

**INTERNATIONAL STUDY CONFERENCE ON
CLASSIFICATION FOR INFORMATION RETRIEVAL***

Dorking, England

May 13 - 17, 1957

Gives a brief account of the proceedings of the Conference and the list of papers presented. The "conclusions and recommendations" of the Conference are also given.

"The use of classification in information retrieval".

Dean Jesse H. Shera, School of Library Science, Western Reserve University, Cleveland, Ohio.

This conference was held at the suggestion of the Federation Internationale de Documentation, and organised by Aslib, as British national member of the F.I.D. Aslib was fortunate in securing the co-operation of the Classification Research Group, an independent group meeting in London, and the University of London School of Librarianship and Archives.

The object of the conference was the study of modern ideas on classification (which are largely due to Ranganathan of India) and their application to information retrieval. The following programme papers were presented:

Opening addresses:

"Classification as a discipline".

S.R. Ranganathan, formerly Professor of Library Science, University of Delhi.
Co-rapporteur, FID/CA (Committee on the theory of classification.)

Papers introducing conference themes:

"The classification of a subject field".
J. Mills, Department of Librarianship, North-Western Polytechnic, London, N.W.5.

"Relations between subject fields".
B.C. Vickery, Librarian, Imperial Chemical Industries, Ltd., Akers Research Laboratories, Welwyn, Herts.

"Notation in classification".
E.J. Coates, Chief Subject Cataloguer, British National Bibliography, 7 Bedford Square, London, W.C.1.

"Classification and mechanical selection".
J.E.L. Farradane, Scientific Information Officer, Tate & Lyle Research Laboratories, Westerham Road, Keston, Kent.

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Conference lecture:

"Contributions of classification to science".
Dr. Norman T. Ball, National Science Foundation, Washington, D.C. (read in his absence by Mr. W.A. Wildhack, U.S. National Bureau of Standards).

Of these, the theme papers and that by Ranganathan were published in Classification Research Group Bulletin, Vol. 1, No. 2 (April 1957). It is hoped that all the programme papers will be published in periodicals.

Other original papers were also presented, by M.G. Cordonnier (8 Bd. Victor, Paris, 15^e):- "Classification terminologique et diffusion Selecto"; Dr. M. Scheele (Frankengraben 40, Bad Godesberg, bei Bonn): "Documentation in West Germany - its present stage with regard to Mechanical Selection"; and Dr. Julian Smith (Lenoir Rhyne College, Hickory, N.C., U.S.A.) "Languages and Classification".

The Conference was limited to some forty invited experts, to ensure the best conditions for success. Representatives of France, Germany, India, Italy, the Netherlands, UNESCO, the United Kingdom, and the United States took part. Other experts from some of these countries and Czechoslovakia, Denmark, Hungary and Norway, were unfortunately prevented at the last moment from attending.

The Conference was generally agreed to have been a great success. After some difficulties over terminology, the meetings soon proved fruitful and revealed that workers in different countries had been thinking along broadly similar lines. Monsieur Eric de Grolier, in a masterly "Concluding Survey", summed up the work of the conference and suggested lines of future work. Most of these, with others, are incorporated in the accompanying "Conclusions and recommendations", which were adopted after a vigorous discussion.

CONCLUSIONS AND RECOMMENDATIONS

Without prejudice to the requirements of the other uses of classification, the following conclusions and recommendations are made from the point of view of information retrieval.

The scope of classification

Traditional classification has been concerned with the construction of hierarchies of terms-chains of classes and co-ordinated arrays. Modern information retrieval techniques also necessitate the combination of terms to express complex subjects. This conference takes the term 'classification' to include the problems raised by both these forms of relation. Some members use the term 'codification' for this field of study.

Schemes of classification

There is general agreement that the most helpful form of classification scheme for information retrieval is one which groups terms into well-defined categories, which can be used independently to form compounds, and within which the terms can be arranged in hierarchies where this conforms to the recognised structure of relations between them.

The need for research

There is no single agreed technique for the construction of such schemes. Facet analysis, relational analysis, codifying analysis, semantic analysis, synthetic terminology, linguistic analysis, and other relevant techniques should be further studied. There is a need for continued and organized research into the theory of classification.

The use of classification schemes

Classification schemes constructed on the above lines may be applied in all forms of literature search and information retrieval, ranging from manually manipulated, visually scanned card catalogues on the one hand, to the most highly developed machine systems on the other. Schemes can be adapted, by suitable coding, to very different retrieval systems. Close co-operation between those working on different retrieval systems is therefore valuable.

Differences between systems

Different retrieval systems using the same classification scheme differ only in the

mechanisms by which search is effected, but this may lead to very marked differences in efficiency. More tests as to the efficiency of various systems at various levels of contents analysis are needed.

The construction and application of schemes

In constructing schemes of classification and in applying them to a retrieval system the fullest consideration must be given to providing alternative approaches for different users. In particular, freedom to vary the manner of combining categories and to vary arrangement of terms in a category in different contexts, must be provided, although a preferred arrangement may be desirable for some international purposes. The schemes must correspond as closely as possible to the needs of users and must be readily adaptable to the changing relationships of subjects in the literature.

Notation for such visually scanned systems as the card catalogue

For such visually scanned systems as the card catalogue, notation serves to arrange subjects in a sequence which is helpful to the users. It must therefore offer maximum hospitality, i. e., it must allow the interpolation of all new subjects in a helpful place, no matter what these subjects are or where they occur.

Secondly, notation for such systems must be acceptable to users. Some qualities which may be needed to ensure this are: simplicity, brevity, (spatial, graphic and/or phonetic), and pronounceability. Tests are needed on the relative importance of these qualities in different circumstances and the symbolism which best embodies them.

In order to allocate notation economically, statistical studies will be of value. The possibility of using, within each category, purely ordinal notation which does not reflect the hierarchy of subordinate and co-ordinate classes, appears to be of value and needs further study. The suggestion from workers in the field of information theory, that their mathematical approach could help in the design of notations, should be explored.

Machine systems

The conference is generally agreed that a great deal more information is needed about the use of machines in information retrieval. Guidance is required as to what types of retrieval system are best adapted to various searching situations in different documentation services. Can a single code for a machine system serve all three functions of placing documents, selecting documents relevant to a given subject, and analysing the information content of the same documents? What are the relative advantages and disadvantages for various types of mechanical selection, of the different types of code which may be available - e.g. (1) random coding, (2) "alphabetical" coding derived from a natural language, (3) systematic coding which expresses hierarchical structure where this is considered necessary? What is the value of special types of symbolism, such as self-demarkating code words or super-imposed coding in different situations? We suggest that attention be given to devising and using methods of answering such questions.

Research projects

Among the research projects which it would be desirable to conduct in the near future, the following may be cited:

- 1) elaboration of schedules of classification for the more general categories usable in many different fields of knowledge (logical, morphological, spatial, of properties, values, and materials, etc.);
- 2) clarification of the problem of relations between subjects, and of the nature of connecting symbols necessary for expressing them;
- 3) study of the different methods for coping with the increasing overlapping between areas of knowledge;
- 4) establishment of a unified systematic terminology in the field of classification theory itself.

A general scheme of classification

The need for a general encyclopaedic or universal scheme of classification, based upon

the principles enumerated above, is felt by a number of members of the conference. It is needed in general libraries and bibliographies, and in special libraries which have interests in many fields. It can aid the construction of special schemes. Reciprocally, it might best be built up by the integration of special schemes. If a new general scheme is to be made, its component parts must be constructed according to a common pattern.

The development of classification schemes

To aid the development of new schemes of classification, whether special or general, according to such a pattern, more detailed guides for their construction, based on the most recent advances of classification theory, are needed. In the construction of schedules for particular subject fields, the closest co-operation is required between those expert in classification technique and those expert in the subject. It is highly desirable that this should be done at international level.

The furtherance of research

In order to further all the aims already discussed, the closest contact must be developed between all who are working in classification theory and in allied fields. The following methods of achieving this suggest themselves:

- a) Maintenance of personal contact between conference members, and making contact with other workers on classification and information retrieval, particularly those in countries not represented at the conference.
- b) Maintaining and extending contact with workers in allied fields.
- c) Exchange of draft schedules.
- d) Setting up research groups in various population centres, as recommended by F. I. D.
- e) Setting up "clearing houses" for papers and schedules in different countries.
- f) Organising further conferences on classification and information retrieval in other countries.
- g) Publishing papers in the journals of other countries than the authors' countries.
- h) Co-ordination and systematization of the terminologies of subjects.
- i) Contact with broadly based organizations which can support research.
- j) Persuading schools of librarianship and documentation to pay more attention to modern developments in the field.