. (RAND P-6576)

Wolf, C. Jr. Policy analysis and public management: strengths and limits. Santa Monica, Ca.: Rand, 1981. (RAND P-6700)

IMPEDIMENTS AND OPPORTUNITIES TO IMPROVING THE INNOVATIVE PROCESS

BOOKS

- AMA management handbook. Edited by William K. Fallon. 2nd ed. New York: American Management Association, 1983. (HD 31 .A418 1983)
- Allen, Robert F. and Charlotte Kraft. Organizational unconscious: how to create the corporate culture you want and need. Englewood Cliffs, N.J.: Prentice-Hall, 1982. (HD 31 .A416 1982)
- Bay, Timothy. How to turn problems into solutions: a manager's guide. Englewood Cliffs, N.J.: Prentice-Hall, 1981. (HD 30.23 .B3 1981)
- Blanchard, Kenneth H. and Spencer Johnson. One minute manager. New York: Morrow, 1982. (HD 31 .B527 1982)
- Brown, Warren B. and Dennis J. Moberg. Organization theory and management: a macro approach. New York: Wiley, 1980. (HD 31 .B7668)
- Buffa, Elwood S. and James S. Dyer. Management science/operations research: model formulation and solution methods. New York: Wiley, 1981. (T 57.6 .B83 1981)
- Caplow, Theodore. Managing an organization. 2nd ed. New York: Holt, Rinehart, and Winston, 1983. (HD 31 .C343 1983)
- Committee for Economic Development. Stimulating technological progress: a statement. New York: Committee for Economic Development, 1980. (HC 110 .T4 C65 1980)
- Cox, Allan J. Cox Report on the American corporation. New York: Delacorte, 1982. (HD 2785 .C598 1982)
- Cribbin, James J. Leadership: strategies for organizational effectiveness. New York: AMACOM, 1981. (HD 57.7 .C74)
- Crosby, Philip B. Art of getting your own sweet way. 2nd ed. New York: McGraw-Hill, 1981. (HD 38 .C68 1981)
- Delaney, William A. Thirty most common problems in management and how to solve them. New York: AMACOM, 1982. (HD 30.29 .D44 1982)

- Dessler, Gary. Organization and management. Reston, Va.: Reston, 1982. (HD 31 .D4868 1982)
- Elfrey, Priscilla. Hidden agenda: recognizing what really matters at work. New York: Wiley, 1982. (HD 31 .E548 1982)
- Erickson, Steve M. Management tools for everyone: twenty analytical techniques that are easy to learn and valuable to know. New York: Petrocelli, 1981. (HD 31 .E74)
- Ford, Charles H. Super executive's guide to getting things done. New York: American Management Association, 1982. (HD 31 .F5725 1982)
- Glaser, Rollin O. and Christine Glaser. Managing by design. Reading, Ma.: Addison-Wesley, 1981. (HD 31 .G537)
- Goodman, Robert. The last entrepreneurs: America's regional wars for jobs and dollars. New York: Simon and Schuster, 1979. (HC 110 .I53 G66)
- Heller, Robert. Business of business: managing with style. New York: Harcourt, Brace, Jovanovich, 1981. (HD 31 .H442)
- Holtz, Herman. Profit-line management: managing a growing business successfully. New York: AMACOM, 1981. (HD 31 .H623)
- Innovation and U.S. research: problems and recommendations. Edited by Charles E. Larsen and W. Novis Smith. Washington: American Chemical Society, 1980. (T 173.8 .I565)
- Kobert, Norman. Aggressive management style. Englewood Cliffs, N.J.: Prentice-Hall, 1981. (HD 31 .K5982)
- Koontz, Harold, et al. Essentials of management. 3rd ed. New York: McGraw-Hill, 1982. (HD 31 .K62 1982)
- Laney, W. L. How to be boss in a hurry: a primer for new managers. Indianapolis: Bobbs-Merrill, 1982. (HF 5500.2 .L29 1982)
- Lanford, H. W. System management: planning and control. Port Washington, N.Y.: Kennikat, 1981. (HD 31 .L3155)
- Lee, James A. Gold and the garbage in management theories and prescriptions. Athens: Ohio University Press, 1980. (HD 31 .L3724)



- Lyles, Richard I. Practical management problem solving and decision making. New York: Van Nostrand Reinhold, 1982. (HD 30.29 .L94 1982)
- McFarland, Dalton E. Management and society: an institutional framework. Englewood Cliffs, N.J.: Prentice-Hall, 1982. (HD 60 .M38)
- Marsteller, William A. Creative management: a euphemism for common sense. Chicago: Crain, 1981. (HD 31 .M2995)
- Masatsugu, Mitsuyuki. Modern Samurai society: duty and dependence in contemporary Japan. New York: American Management Association, 1982. (HN 723 .M29)
- Paine, Frank T. and William Naumes. Organizational strategy and policy: text and cases. 3rd ed. Chicago: Dryden, 1982. (HD 31 .P24 1982)
- Pascale, Richard T. and Anthony G. Athos. Art of Japanese management: applications for American executives. New York: Simon & Schuster, 1981. (HD 70 .U5 P3)
- Pollock, Ted. Managing creatively. 2nd ed. Boston: CBI, 1982. (HD 31 .P59 1982)
- Ramo, Simon. America's technology slip. New York: Wiley, 1980. (T 21 .R24)
- Reitz, H. Joseph. Behavior in organizations. Homewood, Ill.: R. D. Irwin, 1981. (HD 58.7 .R44 1981)
- Sargent, Alice G. Androgynous manager. New York: AMACOM, 1981. (HD 38 .S3143)
- Yavitz, Boris and William H. Newman. Strategy in action: the execution, politics, and payoff of business planning. New York: Free Press, 1982. (HD 31 .Y34 1982)

PERIODICAL ARTICLES

- As E. F. Hutton talks, biotechnology listens. Business Week p. 42+, 23 February 1981.
- Backing new ventures. Money 12:111-12+, April 1983.
- Baldwin, W. City hall discovers venture capital. Forbes 127:90-1, 16 February 1981.
- \_\_\_\_\_. Venture capital on the cheap. Forbes 128:64+, 3 August 1981.
- Basadur, M. Training in creative problem solving: effects on ideation and problem solving in an industrial research organization. Organizational Behavior and Human Performance 30:41-70, August 1982.
- Bennett, K. W. Washington finds venture capital worth the risk. Iron Age 225:28-9, 1 November 1982.
- Benvignati, A. M. Relationship between the origin and the diffusion of industrial innovation. Economica 49:313-23, August 1982.
- Big business tries to imitate the entrepreneurial spirit. Business Week p. 84+, 18 April 1983.
- Bylinsky, G. DNA can build companies, too. Fortune 101:144-6+, 16 June 1980.
- Chakrabarti, A. K. The cross-national comparison of patterns of industrial innovations. Columbia Journal of World Business 17:33-9, Fall 1982.
- Chill grips high-tech venture money. Business Week pp. 91-2, 23 August 1982.
- Cook, J. The molting of America. Forbes 130:161-7, 22 November 1982.
- Corrigan, Richard. Choosing winners and losers: business, labor and political leaders are searching for a U.S. industrial policy. National Journal 15:416-43, 26 February 1983.
- Curley, K. F. and P. J. Pyburn. Intellectual technologies: the key to improving white-collar productivity. Sloan Management Review 24:31-9, Fall 1982.
- Dizard, J. W. Do we have too many venture capitalists? Fortune 106:106-8+, 4 October 1982.

Donnenfeld, S. Monopoly and the incentive to innovate. Southern Economic Journal 48:778-84, January 1982.

Dooskin, Herbert P. Foreign-made goods being dumped in U.S. at unfairly low prices. New York Times IV:2:1, 3 August 1982.

Duffy, S. High tech in the heartland: a look at venture capital, Midwestern style. Barrons 63:34-5, 18 July 1983.

Early, S. and M. Witt. How European unions cope with new technology. Monthly Labor Review 105:36-8, September 1982.

Eisenberg, R. Financing your venture. Money 11:75-6+, December 1982.

Emmett, R. Venture market mysteries. Datamation 28:194+, September 1982.

Feeding the small fry. Economist 284:25-6, 7-13 August 1982.

Feinschreiber, Robert. New tax incentives for innovative firms. High Technology 2(3):110+, May/June 1982.

Field, A. Managing the future: MIT program on technology management. Forbes 130:208, 8 November 1982.

Flax, S. Here come the turkeys. Forbes 126:174+, 24 November 1980.

Frank, R. A. Look at venture capital. Datamation 26:47-8, September 1980.

Gort, M. and A. Konakayama. A model of diffusion in the production of an innovation. American Economic Review 72:1111-20, December 1982.

Greenthal, R. P. and J. A. Larson. Venturing into venture capital. Business Horizon 25:18-23, September/October 1982.

Gumpert, D. E. Venture capital becoming more widely available. Harvard Business Review 57:178+, Jan 1979; 58:58, November/December 1980.

Hardymon, G. F. When corporate venture capital doesn't work. Harvard Business Review 61:114-21, May/June 1983.

Harvey, R. E. Taking a yardstick to company research. Iron Age 225:76-8+, 4 October 1982.

- Here comes the intrapreneur. Business Week p. 188+, 18 July 1983.
- High tech lures union organizers. Business Week pp. 101-2, 11 April 1983.
- High-tech profits. Financial World 152:70-1, 3 March 1983.
- High technology has corporate predators licking their chops. Economist 286:73-4, 19 February 1983.
- High technology: industry outlooks 1983. Business Week pp. 77-84, 17 January 1983.
- High technology: wave of the future or a market flash in the pan? Business Week pp. 86-7+, 10 November 1980.
- Hitt, M. A. Industrial firms' grand strategy and functional importance: moderating effects of technology and uncertainty. Academy of Management Journal 25:265-98, June 1982.
- Horovitz, B. and J. S. McClenahan. Restructuring American industry. Industry Week 215:36-9+, 1 November 1982.
- Industrial policy: is it the answer? Business Week pp. 54-7+, 4 July 1983.
- Investing tips from a venture capitalist. Duns Business Month 121:121+, June 1983.
- Irving, R. R. Managing America's technology: a crisis of leadership at the top. Iron Age 225:27-30+, 22 October 1982.
- Kane, Edward J. Accelerating inflation, technological innovation, and the decreasing effectiveness of banking regulation. Journal of Finance 36:355-67, May 1981.
- Lardner, J. F. Why U.S. manufacturers miss out on new technology. Industry Week 214: 13, 23 August 1982.
- Lee, D. M. S. and T. J. Allen. Integrating new technical staff: implications for acquiring new technology. Management Science 28:1405-20, December 1982.
- Liebermann, Y. and J. Paroush. Economic aspects of diffusion models. Journal of Economics and Business 34(1):95-100, 1982.

Lublin, Joann S. Labor pains: effects of "baby bust" are shrinking ranks of younger workers. Wall Street Journal 198:1+, 10 September 1981.

Magee, J. F. Assessing a company's technological program. Financial Analysts Journal 38:56-9, July/August 1982.

Mahon, G. More risk than reward? a hard look at publicly owned venture capital companies. Barrons 61:4-5+, 29 June 1981.

Main, Jeremy. Work won't be the same again: computers and robots will disrupt millions of workers and force managers to adopt a new style. Fortune 105: 58-61, 28 June 1982.

Maisonrouge, J. G. Technological advances alone not enough to succeed. Management Review 72:34-5, January 1983.

Managing the technology jump. Management Review 71:5, August 1982.

Marsh, A. K. Pentagon urges coproduction changes. Aviation Week and Space Technology 116:18-19, 7 June 1982.

Merwin, J. Have you got what it takes. Forbes 128:60-4, 3 August 1981.

Morner, A. L. Shelters for the venturesome rich. Fortune 102:95-7, 28 July 1980.

Much, M. Venture capital funds are still plentiful. Industry Week 205:104+, 9 June 1980.

Murphy, T. P. Odd couple. Forbes 129:190, 26 April 1982.

\_\_\_\_\_. Will success spoil. Forbes 129:158-9, 29 March 1982.

Murray, T. J. Venture capital: the game gets riskier. Duns Business Month 119: 68-9+, April 1982.

Nelson, R. R. Role of knowledge in R & D efficiency. Quarterly Journal of Economics 97:453-70, August 1982.

New territory for venture capitalists. Business Week p. 103+, 19 October 1981.

Panel urges action on technology. Aviation Week and Space Technology 118:49, 18 April 1983.

Paying a premium for a piece of the action. Business Week pp. 116-7, 25 April 1983.

Phalon, R. Getting a little crowded. Forbes 129:151-2, 15 February 1982.

Pitfalls of trying to promote innovation. Economist 283:95-8, 26 June-2 July, 1982.

Reinganum, J. F. Dynamic game of R & D: patent protection and competitive behavior. Econometrica 50:671-88, May 1982.

Schechter, R. P. How high-tech companies should approach profitability. Financial Executive 51:24-9, March 1983.

Senge, P. Long-term economic slide inhibiting innovation. Chemical and Engineering News 59:20-1, 26 October 1981.

Solvay, J. E. Need for restructuring and technical innovation in adapting to the future. Chemistry and Industry pp. 833-5, 5 December 1981.

Startup fever is spreading. Datamation 28:194+, September 1982.

Stevenson, Matthew. International tariffs and trade barriers. New York Times 21: 2, 31 August 1982.

Szuprowicz, Bohdan. New incentives attract investors. High Technology 2(4):91, July/August 1982.

TRW leads a revolution in managing technology. Business Week pp. 124-7+, 15 November 1982.

Technology moves in on corporate decision-making. Chemical Week 132:30-4, 16 March 1983.

Timmons, J. A. and D. E. Gumpert. Discard many old rules about getting venture capital. Harvard Business Review 60:152-4+, January/February 1982.

Up the entrepreneur: the world of finance is beating a path to his door. Barrons 60: 4-5+, 25 August 1980.

Venture capitalists get bolder. Business Week pp. 101-2, 30 November 1981.

Venture capitalists ride again. Economist 277:110-11, 11 October 1980.

Venture forth and multiply. Economist 286: surv 86+, 26 March 1983.

Venture investing with less risk. Business Week pp. 129-30, 13 April 1981.

Venturing into venture capitalism. Business Week pp. 126-7+, 13 September 1982.

Wallace, Anise C. Magic financing via R & D partnerships. High Technology 3(7): 65-6, July 1983.

Why the giants have to play catch-up. Business Week pp. 103-4, 21 February 1983.

Women: the new venture capitalists. Business Week p. 100+, 2 November 1981.

Zinam, Oleg. The myth of absolute abundance: economic development as a shift in relative scarcities. American Journal of Economics and Sociology 41:61-76, January 1982.

Zschau, Ed. Targeting the innovation process. High Technology 3(9):15-16, September 1983.

GOVERNMENT PUBLICATIONS

- U.S. Congress. House. Committee on Science and Technology. Forecasting needs for the high technology industry. Hearing before the Subcommittee on Science, Research and Technology. 97th Cong., 1st Sess., 24 November 1981. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/67)
- U.S. Congress. House. Committee on Science and Technology. The human factor in innovation and productivity. Hearings before the Subcommittee on Science, Research and Technology. 97th Cong., 1st Sess., 9, 10, 11, 15, 16, 17 September 1981. Washington: U.S. Govt. Print. Off., 1981. (Y4.Sci2:97/51)
- U.S. Congress. House. Committee on Science and Technology. The human factor in innovation and productivity. Hearings . . . 97th Cong., 2nd Sess., October 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/FFF)
- U.S. Congress. House. Committee on Science and Technology. Small business innovation development act. Hearings . . . 97th Cong., 2nd Sess., 26, 27, 28 January 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.Sci2:97/135)
- U.S. Congress. Joint Economic Committee. Special study on economic change, vol. 10: productivity: the foundation of growth. Joint Committee print, 96th Cong., 2nd Sess., 29 December 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.Ec7:Ec7/41/v.10)
- U.S. Congressional Budget Office. The productivity problem: alternatives for action. Washington: U.S. Govt. Print. Off., 1981. (Y10.2:P94)



REPORT LITERATURE

DeLeon, P. Evaluation of technology R & D: a continuing dilemma. Santa Monica, Ca.:  
Rand, 1981. (RAND P-6655)

Walker, Warren E. and Jan M. Chaiken. The effects of fiscal contraction on innovation  
in the public sector. Santa Monica, Ca.: Rand, 1981. (RAND P-6610)

TECHNOLOGY TRANSFER AND INTERNATIONAL TRADE

BOOKS

- American Enterprise Institute for Public Policy Research. Proposals for reform of export controls for advanced technology. Washington, D.C.: American Enterprise Institute, 1979. (KF 1987 .A95)
- Baranson, Jack. North-south technology transfer: financing and institution building. Mount Airy, Md.: Lomond, 1981. (HC 130 .T4 B37)
- Bricker, Rodney P. G. U.S. technology transfer to the Soviet Union: a dilemma. Maxwell Air Force Base, Ala.: Air War College, Air University, 1981. (UGB 907 .A432 MS904-81)
- Committee on Science, Engineering, and Public Policy. Panel on Scientific Communication and National Security. Scientific communication and national security: a report. Washington, D.C.: National Academy Press, 1982. (Q 223 .C6543 1982)
- Eckert, Theodore J. Transfer of U.S. technology to other countries: an analysis of export control policy and some recommendations. Princeton, N.J.: Center of International Studies, Woodrow Wilson School of Public and International Affairs, Princeton University, 1981. (T 174.3 .E24 1981)
- Frame, J. Davidson. International business and global technology. Lexington, Ma.: Lexington, 1983. (T 174.3 .F73 1983)
- The future of business: global issues in the 80's and 90's. New York: Pergamon Press, 1974. (HF 5011 .F87 1979)
- Gee, Sherman. Technology transfer, innovation, and international competitiveness. New York: Wiley, 1981. (T 174.3 .G42)
- Grossack, Irvin M. The international economy and the national interest. Bloomington: Indiana University Press, 1979. (HF 1007 .G722)
- Hedebro, Goran. Communication and social change in developing nations: a critical view. Ames: Iowa State University Press, 1982. (RN 980 .H4 1982)
- Hughes, Kent H. Trade, taxes, and transnationals: international economic decision making in Congress. New York: Praeger, 1979. (HF 1455 .H79)

- International trade and industrial policies, government intervention and an open world economy. Edited by Steven J. Warnecke. New York: Holmes & Meier Publishers, 1978. (HF 1411 .15184 1978)
- International trade, industrialization, and the new international economic order. Edited by Jorge Lozoya. New York: Pergamon Press, 1981. (HG 1411 .1555 1981)
- Liebrez, Marilyn L. Transfer of technology: U.S. multinationals and Eastern Europe. New York: Praeger, 1982. (HD 2844 .L53 1982)
- Malone, Daniel K. Roland: a case for or against NATO standardization. Washington, D.C.: National Defense University, Research Directorate, 1980. (UA 646.3 .M3)
- Mansfield, Edwin, et al. Technology transfer, productivity, and economic policy. New York: Norton, 1982. (HC 110 .152 T4 1982)
- Mogavero, Louis N., et al. What every engineer should know about technology transfer and innovation. New York: M. Dekker, 1982. (T 174.3 .M62 1982)
- Monroe, Wilbur F. International trade policy in transition. Lexington, Ma.: Lexington Books, 1975. (HF 1411 .M616)
- Ohman, Nils Bonesteel. Collaboration in technology: an exploratory study of United States involvement in international cooperative technology programs. Thesis (Ph.D.). Austin: University of Texas, 1980. (SPEC COLL LB 2379 1980 038)
- Organization for Economic Co-operation and Development. North/south technology transfer: the adjustments ahead: analytical studies. Washington, D.C.: OECD Publications and Information Center, 1982. (T 174.3 .M68 1982)
- Rogers, Everett M. Diffusion of innovations. New York: Free Press, 1983. (HM 101 .R57 1983)
- Seurat, Silvere. Technology transfer: a realistic approach. Houston: Gulf, 1979. (T 174.3 .S4813)
- Sternheimer, Stephen. East-west technology transfer: Japan and the Communist Bloc. Beverly Hills: Sage, 1980. (HF 1411 .S7985)
- Technological exchange, the U.S.-Japanese experience: proceedings of a symposium held on October 21, 1981. Edited by Cecil H. Uyehara. Washington, D.C.: University Press of America, 1982. (T 174.3 .T358 1982)

Yergin, Angela S. East-west technology transfer: European perspectives. Beverly Hills: Sage, 1980. (T 174.3 .Y47)

Zagaris, Bruce. Foreign investment in the United States. New York: Praeger, 1980. (HC 4910 .Z33)

PERIODICAL ARTICLES

- American-China trade: forbidden fruit. Economist 284:58, 3 July 1982.
- Arming Andropov. Economist 287:13-14, 23 April 1983.
- Brody, M. Venturing abroad: securities analysts increasingly think its the way to go. Barrons 61:9+, 18 May 1981.
- CIA: Soviets are still seeking U.S. technology. Iron Age 226:12, 13 April 1983.
- Capdevielle, Patricia and Donato Alvarez. International comparisons of trends in productivity and labor cost. Monthly Labor Review 104:14-20, December 1981.
- Chaikin, Sol C. Trade, investment and deindustrialization: myth and reality. Foreign Affairs 60:836-51, Spring 1982.
- The chance the U.S. is taking in Sweden. Business Week pp. 51-2, 2 May 1983.
- China shops for American technology. High Technology 1(5):66-8, June 1980.
- China; the split in Washington over high-tech exports. Business Week p. 44, 23 August 1982.
- Christelow, Dorothy B. National policies toward foreign direct investment. Federal Reserve Bank of New York Quarterly Review 4.21-32, Winter 1979/80.
- Cocom: plugging the hole that Andropov made. Economist 285:21-2, 20 November 1982.
- The dangers of sharing American technology. Business Week pp. 109-11+, 14 March 1983.
- Davis, Neil W. The space race: here comes Japan. High Technology 3(5):27-33, May 1983.
- Foreign firms step up buy-ups of U.S. companies. High Technology pp. 82-4, April 1980.
- Foreign investment: the post-Shah surge in political-risk studies. Business Week p. 69, 1 December 1980.
- GAO urges end to licensing for low-technology exports. Aviation Week and Space Technology 116:19-20, 7 June 1982.

- Goldwater, L. R. Exporting technology can bring retribution as well as rewards. Iron Age 225:24-6, 1 November 1982.
- Government regulations cut technology flow to Eastern bloc. High Technology 2(4): 79-80, July/August 1982.
- Green, R. T. Changing national concentrations of high technology exports, 1974-1979. Columbia Journal of World Business 17:72-6, Fall 1982.
- Guzzardi, Walter, Jr. Cutting Russia's harvest of U.S. technology. Fortune 107: 102-4+, 30 May 1983.
- High technology goes abroad. High Technology 2(6):98+, November/December 1982.
- Hutcheson, D. S. and D. A. Rowley. Innovation generator; key to technology transfer. Mechanical Engineering 104:54-7, August 1982.
- International R & D spending: America holds its own. Economist 285:89-90, 6 November 1982.
- Invented in Europe, patented in America and made in Japan? Economist 287:93-4, 2 April 1983.
- Jacobs, Sanford L. Defense data. Wall Street Journal p. 31, 19 September 1983.
- Japan and America: an offer you won't refuse. Economist 285:45, 13 November 1982.
- Kobayashi, T. The future in scientific technology: the road to U.S.-Japanese cooperation. Computers and People 32:7-11, March/April 1983.
- Kravalis, H. Recommendations of U.S.-Japan high-tech work group. Business America 6:3-4, 7 March 1983.
- Lachica, Eduardo. U.S. Defense Secretary to explore sales of military, other technology to China. Wall Street Journal p. 30, 23 September 1983.
- Lee, R. W., III. Political absorption of Western technology: the Soviet and Chinese cases. Studies in Comparative Communism 15:9-33, Spring/Summer 1982.
- McCulloch, R. Technology transfer and the national interest. International Economic Review 23:421-8, June 1982.

- Madison, Christopher. Congress, administration split on how to plug technology leaks to Soviets. National Journal 15:380-3, February 1983.
- \_\_\_\_\_. U.S. Japan high technology talks turn on trade tactics and teamwork. National Journal 14:1555-7, 11 September 1982.
- Mally, C. Technology transfer controls. Atlantic Community Quarterly 20:233-8, Fall 1982.
- Mann, P. Bill would mandate export curb talks. Aviation Week and Space Technology 118:26-8, 11 April 1983.
- \_\_\_\_\_. Report urges technology export control shift. Aviation Week and Space Technology 117:68-9, 20 December 1982.
- Mitsubishi: a Japanese giant's plans for growth in the U.S. Business Week pp. 128-32, 20 July 1981.
- Murphy, John F. and Arthur T. Downey. National security, foreign policy and individual rights: the quandary of United States export controls. International and Comparative Law Quarterly 30:791-834, October 1981.
- Murray, Margaret. Real goal of Soviets' global spy network. U.S. News and World Report 94:31-2, 18 April 1983.
- Nations, R. Call for a curtain. Far Eastern Economic Review 117:64-6, 10-16 September 1982.
- Net twins to noose? technology sales to Russia. Economist 285:86+, 16-22 October 1982.
- Nielsen, Richard P. Should a country move toward international strategic market planning? California Management Review 25:34-44, January 1983.
- 1977 benchmark survey of U.S. direct investment abroad. Survey of Current Business 61:29-37, April 1981.
- Olmer, L. H. Japan's drive for technological preeminence challenges U.S. Business America 6:6-10, 24 January 1983.
- Pentagon may get more power to stop exports to Soviets. Wall Street Journal p. 3, 21 September 1983.

- Rearming Japan: special report. Business Week pp. 106-11+, 14 March 1983.
- Reining in Reagan on export controls. Business Week p. 151, 13 June 1983.
- Ronstadt, Robert and Robert J. Kramer. Internationalizing industrial innovation. Journal of Business Strategy 3:3-6+, Winter 1983.
- Samuelson, Robert J. Officials grow uneasy as U.S. banking begins to acquire a foreign accent. National Journal 12:1436-41, 30 August 1980.
- Scholl, Russell B. The international investment position of the United States: developments in 1980. Survey of Current Business 61:52-7, August 1981.
- Scientific and technological exchanges with foreign countries. Beijing Review 25: 21-4, 29 March 1982.
- Stuart, Alexander. Opportunity knocks in troubled Mexico: U.S. companies keep investing in new ventures counting on tough austerity measures to bring an economic revival. Fortune 106:146-8+, 23 August 1982.
- Swiss fine 7 on exports. New York Times 132:30, 19 August 1983.
- Symposium on international trade and industrial organization. Edited by Richard E. Caves. Journal of Industrial Economics 29:113-218, December 1980.
- Szuprowicz, Bohdan. Critical materials cut-offs feared. High Technology 1(2): 44-50, November/December 1981.
- Other nations will challenge U.S. computer dominance in the '80s. High Technology pp. 18-20, February 1980.
- Technology export battle heats up. High Technology 3(5):75-6, May 1983.
- Technology transfer: a policy nightmare. Business Week pp. 94-5+, 4 April 1983.
- Technology transfer control by design urged. Aviation Week and Space Technology 116: 25, 22 February 1982.
- Technology transfer: new issues, new analysis. Edited by A. W. Heston and H. Pack. American Academy of Political and Social Science. Annals. 458:7-186, November 1981.



- Tersine, R. J. Productivity improvement strategies: technological transfer and upgrading. Journal of Systems Management 33:15-23, November 1982.
- Tsongas P. Meeting the Japanese challenge. Mini-Micro Systems 15:107-8, July 1982.
- U.S. probes technology transfer, security issues. Chemical and Engineering News 61:6, 25 April 1983.
- U.S. seizes technology headed for East Bloc. Christian Science Monitor p. 2, 14 April 1982.
- U.S. urges tighter controls on exports. Aviation Week and Space Technology 117:24-5, 11 October 1982.
- Venture capital: big bets from abroad. Business Week pp. 93-4, 28 June 1982.
- Vinocur, John. Trail of Western technology is followed to the K.G.B.'s door. New York Times 132:1, 25 July 1983.
- Volpi, R. Technology and polity: the dynamics and dilemmas of managed change. Studies of Comparative Communism 15:71-94, Spring/Summer 1982.
- Wallich, P. Technology transfer at issue. IEEE Spectrum 19:64-73, May 1982.
- Walsh, J. New pressure on scientific exchanges. Science 215:637-8, 5 February 1982.
- Walter, G., Jr. Cutting Russia's harvest of U.S. technology. Fortune 107:102-4+, 30 May 1983.
- Wellborn, Stanley N. When West taps into communist technology. U.S. News and World Report 94:56-7, 17 January 1983.
- Wren Christopher S. Weinberger hopeful on arms for China. New York Times 133:3, 29 September 1983.
- Zonderman, Jon. New law may spur technology exports. High Technology 3(4):84-5, April 1983.

GOVERNMENT PUBLICATIONS

- U.S. Congress. House. Committee on Science and Technology, the Committee on Interstate and Foreign Commerce, the Committee on Banking, Finance and Urban Affairs, and the House Task Force on Industrial Innovation. Technology trade. Hearings before the Subcommittee on International Trade, Investment and Monetary Policy, 96th Cong., 2nd Sess., 24, 25, 26 June 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.Sci2:96/149)
- U.S. Congress. House. Committee on Ways and Means. Trade in high technology products. Hearings . . . 97th Cong., 2nd Sess., 24 May 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.W36:97-60)
- U.S. Congress. House. Committee on Ways and Means. U.S. trade policy. Hearings before the Subcommittee on Trade. 96th Cong., 2nd Sess., 26 June and 21 July 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.W36:96-119)
- U.S. Congress. House. Committee on Ways and Means. U.S. trade policy; phase I: administration and other public agencies. Hearings before the Subcommittee on Trade. 97th Cong., 1st Sess., 28, 29, 30 October and 2, 3, 12 November 1981. Washington: U.S. Govt. Print. Off., 1981. (Y4.W36:97-45)
- U.S. Congress. House. Committee on Ways and Means. U.S. trade policy, phase II: private sector, parts A and B. Hearings before the Subcommittee on Trade, 97th Cong., 1st Sess., 10, 11, 12 February, 18 March 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.W36:97-46 and 97-47)
- U.S. Congress. Joint Economic Committee. Special study on economic change, vol. 9: the international economy: U.S. role in a world market. Joint Committee print, 96th Cong., 2nd Sess., 17 December 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.B22/3:Ex7/34)
- U.S. Congress. Senate. Committee on Banking, Housing and Urban Affairs. East-West trade and technology transfer. Hearings . . . 97th Cong., 2nd Sess., 14 April 1982. Washington: U.S. Govt. Print. Off., 1982. (Y4.B22/3:97-58)
- U.S. Congress. Senate. Committee on Banking, Housing and Urban Affairs. Suspension of U.S. exports of high technology and grain to the Soviet Union. Hearings . . . 96th Cong., 2nd Sess., 19 and 20 August 1980. Washington: U.S. Govt. Print. Off., 1980. (Y4.B22/3:Ex7/35)

U.S. Congress. Senate. Committee on Foreign Relations. U.S. policy toward international investment. Hearings before the Subcommittee on International Economic Policy. 97th Cong., 1st Sess., 30 July, 28 September and 28 October 1981. Washington: U.S. Govt. Print. Off., 1982. (Y4.F76/2:In8/58)

REPORT LITERATURE

Gustafson, T. E. Selling the Russians the rope? Soviet technology and U.S. export controls. Santa Monica, Ca.: Rand, 1981. (RAND R-2649-ARPA)

Wolf, C., Jr., et al. East-West economic relations and the Soviet Union's defense posture. Santa Monica, Ca.: Rand, 1982. (RAND N-1877-USDP)