projection axis or plane varies. Derivatives of the indices are available at little extra computational cost and may be employed to great advantage in the course of the numerical optimisation of the chosen index. As Professor Huber points out in a slightly different context "it does not matter very much if a particular direction ... is determined inaccurately", so a conceptually simple and computationally efficient steepest ascent algorithm has been used to good effect.

If we were to take issue with any of Professor Huber's remarks, it would only be to doubt the usefulness of three-dimensional projections in this exploratory setting, particularly bearing in mind the additional computational burden such projections would impose. Representation of three-dimensional data in a single informative picture (on two-dimensional paper!) is not readily achieved in an immediately meaningful way. Two-dimensional projections, via scatter plots or bivariate density estimates, are readily interpretable, however, and, as Professor Huber points out, may often show interesting features of the data which are not apparent in any one-dimensional projection. For these reasons, we have restricted our attention to both one- and two-dimensional projection pursuit, even, on occasion, for application to three-dimensional data.

Finally, practical experience with the resulting version of the projection pursuit algorithm has proved to be most encouraging. Considerable discussion of the practical advantages and limitations of the technique, together with many further details of the work outlined briefly above, may be found in the thesis of Jones (1983) and in a forthcoming paper to be written jointly with Professor Sibson.

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In 1976 Dr. Gerald Reaven and I, with the assistance of M. A. Fisherkeller, successfully applied projection pursuit to some diabetes data. The data consisted of the (1) relative weight, (2) fasting plasma glucose, (3) area under the plasma glucose curve for the three-hour glucose tolerance test (OGTT), (4) area under the plasma insulin curve for the OGTT, and (5) steady state plasma glucose response (SSPG) for 145 subjects at the Stanford Clinical Research Center, who volunteered for a study of the etiology of diabetes. The goal of the study was to