Book Reviews

Gaul, W., Schader, M. (Eds.): Classification as a Tool of Research. Proceedings of the 9th Annual Meeting of the Classification Society (F.R.G.) University of Karlsruhe, F.R.G., 26–28 June, 1985. Amsterdam: North-Holland 1986. XIII, 502p. – ISBN 0-444-87980-3.

This volume features papers presented at the 9th Annual Meeting of the German Classification Society which was held at Karlsruhe in 1985. The volume consists of 56 papers which are a subset of the 98 invited and contributed papers presented at the meeting. As the editors point out, the papers are often difficult to categorize (an embarrassing admission for experts in classification) and they present them alphabetically by author. It is obviously impossible to even list, not to mention, summarize and evaluate, the large number of contributions in this volume within the limited framework of a book review. For this reason I shall content myself with an general overview of the topics covered. The general distribution of topics is quite similar to that held at recent meetings of the Classification Society of North America, the largest component member of the International Federation of Classification Societies. With one exception to be noted below, this indicates that European and especially German scientists have now fully caught up with advances made by their American colleagues in the 1960's and 70's. There is very little evidence of a lag of information transfer between the various national groups such as was evident in the proceedings of the earliest meetings of the German Classification Society. In fact, what was at one time a largely British and American area of research has in recent years been appreciably enriched by contributions first from France and now from Germany. It is to be hoped that this internationalization of work in the science of classification will continue, aided by the newly founded International Federation of Classification Societies. Symptomatic of the current flow of ideas is the large number of participants from outside Germany who contributed to the meeting and the volume.

Of the 56 papers in the volume, 10 deal with multivariate statistics in the wide sense including analysis of contingency tables. They are perhaps of marginal interest to classification and could as well have been presented as a data analysis or statistics conference. A large portion (16) of the papers is devoted to various aspects of ordination, such as factor analysis, non-metric multidimensional scaling and the like. This is typical of recent trends in classification research although purists might object to ordination being considered an aspect of classification. But the large interplay between clustering and ordination methods in diverse applications of taxonomy as well as the growing number of hybrid approaches, effectively mandate the inclusion of ordination as a tool in classification. Eighteen papers in all treat aspects of cluster analysis but of these fewer than might be expected deal with topics that are currently quite active in North American classificatory research. Only two papers deal with matrix comparison techniques, two with optimality criteria and two with proximity measures. The continuing difficulty of finding methods for significance tests of clusters is witnessed by a single paper on the subject. A further 7 papers deal with the theory of classification; most are devoted to the interesting new ideas on concept analysis and representation developed by R. Wille at the Technical University of Darmstadt. Finally, 3 studies are concerned with computer implementation of various methods.

The quality of the contributions varies, as is customary in a volume such as this. In addition to the concept analysis papers I found the following contributions of considerable interest: one by de Leeuw and Meulman relating principal components analysis and multidimensional scaling, one by Herden on developing optimality criteria using measures of mean heterogeneity of a classification, and one by Molliere on determing the real number of clusters. Wishart's suggestions for dealing with messy data (missing values and mixed variables) constitute a useful review.

The book which has been offset from typed and wordprocessed copy suffers in appearance because of the great variety of typefaces employed. One contributor even prepared his manuscript on a dot matrix printer. There is no index.

Robert R. Sokal

Prof. Dr. R.R. Sokal
Department of Ecology and Evolution, SUNY
Stony Brook, NY, 11793-5245, USA

MILLS, J., BROUGHTON, Vanda: **Bliss Bibliographic Classification. Second Edition: Class K, Society.** London, GB: Butterworths 1984. 167p.
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Users of the Bliss Classification scarcely need to be told about its sophisticated and flexible faceted arrangement, and readers familiar with the earlier volumes in the second edition do not need information about its inverted schedules - how the classes are cited in an order that reverses the sequence in which they are filed. Similarly, arrays within a facet are cited inversely to their filing order. The notation scheme uses a fascinating alphanumeric notation that is said to be purely ordinal, but in fact also contains expressive hierarchic aspects. The mixed notation permits the more frequently used classes to have simpler notations even when they are low in a hierarchy. The book is beautifully edited and its contents are desplayed in a user-friendly way, with clear headings, an index, and a carefully written 25 page introduction.

These properties are shared throughout the Classification and will therefore be familiar to users of its earlier volumes. What is distinctive about this volume, therefore, is its treatment of "Society" as a class. Those who have used the first edition will also be interested in the changes made in this one. Perhaps most importantly, it reflects a shift in focus from "Sociology" as a *discipline* to "Society" as a *phenomenon*. This means that some categories

included in the first edition of Bliss Class K have been moved to other classes (e.g. anthropogeography), while others are not incorporated in this class (e.g. demography and parts of social psychology that deal with attitudes and group behaviour). The focus on phenomena means, for example, that under "family and kinship" one will find themes that would otherwise be separated under sociology, social anthropology, and social psychology. This treatment contrasts with the overall design of the Classification in which disciplinary categories are usually given primacy.

Societal phenomena are subdivided under three main headings: *Social ecology and environment, Social processes,* and *Social structure.* Under the heading of social structure we find types of social entities, including individuals, collectivities, and societies; an associated category for special human needs; and institutional phenomena. The ecological category embraces classes for demography and culture.

The scheme begins with a set of classes based on the *common facets* found in the Bliss Auxiliary Schedule 1. It includes modes of studying and doing research on society, but these facets have been modified to take into account the special properties of human societies - for example, "survey methods" scarcely apply to non-human phenomena. This section also includes "applications of operations on society", and "interpretations of society". The latter covers various ideologies and schools of thought. The former includes only general applications, like planning, but more special applications, as in related fields like political science and economics, are excluded. This will raise questions in the minds of some scholars who are used to a broader definition of the "social sciences".

Of course, all of the Bliss Classification *from K on* relates to human beings and the products of social action. History comes at L, Political science under R, Law at S, Economics at T. However, some disciplines often grouped with the social sciences do precede K in the natural science part of the Bliss scheme: Geography at D, psychology at I and Education in J. No doubt overlaps cannot be avoided. We find that Human geography is placed at KAX, but its consolidation under D is recommended. In the case of Social psychology, a parallel treatment in I and K is recommended, subject to guidelines intended to reduce ambiguity - i.e., if a document focuses on the individual it should be assigned under I, but if on social processes and groups, then it would be placed under K.

All such categorizations will, of course, bring together materials of interest to some users but *scatter* those important for others - something that surely cannot be avoided in even the most flexible and powerful classification scheme. If it is known that a particular subject will interest users of a special library or collection, appropriate choices can be made. Consider, for example, the field of "Ethnic studies". We find at KPD a general class for "ethnic groups and racial groups" after which are listed some faceted concepts, e.g. KPD AD for ethnic movements is associated with KAD for social movements; KPD FDP for ethnic stereotyping with KFD P for dissociative attitudes, and KPD LMQ for ethnoclass with KLM Q for compound groups. This option permits one to collocate under the class for ethnic groups many of the processes, properties and related collectivities that are relevant to this subject. However, fragmentation results if coherent priorities are not followed: for example, if some works on social movements classed under KAD deal with ethnicity, while others on ethnic movements are placed under KPD AD.

The explanation of *faceting* does not show how one could bring into Class K a concept that requires syntheses outside this class. Suppose, for example, that we needed to classify ethnic political parties. Since political science comes after K, we may find a category for this notion in R. In a special library for ethnic studies, this would not be appropriate, but no doubt in such cases special adaptations of the scheme would be acceptable. After all, the main intent of a universal classification scheme, like Bliss, is to accomodate materials found in a general library and special collections often require their own unique classification schemes.

A comment on the treatment of *"Culture"* "aises a useful point. At KBV we read that "This variously defined concept (culture) is interpreted here as "that part of the total repertoire of human action ... which is socially ... transmitted". However, various components of culture are scattered subsequently throughout the classes KC/KY, and the non-material or ideational aspects of culture may be found at KKU. The heading at KKW for customs and folklore calls attention to the fact that a major subdivision of K, for this topic, has been set aside as a final section, from KW/KY. The introduction explains (5.11) that Class K is not completely homogeneous because customs and folklore was extracted from its logical place. We also read that this was a difficult class to schedule because it contains "... an exceptionally tangled complex of factors" (12.8). Additional flexibility is provided for this section by the inclusion of an Auxiliary Schedule K1 intended for use when subdividing any subject in folklore and mythology.

This explanation highlights a fundamental problem, namely the still *chaotic state* of the social sciences. There is simply no coherent and generally accepted framework or paradigm for sociology or anthropology, to say nothing of all the other social sciences. Nor is the terminology of these disciplines well established, a point that provokes the authors to remark, in their comments on social psychology (5.241) that an attempt was made "to disentangle terms which are often used very loosely and ambiguously, e.g. social action, social behavior, social contact, social interaction..." To cope with this problem they employed certain distinctions such as the contrast between more general and more specific modes of behaviour, and between actions designed to promote integration/divisiveness. Within this framework notes are provided to explain the particular contexts in which various terms are applicable. Such expedients are helpful, no doubt, but reliable solutions will be found only as scholars writing in the social sciences accept the kind of terminological help that will enable them to enhance their vocabulary and improve the clarity of their writings.

Finally, users will discover that a great deal of careful thought and analysis went into the preparation of this volume in the new edition of the Bliss Classification. They will also find that its schedules cannot be used without a great deal of *careful study*. Many alternatives are offered, many possible syntheses are available, and the faceting scheme provides an extremely large number of possible classes. Users will themselves have to become secondary classificationists, devising specific adaptations

based on the Bliss principles that will best serve their own needs. As the authors warn, "never classify solely from the A/Z index; always check in the classified schedule". This means that no simple-minded classing of documents on the basis of this volume is possible; before starting to class documents in a library, users will have to make an analysis of the goals of their own collection, its anticipated users, and the kinds of choices that will be most useful to meet their needs.

Fred W.Riggs

Prof.Dr.F.W.Riggs, Department of Political Science, University of Hawaii, Honolulu, HI, 96822, USA.

LEHNUS, Donald J.: **Book Nu**mbers. History, Principles and Applications. Chicago: American Library Association 1980. IV,153p., ISBN 0-8389-0316-9.

COMAROMI, John P.: **Book Nu**mbers. A Historical Study and Practical Guide to their Use. Littleton, CO: Libraries Unlimited 1981. 145p., ISBN 0-87287-251-3

The publication of two full volumed studies on book numbers following close upon each other's heels is somewhat inexplicable. Their appearance, though sudden, is, however, as highly welcome as well-timed rains in the desert. Classification textbook writers seem to be busy wiping out the last vestiges of book numbers from the new editions of their books. For the new generation of researchers in classification, this topic seems suited to their forefathers alone. It no longer seems to hold the attention and interest of scholars. This subject is well past its heyday. Literature on it is vanishing. Consequently, during the past three or four decades, there has been neither research nor any important writing on it. Earlier, only two small pamphlets on book numbers appeared in 1917 and 1937 (1-2). This is indeed an endangered species! Hence, these two books on a subject which is very rarely treated deserve applause. Regretfully, these two books did not attract many reviews, far less any stirrings in library literature. This further confirms lack of interest in the subject, or the reaching of the saturation point. If it is so, it belongs to those very few topics which attain a state of saturation.

Book numbers are a means of classification within classification. Book numbers subarrange all those documents which have the same ultimate class numbers. Book numbers are necessary to provide unique call numbers to the library documents for discrete arrangement on the shelves. They are equally indispensable for shelf-listing and for a classified catalogue. Also known as external notation as distinguished from the internal notation of the class number, a book number is essentially based on some non-subject (external) characteristics of the document, as the subject (or internal) characteristics have already been exhausted while assigning the class number to the document. Hence, book numbers are a step beyond (subject) classification. A class number and a book number are two different steps in the same line to a common end. In other words, the function of a book number starts where that of a class number ends.

Book numbers are an adjunct in library classification as these are not required in knowledge classification. Further, these are only required in a relative classification as distinguished from the fixed location systems of pre-Dewey days. In relative classification, too, these are considered as an auxiliary. In the beginning there was a debate on their usefulness which has now been happily settled in their favor. However, an erroneous notion has come into circulation that the more minute a classification is, the less book numbers are used. It is a highly exaggerated side fact. According to Lehnus (p.75): "If there are only a few items with the same classification number, the book number can be simple, but if the library has many items classified under one number then it must be more detailed". Lehnus' argument in essence boils down to the old argument that if the library is small the classification may be broader, but classification has of necessity to be minute when the size of the library goes on increasing. However, Comaromi (p.5) is apt to say that to pay scant attention to book numbers "is to leave the frosting off the cake. The cake can be eaten to be sure, but with less ease and appreciation". Without book numbers there will be mini-pockets of chaos under every class number and the cost of retrieving a document will be burdensome and even frustrating (Comaromi, p.52).

Ineluctably, the origin and development of book numbers is coeval with the development of relative classification begun in 1876. "At the Amherst, Dewey tried placing the author's name in full or abbreviated form after the class number, but found the method unwieldy. He then decided to use the simplest method possible, that of numbering each book in a class according to its accession. Thus 160.11 would be the first work on logic, 160.2 the second" informs J.Comaromi elsewhere (3). This accession order subarrangement resulted in more or less chronological order within the same class. Then came the idea of translating the author's name into numbers. A prototype, actually a part of his "combined system" of classification, was devised in 1878 by M.Jacob Schwartz (1846-1926) the then librarian of the New York Apprentices Library. His system subarranged books first by size then by author number. Charles Ammi Cutter (1837-1903) liked Schwartz's idea better than the Dewey method of arranging by accession number. John Endmands (1820-1913), librarian of the Mercantile Library of Philadelphia from 1856-1901, successfully improved upon Schwartz's method by prefixing the initial letter to the number standing for the author's name. Cutter at first objected to the mixing of alphabet and numerals but later found it useful. C.A.Cutter, of course, struck by Dewey's use of decimal notations, improved them further by treating the numerals as decimal digits, thus making way for the infinite intercalation of names where needed. In its February 1879 issue, the Library Journal published a symposium on book numbers to which many leading librarians contributed. It gave a fillip to the theory and practice of book numbers. Many ensuing innovative ideas charged the atmosphere further. Cutter was also the first to publish and sell a self-devised author table in 1880 from Boston which is now no longer exstant. In 1885, W.S.Biscoe, a lieutenant of Melvil Dewey, proposed a new system of book numbers based upon the year of publication of the books. Dewey commended it as useful for science and technology books and also included it in his Decimal Classification. By the end of the 1880's cuttering had become a standard procedure; and now "cutter" is an