have long been in use. When the British National Bibliography tried to expand the DDC with verbal subdivisions, they laid the basis for a verbal form of the Dewey number, the "Dewey-feature". It contains information for use with subject headings. Library of Congress Subject Headings (LCSH) does not reflect the LCC always, but PRECIS might be employed together with LCC as well as with DDC.

The combination of classification data together with subject headings as a solution of future problems in the Danish library world is not a new idea. *R. Mölgaard-Hansen* recommended this already in November 1965 by proposing a combination of UDC and subject headings for the university library of Odense (2).

The recent attempts towards establishment of an internationally acceptable system, the Broad System of Ordering (BSO), were only briefly mentioned in the Danish Classification Report of October 1972. Though it is not as yet known to what extent if any, the system may gain acceptance, the basic idea corresponds to the present trend toward less detailed systems with either verbal or notational extensions according to special systems. At any rate, it seems that increased efficiency might be achieved for subject access, be it by combination of classification data and subject headings or by using classification data and conversion mechanisms between different classification systems.

It remains for the Danish libraries to further investigate the use of foreign classification systems regarding both notational and subject indexing (verbal) representation of document contents, wether for direct use (DDC) or for conversion from one system to the other (DDC to UDC and vice versa). An indexing system will serve our purposes too, especially if it is applicable to both DDC and UDC, as is the case with PRECIS (13).

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REPORTS AND COMMUNICATIONS

The DDC Allerton House Conference

Sponsored by Forest Press and the Graduate School of Library Science, University of Illinois at Urbana-Champaign the 21 st Annual Allerton Library Institute was devoted to the topic "Major Classification Systems: the Dewey Centennial". It took place Nov. 9–12, 1975 in Monticello, Illinois, with an attendance of almost 100 participants. The following ten lectures were presented and discussed: *C. David Batty:* Library classification: 100 years after Dewey. *John P. Comraromi:* The historical development of the Dewey Classification System. *Margaret E. Cockshutt:* Dewey today: an analysis of recent editions. *Mary Ellen Michael:* Dewey today: The United States and Canada; a survey of users. – *Joel C. Downing:* Dewey today: the British and European scene. – *Gordon Stevenson:* The Library of Congress Classification scheme and its relation to Dewey. – *Peter Lewis:* Factors in the selection of a classification scheme for a large general library. – *John Rather:* Bibliographic searching by classification in an automated system. – *Derek Austin:* The role of indexing in subject retrieval. – *Paule Rolland-Thomas:* The role of classification in subject retrieval in the future.

European Centenary Seminar on the DDC

September 26–30, 1976, Banbury, Great Britain: 40 librarians from 18 European countries and the United States met on occasion of the 100th anniversary of the publication of the first edition of Melvil Deweys Decimal Classification (DDC). Just days of celebration and commemoration? By no means!

Users exchanged experience. Practitioners of different colors became acquainted with the editor of the DDC, Ben Custer of the Library of Congress. He and the publishers (Forest Press) endeavored once again to determine the future commitments of the DDC in an international library community, in which effort they sometimes seemed to be looking ahead to *the next hundred years* of Decimal Classification!

In addition to a few orientation addresses, e. g. by *R. K. Gardner* on the use of the DDC in North America, the seminar had three thematic centers of interest, namely:
(1) Cooperation in the library field between Washington and London (i. e. between the USA and the UK) in the further development of the DDC and the preparation of a new edition – a cooperation which, as is well known, came about only in the past 10 years (papers by *R. Sweeney, J. Downing,* and *B. Custer).*
(2) Problems of the translation of the DDC into other languages and in particular of its transposition and transposability into other civilizations: the question at issue here was the practical application of the DDC in countries and cultures presenting non-negligible differences from conditions in the USA and Great Britain (papers by *G. Guillien, M. Pelletier,* and *C. Rovira).*

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(3) Possibilities and limitations of the DDC in the age of electronic data processing (papers by *D. Anderson* and *D. Austin).*

A few impressions of the seminar and certain results from the papers read and discussions held are highlighted in the following.

On an international level the DDC has been meeting with increasing interest in the past few years. This is due to several factors, first and foremost to the much-applauded 18th edition of the classification, which appeared in 1971. But strictly speaking it is not so much this one edition which justifies special confidence in the DDC but rather the permanent staff in the Library of Congress, who give not only short-term but also medium and long-term attention to the Classification, and an equally important factor is the excellent cooperation between this staff, the American Library Association, the (British) Library Association and the publishers! The 18th edition, too, is a product of this cooperation – one of whose other products is the fact that the British National Bibliography has been using the DDC since January 1971 without modifying it in any way (as it used to do up to 1970). The "history" of the DDC from the 16th to the 17th to the 18th edition unmistakably reflects the efforts to let all disciplines (both of the sciences and of the humanities) share equally in *further* development and in "continuous revision". This does not exclude a total reshuffling (with the continuity principle than taking second place only) of specific divisions, such as happened some years ago with "Law" and "Mathematics". There are not a few librarians who are willing to credit the Library of Congress classification with "greater stability" but the DDC with greater "topicality". And the importance of such topicality for the DDC is clear from the way in which the DDC defines itself, namely as a means

- for shelving the freely accessible books of a library (the purpose of presenting books to the user),
- for arranging titles in a printed bibliography, e. g. in a national bibliography.

The favorable wind which the DDC is riding at present is evident from its numerous translations, particularly of the abridged edition. An unabridged French translation of the 18th edition of the DDC appeared in 1974 as the result of several years' cooperation between French and Canadian librarians. A complete Spanish translation is in preparation and is to appear in 1979. Evidently, it is already being most eagerly awaited in Latin America!

The translation of the DDC has given – and is still giving – rise to various problems, which were presented during the seminar and discussed in detail. Sample quotations from this discussion read (in substance) as follwos:

- Pelletier and Rovira: The 18th edition is more *internationally oriented* than former editions were. Yet even the 18th edition does not in fact present truly international schedules.
- Pelletier: In countries outside the Anglo-Saxon world, politics, law and administration should be suitably *adapted.*
- Custer: We can't feel *completely responsible* for other cultures.
- Anderson: *National extensions* of the DDC seem to be necessary to meet the needs of users in different countries and different social environments.

Within, as well as without the Anglo-American world the DDC is known and relatively widely used as a universal classification for independently appearing literature. The question thus presents itself whether within the framework of the interchange of bibliographic information in machine readable form the DDC will soon be accepted as the language-independent code par excellence for the exchange of information – or whether it can be introduced as an inofficial standard within an international bibliographic communication system. *Dorothy Anderson* at first gave a cautious answer to this question ("The DDC could be a practical choice") and in the further course of her address even adopted a positive stand ("Lets make use of it (= the DDC)!"), in which connection she was thinking primarily of utilizing the DDC for the purposes of selection and choice of literature: libraries utilizing MARC tapes were interested in "extracting" from the host of titles presented each week the ones relevant for them. This requires:

- subject information on each title announced,
- information on the intellectual level (the question of how to denote the intellectual level on MARC tapes is already being considered in the committees and other bodies concerned).

A sober appraisal will tell us, however, that all *D. Anderson* actually advocated was that in the international exchange of bibliographic data the title entries on magnetic tapes should be accompanied by the corresponding DDC numbers to a greater extent than has been the case so far. In view of the huge amount of time and effort involved in getting the unification and standardization principle accepted in the field of descriptive (meaning: alphabetic) cataloguing, there was hardly a one among the participants in the seminar to succumb to the utopian idea, that the DDC might really find worldwide recognition and that within the foreseeable future a uniform application of this system, acceptable to all countries, might be achieved.

Derek Austin spoke on the subject "The DDC and Automated Subject Retrieval". He had found the DDC class numbers to be of some value for

- the retrieval of literature on *larger subject fields* (interest fields),
- the elimination of non-relevant literature (class marks as *negative* discriminators).

After the motto "A knife is not a proper tool to eat soup" he warned, however, against demanding too much of the DDC. He advised against any modifications of DDC performed for the purpose of converting it into a universal documentation language; such attempts, he said in substance, might spell the end of DDC. *Austin* thus made a plea for the retention of the largely enumerative construction of Deweys Decimal Classification, which he delimited at the same time – though not in so many words – from the UDC.

Regrettably there were also some questions which were not answered at all or not satisfactorily at the seminar. For example:

a) Can a situation be achieved whereby Washington and London will soon arrive at a largely uniform practice in classification according to DDC? It seems pointless to speak of "shared classification" unless the British Library adopts for the books appearing in the USA the DDC numbers assigned by the Library of Congress,

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with the latter conversely accepting for the literature published in the UK the DDC numbers selected by the British Library. The quality of the cooperation *and agreement* between Washington and London in this field should logically serve as an indicator for the changes of international cooperation on a *larger* scale (in the field of exchange of subject information).

b) The British National Bibliography sometimes attaches more than one class number to one title, whereas the Library of Congress always attaches just one class number. Will one arrive at a common understanding to attach
- a "main entry" class number (the preferred number), as well as
- "added entry" class numbers (optional numbers), if desirable?

c) The "map of knowledge", said P. Quigg in Banbury, bears more resemblance to a weather map than to a geographic one. For a library with meticulously arranged stocks according to the DDC this means that it must develop a concept on how it is going to deal with such older literature as was acquired *many* years ago and classified according to *earlier* DDC editions. Here we are confronted with an eminently *practical* problem for which there are several solutions requiring the expenditure of different amounts of efforts and funds. This subject was given too little attention, a fact which must be termed amazing – firstly, because the DDC (fortunately) follows the overall development of human knowledge at not too great a distance in time, and secondly, because the delegates assembled in Banbury were mainly *librarians*.

The conference was
- generously sponsored by Forest Press, Inc., Albany, N.Y. (a division of the Lake Placid Education Found - tion), and
- very well organized by the (British) Library Association.

A printed report on the seminar will probably be made available in 1977 by the Library Association and/or by Forest Press.

Ullrich Fellmann

Classification Society Conference, USA

The Seventh Annual Meetings of The Classification Society, North American Branch, were held at the University of Rochester, May 23–25, 1976 with about 60 participants, more than half of which (36) presenting papers in the following topical sessions: (1) Classification of large document collections, (2) Pattern recognition, (3) Comparative methodology, (4) Fuzzy clustering algorithms, (5) Applications, (6) Discriminant analysis, (7) Multivariate analysis and its applications, (8) Theory. The following papers were presented:

Small, H. G.: Structural dynamics of scientific literature.
Carmone, F. J., Bearman, T. C.: An application of cluster analysis to the study of overlap of abstracting and indexing services.
Salton, G.: Fast automatic classification systems for information storage and retrieval.
Yu, C. T.: Automatic pseudo-classification.
Lainiotis, D. G.: Adaptive pattern recognition: a survey.
Toussaint, G. T.: Recent results on generalized information measures and their relation to probability of misclassification.
Carayannopoulos, G. L. et al.: Feature selection, classification and evaluation of Radar signature.
Forsen, G., Zoracki, M.: Interactive image processing.
Kanal, L. et al: Hierarchical classifier design using MIPACS.
Mezzich, J. E.: Empirically evaluating cluster analytic approaches.
Aldenderfer, M. S., Blashfield, R. K.: A survey of the use of cluster analysis in scientific research.
Lorr, M.: The virtues and limitations of Q-factor analysis.
Woodbury, M.: A generalized ditto algorithm for initial fuzzy clusters.
Ruspini, E.: Fuzzy clusterring as an optimum mapping between metric spaces.
Bezdek, J.: Feature selection for binary data with fuzzy ISODATA.
Johnson, L. L.: Graph theoretic analysis of the Auguas Verdes Industry of Northern Chile.
Aldenderfer, M.: Inter-site relationships in the highlands of Ethiophia: the use of cluster analysis for hypothesis generation and verification in archaeology.
Lankford, P. M.: The interface of classification and planning.
Cahoon, L. et al: A multi-dimensional statistical procedure for spatial analysis.
Guttenberg, A. Z.: The definition and classification of land use regions.
Eisenbeis, R. A.: Pitfalls in the application of discriminant analysis in business, finance and economics.
Goldstein, M.: An overview of multinomial discriminant analysis.
Broffitt, J. D. et al: Rand procedures in partial and forced discriminant analysis.
Bryant, E., Dodge, A. G.: Forest type mapping using LANDSAT data.
Haralick, R. M.: Texture tone analysis of image data.
Lee, J. C.: Inference on the Eigenvalues.
Harris, R. J.: The invalidity of partitioned U-tests of individual roots in Manova and in canonical analysis.
Srivastava, J. N.: Multivariate search models.
Goodman, K. C. L. et al: An experimental computer-based system for the selective dissemination of diabetes-related literature.
Strauss, J. S. et al: Use of the Biplot for the classification of psychiatric disorders.
Brennan, T., Huizinga, D.: A review of classification in delinquency and social deviance.
Phipps, J. B., Dewdney, A. K.: On the most different classifications of the same set of entities.
Matula, D. W.: Advances in k-linkage cluster analysis.
Day, W. H. E.: Flat cluster methods based on concepts of connectedness.
Diday, E.: Representation and clustering.
Hartigan, J. A.: Significance tests in clustering.
Carroll, D.: Non-spatial and hybrid scaling models.

A concluding panel discussion "Consumer report on cluster analysis packages" involving J. Rohlf, H. Friedman and R. Blashfield was meant to critically discuss cluster analysis programs and to describe their availability. The banquet talk was given by Alexander Woodcock on "Catastrophe theory".

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Classification and Phylogeny

This was the topic of the Sept. 29, 1976 meeting of The Classification Society, European Branch at the University of York in Heslington, York, England. The problem to find new approaches for the classification of organisms was treated in the following lectures: *D. Boulter:* Problems and progress in use of amino acid sequence data in plant phylogenetic studies. – *F. A. Bisby:* The evolutionary implications of discordance between differenct character sets in high plants. – *P. H. A. Sneath:* Methods of distinguishing reliable indicators of phylogeny. – *A. F. Parker–Rhodes:* Taxonomy and evolutionary status. – *A. J. Cain:* The difficulty of inferring phylogeny.

Colloque Internationale de Terminologie, Paris, June 1976

The Association Française de Terminologie (AFTERM), established a year ago, is to fulfill the following tasks with particular emphasis on the French language:

- to organise a permanent inventory of terminological work in order to establish a terminology documentation bank
- to collect and classify terminological data prepared by specialized organizations
- to facilitate exchange between terminological organizations
- to encourage preparation and publication of specialized vocabularies
- to support standardization of terminology
- to promote the establishment of terminology networks
- to direct training of technicians and experts in technical French terminology
- to promote methodological research necessary for terminological work
- to ensure French participation in meetings dealing with problems of linguistics and terminology.

With these tasks in mind, AFTERM convened a meeting in Paris – La Défense, June 15–18, 1976 which was attended by more than 300 experts from 15 different countries.

The papers and subsequent discussions focused on the following topics:

- Translation and terminology
- Science and terminology – Technology and terminology
- Documentation and terminology – Linguistics and terminology
- Terminology data banks
- Terminology networks

In the opening session the tone was set by the addresses of *R. Frontard*, Director General of the Association Française de Normalisation (AFNOR) *F. Cloutier*, Ministre des Affaires Intergouvernementales du Québec, *G. Pelletier*, Canadian Ambassador in France, and *Ch. Scrivener*, Secrétaire d'Etat auprès du Ministre de l'Economie et des Finances (Consommation).

The inaugural speakers stressed the necessity for a concerted effort of all concerned, be it on the national or international level, in order to improve communication in all fields, since unambiquous communication is at the base of scientific and technological research as well as of national and international trade and since promotion of terminological work means promotion of human understanding and development.

1. Translation and terminology

Ms. Forgues and *Mr. Tchirikoff*, of the United Nations Division of Translation, New York, and of the Section of Terminology and Documentation, Geneva, respectively, dealt with problems encountered by translators within international organizations. Given the nature of the UN, documents must be translated without delay in a number of languages, and the corpus of the UN terminology is thus evolved in the translation services by translators themselves rather than by trained terminologists.

The Commission of the European Communities on the other hand, as Mr. *Goffin*, Head, Terminology Bureau, Brussels, reported was in a much better position since terminological research as such was carried out to quite an extent. Persons to be hired as terminologists first have to pass examinations for translators.

Mr. *Paré*, Director of the Banque de Terminologie, reported on experiences gained at the Université de Montréal, and stressed the interdependence of terminologists and translators, and the valuable contribution both could make towards standardization of terminology.

Mr. *Sliosberg*, President of the Société Française des Traducteurs Paris, too elaborated on the difficulties, translators were due to encounter in our rapidly changing world. Mr. *Zareba*, Director, Department of Methodology of Teaching in French at the Institute of Romance Philology at the University Jagellonne, Poland, reported on their experiences with a phraseological French – Polish dictionary.

2. Science and terminology – technology and terminology

Chaired by *J.-E. Dubois*, Director of Research, at the Ministère de la Défense, representatives of the Comité d'Etude des Termes Technique Français, Paris (*P. Agron*), of the Regie de la Langue Française (RLF) Québec (*M. Forget*), of the Conseil International de la Langue Française (CILF), Paris, (*H. Joly*), and of the Bureau National de l'Information Scientifique et Technique, (BNIST), Paris (*J. Michel*), emphasized the importance of carefully selected and well defined technical terms for science and technology, and for the humanities. These problems became particularly evident with regard to the French language since the greater part of scientific literature originates in languages other than French, primarily in English. For this reason organizations such as CILF and RLF, respectively, have started elaboration of vocabularies for particular fields in order to meet the most pressing needs.

Standardization and regulation of terminology were brought to the fore by the Director of AFNOR, *M. R. Frontard*, and the representative of the Tekniska Nomenklaturcentralen, Sweden, Mr. *Heyum.*

Increasing importance of terminological word banks for world-wide communication was stressed by speakers from the CEC (*A. Reichling*), from the RLF, (*M. Forget*), and from Siemens (*H.-P. Brunold*).

3. Terminology and its relation to documentation

Problems of terminology of information and documentation and measures undertaken so far were discussed by

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Ms. *F. Cestac* of the Union Française des Organismes de Documentation (UFOD), Paris. Ms. *M. Moureau* of the French Oil Institute Rueil – Malmaison illustrated various aspects of bibliographic research such as formation of search words (truncation).

Other relevant linguistic research strategies, particular lexicological and lexicographical issues were discussed by *A. Yanez* of the Centre de Documentation de l'Armement, Ministère de la Défense, Paris, *L. Guilbert*, Director of the Centre d'Etude de la Néologie Lexicale, Paris, and *A. Rey*, the Editor-in-chief of Robert dictionaries, Paris.

Convergences and divergences of thesauri and terminologies were discussed by *J. Maniez*, Institut Universitaire de Technologie, Dijon.

4. Terminology data banks

In a spectacular demonstration of direct interrogation of word banks in Europe and Canada – the high-light of the meeting the following terminological data bases were tapped for information on specific technical terms, their context, existing definitions or foreign language, equivalents, or wether it was a standardized term, a neologism, etc.:

- the Bundessprachenamt [Federal Office of Languages] in Hürth/Köln (presented by *K. F. Berner*),
- AFNOR's base NORMATERM, Paris (Ms. *J. Laurent*)
- the Banque de terminologie du Québec (*J.-C. Corbeil*),
- the CEC, Luxembourg (*A. Reichling*),
- the Banque de terminologie de l'Université de Montréal, (*P. Le Quellec* and *M. Paré*).

There, on the big screen in the Salle des Nations of the Tour d'Europe, experts witnessed a demonstration which – surpassing technical obstacles – still illustrated the amount of work that has to be undertaken on the standardization level, particularly as regards unified data exchange formats. Moreover, diacritical marks, essential for many languages, cannot just simply be left out without jeopardizing future exchange of terminological data.

It has to be kept in mind, of course, that each one of these word banks existing was conceived out of a particular need and is to fulfill particular requirements. Questions of compatibility are, therefore, also questions of funds and will have to be tackled carefully.

Nevertheless, awareness of these problems is there, and collaboration between French-speaking countries is under-way, certainly representing the beginning for an exchange of terminological data on a international level.

5. Terminological networks

Work has already been undertaken on the national level, in France, via CYCLADES, as reported by *L. Pouzin* of the Institut de Recherches d'Informatique et d'Automatique Rocquencourt; on the European level, EURONET, as described by *J. A. Bachrach* of the CEC, Luxembourg, on the "francophone" level, as described by *J.-D. Gendron* and on the international level by *H. Felber*, Director of Infoterm, who reported on a plan concerning a world-wide terminology network (Infoterm-net) and possibilities for its realization.

M. Bruguière, Rapporteur of the Haut Comité de la Langue Française summarized the results of the Colloque.

The meeting as a whole represented as well-rounded report on the state-of-the-art of terminological work in the "francophone" countries.

The presence of members of government, both from France and Canada, confirmed the fact that terminology has become a matter of great importance not only for experts immediately concerned with terminology (such as translators, terminologists, documentalists) but also for those involved in policy making; in a way, terminology has become a political affair.

Similar endeavours (as undertaken by AFTERM) for other languages or language groups are recommended.

Magdalena Krommer-Benz

Moscow Meeting of ISO/TC 37/WG 1 "Principles of terminology"

At the fifth meeting of the Technical Committee 37 "Terminology (principles and co-ordination)" of the International Organization for Standardization (ISO) in Vienna in June 1974, *WG 1 "Principles of terminology"* was set up. From 27 to 30 September 1976, WG 1 held its first meeting at the Vsesojuznyj Naučno-Issledovatel'skij Institut Techničeskoj Informacii, Klassifikacii i Kodirovanija (VNIIKI) in Moscow, one of the specialized institutes of Gosstandart, the Soviet member of ISO. VNIIKI also holds the Secretariat of ISO/TC 37/WG 1.

At this meeting representatives of Austria, Canada, France, Germany, Poland and of USSR were present, altogether 16 persons.

1. Report of TC 37

In the report of TC 37 Secretariat it was pointed out that the terminological and lexicographical principles prepared by TC 37 represented a very important tool for the unification of terminology work in the world. For this reason they are recommended for application in the world information network UNISIST which is being developed by Unesco and in particular in the network of terminological bodies which is developed by the International Information Centre for Terminology (Infoterm). Infoterm functions within the framework of UNISIST.

The scope of WG 1 was defined as follows:

> "Standardization of methods for setting up national and international terminologies and of methods for co-ordinating such activities with the exclusion of lexicographical methods."

2. Revision of ISO/R 1087 "Vocaculary of terminology"

WG 1 decided to review ISO/R 1087. The revised version of R 1087 should include concepts and terms used in documents prepared by TC 37 with their definitions, plus generic terms necessary to construct the system of concepts. In addition it was decided to include a revised version of document 37 N 200 "Chapter 4. Vocabularies and dictionaries". The revised version of R 1087 will be published as ISO Standard if accepted by TC 37 and ISO member bodies. The Secretariats of ISO/TC 37/WG 1 (VNIIKI) and ISO/TC 37 (Austria) will co-operate in preparing a revised version.

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3. Revision of ISO/R 704 "Naming principles"

WG 1 decided to review ISO/R 704. The Secretariat of WG 1 will prepare a draft revised version of R 704 which will be submitted to WG 1 for comment.
The revised version of R 704 will be published as ISO Standard if accepted by TC 37 and ISO member bodies.

4. International key to terminology

On the instigation of a Swedish specialist via letter of the Swedish Standards Institution to Austrian Standards Institute the TC 37 Secretariat prepared document 37 N 268 for discussion at the Moscow meeting in which the nature of the key to terminology is described under item 2.6.2 in the following way:

> "The international key to terminology is a compilation of word elements (= roots and affixes) and rules necessary for the correct forming of international terms."

The most important features of the key to terminology are:

(1) The key to terminology is not designed to satisfy philological interests but to meet the needs of terminologists.
It equally serves as a basis for terminologies in Romance, Germanic, Slavic and other languages, even for constructed languages such as Esperanto.

(2) Word elements are primarily arranged according to concepts, i. e. in classified order; alphabetic order is only secondary.

(3) The frequency of word elements has to be taken into account and to be marked.
Thus, rating of synonyms will be possible, i. e. selective use of the key.
This is the only way to teach the key to terminology, i. e. step by step.

(4) Word elements have to be written in the same way as Latin today. This spelling has been maintained in the most complete way in French and English.

(5) Word elements are presented in a standard form showing no national peculiarities (prototype form). Based on strict rules the standard form can be transformed (= transposed) into national variants.

(6) For easy learning and practicing of the key to terminology an internationally unified prononciation is assigned to the Latin type prototype forms. Appropriate proposals for a "continental prononciation" are available.

(7) International words which are not Latin type terms are admitted in the key as "ethnic forms" (ethnic type terms) without modification. They are pronounced in the same manner as in the original language.

As Annex 3 of document 37 N 268 the development of the idea of an international "key to terminology" is given from 1934 until today.

It is also mentioned that work on such a key has been going on for some time in the Austrian Standards Institute.

After discussion WG I decided that TC 37 Secretariat should prepare a Working Document intended to be included as Annex in a draft revised version of ISO/R 860 "International unification of concepts and terms". TC 37 Secretariat should invite specialists in the field of the internationalisation of terminologies via the members of TC 37 in order to join this work.

5. Revision of ISO/R 860 "International unification of concepts and terms"

WG 1 decided to review ISO/R 860. The Secretariat of TC 37 will prepare a draft revised version of R 860 with an Annex "Key to terminology" mentioned above which will be submitted to WG I for comment. The revised version of R 860 will be published as ISO Standard if accepted by TC 37 and ISO member bodies.

6. Terminology of signs and symbols

WG 1 postponed the decision on undertaking a new task "Terminology of signs and symbols" to the next WG 1 meeting until the German Draft Standard DIN 2338 "Begriffssystem Zeichen" [System of concepts for signs and symbols] is translated into English and French.

7. Task Group on ISO Technical Vocabulary (ITV)

WG 1 considered the preparation of the ITV very important for diffusion and application of standardized terminologies. For this reason TC 37 Secretariat will set up a Task Group of experts within TC 37 for giving advice to the ISO Central Secretariat in undertaking such a project.

Helmut Felber

Bibliothekarische Ausbildung in Sacherschließung (A library classification training program)

Am Bibliothekar-Lehrinstitut des Landes Nordrhein-Westfalen in Köln liegt dem Fach Sacherschließung innerhalb des sechssemestrigen Studiums für Diplom-Bibliothekare an Öffentlichen Bibliotheken seit 1970 folgendes Lehrkonzept[1] zugrunde.

A. **Lehrziel**

Vermittlung von Theorie und Praxis der wichtigsten Erschließungsmethoden unter Berücksichtigung ihrer An-

This manual presents a compilation of rules for the formal recording of documents in the field of literary documentation, which have proved themselves nationally and internationally in practise. The manual is specially conceived for the practitioner and is so designed that it can be used by the conventional documentation centres as also by those centres that have already been converted to mechanical processes.

Leitfaden für die formale Erfassung von Dokumenten in der Literaturdokumentation

Von Christiane Hitzeroth, Dagmar Marek und Isa Müller unter Mitarbeit von Cornelia Häfner, Marianne Knarr, Beate Metzler und Christa Seeger

1976. IX, 493 Seiten. Format DIN A 4. Leinen DM 20,–. ISBN 3-7940-7002-X

Verlag Dokumentation , Publishers, POB 711009, D-8000 München 71, Phone (089) 79 89 01

https://doi.org/10.5771/0943-7444-1976-2-96 https://www.inlibra.com/de/page/agb - Open Access -

wendung in deutschen Universalbibliotheken sowie der Tätigkeiten von Diplom-Bibliothekaren an Öffentlichen Bibliotheken. Diese spezifisch bibliothekarische Ausrichtung schließt jedoch nicht aus, daß auch die unkonventionellen, insbesondere in der Dokumentation gebräuchlichen Erschließungsverfahren zu den Lehrinhalten gehören.

B. Studienorganisation

Entsprechend der geltenden Studienordnung[2] gliedern sich die Kurse in das obligatorische Grundstudium vom 1.–6. Semester und in das der fakultativen Spezialisierung dienende Wahlfachstudium zwischen dem 3.–6. Semester. Das Grundstudium umfaßt für die Sacherschließung insgesamt 110 Einzelstunden, davon 80 in Vorlesungsform und 30 für praktische Übungen. Die unter C. 1–6 aufgeführten Hauptkapitel des Vorlesungsprogramms entsprechen jeweils dem Lehrstoff eines Semesters. Für die Seminare und Kolloquien des Wahlfachstudiums gilt die Belegung von 60 Einzelstunden als Mindestzahl.

C. Abriß des Vorlesungsprogramms für das Grundstudium

1. Einführung in die bibliothekarische Sacherschließung[3]
1.1 Begriff und Funktion der Bibliothekskataloge
1.2 Hauptformen der konventionellen Sacherschließung
1.2.1 Systematischer Katalog – Systematische Aufstellung – Reader-interest-arrangement
1.2.2 Schlagwortkatalog – Schlagwortindex – Kreuzkatalog
1.2.3 Thematische Erschließung der Schönen Literatur
1.3 Organisation des Erschließungssystems Öffentlicher Bibliotheken
1.4 Katalogbenutzerforschung und Benutzerschulung
1.5 Überblick über die Einteilung von Ordnungstypen (Informationsrecherchesprachen)
2. Theorie und Terminologie der Klassifikation
2.1 Definitionen und Typen der Klassifikation
2.2 Charakteristika bibliothekarischer Klassifikation
2.3 Geschichte der Klassifikation und des systematischen Kataloges
2.4 Grundbegriffe und Bewertungskriterien für Universalklassifikationen[4]
2.4.1 Inhaltliche Grundstruktur und Pflege
2.4.2 Gliederungstiefe und -prinzipien
2.4.3 Strukturierungsmittel: Normung, Schlüsselung u. ä.
2.4.4 Notationssystem
2.4.5 Zugriffs- und Gestaltungsformen: Index, Benutzungshilfen u. ä.
3. Vergleichende Analysen ausgewählter Universalklassifikationen[5] (entsprechend den Kriterien bei 2.4)
3.1 Klassifikationssysteme deutscher Öffentlicher Bibliotheken: Allgemeine Systematik für Büchereien (ASB) – Systematiken der Stadtbibliotheken Duisburg und Hannover (SSD, SSH).
3.2 Klassifikationssysteme und -methoden deutscher wissenschaftlicher Bibliotheken: Systematik der Universitätsbibliothek Bremen – Mainzer Sachkatalog (Eppelsheimer-Methode) – Systematischer Katalog der Bayerischen Staatsbibliothek (BSB).
3.3 International verbreitete Klassifikationssysteme: DDC – UDC – LCC – BBK.
4. Schlagwortmethode und analytische Literaturerschließung
4.1 Geschichte und Typen der Schlagwortkatalogisierung
4.2 Verhältnis der Schlagwortmethode zu anderen Erschließungsverfahren
4.3 Schlagwortgebung: Sprachliche Form, Schlagwortarten und -verweisungen, Vorzugsfolgen bei Schlagwortketten
4.4 Standardverzeichnisse und Regelwerke: Vergleich der Schlagwortinstruktionen der Universitätsbibliotheken Erlangen, Berlin, Düsseldorf – ETH Zürich – Österreichische Modellrichtlinien u. a.
4.5 Sonderformen: Biographische u. geographische Kataloge
4.6 Methoden der analytischen Literaturerschließung
5. Thesaurus und andere Indexierungsmethoden
5.1 Definition und Entwicklung der Thesaurusmethode
5.2 Struktur, Formen und Erstellung eines Thesaurus
5.3 Thesaurusmodelle: TEST, Thesaurofacet, DK-Thesaurus
5.4 Gegenüberstellung: Thesaurus und Klassifikation
5.5 Bibliothekarische Sacherschließung und EDV
5.6 Computereinsatz in Öffentlichen Bibliotheken am Beispiel der Katalogmodelle der "Arbeitsgemeinschaft Kommunale Datenverarbeitung Nordrhein-Westfalen"
5.7 Maschinelle Registererstellung: KWIC- und KWOC-Verfahren
6. Facettenmethode – Vereinheitlichungsbestrebungen in der Klassifikation
6.1 Polyhierarchische Klassifikationen
6.1.1 Ranganathan und die Colon-Classification
6.1.2 Facettenklassifikationen der Classification research group
6.1.3 Methodik der Facettenanalyse
6.2 Einheitsklassifikation für deutsche Bibliotheken
6.2.1 Entwicklung der Vereinheitlichungsbestrebungen (1884–1945)
6.2.2 Die "doppelt notierte" Einheitsklassifikation
6.2.3 Probleme kooperativer Sacherschließung
6.3 Internationale Standardisierungsbestrebungen
6.3.1 Problematik universeller Ordnungsprojekte
6.3.2 Entwicklung und Stand der UDC-Reform
6.3.3 Broad system of ordering (UNISIST)

D. Übungsprogramme des Grundstudiums

1. Einführung in die Methodik der Inhaltsanalyse, des Klassifizierens und Indexierens.
2. Einordnung konkreter Literaturbeispiele anhand verschiedener Klassifikationssysteme (siehe C. 3.1–3.3) und Schlagwort-Regelwerke (siehe C. 4.4). Die ca. 30 Übungsfälle werden von den Studenten in unterrichtsfreien Stunden anhand der in der Institutsbibliothek vorhandenen Materialien bearbeitet, die Diskussion der gefundenen Ergebnisse erfolgt während der Übungen.
3. Erarbeitung von Gesichtspunkten zur Erstellung von Klassifizierungs- und Indexierungsregeln (unter Berücksichtigung einer Normvorlage).

E. Seminare und Kolloquien des Wahlfachstudiums

Aufbauend auf den im Grundstudium vermittelten Kenntnissen werden in diesen Lehrveranstaltungen vor

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allem spezielle bzw. kontroverse Themen von den Studenten selbständig untersucht. Dafür hier nur einige Beispiele: Methoden der Terminologiearbeit zu klassifikatorischen Fragen – Einheitsklassifikation und universale Facettenklassifikation – Untersuchungen zu GOLEM und PRECIS – Regelwerk zur Annotierung von Sachliteratur – Benutzerfreundlichkeit von Bibliothekskatalogen.

Gisela Heinrich

Anmerkungen

1 Für einen ausführlichen Bericht über Begründungen und Erfahrungen zu dem vorgelegten Lehrprogramm siehe Heinrich, G.: Zur Didaktik und Methodik des Faches „Sacherschließung". In: Bibliothekarische Ausbildung in Theorie und Praxis. Hrsg. von R. Jung und L. Sickmann. Köln 1975. S. 203–216.

2 Vorläufige Studienordnung für Diplom-Bibliothekare an Öffentlichen Bibliotheken im Land Nordrhein-Westfalen. In: Bibliotheksdienst (1973) S. 97–101.

3 Zu Beginn der Kurse werden zwei Bibliographien mit Hinweisen auf grundlegende Fachliteratur (insgesamt 66 Titel) als vervielfältigtes Lehrmaterial ausgegeben.

4 Als Lernmittel (in maschinenschriftlicher Form) dienen ein Terminologie-Wörterbuch zur Klassifikation (25 Seiten) sowie eine Kriterienliste zur Untersuchung von Universalklassifikationen (8 Seiten), die vom Dozenten zusammengestellt wurden.

5 Von diesen 10 vorgestellten Klassifikationen werden die DDC, LCC und BBK sowie der Katalog der BSB lediglich kursorisch behandelt, während die Systeme Öffentlicher Bibliotheken und die UDC (siehe auch Punkt 6.3.2) eingehend analysiert werden. Zur Veranschaulichung dienen fotokopierte Textauszüge aus Klassifikationen oder Demonstrationen durch Tageslichtfolien im Overheadprojektor. Außerdem stehen als Lehrmaterial tabellarische Übersichten mit Gegenüberstellungen der wesentlichsten Fakten für die 10 Klassifikationen zur Verfügung.

Classification Theory Course in Rio de Janeiro

Since almost 6 years a Master Degree Course in information science is offered by the Universidade Federal do Rio de Janeiro together with the former IBBD and now IBICT (Instituto Brasileiro de Informação em Ciencia e Tecnologia) since March 1976 under the direction of Dr. José Vencovsky. Among its three semester program for altogether 19 courses two are devoted to indexing and thesauri and one to the theory and systems of classification. The latter one had been held for this year's master degree program (Mestrado) from Aug. 2 – Sept. 10, 1976 in Rio de Janeiro at the IBICT-Building, for 28 very interested students in 54 hours altogether. (Former courses were given by J. Mills (1972) and A. G. Brown (1974).

A first survey on the expectations of this course – for which the knowledge of the English language was prerequisite – showed following special interests:

4 wanted to get a general overview about the concerns of classification
12 expected something about the theory of the structures of classification systems
8 wished to receive methodical advice for the practical elaboration of classification systems and
4 hoped to learn how to teach classification themselves.

A request for the previous knowledge in classification revealed that six students had not read any book as yet about classification, 8 had read one book, the rest between two and four books.

The teaching program included the following topics:

1. Aristotele's contributions to the theory of classification
2. A short history of library classification
3. An outline of concept theory (concept relations, concept categorization, etc.)
4. Definition theory
5. Thesaurus and classification terminology
6. Approaches for the construction of classification systems
7. Arrangement rules for classification systems and methodology of facetting
8. Notation – its significance, function and typology
9. Presentation, especially of the structure of the following universal classification systems: Dewey Decimal (DDC), Universal Decimal (UDC), Library of Congress (LCC), Bliss (BC), Colon (CC) and the new Russian BBK
10. Application of these systems: classing topics, stages in classing, classing versus indexing
11. 'Relational indexing'. Relationship indications used
12. Growth and formation of subject fields, citation order, filing order
13. History of classification in the last 20 years in UK, France, Germany, USA, USSR
14. UNISIST efforts towards compatibility of classification systems and thesauri
15. Organisation of classification on a national and international level.

Three exercises were held during the course to control understanding and to allow some practical experience with categorial analysis of thesaurus terms. As a final work a term paper with the following assignment had to be delivered:

"Comparative analysis of a special subject-field in different universal classification systems and proposal for a new structure of this field.

Task: Select a special subject-field in which you feel to have some knowledge and interest. It should not comprise more than – say – 3–5 hierarchies with perhaps altogether 30 to 50 subdivisions.
Examine and describe:

a) its form of presentation in the DDC, UDC, LCC, Bliss and CC if possible or at least in three of these systems (with a quantitative analysis of the classes and terms found and a diagrammatic display of the source of each term).

b) Analyze the structures (facets) and material relationships in the groupings and in the arrangement. Name the arrangement rules you find applied.

c) From all the concepts you find in your selected field in the different systems try to construct a new faceted classification. Define the principles used. Establish also an alphabetical index to it.

d) Show in about 5 examples, how your system can be applied to class titles of documents. How can the concepts from your facets be combined in a consistent way to facilitate what is called "citation order/filing order"?

The paper should have a length of 15–20 pages."

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The results of these term papers have been very satisfying indeed. They are summarized in short as follows:

In Table 1 a compilation is given of the quantiative analyses of the number of relevant classes found in different universal schemes referring to one subject-field (numbers given are the sum of the classes on mostly three hierarchical levels). In each paper the classes have been "dissolved" into single terms; the sources for each term were displayed diagrammatically. In comparing the occurrences of terms a new concept in the comparative analysis of classification systems was created by one student: the "linguistic coincidence ratio" – being the percentage of linguistical identity in the English terms of a given field in different systems.

The qualitative analysis of the genus/species, partition, opposition and functional relationships as well as arrangement rules identified in the systems showed a clear understanding of these usually hidden structural elements in classification systems; they also showed that the single structures of the systems investigated were not always as bad as deemed. The newly proposed systems of the students, mostly in beautiful faceted order and even also useful citation order, however, very often lacked the suggestion of a correspondingly well organised notation. Here some more research will be necessary to provide guidelines on how to adapt possible choices with necessary bases of notation for the different cases in each field of knowledge.

Most of those who had not had any experience in classification before the course concluded with an excellent mark, as did many others also. All in all the interest of just this mostly female group in the very abstract problems of the theoretical basis of classification was inspiring and refreshing at the same time. May there be more groups of this kind soon.

Ingetraut Dahlberg

Subject-field	DDC	UDC*	LCC	BC	CC
Logic	16	–	–	56	17
Nuclear and atomic physics	56	30	22	–	19
Astronomy	158	61	37	–	103
Animal husbandry	–	120	–	42	67
Agricultural soil-science	50	–	40	42	–
Food Technology	120	125	88	–	–
Cardiology	6	4	4	25	18
Psychiatry	19	–	54	21	4
Ophthalmology	38	–	65	–	18
Gynecology	20	12	144	–	109
Teaching methods	41	–	–	25	30
Higher education	22	15	59	9	19
Leisure	–	29	27	24	11
Cooking	33	25	146	–	4
Composite dishes	54	–	23	11	–
Leather manufacture	–	70	24	14	–
Land transportation	–	47	–	8	18
Postal communication	19	26	42	–	–
Techn. processes in libraries	35	–	9	–	17
Printing	38	–	25	–	7
Secular vocal music	27	10	–	13	2
Musical instruments	–	38	–	46	33
Drawing	25	24	42	–	–
Painting	20	12	32	27	17
History of architecture	25	–	50	22	48
Theater	34	–	101	26	–
Folklore	35	19	138	66	3
Occultism	62	–	70	–	19

* With the exception of the number mentioned for Food technology taken from the Portuguese Full Edition, the Abridged English edition of 1961 was used.

Table 1: Survey on the subject-fields selected and the number of relevant classes by field in the chosen systems (the "empty systems" had not been considered in the respective analysis):

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