specific error rates). If each of the tested probabilistic translations do not fit the data well, also several other hypotheses that diverge from the Guttman model can be tested. For instance, part of the population could be intrinsically scalable according to the Guttman ordering of the items, while the rest of the population could be intrinsically unscalable, or possibly there are two orderings of items in the population (biform model).

Chapter 5 is about a relatively new application of latent class analysis: Comparing latent structures in multiple groups or of the same group measured at different times. Illustrated are the heterogeneous unrestricted T-class model (equal numbers of latent classes for all groups without restrictions on the within group parameters), some partial homogeneous models as well as the complete homogeneous model (across-group restrictions on all of the parameters). If the last model holds, the groups have the same latent structure and their distributions over the resulting latent classes can be compared. A document of the control cards for MLLSA and the program lines for the analyses given in the main text are given in two appendices.

To come to a final evaluation, aside from a few typographical errors like wrong subscripts of probabilities and omission of 'hats' to denote the estimation status of probabilities, *Latent class analysis* by Allan McCutcheon can be recommended as a good and well-written introductory text on latent class analysis. Without going into too much detail concerning technical aspects of the method, the reader gets a good impression of the core idea behind it and the kind of analyses that can be done with it. Also one is warned for several pitfalls resulting from blindly applying this technique. For the reader who wants to study this topic more thoroughly several useful references are given.

Reviewer: M. Candel (Nijmegen)

ROSKAM, E. E., SUCK, R. (Eds.): *Progress in mathematical psychology – I.* Amsterdam: North-Holland, 1987, pp. 538

In an impressive and encouraging collection of 30 papers, which originated from recent annual meetings of the European Mathematical Psychology Group, 35 authors from eight nations provide an overview of topics in which European mathematical psychologists are involved. The six parts of the book contain contributions to measurement theory, cognitive processes, reaction time models, perception and psychophysics, psychometrics and scaling theory, data analysis, and topics of social choice as well as of decision making. The editors indicate that the papers are from areas where the most intensive research of European mathematical psychologists is done and in which the contributions of mathematical psychology to other fields of psychology are most seminal.

Almost all papers report on work in progress. Some provide an overview of a recently developed theoretical analysis on a specific topic: Treisman (Oxford), e.g., analyses the effects of the setting and adustment of decision criteria on several psychophysical performances using three control processes; similarly, Zaus (Oldenburg) describes the class of hybrid adaptive methods presumedly suitable to match theory with observations better than classical methods by estimating the percentiles of quantal response functions in sensitivity analysis.

Part I on *Measurement Theory* combines several papers by Niederée (Bonn), Irtel (Regensburg), Droste (Essen), Suck (Osnabrück), and Smolenaars (Amsterdam). The authors treat topics in additive conjoint measurement, and more general aspects of fundamental measurement, e.g. its relation to probabilistic test theory. Orth (Hamburg) outlines a theory of meaningfulness.

Part II on *Cognitive Processes* combines four papers. Raaijmakers (Nijmegen) presents a formal model for the retrieval process called Search of Associative Memory (SAM). Buffart (Nijmegen) reports on a model for the representation of serial patterns in a network-structure. Response times in mental testing are discussed in the framework of a psychometric theory of intelligence by Roskam (Nijmegen). Van Breukelen, Jansen, Roskam, Van der Ven, & Smit (Nijmegen) offer a theory to decompose reaction times into process-time and distraction-time in order to explain trend effects in simple mental tasks.

Part III on *Performance and Timing* contains five papers. The method of reaction time is treated in two other papers, the one of which (Colonius, Oldenburg) builds models for dependent processing, the other of which (Diederich, Hamburg) analyzes the measurement of facilitation in the motor component. Eisler (Stockholm) discusses rats timing behavior and its possible relation with the psychophysics of time perception. Stress in waiting situations of human-computer-interactions is examined by Holling & Gediga (Osnabrück).

Part IV on *Perception and Psychophysics* covers several topics aside from the papers of Treisman and Zaus (see above). Nelson (Washington) discusses the applicability of the Goodman-Kruskal coefficient to signal detection theory. Other papers are on brightness processing (Irtel, Regensburg), on size distance invariance (Lukas, Regensburg), and on the identification of subsystems in the visual system (Mortensen, Münster). Garriga Trillo (Madrid) presents studies on olfactory psychophysics aiming to substitute the absolute threshold test.

Part V on *Psychometrics and Scaling Theory* combines a series of six papers which discuss problems in scaling, e.g. the value of Bayesian estimation methods for Rasch's multiplicative Poisson model (Jansen, Groningen), a theory about the probabilistic unfolding of preferences (van Blokland-Vogelsang, Verbeek & Eilers, Amsterdam), a polynomial model

for expert's categorial judgments (Barthelemy & Mullet, Paris), and a Boolean approach to questionaires (van Buggenhaut & Degreef, Brussels). Becker & Billhardt (Kassel) propose a modification and extension of Tversky's feature model for similarity judgments. Additionally, Garcia-Pérez (Madrid) presents a finite state theory of the performance in multiple-choice tests.

Part VI on *Social Choice and Conflict* presents three papers. A model for dynamic decision making, when dual control problems with conflicting goals occur, is outlined by Van den Wittenboer, De Bruyn & Catau (Amsterdam). Bezembinder (Nijmegen) discusses the theoretically intricate problem of interpersonal comparisons of utility and the problem of social choice. Schulz & May (Bielefeld) detail a random utility model for the evaluation of social motives by ranking methods.

The reader of the highly recommandable book will find treatments of substantive issues which go beyond formalized mathematical proofs. A Subject Index and an Author Index will help the reader with his/her studies.

Reviewer: Prof. Dr. W. Hommers (Würzburg)

STEWART, D. W.: *Secondary research – Information sources and methods.* Applied Social Research Methods Series, Volume 4. Beverly Hills, Ca.: SAGE Publications, 1984, pp. 133.

This book attempts to introduce novices to academic studies to the use of libraries or better to say bibliographic services. They will provide what Stewart calls "Secondary Sources", i.e. information at the data level and at the report level. He uses these terms interchangeably which is quite wise because report information is backed up by primary data banks so that condensed and detailed information is available. The two sources will be separated but accessible more and more. So "Secondary Analysis" is nothing but "a further analysis of information that has already been obtained" (p. 11). After an introductory chapter chapters dealing with "Evaluating Secondary Sources", more sources related chapters "Government Information", "Syndicated Commercial and Other Nongovernment Sources", and "Computer Assisted Information Acquisition" do follow. Since a US perspective is taken this limits the use in other parts of the world, however useful hints may be inferred and adapted to national services. Some center or source related information is too sparse and demonstrations as to their accessibility and usefulness within research programs are lacking. It would have been very instructive to demonstrate how primary and secondary data are used and results converge, hopefully, to a common conclusion. The prevailing argument of multi method strategies would have been very persuading.