

Relevance of a Classified Catalogue in the FRBR Perspective and a Proposed Model of it with Description as per the ISBD and a Faceted Class Number as Key Attribute

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The paper highlights the importance of cataloguing as the basic prerequisite for all information retrieval processes, and therefore its relevance as a core in LIS curriculum. The developments in ICT have brought in sea changes in the universe of information resources as well as in customer requirements. This changed situation has caused only a redefinition of the functions and format of the catalogue and not made it redundant. Formulation of FRBR as a conceptual model for bibliographical databases is a landmark in this context. The FRBR in fact is a manifestation of the theoretical frame that Ranganathan had proposed for the universe of documents. The recent attempts to incorporate Classification Numbers to enable browsing resources in the web and the approach of FRBR aiming at retrieval of the different manifestations and expressions of a work during a search, necessitate a coextensive Class Number as a key attribute for every work as an access point. Such an approach would necessitate training students of librarianship on the modus operandi of a Classified Catalogue. The paper gives an entity relationship diagram for a bibliographical database and a model of a Classified Catalogue with description as per the ISBD and access points derived on the basis of the rules of the *Classified Catalogue Code* of Ranganathan.

Background

‘Information processing and retrieval’ being the core of librarianship, warrants adequate coverage at all levels of education in library and information science (LIS). Library schools therefore used to include detailed study of the tools and techniques of information processing and retrieval, including classification, cataloguing, indexing, information system design etc in the syllabi of the various courses in LIS. In fact library classification and cataloguing together accounted for almost half of the syllabi during the early days of library education. Subsequent developments, especially the application of information communication technology (ICT) in information retrieval and the changes in the requirements and expectations of the clientele whom the profession has to serve, led to a paradigm shift in the discipline and made it necessary to incorporate more components borrowed from other subject fields in the syllabi. However the general practice in LIS schools is to have curricula with emphasis on the basic philosophy and theory of information processing and retrieval rather than just training the students in ICT enabled information retrieval skills. Such an approach is essential for the development of discipline retaining its identity.

Momentous changes have taken place in the scheme of education for librarianship all over the world during the past few years. In India for example, many of the library schools have now switched over to two-year integrated (4 semester) Master of Library and Information Science (M L I Sc) programme, with a basic degree in any discipline under the 10+2+3 scheme as the minimum qualification for admission. The former one-year courses of B L I Sc and M L I Sc are also being continued in some schools. In addition, there is the certificate course in library and information science, with either matriculation or a pass in higher secondary course as minimum requirement for admission, offered in universities, government institutes and autonomous institutions. These courses aim at moulding manpower competent to work in the various libraries and information centres and to perform a range of jobs, from routine semiprofessional operations to managing national level integrated information systems. As the Curriculum Development Committee of the University Grants Commission (2001) observes, about 90% of the libraries in the country function on traditional lines, with print-based collection managed with card catalogue, card-based circulation system and other traditional devices, and with limited access to electronic resources. At the same time there are a good number of state-of-the-art libraries and information units that provide access to a host of digital resources within their campus as well as from outside. Therefore the professionals coming out of the library schools must be competent for both the categories of libraries. Hence the curricula of the various courses are framed in such a way that a balanced coverage of both traditional tools and techniques as well as modern ICT-based devices is maintained. This paper is concerned with the facet of library cataloguing, the core of LIS which has to reflect the latest trends.

Library Catalogue

The card catalogue has been dominating in libraries for more than two centuries, since the French Government for the first time in 1791 issued formal instructions to their libraries to prepare and maintain catalogue in the card form. The mid 1970s witnessed the introduction of online catalogues, which originally were similar to the card catalogue, with additional details from the circulation system files (Beaulieu and Borgman, 1996). Today the OPACs cover local as well as remote information sources and have user-friendly search interfaces. The traditional catalogue card cabinets are either discarded or retained just for the sake of completing the retrospective conversion. Focusing on the classified catalogue of the Science and Technology Department of the Carnegie Library in Pittsburgh, Cox et al (1998) discuss the controversial issue of American libraries discarding old catalogues when they are automated. The authors highlight the virtues of a classified card catalogue and bring out the need for their preservation. A number of catalogue use studies were conducted after the implementation of OPACs. The major finding of most of the studies is about the limitations and inefficiency of OPACs in respect of subject searches (Sridhar, 2004; 2004a; Varghese, 1997). The card catalogue was found to be more efficient and the studies highlight the need for incorporating something similar to the syndetic structure of subject entries in automated catalogues.

Cataloguing Rules and LIS Education

Insistence on strict rules for the choice and rendering of various elements in a catalogue and stringent regulations on the use of punctuation marks and capitalization have invoked a lot of criticisms from the different corners of library profession itself. Cataloguing has been criticized as the most expensive job in a library and the card catalogue as a white elephant. Majority of library professionals believe that the DBMS packages have made compilation of library catalogues rather simple and the stringent cataloguing rules are no more significant.

Further it is argued that search engines index even the full text of documents and exhaustively retrieve the items matching a set of post coordinate search terms, which in turn makes the conventional catalogues insignificant. But actual experience seems to counter these views. Though search engines retrieve millions of items in response to a query, nobody spares time to go through all the retrieved items and check their relevance. In spite of the relevance ranking and advanced search features in search engines we come across a lot of irrelevant items retrieved in response to queries. A study made in March 2000 reports that the so called 'Deep Web', that part which is not accessible to the traditional search engines, is 400 to 550 times larger than the 'Surface Web'. The quality content of the former is found to be 1,000 to 2,000 times greater as its content is highly relevant to every information need, market, and domain. Moreover, ninety-five per cent of the deep Web is found to be publicly accessible information and not subject to fees or subscriptions (Bergman, 2000). Search engines cannot therefore be considered as substitutes of library catalogues.

In the circumstances the library profession continues to go ahead treating catalogues and cataloguing as indispensable for information processing. The revision of ISBDs retaining and perhaps adding more punctuations to represent data elements, regular updating of the AACR2, and initiating steps for the AACR3 signify the relevance of the rules for cataloguing in the present context. Job notifications specifically for candidates with expertise in classification and cataloguing appearing professional journals are not rare. Michael Gorman (2002) rightly places bibliographic control and cataloguing at the heart of library education.

As cataloguing continues to be the fundamental constituent of librarianship and information retrieval, practical training in preparing and maintaining a card catalogue is essential in LIS education at all levels. A card catalogue can be viewed as a simple manifestation of a database. Mastering skills in compiling a card catalogue enables the students to get acquainted with the principles and technicalities in designing and maintaining a computerized database as well as their search and retrieval. The functional requirements of files that constitute a database; the records, which form the files; fields and subfields that are the components in a record can be well understood once the structure and components of entries in a card catalogue are familiarized. It would enable library professionals to formulate appropriate bibliographical descriptions suited to the various contexts such as library catalogues, bibliographical references, printed indexing and abstracting services and to design user friendly interfaces so as to form OPACs and Web OPACs. Knowledge of the standards used in bibliographic record formats would

help interpret bibliographical descriptions even if prepared in an unfamiliar script and to export and import entries between databases. A prototype card catalogue would also reveal the need for standardization and systematization in the choice and recording of the essential access points. The role of the main file and that of inverted files in a database, as well as the logical file structure in an Entity–Relationship (ER) model database can be well understood by the analogy of the entries in a card catalogue. Moreover the transformation from card catalogue to computerized catalogue has not been completed in our libraries so far. The Resource Description Framework, a scheme designed to facilitate the interoperability of metadata of web resources too can be viewed as the twenty-first century manifestation of the card catalogue (McCathieNevile and Méndez-Rodríguez, 2007).

FRBR

The FRBR formulated as a conceptual model for bibliographic databases had a profound impact on library cataloguing and universal bibliographic control practices (Madison, 2005). The ER model, which allows describing the data involved in common databases, including bibliographical data, in terms of objects and their relationships, underlies the FRBR framework. Analysis of the requirements, design of the conceptual model appropriate to the requirements, and design of a logical schema suited to the DBMS selected are the initial steps in designing any database. The ER model enables translation of descriptive statements of user requirements to precise description that can be implemented in the DBMS that is selected and therefore it is extensively used in database design. For bibliographic universe too, which exhibits more complexities than the ones seen in other familiar database applications, these steps hold good and therefore it is chosen as the basis to work out the conceptual model in FRBR.

The FRBR model attempts to delineate the types of entities constituting the universe of documents and the elements associated with them, the attributes of each, and the kinds of relationships that exist between entities. The entities are categorized into three groups namely the bibliographical resources which in themselves are the products of intellectual or artistic endeavour that the databases refer, entities responsible to them, and entities that are the subjects of the resources. The first group of entities is then divided as work, expression, manifestations and items. The second group comprises persons and corporate bodies. The subject can be any one or more of the other two groups of entities or any concept, object, place or event. To describe the entities in a database one has to use their attributes, which the FRBR document describes in detail. The relationship between entities enables to link the different categories of entities in the database. Further, the FRBR identifies the functions of a bibliographic database in terms of the user tasks. All these together are envisaged to serve as the schema for the design of a bibliographic database. Tillet (2004) gives a detailed discussion on the impact of FRBR on cataloguing codes and practices including the future systems.

The approach made in FRBR has close resemblance with the body of principles that Ranganathan had proposed as the theory of library classification and cataloguing. The FRBR defines entities as ‘the key objects of interest to users of bibliographical data’ in line with the definition as ‘the principal data objects about which information is to be

collected; they usually denote a person, place, thing, or event of informational interest' given in ER modeling (Teorey, 1999). The term 'tuple' or 'row' refers to a single item of an entity. An 'entity' defined in the General Theory of Classification as 'anything existing, either in concrete form or as concepts', corresponds to a 'tuple' in DBMS. 'Facet' used as a generic term denoting the Basic Class as well as 'group of isolates forming part of it derived on the basis of a single train of characteristics' can be deemed as the equivalent of 'entity' in the ER model. 'Attribute' defined as 'any quality or property of an entity' has the same scope both in the General Theory and in the ER context. The first group of entities defined as 'products of intellectual or artistic endeavour' corresponds to the 'book', which is considered as a composite entity comprising soul, subtle body and gross body as constituents. The 'work' as defined in FRBR is the equivalent of the soul of a book. The soul finds expression in the subtle body of the book. In fact Ranganathan defines 'work' as 'expressed thought'. The gross body gives the work its physical manifestation. That particular manifestation under consideration, say the one possessed by the library, is the 'item' being handled. A coextensive Class Number can be made to represent the thought content or the 'work' embodied in a document. A Book Number derived using the facet formula proposed in the Colon Classification, with provision for language and form facets would be a close representation of the 'expression' part. Even individual copies of the same book can be specifically identified with the help of CC book numbers. Collection Number can reveal the nature of the physical form or 'manifestation'. Thus the Colon Classification has the capability to assign Call Number that **uniquely identifies** each and every bibliographical item in a collection. A relational database with such a unique Call Number as the key attribute with provision to arrive at the number when searched through verbal headings would be a very powerful mechanism for retrieval. A simplified conceptual model of a library catalogue with bibliographic description as per the ISBD, is shown in figure 1.

Class Number and Subject Search

Classified arrangement of the items constituting a library collection as well as their surrogates in a catalogue or other databases has been found to enhance the efficiency of retrieval, especially while conducting an exhaustive search for resources on a topic. A classified arrangement helps users browse a collection, including surrogates, which in turn enables them to identify and formulate their very specific requirement and to proceed until the most relevant item is obtained. The major cause of difficulties that users feel while searching an online catalogue, according to Borgman (1986) is the insufficient understanding of the searching behaviour, especially the iterative nature of search. Users conduct the search over a number of sessions, refining the query in each session in the light of the results obtained. The deeper function that Ranganathan attributes to the library catalogue, that it has to "spread before the user a full connected panorama of all the materials on his specific subject all its subdivisions, and all broader subjects of which it is itself a subdivision" and Lubetzkey's (1977) statement that "the catalogue has to tell you more than what you ask for.... The answer of a good catalogue is not to say yes or no, but ... to tell the user that the library has [the work] in so many [expressions and manifestations] editions and translations, and you have your choice" can be fulfilled effectively only through a Classified Catalogue.

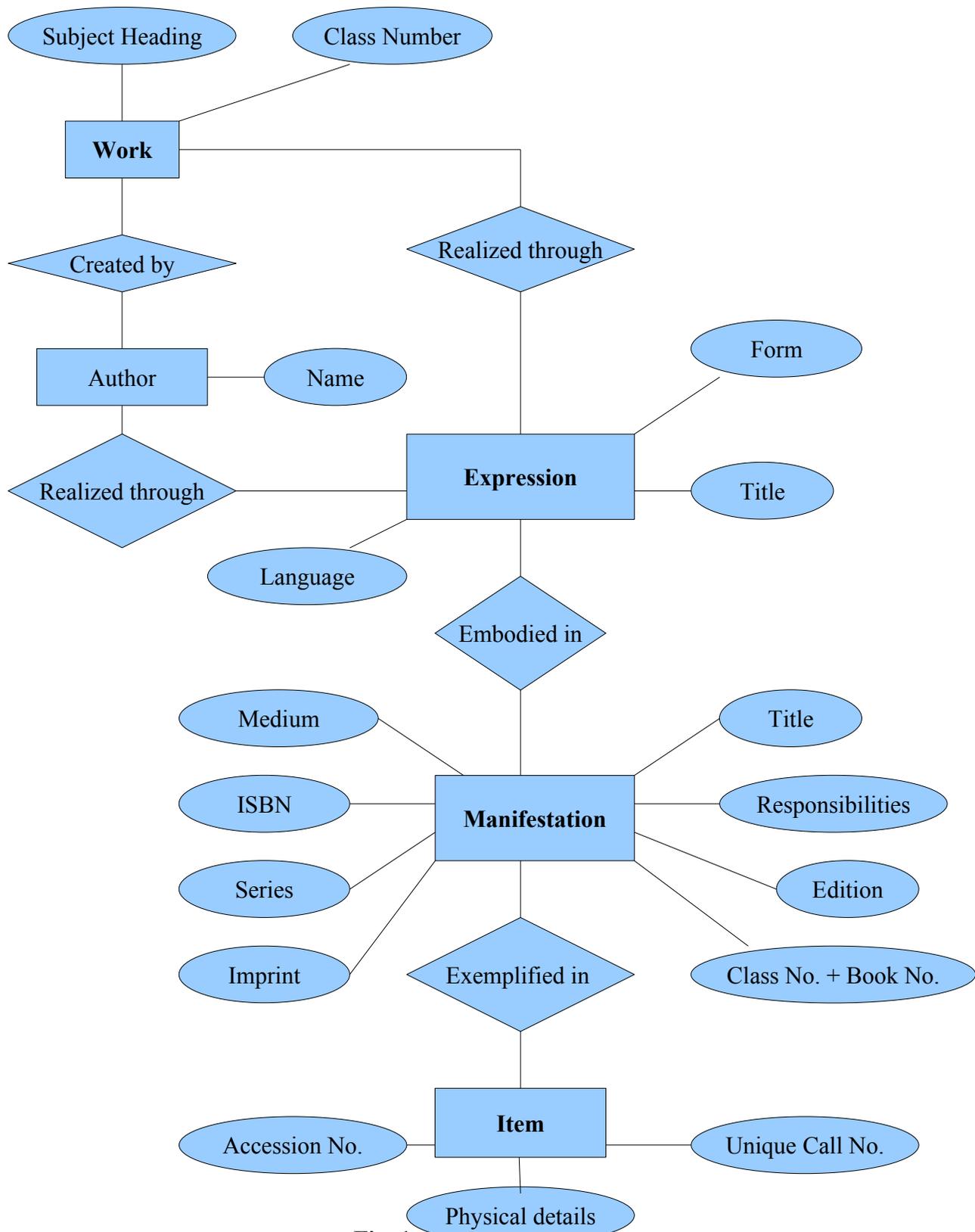


Fig. 1

Conceptual model (FRBR) of a library catalogue within the ISBD frame work

This sort of an approach holds good not only for a card catalogue but also for modern databases including subject gateways and web OPACs. In a paper contributed to a thematic issue on 'subject control in on-line catalogues' of the *Cataloging & Classification Quarterly*, Broadbent (1989) illustrated the feasibility of making an online catalogue function as a Classified Catalogue as well, by providing a classified index having Class Numbers as access points. Such an index is proved to be a powerful browsing device. Classification is found to have immense application in the search and retrieval of web resources. Even though a linear arrangement as that of printed books in shelves is not applicable, organizing the resources into hierarchical subject categories facilitates topical browsing and filtering of less relevant ones. In a review article contributed in the *ARIST*, Woodward (1996) examines the techniques such as automatic classification projects, classified subject trees and the electronic version of the DDC in organizing the web resources. Citing a range of works dealing with automated classification approach to web resources including text categorization, document clustering, and document classification with controlled vocabulary, Golub (2006) discusses their similarities and differences along with some directions for future research. Choi and Peng (2004) substantiate the need for an automatic classification to organize the vast resources in the web and to enhance efficiency of retrieval. Even today we have a few subject directories that give class descriptors and class numbers as access points with a view to facilitating search as well as browsing. The Dewey Browser of the OCLC Research; the DeweyBrowse, another directory of web sites suited to children created and maintained by Gail Shea Grainger; the BUBL, a directory of academic web resources, etc are examples of web directories that enable browsing using DDC Class Numbers. In addition, the records in many databases have fields named classification or descriptors or both and they carry alphabetical subject headings or class marks or a combination of the two. These fields help enhance precision in retrieval while carrying out a search in the database. The number of studies and projects undertaken during the past few years with a view to examining the feasibility of library classification schemes and other specially designed subject hierarchies give testimony to this.

Faceted Classification and Information Retrieval

The significance of Facet Analysis techniques in all the various activities relating to information retrieval has been well accepted in the field of LIS. Ranganathan gave a new dimension to the technique and he successfully applied it in the design of Colon Classification and the Chain Procedure of deriving subject headings. A facet being a list of concepts or isolates in a subject domain derived on the basis of a single train of characteristics can be viewed as one of the first order divisions of the subject. All the component concepts in any branch of knowledge can be categorized into a set of facets. In the main subject medicine for instance, one can have the 'organs' facet, 'problems' facet, 'causative factors' facet, 'handling' facet etc. The Basic Class together with isolate facets arranged in a logical sequence can be viewed to give what is called the absolute syntax of the subject in hand. A freely faceted system gives maximum flexibility in formulating the facets and in deciding their sequence, the only restriction being that everything should be based on sound principles and logic. The Class Number of a compound subject is derived by connecting the Basic Facet and isolate numbers in a logical sequence, using the prescribed indicator digits. The notation system mechanizes

the arrangement of specific subjects in a domain into a preferred logical sequence. In this respect the Colon Classification can be considered as a close approximation of a freely faceted classification.

The Classification Research Group declared in 1955, the need for using facet analysis as the basis of all methods of information retrieval. Facet analysis at varying degrees is applied in library classification schemes including the DDC, subject heading lists and in thesaurus construction. The continued relevance of Ranganathan's facet analysis in modern information retrieval systems is illustrated by Ingwersen and Wormell (1982). Ellis and Vasconcelos (1999) give an outline as to how facet analysis can be used to search and organize the web resources in a more efficient manner than the search engines and directories do. A detailed account of the applications of facet analysis including its use in search and retrieval of web documents and portals is given by Vanda Broughton (2006). Therefore it becomes evident that a Classified Catalogue in card form, or a relational database with provision for browsing through a hierarchical class structure, with a sound footing on a freely faceted classification would be very much effective and efficient as a tool for all types of information retrieval. Hence the author proposes a Classified Catalogue; with Class Number as per the Colon Classification and subject entries derived using the Chain Procedure as a prototype as a module to train the students in library cataloguing.

Unit Records in a Catalogue

A card catalogue is a collection of entries, each one prepared in a standard size card, arranged in the desired sequence. Every entry is a unit record and an entry other than the reference entries, acts as a surrogate of the document to which it relates. An entry has basically three components, namely a unique description of the document, a heading which the users are likely to choose as access points while searching for it and a symbol or mark that enables to retrieve it from the collection once it is found to be present. The description comprises a set of attributes presented in a predefined format. There would be sufficient number of entries, more or less of uniform pattern so as to facilitate searching the same document through various attributes as well as related entities. Reference entries direct a user searching the catalogue using a heading of his preference to another one that is preferred by the library. It may be the one meant for a single document or a group of documents.

An automated catalogue too comprises a set of files linked together so as to form a database. Each file is made up of records of a single type, records themselves being made up of a set of attributes of the entities which they refer to. The organization of data into files facilitates integration of data, updating records and efficient retrieval. Records uniquely representing the documents in the collection and made up of their attributes constitute the main file. The database management software takes care of the internal manipulations.

Classified Catalogue and ISBD

The library schools in India have been training students in compiling both Classified Catalogue and Dictionary Catalogue using the *Classified Catalogue Code (CCC)* and the *AACR2* respectively. This practice has led to the conviction even among a large majority of the professionals that no Classified Catalogue can be constructed applying the rules of *AACR2*. Some library schools today have done away with the practice of a Classified Catalogue on the ground that rules in *CCC* have lost their relevance in the context of computerized catalogues. But the theoretical foundation of cataloguing that Ranganathan has formulated still holds good in an automated catalogue as well. A great impact of the scientific basis that Ranganathan has laid down can be seen in the FRBR model itself and the amendments made from time to time in the rules for choice and rendering of access points in the various revisions of *AACR2*. It therefore becomes inevitable to perpetuate the Normative Principles so that the tools and techniques that we develop would have a sound theoretical foundation, which can further be improved applying the scientific method.

The ISBDs have today been accepted as the universal standard for describing documents of all types in bibliographical databases and therefore the corresponding rules in the *CCC* which were framed for a hand written card catalogue have lost their relevance. But the philosophical and theoretical bases of the *CCC* and the rules relating to headings have no parallels in the *AACR2* or in other catalogue codes. Had the *CCC* been revised during the 1970s replacing rules for description with the ISBDs and updating the other rules properly it would have been a great boon to modern cataloguing. This author is of strong view that library schools have to train the students to compile a Classified Catalogue using the ISBD for the description part of entries and headings as derived according to the rules of the *CCC*. The author proposes the following modus operandi for such a cataloguing model.

The Proposed Model of a Classified Catalogue

The proposed model includes the kinds of entries in a Classified Catalogue, the content and format of each entry and the conventions used in respect of style of recording. A few illustrative examples as per the model are given as appendix.

a. Kinds of Entries

The entries in a Classified Catalogue would be of two types: number entries and word entries. The latter actually serve as alphabetical index to the former. Figure 2 shows a categorization of entries, indicating the role of each.

b. Main Entry and Book Index Entries

The flow diagram (figure 3) gives the procedure to prepare the Main Entry (ME) and Book Index Entries (BIE) using the unit card system.

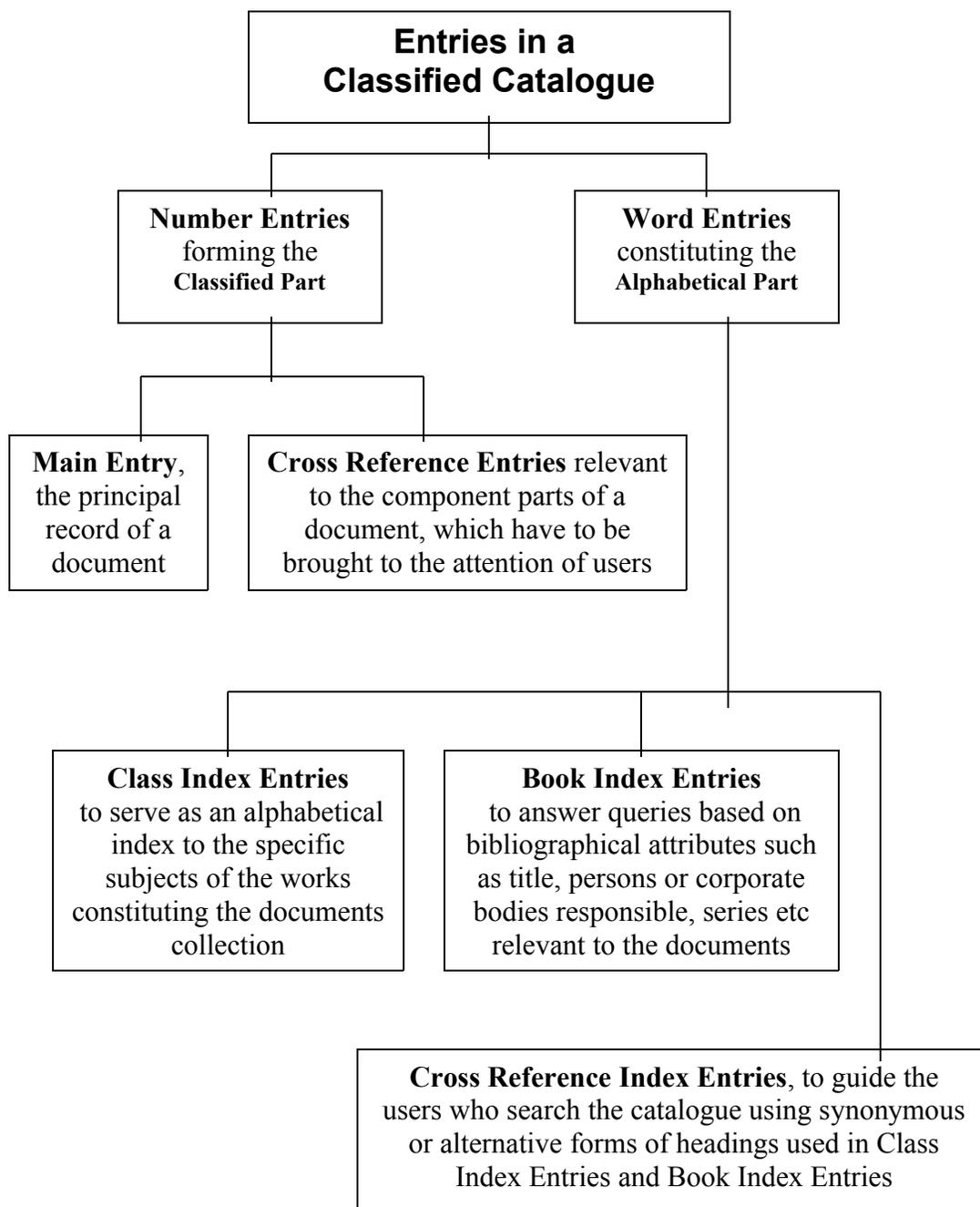


Fig. 2
Kinds of Entries in a Classified Catalogue

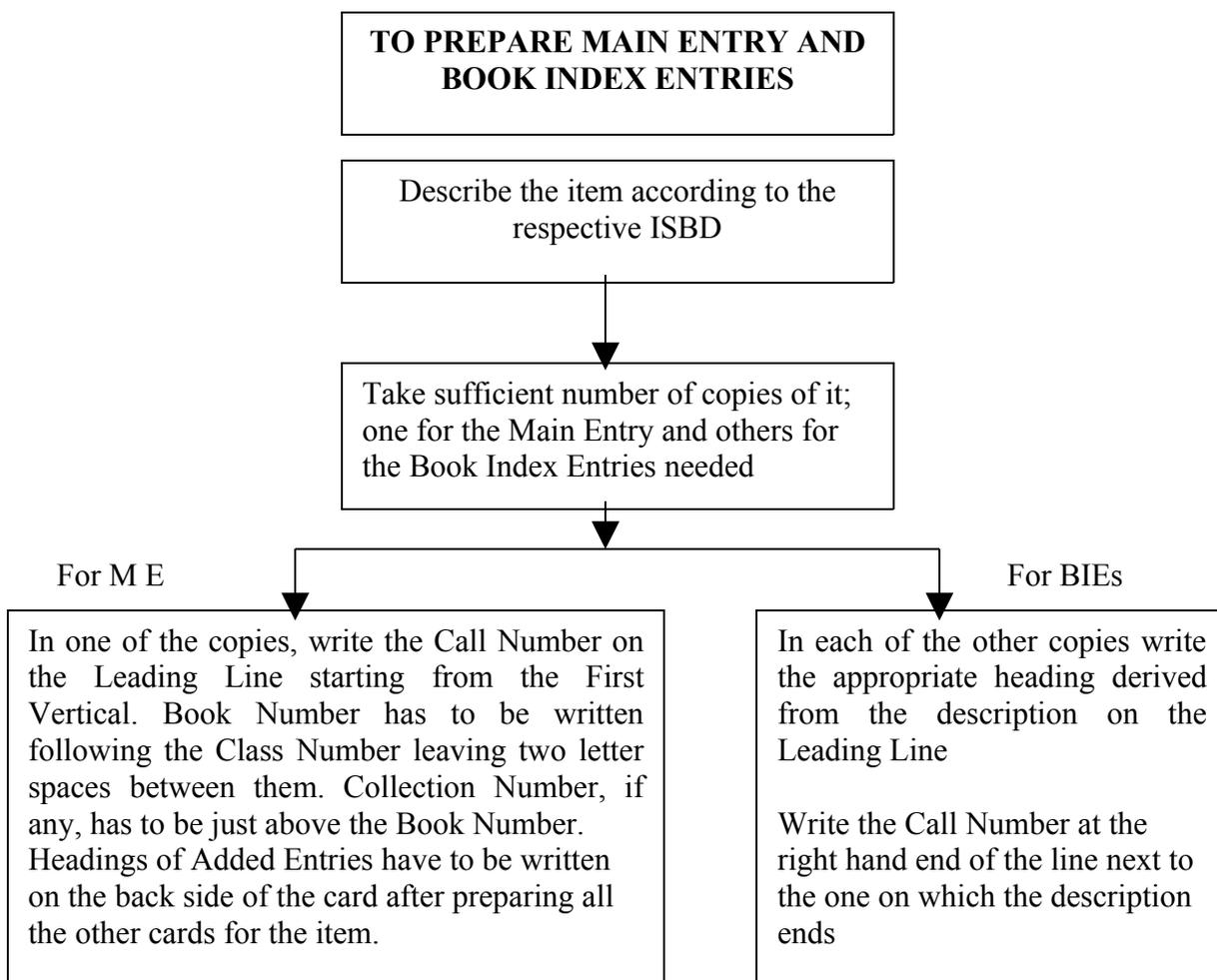


Fig. 3
Steps to prepare Main Entry and Book Index Entries

c. Class Index Entries

Class Index Entries (CIE) are to serve as alphabetical index to the Class Numbers representing the 'works'. A CIE has to consist of three sections, namely, Leading Section, Second Section and Index Number. Alphabetical subject headings derived from the Class Number, applying Chain Procedure have to occupy the Leading Section. A directing statement "*For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number*" has to be the content of Second Section. The Class Number denoting the heading written in the Leading Section shall be the Index Number

d. Cross Reference Index Entries (CRIE)

CRIEs have three sections: Leading Section, Second Section and Referred to Heading. The alternative form of the heading to which the entry refers, that is the Referred from

Heading, is to be in the Leading Section. The Second Section is to contain the directing statement 'See' or 'See also' as per the context. The Referred to Heading will be the Heading of the CIE or BIE to which the searcher is directed.

e. Cross Reference Entries (CRE)

CREs are Class Number entries referring to some portion of an item, for which the cataloguer anticipates specific enquiries from the part of users. CRE can be prepared by writing the Class Number of the topic from which the cross reference is made and the directing element 'See also' in two separate lines in a copy of the Main Entry. There can be more than one CREs for an item catalogued.

f. Conventions on Style of Writing

The Heading of a BIE may have more than one component such as an Entry Element, Secondary Element, Individualizing Elements and Descriptive Elements and they have to be shown distinctly. Further, there is the possibility of more than one block such as an organ of a corporate body in the heading. Therefore the typographical style prescribed in the Part E of the CCC would be the best option. Changes in Call Number of a document may have to be effected in the light of revision of classification scheme used or anticipating better use of the item by users. In the light of these, the following conventions are recommended.

- ☞ Use pencil to write Call Number and Class Number wherever they occur.
- ☞ Entry Element in a Heading has to be in Upper Case characters.
- ☞ Secondary Element and Individualizing Elements have to follow the Entry Element, and they have to be written in Lower Case letters, observing rules of grammar and enclosed in separate parentheses.
- ☞ Descriptive Element can be used to indicate responsibilities other than authorship. It has to follow the secondary and individualizing elements preceded by a comma and be in Italics (or underlined if hand written) with initial letter of each in Upper Case.
- ☞ More than one blocks if any in the Heading, have to be separated by commas.
- ☞ While using the title of a document as heading, initial articles if any, have to be omitted (unless it is an inseparable part of it) and the first two of the remaining words have to be treated as entry element.
- ☞ When the title of a series appears as heading, the statement as written in the series area has to be written, in complete capitals, omitting initial articles if any.

- ☞ Elements such as instructions and directing statements, which do not represent entities or their attributes, have to be in italics.

- ☞ Heading of a Book Index Entry referring to joint personal or corporate responsibilities of the same degree, involving two persons or bodies, should include both the names connected with the conjunction '**and**'

- ☞ The Heading for joint personal or corporate responsibilities involving more than three, should be that of the first mentioned person or body, followed by '**et al**'

Figure 4 shows as how a Classified Catalogue fulfills the functions of a catalogue envisaged in the FRBR.

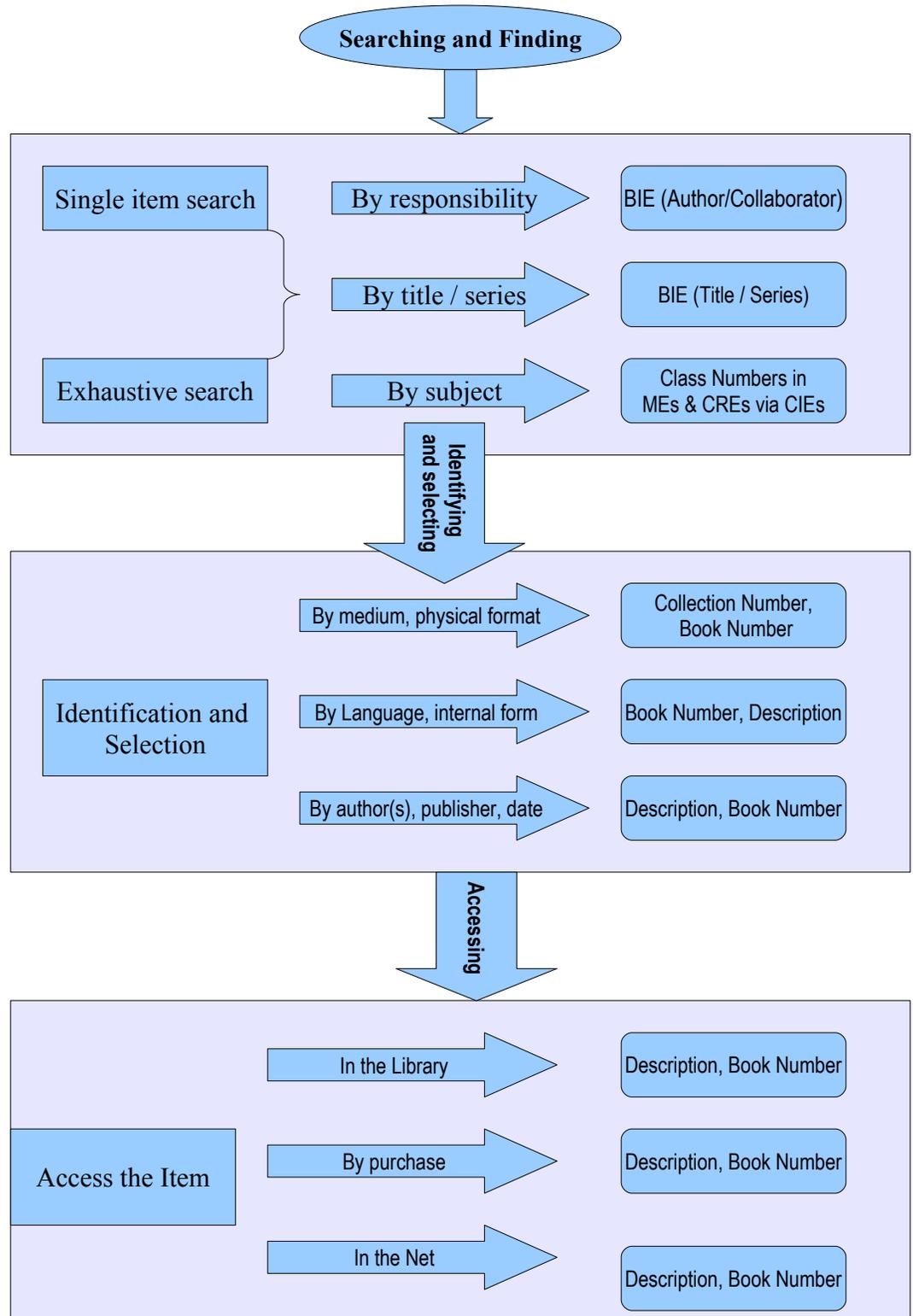


Fig. 4

Illustrative Examples

Illustrative examples of catalogue entries for a few items prepared in accordance with the proposed model are given in the appendix.

Conclusion

The importance of library classification and cataloguing in modern information retrieval techniques cannot be under-estimated and they have to form the core of education for librarianship. The application of ICT in general and DBMS in particular have a profound impact on library cataloguing techniques. However, the philosophical foundation that people like Ranganathan and Lubetzkey had laid for cataloguing has not become obsolete. The model proposed here would enable to resolve many of the complications in cataloguing. Using the Call Number as the primary access point in Main Entries will eliminate many complexities in the choice of Main Entry Headings. For example the decision about headings for works of shared and mixed responsibilities would become rather simple. Similarly the conditions for giving corporate bodies as Main Entry headings no longer need be considered. A well designed table that connect post coordinated alphabetical headings with their Facet Numbers combined with a mechanism to synthesize pre-coordinated Class Numbers while carrying out search, would make the catalogue or even any other bibliographical database the most efficient.

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APPENDIX

Illustrative Examples of Catalogue Entries

Example 1

		X8(A):2.58'N5 N62
45768		Growth of industrial production in the Soviet Union / by G. Warren Nutter ; assisted by Israel Borenstein and Adam Kaufman. – Princeton : Princeton University Press, 1962 xxvii, 706 p. ; 22 cm. – (National Bureau of Economic Research, general series ; no. 75) Bibliography : p. 635-86
		RUSSIA, PRODUCTION, INDUSTRY.
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number X8(A):2.58
		PRODUCTION, INDUSTRY.
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number X8(A):2
		INDUSTRY, ECONOMICS.
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number X8(A)
		ECONOMICS.
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number X

		NUTTER (G Warren).	
		Growth of industrial production in the Soviet Union / by G. Warren Nutter ; assisted by Israel Borenstein and Adam Kaufman. – Princeton : Princeton University Press, 1962 xxvii, 706 p. ; 22 cm. – (National Bureau of Economic Research, general series ; no. 75) Bibliography : p. 635-86	X8(A):2.58’N5 N62
		BORENSTEIN (Israel) and KAUFMAN (Adam), <i>Assis.</i>	
		Growth of industrial production in the Soviet Union / by G. Warren Nutter ; assisted by Israel Borenstein and Adam Kaufman. – Princeton : Princeton	
		KAUFMAN (Adam) and BORENSTEIN (Israel), <i>Assis.</i>	
		Growth of industrial production in the Soviet Union / by G. Warren Nutter ; assisted by Israel Boren-	
		NATIONAL BUREAU OF ECONOMIC RESEARCH, GENERAL SERIES ; no. 75	of
		Growth of industrial production in the Soviet Union / by G. Warren Nutter ; assisted by Israel Borenstein and Adam Kaufman. – Princeton : Princeton University Press, 1962 xxvii, 706 p. ; 22 cm. – (National Bureau of	N5 N62
		Russia, Production, Industry. Production, Industry. Industry, Economics. Economics. Nutter (G Warren). Borenstein (Israel) and Kaufman (Adam), <i>Assis.</i> Kaufman (Adam) and Borenstein (Israel), <i>Assis.</i> National Bureau of Economic Research, general series; no. 75	

Example 2

		O122,3L83w,1 111N54
102441		The private diaries of Stendhal / edited and translated by Robert Sage. – New York : Doubleday & Co. , 1954 xiv, 570 p. : ill. ; 24 cm. Stendhal is the pseudonym of Marie-Henri Beyle
		AUTOBIOGRAPHY, STENDHAL, <i>Pseud.</i>
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number O122,3L83w,1
		BIOGRAPHY, STENDHAL, <i>Pseud.</i>
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number O122,3L83
		STENDHAL, <i>Pseud.</i> , [i e Marie-Henri Beyle], FICTION.
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number O122,3L83
		FICTION, FRENCH
		For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number O122,3

		SAGE (Robert), <i>Ed and Tr.</i>
		The private diaries of Stendhal / edited and translated by Robert Sage. – New York : Doubleday & Co. , 1954 xiv, 570 p. : ill. ; 24 cm. Stendhal is the pseudonym of Marie-Henri Beyle O122,3L83w,1 111N54

		BEYLE (Marie-Henri)
		<i>See</i> STENDHAL, <i>Pseud.</i>

		DIARIES.
		<i>See</i> AUTOBIOGRAPHY.

<p>Autobiography, Stendhal, <i>Pseud.</i> Biography, Stendhal, <i>Pseud.</i> Stendhal, <i>Pseud.</i>, [i e Marie-Henri Beyle], Fiction. Fiction, French. French, Literature. Literature. Sage (Robert), <i>Ed and Tr.</i> Beyle (Marie-Henri). Diaries.</p>

Example 3

		22.56'N24t N27
45734		Report on public libraries in England and Wales / Public Libraries Committee. – New York : University Microfilms Limited, 1970 286 p. ; 22 cm. Chairman : Frederic G. Kenyon Report first published: London : H M S O, 1927
		UNITED KINGDOM, PUBLIC LIBRARIES (Committee) (1924) REPORT. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number 22.56'N24t
		KENYON COMMITTEE (1924) REPORT. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number 22.56'N24t
		GREAT BRITAIN AND IRELAND, PUBLIC LIBRARIES. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number 22.56
<p>United Kingdom, Public Libraries (Committee) (1924) Report. Kenyon Committee (1924) Report. Great Britain and Ireland, Public libraries. Public libraries. Library science.</p>		

Example 4

		C9B3,1:(C5:55)0gC4p1,N68 N70
768234		Thermal neutron diffraction : proceedings of the International Summer School at Harwell, 1-5 July 1968 / edited by B.T.M. Willis. – Oxford : Oxford University Press, 1970 xiv, 229 p. ; 23 cm. – (Harwell post-graduate series) At the head of title page : United Kingdom Atomic Energy Authority Research Group
		INTERNATIONAL SUMMER SCHOOL ON NEUTRON DIFFRACTION (Harwell) (1968) PROCEEDINGS. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number C9B3,1:(C5:55)0gC4p1,N68
		CONFERENCE PROCEEDINGS, HEAT influencing DIFFRACTION, NEUTRON. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number C9B3,1:(C5:55)0gC4p
		HEAT influencing DIFFRACTION, NEUTRON. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class
		DIFFRACTION, NEUTRON, NUCLEAR PHYSICS. For documents in this Class and its Subdivisions see the Classified Part of the catalogue under the Class Number C9B3,1:(C5:55)

		WILLIS (B T M), <i>Ed.</i>
		Thermal neutron diffraction : proceedings of the International Summer School at Harwell, 1-5 July 1968 / edited by B.T.M. Willis. – Oxford : Oxford University Press, 1970 xiv, 229 p. ; 23 cm. – (Harwell post-graduate series) At the head of title page : United Kingdom Atomic Energy Authority Research Group C9B3,1:(C5:55)0gC4p1,N68 N70
		HARWELL POST-GRADUATE SERIES
		Thermal neutron diffraction : proceedings of the International Summer School at Harwell, 1-5 July 1968 / edited by B.T.M. Willis. – Oxford : Oxford University Press, 1970 xiv, 229 p. ; 23 cm. – (Harwell post-graduate series) At the head of title page : United Kingdom Atomic Energy Authority Research Group C9B3,1:(C5:55)0gC4p1,N68 N70
		International Summer School on Neutron Diffraction (Harwell) (1968) Proceedings. Heat influencing Diffraction, Neutron. Diffraction, Neutron, Nuclear physics. Neutron, Nuclear physics. Nuclear physics. Physics. Willis (B T M), <i>Ed.</i> Harwell post-graduate series.