International Standards

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IN THE *Library Trends* article on this topic ten years ago, Otto Löhmann wrote:

> Rationalization is the motto in libraries today, as it has been for a long
> time in commerce, technology and industry. An explosive develop-
> ment in the fields of research and information and a very small
> reservoir of human working capacity make absolutely necessary an
> economical utilization of all possibilities in library work and
> documentation.[1]

For "rationalization" read "resource sharing," and the paragraph still stands for the decade 1971-81. As was pointed out in the symposium on Resource Sharing of Libraries in Developing Countries, "Resource sharing is an omnibus expression to cover cooperation, coordination, inter-library loans, cooperative acquisition, cooperative cataloguing."[2] For resource sharing or rationalization (call it what you will), standardi- zation on an international scale becomes more and more necessary, especially when the pressures due to a world recession are all the greater. The role of international institutions equally becomes more and more important, and we have, in the past decade, seen a considerable amount of effort spent on the development of standards.

With the development of standards, we have also seen a more critical approach to the general question of standards. Already in Otto Löhmann's article, the distinction was made as follows: "Standards may be of material, quantifiable nature, but they may also be nonmate-

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rial, intellectual, or, expressed in another way, qualitative (e.g., international definitions)."[3] The *Oxford English Dictionary* gives several definitions of *standard*, two of which are particularly apposite. The first is an "exemplar of measure...—the authorized exemplar of a unit of measure,...preserved in the custody of public officers as a permanent evidence of the legally prescribed magnitude of the unit"; secondly, "an authoritative or recognized exemplar of correctness, perfection, or some definite degree of any quality"; and finally, "a definite level of excellence, attainment, wealth, or the like, or a definite degree of any quality, viewed as a prescribed object of endeavour or as the measure of what is adequate for some purpose." Similarly, the adjective is defined as "serving as a standard of measurement, weight or value...serving or fitted to serve as a standard of comparison or judgement."[4]

Warwick S. Cathro, in a recent article has distinguished between customary and *ex-cathedra* standards.[5] The former are those which are in common use already, such as the Roman alphabet; the latter, those which have received formal or quasi-legal status following publication by a national or international body, such as International Federation of Library Associations (IFLA), International Standards Organization (ISO), or Association Française de Normalisation (AFNOR).

In a recent paper on "Standards, Objectives and Guidelines for School Libraries," Arthur Jones distinguishes between *standards* (for example, the standard for A4 paper, 210 x 297mm), and *guidelines*: "If I follow your guidelines precisely they will at least enable me to repeat an experience and a level of performance which you have achieved in the past."[6] In point of fact, many standards in the field of library and information science have been a codification of the best practice known, and they have been formulated over several decades on this basis. However, the influence of science generally, and management science in particular, appears to have influenced attitudes toward standards, so that a distinction is being made between those standards which are precise, e.g., measurements for catalog cards or paper sizes, and those which concern standards of service ("guidelines") and are expressions of the best practice known at the time (and therefore subject to revision as practice improves).

Arthur Jones adds "objectives" to "standards" and "guidelines," and suggests that the latter are based on the experience of the past, while objectives look to the future. " 'Management by objectives'...asks, where are we going? and only then, how are we to get there? What are our resources? What are our priorities?"[7] The application of standards, then, depends on the reaction to them by individual institutions, or in

the case of international standards, by national agencies of one kind or another.

It appears to be the case that we have expected too much of "standards," for there has been a tendency to retain the word *standards* in titles—*Standards for Public Libraries*—even though the points discussed are in the nature of "guidelines." Arthur Jones mentions "objectives," and, as he points out, these look to the future rather than to the past. So do other planning programs, such as Management by Objectives (MbO) or Planning-Programming-Budgeting Systems (PPBS), while performance appraisal is the assessment of such programs in the light of the experience of what has actually happened, and with a view to further programs of planning. Nick Moore, in an interesting paper to the Australasian Library Conference in 1981, suggests that, in practice, standards "are being overtaken and replaced by performance measurement techniques." In other words, modern management practices are making standards irrelevant. His conclusion is that there is still a place for standards, but that "the traditional reliance on standards promulgated by others has been diminished by a growing reliance on systems which encourage the exercise of local autonomy in the formulation of objectives and the measurement of performance."[8] This conclusion, however, may be correct for industrialized countries with well-developed library systems, but the fact remains that standards of some kind are required for international practice.

The growth of standard formulation has also led to further analysis of their status. The international body for the promulgation of standards is the International Standards Organization (ISO) which depends on the various national standards institutions for significant input. It is these bodies that produce standards which have official status. But as standards become more pervasive, nonofficial, or certainly nongovernmental, bodies, such as IFLA or FID, increasingly promulgate standards which are accepted in practice as international standards, though these may not be regarded as official standards by the issuing bodies. Indeed, Unesco's *Unisist Guide to Standards for Information Handling*, part 2, is titled "Guide to Normative Materials," *norm* indicating French influence as equivalent to *standard* (as in *Association Française de Normalisation*) and also East European influence (as in "fulfilling one's norm ").

Standards, norms, guidelines, then, appear in the information field to be of three kinds:

1. technical standards of measurement, e.g., catalog cards, technical equipment;

2. technical standards for the layout of documents, e.g., ISBDs; and
3. guidelines for attainment of performance, e.g., standards for public libraries.

Those of the first variety, of course, affect activities broader than information, though they are fundamental to basic practice. The most important developments in the last decade, however, have been in the field of cataloging, and the amount of literature on the topic reflects this.

Standardization in cataloging goes back to the Anglo-American rules of 1908, for this was the first essay in international cooperation in this field.[9] With the publication of the American revision of 1949,[10] attention was given to the principles underlying cataloging practice, with the final result of the Conference on Cataloguing Principles held in Paris under the auspices of Unesco, under the inspiration of IFLA in 1961. This gave rise to further consideration of cataloging principles, including the *Statement of Principles*,[11] and the development of the remarkable Universal Bibliographic Control program formulated by Dorothy Anderson for the NATIS Conference of 1974.[12] This has proved to be the springboard for a program of fundamental international importance, and a series of publications has ensued which has transformed cataloging practice worldwide.[13] The International Standard Bibliographic Descriptions, while not regarded as standard by the IFLA International Office for UBC, are regarded as such for descriptive cataloging by others, including both ISO and Unesco (which in itself gives them a semiofficial status). Similarly, the manuals and guides published by the same office have served as exemplars for cataloging practice internationally. The UBC Office has also published a number of items relating to machine-readable cataloging. On the other hand, Warwick S. Cathro, while recognizing the preeminence of IFLA in this field and acknowledging the increased activity of ISO with regard to international standards in documentation, identifies limits in their influence:

> An inevitable result of rapid change has been the failure of national agencies to comply with the most modern or the most international standards. As examples of non-compliance, the UNIMARC format is not being used for international exchange: the ISO 3166 country codes are not used in our MARC records; there is no plan to implement the new ISO extended roman character set (ISO/DIS 5426); and the ISO transliterations for Cyrillic and other scripts are being ignored. In addition, compliance with ISBD, *AACR2* and even *AACR1* has been late, patchy or heavily qualified.[14]

Problems of standardization in serials, including the relationships of ISBD(S) and the title main entry, and of ISDS and ISBD(S) and AACR are dealt with in a series of articles,[15] while Stevens deals with the special field of Asian serial literature, and points out how wide the differences are in the state of bibliographic control, and how Asian librarians are seeking to make their views known in the formulation of international standards.[16]

An important historical perspective on standardization in cataloging is afforded by Doralyn Hickey,[17] who shows the dominance of the United States up to World War II. Thereafter, participation was broader, resulting in the Paris conference in 1961, and American influence has diminished, the initiative being taken by IFLA, as already indicated.

In an article on "Normative Activities in the UNISIST Programme," Löhner[18] drew attention to the standardization programs which are directed toward interconnection among information systems. In 1973, for example, Unesco published *Guidelines for Monolingual Thesauri* to foster the development of compatible thesauri for the transfer of information among information agencies in different countries.[19] As a help toward standards in indexing, Unesco published a draft document on indexing principles.[20] The attempt made here is to develop principles independent of any particular information system. Sutter wrote a paper which includes descriptions both of the ISONET thesaurus and the ISONET manual.[21] ISONET, as the ISO's network, can now come into operation with these two essential tools.

Helmut Felber[22] describes current work in terminology centers on the standardization of terminology and the coordination of terminological activities, and draws attention to the importance of the work of ISO/TC 37. He also refers to the work of Infoterm. Also at the same congress, J. Laurent[23] reported on the use of the terminology standardized at AFNOR, while Derek Austin[24] reported on progress toward standard guidelines for the construction of multilingual thesauri.

Subject problems were also considered at a seminar sponsored by the British Council, the British Library and the Library Association,[25] as were various means for expressing subject information on machine-readable records. Desiderata for a future system should include the admission of new terms in the vocabulary, meaningful relationships among terms, and the use of neutral codes to represent specific concepts.

Margaret Park[26] reviewed international standardization from an American point of view and gave a state-of-the-art review of standardization related to libraries, abstracting and indexing standards, and data element standardization, thus continuing Schmierer's review.[27]

The importance of an international approach to technological knowledge was emphasized in the proceedings of a seminar on industrialization in developing countries in 1978[28] which included problems of international standardization in scientific and technological information work. E.J. French drew attention to the importance of testing and evaluating standards, and to methods for observing standards from the initial proposal to publication and subsequent implementation.[29] The state of international standardization in the field of information and library activities was seen from an East European point of view by Vajda and Ottavay[30] in a report to the ISO/TC 46 meeting held in Brussels in May 1976 about current work and work outlined for the future.

The impetus of further recognition for international standards has come from publications by both ISO and Unesco. In 1977 the ISO Information Centre, with the sponsorship of Unesco within its UNISIST program, published the ISO Standards Handbook 1 *Information Transfer*. The introduction states that "Standardization at the international level...is recognized as an absolute necessity for practical and financial reasons."[31] The work includes standards for bibliographic references and descriptions, abstracts and indexing; presentation of documents; conversion of written languages; document copying and microforms; bibliographic control (ISBN and ISSN); libraries and information systems; mechanization and automation in documentation; classification and controlled languages for information storage and retrieval; and terminology (principles). There are also a number of draft standards, and a listing of ISO standards in numerical order. Reference to ISBD(M) is made in draft DIS 5962. The same year, the Information Centre also published *International Standards for Documentation and Terminology*.[32] This includes the same headings as the previous volume, and gives in part I the titles of standards for which the full text is found in the *Handbook*. In part II, however, are given "International standards and normative documents developed by other international organizations." These include the *UNISIST Guidelines*,[33] ISBD(M) and ISBD(S), and various INIS standards (for descriptive cataloging, abstracts, terminology and codes for countries, authority lists, etc., and FID Universal Decimal Classification).

The UNISIST program of Unesco has given a considerable impetus to the publication of guidelines in the realm of archive, documentation and libraries, now grouped in the General Information Program (itself an amalgam of the UNISIST and NATIS programs) under the comprehensive umbrella of "information." In 1980, again under the

auspices of the UNISIST program, Unesco published *UNISIST Guide to Standards for Information Handling*. The work was coordinated by the Section for the Promotion of Methods, Norms and Standards of the Division of the General Information Program of Unesco (under the direction of Wolfgang Löhner). In the introduction, it is recognized that there "is a need for information exchange between systems," and that from existing experience in this field, standards are being developed and "being applied in the development of Unesco's long-term standardization programme." Equally, it is recognized that the effectual application of this program requires "research to determine the needs; preparation of standards, methods and guidelines; adequate packaging and distribution; and promotion of application and advice."[34] Dissemination of the information about standards is regarded as important since, though international standards may be promulgated, they may not always arrive at the site required for implementation. However, it is also understood that "the adoption of new standards often means costly restructuring...financial considerations will dictate the solution of international standardization"[35] and standards will need to be updated.

The *Guide* has chapters on the preparation of documents and subject analysis, production of documents, reproduction of documents, representation of information, editing, bibliographic records, interchange of machine-readable bibliographic data, management of document collections, and numerical data, together with a bibliography. The text includes useful guidance on the sources of information on standards and guidelines in the various subjects, and guides readers to the bodies responsible for the formulation of the standards. It is an indispensable tool for anyone concerned with international normalization in the information field. In addition, it includes references to numerous standard manuals and national standards (e.g., the AMA *Style Book and Editorial Manual*, 1971; the COSATI *Guidelines for Descriptive Cataloguing of Reports*, 1978; and NEN 690—1969 *Mappen en brievenhouders*).

The chapter on the "Interchange of Machine-Readable Bibliographic Data" brings us to a new aspect of the topic: "The transfer of bibliographic data in machine-readable form is now an essential part of the information transfer system." The chapter is concerned with a number of international formats either "established by an international organization and/or for an international information system" or "intended to be used on an international scale."[36] The text properly points out that these formats have historically been developed around two foci: libraries, and abstracting and indexing services. The contribu-

tion is noted of both the UNISIST International Centre for Biblio-
graphic Descriptions (UNIBID) and IFLA, and attention is drawn to
documentation on UK, MARC, LC MARC, and INTERMARC. How-
ever, the main thrust of the chapter concerns the development of work
on data exchange formats, internal formats, and "an international
exchange format which would be totally implemented—independent
and hence truly universal," as recommended by the International Sym-
posium on Bibliographic Exchange Formats.[37]

The use of international bibliographic standards with regard to
specialist services is treated in several articles.[38] Activity in the field of
pagination, titles, alphabetization, transliteration, and statistics is
reported by Johanna Eggert.[39] This was the report of a meeting in Basel
to coordinate the efforts of German-speaking countries.

A Unesco symposium for editors of documentation, library and
archives journals was held in Budapest in 1972, during which concern
was expressed about the application of ISO standards in this specialized
field. An enquiry was conducted which sought information on confor-
mity with the standards. Reports came from Singapore and Budapest.[40]
Sviridov described programs of the World Intellectual Property Organi-
zation for the international standardization of patent documents and
the development of new information retrieval methods. He drew atten-
tion to the Paris Union Committee for Cooperation in Information
Retrieval Among Patents Offices (ICIREPAT), the International Patent
Classification (IPC), and the International Patent Documentation Cen-
tre (INPADOC).[41]

Jerome Miller considered the problems of bibliographic citation
for "previously published" microform copies. There is a lack of a system
for citation for copies of previously published material, and he pro-
posed the citation to the original work, accompanied by the microform
citation in brackets. This citation consists of the microform type, micro-
form publisher, microform series, and identifying number(s).[42]

Goulard looked at the state of microfiche standardization,[43] and
Archard considered the broader picture in his paper, "A Question of
Standards,"[44] presented to an Information Management Conference. He
described the current situation for national and international standards,
some of which are given in an appendix.

Baker discussed international standards for microforms.[45] He
pointed out that these are dealt with by AFNOR, and ISO has formed a
new committee, TC 171. This committee is working actively and has
four working groups: WG1 is concerned with the physical characteris-
tics of microforms and containers (United States), WG3 handles appli-

cations (Canada), WG4 is concerned with quality aspects (France), and WG5 with equipment (United States). Work continues, it is reported, on standards for microfilm readers and methods of testing, and on the legal acceptance of microforms.

The examination of magnetic tapes and their relevance to international information transfer was undertaken by Wilmot.[46] She looked at the physical characteristics of magnetic tapes, the presentation of data, and the record structure. She concluded that the most important area for information processing remains the overall bibliographic content. Martin Bloch and others[47] reported on the communicative format of data recording on magnetic tape and described the work of the International System of Scientific and Technical Information in Moscow. They are critical of ISO 2709—1973 *Format for bibliographic information interchange on magnetic tape*. Machine formats were the subject of a paper by Richard Coward[48] at the 1974 Western European Seminar on the Interchange of Bibliographic Information in Machine Readable Form. The standards program was discussed, together with the current situation and the lessons to be learned from the past.

Standards for university library buildings have been drawn up by a group appointed by the Nordrhein-Westfalen Minister for Science and Research.[49] Area requirements are stated for storage and display, readers' accommodation, etc. Planning factors and standards relating to university library buildings in developing countries have been considered by Peter Hoare.[50]

IFLA Standards for Public Libraries,[51] published in 1973, are the result of prolonged negotiation and study, arising out of the draft standards of 1956-58. In addition, the "Unesco Public Library Manifesto" appeared in a revised text, and the standards arise from the aims of the manifesto. The standards include units of administration and service, collections, special groups, staff, buildings, and the cost of the public library service. Provided one understands that standards are the formulation of the best current practice, and not a universal mathematical formulation, there need be no confusion between "standards" and "guidelines," which also appears in the text.

In Norway, standards for public library book stocks were formulated after consideration of norms in other countries and of local conditions. The standards would be difficult for smaller municipalities to meet, but may lead to improved selection.[52] Recommended minimum standards for secondary school libraries approved by the Singapore Ministry of Education are reported in *Singapore Libraries*.[53]

Lundin[54] reported on school library standards in 1973, based on the Commonwealth Secondary School Libraries Research Project Bulletin

No. 2, *On Establishing Standards.* He discussed two varieties of standard—quantitative and qualitative—together with evaluative criteria.

Standards for school libraries have been considered by the Danish School Library Association.[55] The report includes recommendations for "minimum standards" for book stock, audiovisual material, hardware, staffing, and arrangement of stock and premises. It also includes recommendations for joint collections with municipal libraries and regional centers, as well as a state center for technical materials.

Standards for technical institute libraries, hitherto neglected, were approved by the New Zealand Library Association in 1972.[56] New Zealand has also considered standards for libraries in health authorities: these include libraries both for patients and for staff,[57] while Mary Ronnie points out that the IFLA concept of patients' libraries as a public library responsibility is not realistic in New Zealand, where local government and health authorities have different areas of jurisdiction.[58]

Attention has also been paid to standards for library education. A revised text of the standards was approved by the IFLA General Council in 1976. This includes not only standards, but their genesis, philosophy and possibility for implementation. Schools should be at university level, should have stated goals, and the requisite financial support with the appropriate financial resources and accommodation. The curriculum should emphasize principles and concepts, rather than routines, while continuing education should be part of the program. There should be well-defined admission and qualification standards. Long-range planning is also essential.[59]

Edward Dudley examines the record of the IFLA Section on Library Schools critically and wonders, quoting Havard-Williams, whether worldwide standards can be anything more than banal. He also proposes topics for further discussion.[60]

It is evident in the last decade that the importance of standards has been enhanced, partly from a need for economy and efficiency, but also because of the development of information services, the increase in their importance in modern technological society, and hence their increased contact with technology itself—in particular, with computer processing. The coming decade will witness a continuation of this trend, particularly as developing countries make their presence more evident in the development of information activities.

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