methods of procedure are specified in advance. Everitt correctly points out that the pursuit of statistical significance is unfortunate and damaging, but to recommend informality as an alternative is to invite a return to the not-so-long-ago days when psychiatric research had the deserved reputation for producing junk.

Unlike Everitt, I would support the statistician who couldn't or wouldn't help the psychiatrist with a 500-item questionnaire that had been administered to 100 depressed patients. The statistician, if he or she had several years of experience working in the mental disorders, probably knew better than the psychiatrist, who may have been new to psychiatric research, that there wasn't much left to learn about the dimensions underlying depression, that hundreds of factor analyses of rating scales applied to depressives had already been performed, and that virtually nothing of value would be gained by the performance of yet another such factor analysis. Knowledge in psychiatry, and the psychiatrist's career in research, would both have been better served by the specification and testing of hypotheses, perhaps by a confirmatory factor analysis (Everitt and Dunn, 1983).

The opinion implicit in the preceding paragraph is that a statistician who's had extensive experience

in a medical or scientific specialty may sometimes have as much or even more knowledge than a person formally trained in that specialty. Does Everitt subscribe to such heresy? How would he recommend a statistician to act if there were a serious disagreement on substantive matters between the statistician and the subject matter "expert?"

ADDITIONAL REFERENCES

AMERICAN PSYCHIATRIC ASSOCIATION COMMITTEE ON NOMEN-CLATURE AND STATISTICS. (1980). Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. American Psychiatric Association, Washington.

COHEN, J. (1960). A coefficient of agreement for nominal scales. Ed. Psychol. Meas. 20 37-46.

EVERITT, B. S. and DUNN, G. (1983). Advanced Methods of Data Exploration and Modelling. Heinemann, London.

FLEISS, J. L., COHEN, J. and EVERITT, B. S. (1969). Large sample standard errors of kappa and weighted kappa. *Psychol. Bull.* 72 323-327

FLEISS, J. L. and ZUBIN, J. (1969). On the methods and theory of clustering. *Multivariate Behav. Res.* 4 235-250.

KORAN, L. M. (1975). The reliability of clinical methods, data and judgments. New England J. Med. 293 642-646 and 695-701.

SCHMIDT, H. O. and FONDA, C. P. (1956). The reliability of psychiatric diagnosis. J. Abnorm. Soc. Psychol. 52 262-267.

SPITZER, R. L., COHEN, J., FLEISS, J. L. and ENDICOTT, J. (1967). Quantification of agreement in psychiatric diagnosis. *Arch. Gen. Psychiat.* 17 83-87.

Comment: The Biometric Approach to Psychiatry

Joseph Zubin

Everitt points out that psychiatry for the last several decades has been trying to emerge from its phenomenological descriptive cocoon into a more objective science. Galton was not alone in demanding measurement and numbers as a sine qua non for attaining "the dignity of a science." Thorndike is quoted as saying that whatever exists, exists in some amount and therefore could be eventually subjected to measurement and counting. Lord Kelvin is quoted as saying that one cannot understand a phenomenon

Joseph Zubin is Research Career Scientist and Coordinator for Research and Development, Veterans Administration Medical Center, and Distinguished Research Professor of Psychiatry, University of Pittsburgh Medical School. His mailing address is Biometrics Research, Veteran's Administration Medical Center, Highland Drive, Pittsburgh, Pennsylvania 15206.

until it is subjected to measurement. Both Emil Kraepelin and Karl Jaspers were appreciative of the importance of objective data and their evaluation. Kraepelin (1896) indicated his interest in measurement in the following statement:

"As soon as our methodology has sufficiently proved itself through experience with healthy individuals, it would be possible to approach the actual ultimate goal of these efforts, the investigation of the sick personality, especially of the inborn pathological disposition.... We, therefore, have first of all to investigate whether it is possible by means of psychological tests to determine individual deviations, which cannot be recognized by ordinary observation. If that succeeds, we would be in the position, through the quantitative determinations at our disposal, to establish the