

this book is now a standard subject cataloguing tool. It was based on the subject heading practices of 9 small but well-catalogued libraries. Its 2nd and 3rd editions were published in 1926 and 1933, again under the editorship of Sears, who died prematurely. The 4th (1939) and 5th (1944) editions, edited by Isabel Stevenson Munro, also included DDC numbers. The 6th (1950), 7th (1954) and 8th (1959) editions were edited by Bertha M. Frick. The 6th edition incorporated Sears' name to assume its present title.

The book was deemed useful both for small and medium-sized libraries and acquired an internal format of display and cross-references which lasted until the 14th edition (1991) edited by Martha T. Mooney. In the 9th (1965) and 10th (1972) editions edited by Barbara M. Westby the DDC numbers were dropped to reappear again as of the 11th (1977) edition. The 12th (1982) was the last edition edited by Westby. The 13th (1986) edition edited by Carmen Rovira and Caroline Reyes was the first to be in an online form; and it introduced some changes to suit OPACs environment by deinviting many of the headings. The electronic-age reforms have continued through the 14th (1991) and the present 15th editions. The 13th edition also incorporated headings from the Subject Headings for Children's Literature (Library of Congress). Now the revisions are more frequent and short-spaced in time.

In the present edition new headings have been added in the areas of Technology, Business, People and Environment. „African American“ is a significant new heading added. In the fiction and films areas alone some 120 new headings have been added. Some 500 headings have been newly added, modified, or deleted, mostly at the suggestion of working librarians. A long list of all replaced headings is given. Some headings have been given new terms for old concepts, e.g. „Explorations“ has been changed to „Discoveries“. Changes in Sears were inevitable following the changes in the LC Subject Headings policies, which Sears closely follows. Since the 13th edition, as already said, direct forms of headings are preferred over the inverted forms, e.g. „Islamic art“ instead of „Art, Islamic“. The changes have come full circle with the deinviting en masse of almost all inverted headings. This will increase the probability of „hits“ in the hit-an-miss location of headings. In the 15th edition the scope notes have been increased in number. It uses the 12th edition (1990) of the Abridged DDC for class numbers consisting mostly of 4 digits. The headings are arranged word by word following the ALA Filing Rules (1980) with punctuations being disregarded. In forms of corporate headings AACR-2R (1988) has been followed.

The most important change is in the display format, which resembles a thesaurus with use of abbreviated labels like BT, NT, RT, UF, USE and SA. The old symbol and abbreviation „see“ has been replaced by „USE“, „X“ has been replaced by „UF“ and „x“ by BT, NT and RT; „See also“ has been replaced by „SA“. The thesaurus format conforms to the NISO standards for thesauri (1993). The headings are now easily accessible and easy to use; and the relations between headings are more vividly apparent. But in the public catalogue the display format of cross-references remains totally unchanged.

In principle the 15th edition continues the fundamental principles of specific and direct entry and user's convenience laid down by C.A.Cutter (1837-1903) in his famous *Rules for a Dictionary Catalog* (1876-1903). It still maintains the age-old balance between theory and practice with a tilt towards practicality. The new edition copes with the developments in new subjects and terminology, and reflects the changes in user's approaches to the subject catalogues.

Paged display augmented by crisp typography is clear, though on each page the margins in which local decision, revisions and additions may be recorded, have been narrowed. The repetition on every page of full expansions of the thesaural terms such as BT, RT, etc. reflects a distrust of the maturity of Sears users, and will hopefully be avoided in the next edition. A fault, though not of the editor or publisher, is contained in the CIP Cataloguing data.

In brief, this timely new edition is in tune with the new environments, and will continue to be useful in OPACs as it was and still is in card catalogues.

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BELL, Hazel K.: Indexing Biographies and Other Stories of Human Lives. London: Society of Indexers 1992. 42p., 37 refs., Index. ISBN 1-871577-18-6 = Occasional Papers on Indexing, No.1.

This booklet describes in detail the peculiarities of the indexing of texts of the type mentioned in the title. Sensitive as such texts usually are, the interpretation inevitably involved in any indexing is a delicate matter here, since the conversion of the finely gradated nuances of expression into keywords is a task which sometimes will be difficult to accomplish with sufficient precision and without shifting the meaning of the fine undertones that may be present. Also, there is a danger of becoming a possible accessory to libel when a text contains scurrilous allegations. As the authoress puts it, indexers of human lives have to „search their souls as well as their thesauri“.

Another peculiarity noted by the authoress lies in the fact that „bibliographical indexers are usually working on unfamiliar topics and can make no claim to expertise“. Particularly complex is the text of novels, where the relationships between the various characters and objects, as well as the significance of the various topics, metaphors, images, etc. for the index, need to be assessed. Peculiar to these texts is also the problem of the indexing of the numerous events in which the main character is involved.

Over and beyond the peculiarities of bibliographies and other stories of human lives, however, advice that may be useful for the indexing of other works as well is likewise given. Thus, e.g., the indexer is advised to read the given text several times most thoroughly to obtain certainty as to the completeness of the index with respect to the vocabulary drawn up. Also, the indexer should always indicate correctly how many pages (or paragraphs!) are covered by a topic, and he should select his subheadings most appropriately and concisely. The various

forms of arrangement of the subheadings under a subject heading are discussed, with particular attention being paid to the theme-by-theme arrangement (only rarely encountered though it may be), such in contrast with the alphabetic and chronological arrangement. Assignment indexing is indispensable, as only very few of the subheadings closely match the text, and as the reader cannot be assumed to have knowledge of the authors' selection of words. Typographic advice on the shaping of the layout concludes the book.

The reader is given a good overview of many a difficult question, since not only the pertinent opinion of the authoress is given, but also the dissenting advice of other authors.

The booklet can be recommended to anyone setting him- or herself the task of compiling an index to a book of this special nature. Much effort is involved in such a task, and the circle of interested persons may be assumed to be small, limited as it will usually be to persons intending to conduct literary studies on the given texts.

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DELGADO, Rodrigues, BANATHY, B.H. (Eds.): International Systems Science Handbook. An Introduction to Systems Science for Everybody. Madrid: Systemic Publications 1993. 512p.

The various systems approaches have mushroomed rather explosively. It proves less and less possible both to focus on a necessarily specialized field and at the same time to follow the general trend. The first is necessary to be pragmatically efficient. The second is to retain an at least general overview over the larger field of systems in general, which is a must if the results achieved are not to remain isolated aspects. – Any attempt thus to provide a view on what is going on in systems science is doubly welcome. In addition, special concepts and tools, e.g. algorithms employed, normally require considerable effort to be adequately understood. Systems Science for everybody will also be gratefully accepted, namely if it is understood as a qualified generally understandable pointing out of just the basic structures which can be derived from its fundamental principles. Likewise, finally, an introduction for systems non-specialists/addicts is much needed to interdisciplinarily bridge the gaps still existing in disciplinary research. None of these endeavors being easily accomplished in itself, this goes all the more for the combination claimed in title and subtitle. How does the volume approach these goals, and how far does it succeed?

As the editor states, *The general purpose of this book is to bring into focus the significance and contribution of systems education to the advancement of systems inquiry* (p.16). This rather abstract and equally abstractly elaborated goal is intended to further systems educational programs. Only sixty (of 500) pages, however, belong to the chapter labeled 'Education'. Even there theoretical considerations prevail; teaching/learning systems themselves are scarcely touched. Thus the necessary limitation and the strength of the, in toto, 37 contributions lie in the confinement to fundamental concepts, i.e. systemic perspectives, basic methodologies

and a small number of important applications (p.11). They are accordingly clustered into six chapters. 1. *Introduction* provides definitions of the terms on education. 2. *Generalities* covers and explores basic concepts of systems theory. 3. *Systems Science* refers to Science as a system from the systems science point of view. 4. *Education* deals with relevant aspects like the biological and cognitive functions. 5. *Methodology* offers a general view of systems methodologies and systems methods: systems analysis, systems dynamics and systems dialectics, considered as a basis for integrated development. 6. *Some Applications* discusses in some applications seen as characteristic, such as ecosystems, innovation, time management and morality.

Again: the volume is only abstractedly, and on a very high theoretical level, concerned with learning. It devotes itself to a general overview in the areas chosen rather than focussing on the latest developments. Moreover, it favors the formal/mathematical conceptual side. For example, the Soft Systems Method (P. Checkland, Lancaster) is only briefly and partly dealt with. These confinements accepted, the perusal of the book proves quite rewarding and often exciting. Resisting the temptation to get lost in interesting details – and there are plenty of them all over the book – just a few highlights may be pointed out. They can be very roughly labeled as peculiar aspects of systems modeling as a means to perceive new realities, to find innovatively new orders within these realities and to acquire heuristic tools to deal with – or possibly even to control – change.

The brilliant '*Systems Theory. Basic Concepts*' (Delgado, p.18) plainly shows just where within comprehensive models of the systems concept white spots still need to be filled with concrete/conceptual programs for practical application. This is true in particular in the societal and the human domain. The same applies to '*Main Currents in Systems Thinking: General Systems Theory and General Evolution Theory*' (Lazlo, p.105). Under the auspices of the systems approach, Systems Science, Psychology and Cognition (Andreevsky, p.176), the different approaches to and within the discipline psychology are extended up to the impacts of computer science. '*The Integration of Systemic and Interpretative Thought*' (Snow, p.136) I found to be highly recommendable from the point of view of hermeneutics, philosophy of science and methodology in general. '*Social Systems*' (Bunge p.210) engages in – on first sight – somewhat bewildering attempt at the study of social facts, consisting mainly of definitions and principles. Considerations nearer to concrete systems, namely economics and corporations, will be found in '*The Systems Paradigm in Organization and Management: From Open Systems to the Chaos Hypothesis*' (Broekstra, p.69) and in '*Cultural Change, Strategic Management and Organizational Change*' (Ulloa, p.222). Their reasoning explicitly includes 'soft' factors like Weltanschauung, and a reliance on the Soft Systems Method SSM (Checkland), coming near to pragmatic application, as does '*A Cognitive Map of Cultural Change*' (Lazlo, p.315).

Closing the circle: '*Conceptual Tools*' (Manzelli, p.329), '*Systems Dialectics for Integrated Development*' (Rodriguez-Delgado, p.349) and '*General Rules for System Dynamics Modeling*' (Martinez, p.381) appear to be strongly attached