ings catalogue. The library of the T.H. Eindhoven applies for their subject headings the rule of inversion, which is generally not recommended. The library of the University of Amsterdam started a subject headings catalogue in 1982, when a decision was taken to abandon the DDC. This library uses only a small number of top DDC classes to divide the subject headings into subject fields. The DDC, which was used from 1977 to 1982 with the idea to adopt the DDC numbers from the CIP-data and MARC exchange tapes, had to be abandoned because of the general dissatisfaction. Only about 30% of the DDC numbers could be taken over, while the quality of some of these notations was often found, frankly speaking, poor.

Automation has been playing an important role in the subject cataloguing since about mid 1970s. In 1982, the automation of cataloguing was a general phenomenon. Most of the libraries joined the national cataloguing system PICA. The card catalogues were often substituted by the COM-catalogues. Only three libraries were considering an online library catalogue in 1982.

This fact illustrates the rapid development in this field. Two years later, in 1984, the online library catalogue is the general aim. The retrieval power of such a catalogue is recognized (Boolean search, application of limits, truncations). The subject catalogues cease to exist as individual entities in the library premises and turn into access point files instead, as part of the overall cataloguing system. The additional free text subject searching is possible. However, the continued use of the controlled vocabulary is generally desired.

Because of this rapid development, the descriptions of the subject cataloguing in the above mentioned fifteen libraries have a historic value. But shall the influence of the local traditions continue also in the online public access catalogues? It would be interesting to make a new review of the same libraries at the beginning of the 1990s. Will then only one description be sufficient, or at least a reduced number of them, as a token of unity or unification process? It may be so.

Anatol Vasiljev

A. Vasiljev, Bibliotheek Technische Hogeschool Delft, Doelenstraat 101, NL-2611 NS Delft.

LOHSE, Heinz; LUDWIG, Rolf; RÖHR, Michael: **Statistische Verfahren für Psychologen, Pädagogen und Soziologen** (Statistical procedures for psychologists, pedagogues and sociologists). Berlin, DD: Volk und Wissen 1982, 480 p.

The book is thought to be a continuation of the book "Clauß, G., Ebner, H.: Grundlagen der Statistik für Psychologen, Pädagogen und Soziologen". In the first chapter an attempt is made to supplement some foundations of the application of statistical procedures. The relation between empirical research and statistics, elements of experimental design, sample selection, interval estimation, and selected transformations of the data are dealt with. In the second chapter distribution-free tests, analysis of correlations and associations, regression analysis, analysis of variance and covariance, discriminant analysis, canonical analysis, path analysis, cluster analysis, and configuration frequency analysis are treated.

The book has the same pros and cons as many other books in this field which cover these topics and which are addressed to this group of users. It is written quite understandable with many illustrating numerical examples. From this point of view it can be recommended to all users in the target group.

However, it is not surprising that the book contains several of those misunderstandings which are typical for books of this kind. Typical examples of errors in the second chapter are the doubtful interpretations of significant results of Cochran's Q test (p. 125) or of the Friedman test (p. 135), respectively, which may become significant with a high probability for dependent samples though the marginal distributions are identical.

On p. 255 is described how one should select the predictors in a multiple linear regression and an analogous procedure is described on p. 347 for the selection of variables in discriminant analysis. These procedures cannot be trusted since they imply many simultaneous decisions for the same set of data. The seemingly good results prove nothing, since one will get always good results if one starts with a sufficiently large number of variables. A cross-validation with respect to the selected variables based on a completely new sample is absolutely necessary. With respect to the analysis of covariance in a two-way classification (p. 321) it is not mentioned that the three tests on main effects and interaction are simultaneous dependent tests and that an alpha adjustment is necessary. Furthermore the main effects cannot be interpreted in a conclusive way in the presence of an interaction.

Of particular interest for the readers of this journal is the description of classification methods. Only a short introduction is given to cluster analysis and configural frequency analysis. With respect to cluster analysis it seems strange that distances (p. 393) and similarities are defined without the important assumption of the triangle inequality. On 44 pages the application of discriminant analysis is explained. I doubt that the supposed readers of the book will be able to follow the derivation of the linear discriminant function on p. 343. Such derivations should be either much more explicit or should be deleted altogether. On p. 344 the Hotelling statistic is discussed a second time without mentioning that this was done already on p. 288. The strategy for assigning subjects to the different groups on p. 346 is rather strange since a criterion based on a significance test is used. This can lead to objects which are assigned to no group or to more than one group, respectively, in contrast to the original intent of discriminant analysis. An introduction of the more common procedure of assignment together with a discussion of error rates might have been more appropriate for an introductory text. The same arguments hold for the multiple discriminant analysis, as well.

On the whole, the book will be quite useful for the readers of the preceding book of Clauß and Ebner and will give them many suggestions for evaluating their data. However, for readers primarily interested in numerical classification the book will not give much information.

Joachim Krauth

Prof. Dr. J. Krauth, Lehrstuhl für Psychologie IV, Universität Düsseldorf, Psychol. Inst. Universitätsstr. 1, D-4000 Düsseldorf 1