

REFERENCES

- BISHOP, Y. M. M., FIENBERG, S. E. and HOLLAND, P. W. (1975). *Discrete Multivariate Analysis: Theory and Practise*. MIT Press, Cambridge, MA.
- BREIMAN, L. and FRIEDMAN, J. H. (1982). Estimating optimal transformations for multiple regression and correlation. Dept. of Statist. technical report, Orion 16, Stanford University.
- CLEVELAND, W. S. (1979). Robust locally weighted regression and smoothing scatterplots. *J. Amer. Statist. Assoc.* **74** 829–836.
- DEMING, W. E. and STEPHAN, F. (1940). On a least squares adjustment of a sampled frequency table when the expected marginal totals are known. *Ann. Math. Statist.* **11** 427–444.
- DIACONIS, P. (1983). Projection pursuit for discrete data. Stanford University technical report no. 198.
- EFRON, B. (1979). Bootstrap methods: another look at the jackknife. *Ann. Statist.* **7** 1–26.
- FIENBERG, S. E. (1977). *The Analysis of Cross-Classified Categorical Data*. MIT Press, Cambridge, MA.
- FRIEDMAN, J., STUETZLE, W. and SCHROEDER, A. (1984). Projection pursuit density estimation. *J. Amer. Statist. Assoc.* **79** 599–608.
- HASTIE, T. and TIBSHIRANI, R. (1984). Generalized additive models. Stanford University, Lab. for Comput. Statist. report no. 2.
- MCCULLAGH, P. and NELDER, J. (1983). *Generalized Linear Models*. Chapman Hall, London.
- NELDER, J. and WEDDERBURN, R. W. M. (1972). Generalized linear models. *J. Roy. Statist. Soc. Ser. A* **135** 370–384.
- TIBSHIRANI, R. and HASTIE, T. (1984). Local likelihood estimation. Stanford technical report 97 and unpublished Ph.D. thesis (1st author), Dept. of Statist. Stanford University.

DEPARTMENT OF STATISTICS
STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305

M. C. JONES

University of Birmingham

Professor Huber presents a most interesting paper reviewing the broad area within multivariate data analysis now encompassed by the term “projection pursuit.” My own comments relate to recent research in this field undertaken at the University of Bath, UK, by myself and Professor Robin Sibson. Our work focussed on the basic projection pursuit algorithm thought of as an exploratory tool applied to point clouds—as a method for finding “interesting” low-dimensional “views” of a multivariate data set—in the spirit of Friedman and Tukey (1974); as such, these comments are most relevant to Section II of the current paper.

Initially, we had access only to Friedman and Tukey’s pioneering paper and during much of the course of our work remained unaware of the more recent work by Professors Huber, Friedman and others. Bearing this in mind, the close agreement between many of Professor Huber’s ideas and our own, which are outlined below, seems quite remarkable.

The particular implementation of the projection pursuit method described by Friedman and Tukey allowed considerable scope for improvement on both theoretical and practical grounds. Consequently our aim was to provide a new