## References

Allaud, Louis, and Maurice Martin. 1976. Schlumberger. Historie d'une Technique. Paris: Berger-Levrault.

Allen, Robert C. 1982a. "Vitascope/Cinematographe: Initial Patterns of American Film Industrial Practice," in *The American Movie Industry: The Business of Motion Pictures*, G. Kindem, ed. Carbondale, IL: Southern Illinois University Press, 3-11.

Allen, Robert C. 1982b. "Motion Picture Exhibition in Manhattan, 1906–1912: Beyond the Nickelodeon," in *The American Movie Industry: The Business of Motion Pictures*, G. Kindem, ed. Carbondale, IL: Southern Illinois University Press, 12–24.

Amsterdamska, Olga. 1990. "Surely You're Joking Monsieur Latour!" Science, Technology and Human Values: 495-504.

Andersen, Håkon With, and John Peter Collett. 1989. Anchor and Balance: Det Norske Veritas, 1864–1989. Oslo: J. W. Cappelens Forlag.

Anderson, Robert. 1985. "The Motion Picture Patents Company: A Reevaluation," in *The American Film Industry*, rev. ed., T. Balio, ed. Madison, WI: University of Wisconsin Press, 133-152.

Ashmore, Malcolm. 1989. The Reflexive Thesis: Wrighting the Sociology of Scientific Knowledge. Chicago: University of Chicago Press.

Ashmore, Malcolm, Mulkay, Michael and Pinch, Trevor J. 1989. Health and Efficiency: A Sociology of Health Economics. Milton Keynes: Open University Press.

Ashmore, Malcolm, Mulkay, Michael, Pinch, Trevor, and the Health Economists' Study Group HESG (1989) "Definitional Work in Applied Social Science: Collaborative Analysis in Health Economics and Sociology of Science," in *Knowledge and Society: Studies in the Sociology of Science Past and Present*, L. Hargens, R. A. Jones, and A. Pickering, eds. vol. 8, Greenwich, Connecticut: JAI Press, 27–55.

Authier, M. 1989. "Archimède, le canon du savant," in *Eléments d'Histoire des Sciences*, Michel Serres, ed. Paris: Bordas, 101-127.

Balio, T. 1985. "Struggles for Control," in *The American Film Industry*, rev. ed.,T. Balio, ed. Madison, WI: University of Wisconsin Press, 103-131.

Baker, N. 1988. The Mezzanine. New York: Weidenfeld and Nicholson.

Balogh, B. 1987. Trouble in Paradise. Institutional Expertise in the Development of Nuclear Power, 1945–1975. Ph.D. diss., Johns Hopkins University.

Barnes, Barry. T. S. Kuhn and Social Science. New York: Columbia University Press.

Barnes, Barry. 1988. The Nature of Power. Cambridge: Polity Press.

Baxandall, Michael. 1985. Patterns of Intention. On the Historical Explanation of Pictures. New Haven, CT: Yale University Press.

Bealer, Alex W. 1969. The Art of Blacksmithing. New York: Funk and Wagnalls.

Beamont, Roland. 1968. Phoenix into Ashes. London: William Kimber.

Beamont, Roland. 1980. Testing Years. London: Ian Allen.

Becker, Howard S. 1964. "Personal Change in Adult Life." Sociometry 27: 40-53.

Ben-David, Joseph. 1960. "Roles and Innovations in Medicine." American Journal of Sociology 65: 557-568.

Beniger, James R. 1986. The Control Revolution: Technological and Economic Origins of the Information Society. Cambridge, MA: Harvard University Press.

Bertin, Jacques. 1983. Semiology of Graphics: Diagrams, Networks, Maps. Madison, W: University of Wisconsin Press.

Bessemer, Henry. 1896. "The Bessemer Process." Engineering 6 (20 March): 367–370.

Bessemer, Henry. 1905. Sir Henry Bessemer, F.R.S.: An Autobiography. London: Offices of Engineering.

Bijker, Wiebe E. 1987. "The Social Construction of Bakelite: Toward a Theory of Invention," in *The Social Construction of Technological Systems*, W. E. Bijker, T. P. Hughes, and T. J. Pinch, eds. Cambridge, MA: MIT Press, 159–187.

Bijker, Wiebe E., Hughes, Thomas P., and Pinch, Trevor J. 1987b. "General Introduction," and "Introductions," in Bijker et al., eds. 1987a, 1-6, 9-15, 107-110, 191-194, 307-309.

Bijker, Wiebe E., Hughes, Thomas P., and Pinch, Trevor J., eds. 1987a. The Social Construction of Technological Systems. Cambridge, MA: MIT Press.

Birch, Alan. 1963–1964. "Henry Bessemer and the Steel Revolution." Nachrichten aus der Eisen-Bibliothek (Schaffhausen) 28: 129–136; 30: 153–159.

Bloor, David C. 1976. Knowledge and Social Imagery. London: Routledge and Kegan Paul.

Bodewitz, Henk J. H. W., Buurma, H., and De Vries, Gerard H. 1987. "Regulatory Science and the Social Management of Trust in Medicine," in *The Social Construction* of *Technological Systems*. New Directions in the Sociology and History of Technology, W. E. Bijker, T. P. Hughes, and T. J. Pinch, eds. Cambridge, MA: MIT Press, 241–258.

Boltanski, Luc, and Thevenot, Laurent. 1987. Les Economies de la Grandeur. Paris: PUF, Cahiers du Centre d'Etudes de l'Emploi.

Boltanski, L., and Thevenot, L. 1991. De la Justification les Economies de la Grandeur. Paris: Gallimard.

Boorstin, Daniel J. 1973. The Americans: The Democratic Experience. New York: Random House.

Boucher, John Newton, ed. 1908. A Century and a Half of Pittsburg and Her People. Pittsburgh: Lewis.

Boucher, John Newton. 1924. William Kelly: A True History of the So-called Bessemer Process. Greensburg, PA: John Newton Boucher.

Boullier, D., Akrich, M., and Le Goaziou, V. 1990. Représentation de l'utilisateur final et genèse des modes d'emploi. Miméo, Ecole des Mines.

Bowker, Geof. 1987. "A Well-Ordered Reality: Aspects of the Development of Schlumberger, 1920-1939." Social Studies of Science 17: 611-655.

Bowker, Geof. 1988. 'Pictures from the Subsoil, 1939,' in "Picturing Power; Visual Depiction and Social Relations." *Sociological Review Monographs* 35, Gordon Fyfe and John Law, eds. 1986, 221–254.

Bowker, Geof. 1989. "L'Industrialisation de la Science," in *Elements d'Histoire des Sciences*, Michel Serres, ed. Paris: Bordas.

Boyer, P. 1985. By the Bomb's early light. American thought and culture at the dawn of the Atomic Age. New York: Pantheon.

Bright, A. A. 1949. The Electrical Lamp Industry: Technological Change and Economic Development from 1800 to 1947. New York: MacMillan.

Bright, A. A., and Maclaurin, W. R. 1943. "Economic Factors Influencing the Development and Introduction of the Fluorescent Lamp." *Journal of Political Economy* 51: 429-450.

Buchanan, Angus. 1991. "Theory and Narrative in the History of Technology," *Technology and Culture* 32: 365-376.

Butler, Samuel 1872 (paperback edition 1970). Erewhon. Harmondsworth: Penguin.

Callon, Michel. 1980. "Struggles and Negotiations to Define What is Problematic and What is Not: the Sociologic of Translation," in *The Social Process of Scientific Investigation*, vol. 4, K. Knorr, R. Krohn, and R. D. Whitley, eds. Dordrecht: Reidel, 197-219.

Callon, Michel. 1986a. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay," in *Power, Action and Belief: a New Sociology of Knowledge*? J. Law, ed. London: Routledge and Kegan Paul, 196-233.

Callon, Michel. 1986b. "The Sociology of an Actor-Network: The Case of the Electric Vehicle," in *Mapping the Dynamics of Science and Technology: Sociology of Science in the Real World*, Michel Callon, John Law, and Arie Rip, eds. Basingstoke: Macmillan, 19–34.

Callon, Michel, and Latour, Bruno. 1981. "Unscrewing the Big Leviathan: How Actors Macrostructure Reality and How Sociologists Help Them To Do So," in Advances in Social Theory and Methodology: Toward an Integration of Micro and Macro Sociologies, K. Knorr-Cetina, and A. V. Cicourel, eds. London: Routledge and Kegan Paul, 277-303.

Callon, Michel, and Latour, Bruno. 1992. "Don't Throw Out the Baby with the Bath School: Reply to Collins and Yearley," in *Science as Practice and Culture*, A. Pickering, ed. Chicago: Chicago University Press.

Callon, Michel, and Law, John. 1989. "On the Construction of Sociotechnical Networks: Content and Context Revisited." *Knowledge and Society* 9: 57-83.

Callon, Michel, Law, John, and Rip, Arie, eds. 1986. *Mapping the Dynamics of Science and Technology*. Basingstoke: Macmillan.

Cambrosio, Alberto, Keating, Peter, and Mackenzie, Michael. (Forthcoming). "Scientific Practice in the Courtroom: The Construction of Sociotechnical Identities in a Biotechnology Patent Dispute."

Camp, J. M., and Francis, C. B. 1925. *The Making, Shaping and Treating of Steel*, 4th ed. Pittsburgh: Carnegie Steel Co.

Campbell, John. 1983. Roy Jenkins, a Biography. London: Weidenfeld and Nicolson.

Carlson, W. Bernard. 1983. "Edison in the Mountains: The Magnetic Ore Separation Venture, 1879–1900." *History of Technology* 8: 37–59.

Carlson, W. Bernard. 1988. "Thomas Edison as a Manager of R&D: The Case of the Alkaline Storage Battery, 1898–1915." *IEE Technology and Society* 7: 4–12.

Carlson, W. Bernard. 1991. Innovation as a Social Process: Elihu Thomson and the Rise of the Electrical Industry, 1875-1900. New York: Cambridge University Press.

Carlson, W. Bernard, and Gorman, Michael E. 1989. "Thinking and Doing at Menlo Park: Edison's Development of the Telephone, 1876–1878," in *Working at Inventing: Thomas A. Edison and the Menlo Park Experience*, W. S. Pretzer, ed. Dearborn, MI: Henry Ford Museum and Greenfield Village, 84–99.

Carlson, W. Bernard, and Gorman, Michael E. 1990. "Understanding Invention as a Cognitive Process: The Case of Thomas Edison and Early Motion Pictures, 1888-1891." Social Studies of Science 20: 387-430.

Cassady, Ralph. 1982. "Monopoly in Motion Picture Production and Distribution: 1908-1915," in *The American Movie Industry: The Business of Motion Pictures*, G. Kindem, ed. Carbondale, IL: Southern Illinois University Press, 25-67.

Chandler, Alfred D. 1977. The Visible Hand: The Managerial Revolution in American Business. Cambridge, MA: Harvard University Press.

Clapp, F. G. 1929. "Role and Structure in the Accumulation of Petroleum," in Structure of Typical American Oil Fields: A Symposium on the Relation of Oil Accumulation to Structure, vol. 2. London: Thomas Murby, 667-716.

Clarke, Basil. 1965. Supersonic Flight. London: Frederick Muller.

Clegg, Stewart R. 1989. Frameworks of Power. London: Newbury Park; New Delhi: Sage.

Clifford, James. 1983. "On Ethnographic Authority," Representations 1, 2.

Collins, H. M. 1981a. "The Place of the Core-Set in Modern Science: Social Contingency with Methodological Propriety in Science." *History of Science* 19: 6–19.

Collins, H. M. 1981b. "Stages in the Empirical Programme of Relativism," Social Studies of Science 11: 3-10.

Collins, H. M. 1985. Changing Order. Beverly Hills and London: Sage.

Collins, H. M., and Pinch, Trevor J. 1982. Frames of Meaning: The Social Construction of Extraordinary Science. Boston: Routledge and Kegan Paul.

Collins, H. M., and Yearley, Steven. 1992. "Epistemological Chicken," in Science in Practice and Culture, A Pickering, ed. Chicago: Chicago University Press.

Committee on Patents. 1942. Hearings before the Committee on Patents United States Senate, 77th Congress, 2nd Session on S.2303 and S.2491, Part 9, 18-21 August 1942: 4753-5032. Washington, D.C.: United States Government Printing Office. Constant. Edward W. 1980. The Origins of the Turbojet Revolution. Baltimore, MD: Johns Hopkins University Press.

Constant, Edward W. 1983. "Scientific Theory and Technological Testability: Science, Dynamometers, and Water Turbines in the 19th Century." *Technology and Culture* 24: 183–198.

Crossman, Richard. 1975. The Diaries of a Cabinet Minister; Vol. 1, Minister of Housing. London: Hamish Hamilton and Jonathan Cape.

Culler, F. J., Mclain, S., eds. 1957. Status Report on the Disposal of Radioactive Wastes. Oak Ridge, TN: Oak Ridge National Laboratory, 57-3-114.

Culyer, A. J. 1985. "Editorial," *Nuffield | York Portfolios* 19. Nuffield Provincial Hospital Trust, London, p. 1.

Czitrom, Daniel J. 1982. Media and the American Mind: From Morse to McLuhan. Chapel Hill, NC: University of North Carolina Press.

Daumas, M. 1977. "Analyse historique de l'evolution des transports en commun dans la region parisienne de 1855 a 1939." Paris: Centre de documentation d'Histoire des Techniques.

Davis, Donald Finlay. 1988. Conspicuous Production: Automobiles and Elites in Detroit, 1899-1933. Philadelphia: Temple University Press.

Dean, John. 1979. "Controversy over Classification: A Case Study from the History of Botany," in *Natural Order: Historical Studies of Scientific Culture*, Barry Barnes and Steven Shapin, eds. London: Sage, 211–230.

"Dedication of Tablet Recalls Bessemer Patent Controversy." 1922. Iron Trade Review 71 (19 October): 1064.

Del Sesto, S. L. 1987. "Wasn't the Future of Nuclear Engineering Wonderful?" in *Imagining Tomorrow. History, Technology and the American Future*, J. J. Corn, ed. Cambridge, MA: MIT Press, 58-76.

Dennis, Michael Aaron. 1987. "Accounting for Research: New Histories of Corporate Laboratories and the Social History of American Science." *Social Studies of Science* 17: 479-518.

Dickson, W. K. L. 1933. "A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-phonograph," in *A Technological History of Motion Pictures and Television*, R. Fielding, ed. Berkeley: University of California Press, 1980, 9–16. This article was originally published in *Journal of the Society of Motion Picture Engineers*, vol. 21 (Dec. 1933).

Divine, R. A. 1978. Blowing on the wind. The nuclear test ban debate, 1954–1960. New York: Oxford University Press.

Doctorow, E. L. 1985. World's Fair. New York: Ballantine Books.

Dorsett, J. D. 1950. "Insurance Problems with Atomic Energy Use," in *Industrial and* Safety Problems of Nuclear Technology, H. M. Shamos and S. G. Roth, eds. New York: Harper.

Dosi, Giovanni. 1982. "Technological Paradigms and Technological Trajectories." *Research Policy* 11: 147-162.

Douglas, Mary. 1973. Natural Symbols: Explorations in Cosmology. Harmondsworth: Penguin.

Douglas, Susan J. 1987. Inventing American Broadcasting, 1899–1922. Baltimore, MD: Johns Hopkins University Press.

Dredge, James. 1898. "Sir Henry Bessemer." ASME Transactions 19: 881-964.

Dutton, H. I. 1984. The Patent System and Inventive Activity during the Industrial Revolution, 1750-1852. Manchester: Manchester University Press.

Eisenstein, Elizabeth L. 1979. The Printing Press as an Agent of Change: Communications and Culture in Early Modern Europe. Cambridge: Cambridge University Press.

Eisinger, Peter K. 1988. The Rise of the Entrepreneurial State: State and Local Economic Development Policy in the United States. Madison, WI: University of Wisconsin Press.

Elias, Norbert. 1978. The History of Manners. Oxford: Blackwell.

Elzen, Boelie. 1986. "Two Centrifuges: A Comparative Study of the Social Construction of Artefacts." *Social Studies of Science* 16: 621–662.

Elzen, Boelie. 1988. Scientists and Rotors: The Development of Biochemical Ultracentrifuges. Ph.D. diss., University of Twente.

Engelhardt, H. Tristram, Jr., and Caplan, Arthur L., eds. 1987. Scientific Controversies: Case Studies in the Resolution and Closure of Disputes in Science and Technology. Cambridge: Cambridge University Press.

Engelken, R. C. 1940. "Lighting the New York World's Fair", *Journal of Electrical Engineering* 59 (May 1940): 179-203.

"Fluctuations in the Prices of Crude and Finished Iron and Steel from January 1, 1898, to January 1, 1907." 1907. Iron Age supplement (10 January).

Foucault, Michel. 1975. Surveiller et Punir, Naissance de la Prison. Paris: Gallimard.

Fox, Richard W., and Lears, T. J. Jackson, eds. 1983. The Culture of Consumption: Critical Essays in American History, 1880-1980. New York: Pantheon.

Friedel, Robert, and Israel, Paul. 1986. Edison's Electric Light: Biography of an Invention. New Brunswick, NJ: Rutgers University Press.

Frontisi-Ducroux, F. 1975. Dédale, Mythologie de l'artisan en Grèce Ancienne. Paris: Maspéro-La Découverte.

Fujimura, Joan. 1987. "Constructing 'Do-able' Problems in Cancer Research: Articulating Alignment." Social Studies of Science 17: 257–293.

Galambos, Louis, and Pratt, Joseph. 1988. The Rise of the Corporate Commonwealth: United States Business and Public Policy in the 20th Century. New York: Basic Books.

Gallup, G. H. 1972. The Gallup Polls: Public Opinion 1935-1971. New York: Random House.

Gardner, Charles. 1981. British Aircraft Corporation, a History. London: Batsford.

Giddens, Anthony. 1984. The Constitution of Society. Cambridge: Polity Press.

Gilbert, G. Nigel, and Mulkay, Michael. 1984. Opening Pandora's Box: A Sociological Analysis of Scientists' Discourse. Cambridge: Cambridge University Press.

Gish, O. H. 1947 (1932). "Use of Geo-electric Methods in the Search for Oil," in *Early Geophysical Papers of the Society of Exploration Geophysics*. Tulsa, OK: Society of Exploration Geophysics, 497–508.

Glaser, Barney, and Strauss, Anselm. 1966. Awareness of Dying. Chicago: Aldine.

Gökalp, Iskender. 1992. "On the Analysis of Large Technical Systems." Science, Technology & Human Values 17 (winter): 57-78.

Gooding, David, Pinch, Trevor, and Schaffer, Simon, eds. 1989. The Uses of Experiment: Studies in the Natural Sciences. Cambridge: Cambridge University Press.

Gorman, Michael E., and Carlson, W. Bernard. 1990. "Interpreting Invention as a Cognitive Process: Alexander Graham Bell, Thomas Edison, and the Telephone, 1876–1878." *Science, Technology, and Human Values* 15 (spring 1990): 131–164.

Greiner, A. 1877. "Nomenclature of Steel." *Engineering and Mining Journal* 23 (3 March): 138–139.

Griffiths, R., et al. 1983. NHS Management Inquiry. London: DHSS.

Gunston, Bill. 1974. Attack Aircraft of the West. London: Ian Allen.

Hacker, B. C. 1987. The Dragon's Tail. Radiation Safety in the Manhattan Project, 1942-1946. Berkeley: University of California Press.

Harrison, W., and Hibben, S. G. 1938. "Efficient Tint Lighting With Fluorescent Tubes." *Electrical World* 110 (May 1938): 1523-1530.

Hastings, Stephen. 1966. The Murder of TSR 2. London: Macdonald.

Heiland, C. A. 1940. Geophysical Exploration. New York: Hafner.

Hellrigel, Mary Ann. 1989. "Creating an Industry: Thomas A. Edison and His Electric Light System." Master's thesis, University of California, Santa Barbara.

Hendricks, Gordon. 1966. The Kinetoscope: America's First Commercially Successful Motion Picture Exhibitor. New York: The Beginnings of the American Film.

Hewish, John. 1987. "From Cromford to Chancery Lane: New Light on the Arkwright Patent Trials." *Technology and Culture* 28: 80-86.

Hewlett, R. G. 1978. Federal Policy for the disposal of highly radioactive wastes from commercial nuclear power plants. Washington, DC: Department of Energy, DOE/MA-0153.

Hewlett, R. G., and Duncan, F. 1969. *Atomic Shield*, 1947–1952. University Park and London: Pennsylvania State University Press.

Hindle, Brooke. 1981. Emulation and Invention. New York: New York University Press.

Hine, T. 1986. Populuxe. New York: Knopf.

Hollander, W. 1981. Abel Wolman. His Life and Philosophy, an Oral History. Chapel Hill, NC: Universal Printing and Publishing Company.

Holley, Alexander L. 1865. A Treatise on Ordnance and Armor. New York: D. Van Nostrand.

Holley, Alexander L. 1868. The Bessemer Process and Works in the United States. New York: D. Van Nostrand.

Holley, Alexander L. 1872. "Bessemer Machinery." Journal of the Franklin Institute 94: 252-265, 391-399; (1873): 233-241.

Holley, Alexander L. 1873a. Bessemer Machinery. Philadelphia: Merrihew.

Holley, Alexander L. 1873b. "Tests of Steel." American Institute of Mining Engineers Transactions 2: 116-122. Holley, Alexander L. 1875. "What is Steel?" American Institute of Mining Engineeers Transactions 4: 138-149.

Holton, Gerald. 1978. "Subelectrons, Presuppositions, and the Millikan-Ehrenhaft Dispute." *Historical Studies in the Physical Sciences* 9: 161-224.

Hounshell, David A., and Smith, John Kenly, Jr. 1988. Science and Corporate Strategy: Du Pont R&D, 1902-1980. Cambridge: Cambridge University Press.

Howe, Henry M. 1875. "What is Steel?" *Engineering and Mining Journal* 20 (28 August; 4, 11, 18 September 1875): 213, 235–236, 258–259, 282–283.

Howe, Henry M. 1876. "The Nomenclature of Iron." American Institute of Mining Engineers Transactions 5: 515-537.

Howe, Henry M. 1891. The Metallurgy of Steel, 2nd edition, revised. New York: Scientific Publishing.

Hughes, Thomas P. 1971. *Elmer Sperry: Inventor and Engineer*. Baltimore, MD: Johns Hopkins University Press.

Hughes, Thomas P. 1977. "Edison's Method," in *Technology at the Turning Point*, W. B. Pickett, ed. San Francisco: San Francisco Press, 5-22.

Hughes, Thomas P. 1983. Networks of Power: Electrification in Western Society, 1880-1930. Baltimore, MD: Johns Hopkins University Press.

Hughes, Thomas P. 1986a. "The Seamless Web: Technology, Science, Etcetera, Etcetera." Social Studies of Science 16: 281-292.

Hughes, Thomas P. 1986b. "Machines and Medicine. A Projection of Analogies Between Electric Power Systems and Health Care Systems." International Journal of Technology Assessment in Health Care 2: 285-295.

Hughes, Thomas P. 1987. "The Evolution of Large Technological Systems," in Bijker, et al., eds. 1987a: 51-82.

Hughes, Thomas P. 1989. American Genesis: A Century of Invention and Technological Enthusiasm, 1870-1970. New York: Viking Penguin.

Hull, David L. 1988. Science as a Process: An Evolutionary Account of the Social and Conceptual Development of Science. Chicago: University of Chicago Press.

Hung, Robert W. 1876. "A History of the Bessemer Manufacture in America." American Institute of Mining Engineers Transactions 5: 201-216.

Ignatieff, Michael. 1978. A Just Measure of Pain: The Penitentiary in the Industrial Revolution, 1750-1850. New York: Pantheon.

Inman, G. E., and Thayer, R. N. 1938. "Low-Voltage Fluorescent Lamps." *Journal* for Electrical Engineering 57 (June 1938): 245–248.

"The Invention of the Bessemer Process." Engineering 6 (27 March 1896): 413-414.

Jacobs, Dany. 1988. Gereguleerd Staal: Nationale en Internationale Economische Regulering in de Westeuropese Staalindustrie, 1750–1950. Ph.D. diss., University of Nijmegen.

Jacobs, Lewis. 1968 (1939). The Rise of the American Film: A Critical History. New York: Teachers College Press, 1939; reprinted 1968.

Jeans, W. T. 1884. The Creators of the Age of Steel. New York: C. Scribner's Sons; London: Chapman and Hall.

Jehl, Francis. 1937. Menlo Park Reminscences, 3 vols. Dearborn, MI: Edison Institute, 1937-1941.

Jenkins, Reese V. 1984. "Elements of Style: Continuities in Edison's Thinking." Annals of the New York Academy of Sciences 424: 149-162.

Jenkins, Reese V., and Israel, Paul. 1948. "Thomas A. Edison: Flamboyant Inventor." *IEEE Spectrum*, December, 74-79.

Jenkins, Reese V., et al. 1989. The Papers of Thomas A. Edison. Vol. 1: The Making of an Inventor, February 1847–June 1873. Baltimore, MD: Johns Hopkins University Press.

Johnson, Terence J. 1972. Professions and Power. London: Macmillan.

Johnson, Terence J. 1977. "The Professions in the Class Structure," in Industrial Society: Class, Cleavage, and Control, Richard Scase, ed. New York: St. Martin's, 93-110.

Jones, Edgar. 1988. "The Transition from Wrought Iron to Steel Technology at the Dowlais Iron Company, 1850–1890," in *The Challenge of New Technology: Innovation in British Business Since 1850*, Jonathan Liebenau, ed. Gower: Aldershot, 43–57.

Josephson, Matthew. 1959. Edison: A Biography. New York: McGraw-Hill.

Kasson, John. 1978. Amusing the Million: Coney Island at the Turn of the Century. New York: Hill and Wang.

Kindem, G., ed. 1982. The American Movie Industry: The Business of Motion Pictures. Carbondale, IL: Southern Illinois University Press.

Kopp, C. 1979. "The origins of the American scientific debate over fallout." Social Studies of Science 9: 403-422.

Kraus, S., Mehling, R., and El-Assal, E. 1963. "Mass Media and the Fallout Controversy." *Public Opinion Quarterly* 27: 191–206.

Kuklick, Henrika. 1983. "The Sociology of Knowledge: Retrospect and Prospect." Annual Review of Sociology 9: 287-310.

Lamb, Robert K. 1952. "The Entrepreneur and the Community," in Men in Business: Essays in the History of Entrepreneurship, W. Miller, ed. Cambridge, MA: Harvard University Press, 91-119.

Lange, Ernest F. 1913. "Bessemer, Göransson and Mushet: A Contribution to Technical History." *Memoirs Manchester Lit & Phil Society* 57, no. 17: 1-44.

Latour, Bruno. 1987. Science in Action. How to follow scientists and engineers through society. Milton Keynes: Open University Press; and Cambridge, MA: Harvard University Press.

Latour, Bruno. 1988a. "How to Write *The Prince* for Machines as Well as for Machinations," in *Technology and Social Change*, Brian Elliot, ed. Edinburgh: Edinburgh University Press.

Latour, Bruno. 1988b. "A Relativist Account of Einstein's Relativity." Social Studies of Science 18: 3-45.

Latour, Bruno. 1988c. Irreductions, published with The Pasteurization of France, translated by A. Sheridan and J. Law. Cambridge, MA: Harvard University Press.

Latour, Bruno. 1990. "Drawing Things Together," in Representation in Scientific Practice. Michael Lynch and Steve Woolgar, eds. Cambridge, MA: MIT Press, 19-68.

Latour, Bruno. 1992. Aramis ou l'amour des techniques. Paris: La Découvertè.

Latour, Bruno, Mauguin, P., and Teil, Genvieve 1992. "A Note on Socio-Technical Graphs." *Social Studies of Science* 22: 33–57.

Law, John. 1987a. "On the Social Explanation of Technical Change: The Case of the Portuguese Maritime Expansion." *Technology and Culture* 28: 227-252.

Law, John. 1987b. "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion," in *The Social Construction of Technological Systems*, W. E. Bijker, T. P. Hughes, and T. J. Pinch, eds. Cambridge, MA: MIT Press, 111-134.

Law, J. 1988. "The Anatomy of a Sociotechnical Struggle: The Design of the TSR2," in *Technology and Social Process*, B. Elliott, ed. Edinburgh: Edinburgh University Press, 44-69.

Law, John. 1991a. "Theory and Narrative in the History of Technology: Response," *Technology and Culture* 32: 377-384.

Law, John. 1991b. "Power, Discretion and Strategy: Management Discourse in a Formal Organisation," in *Power, Technology and the Modern World*, J. Law, ed. London: Routledge.

Law, John. 1992. "The Olympus 320 Engine: A Case Study in Design, Autonomy and Organizational Control," in *Technology and Culture*.

Leroi-Gourhan, A. 1964. Le Geste et la Parole. Paris: Albin-Michel.

Lord, W. M. 1945–1947. "The Development of the Bessemer Process in Lancashire, 1856–1900." Newcomen Society Transactions 25: 163–180.

Lundvall, Bengt-Åke. 1988. "Innovation as an Interactive Process: From User-Producer Interaction to the National System of Innovation," in *Technical Change and Economic Theory*, Giovanni Dosi, et al., eds. London: Pinter, 349–369.

Lyell, Charles. Principles of Geology, 3 vols., London, 1830-1832.

Lynch, Michael, and Woolgar, Steve eds. 1990. Representation in Scientific Practice. Cambridge, MA: MIT Press.

Mack, P. 1990. Viewing the Earth. The Social Construction of the Landsat Satellite System. Cambridge, MA: MIT Press.

MacKenzie, Donald. 1978. "Statistical Theory and Social Interests: A Case Study." *Social Studies of Science* 8: 35-83.

MacKenzie, Donald. 1987. "Missile Accuracy: A Case Study in the Social Processes of Technological Change," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, W. E. Bijker, T. P. Hughes, and T. J. Pinch, eds. Cambridge, MA: MIT Press, 195–222.

MacKenzie, Donald. 1989. "From Kwajalein to Armageddon? Testing and the social construction of missile accuracy," in *The Uses of Experiment*, D. Gooding, T. J. Pinch, and S. Schaffer, eds. Cambridge: Cambridge University Press.

MacKenzie, Donald. 1990a. Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance. Cambridge, MA: MIT Press.

MacKenzie, Donald. 1990b. "Economic and Sociological Explanation of Technical Change." Paper presented to Meeting on Firm Strategy and Technical Change: Micro Economics or Micro Sociology? at Manchester, 27–27 September.

MacKenzie, Donald. 1990c. "Negotiating Arithmetic, Deconstructing Proof: The Sociology of Mathematics and Information Technology." Mimeo, Edinburgh University.

MacKenzie, Donald, and Barnes, Barry. 1979. Scientific Judgement: The Biometry-Mendelism Controversy," in *Natural Order: Historical Studies of Scientific Culture*, Barry Barnes and Steven Shapin, eds. London: Sage, 191–210.

MacKenzie, Donald, and Spinardi, Graham. 1988. "The Shaping of Nuclear Weapon System Technology: US Fleet Ballistic Missile Guidance and Navigation." *Social Studies of Science* 18: 419-463; 581-624.

MacKenzie, Donald, and Wajcman, Judy, eds. 1985. The Social Shaping of Technology a Reader. Milton Keynes: Open University Press.

Macleod, Christine. 1988. Inventing the Industrial Revolution: The English Patent System, 1660-1800. Cambridge: Cambridge University Press.

Maier, Charles S. 1975. Recasting Bourgeois Europe: Stabilization in France, Germany, and Italy in the Decade after World War I. Princeton: Princeton University Press.

Maier, Charles S. 1987. In Search of Stability: Explorations in Historical Political Economy. New York: Cambridge University Press.

Mann, Michael. 1986. The Sources of Social Power. Vol. 1. A History of Power from the Beginning to A.D. 1760. Cambridge: Cambridge University Press.

May, Lary. 1980. Screening out the Past: The Birth of Mass Culture and the Motion Picture Industry. New York: Oxford University Press.

Mayntz, Renate, and Hughes, Thomas P., eds. 1988. The Development of Large Technical Systems. Frankfurt: Campus Verlag.

Mazuzan, G. T., and Walker, J. S. 1984. Controlling the Atom. The Beginnings of Nuclear Regulation, 1946-1962. Berkeley: University of California Press.

McCracken, Grant. 1988. Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods and Activities. Bloomington: Indiana University Press.

McGaw, Judith A. 1985. "Accounting for Innovation: Technological Change and Business Practice in the Berkshire County Paper Industry." *Technology and Culture* 26: 703-725.

McHugh, Jeanne. 1980. Alexander Holley and the Makers of Steel. Baltimore, MD: Johns Hopkins University Press.

Metcalf, William. 1876. "Can the Commercial Nomenclature of Iron Be Reconciled to the Scientific Definitions of the Terms Used to Distinguish the Various Classes?" *American Institute of Mining Engineers Transactions* 5: 355–365.

Metcalf, William, et al. 1880. "Discussion on Steel Rails." American Institute of Mining Engineers Transactions 9: 529–608.

Metlay, D. 1985. "Radioactive waste management policy making," in *Managing* the National's Commercial High-Level Radioactive Waste. Washington, DC: Office of Technology Assessment (OTA), 199-244.

Millard, A. J. 1990. *Edison and the Business of Innovation*. Baltimore: Johns Hopkins University Press.

Misa, Thomas J. 1985. "Military Needs, Commercial Realities, and the Development of the Transistor, 1948–1958," in *Military Enterprise and Technological Change*, Merritt Roe Smith, ed. Cambridge, MA: MIT Press, 253–287.

Misa, Thomas J. 1987. Science, Technology and Industrial Structure: Steelmaking in America, 1870-1925. Ph.D. diss., University of Pennsylvania.

Misa, Thomas J. 1988a. "How Machines Make History, and How Historians (and Others) Help Them to Do So." *Science, Technology and Human Values* 13: 308–331.

Misa, Thomas J. 1988b. "The Construction and Destruction of a Heterogeneous Network: The Case of High Speed Tool Steel." Paper presented to European Association for the Study of Science and Technology, Amsterdam, 16–19 November.

Misa, Thomas J. 1992. "Theories of Technological Change: Parameters and Purposes." Science, Technology, and Human Values 17 (winter): 3-12.

Moon, P. 1936 (revised ed. 1961). The Scientific Basis of Illuminating Engineering. New York: Dover Publications.

Morrell, Jack, and Thackray, Arnold. 1981. Gentlemen of Science: Early Years of the British Association for the Advancement of Science. Oxford: Clarendon Press.

Mulkay, Michael. 1979. "Knowledge and Utility: Implications for the Sociology of Knowledge," *Social Studies of Science* 9: 63-80.

Mulkay, Michael. 1985. The Word and the World. London: George Allen and Unwin.

Musser, Charles. 1991. Before the Nickelodeon: Edwin S. Porter and the Edison Manufacturing Company. Berkeley: University of California Press.

Mulkay, Michael, Pinch, Trevor, and Ashmore, Malcolm. 1987. "Colonizing the Mind. Dilemmas in the Application of Social Science." *Social Studies of Science* 17: 231–256.

Nelson, Richard R, and Winter, Sidney G. 1982. An Evolutionary Theory of Economic Change. Cambridge, MA: Belknap/Harvard University Press.

Noble, David F. 1977. America by Design: Science, Technology and the Rise of Corporate Capitalism. New York: Knopf.

Noble, David. 1984. Forces of Production: A Social History of Industrial Automation. New York: Knopf.

Norman, David. 1988. The Psychology of Everyday Things. New York: Basic Books.

Pearse, John B. 1872. "The Manufacture of Iron and Steel Rails." American Institute of Mining Engineers Transactions 1: 162–169.

Peiss, Kathy Lee. 1986. Cheap Amusements: Working Women and Leisure in Turn-of-the-Century New York. Philadelphia: Temple University Press.

Perrow, Charles. 1984. Normal Accidents: Living with High-Risk Technologies. New York: Basic Books.

Pfau, R. 1984. No Sacrifice Too Great: The Life of Lewis L. Strauss. Charlottesville, VA: University Press of Virginia.

Philip, Cynthia Owen. 1985. Robert Fulton: A Biography. New York: Franklin Watts.

Pinch, Trevor J. 1986. Confronting Nature: The Sociology of Solar-Neutrino Detection. Dordrecht: D. Reidel.

Pinch, Trevor, Ashmore, Malcolm, and Mulkay, Michael. 1987. "Social Technologies: To Test or Not to Test, That Is the Question." Presented to the International Workshop on the Integration of Social and Historical Studies of Technology, University of Twente, 3–5 September.

Pinch, Trevor J., and Bijker, W. E. 1984. "The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." *Social Studies of Science*. 14: 399–441.

Pinch, Trevor J., and Bijker, Wiebe E. 1986. "Science, Relativism and the New Sociology of Technology." Social Studies of Science 16: 347-360.

Pinch, Trevor J., and Bijker, Wiebe E. 1987. "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit One Another," in *The Social Construction of Technological Systems*, Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch, eds. Cambridge, MA: MIT Press, 17–50.

Pool, Ithiel de Sola. 1983. Technologies of Freedom. Cambridge, MA: Belknap/ Harvard University Press.

Post, Robert C. 1976. *Physics, Patents, and Politics: A Biography of Charles Grafton Page.* New York: Science History.

Pratt, Wallace E. 1940. "Geology in the Petroleum Industry." Bulletin of the American Association of Petroleum Geologists 24: 1209–1240.

Price Waterhouse and Comshare. 1986. "Management Budgeting for General Managers." Available from Price Waterhouse, London.

Prime, Frederick, Jr. 1875. "What Steel Is." American Institute of Mining Engineers Transactions 4: 328-339.

Rae, John B. 1965. The American Automobile: A Brief History. Chicago: University of Chicago Press.

Ramsaye, Terry. 1926. A Million and One Nights: A History of the Motion Picture. New York: Simon and Schuster.

Reed, Bruce, and Williams, Geoffrey. 1971. Denis Healey and the Policies of Power. London: Sidgewick and Jackson.

Reich, L. 1985. The Making of American Industrial Research: Science and Business at G.E. and Bell, 1876–1926. Cambridge: Cambridge University Press.

Ridenour, L. N. 1950. "How effective are radioactive poisons in warfare?" Bulletin of Atomic Scientists 6: 199-202, 224.

Robertson, James Oliver. 1980. American Myth, American Reality. New York: Hill & Wang.

Rogers, R. P. 1980. The Development and Structure of the U.S. Electric Lamp Industry, Bureau of Economics Staff Report of the Federal Trade Commission. Washington, D.C.: U.S. Government Printing Office.

Rosenberg, Nathan. 1982. Inside the Black Box: Technology and Economics. Cambridge: Cambridge University Press.

Rosenzweig, Roy. 1983. Eight Hours for What We Will: Workers and Leisure in an Industrial City, 1870-1920. New York: Cambridge University Press.

Rosi, E. J. 1965. "Mass and Attentive Opinion on Nuclear Weapon Tests and Fallout, 1954–1963." *Public Opinion Quarterly* 29: 280–298.

Rudwick, Martin J. S. 1985. The Great Devonian Controversy: The Shaping of Scientific Knowledge among Gentlemanly Specialists. Chicago: University of Chicago Press.

Russell, Conrad, ed. 1973. The Origins of the English Civil War. London: Macmillan.

Russell, Stewart. 1986. "The Social Construction of Artefacts: a Response to Pinch and Bijker." Social Studies of Science 16: 331-346.

Sahal, D. 1981. Patterns of Technological Innovation. Reading, MA: Addison-Wesley.

Sandberg, C. P. 1880. "Rail Specifications and Rail Inspection in Europe." American Institute of Mining Engineers Transactions 9: 193-248.

Sandberg, C. P., et al. 1881. "Iron and Steel Considered as Structural Materials— A Discussion." American Institute of Mining Engineers Transactions 10: 361-411.

Schifrin, Art. 1983a. "Researching and Restoring Pioneering Talking Pictures: The 70th Anniversary of the Theatrical Release of the Kinetophone." *Journal of the Society of Motion Picture and Television Engineers* 92: 739–751.

Schifrin, Art. 1983b. "The Trouble with the Kinetophone." American Cinematographer 64 (September): 50-54, 115.

Scranton, Philip. 1991. "Theory and Narrative in the History of Technology: Comment." *Technology and Culture* 32: 385-393.

Secord, James A. 1986. Controversy in Victorian Geology: The Cambrian-Silurian Dispute. Princeton, NJ: Princeton University Press.

Segerstråle, Ullica. 1986. "Colleagues in Conflict: An 'In Vivo' Analysis of the Sociobiology Controversy." *Biology and Philosophy* 1: 53-87.

Shapin, S., and Schaffer, S. 1985. Leviathan and the Air Pump: Hobbes, Boyle and the Experimental Life. Princeton: Princeton University Press.

Shelley, Mary. 1816 (pocket edition, 1983). Frankenstein. Harmondsworth: Penguin.

Shrum, Wesley, and Morris, Joan. 1990. "Organizational Constructs for the Assembly of Technological Knowledge," in *Theories of Science in Society*, Susan E. Cozzens and Thomas F. Gieryn, eds. Bloomington and Indianapolis: Indiana University Press, 235–257.

Siemens, C. W. 1868. "The Regenerative Gas Furnace as Applied to the Manufacture of Cast Steel." *Journal of the Chemical Society* (London) n.s. 6: 279–308.

Sigaut, F. 1984. "Essai d'identification des instrument a bras au travail de sol." Cahiers ORSTOM, Science Humaines 22, 3/4: 359-374.

Simon, H. A. 1969. The Sciences of the Artificial. Cambridge, MA: MIT Press.

Singer, Ben. 1988. "Early Home Cinema and the Edison Home Projecting Kinetoscope." *Film History* 2: 37-69.

Sklar, Robert. 1975. Movie-Made America: A Social History of American Movies. New York: Random House.

Slide, Anthony. 1970. Early American Cinema. New York: A. S. Barnes.

Smith, Dorothy. 1974. "The Social Construction of Documentary Reality." Sociological Enquiry 44(4): 257-268.

Star, Susan Leigh. 1989. Regions of the Mind: Brain Research and the Quest for Scientific Certainty. Stanford: Stanford University Press.

Staudenmaier sj, John. 1985. Technology's Storytellers: Reweaving the Human Fabric. Cambridge, MA: MIT Press.

Stone, L. 1972. The Causes of the English Revolution, 1529-1642. New York: Harper.

Stone, L. 1973. Family and Fortune: studies in aristocratic finance in the sixteenth and seventeenth centuries. Oxford: Clarendon.

Stoughton, Bradley. 1908. The Metallurgy of Iron and Steel. New York: Hill.

Stoughton, Bradley. 1934. The Metallurgy of Iron and Steel. 4th edition. New York: McGraw-Hill.

Strauss, Anselm. 1978. Negotiations. San Francisco: Jossey-Bass.

Suchman, Lucy. 1987. Plans and Situated Actions. The Problem of Human Machine Communication. Cambridge: Cambridge University Press.

Supply of Military Aircraft, 1955. Cmd. 9388. London: Her Majesty's Stationery Office.

Susman, Warren I. 1984. Culture as History: The Transformation of American Society in the Twentieth Century. New York: Pantheon.

Swann, John. 1887. An Investor's Notes on American Railroads. New York: Putnam.

Swank, James M. 1964 (1982). History of the Manufacture of Iron in All Ages. New York: Burt Franklin.

Tate, Alfred O. 1938. Edison's Open Door. New York: E. P. Dutton.

Tawney, Richard Henry. 1960. Religion and the rise of capitalism: An historical study. London: Murray.

Temin, Peter. 1964. Iron and Steel in Nineteenth-Century America: An Economic Inquiry. Cambridge, MA: MIT Press.

Thomas, Donald E. 1987. *Diesel: technology and society in industrial Germany*. Tuscaloosa, AL: University of Alabama Press.

Titus, C. A. 1986. Bombs in the Backyard. Atomic Testing and American Politics. Reno and Las Vegas, NV: University of Nevada Press.

Todd, Edmund N. 1987. "A Tale of Three Cites: Electrification and the Structure of Choice in the Ruhr, 1886–1900." Social Studies of Science 17: 387–412.

Todd, Edmund N. 1989. "Industry, State, and Electrical Technology in the Ruhr circa 1900." Osiris 5: 243–259.

Toure, A. 1985. Les petits metiers d'Abidjan. Paris: Edition Karthala.

Trevor-Roper, Hugh R. 1951. "The Elizabethan Aristocracy: an anatomy anatomized." *Economic History Review*, 2nd series, 3: 279–298.

Trevor-Roper, Hugh R. 1953. "The Gentry, 1540-1640." Economic History Review, supplement 1.

Tweedale, Geoffrey. 1984. "Sir Henry Bessemer." Dictionary of Business Biography. London: Butterworths, I: 309-314.

Tweedale, Geoffrey. 1987. Sheffield Steel and America: A Century of Commercial and Technological Interdependence, 1830-1930. Cambridge: Cambridge University Press.

U.S. Atomic Energy Commission (USAEC). 1949a. Reporting of the handling of radioactive waste materials in the United States Atomic Energy Program. Report AEC 180-1, October 17.

USAEC. 1949b. Reporting of the handling of radioactive waste materials in the United States Atomic Energy Program. Report AEC 180-2, October 14.

USAEC. 1949c. Handling Radioactive Wastes in the Atomic Energy Program. Washington DC: Government Printing Office (GPO).

USAEC. 1956a. Disposal of Radioactive Waste. February 3.

USAEC. 1956b. Disposal of Radioactive Waste. Report AEC 180-5, March 30.

USAEC. 1956c. Disposal of Radioactive Wastes in the US Atomic Energy Program. (WASH-408). Washington, DC: Government Printing Office, May 17.

USAEC. 1957a. Atomic Energy Commission Handling and Disposal of Radioactive Wastes. Report AEC 180-6, June 14.

USAEC. 1957b. Status Report on Handling and Disposal of Radioactive Wastes in the AEC Program. (WASH-742). Washington, DC: Government Printing Office, August.

USAEC. 1958. First Meeting of the AEC Waste Disposal Working Group (WDWG). Report AEC 719-20, April 3.

USAEC. 1960a. Annual Report to Congress of the Atomic Energy Commission for 1959. Washington, DC: Government Printing Office.

USAEC. 1960b. Opinion and final decision in the matter of industrial waste disposal corporation. Report AEC-R, 42-23, June 27.

USAEC. 1960c. Letter to Committee on Waste Disposal, NAS-NRC, regarding land disposal of radioactive wastes. Report AEC 180-13, September 20.

USAEC. 1960d. Land Disposal of Radioactive Waste—Addendum to AEC 180-3. Report AEC 180-14, October 27.

U.S. Department of Energy (DOE) Archives. Energy History Collection.

U.S. DOE Archives. Records of the US Atomic Energy Commission, Record group 326, Collection 'Secretariat' (SECY)—Materials 12 (Waste Processing and Disposal).

U.S. Joint Committee on Atomic Energy (JCAE). 1959. Hearings on Industrial Radioactive Waste Disposal. 86th Congress, first session, January 28–30, and February 2–3. Washington, DC: Government Printing Office (GPO).

U.S. National Academy of Sciences (NAS) Archives. Records of the committee on (geologic) waste disposal.

USNAS Archives. Records of the committee on disposal and dispersal of radioactive wastes.

USNAS. 1956a. The Biological Effects of Atomic Radiation: Summary Reports. Washington DC: National Academy of Sciences.

USNAS. 1956b. The Biological Effects of Atomic Radiation: A Report to the Public. Washington DC: National Academy of Sciences.

USNAS. 1957a. *The Disposal of Radioactive Waste on Land*. Washington DC: National Academy of Sciences.

USNAS. 1957b. "Proceedings of the Princeton Conference on Disposal of Radioactive Waste Products, September 10-12, 1955, Princeton University, New Jersey," in *The Disposal of Radioactive Waste on Land*. Washington, DC: National Academy of Sciences.

USNAS. 1957c. Status Report on the Disposal of Radioactive Wastes. Washington, DC: National Academy of Sciences.

U.S. National Archives. Records of the US Joint Committee on Atomic Energy. Record group 128.

U.S. National Archives. Records of the US atomic Energy Commission. Record group 326.

Usselman, Steven W. 1985. Running the Machine: The Management of Technological Innovation on American Railroads, 1860-1910. Ph.D. diss., University of Delaware.

Vergragt, Philip J. 1988. "The Social Shaping of Industrial Innovations." Social Studies of Science 18: 483-513.

Wachhorst, Wyn. 1981. Thomas Alva Edison: An American Myth. Cambridge, MA: MIT Press.

Weart, S. R. 1988. Nuclear Fear. History of Images. Cambridge, MA: Harvard University Press.

Wertime, Theodore A. 1961. The Coming of the Age of Steel. Leiden: E. J. Brill.

West, P. 1986. "Clinical Budgeting—A Critique." Paper presented to the Health Economists' Study Group, University of Bath, July.

Wickings, I. 1983. "Griffiths Report: Consultants Face the Figures." Health and Social Service Journal, December 8.

Wickings, I., Childs, T., Coles, J., and Wheatcroft, C. 1985. *Experiments Using Pacts in Southend and Oldham HAs*, CASPE Research Paper, CASPE, King Edward's Hospital Trust Fund, London.

Wickings, I., and Coles, J. 1985. "The Ethical Imperative of Clinical Budgeting." *Nuffield* / York Portfolios 10: 1-8. Nuffield Provincial Hospital Trusts, London.

Wiebe, Robert. 1967. The Search for Order, 1877-1920. New York: Hill and Wang.

Wilford, J. N. 1981. The Mapmakers. New York: Knopf.

Williams, Geoffrey, Gregory, Frank, and Simpson, John. 1969. Crisis in Procurement: A Case Study of the TSR-2. London:Royal United Service Institution.

Williams, Rosalind H. 1982. Dream Worlds: Mass Consumption in Late Nineteenth-Century France. Berkeley: University of California Press.

Williams, W. Mattieu. 1890. The Chemistry of Iron and Steel Making. London: Chatto and Windus.

Wilson, Harold. 1971. The Labour Government, 1964–1970: A Personal Record. London: Weidenfeld and Nicolson and Michael Joseph.

Winch, P. 1958. The Idea of a Social Science and Its Relation to Philosophy. London: Routledge and Kegan Paul.

Winner, Langdon. 1977. Autonomous Technology. Cambridge, MA: MIT Press.

Winner, Langdon. 1980. "Do Artefacts Have Politics?" Daedalus 109: 121-136.

Wittgenstein, L. 1974. Philosophical Investigations, 3rd edition. Oxford: Basil Blackwell.

Wood, Derek. 1975. Project Cancelled. London: Macdonald's and Janes.

Woolgar, Steve. 1983. "Irony in the Social Study of Science," in Science Observed: Perspectives on the Social Study of Science, K. D. Knorr and M. Mulkay, eds. Beverly Hills and London: Sage, 239-266.

Woolgar, Steve, ed. 1988. Knowledge and Reflexivity: New Frontiers in the Sociology of Knowledge. Beverly Hills and London: Sage.

## **Contributors**

**Madeleine Akrich** is a research fellow at the Centre de Sociologie de l'Innovation of the Ecole Normale Supérieure des Mines in Paris. Her research is on the sociology of technology; she has published several articles on the process of technology transfer to less-developed countries and on user representations during the innovation process.

**Malcolm Ashmore** is lecturer in sociology at Loughborough University of Technology. His interests are in the sociology of scientific knowledge, expertise, and reflexivity; currently, he is investigating the role of the debunker in cases of discovered "fraud." He has published *The Reflexive Thesis* (University of Chicago Press, 1989) and, with Michael Mulkay and Trevor Pinch, *Health and Efficiency: A Sociology of Health Economics* (Open University Press, 1989).

**Wiebe E. Bijker** is associate professor at the University of Limburg, The Netherlands. His present research focuses on the implications of recent work in the sociology and history of technology for issues of control, intervention, and social change; his work encompasses technology assessment, ethics, and theories of society.

**Geof Bowker** is director of the National Archive for the History of Computing at the Center for the History of Science, Technology and Medicine, University of Manchester. His research interests include the history of cybernetics and computing. He has written extensively on the history of Schlumberger.

**Michel Callon** is professor of sociology at the Ecole Normale Supérieure des Mines in Paris and director of the Centre de Sociologie de l'Innovation. His current research focuses on the dynamics of techno-economic networks and on scientific research policies. He has edited, with John Law and Arie Rip, *Mapping the Dynamics of Science* and Technology (Macmillan, 1986) and La Science et ses réseaux (La Découverte, 1989).