References

Chapter 1

1. A. Johnston (ed.) *Francis Bacon*, "In praise of knowledge" (Schocken Books, New York; 1965) p. 13.
2. A. Johnston (ed.) *Francis Bacon*, "The advancement of learning" (Schocken Books, New York; 1965) p. 61.
3. D.A. Kronick, *A history of scientific and technical periodicals* (Scarecrow Press, New York; 1962) p. 60.
4. D.A. Kronick, *A history of scientific and technical periodicals* (Scarecrow Press, New York; 1962) p. 149.
5. M.F. Katzen, "The changing appearance of research journals in science and technology: an analysis and a case study." *In:* A.J. Meadows (ed.) *Development of science publishing in Europe* (Elsevier Science Publishers, Amsterdam; 1980) p. 184.
6. J.E. McClellan III, *Science reorganized: scientific societies in the eighteenth century* (Columbia University Press, New York; 1985) p. 1.
7. J.E. McClellan III, *Science reorganized: scientific societies in the eighteenth century* (Columbia University Press, New York; 1985) p. 9.
8. J.Z. Young, *An introduction to the study of man* (Clarendon Press, Oxford; 1971) pp. 342–348.
9. E.G. Edwards, "The need for a history of higher education." In: History of Education Society, *The changing curriculum* (Methuen, London; 1971) pp. 87–100.
10. A.M. Carter, "Scientific manpower for 1970–1985," *Science*, 172, pp. 132–140 (1971).
11. G. Holton, "On the recent past of physics," *American Journal of Physics, 29*, p. 1 (1961).
12. A.J. Meadows, "Too much of a good thing?: quality versus quantity." In: H. Woodward and S. Pilling (eds.) *The international serials industry* (Gower Publishing, Aldershot, UK; 1993) pp. 23–43.
13. W. Goffman, *Coping with the biomedical literature explosion: a qualitative approach* (Rockefeller Foundation, New York; 1978) pp. 11–19.
14. M.J. Le Bas and J. Durham, "Scientific communication of geochemical data and the use of computer databases," *Journal of Documentation, 45*, pp. 124–138 (1989).
15. C.B. Wooton, *Trends in size, growth and cost of the literature since 1955* (British Library Research and Development Department, London; 1977) p. 71.
16. F. Rider, *The scholar and the future of the research library: a problem and its solution* (Hadham Press, New York; 1944) p. 6.
17. *The L.I.S.T. (Library and Information Statistics Tables for the UK)* (Library and Information Statistics Unit, Loughborough University, Loughborough, UK; 1994) Table 21.
18. E.J. Huth, "The information explosion," *Bulletin of the New York Academy of Medicine, 65*, pp. 647–661 (1989).

19. J.G. Crowther, *British scientists of the nineteenth century,* [Vol. I] (Penguin Books, Harmondsworth, UK; 1940) p. 113.
20. J.B. Priestley (ed.), *The Bodley Head Leacock* (Bodley Head, London; 1957) p. 161.
21. J. Ben-David, *The scientist's role in society* (Prentice-Hall, Englewood Cliffs, New Jersey; 1971).
22. J. Evans, *A history of the Society of Antiquaries* (Society of Antiquaries, London; 1956) p. 374.
23. L. Huxley, *Life and letters of Thomas Henry Huxley,* [Vol. I] (Macmillan, London; 1900) p. 424.
24. *Nature, 8,* p. 381 (1873).
25. A.G. Bloxham, *Nature, 50,* p. 104 (1894).
26. *Nature, 3,* p. 423 (1871).
27. D. Pendlebury, "Science's go-go growth: has it started to slow?" *The Scientist, 3,* p. 14 (1989).

Chapter 2

1. L.R. Veysey, *The emergence of the American university* (University of Chicago Press, Chicago; 1965) p. 133.
2. F. Machlup, *Knowledge and knowledge production* [Vol. I] (Princeton University Press, Princeton, New Jersey; 1980) p. 69.
3. G.R. Elton, *The practice of history* (Fontana, London; 1969) p. 17.
4. F. Machlup, *Knowledge and knowledge production* [Vol. I] (Princeton University Press, Princeton, New Jersey; 1980) pp. 73–74.
5. F. Machlup, *Knowledge and knowledge production* [Vol. I] (Princeton University Press, Princeton, New Jersey; 1980) pp. 73–74.
6. J. Ziman, *Knowing everything about nothing: specialization and change in scientific careers* (Cambridge University Press, Cambridge; 1987) p. 6.
7. A. Quiller-Couch, *On the art of writing* (Guild Books, Cambridge University Press, Cambridge; 1946) pp. 144–145.
8. M. Hunt, *The story of psychology* (Doubleday, New York; 1993) p. 563.
9. M. Hunt, *The story of psychology* (Doubleday, New York; 1993) p. 310.
10. R.K. Merton, *The sociology of science: theoretical and empirical investigations* (University of Chicago Press, Chicago; 1973) pp. 267–278.
11. T.S. Kuhn, *The structure of scientific revolutions* (University of Chicago Press, Chicago; 2nd Edition 1970).
12. K.R. Popper, *Conjectures and refutations* (Routledge and Kegan Paul, London; 1963).
13. T.S. Kuhn, *The structure of scientific revolutions* (University of Chicago Press, Chicago; 2nd Edition 1970) p. 167.
14. T.S. Kuhn, *The structure of scientific revolutions* (University of Chicago Press, Chicago; 2nd Edition 1970) p. 171.
15. M. Callon, J. Law, and A. Rip, *Mapping the dynamics of science and technology* (Macmillan, London; 1986) p. 4.
16. P. Rainbow (ed.) *Foucault Reader* (Pantheon Books, New York; 1984) pp. 334–335.
17. S.B. Barnes, "On the reception of scientific knowledge beliefs." *In*: B. Barnes (ed.) *Sociology of science* (Penguin Books, Harmondsworth, UK; 1972) p. 278.
18. I. Spiegel-Rösing, "The study of science, technology and society (SSTS): recent trends and future challenges." *In*: I. Spiegel-Rösing and D. de S. Price (eds.) *Science, technology and society: a cross-disciplinary perspective* (Sage Publications, London; 1977) p. 20.
19. P.H. Phenix, *Realms of meaning: a philosophy of the curriculum for general education* (McGraw-Hill, New York; 1964).
20. S. Neill, *The interpretation of the New Testament 1861–1961* (Oxford University Press, London; 1964) p. 338.

21. B. Bergonzi, *Exploding English: criticism, theory, culture* (Clarendon Press, Oxford; 1990) pp. 15–16.
22. B. Bergonzi, *Exploding English: criticism, theory, culture* (Clarendon Press, Oxford; 1990) p. 141.
23. S. Gubar and J. Kamholtz (eds.) *English inside out: the places of literary criticism* (Routledge, New York; 1993) p. 114.
24. R.K. Merton, *Social theory and social structure* (The Free Press, New York; 1968) pp. 50–51.
25. G.R. Elton, *The practice of history* (Fontana, London; 1969) p. 38.
26. L. Wolpert, *The unnatural nature of science* (Faber and Faber, London; 1992) p. 121.
27. A. Biglan, "The characteristics of subject matter in different academic areas." *Journal of Applied Psychology, 57*, pp. 195–203 (1973).
28. D.J. de S. Price, "Citation measures of hard science, soft science, technology, and non-science." *In*: C.E. Nelson and D.K. Pollack (eds.) *Communication among scientists and engineers* (Heath, Lexington, Massachusetts; 1970) pp. 1–12.
29. S. Baldi and L.L. Hargens, "Reassessing the N-rays reference network: the role of self citations and negative citations," *Scientometrics, 34*, pp. 239–253 (1995).
30. S.E. Cozzens, "Using the archive: Derek Price's theory of differences among the sciences." *Scientometrics*, 7, pp. 431–441 (1985).
31. *Nature, 225*, p. 126 (1970).
32. A. Rip and J.-P. Courtial, "Co-word maps of biotechnology: an example of cognitive scientometrics," *Scientometrics, 6*, pp. 381–400 (1984).
33. R.J.W. Tijssen, "A scientometric cognitive study of neural network research: expert mental maps versus bibliometric maps," *Scientometrics, 28*, pp. 111–136 (1993).
34. D. Lindsey, *The scientific publication system in social science* (Jossey-Bass, San Francisco; 1978) p. 81.
35. D. Lindsey, *The scientific publication system in social science* (Jossey-Bass, San Francisco; 1978) p. 83.
36. H. Zuckerman and R.K. Merton, "Patterns of evaluation in science: institutionalisation, structure and functions of the referee system," *Minerva, 9*, pp. 66–100 (1971).
37. P. Earle and B.C. Vickery, "Subject relations in science/technology literature," *Aslib Proceedings, 21*, pp. 237–243 (1969).
38. A.J. Nederhof, R.A. Zwaan, R.E. De Bruin, and P.J. Dekker, "Assessing the usefulness of bibliometric indicators for the humanities and the social and behavioural sciences: a comparative study," *Scientometrics, 15*, pp. 423–435 (1989).
39. A.J. Meadows, "Quantitative study of factors affecting the selection and presentation of scientific material to the general public," *Scientometrics, 20*, pp. 113–119 (1991).
40. J.S. Kidd, "The popularization of science. Part II. Patterns of topical coverage," *Scientometrics, 15*, pp. 241–255 (1989).
41. E.W. Said, *The world, the text, and the critic* (Faber and Faber, London; 1984) p. 144.
42. A. Clayton, M. Hancock-Beaulieu, and J. Meadows, "Change and continuity in the reporting of science and technology: a study of *The Times* and the *Guardian*," *Public Understanding of Science, 2*, pp. 225–234 (1993).
43. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123, London; 1993).
44. G. Philip, "Use of leading edge information systems by academic chemists in the UK. Part II." *Journal of Information Science, 22*, pp. 93–106 (1996).
45. H.C. Morton and A.J. Price, *The ACLS survey of scholars* (American Council of Learned Societies, Washington, D.C.; 1989) p. 42.
46. B.V. Lewenstein, "Cold fusion and hot history," *Osiris*, 7, pp. 135–163 (1992).

Chapter 3

1. W. Tuckwell, *Reminiscences of Oxford* (Smith, Elder, London; 1907) p. 124.
2. L. Wilson, *American academics: then and now* (Oxford University Press, New York; 1979) p. 15.
3. D.C. Pelz and F.M. Andrews, *Scientists in organizations* (John Wiley, New York; 1966) pp. 214–260.
4. G. Watson, *The literary thesis: a guide to research* (Longman, London; 1970) p. 3.
5. S. Cotgrove and S. Box, *Science, industry and society* (George Allen and Unwin, London; 1970).
6. A.J. Berry, *Henry Cavendish* (Hutchinson, London; 1960) p. 21.
7. E.T. Bell, "Gauss, the prince of mathematicians," *In:* J.R. Newman (ed.) *The world of mathematicians* [Vol. 1] (George Allen and Unwin, London; 1960) pp. 305–306.
8. L. Huxley (ed.) *Life and letters of Thomas Henry Huxley* [Vol. I] (Macmillan, London; 1900) p. 70.
9. L. Huxley (ed.) *Life and letters of Thomas Henry* Huxley [Vol. I] (Macmillan, London; 1900) p. 69.
10. D.K. Simonton, *Scientific genius: a psychology of science* (Cambridge University Press, Cambridge; 1988) p. 124.
11. D.J. de S. Price, *Little science, big science* (Columbia University Press, New York; 1963) p. 52.
12. P.E. Vernon, "Historical overview of research on scientific abilities," *In:* D.N. Jackson and J.P. Rushton (eds.) *Scientific excellence: origins and assessment* (Sage, Newbury Park, California; 1987) pp. 40–66.
13. L. Hudson, *Contrary imaginations* (Methuen, London; 1966) p. 155.
14. F. Barron, *Creative person and creative process* (Holt, Rinehart and Winston, New York; 1969) p. 68.
15. W. Gratzer (ed.) *A literary companion to science* (W.W. Norton, New York; 1990) pp. 147–148.
16. F. Barron, *Creative person and creative process* (Holt, Rinehart and Winston, New York; 1969) pp. 99–101.
17. A.H. Halsey and M. Trow, *The British academics* (Faber and Faber, London; 1971) p. 297.
18. S. Kyvik, "Productivity differences, fields of learning, and Lotka's law," *Scientometrics, 15*, pp. 205–214 (1989).
19. S. Hodges, B. Hodges, A.J. Meadows, M. Beaulieu, and D. Law, "The use of an algorithmic approach for the assessment of research quality," *Scientometrics, 35*, pp. 3–13 (1996).
20. K. Prpic, "The socio-cognitive frameworks of scientific productivity," *Scientometrics, 31*, pp. 293–311 (1994).
21. A.J. Lotka, "The frequency distribution of scientific productivity," *Journal of the Washington Academy of Sciences, 16*, pp. 317–323 (1926).
22. D.J. de S. Price, *Little science, big science* (Columbia University Press, New York; 1963) p. 46.
23. S. Hodges, B. Hodges, A.J. Meadows, M. Beaulieu, and D. Law, "The use of an algorithmic approach for the assessmentof research quality," *Scientometrics, 35*, pp. 3–13 (1996).
24. E. Munch-Petersen, "Bibliometrics and fiction," *Libri, 31*, pp. 1–21 (1981).
25. H. Grupp, "On the supplementary functions of science and technology indicators: the case of West German telecommunications R and D," *Scientometrics, 19*, pp. 447–472 (1990).
26. L. Liming and L. Lihua, "Scientific publication activities of 32 countries: Zipf-Pareto distribution," *Scientometrics, 26*, pp. 263–273 (1993).
27. J.P. Rushton and S. Meltzer, "Research productivity, university revenue, and scholarly impact (citations) of 169 British, Canadian and United States universities (1977)," *Scientometrics, 3*, pp. 275–303 (1981).
28. M. Weinstock, "Citation indexes," *Encyclopaedia of Library and Information Science, 5*, pp. 16–40 (1971).

29. D.E. Chubin and S.D. Moitra, "Content analysis of references: adjunct or alternative to citation counting?" *Social Studies of Science, 5*, pp. 423–441 (1975).
30. C.G. Prabha, "Some aspects of citation behavior: a pilot study in business administration," *Journal of the American Society for Information Science, 34*, pp. 202–206 (1983).
31. J.R. Cole and S. Cole, *Social stratification in science* (University of Chicago Press, Chicago; 1973) p. 22.
32. B. Cronin, "Rates of return to citation," *Journal of Documentation, 52*, pp. 188–197 (1996).
33. D.K. Simonton, *Scientific genius: a psychology of science* (Cambridge University Press, Cambridge; 1988) p. 84.
34. A.H. Halsey and M. Trow, *The British academics* (Faber and Faber, London; 1971) Chapter 12.
35. W. Shockley, "On the statistics of individual variations of productivity in research laboratories," *Proceedings of the Institute of Radio Engineers, 45*, pp. 279–290 (1957).
36. Quoted in: D.K. Simonton, *Scientific genius: a psychology of science* (Cambridge University Press, Cambridge; 1988) pp. 50–51.
37. Quoted in: D.K. Simonton, *Scientific genius: a psychology of science* (Cambridge University Press, Cambridge; 1988) pp. 50–51.
38. A.H. Halsey and M. Trow, *The British academics* (Faber and Faber, London; 1971) p. 304.
39. M. Charlesworth, L. Farrall, T. Stokes, and D. Turbull, *Life among the scientists: an anthropological study of an Australian scientific community* (Oxford University Press, Melbourne; 1989) p. 119.
40. H.W. Menard, *Science: growth and change* (Harvard University Press, Cambridge, Massachusetts; 1971) pp. 103–108.
41. V. Trimble, "Death comes as an end-effect of cessation of personal influence upon rates of citation of astronomical papers," *Czechoslovak Journal of Physics, 36*, pp. 175–179 (1986).
42. B.E. Noltingk, *The art of research* (Elsevier, Amsterdam; 1965) p. 94.
43. H.C. Lehman, *Age and achievement* (Princeton University Press, Princeton, New Jersey; 1953).
44. W. Dennis, "Productivity among American psychologists," *American Psychologist, 9*, pp. 191–194 (1954).
45. R.J. Simon, "The work habits of eminent scientists," *Sociology of Work and Occupations, 1*, pp. 327–335 (1974).
46. A. van Heeringen and P.A. Dijkwel, "The relationships between age, mobility and scientific productivity. Part 1. Effect of mobility on productivity," *Scientometrics, 11*, pp. 267–280 (1987).
47. A. van Heeringen and P.A. Dijkwel, "The relationship between age, mobility and scientific productivity. Part II. Effect of age on productivity," *Scientometrics, 11*, pp. 281–293 (1987).
48. J. Ziman, *The force of knowledge* (Cambridge University Press, Cambridge; 1976) p. 122.
49. H. Small, "Recapturing physics in the 1920s through citation analysis," *Czechoslovak Journal of Physics, 36*, pp. 142–147 (1986).
50. R.K. Merton, *The sociology of science: theoretical and empirical investigations* (University of Chicago Press, Chicago; 1973) pp. 439–459.
51. H.L. Hoerman and C.E. Nowicke, "Secondary and tertiary citing: a study of referencing behavior in the literature of citation analysis deriving from the Ortega hypothesis of Cole and Cole," *Library Quarterly, 65*, pp. 415–434 (1995).
52. J.R. Cole and S. Cole, *Social stratification in science* (University of Chicago Press, Chicago; 1973) p. 228.
53. H. Zuckerman, "The careers of men and women scientists: a review of current research." *In:* H. Zuckerman, J.R. Cole, and J.T. Bruer (eds.) *The outer circle: women in the scientific community* (Yale University Press, New Haven, Connecticut; 1991) pp. 27–56.
54. M.W. Rossiter, *Women scientists in America: struggles and strategies to 1940* (Johns Hopkins University Press, Baltimore; 1982) pp. 172–173.
55. M.F. Fox, "Gender, environmental milieu, and productivity in science." *In:* H. Zuckerman,

J.R. Cole, and J.T. Bruer (eds.) *The outer circle: women in the scientific community* (Yale University Press, New Haven, Connecticut; 1991) pp. 188–204.
56. M.J. Moravcsik, *Science development: the building of science in less developed countries* (International Development Research Center, Indiana University, Bloomington; 1974).
57. Kapil Raj, "Images of knowledge, social organization, and attitudes to research in an Indian physics department," *Science in Context, 2*, pp. 317–339 (1988).
58. M. Bonitz, E. Bruckner, and A. Scharnhorst, "The structure of world science in the eighties," (Fifth International Conference on Scientometrics and Informetrics, River Forest, Illinois; 1995).
59. A.J. Meadows, "Amateur science and communication," *Science and Public Policy, 13*, pp. 285–289 (1986).
60. R.A. Stebbins, "Avocational science: the amateur routine in archaeology and astronomy," *International Journal of Comparative Sociology, 22*, pp. 34–48 (1980).
61. A.J. Meadows, *Communication in science* (Butterworths, London; 1974) p. 196.
62. S.P. Gupta and P.S. Nagpaul, "Organizational structure as related to performance: a study of research groups in India." *In:* P.S. Nagpaul (ed.) *Organization and efficiency of research groups* (National Institute of Science, Technology and Development Studies, New Delhi; 1988) pp. 139–152.
63. D. de B. Beaver, "Collaboration and teamwork in physics," *Czechoslovak Journal of Physics, 36*, pp. 14–18 (1986).
64. A.J. Meadows, *Communication in science* (Butterworths, London; 1974) p. 197.
65. D. de B. Beaver, "Collaboration and teamwork in physics," *Czechoslovak Journal of Physics, 36*, pp. 14–18 (1986).
66. D. Lindsey, *The scientific publication system in social science* (Jossey-Bass, San Francisco; 1978) p. 83.
67. M. Gibbons, C. Limoges, H. Nowotny, S. Schwartzman, P. Scott, and M. Trow, *The new production of knowledge* (Sage Publications, London; 1994) p. 166.
68. P. Wright, "Homework: an international comparison of behavioural researchers' use of computers for work at home." *In:* M. Feeney and K. Merry (eds.) *Information technology and the research process* (Bowker-Saur, London; 1990) pp. 130–145.
69. H.C. Morton and A.J. Price, *The ACLS survey of scholars* (American Council of Learned Societies, Washington, D.C.; 1989) p. 36.
70. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123, London; 1993).
71. E. Coiera, "Medical informatics," *British Medical Journal, 310*, pp. 1381–1387 (1995).

Chapter 4

1. R.G. Crowder, *The psychology of reading: an introduction* (Oxford University Press, New York; 1992).
2. M.A. Tinker, *Legibility of print* (Iowa State University Press, Ames; 1963).
3. G. Henry, *Comment mesurer la lisibilité* (Nathan, Paris; 1975).
4. A.J. Meadows, "The readability of physics papers," *Czechoslovak Journal of Physics, 36*, pp. 89–91 (1986).
5. M.A.K. Halliday and J.R. Martin, *Writing science: literacy and discursive power* (Falmer Press, London; 1993) p. 71.
6. G.K. Zipf, *The psycho-biology of language* (Houghton Mifflin, Boston; 1935) pp. 20–48.

7. A.L. de Lavoisier, *Elements of chemistry* (Dover, New York; 1965) p. xiv.
8. D.W. King, D.D. McDonald, and N.K. Roderer, *Scientific journals in the United States: their production, use and economics* (Hutchinson Ross, Stroudsburg, Pennsylvania; 1981) p. 164.
9. J. Rolinson, H. Al-Shanbari, and A.J. Meadows, "Information usage by biological researchers," *Journal of Information Science, 22*, pp. 47–53 (1996).
10. D.W. King, D.D. McDonald, and N.K. Roderer, *Scientific journals in the United States: their production, use and economics* (Hutchison Ross, Stroudsburg, Pennsylvania; 1981) p. 175.
11. A.J. Meadows, *Communication in science* (Butterworths, London; 1974) pp. 102–103.
12. B. Shackel and D.J. Pullinger, *BLEND-1: background and developments* (Library and Information Research Report No. 29, British Library, London; 1984) pp. 72–73.
13. I.L. Horowitz and M.E. Curtis, "Scholarly book publishing in the 1990s." *In:* P.G. Altbach and E.S. Hoshino (eds.) *International book publishing: an encyclopedia* (Garland Publishing, New York; 1995) pp. 303–313.
14. B. Biber, *Variation across speech and writing* (Cambridge University Press, Cambridge, UK; 1988) p. 15.
15. M. Charlesworth, L. Farrall, T. Stokes, and D. Turnbull, *Life among the scientists: an anthropological study of an Australian scientific community* (Oxford University Press, Melbourne; 1989) p. 83.
16. D.B. Hertz and A.H. Robenstein, *Team research* (Eastern Technical Publications, New York; 1953).
17. J. Rolinson, H. Al-Shanbari, and A.J. Meadows, "Information usage by biological researchers," *Journal of Information Science, 22*, pp. 47–53 (1996).
18. C.W. Shilling, J. Bernard, and J.W. Tyson, *Informal communication among bioscientists* (Biological Sciences Communication Project, George Washington University, Washington, D.C.; 1964).
19. A.J. Meadows, *Communication in science* (Butterworths, London; 1974) pp. 121–122.
20. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123, British Library, London; 1993).
21. T.J. Allen, "Roles in technical communication networks." *In:* C. Nelson and D.K. Pollock (eds.) *Communication among scientists and engineers* (Heath, Lexington, Massachusetts; 1970) pp. 191–208.
22. D.J. de S. Price and D. de B. Beaver, "Collaboration in an invisible college," *American Psychologist, 21*, pp. 1011–1017 (1966).
23. S. Crawford, "Informal communication among scientists in sleep research," *Journal of the American Society for Information Science, 22*, pp. 301–310 (1971).
24. G. Taubes, *Nobel dreams: power, deceit and the ultimate experiment* (Random House, New York; 1986).
25. S. Pangasa and G. Mehta, "Pattern of internal and external communication in R & D groups." *In:* P.S. Nagpaul (ed.) *Organization and efficiency of research groups* (National Institute of Science Technology and Development Studies, New Delhi; 1988) pp. 199–211.
26. B. Cronin, "Invisible colleges and information transfer," *Journal of Documentation, 38*, pp. 212–236 (1982).
27. R.L. Dahling, *Shannon's information theory: the spread of an idea* (Institute for Communication Research, Stanford University, California; 1962).
28. W. Goffman, "Mathematical approach to the spread of scientific ideas—the history of mast cell research," *Nature, 212*, pp. 449–452 (1966).
29. P.J. Shoemaker, *Gatekeeping* (Sage Publications, Newbury Park, California; 1991).
30. H. Zuckerman, *Scientific elite* (The Free Press, New York; 1977) p. 108.
31. J. Rolinson, H. Al-Shanbari, and A.J. Meadows, "Information usage by biological researchers," *Journal of Information Science, 22*, pp. 47–53 (1996).
32. M.F. Fox, "Gender, environmental millieu, and productivity in science." *In:* H. Zuckerman,

J.R. Cole, and J.T. Bruer (eds) *The outer circle: women in the scientific community* (Yale University Press, New Haven, Connecticut; 1991) pp. 188–204.
33. A.M. Anderson, "The fragmenting world of science communication." *In:* K. Ackrill (ed.) *The role of the media in science communication* (Ciba Foundation, London; 1994) pp. 97–111.
34. G. Stix, "The speed of write," *Scientific American, 272*, pp. 72–77 (1994).
35. J. Rolinson, A.J. Meadows, and H. Smith, "Use of information technology by biological researchers," *Journal of Information Science, 21*, pp. 133–139 (1995).
36. L. Stewart, "User acceptance of electronic journals: interviews with chemists at Cornell University," *College and Research Libraries, 57*, pp. 339–349 (1996).
37. A. Dillon, *Designing usable electronic text* (Taylor and Francis, London; 1994) p. 42.

Chapter 5

1. W.D. Garvey, *Communication: the essence of science* (Pergamon Press, Oxford; 1979) p. 282.
2. S. Hodges, B. Hodges, A.J. Meadows, M. Beaulieu, and D. Law, "The use of an algorithmic approach for the assessment of research quality," *Scientometrics, 35*, pp. 3–13 (1996).
3. H.C. Morton and A.J. Price, *The ACLS survey of scholars* (American Council of Learned Societies, Washington, D.C.; 1989) p. 26.
4. B.C. Vickery and A. Vickery, *Information science in theory and practice* (Butterworths, London; 1987) p. 86.
5. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123; 1993) pp. 93–94.
6. D.W. King, D.D. McDonald, and N.K. Roderer, *Scientific journals in the United States* (Hutchinson Ross, Stroudsburg; Pennsylvania; 1981) pp. 66–67.
7. W.D. Garvey, *Communication: the essence of science* (Pergamon Press, Oxford; 1979) p. 60.
8. E. Rudd and S. Hatch, *Graduate study and after* (Weidenfeld and Nicholson, London; 1968).
9. D. Schauder, "Electronic publishing of professional articles: attitudes of academics and implications for the scholarly communication industry," *Journal of the American Society for Information Science, 45*, pp. 73–100 (1994).
10. M.D. Gordon, "Citation ranking versus subjective evaluation in the determination of journal hierarchies in the social sciences," *Journal of the American Society for Information Science, 33*, pp. 55–57 (1982).
11. D. Schauder, "Electronic publishing of professional articles: attitudes of academics and implications for the scholarly communication industry," *Journal of the American Society for Information Science, 45*, pp. 73–100 (1994).
12. J. Rymer, "Scientific composing processes." *In:* D.A. Jolliffe (ed.) *Advances in writing research* [Vol. 2] (Ablex Publishing, Norwood, New Jersey; 1988) p. 223.
13. J. Hartley, *Technology and writing* (Jessica Kingsley, London; 1992) pp. 23–24.
14. A.B. Buxton and A.J. Meadows, "The variation in the information content of titles of research papers with time and discipline," *Journal of Documentation, 33*, pp. 46–52 (1977).
15. T.N. Huckin, "Surprise value in scientific discourse." *In: Ninth European Symposium on Language for Special Purposes* (Bergen, Norway; 1993).
16. S. Eastwood, P. Derish, E. Leash, and S. Ordway, "Ethical issues in biomedicine: perceptions and practices of postdoctoral research fellows responding to a survey," *Science and Engineering Ethics, 2*, pp. 89–114 (1996).

17. N. Wade, *The Nobel Prize duel.* (Anchor Press/Doubleday, Garden City, New York; 1981) *In:* W. Gratzer (ed.) *A literary companion to science* (W.W. Norton, New York; 1990) p. 390.
18. B. Cronin, *The scholar's courtesy* (Taylor Graham, London; 1995).
19. J.P. Kassirer and M.A. Angell, "On authorship and acknowledgements," *New England Journal of Medicine, 325*, pp. 1510–1512 (1991).
20. L.A. Coser, C. Kadushin, and W.W. Powell, *Books: the culture and commerce of publishing* (University of Chicago Press, Chicago; 1985) p. 229.
21. S. Lock, *A difficult balance: editorial peer review in medicine* (Nuffield Provincial Hospitals Trust, London; 1985) p. 60.
22. M.D. Gordon, "The role of referees in scientific communication." *In:* J. Hartley (ed.) *Technology and writing: readings in the psychology of written communication* (Jessica Kingsley, London; 1992) pp. 263–275.
23. D. Lindsey, *The scientific publication system in social science* (Jossey-Bass, San Francisco; 1978) p. 19.
24. M.C. La Follette, *Stealing into print* (University of California Press, Berkeley; 1992) p. 122.
25. R.L. Daft, "Why I recommended that your manuscript be rejected and what you can do about it." *In:* L.L. Cummings and P.J. Frost (eds.) *Publishing in the organizational sciences* (Sage Publications, Thousand Oaks, California; 1995) pp. 164–182.
26. M. Ryan, "Evaluating scholarly manuscripts in journalism and communications," *Journalism Quarterly, 59*, pp. 273–285 (1982).
27. S.S. Siegelman, "Assassins and zealots: variations in peer review," *Radiology, 178*, pp. 637–642 (1991).
28. V. Bakanic, C. McPhail, and R.S. Simon, "Mixed messages: referees' comments on the manuscripts they review," *Sociological Quarterly, 30*, pp. 639–654 (1989).
29. S. Lock, *A difficult balance: editorial peer review in medicine* (Nuffield Provincial Hospitals Trust, London; 1985) p. 63.
30. A.J. Meadows, *The scientific journal* (Aslib, London; 1979) p. 107.
31. H. Zuckerman and R.K. Merton, "Patterns of evaluation in science: institutionalisation, structure and functions of the referee system," *Minerva, 9*, pp. 66–100 (1971).
32. D.W. King, D.D. McDonald, and N.K. Roderer, *Scientific journals in the United States* (Hutchinson Ross, Stroudsburg, Pennsylvania; 1981) p. 77.
33. H.H. Kornhuber, quoted in: H.-D. Daniel, *Guardians of science: fairness and reliability of peer review* (VCH, Weinheim; 1993) p. 3.
34. R.L. Jacobson, quoted in: H.-D. Daniel, *Guardians of science: fairness and reliability of peer review* (VCH, Weinheim; 1993) p. 63.
35. J. Rolinson, H. Al-Shanbari, and A.J. Meadows, "Information usage by biological researchers," *Journal of Information Science, 22*, pp. 47–53 (1996).
36. H.W. Marsh and S. Ball, "The peer review process used to evaluate manuscripts submitted to academic journals: interjudgmental reliability," *Journal of Experimental Education, 57*, pp. 151–169 (1989).
37. H. Zuckerman and R.K. Merton, "Patterns of evaluation in science: institutionalisation, structure and functions of the referee system," *Minerva, 9*, pp. 66–100 (1971).
38. M.J. Mahoney, *The scientist as subject: the psychological imperative* (Ballinger, Cambridge, Massachusetts; 1976) Chapter 5.
39. H. Zuckerman and R.K. Merton, "Patterns of evaluation in science: institutionalisation, structure and functions of the referee system," *Minerva, 9*, pp. 66–100, (1971).
40. M.D. Gordon, "A critical reassessment of inferred relations between multiple authorship, scientific collaboration, the production of papers and their acceptance for publication," *Scientometrics, 2*, pp. 193–201 (1980).

41. S. Presser, "Collaboration and the quality of research," *Social Studies of Science, 10*, pp. 95–101 (1980).
42. R. Rosenthal, "Reliability and bias in peer-review practices," *Behavioral and Brain Sciences, 5*, pp. 235–236 (1982).
43. M.D. Gordon, "The role of referees in scientific communication." *In:* J. Hartley (ed.) *Technology and writing: readings in the psychology of written communication* (Jessica Kingsley, London; 1992) pp. 263–275.
44. D.P. Peters and S.J. Ceci, "Peer review practices of psychological journals: the fate of published articles, submitted again," *Behavioral and Brain Sciences, 5*, pp. 187–192 (1982).
45. S.J. Ceci and D.P. Peters, "How blind is blind review?" *American Psychologist, 39*, pp. 1491–1494 (1984).
46. R.A. McNutt, A.T. Evans, R.H. Fletcher, and S.W. Fletcher, "The effects of blinding on the quality of peer review," *Journal of the American Medical Association, 263*, pp. 1371–1376 (1990).
47. J.M. Campanario, "Have referees rejected some of the most-cited articles of all times?" *Journal of the American Society for Information Science, 47*, pp. 302–310 (1996).
48. H.C. Morton and A.J. Price, *The ACLS survey of scholars* (American Council of Learned Societies, Washington, D.C.; 1989) p. 28.
49. C.M. Yentsch and C.J. Sindermann, *The woman scientist* (Plenum Press, New York; 1992) p. 136.
50. S. Lock, *A difficult balance: editorial peer review in medicine* (Nuffield Provincial Hospitals Trust, London; 1985) p. 29.
51. M.D. Gordon, "The role of referees in scientific communication." *In:* J. Hartley (ed.) *Technology and writing: readings in the psychology of written communication* (Jessica Kingsley, London; 1992) pp. 263–275.
52. S. Lock, *A difficult balance: editorial peer review in medicine* (Nuffield Provincial Hospitals Trust, London; 1985) p. 59.
53. W.D. Garvey, *Communication: the essence of science* (Pergamon Press, Oxford; 1979) p. 190.
54. S. Lock, *A difficult balance: editorial peer review in medicine* (Nuffield Provincial Hospitals Trust, London; 1985) pp. 67–68.
55. W.J. Broad and N. Wade, *Betrayers of the truth: fraud and deceit in the halls of science* (Simon and Schuster, New York; 1982).
56. A.J. Meadows, *Communication in science* (Butterworths, London; 1974) p. 64.
57. S. Lock, *A difficult balance: editorial peer review in medicine* (Nuffield Provincial Hospitals Trust, London; 1985) p. 48.
58. M.C. La Follette, *Stealing into print* (University of California Press, Berkeley; 1992) p. 130.
59. R. Smith, "Time to face up to research misconduct," *British Medical Journal, 312*, pp. 789–790 (1996).
60. M.C. La Follette, *Stealing into print* (University of California Press, Berkeley; 1992) p. 179.
61. W.W. Powell, *Getting into print* (University of Chicago Press, Chicago; 1985) p. 169.
62. American Council of Learned Societies *Scholarly communication* (Johns Hopkins University Press, Baltimore; 1979) p. 93.
63. L.A. Coser, C. Kadushin, and W.W. Powell, *Books: the culture and commerce of publishing* (University of Chicago Press, Chicago; 1985) p. 236.
64. Y. Lindholm-Romantschuk, *The flow of ideas within and among academic disciplines: scholarly book reviewing in the social sciences and humanities* (Ph.D. thesis, University of California, Berkeley; 1994) p. 53.
65. Y. Lindhohm-Romantschuk, *The flow of ideas within and among academic disciplines: scholarly book reviewing in the social sciences and humanities* (Ph.D. thesis, University of California, Berkeley; 1994) p. 80 *et seq.*
66. J. Bernstein, *Cranks, quarks and the cosmos* (Basic Book, New York; 1993) p. 27.

67. K. Johnson, "Dimensions of judgement of science news stories," *Journalism Quarterly, 40*, pp. 315–322 (1963).
68. M. Tuman, *Word Perfect: literacy in the computer age* (Falmer Press, London; 1992) pp. 109–110.
69. D. Schauder, "Electronic publishing of professional articles: attitudes of academics and implications for the scholarly communication industry," *Journal of the American Society for Information Science, 45*, pp. 73–100 (1994).
70. H. Lustig, "Electronic publishing: the role of a large scientific society." *In:* D. Shaw and H. Moore (eds.) *Electronic publishing in science* (ICSU Press/UNESCO; 1996) pp. 127–130.

Chapter 6

1. M.L. Radford, "Communication theory applied to the reference encounter: an analysis of critical incidents," *Library Quarterly, 66*, pp. 123–137 (1996).
2. D. Ellis, D. Cox, and K. Hall, "A comparison of the information seeking patterns of researchers in the physical and social sciences," *Journal of Documentation, 49*, pp. 356–369 (1993).
3. A.J. Meadows, *Communication in science* (Butterworths, London; 1974) p. 95.
4. C.C. Gould, *Information needs in the humanities: an assessment* (Research Libraries Group, Stanford, California; 1988).
5. C.C. Gould and M. Handler, *Information needs in the social sciences: an assessment* (Research Libraries Group, Mountain View, California; 1989).
6. C.C. Gould and M. Handler, *Information needs in the social sciences: an assessment* (Research Libraries Group, Mountain View, California; 1989) p. 17.
7. A.J. Meadows, *Innovation in information* (Bowker-Saur, London; 1994) p. 70.
8. D.W. King, J. Casto, and H. Jones, *Communication by engineers: a literature review of engineers' information needs, seeking processes, and use* (Council on Library Resources, Washington, D.C.; 1994).
9. J. Martyn, *Literature searching habits and attitudes of research scientists* (British Library Research Paper No. 14, British Library, London; 1986).
10. E. Almquist, *An examination of work-related information acquisition usage among scientific, technical and medical fields* (Faxon Institute Annual Conference, Reston, Virginia; 1991).
11. E. Almquist, *An examination of work-related information acquisition usage among scientific, technical and medical fields* (Faxon Institute Annual Conference, Reston, Virginia; 1991).
12. J.-M. Griffiths and D.W. King, *Special libraries: increasing the information edge* (Special Libraries Association, Washington, D.C.; 1993) p. 13.
13. J. Rolinson, H. Al-Shanbari, and A.J. Meadows, "Information usage by biological researchers," *Journal of Information Science, 22*, pp. 47–53 (1996).
14. E. Almquist, *An examination of work-related information acquisition usage among scientific, technical and medical fields* (Faxon Institute Annual Conference, Reston, Virginia; 1991).
15. J. Olsen, *Electronic journal literature: implications for scholars* (Mecklermedia, Westport, Connecticut; 1994) p. 18.
16. J. Palmer, "Scientists and information. Part I. Using cluster analysis to identify information style," *Journal of Documentation, 47*, pp. 105–129 (1991).
17. T.W. Malone, "How do people organise their desks? Implications for the design of office information systems," *ACM Transactions on Office Information Systems, 1*, pp. 99–112 (1983).
18. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123, British Library, London; 1993) p. 115.

19. J.-M. Griffiths and D.W. King, *Special libraries: increasing the information edge* (Special Libraries Association, Washington, D.C.; 1993) p. 103.
20. J. Chapman, "Views of a history information officer." *In:* S. Stone (ed.) *Humanities information research: proceedings of a seminar; Sheffield 1980* (Centre for Research on User Studies, University of Sheffield, Sheffield, Yorks; 1980) pp. 31–32.
21. E. Almquist, *An examination of work-related information acquisition usage among scientific, technical and medical fields* (Faxon Institute Annual Conference, Reston, Virginia; 1991).
22. C.V. Wedgwood, quoted in: Ved Mehta, *Fly and the fly-bottle* (Penguin Books, London; 1965) pp. 166–167.
23. D. Ellis, "Modeling the information-seeking patterns of academic researchers: a grounded theory approach," *Library Quarterly, 63*, pp. 469–486 (1993).
24. R.S. Cahn, *Survey of chemical publications* (Chemical Society, London; 1965).
25. D.W. King, D.D. McDonald, and N.K. Roderer, *Scientific journals in the United States* (Hutchinson Ross, Stroudsburg, Pennsylvania; 1981) p. 201.
26. S.J. Cunningham and D. Bocock, "Obsolescence of computing literature," *Scientometrics, 34*, pp. 255–262 (1995).
27. D.J. de S. Price, "Networks of scientific papers," *Science, 149*, pp. 510–515 (1965).
28. Y.-F. le Coadic, *La science de l'information* (Presses Universitaires de France, Paris; 1994) p. 70.
29. H.W. Menard, *Science: growth and change* (Harvard University Press, Cambridge, Massachusetts; 1971) pp. 53–57.
30. D.F. Shaw, "Input, subfields and ageing of recently cited physics monographs," *Czechoslovak Journal of Physics, 36*, pp. 130–132 (1986).
31. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123, London; 1993) p. 105.
32. F. Narin, "Patent bibliometrics," *Scientometrics, 30*, pp. 147–155 (1994).
33. A.M. Cummings, M.L. Witte, W.G. Bowen, L.O. Lazarus, and R.H. Ekman, *University libraries and scholarly communication* (Andrew W. Mellon Foundation, Pittsburgh, Pennsylvania; 1992) p. 16.
34. A.M. Cummings, M.L. Witte, W.G. Bowen, L.O. Lazarus, and R.H. Ekman, *University libraries and scholarly communication* (Andrew W. Mellon Foundation, Pittsburgh, Pennsylvania; 1992) pp. 88–90.
35. H.C. Morton and A.J. Price, *The ACLS survey of scholars* (American Council of Learned Societies, Washington, D.C.; 1989) p. 46.
36. C.R.H. Inman, "Scientific publications in English and developing countries: a report of a survey of scientists' experiences," *Journal of Information Science, 6*, pp. 159–164 (1983).
37. P.B. Kantor, "Information retrieval techniques," *Annual Review of Information Science and Technology, 29*, pp. 53–90 (1994).
38. J. Rowley, "The controlled versus natural indexing languages debate revisited: a perspective on information retrieval practice and research," *Journal of Information Science, 20*, pp. 108–119 (1994).
39. T.K. Park, "The nature of relevance in information retrieval: an empirical study," *Library Quarterly, 63*, pp. 318–351 (1993).
40. T.K. Park, "The nature of relevance in information retrieval: an empirical study,: *Library Quarterly, 63*, pp. 318–351 (1993).
41. B. Vickery and A. Vickery, "Online search interface design," *Journal of Documentation, 49*, pp. 103–187 (1993).
42. W.J. Wilbur, "Human subjectivity and performance limits in document retrieval," *Information Processing and Management, 32*, pp. 515–527 (1996).

43. G. Philip, "Use of 'leading edge' information systems by academic chemists in the UK. Part 1. The results of a preliminary investigation," *Journal of Information Science, 21*, pp. 187–199 (1995).
44. J. Rolinson, A.J. Meadows, and H. Smith, "Use of information technology by biological researchers," *Journal of Information Science, 21*, pp. 133–139 (1995).
45. J. Olsen, *Electronic journal literature: implications for scholars* (Mecklermedia, Westport, Connecticut; 1994) p. 43.
46. A.M. Cummings, M.L. Witte, W.G. Bowen, L.O. Lazarus, and R.H. Ekman, *University libraries and scholarly communication* (Andrew W. Mellon Foundation, Pittsburgh, Pennsylvania; 1992) p. 121.
47. L. Stewart, "User acceptance of electronic journals: interviews with chemists at Cornell University," *College and Research Libraries, 57*, pp. 339–349 (1996).
48. K. Willis, K. Alexander, W.A. Gosling, G.R. Peters Jr., R. Schwarzwalder, and B.F. Warner. "TULIP—The University Licensing Program: experiences at the University of Michigan," *Serials Review, 20*, pp. 39–47 (1994).
49. The Royal Society, the British Library, and the Association of Learned and Professional Society Publishers, *The scientific, technical and medical information system in the UK* (British Library R and D Report No. 6123, London; 1993) p. 159.
50. L. Stewart, "User acceptance of electronic journals: interviews with chemists at Cornell University," *College and Research Libraries, 57*, pp. 339–349 (1996).
51. A.J. Meadows, "Preserving the digital imprint," *Learned Publishing, 9*, pp. 215–218 (1996).
52. V.A. Markusova, R.S. Gilyarevskii, A.I. Chernyi, and B.C. Griffith, "Information behavior of Russian scientists in the 'Perestroika' period," *Scientometrics, 37*, pp. 361–380 (1996).
53. L. Stewart, "User acceptance of electronic journals: interviews with chemists at Cornell University," *College and Research Libraries, 57*, pp. 339–349 (1996).
54. J.P. Walsh and T. Bayma, "Computer networks and scientific work," *Social Studies of Science, 26*, pp. 661–703 (1996).
55. J.P. Walsh and T. Bayman, "Computer networks and scientific work," *Social Studies of Science, 26*, pp. 661-703 (1996).
56. B.C. Vickery and A. Vickery, *Information science in theory and practice* (Butterworths, London; 1987) p. 106.
57. H.C. Morton and A.J. Price, *The ACLS survey of scholars* (American Council of Learned Societies, Washington, D.C.; 1989) p. 24.
58. D.P. Phillips, E.J. Kanter, B. Bednarczyk, and P.L. Tastad, "Importance of the lay press in the transmission of medical knowledge in the scientific community," *New England Journal of Medicine, 325*, pp. 1180–1183 (1991).
59. S. Klaidman, *Health in the headlines: the stories behind the stories* (Oxford University Press, New York; 1991) pp. 48–49.
60. S. Klaidman, *Health in the headlines: the stories behind the stories* (Oxford University Press, New York; 1991) p. 5.
61. T.S. Eliot, *The complete poems and plays* (Faber and Faber, London; 1969) p. 147.