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# Classification Practice in the USSR. Current Status and Development Trends

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Under the pertinent USSR National Standard the libraries and information centers in the USSR usc simultaneously four universal classification systems; each having definate functions and spheres of application. The problems of interaction of the classification systems are studied in the present article. Special emphasis is put on the Library-Bibliographical Classification (LBC) and its varients and editions as being used in the overwhelming majority of Soviet libraries. The great possibilities of LBC application from the point of view of automatic searching arc discussed. Author

#### 1. Introduction

The year 1987 marked the 70th anniversary of the Union of Soviet Socialist Republics. The development of the economic, social and cultural spheres of the life of Soviet society now undergoing a new stage of restructuring and acceleration, is characterised by sweeping changes. Theoretical and practical work in the areas crucial to our further development is coming to the fore today. The experience of foreign countries is being thoroughly studied and the correctness of the decisions made earlier is being checked. Such work is characteristic not only of the branches of the national economy; it is yielding results in special spheres of activity as well.

The present article is an attempt to examine the status and trends in the development of classification practice in this country. For obvious reasons we shall skip the historical part, noting, however, that prior to the Great October Socialist Revolution there existed classification systems in Russia which were original and highly interesting in structure and contents but were rarely applied out of the bounds of one library. The names of A.I.Bogdanov, P.G.Demidov, A.N.Olenin, F.F.Reiss, K.K.Foigt, K.M.Bär are noteworthy in the history of classification thought (2, 3).

#### 2. Traditions and the Present State

In the days of pre-Revolutionary Russia, only major libraries could afford to have systematic catalogues. Russian librarians were well familiar with the Dewey Decimal Classification System (DC) and its extended variant prepared at the Institut International de Bibliographie (IIB) by Paul Otlet and Henri LaFontaine.

In 1921, N.K.Krupskaya signed a decree introducing the DC of the IIB as an obligatory system for all libraries in the country. As we know, this was the first time ever that such a government decision was taken anywhere in the world. The Soviet government was interested in having a unified system of classification introduced into all libraries of the country, which would make it possible to train personnel in a centralised way, and to provide libraries with printed catalogue cards with classification numbers on them.

However, the DC of the IIB (later the UDC) never became a classification system applied universally throughout the USSR, nor the exclusive one used there. Even during the first decade of its existence, the ways of development of its two variants - for public and scientific libraries - diverged. For decades (up to the 1960s), the tables for public libraries were steadily revised under due consideration of the realities of the Soviet system and socialist society. While retaining partial - similarity to the DC in form, the tables substantially differed from them in contents. The second variant -for scientific libraries - developed along independent lines, but likewise without regard to the activities of the Federation Internationale de Documentation (FID). In accordance with Resolution N.445 adopted by the USSR Council of Ministers in 1962, the UDC was introduced as an obligatory system into scientific-technical libraries and scientific and technological information agencies. All subsequent work on UDC has been fully coordinated with FID ever since. At present the third Russian-language edition of the UDC is being completed (FID No.572). However, the UDC is used only by scientific-technical, medical and agricultural libraries and information agencies. A broad network of libraries in the humanities, all public libraries, children's and school libraries included (more than 300,000 in all) do not use the UDC. They use different variants of the Library-Bibliographic Classification System (LBC), worked out by Soviet scientists.

The proposals for creating our own, Soviet system of classification were made as early as the 1920s. For several decades work to this end was conducted only in major Soviet libraries. At the concluding stage the scientists and specialists pooled their efforts (5, 6). During 1961-1968, the full LBC tables for scientific libraries were published (25 issues, 30 volumes containing about 34,000 main and over 51,000 compound numbers). On the basis of this variant the following tables were worked out in subsequent years: abridged tables for scientific libraries in 1970-1972, for public libraries in 1978, and for regional libraries (four volumes) in 1980-1983. Approximately once in five years the variants for public, children's and school libraries are published. A system of constantly distributed extensions and corrections keeps the LBC up to date. In 1965 the LBC tables were first introdued into the network of scientific libraries. By now they have become the main classification system for a broad network of libraries in this country (with the exception of some libraries which continue to use UDC).

### 3. Four Systems: Advantage or Disadvantage?

However, classification practice in the USSR is not confined to UDC and LBC only. Under GOST (State Standard of the USSR) 7.44-84, Soviet scientific and technical libraries and information agencies use four universal classification systems, including UDC and LBC.

The two other systems are relatively new and have limited functions and spheres of application.

The GASNTI (State Automatic System of Scientific and Technical Information) Rubrication System performs communication and address functions for scientific and technical information libraries and centers. The Rubrication System's numbers are printed in information publications and are also used whenever information/data are exchanged, for instance in transferring catalogue cards from one organisation to another with a view to creating union catalogues.

The Unified Classification of Literature for bookpublishing in the USSR (EKL) is used in publishing houses for the planning and coordination of book publications, in the book trade system, and in national bibliographic agencies to compile publication statistics and to group material in bibliographic publications. The classification numbers of EKL are printed in books and on the catalogue cards from centralised cataloguing agencies. These classification numbers are used for acquisition in libraries.

GOST 7.44-84 also sets forth classification systems for standards and technical conditions obligatory in the USSR and the International Patent Classification (IPC). The sphere of application of these special systems is limited and we shall not dwell on them in detail.

Four systems - are these enough for the country and its libraries and information agencies? It would be optimal, of course, to have a single, "unified" classification system, something the Soviet librarians have been dreaming of for several decades. However, attempts to create such a system have been of no avail. Present--day practice is based on a sufficiently clear-cut demarcation of the spheres of application and the functions of each of the four systems. The new approach to the solution of traditional problems is based on empirical knowledge. Experience shows that practically no country in the world has succeeded in solving the problem of a "unified" classification system. More and more specialists are coming to share the view that such a system would be economically unjustified, since it would require drafting dozens of special variants for various pragmatic purposes. After all, the dream of a universal language likewise remains just a dream. More and more specialists in different countries (to be more precise, speaking different languages) are coming to recognise English as a communication language, at any rate, in the sphere of science. Only the future will show which of the information-retrieval languages in this country might take the functions of a "unified" language. Today we are trying to train personnel so that they will have no difficulty in understanding and translating from one language into another. Systems of automatic translation from UDC into LBC, from UDC into the GASNTI Rubrication System, from LBC into the GASNTI Rubrication System, etc. are being developed now.

#### 4. LBC: Stability and Consistency of its Variants

Problems of the further development of LBC have come to the fore in recent years. This classification system was developmed in the 1960s. Its structure and main contents reflect the level of development of science in that period. There is a substantial difference in the

approach by specialists to the development of UDC and LBC respectively. First, UDC is an international system. Proposals to improve its contents are submitted by scientists and specialists to FID, which, in analysing them, does not demand that they be accompanied by literature (in the form of a published book or article). That is why the detailedness of many sections of UDC reflects not so much the development of literature, and documentation as the development of this branch of knowledge itself in the sense of increasing detailedness, differentiation of notions, dissection of objects, products, instruments into components, each of which is assigned a class number. LBC was developed on the basis of the analysis and synthesis of information found in specific publications - books or articles (but not patents or standards) - which, moreover, were mostly of national origin. The latter circumstance substantially lowers the level of conciseness of LBC. One should bear in mind, however, that the compilers of LBC did take into account the subject matter of foreign book publications with the exception of articles. In translating LBC into their own language, a number of countries (GDR, Bulgaria, Vietnam) revised and detailed the corresponding national sections (history, literature, etc.) (1). As we know, this practice is also characteristic of foreign libraries using UDC.

New phenomena in social life, rapid developments in science and technology and in the humanities called for a constant improvement of the LBC tables. The system of extending and amending the LBC tables has been taking shape over several decades. Extensions and corrections to most of the branch sections have been published separately, many of them several times. Simultaneously there emerged another form of publication for extensions and corrections which was characterised by a certain regularity (twice a year) and bore no relation to any specific branch. In a number of cases the revision of a section necessitated the complete replacement of the tables. This was the case with the sections on library work, library science and bibliography. A new variant of the tables in the form of extensions and corrections was brought out to replace the previous one in its entirety.

The growning numbers of extensions and corrections has confronted the specialists with a number of complex problems, since the variants of the LBC tables (for regional, public, children's and school libraries) are worked out and published practically simultaneously with each extension and correction. How to ensure the stability of the tables in the face of their constant improvement? How to ensure the identity of the LBC variants and the possibility of transition from one variant to another? These problems are not so pressing in many other countries, for the USSR's broad (300,000 libraries, as mentioned before) and multi-level system of libraries have no parallel anywhere outside the USSR.

## 5. The Problem of the International Character of the LBC Notation

Among the quantitative and qualitative parameters influencing the destinies of LBC in our country, one should also mention the multi-ethnic character of the population of the Soviet Union. LBC was developed

with due regard to its international character. But what the compilers had in mind in developing the system was contents rather than form. The LBC notation uses capital (big) and small letters of the Russian alphabet. The 28 letters proved to be an obstacle to a broad introduction of LBC in a number of constituent Soviet republics using the Latin alphabet (Lithuania, Latvia, and Estonia) or their own alphabets (Georgia and Armenia). Incidentally, in other republics the national alphabet does not always coincide with the Russian one. Different variants were tried out to overcome the aforementioned difficulty. In the end, the proposal to replace the Russian letters in the main row of subdivisions of LBC by figures gained acceptance. Since 1977, the LBC tables have been published in the figure variant. The letter basis has been preserved only in the tables for scientific libraries, all of which are equipped with elementary conversion tables and can actually decide for themselves whether to use the letter or figure variant of LBC classification numbers.

It cannot be claimed that the problems of stability and interrelation of LBC variants have been solved completely. Today, extensions and corrections of the complete LBC necessitate a corresponding revision of the tables for regional, public, children's and school libraries provided, of course, they do not affect their corresponding levels of detailedness. A decision has been taken to regularly publish extensions and corrections to the tables for regional libraries. As to the publication of extensions and corrections to the tables for public, children's and school libraries it has been found more expedient to accumulate material for a revised edition. If a need arises to promptly introduce extensions and corrections in the tables, one can use the relevant information as published in the journal 'Bibliotekar' (The Librarian).

An ideal situation would be one where the publication of a single (most complete and detailed) LBC number would be useful for libraries at all levels using different table variants. The idea of a universal, expansive classification, first proclaimed by Ch.A.Cutter, has not been realised. Nor has it been realised in the Soviet Union, although much has been done in this direction. It is difficult to imagine a situation where all variants of the tables of a classification system are worked out and published simultaneously. But however difficult it may be, we are striving to reduce the number of discrepancies, since this is the only way to raise the effectiveness of a centralised system.

LBC is a synthetic, or semi-faceted classification system. The subdivisions of the main tables are combined with the subdivisions of a great number of auxiliary tables, both general and special. In some cases the classification number consists of ten and more elements (4). Hence it is easy to imagine the difficulties involved in developing LBC variants, since this is not a question of "reducing" classification numbers by cutting part of them. All auxiliary tables are analysed, some of them discarded and others reduced. Besides, the variant for children's and school libraries has a number of subdivisions reflecting the specificity of this type of libraries, the character of its book stocks and the requirements of its readers - children and schoolchildren.

The development of yet another LBC variant, called a

regional variant, is nearing completion. Traditionally, the bibliographies of literature on individual villages, towns and regions (depending on the administrative-territorial situation of a library) are compiled in individual Soviet libraries. Such bibliographies list publications on a systematic basis and are compiled according to specially developed classification systems. The regional LBC tables are, in fact, an attempt to transform a universal classification into a regional geographical variant whereby all literature of a regional nature (determinants of place in UDC or the corresponding territorial divisions in LBC) are collected up according to the regional principle with subsequent systematic subdivisions.

#### 6. The Efficiency of the Card Catalogue

The Lenin State Library of the USSR and a number of other major Soviet libraries have been using LBC for more than twenty years. Since recently, we have increasingly given thought to the efficiency of our work, especially the efficiency of the manual handling of LBC for arranging traditional card-catalogues. Our specialists engaged in the scientific processing of publications are, as a rule, people with a higher education in the field who receive, in fact, a further diploma upon finishing the Higher Library Courses at the Library. Each incoming publication added to the library stocks is thoroughly analysed, the most varied aspects of its contents are determined, and its significance for the readers, its form and way of expounding material is assessed. The decision on classification is taken as a result of making the fullest possible use of all the possibilities of classification tables. We must exercise restriction only in the assignment of classification numbers to each publication, since the volume of card-catalogues is growing very fast.

To what extent can the systematisation process at our library be called efficient? Are the latent characteristics as reflected by specialists in classification numbers during processing put to use later on in the process of search? The answers to these questions, which have been always asked, do not satisfy us at all. The search in the systematic card-catalogue is conducted according to classification numbers from left to right without regard to the structure of the numbers. However logical a classification system may be, it can never anticipate all the shades of the readers' demand and all variants of search. Our experience shows that in the systematic card-catalogue of a major library only the initial part of class numbers is used. Its second part is not reflected in any way in the detailedness of the cards. A working hypothesis was checked: the cards should be arranged in strict conformity with all the elements of the classification numbers. However, this measure, too, facilitates the process of search only to a negligible degree. The readers favour the reverse chronological order of card arrangement within a subdivision of 40 to 60 cards, which is more convenient for item selection. In this arrangement, new literature comes first.

Attempts at indexing readers' inquiries have shown that all too often readers need information which can be easily coded but cannot be supplied according to the catalogue without prolonged work with it. If we imagine the structure of a classification number in the form of elements marked by Arabic figures, then we could cite several examples bearing no relation to any specific

subject. Let us imagine that the classification solution is expressed during the processing of a book by the numbers 1-2-3-3-5-6-7-8 consisting, as we see, of eight elements. Everything would be all right if the search were conducted in strict hierarchical order and in the same order of indications as reflected in the classification numbers, say: 1 (branch), 2 (sub-branch). 3 (territorial subdivision), 4 (period - chronological subdivision), 5 (subject), 6 (problem), etc. Obviously, the type of publication would be reflected at the concluding stage of the classificatory exposition of contents by element 8. But the reader who addresses the catalogue may need quite a different combination of indications, for instance: 1-4-6 (branch - period - problem, regardless of territory), or 1-3-6 (branch - territory - problem, regardless of chronological period). There may be an inquiry to which the systematic catalogue cannot respond at all because it does not contain the main thing - the branch indication (for instance, 4-5, regardless of branch). There are quite a few such inquiries.

#### 7. The Prospects of Automatic Search

There can be only one solution to the problem: only automatic search can ensure the high efficiency of information supply according to any indications and in any combination of them. It is precisely in this way that we at the Lenin State Library of the USSR approach this task today. Computers will provide readers with vast opportunities. Information can be supplied in repsonse to the set combination of indications relating to both contents and form. The latter may include the name of the author, the place and year of publication of the document, the publishing house and many other indications. LBC has been chosen as the main linguistic means.

However, LBC was worked out without consideration for automatic system requirements. To make classification numbers shorter the compilers had to violate the logic of the hierarchical structure of tables. The same notions in different branches have been expressed in different ways. In many cases LBC numbers incorporate so-called "Plans of arrangement", viz. the hidden standard tables without identification marks of their own. Only specialists, well versed in the tables can perceive the

subdivisions of the arrangement in the classification numbers. These and other peculiarities of LBC are serious obstacles to the development of an automatic system. That is why the tables need to be considerably revised so as to meet the requirements of automation. This work is not so much difficult as it is laborious, but this obstacle will be overcome in due course.

It may be recalled that LBC is a system of variants operating in thousands of Soviet libraries. Transformation of any of them in the direction of automatic search cannot be conducted separately, even if other variants continue to be handled manually in the traditional card-catalogue. The task is complicated by the fact that it is impossible to automate the entire network of Soviet libraries more or less simultaneously. We propose to charge machines with the task of automatically compiling LBC and to automate the elaboration of its variants for traditional and other catalogues.

The programme we just mapped out is a long-term proposition. Its implementation has already started and the preliminary results give us grounds for hope of success. Every specialist with relevant experience can imagine the complexity of the tasks multiplied by hundreds of thousands of libraries scattered all over the territory of the Soviet Union. Our efforts today are determined by the clarity of the prospect, aims and end results.

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