it wants to help in analyzing complicated and sophisticated cases.

This way of seeing and handling things is surely symptomatic of our times. By the influence of Francis Bacon and modern epistemology of science methodology has received a very important place in scientific activity and reflective thought. It can be assumed that in the near future we will return from the methodological point of view to the casuistical one as practiced in medieval times This will lead to a new form of casuistics as the art to seek efficient solutions to global problems. It will also be a new form of rationality based on religious foundations. Julius Schreider

(1) Union of International Associations: Yearbook of International Organizations. 1986/87. Vol.3: Subject Volume. Global Action Networks; Classified directory by subject and region. 4th ed. München-etc.: K.G.Saur 1986. (Here Appendix 6, 20p.) (See also Int.Classif.11(1984)No.2, p.69-76, + No3, p.139-50)

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COMAROMI, John P., SATIJA, M.P.: **Exercises in the 20th edition of the Dewey Decimal Classification.** New Delhi, Sterling Publishers 1990. 127p.

Since the previous edition of this text-book - *Introduction to the practice of the Dewey Decimal Classification* (1987) - the title has been changed, and the well-known authors are now in alphabetical order on the title page. A new edition became necessary with the publication of the 20th edition of the DDC. The authors claim, that the new edition can also be used in connection with DDC-18 and DDC-19. This claim seems justified, considering that the structure of the new edition is unaltered, the text relatively unchanged, and the greater part of the examples retained. Evidently there is no need to make alterations in a book, that has proved satisfactory, apart from including examples, that have to do with the differences between DDC-19 and DDC-20.

Classification is an intellectual play with the most obvious practical consequences. It is the act of fitting the document under classification into its proper place, in line with other documents of an identical scope or with a similar content. If a document has been well classified, it offers, together with other members of the same class and with the neighbouring classes, a logically beautiful exposition of human knowledge in a given field. This facet of the classification process is dependent on the quality and intuition of the classifier, and can hardly be taught at library schools, rather in real life.

What can be taught is the use of the classification system rules, the number building, which is also an interesting facet of the classification process. Number building can be taught without real books; book titles as similar as possible to real books are ideal materials. Number building instruments in the DDC are, besides the main schedules, the subdivision tables, and the rules of precedence. As in other faceted systems the order of precedence is important and could not be left to individual taste.

To make it possible for library school students to master such techniques together with the many possibilities of synthesis that have grown throughout the many editions of the DDC is the scope of this textbook. The resulting class numbers are in themselves unintelligible to users of the system who are not classifiers, or in other ways familiar with the strange world of these class numbers, that appear as mere codes. Much as this can be regretted, their lengths make them useful in large collections, in bibliographies, or in bibliographical databases to keep together similar subjects and to separate subjects that are not fully identical. So far DDC has abstained from the use of such visual facet indicators as would separate the elements of the classification numbers, and make the searching of single facets easier in an online retrieval system.

I find this new book very satisfactory as an instrument to teach and to learn the art of Dewey number building. The examples are many, well differentiated, and the conclusions - what did you learn? - carefully done. The final summarizing exercises give the student ample opportunities to look back and remember. Like the other volumes in the Satija/Comaromi series this new one should be welcomed as much as its predecessors: ideal for library school students, interesting for many a librarian. Jens B. Friis-Hansen

HOLLEY, Robert P. (Ed.): **Subject control in online catalogs.** New York: Haworth Press 1989. 251p. ISBN 0-86656-793-3. (Also published as 'Cataloging & Classification Quarterly 10(1989)Nos. 1/2)

Given the fact that the book under review is available both as a double issue of the journal *Cataloging and Classification Quarterly* and now also as an independent monograph, the question suggests itself whether we are dealing here with a standard work that can be consulted whenever one wishes to occupy oneself with questions of the online catalog and its design, such in particular with a view to subject searching possibilities. After reading the book one will have to conclude, however, that it cannot meet such expectations.

The chief objection would be that the book does not furnish a full or comprehensive impression of the possibilities (both in theoretical planning and in practical realization), for providing subject searching facilities in online catalogs, nor of the problems occurring in retrieval with all its complex individual factors; it is too much in the nature of a compilation of individual punctual contributions on partly quite specific problems which, in the manner as assembled here, are not representative of the problems of subject analysis of documents in online public-access catalogs. This point of view

is illustrated more clearly than I could have done it myself by the following quotation from another book which can be recommended in many respects as a complement to the compilation reviewed here:
"Meanwhile much of the criticism regarding subject access centered around the Library of Congress Subject Headings. One should, however, view subject access in a broader perspective. This perspective is that subject access to online catalogs consists of a number of independent but interacting components, of which the subject headings is only one. As the user sits in front of an online catalog terminal, the information he or she retrieves depends on the strengths and weaknesses of each of these components and how well these components are brought together to form a coherent and understandable system" (1).

As a second general objection one might mention the fact that, in their majority, the contributions are not discussions of new designs but rather proposals for the improvement of existing systems, proposals which, moreover, frequently pertain exclusively to the application of Boolean instruments to free-text vocabulary, with little attention being paid to the question whether the supposedly simple and cheap solutions will not, in the end, prove to be the expensive ones by turning out to be unsuitable in the long run. Of many a proposal the frequently voiced criticism is true that it is too much oriented to traditional catalog thinking, that little attention is paid to what is realizable or desirable. Thus, e.g., only little is said of adaptive support functions or used modeling, of linguistic or statistic improvement algorithms, of user feedback systems, of graphic user interfaces or of other practical aids that are already being put to the test. So in this respect, too, the book is unable to meet more elevated expectations.

Nevertheless, for one well versed in the subject matter this volume is a useful book containing a number of readable contributions (as well as a wealth of examples), of which a few will now be considered further.

A contribution to be counted among the more fundamental ones is the one by *Simone Klugmann* on the subject 'Failures in subject retrieval'. Characterizing her contribution as one intended *'to supply a rational approach to the online catalog that will yield predictable and consistent results'* (p. 20), she discusses strengths and weaknesses of existing systems (using, among others, the development of MELVYL as an example), deriving from this possibilities for the design of future OPACs. This contribution is recommendable as a suitable overview of the entire problem field.

Likewise highly readable are *Mary Dykstra*'s remarks on the subject 'PRECIS in the online catalog', which need not be regarded as limited to the PRECIS system, but may also be viewed in the light of the question, interesting for other procedures as well: 'Processing of precombined indexing results for post-coordinating retrieval', a subject expected to play a major role in the future design of subject searching components. Thus one would wish that Dykstra's hints on the design of a 'syntactic retrieval' system making use of the PRECIS role operators (p. 93) will undergo some practical concretization. (In this connection attention is invited to a contribution by the reviewer in which this problem field is likewise discussed (2)).

An aspect which is steadily gaining in importance - consideration and modeling of the context-variable cognitive processes taking place in the user in the posing of search questions for the designing of subject search components - is gone into by *Alva T. Stone*, using law library OPACs as an example. It would be desirable if such considerations were developed also from the point of view of all other disciplines. The realization that there is no such thing as one universal user should as soon as possible become part and parcel of the planning considerations for the designing of OPACs. However, the concluding proposal: integration of free text and Boolean operators fails to convince the reader, particularly against this background.

Likewise devoted to better knowledge of user expectations is *Allison Carlyle*'s detailed contribution on the question of 'matching studies', a question which again is not only of interest for the Library of Congress Subject Headings (LCSH's) - as discussed here - but should be seen in a wider context.

Nancy Williamson is represented with a contribution entitled 'The role of classification in online systems', which, however, apart from raising a general demand for paying attention to classification systems in online catalogs, is more concerned with thesaurus structures than with specific questions of the transposition of classificatory structures in online environments.

The use of classification systems in online catalogs is also touched upon by *Elaine Broadbent*, though only secondarily to the question of whether notations should be assigned to the documents or to the LCSH's. It is not only at this point that one wishes that the development of the UDC-based ETHICS system of ETH, the Zurich Institute of Technology, would be better known in US circles (cf.e.g. (3)), which might give a different direction to many an argument (although likewise failing to mention the ETHICS system, the book listed under (1) offers far more information in these questions).

In a brief contribution, *Lois Mai Chan* discusses the necessity of a subject cataloging code. For the reasons mentioned already at the beginning, the reviewer is unable to approve of the subordination, recognizable from Chan's remarks, of fundamental methodological considerations to pragmatic hybridization.

The book is rounded off by a commented bibliography on 'Subject access in online catalogs' compiled by *Doris Cruger Dale*, which, for all its great usefulness, will not be spared the fate of finding itself soon overtaken by developments in this rapidly changing field.

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SMITH, Linda C. (Ed.): **Questions and answers: strategies for using the electronic reference collection.** Urbana-Champaign, IL: University of Illinois 1989. 208p. Hardcover. ISBN 0-87845-077-7.

This volume contains the proceedings of the twenty-fourth annual "Clinic on Library Applications of Data Processing" which was held April 5-7, 1987, at the University of Illinois at Urbana-Champaign. Of the fifteen papers published here, nine were given by invited speakers discussing various aspects of the clinic theme, one was part of a poster session, and five were presented by librarians from the University of Illinois, thus dealing with local aspects of library automation. The range of topics discussed comprises online public access catalogues, online databases, CD-ROM databases and catalogues, and bibliographic networks.

The keynote paper by *Sheila Creth*, "Beyond technical issues: the impact of automation on library organizations" (pp.4-13), looks at library automation from a University Librarian|s managerial point-of-view. Firstly, the author discusses the changes that library automation might bring to the organisation. Will libraries and librarians really play the central role in providing access to information within a highly automated university community? Or will they lose this role to academic computing centres? Even in Europe we can feel a tendency of merging university libraries and computing centres, or at least of putting them under a common management. Creth also mentions the impact of automation on communication patterns within a library organisation, and on the organisational structure of libraries. It could well be that in automated libraries teams working within broad subject fields are more efficient than the traditional public and technical services divisions. Whether or not participatory management will replace the existing authoritarian structures in libraries is an open question; there are certainly some aspects other than automation that also must be considered in this context. In the second part of her paper, Creth deals with the impact of library automation on the individual. She gives a somewhat futuristic view of the numerous skills that present-day and future librarians should have and accordingly points to the increasing importance of training and development of staff. I wonder who will ever pay for this when today's authorities still expect you to cover the expenses for conference trips yourself; Creth is not very helpful by stating that "somehow" that money must be put together. Finally, the paper touches some important aspects of the work environment, including health concerns of "life at a workstation", the location of staff and the flow of work, and the problems of work relationships in the automation context. Surely, the latter point would have deserved more attention than given here; it seems that not many of us dare to speak about demotivation and alienation caused by library automation.

Charles Hildreth's paper, "Extending the access and reference service capabilities of the online public catalog" (p.14-33), is a must for everyone studying OPAC theory and practice. Hildreth starts with a brief account of the different development histories of OPACs and online information systems, and of the weaknesses of first-generation online catalogues, before concentrating on a discussion of the present state of operational OPACs, their problems and shortcomings, and suggesting different ways to improve their access and service potential to library users. Most present-day OPACs fall into the second category of the author's three-generation classification of online catalogues; even the rather underdeveloped OPAC this reviewer is most familiar with provides some features beyond those of simple first-generation known-item finding tools. Obviously, some of the more advanced second-generation OPACs can be seen as bibliographic information retrieval systems, designed for end-user access, containing a wider variety of subjects but still lacking the standard of subject searching features that IR-systems usually provide. According to the author, they are efficient tools for library staff but not yet for a wide variety of untrained, occasional users (too many failed searches, navigational confusion, problems with the subject indexing vocabulary, ignorance of the basic approaches to retrieval, etc.) Hildreth then very briefly reviews relevant research results that some OPAC developers seemingly never ever bothered to notice at all. -- The paper's second part presents eight ways of extending the OPAC, mostly by adding data to the MARC catalogue records, by integrating related data or information files to the OPAC database, by enhancing the search and retrieval options, and by providing gateway access to external bibliographic and other files. Hildreth also makes clear that most present-day operating OPACs have neglected the developments in modern information retrieval research (especially non-Boolean techniques), and talks about "intelligent" systems (they begin where conventional systems end). At least, a limited number of advanced IR and online catalogue systems have started using "modern" techniques such as automatic combinatorial searching or automatic linguistic techniques including the use of thesauri and other subject authorities files. Hildreth concludes that the "fully extended OPAC or even the 'full collection access instrument' does not yet exist in a particular operational environment," andidentifies some obstacles which need to be overcome (incompati-