
Book Reviews

AMBROSI, Klaus: **Aggregation und Identifikation in der numerischen Taxonomie.** (In German)

(Aggregation and Identification in Numerical Taxonomy). Königstein/Ts.: Verlag A. Hain 1980. III, 100 p. = Quantitative Methoden der Unternehmensplanung, 15.

This booklet treats on and overviews some special problems from data analysis. The starting point is a set X of n objects i whose properties are measured by q features or variables M_1, \dots, M_q (with values in sets A_1, \dots, A_q , respectively). Generally, the sets A_1, \dots, A_q bear some structure S_ℓ (rendering M_ℓ e.g. an ordinal, nominal or numerical variable; hierarchical or uniform structures are considered, too) which, generally, is different for different ℓ 's (mixed data situation). The first problem is to aggregate the structures S_1, \dots, S_q into a single structure $S = F(S_1, \dots, S_q)$ of the same type (Chapter 2). Many aggregation methods are presented in cases when S_ℓ resp. S are given by a relation, a distance measure or a sequence of relations. — The second problem results when a fixed structure S_0 is given beforehand on the set X of objects (e.g. a partition, a covering or a hierarchy) and we ask, which of the variables M_1, \dots, M_q contribute mostly to the 'explanation' of this structure. This problem is solved by defining a distance $w(S_0, S)$ between structures and searching for weights $\alpha_1, \dots, \alpha_q \geq 0$ which minimize the distance $w(S_0, F(\alpha_1 S_1, \dots, \alpha_q S_q))$ (here F is a modified aggregation function giving weights $\alpha_1, \dots, \alpha_q$ to the variables M_1, \dots, M_q). Many similar procedures are described, too. — The book proceeds in a mathematical and very formal way (even if no theorems or proofs are given). The usefulness of the methods remains open since no examples, applications or real data problems are given.

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NEELAMEGHAN, A. (Ed.): **Ordering Systems for Global Information Networks.** Proceedings of the Third International Study Conference on Classification Research, Bombay 1975. Bangalore, India: Documentation Research and Training Centre 1979. XXVI, 511 p.

If A. Neelameghan in his "Welcome Speech" emphasizes "the inspired guidance of the late Dr.S.R.Ranganathan" at the first two Study Conferences in Dorking (1957) and Elsinore (1964), this statement can safely be extended to the Bombay Conference as well, fulfilling as it did a longstanding wish of Ranganathan's - the holding of such an FID Conference in India. Even though he did not live to see this event take place - Ranganathan is and remains in many respects "our Guru", as Eric de Grolier so aptly put it in his memorial address "A Tribute to Dr. Ranganathan". The outstanding research results are taken up, continued and developed further in numerous contributions to the Third Study Conference, with the

almost perplexing richness and variety of whose subjects this reviewer now finds himself confronted.

The publication of the present "Proceedings" is organized along the same formal lines as that of the material on the Elsinore Conference: the volume contains the welcoming and inaugural addresses, most of the papers read at the Conference (in some cases - especially where the texts had already been published elsewhere - reduced to abstracts by decisions of the Organising Committee) in thematic arrangement, the Conference Organisation data including the complete timetable and a list of participants, and finally an alphabetic index. The value of an index to a composite volume of heterogeneous contributions is of course debatable. The Elsinore Proceedings remarked in this connection: "This index grew from the natural language of the conference participants, and their words have only been edited slightly to bring related topics together". That, at least, is better than nothing, but one should not expect the index of the Bombay Proceedings to produce more than that, even though it imposes somewhat higher claims, using as it does subject subheadings for topic specification and indicating relations of various kinds. Regrettable features are the non-inclusion - such in contrast to the Elsinore Proceedings - of the discussion remarks to the papers read and the long delay in time (impression 4 whole years after the date of the Conference, as against only 3/4 year in the Elsinore case); however, so the Editor hopes in his Preface, most contributions are still readable even today. All the happier one would therefore have been with a better quality of paper and particularly of binding (my reviewing copy literally went to "pieces" before I had even read all articles). The various typographical errors do not carry too much weight, considering the immense editorial achievement which the publication of such a mammoth volume undeniable represents.

The Elsinore Conference had been devoted to the general - and very broadly conceived topic "Classification Research". Besides the thematic areas "Mechanized Classification" and "Evaluation Techniques - Comparison of Systems" (they played, to a different extent, a part in Bombay as well), contributions on "General Theory of Classification" and on "Selected Specialized Schemes" were in the centre of interest. As a connecting link to similar thematic areas of the Bombay Conference Ranganathan's Elsinore paper "General and Special Classifications" may be recalled. He termed it a "false antithesis" to place general and special classifications in opposition to each other or even to play off the ones against the others. Subsequent developments showed that despite Ranganathan's warnings (each special classification implies a considerable duplication of efforts in the "borderline areas" of the given field and at the same time isolates itself from other special classifications) the trend toward the creation of classifications and/or thesauri for single fields of knowledge intensified while on the other hand voices were heard again and again which pointed to the need for a comprehensive national and international information exchange such as can only be effectively and rationally realized on the basis of a uniform classification system. Hence, various attempts were undertaken at the same time to create a new type of general and uniform classification to replace