REFERENCES

Benzécri, J.–P. et al. (1973). *L'analyse des données*. Paris: Dunod.

Carroll, J.B. (1953). An analytic solution for approximating simple structure in factor analysis. *Psychometrika*, **18**, 23–38.

Carroll, J.D., & Chang, J.–J. (1970). Analysis of individual differences in multidimensional scaling via an n–way generalization of "Eckart–Young" decomposition. *Psychometrika*, **35**, 283–319.

Carroll, J.D., & Chang, J.–J. (1972). *IDIOSCAL: A generalization of INDSCAL allowing IDIOsyncratic reference systems as well as an analytic approximation to INDSCAL.* Paper presented at the Spring Meeting of the Psychometric Society, Princeton, New Jersey, March 30–31.

Carroll, J.D., De Soete, G. &, Pruzansky, S. (1989). An evaluation of five algorithms for generating an initial configuration for SINDSCAL. *Journal of Classification*, **6**, 105–119.

Carroll, J.D., Pruzansky, S., & De Soete, G. (1987). A comparison of three rational initialization methods for INDSCAL. In Diday et al. (Eds.) *Data analysis and informatics*, INRIA, Le Chesnay.

Carroll, J.D., & Wish, M. (1974). Models and methods for three–way multidimensional scaling. In D.H. Krantz et al. (Eds.) *Contemporary developments in mathematical psychology, Vol. II: Measurement, psychophysics, and neural information processing* (pp. 57–105). San Fransisco: Freeman & Co.

Cazes, P. (1980). L'analyse de certains tableaux rectangulaires décomposés en blocs: Généralisation des propriétés rencontrées dans l'analyse des correspondances multiples II. Questionaires: Variantes de codages et nouveaux calculs de contributions [ANA.BLOCS II]. *Les Cahiers de l'Analyse des Données*, **5**, 387–403.

Cazes, P., Bonnefous, S., Baumerder, A., & Pagès, J.P. (1976). Description cohérente des variables qualitatives prises globalement et de leurs modalités. *Statistique et Analyse des Données*, **1(2)**, 48–62.

Clarkson, D.B., & Jennrich, R.I. (1988). Quartic rotation criteria and algorithms. *Psychometrika*, **53**, 251–259.

Coppi, R. (1986). Analysis of three–way data matrices based on pairwise

relation measures. In *Compstat* 1986 (pp. 129–139). Heidelberg: Physica–Verlag.

Crawford, C.B., & Ferguson, G.A. (1970). A general rotation criterion and its use in orthogonal rotation. *Psychometrika*, **35**, 321–332.

Cuadras, C.M. (1989). Distance analysis in discrimination and classification using both continuous and categorical variables. In Y. Dodge (Ed.) *Statistical data analysis and inference.* Amsterdam: Elsevier Science Publishers.

D'Alessio, G. (1988). Multistep principal components analysis (MPCA): A new approach for the analysis of contingency tables series. In H.H. Bock (Ed.) *Classification and related methods of data analysis.* (pp. 497–504). Amsterdam: Elsevier Science Publishers.

D'Ambra, L., & Marchetti, G.M. (1986). The analysis of three–way data matrices: a method based on relation measures between units (in Italian). In *Proceedings of the 33rd Meeting of the Italian Statistical Society, vol* 1 (pp. 171–182).

Daniels, H.E. (1944). The relation between measures of correlation in the universe of sample permutations. *Biometrika*, **33**, 129–135.

De Leeuw, J. (1973). *Canonical analysis of categorical data.* Doctoral Dissertation, University of Leiden.

De Leeuw, J., & Meulman, J. (1986). A special jackknife for multidimensional scaling. *Journal of Classification*, **3**, 97–112.

De Leeuw, J., & Pruzansky, S. (1978). A new computational method to fit the weighted Euclidean distance model. *Psychometrika*,**43**, 479–490.

De Leeuw, J., & Van Rijckevorsel, J.L.A. (1980). HOMALS and PRINCALS, some generalizations of principal components analysis. In E. Diday et al. (Eds.) *Data analysis and informatics II* (pp. 231–242). Amsterdam: Elsevier Science Publishers.

De Leeuw, J., & Van Rijckevorsel, J.L.A. (1988). Beyond Homogeneity Analysis. In J.L.A. Van Rijckevorsel J., & J. De Leeuw (Eds.) *Component and correspondence analysis* (pp. 55–80). New York: Wiley.

Di Ciaccio, A. (1986). Representation of a new association measure between categories using multidimensional scaling. In E. Diday et al. (Eds.) *Data analysis and informatics IV* (pp. 369–378). Amsterdam: Elsevier Science Publishers.

Domenges, D., & Volle, M. (1979). Analyse factorielle spherique: une exploration. *Annales de l'INSEE*, **35**, 3–84.

Eckart, C., & Young, G. (1936). The approximation of one matrix by another of lower rank. *Psychometrika*, **1**, 211–218.

Escofier, B. (1979). Traitement simultané de variables qualitatives et quantitatives en analyse factorielle. *Les Cahiers de l'Analyse des Données*, **4**, 137–146.

Escofier, B. (1984). Analyse factorielle en reference à un modèle. Application a l'analyse de tableaux d'échanges. *Revue de Statistique Appliquée*, **32**, 25–36.

Escofier, B., & Pagès, J. (1983). Méthode pour l'analyse de plusieurs groupes de variables – Application à la caractérisation de vins rouges du Val de Loire. *Revue de Statistique Appliquée*, **31**, 43–59.

Escofier, B., & Pagès, J. (1984). *L'analyse factorielle multiple*. Cahiers du bureau universitaire de recherche opérationnelle, no.**42**, Université Pierre et Marie Curie, Paris.

Escoufier, Y. (1970). Echantillonnage dans une population de variables aléatoires réelles. *Publ. Inst. Statist. Univ. Paris*, **19**, fax. 4, 1–47.

Escoufier, Y. (1973). Le traitement des variables vectorielles. *Biometrics*, **29**, 751–760.

Escoufier, Y. (1980). Exploratory data analysis when data are matrices. In K. Matusita (Ed.) *Recent developments in statistical inference and data analysis* (pp. 45–53). Amsterdam: Elsevier Science Publishers.

Ferguson, G.A. (1954). The concept of parsimony in factor analysis. *Psychometrika*, **19**, 281–290.

Fichet, B. (1986). Distances and Euclidean distances for presence–absence characters and their application to factor analysis. In J. De Leeuw, W. Heiser, J. Meulman, & F. Critchley (Eds.) *Multidimensional data analysis* (pp. 23–46). Leiden: DSWO press.

Fichet, B., & Gbegan, A. (1986). Analyse factorielle des correspondences sur signes de presence–absence. In E. Diday et al. (Eds.) *Data analysis and informatics IV* (pp. 209–219). Amsterdam: Elsevier Science Publishers.

Gifi, A. (1981). *Nonlinear multivariate analysis*. Leiden: Department of Data Theory.

Gower, J.C. (1966). Some distance properties of latent root and vector

methods used in multivariate analysis. *Biometrika*, **53**, 325–338.

Gower, J. C. (1971). A general coefficient of similarity and some of its properties. *Biometrics*, **27**, 857–871.

Grasse, P. (Ed.) (1955). *Travaux sous la direction de P.Grasse. Traité de zoologie.* Paris: Masson.

Green, B.F. (1952). The orthogonal approximation of an oblique structure in factor analysis. *Psychometrika*, **17**, 429–440.

Greenacre, M.J. (1984). *Theory and applications of correspondence analysis.* London: Academic Press.

Greenacre, M.J. (1988). Correspondence analysis of multivariate categorical data by weighted least squares. *Biometrika*, **75**, 457–467.

Guttman, L. (1941). The quantification of a class of attributes: A theory and method of scale construction. In P. Horst et al. (Eds.) *The prediction of personal adjustment* (pp. 319–348). New York: Social Science Research Council.

Harman, H.H. (1976). *Modern factor analysis* (3rd edition). Chicago: University of Chicago press.

Hartigan, J.A. (1975). *Clustering algorithms*. New York: Wiley.

Hayashi, C. (1950). On the quantification of qualitative data from the mathematico–statistical point of view. *Annals of the Institute of Statistical Mathematics*, **2** (1), 35–47.

Heiser, W.J. (1981). *Unfolding analysis of proximity data.* Leiden: Department of Psychology.

Heiser, W.J., & Meulman, J. (1983). Analyzing rectangular tables by joint and constrained multidimensional scaling. *Journal of Econometrics*, **22**, 139–167.

Horan, C.B. (1969). Multidimensional scaling: Combining observations when individuals have different perceptual structures. *Psychometrika*, **34**, 139–165.

Hubert, L. (1977). Nominal scale response agreement as a generalized correlation. *British Journal of Mathematical and Statistical Psychology*, **30**, 98–103.

Jaffrennou, P.A. (1978). *Sur l'analyse des familles finies de variables vectorielles*. Thèse, Université Saint–Étienne.

Janson, S., & Vegelius, J. (1978a). *Correlation coefficients for more than one scale type and symmetrization as a method of obtaining them.* (Research

Report, 78–2) University of Uppsala, Department of Statistics.

Janson, S., & Vegelius, J. (1978b). On the applicability of truncated component analysis based on correlation coefficients for nominal scales. *Applied Psychological Measurement*, **2**, 135–145.

Janson, S., & Vegelius, J. (1982). Correlation coefficients for more than one scale type. *Multivariate Behavioral Research*, **17**, 271–284.

Jennrich, R.I. (1970). Orthogonal rotation algorithms. *Psychometrika*, **35**, 229–235.

Jones, M.C., & Sibson, R. (1987). What is projection pursuit? *Journal of the Royal Statistical Society, series A*, **150**, 1–36.

Kaiser, H.F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, **23**, 187–200.

Kiers, H.A.L. (1988). Principal components analysis on a mixture of quantitative and qualitative data based on generalized correlation coefficients. In M.G.H. Jansen, & W.H. van Schuur (Eds.) *The many faces of multivariate analysis (Vol. I): Proceedings of the SMABS – 88 conference in Groningen* (pp. 67–81). Groningen: Rion.

Kiers, H.A.L. (1989a). A computational short–cut for INDSCAL with orthonormality constraints on positive semi–definite matrices of low rank. *Computational Statistics Quarterly*, in press.

Kiers, H.A.L. (1989b). *Hierarchical relations between three – way methods*. Manuscript submitted for publication.

Kiers, H.A.L. (1989c). INDSCAL for the analysis of categorical data. In R. Coppi, & S. Bolasco (Eds.) *Multiway data analysis* (pp. 155–167). Amsterdam: Elsevier Science Publishers.

Kiers, H.A.L. (in press). Majorization as a tool for optimizing a class of matrix functions. *Psychometrika*.

Kroonenberg, P.M. (1983). *Three – mode principal component analysis: Theory and applications*. Leiden: DSWO press.

Kroonenberg, P.M., & De Leeuw, J. (1980). Principal component analysis of three–mode data by means of alternating least squares algorithms. *Psychometrika*, **45**, 69–97.

Lauro, N., & D'Ambra, L. (1984). L'analyse non–symmetrique des corres–pondances. In E. Diday et al. (Eds.) *Data analysis and informatics III* (pp. 433–446). Amsterdam: Elsevier Science Publishers.

Lebart, L., Morineau A., & Tabard, N. (1977). *Techniques de la description statistique.* Paris: Dunod.

Levin, J. (1966). Simultaneous factor analysis of several gramian matrices. *Psychometrika*, **31**, 413–419.

L'Hermier des Plantes, H. (1976). *Structuration des tableaux à trois indices de la statistique.* Thèse de 3ème cycle, Université Montpellier II.

Marchetti, G.M. (1988). *Three – way analysis of two – mode matrices of qualitative data.* Research Report, Department of Statistics, University of Florence.

Marcotorchino, F. (1984). *Utilisations des comparaisons par paires en statistique des contingences* (Etudes F069, F071, F081). Centre Scientifique IBM–France, Paris.

Meulman, J.J. (1982). *Homogeneity analysis of incomplete data.* Leiden: DSWO press.

Meulman, J.J. (1986). *A distance approach to nonlinear multivariate analysis.* Leiden: DSWO press.

Miller, R.G. (1974). The jackknife: A review. *Biometrika*, **61**, 1–15.

Muthén, B. (1984). A general structural equation model with dichotomous, ordered categorical, and continuous latent variable indicators. *Psychometrika*, **49**, 115–132.

Neuhaus, J.O., & Wrigley, C. (1954). The quartimax method: An analytic approach to orthogonal simple structure. *British Journal of Mathematical and Statistical Psychology*, **7**, 81–91.

Nishisato, S. (1980). *Analysis of categorical data: Dual scaling and its applications.* Toronto: University Press.

Nishisato, S. (1984). Forced classification: A simple application of a quantification method. *Psychometrika*, **49**, 25–36.

Sabatier, R. (1987). *Méthodes factorielles en analyse des données: Approximations et prise en compte de variables concomitantes.* Thèse de doctorat, Université des Sciences et Techniques du Languedoc, Montpellier.

Saporta, G. (1975). *Liaisons entre plusieurs ensembles de variables et codage de données qualitatives.* Thèse de 3ème cycle, Université de Paris IV.

Saporta, G. (1976). Quelques applications des opérateurs d'Escoufier au traitement des variables qualitatives. *Statistique et Analyse des Données*, **1**, 38–46.

Saporta, G. (1979). Pondération optimale de variables qualitatives en analyse

des données. *Statistique et Analyse des Données*, **3**, 19–31.

Saunders, D.R. (1953). *An analytic method for rotation to orthogonal simple structure.* Research Bulletin, RB 53–10. Princeton, New Jersey: Educational Testing Service.

Sugiyama, M. (1975). *Religious behavior of the Japanese: Execution of a partial order scalogram analysis based on quantification theory.* Paper presented at the US–Japan seminar on theory, methods and applications of multidimensional scaling and related techniques, La Jolla, California.

Ten Berge, J.M.F. (1983). A generalization of Kristof's theorem on the trace of certain matrix products. *Psychometrika*, **48**, 519–523.

Ten Berge, J.M.F. (1984). A joint treatment of varimax rotation and the problem of diagonalizing symmetric matrices simultaneously in the least–squares sense. *Psychometrika*, **49**, 347–358.

Ten Berge, J.M.F., Knol, D.L., & Kiers, H.A.L. (1988). A treatment of the orthomax rotation family in terms of diagonalization, and a re–examination of a singular value approach to varimax rotation. *Computational Statistics Quarterly*, **3**, 207–217.

Tenenhaus, M. (1977). Analyse en composantes principales d'un ensemble de variables nominales ou numériques. *Revue de Statistique Appliquée*, **25**, 39–56.

Tenenhaus, M., & Young, F.W. (1985). An analysis and synthesis of multiple correspondence analysis, optimal scaling, dual scaling, homogeneity analysis and other methods for quantifying categorical multivariate data. *Psychometrika*, **50**, 91–119.

Ter Braak, C.J.F. (1986). Canonical correspondence analysis: A new eigenvector technique for multivariate direct gradient analysis. *Ecology*, **67**, 1167–1179.

Torgerson, W.S. (1958). *Theory and methods of scaling.* New York: Wiley.

Tschuprow, A.A. (1939). *Principles of the mathematical theory of correlation.* New York: William Hodge.

Tucker, L.R. (1966). Some mathematical notes on three–mode factor analysis. *Psychometrika*, **31**, 279–311.

Tucker, L. R. (1972). Relations between multidimensional scaling and three–mode factor analysis. *Psychometrika*, **37**, 3–27.

Tucker, L.R., & Messick, S. (1963). An individual differences model for

multidimensional scaling. *Psychometrika*, **28**, 333–367.

Van Buuren, S., & Heiser, W.J. (1989). Clustering n objects into k groups under optimal scaling of variables. *Psychometrika*, in press.

Van der Burg, E. (1985). HOMALS classification of whales, porpoises and dolphins. In J.–F. Marcotorchino, J.–M. Proth, & J. Jansen (Eds.) *Data analysis in real life environment: Ins and outs of solving problems* (pp. 25–36). Amsterdam: Elsevier Science Publishers.

Van der Burg, E. (1988). *Nonlinear canonical correlation and some related techniques*. Leiden: DSWO press.

Van der Heijden, P.G.M. (1987). *Correspondence analysis of longitudinal categorical data*. Leiden: DSWO press.

Van Rijckevorsel, J. (1987). *The application of fuzzy coding and horseshoes in multiple correspondence analysis*. Leiden: DSWO press.

Van Zomeren, A.H., & Van den Burg, W. (1985). Residual complaints of patients two years after severe head injury. *Journal of Neurology, Neurosurgery, and Psychiatry*, **48**, 21–28.

Vegelius, J. (1973). *Correlation coefficients as scalar products in Euclidean spaces*. (Research Report, 145) University of Uppsala, Department of Statistics.

Vegelius, J. (1978). On the utility of the E–correlation coefficient concept in psycholgical research. *Educational and Psychological Measurement*, **38**, 605–611.

Vegelius, J., & Bäckström, A. (1981). An enquiry about religion, analyzed by a nominal scale truncated component analysis. *Educational and Psychological Measurement*, **41**, 717–724.

Vescia, G. (1985a). Automatic classification of cetaceans by similarity aggregation. In J.–F. Marcotorchino, J.–M. Proth, & J. Jansen (Eds.) *Data analysis in real life environment: Ins and outs of solving problems* (pp. 15–24). Amsterdam: Elsevier Science Publishers.

Vescia, G. (1985b). Descriptive classification of cetacea: Whales, porpoises and dolphins. In J.–F. Marcotorchino, J.–M. Proth, & J. Jansen (Eds.) *Data analysis in real life environment: Ins and outs of solving problems* (pp. 7–13). Amsterdam: Elsevier Science Publishers.

Yanai, H. (1986). Some generalizations of correspondence analysis in terms of projection operators. In E. Diday et al. (Eds.) *Data analysis and*

informatics IV (pp. 193–207). Amsterdam: Elsevier Science Publishers.

Young, F.W., Takane, Y., & De Leeuw, J. (1978). The principal components of mixed measurement level multivariate data: An alternating least squares method with optimal scaling features. *Psychometrika*, **43**, 279–281.

Zegers, F.E. (1986). *A general family of association coefficients*. Doctoral dissertation, University of Groningen.

Zegers, F.E., & Ten Berge, J.M.F. (1986). Correlation coefficients for more than one scale type: An alternative to the Janson and Vegelius approach. *Psychometrika*, **51**, 549–557.