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Revising the Dewey Decimal Classification

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Revision of the DDC is based on the growth or recasting of knowledge that is revealed in a decade of publishing. Revision takes place at the Library of Congress and is guided by several professional committees and the advice of experts. *Decimal Classification Additions, Notes and Decisions (DC&)* conveys revisions of a minor nature between editions. Separate publications, such as for 004–006 Data Processing and Computer Science, make extensive revisions available between editions. (Author)

The twentieth edition of the DDC is now in preparation; it is to be published in 1989. The various editions have appeared ranging from a span of two years (between Editions 8 and 9 from 1913 to 1915) to twelve years (between Editions 6 and 7 from 1899 to 1911). The revision cycle seems settled at an approximate span of ten years.

The reasons and need for revising and edition are self-evident. The most immediate need results from the depletion of the printed copies of the edition. Melville Dewey usually limited the number of copies of each edition so that he would never be caught with more books than buyers. Occasionally he underestimated the popularity of the Classification, and a new edition followed hard upon the heels of the former despite there being very little new material in the new edition. A more legitimate reason for a new edition was to keep pace with the ever-growing knowledge bursting upon the world.

A new edition endeavours to encompass new subjects at appropriate places, expand the existing numbers wherever required, and rectify the wrongly placed subjects by relocating them to the appropriate places. Some class numbers that have not been used may be discontinued or reduced in detail; this is done hesitantly, however, as this act makes orphans of numbers that may have been used by libraries. For each new edition the editorial rules are revised to produce changes needed to make the DDC more accessible and easy to understand. (For Edition 20 a Manual has been incorporated in the Classification to make it more consistently applied.) Introductory material is written anew to emphasize the changes made in the new edition as well as to make such introductory material more readily comprehensible. A noteworthy feature is that every edition tries to assimilate some of the new advances made in the general theory of classification; it also tries to afford more op-

portunities for synthesis of class numbers. Another important use of revision in recent editions is the internationalizing and cosmopolitanizing of the DDC and the concomitant reduction of American bias.

1. Responsibility of Revision

The revision of the DDC is a continuous process. The Decimal Classification Editorial Policy Committee (EPC) meets twice a year to consider minutely the proposals for amendments and extensions submitted by the Decimal Classification Division. (Members of the EPC themselves usually do not propose new developments, though there is no ban on their doing so.) The Division is the executive organ; it prepares the draft proposals in its office at the Library of Congress, where it is a division of the Processing Services Department. Not only does the Division make the Classification, but it is also its single largest user, classifying well over 100,000 titles annually for use on MARC records and LC cards. Consequently, the editors are able to take close note of current trends in every branch of knowledge. The DDC is thus actually based on the principle of literary warrant that decrees that no DDC number can exist for a topic unless several items have been written upon it. A new edition of the DDC is built on an experience gained through the classification of from 500,000 to 800,000 books published all over the world and in many languages. It is a great advantage and an enviable opportunity available to no other classification system except for the Library of Congress Classification.

A new edition is prepared on the basis of the preceding one and on all the separates that have been published since the publication of the preceding edition. The separates are the result of the policy of continuous revision that Forest Press promulgated after the publication of Edition 19. (To date there have been two separates: 301–307 Sociology and 004–006 Data processing and Computer science.) Formal and informal criticism of the previous edition in the professional press and among librarians is taken careful note of. The major source for revision is the experience of the Division in using the edition. This experience produces not only DDC numbers for LC cards and Marc records but also produces the DDC “shelflist, a file of cards for most of the monographs classed by the current edition of the DDC and arranged 001–999. The shelflist provides the editors with the evidence that suggests where revision, expansion, or reduction should take place. The degree of revision a part of the Classification is to undergo is decided by Forest Press upon the Editorial Policy Committee’s approval. The degree of expansion is decided by the editors after they have determined the literary warrant for the class. What is to receive complete revision (phoenixing) is determined by the EPC and Forest Press.

Drafts of the new edition are prepared by the Decimal Classification Division, where eleven decimal classification specialists classify books and serials under the guidance of the Assistant Chief of the Division. The Editor is assisted by three assistant editors and by decimal classification specialists of the Division well-versed in an area being revised.

2. Phoenix Schedules

The most important and precarious part of the revision of the DDC is the creation of a phoenix schedule, the total revision of a small part of the schedule with little or no reference to the previous schedule except for the base number. In the case of a phoenix schedule for a division, all sections are usually given new meanings; in the case of a section, all first-level subsections are usually given new meanings. In normal revision a class number when vacated of its meaning is not allowed to gain a new meaning for several editions in order to prevent confusion at the shelf and in the classified catalogue. But this consideration is disregarded in the case of phoenix schedules; the vacated numbers are used immediately for new topics. The phoenix schedule is a device to overhaul the DDC gradually. Though the device ruthlessly violates the integrity of numbers policy, it helps to keep pace with the growth of knowledge and, more importantly, with the *restructuring of knowledge*, for not only do new facts present themselves to our senses but they give rise to different ways to view our world. Such schedules are only introduced when the existing treatment of the class in the DDC fails miserably to reckon with current knowledge: subject order has become unfathomable, collocation useless, modern details lacking and the citation order a mystery.

Antecedents of the phoenix schedule can be traced back to what was termed the "alternative schedule". In the thirteenth edition an alternative schedule of 89 pages was provided for Psychology at 159.9. Similarly in the fourteenth edition an alternative schedule of 14 pages was offered for taxonomic botany based on 582. As the name implies, these schedules were optional. The phoenix schedules as such were introduced for the first time in the sixteenth edition, when all the subsections of 546 Inorganic chemistry and 547 Organic chemistry were redone. Edition 17 provided a phoenix schedule for 150 Psychology, Edition 18 for 340 Law and 510 Mathematics, Edition 19 for 301–307 Sociology and 324. The political process, and in the area table the area numbers for Great Britain have been revised and developed at 41–42 to be in tune with the new administrative organization. Thus as a result of the phoenix schedules only the division numbers are unaltered and constantly carry the meanings that Melvil Dewey assigned to them by the second edition in 1885. For the sixteenth through the nineteenth editions never more than two phoenix schedules were introduced. After the publication of Edition 19 in 1979, however, the policy of continuous revision was promulgated; this policy has produced one phoenix schedule 004–006 Data Processing and Computer Science and a large expansion (301–307 Sociology) before the publication of Edition 20. (Only 780 Music has been phoenixed for Edition 20.)

3. Method of Creating Phoenix Schedules

The decision to introduce a phoenix schedule is made far in advance of its publication, sometimes one or two editions earlier. Accordingly it is made known to the profession to prepare it psychologically for the impending far-reaching change. Extensive deliberation over a con-

siderable period of time is made by the members of the Editorial Policy Committee and the Forest Press Committee in order to decide the part of the schedule or the auxiliary tables to be given phoenix treatment in the coming editions.

The method of preparing a phoenix schedule is more or less the same as the introduction or expansion of a topic, though the task is considerably more extensive; it is as if one stood before a forest and had to make intellectual sense of it, whereas adding a new topic is but adding a tree to the forest, and expanding a number little more than giving a tree there some additional branches. The availability of liberated notation provides a good advantage, and facilitates total restructuring of the schedule.

Phoenix schedules are usually prepared by the Decimal Classification Division, though some of the ground work may be done by an outside subject expert or professional agency, as was the case with 780 Music (whose groundwork was done in England by John Clews and Russell Sweeney).

The first step in the development of a phoenix schedule is a review of the DDC shelflist to gain a feeling for the topics that must be organized in the target class. The next step is to consult several recent introductions or compends on the subject to learn of the various major categories and subcategories that have to be reckoned with. At this point other library classifications may be consulted to determine how they have treated the subject (the Library of Congress Classification, Bliss, and the Universal Decimal Classification being the primary ones). The editor turns then to recent book-level monographic literature to enhance what he has learned from the DDC shelflist and to verify that the scholars' view of the organization of a field squares with the way the field is written about, a happy state that is frequently not the case. When the editor believes he has a firm grasp of the overall intellectual and bibliographic structure of a field, he begins to outline the subject, not from the first line to the last, but a level at a time; that is, first level arrays are completed before any second level arrays are set down – all subdivisions of chemistry are set forth before a subdivision of organic chemistry is set forth.

Even at the preparatory stage a large number of librarians and other scholars are consulted on general order and sticky points. (For example, for the proposed phoenix for 351/354 the (British) Library Association Decimal Classification Committee conducted a survey in the summer of 1983 to discover the preferences of librarians for the citation order to be used in the proposed phoenix schedule for 350–354 Public Administration.) And before finally incorporating a phoenix schedule in an edition, it is widely circulated to be previewed and criticised by subject experts and librarians using the DDC. This was done for 004–006 Data processing and Computer science. The process was even more extensive in distribution and time for the 780 Music phoenix that had been proposed in 1980 so that the practitioners of music librarianship could have time to analyze the changes found therein. A recently established review mechanism involves the Subject Analysis Committee of the Cataloging and Classification Section of the Resources and Technical Services Division of the American

Library Association as it sets up subcommittees to study major new schedules proposed by the Decimal Classification Division and accepted by the Editorial Policy Committee and the Forest Press Committee. Such subcommittees have proven extremely helpful in altering the proposed schedules in useful ways and in bringing interested librarians into the editorial process.

Preliminary drafts are submitted to the EPC for examination, discussion, and approval. At its semi-annual meetings the Committee discusses the pros and cons of every proposal, whether it be great or small, technical or organizational. The EPC may approve what the Division submits; it may propose changes in the light shed by discussion, or it may postpone its decision until such time as it feels it possesses sufficient information. The members of the EPC always keep "uppermost in their minds the needs and desires of the worldwide library community they serve," wrote John P. Comaromi, then Chairman of the EPC (1).

The EPC does not have the final word on what the Division proposes; that is uttered by the Forest Press Committee, which, as was noted earlier, is primarily concerned with administrative and publishing matters. The Forest Press Committee usually approves what the EPC recommends, though its approval is not guaranteed. To restate the Official arrangement: the Forest Press Committee instructs the Executive Director of Forest Press to inform the Editor at the Decimal Classification Division to perform what the EPC has recommended to Forest Press after reviewing what the Division has proposed. The Division remains free, however, to refine whatever development it has already done and had accepted.

Thus the preparation of a new edition not only involves the scientific and educational consensus, but also the consensus of a considerable body of librarians.

The text of an edition used to be frozen (i.e., no more new material could be added to it) two or three years before the actual date of publication. But with the computerized editorial support system now in place the text will not be frozen until the PRINT button is pushed, which will be a mere five or six months before the date of publication.

4. DC &

The changes in the new editions of the DDC are not supposed to come as a complete surprise to its users. Whenever the decision is made to prepare certain phoenix schedules for the next edition, the decision is made known to users of the DDC through the irregular periodical *Decimal Classification Additions, Notes, and Decisions*. Popularly known as *DC&* the work is published by Forest Press and edited by the Editor. The present series began publication in January 1959; volume one lasted during the life of Edition 16. In one form or another its antecedents extend back to 1885 when Melville Dewey promised to provide new numbers and corrections to the purchasers of the second edition. *DC&* is mailed free of cost to all purchasers of Edition 19 and to purchasers of the abridged edition who request it. Explaining the intended use of *DC&* John Comaromi wrote in his history of the DDC:

Its multifold purpose was to convey the decisions of the Decimal Classification Office on thorny matters, to explain how problem areas were to be treated, to present revisions at an early date so that each new edition would not be published with more relocations than a library could absorb, and in general to let the public know that those responsible for the DDC were interested in the problems and opinions of DDC users and wanted to serve their classification needs. It was a fine idea . . . Often these libraries could not understand the DDC numbers on LC cards, for they were based upon revisions made at the Library of Congress that had never been explained to DDC users (2).

In volume four, *DC&* began to include a new feature of giving questions put by users to the Division accompanied by the Division's answers. Here, for example, are a question and answer printed in *DC&* 4:4:

Letter 1

One of our customers who received the 7th edition of *Granger's Index to Poetry* noticed that it had the classification number 016.808, while the Granger's 1970-1977 edition already in her library had the classification number 808.81. She felt they should stand side by side, and asked me to ask you why they have different classification numbers.

Response from the Division

Your questioning the disparate classification of two editions of the same work, Edith Granger's *Index to Poetry*, actually resolves into questioning our apparent discrepancy in the use of 016 and standard subdivision -016. To show that this analysis is so, let me at once cite the full classification numbers we assigned to the two Granger editions in question. Our number for the 1978 edition (LC 78-4097 r82) is 808.810016; our number for the 7th edition in 1982 (LC 81-18155) is 016.80881. Not only were the two editions classified according to different editions of the Dewey Decimal Classification (editions 18 and 19, respectively), but they also reflect a policy change in the use of standard subdivision -016.

This policy change is reflected in the *Manual on the Use of the Dewey Decimal Classification: Edition 19*, p. 4, and it may be summarized as follows: Concerning the use of 016 and standard subdivision -016, we now use 016 for bibliographies and indexes, for lists and compilations of works on specific subjects. Our position is that many indexes are, in fact, bibliographies, and that they should, therefore, be classed in 016 plus subject, e.g., an index to educational periodicals 016.37, but *Dewey Decimal Classification and Relative Index*, 025.431. The index to a specific collection should be classed with the collection without the standard subdivision -016 because the index should not be separated from the collection.

The reader can see that *DC&* is attempting to be an effective medium of communication between the consumers and producers of the DDC.

5. Implementation of the New Edition

Implementation of a new edition in an established library is an off-putting task; no heart of anyone who has faced this task has soared - it has moved, rather, in the other direction. To defer reclassing existing stock to the new structure produces a form of mental madness in the collection, and mental upset in its users. To help classifiers in switching over to the new edition, each new edition and separate provides a list - a ready-reckoner - giving the new numbers for previous numbers. The editors also provide a list of old numbers with the new number equivalent for those libraries that do not intend to alter their current practices in classifying, thus enabling them to use the numbers provided by the Division

for the current edition in order to arrive at numbers in the previous edition.

In this manner is the DDC scrubbed, polished, and dressed to meet the world anew and to respond to the old and new challenges that forms of knowledge bring.

Association for Computational Linguistics Second Conference on Applied Natural Language Processing

The conference took place from Feb.9-12, 1988 at Austin TX, USA. According to the program it comprised the following 10 Sessions with altogether 32 papers: *Session 1: Systems*. S.E.BRENNAN: The multimedia articulation of answers in a natural language query system. - P.J.HAYES, L.E.KNECHT, M.J.CELLIO: A news story categorization system. - E.RICH, S.LUPER-FOY: An architecture for anaphora resolution. - *Session 2: Generation*. D.ROESNER: The SEMSYN Generation System: Ingredients, applications, prospects. - L.BOG-GESS: Two simple prediction algorithms to facilitate text production. - D.D.McDONALD: From water to wine: Generating natural language text from today's applications programme. - *Session 3: Syntax and Semantics*. F.-M.LANG, L.HIRSCHMAN: Improved portability and parsing through interactive acquisition of semantic information. - S.HURUM: Handling scope ambiguities in English. - R.GRISHMAN, P.PENG: Responding to semantically illformed input. - R.GRISHMAN, M.CHITRAO: Evaluation of a parallel chart parser. - *Session 4: Morphology and the Lexicon*. K.DeSMEDT, B.v.BERKEL: Triphone analysis: A combined method for the correction of orthographical and typographical errors. - M.S.NEFF, R.J. BYRD, O.A.RIZK: Creating and querying hierarchical lexical databases. - L.G.MEANS: Cn yur cmputr raed ths? - E.A.FOX, J.T.NUTTER, T.AHLWEDE, M.EVANS, J.MARKOWITZ: Building a large thesaurus for information retrieval. - *Session 5: Systems*. K.L.RYAN, D.OLAWSKY: Application-specific issues in NLI development for a diagnostic expert system. - O.EMORINE, P.MARTIN: The MULTIVOC Text-to-Speech System. - G.DATSKOVSKY MOERDLER: Structure from anarchy: Meta level representation of expert system predicates for natural language interfaces. - *Session 6: Text processing*. L.F.RAU, P.S.JACOBS: Integrating top-down and bottom-up strategies in a text processing system. - K.W.CHURCH: A stochastic parts program and noun phrase parser for unrestricted text. - M.S.CHODOROW, Y.RAVIN, H.E.SACHAR: A tool for investigating the synonymy relation in a sense disambiguated thesaurus. - K.JENSEN, J.-L. BINOT: Dictionary text entries as a source of knowledge for syntactic and other disambiguations. - *Session 7: Machine Translation*. G.B.VARILE, P.LAU: EUROTRA: Practical experience with a multilingual machine translation system under develop-

References

- (1) Comaromi, J.P.: Preface by the Decimal Classification Editorial Policy Committee. In: Dewey Decimal Classification and Relative Index, Ed. 19. Albany, N.Y.: Forest Press 1979. Vol. 1, XVI.
- (2) Comaromi, J.P.: The Eighteen Editions of the Dewey Decimal Classification. Albany, N.Y.: Forest Press 1976. p. 533-534.

ment. - G.GEBRUERS: Valency and MT: Recent developments in the METAL system. - *Session 8: Systems*. J.KALITA, S.SHENDE: Automatically generating natural language reports in an office environment. - D.A.WROBLEWSKY, E.A.RICH: LUKE: An experiment in the early integration of natural language processing. St.D.RICHARDSON, L.C.BRADEN-HARDER: The experience of developing a large-scale natural language text processing system: CRITIQUE. - *Session 9: Morphology and the Lexicon*. B.T.USHIKA, B.EVANS, J.TOM, F.MACHI: Computational techniques for improved name search. - E.EJERHED: Finding clauses in unrestricted text by stochastic and finitary methods. - J.SLOCUM: Morphological processing in the Nabu System. - *Session 10: Syntax and Semantics*. J.BEAR, J.R.HOBBS: Localizing expression of ambiguity. - P.S.NEWMAN: Combinatorial disambiguation. - K.WIT-TENBURG, J.BARNETT: Canonical representation in NLP system design: A critical evaluation.

A number of tutorials were held in parallel on Febr.9 among which also one on "The role of logic in representing meaning and knowledge" by B.MOORE and one on "Machine-readable dictionaries: A computational linguistics perspective" by B.BOGURAEV and B.LEVIN.

For further information please turn to Prof.D.E. Walker, Bell Communications Research, 445 South Street MRE 2A379, Morristown, NJ 07960, USA.

Cont. of p. I

- 1 Hartmann, N.: Der Aufbau der realen Welt. Grundrisse der allgemeinen Kategorienlehre. 3.Aufl. Berlin: W.de Gruyter 1964. p.259
- 2 "The most helpful form of classification scheme for information retrieval is one which groups terms into welldefined categories, which can be used independently to form compounds, and within which the terms can be arranged in hierarchies where this conforms to the recognized structure of relations between them". In: Proc.Intern.Study Conf.on Classification for Information Retrieval. Dorking, 13-17 May 1957. London: Aslib 1957. p.111-3
- 3 Aitchison, J. et al.: Thesaurifacet. A thesaurus and faceted classification for engineering and related subjects. Whetstone, Leicester: The English Electric Co.1969. 491p.
- 4 Devadason, F.: Computerized Deep Structure Indexing System. FID/CR Report No.21. Frankfurt: Indeks Verlag 1986. 42 p.
- 5 Monod, J.: Le Hasard et la Necessite. Essai sur la Philosophie Naturelle de la Biologie Moderne. Paris 1970. 212 p. (Chance and Necessity. New York: Vintage Books 1972. Zufall und Notwendigkeit. München: Piper 1971. 5.1973)