GOLDEN OLDIES 103

## REFERENCES

- AD HOC COMMITTEE ON RESOURCES FOR THE MATHEMATICAL SCIENCES (1984). Renewing U. S. Mathematics—Critical Resource for the Future. National Research Council Report. National Academy Press, Washington.
- ANDERSON, T. W. (1960). Harold Hotelling's research in statistics.
  Amer. Statist. 14 17-21.
- BRADLEY, R. A. (1982a). Graduate programs in statistics—a discussion. In *Teaching of Statistics and Statistical Consulting* (J. S. Rustagi and D. A. Wolfe, eds.) 81-91. Academic, New York.
- Bradley, R. A. (1982b). The future of statistics as a discipline. J. Amer. Statist. Assoc. 77 1-10.
- COMMITTEE ON THE TEACHING OF STATISTICS (1940). Resolutions on the teaching of statistics. *Ann. Math. Statist.* 11 472.
- COMMITTEE ON THE TEACHING OF STATISTICS (1948). The teaching of statistics. *Ann. Math. Statist.* **19** 95–115.
- CRAMÉR, H. (1946). Mathematical Methods of Statistics. Princeton Univ. Press, Princeton, N. J.
- DEMING, W. E. (1940). Discussion of Professor Hotelling's paper. Ann. Math. Statist. 11 470-471.
- DEMPSTER, E. R. (1949). Untitled discussion. *Proc. Berkeley Symp. Math. Statist. Probab.* 45–47. Univ. California Press.
- GEISSER, S. (1982). Observations on graduate programs in statistics and related issues. In *Teaching of Statistics and Statistical Consulting* (J. S. Rustagi and D. A. Wolfe, eds.) 21-33. Academic. New York
- HOEFFDING, W. (1978). Hotelling, Harold. International Encyclopedia of Statistics (W. H. Kruskal and J. Tanur, eds.) 1 439-441. The Free Press, New York.
- HOTELLING, H. (1930). British statistics and statisticians today. J. Amer. Statist. Assoc. 25 186-190.
- HOTELLING, H. (1941). Presidential address (to Indian Statist. Congress at Madras). Sankhyā 5 127-129.

- HOTELLING, H. (1944). Graduate work in statistics at Columbia University. *Biometrics Bull.* 1 22–23.
- HOTELLING, H. (1948). Mathematical statistics and econometrics at the University of North Carolina. *Econometrica* 16 125–126.
- HOTELLING, H. (1950). Needed steps in the mathematical training of social scientists. *Econometrica* 18 198-199.
- LEVENE, H. (1974). Harold Hotelling 1895–1973. Amer. Statist. 28 71–73.
- MADOW, W. G. (1960). Harold Hotelling as a teacher. Amer. Statist. 14 15-17.
- MANN, N. R. (1985). The Keys to Excellence—The Story of the Deming Philosophy. Prestwick Books, Los Angeles.
- MINTON, P. D. (1983). The visibility of statistics as a discipline. Amer. Statist. 37 284-289.
- MINTON, P. D. and FREUND, R. J. (1977). Organization for the conduct of statistical activities in colleges and universities. Amer. Statist. 31 113-117.
- NEYMAN, J. (1960). Harold Hotelling—A leader in mathematical statistics. In Contributions to Probability and Statistics: Essays in Honor of Harold Hotelling (I. Olkin, S. G. Ghurye, W. Hoeffding, W. G. Madow and H. B. Mann, eds.) 6-10. Stanford Univ. Press, Stanford, Calif.
- OLKIN, I., GHURYE, S. G., HOEFFDING, W., MADOW, W. G. and MANN, H. B. (eds.) (1960). Contributions to Probability and Statistics: Essays in Honor of Harold Hotelling. Stanford Univ. Press. Stanford. Calif.
- Rustagi, J. S. and Wolfe, D. A. (eds.) (1982). Teaching of Statistics and Statistical Consulting. Academic, New York.
- SAMUELSON, P. A. (1960). Harold Hotelling as a mathematical economist. *Amer. Statist.* 14 21-25.
- SMITH, W. L. (1978). Harold Hotelling 1895–1973. Ann. Statist. 6 1173–1183.
- SMITH, W. L. (1983). Hotelling, Harold. Encyclopedia of Statistical Sciences (S. Kotz, N. L. Johnson and C. B. Read, eds.) 3 668– 669. Wiley. New York.

## Comment: Recollections about Harold Hotelling

## W. Edwards Deming

It was in 1936, I believe, when at a meeting of the American Statistical Association in Atlantic City, Harold Hotelling told some of us that a woman in the Mathematics Department at the University of Toronto had written to him for advice. The head of the department had decided that there should be in their curriculum a course on statistics or possibly it was statistical theory. He had delegated the job to her.

W. Edwards Deming is a Consultant in Statistical Studies, Distinguished Lecturer in the School of Business, Columbia University, and Professor of Statistics in the Graduate School of Business Administration, New York University. His mailing address is 4924 Butterworth Place, Washington, DC 20016.

None of the others wished to teach it. She was a woman, and new in the department, so she was elected to teach the course. She wrote to Professor Hotelling with the question, "What should I teach?" His reply to her was merely, in his kind way, "Teach what you know."

This principle pervaded all his work. He tried to stay within his limitations, although I would remark that his limitations were well beyond the horizon. He took the point of view that statistical theory should be taught by someone that knows statistical theory. If one studies bacteriology, he studies it with someone that knows bacteriology. He had profound faith and respect for people that know statistical theory. In my own book, *Out of the Crisis* (1986), the following quotation is at the head of the chapter on page 465.