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ABSTRACT

The introduction to this paper discusses the definition of the scope of library and information science and establishes what is included under the term "periodical." The main types of periodicals are considered to be: professional and academic, international, periodicals outside the field and secondary periodicals. The second section considers periodical publishing in librarianship, documentation and archives. Those classes of periodicals which were excluded from discussion are noted and the methods for determining the "core" of periodicals are described. Methods for improving the editing and publishing of periodicals is the subject of the third section and the coverage of professional literature in secondary publications is the topic of section four. This fourth section gives a comparison of: "Library and Information Science Abstracts," "Referativnyj Zhurnal," and "Information Science Abstracts." The final section of this paper consider the promotion of international co-operation between editors of journals. The appendices list periodicals by country, by language and by rough categorization; as well as periodicals outside the field of librarianship and documentation. Subject presentation used by the large abstracting services is also appended. (NH)

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SYMPOSIUM OF EDITORS OF DOCUMENTATION, LIBRARY AND ARCHIVES JOURNALS

Paris, Unesco House, 16-18 May 1972

BACKGROUND PAPER

by Herbert Coblans
London

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1. Introduction

Publication is traditionally the way in which individuals involved in a discipline, a craft or service, communicate in some permanent form. In this way the literature of a subject is recorded and maintained. Both technically (printing, offset, xerographic copying) and legally (there is a lack of agreement as to what constitutes publication) the position is somewhat ill-defined, inevitably wasteful and very hard to control. Thus on the one hand bibliographical control is inefficient, due to the scatter of relevant articles, with serious implications for information retrieval. On the other hand during the past quarter of a century the ever present exponential growth of the literature has somewhat accelerated, thus making co-operation and co-ordination all the more essential.

1.1 Therefore it is necessary to:

(a) define the scope of our subject area;

(b) establish what is to be included under the loose term "periodical".

As to the former it is a measure of the craft nature and technical character of the métier, in contrast to a science or an academic discipline, that there is still so much misunderstanding and disagreement about the definition of librarianship, documentation, information science, informatics etc. As a subject it is still in the pre-scientific stage rather like alchemy was in the Renaissance. In practice they overlap, have much in common and are part of a broad spectrum of activities. A librarian, a documentalist, an information scientist, an archivist, although usually identifiable professionally, in practice can be concerned with parts of one or more of the above sub-systems. However, they have enough in common to justify combined treatment as a complex which involves the collection, organization and conservation of documents as well as making their content known by subject analysis and dissemination. (Document here is understood in its widest possible connotation.)

1.2 Consequently and inevitably all periodicals which cover the field, mainly or only in part, will have to be included. In fact the already mentioned scatter which can result in an important paper on the electronics of instrumentation appearing in a medical periodical, is even more marked a characteristic of the information field. After all documentation has become so basic and central part

of every science or technology that more and more scientific periodicals carry papers of broad relevance to our activities. However it will be necessary to limit the range of periodicals to be included in the interests of efficient action to improve publication.

1.3 The following is a rough attempt to break down the field into the main types of periodicals and assess their relevance for this meeting.

1.3.1 Professional and academic periodicals. These are essentially national organs or concerned to serve a region within a country. They can be somewhat arbitrarily sub-divided into general and special and by both intrinsic and extrinsic characteristics, but with some cross-classification.

1.3.1.1 General periodicals:

(a) broad areas;

(b) professional or official organs;

(c) news sheets or information bulletins;

(d) reportage on technical and administrative services;

(e) research and development;

(f) educational.

In practice of course some national periodicals, especially in the case of smaller countries, will combine all or some of these categories.

1.3.1.2 Specialized periodicals. These consciously aim at sectional interests but are fairly universal in coverage since techniques and hardware are becoming less and less nationally bound. Typical examples are:

(a) "Methodik der Information in der Medizin"

(b) "Program"

(c) "Bollettino dell'Istituto di Patologia del Libro"

1.3.2 Then there is a class of a rather different kind - international periodicals. International here does not mean universal, since in that sense some of the periodicals in 1.3.1 are very broad in their coverage. Rather international refers to the nature, outlook and status of the issuing or responsible body; in effect an intergovernmental organization or an NGO like an international professional federation as for example the FID. This is not just a formal and convenient breakdown, it represents a basically different approach, since national practice and one language cannot be accepted as naturally predominant. An obvious example of such an international periodical is the "Unesco bulletin for libraries".

1.3.3 Finally, there are two groups which are both important and full of difficulties.

1.3.3.1 Periodicals outside our field which occasionally carry articles of importance and direct relevance. This category is difficult to control from the point of view of current awareness but cannot be neglected. Increasingly it is a source of valuable material. Typical examples are:

(a) "Physics today"

(b) "Cybernetica"

(c) "Hommes et technique"

(d) "IBM Nachrichten"

1.3.3.2 Secondary periodicals. This group includes three main types aiming at current awareness and retrospective retrieval: indexing services (e.g. "Library literature"), abstracting services (e.g. "Referativnyj Zhurnal 59. Informatika") and annual reports of progress (e.g. "Annual review of information science and technology").

2. Periodical publishing in librarianship, documentation and archives (Agenda item 1)

2.1 An objective analysis, as far as is possible in this rather inchoate field, must be based in the first place on some quantitative estimate of the periodicals in terms of country, subject, language, form, purpose, etc. Only then can the problems of the co-operation between editors, of the exchange of material and of the improvement of the documentation of our craft or "science" (so far as it is a science) begin to be faced with some measure of realism.

2.2 Unfortunately the time-honoured analogy of the shoemaker and his shoeless children applies as strongly as ever to our field. Librarians and documentalists know very little about the information needs of the profession and how they are met by periodicals and other forms of communication. The quality and the effectiveness of its literature have not been studied objectively in any detail. Thus periodicals tend to be born, to wed, to split or to die under the influence of accidental or commercial factors which have often little to do with the aims and objects of our profession. For example it is a striking fact, pointed out at a recent conference (1) in the United States of America, that about 64% of library periodicals now being published were started after 1946. Probably the figure is even higher for information science. It is clearly desirable that we should study the anatomy and the physiology of our publication structure as seriously as for example the American Institute of Physics has done with major periodicals (2) like "Physical review" and "Physical review letters".

2.3 Quantitative estimate of some parameters in the publication of periodicals. While all such estimates are biased and subjective, the result is made more reproducible by stating the criteria for exclusion and inclusion as precisely as possible. The list (3) compiled and published in 1968 by the FID was used as a basis, being brought up to date to include 1970. It was amplified where necessary by checking against the published lists of periodicals covered by four services (LISA, Ref. Zh., ISA and LL) and the holdings of the two largest British collections in these special fields (the Library Association and Aslib). The following classes of periodicals were excluded:

(a) provincial, county, individual libraries or systems, i.e. only those that are national (or cover large regions) in outlook were included;

(b) bibliographies, historical bibliography, bibliophilia, publishers' announcements (abstracts and indexes were counted separately);

(c) monograph series and irregular publications;

(d) subject documentation except periodicals where contributions to the methodology of our disciplines regularly appear (e.g. "Journal of chemical documentation").

These exclusions were limited by cases where the quality at the general level was high, or in the case of certain small countries it was the only periodical published.

2.3.1 Total number (librarianship, documentation, archives) 240.

2.3.2 By country (or international). See Appendix 1.

2.3.3 By language (or polyglot). See Appendix 2.

2.3.4 By categories. See Appendix 3.

2.3.5 There is yet another count which is the least reliable of all of them, but is none the less of great practical importance to the secondary services, namely the class discussed in 1.3.3.1 - not our subject field but periodicals which occasionally carry articles which are in-scope. One method of counting is to pick out from the lists of periodicals covered by the secondary services all those which are judged to provide a reasonable yield (obviously a subjective approach) but are not included in 2.3.1. For the results of an analysis of four such lists see Appendix 4.

2.4 "Core" of periodicals. In recent years the concept of a "core" of periodicals, essential for a subject, has grown up. Such a core would provide more than 90% of the articles that are worth abstracting. Using a citation count as a measure of "goodness" Martyn and Gilchrist (4) found that less than 10% of the "best" British periodicals in science and technology would give 95% coverage. A more precise figure was given by the Chemical Abstracts Service of the American Chemical Society. Although they scan some 12,000 periodicals, 90% of their published abstracts are obtained from only 2,000 periodicals. However, to define such a core for our field is likely to be much more difficult because of the wide range of marginal disciplines and technologies involved. Methods for such study are discussed in section 4.2, and would certainly be a real help in an understanding of the structure of our periodical literature.

3. Improvement of editing and publishing (Agenda item 2)

In its "Guide for the preparation of scientific papers for publication" (5) Unesco hopes "that observance of the rules laid down will make it possible to speed the classification of scientific documentation, enhance the value of the information contained therein and reduce the enormous expenditure incurred by the scientific and technical documentation centres of all countries". This argument applies just as cogently for non-scientific publication. It is also a fact of publishing life that authors and editors tend to be individualistic, even anarchic. It needs some external restriction, like conditions laid down by financial sponsors, or the inexorable demands of standardized input for computer handling, before human nature changes.

3.1 Therefore methods for improvement should be as realistic as possible and interference be reduced to an essential minimum. The various aspects will be considered under the following headings: content, form and presentation, production and distribution, general.

3.1.1 Content. In the first place each editor or editorial board must have a clearly stated directive as to the scope and purpose of each periodical. Whether it is to be the bulletin or news-sheet of a small national body (which would therefore be all-inclusive), a periodical devoted to research and basic philosophy in librarianship or documentation, or a periodical attempting universal coverage in a number of languages in a highly specialized field (e.g. "Restaurator" the preservation of library and archival material), its policy must be announced explicitly and adhered to as closely as possible. In this way editors can insist on higher standards of quality and relevance, and can help to reduce the great dispersion, the scatter of articles which so gravely complicates retrieval. Arising from this editors have a certain obligation towards authors to help them to direct quality articles to the most suitable publication outlet. In fact each editor is part of a world-wide network of high priests with a sacred responsibility to maintain and deepen the bibliographical record. This also implies that there should be more direct and frequent communication between the editors of the basic periodicals for each speciality, as well as the more general periodicals.

3.1.1.1 Basically the most effective way of improving quality is by extending the system of referees common in certain countries. The disadvantage is that it can further increase the delay of publication which is already too long in the view of authors. Whereas these delays can have serious consequences in the applied sciences, it is doubtful whether it has such significance for our field. If it is true that "so much library literature is not worth the cost of indexing or abstracting" (6), higher standards of selection are necessary. On the other hand the delay between the receipt of a manuscript and its appearance in print is much more a function of the efficiency of the editorial office. Too many editors are like "Sunday painters" - they lack the minimum of secretarial help that is needed. Referees can also help to stem the inflation in the literature by watching out for the multiple publication of the same idea in varient forms (proceedings of a conference, news bulletin, a Festschrift, etc.). Clearly there are no dramatic recipes for improvement, but in the long run it can only come by greatly strengthening the powers and resources of editors and referees.

3.1.2 Form and presentation. Over the years there has been considerable agreement as expressed in ISO recommendations, and the follow-up with national standards, on good practice in the formal elements of bibliographical units in publication. Additionally Unesco has campaigned, especially within the scientific community by developing and disseminating its "Guide for the preparation of scientific papers for publication" (5). Unfortunately authors tend to remain laws unto themselves and editors, either through conviction, inertia or ignorance have allowed bad local practice to continue unchecked. Exhortation is ineffective and perhaps the best hope is to concentrate on a few essential elements. This is where groups of editors, publishers, the large abstracting and indexing services and more recently UNISIST (7) can exert more pressure than ISO which has no executive power.

3.1.2.1 Identification (8a)

(a) Abbreviations should be used sparingly and only in internationally accepted forms. National practice in one language cannot be translated by analogy into another language; e.g. where in German u.a. is the abbreviation for "unter anderen", it does not follow that "among others" can be abbreviated in English as a.o.

(b) Transliteration using an accepted international system (8b) is to be preferred to transphonation if the periodical is to have international circulation. Local systems for transphonation can lead to serious problems of identification and loss in information retrieval.

3.1.2.1.1 The names of authors should be as complete and standardized as possible. Their affiliations similarly should be consistent within the periodical and, if possible conform with an authority list (see for example the INIS (9) authority list)..

3.1.2.1.2 Titles of articles, while concise should be informative and devoid of unnecessary abbreviations.

3.1.2.1.3 Citations or references (8c and 8d). While scientific periodicals tend to use shortened forms of references to save on printing costs, this practice is to be deprecated for bibliographical work. Authors' names, the title of the article in the original language (with a translation appended where desirable), the title of the periodical in standard form, the volume number, the inclusive pagination and the date should all be given. This has become much more essential since services based on citation indexing have become available. References should only be made to published material (or known to be accepted for publication) and not to "classified" documents or private communications. Notes by preference should be separated from references.

3.1.2.2 The periodical as a whole.

3.1.2.2.1 The title should be concise, clear and as far as possible unique. Its clarity can usually be ensured by layout or by typographical device, e.g. if it has the official title "ANRT Information et documentation" the layout should not allow the interpretation Association Nationale de la Recherche Technique as sponsor and "Information et documentation" as title. The abbreviation of the title should be based on ISO principles (8e and 8f) and at all events should be indicated in the bibliographical strip (8g), located at the foot of the first page of the cover of the periodical. It is the prime responsibility of the editor of a periodical to guard against the possible variant forms of the title in citation. How catastrophic this can become, in an admittedly extreme case, can be illustrated by the variants which were turned up in published citations in the course of the Martyn and Gilchrist study (4) for one important periodical: "Zhurnal Eksperimentalnoj i Teoreticheskoj Fisiki", for which there is a cover-to-cover translation in English called, "Soviet Physics - JETP". They found 23 different versions for this title.

3.1.2.2.2 Numbering and dating. In general the fascicule of a periodical should be identified by a volume number (year should not be used as a substitute) and an issue number, always in Arabic numerals. Any substantial change of title, which should be avoided wherever possible, should also imply a change in volume number starting from the beginning once again.

3.1.2.2.3 International Standard Serial Number. One of the first actions of UNISIST was to establish an International Serials Data System at the Bibliothèque Nationale in Paris. There arrangements will be made for the assignment to each periodical of a unique identifying number (ISSN) by which it can be quoted in all bibliographical, commercial and other contexts. This number will include a check digit so that any number cited can be checked for transmission errors by computer. The International Centre should be in a position to provide computer-produced lists

of periodicals with standard titles and abbreviations as well as the corresponding ISSN's.

3.1.3 Aids to content specification.

3.1.3.1 Table of contents (8h). Developments in recent years, both in reprography and computer-produced current awareness services, have enhanced the importance of such a table in each issue of a periodical, especially the inclusion of a minimum of data to identify each bibliographical unit.

3.1.3.2 Abstracts (5). No article should be published without an informative abstract. In practice editors must insist that this is an integral part of the author's preparation of his manuscript. The editor must ensure, by modification where necessary, that its style and content adequately reflect the article.

3.1.3.3 A certain number of periodicals (mainly in the science/technology field) assign classification codes or index terms, descriptive of the subject content, to each article at source. While this can be a great help, its ultimate value will depend on the emergence of agreement on some widely accepted indexing or switching language.

3.1.3.4 Volume indexes (8i). The provision of an index to each volume (and, where possible, cumulative indexes covering a number of years) is an implied responsibility of the publisher. Certainly no periodical in our field should shirk this obligation, if it is not to be dismissed as ephemeral and even trivial. Whereas the author part (both personal and corporate) of the index can be prepared on the basis of rules which have some international currency, the subject part cannot draw on any internationally agreed authority lists - the range of variation is far too wide. Even in our own field we try to communicate in a Babel of indexing tongues. In the present state of anarchy we can only insist on internal consistency which permits the user to operate within one indexing framework for each periodical. Considering how difficult it has been to achieve an agreed thesaurus within one language, even in one country, the immediate prospects for international agreement do not seem to be so good. However, international co-ordination of efforts may hold out some hope*.

3.2 Production and distribution. There is no doubt that the problems of production and distribution of our periodicals are becoming more serious in spite of technical improvements in printing and in the speed of communication. Costs are going up steeply almost everywhere and printing delays are hardly less serious. And yet small offset printing could be faster and cheaper, and computer-aided type-setting is certainly becoming competitive with letterpress. However, the full benefits of computerized printing will only show themselves when the costs of producing the machine-readable input can be shared between the printing of the periodical and the production of secondary publications, abstracts and indexes. Since the same basic text, once stored in the computer, can be used

* At a recent meeting of the Central Classification Committee of the FID an internationally accepted Standard Reference Code (SRC) was discussed. This Code would provide "a sort of simplified synoptic chart with the main classes of our contemporary knowledge arranged in more helpful hierarchic levels and give more balanced and less complex notation than the existing UDC". Linkages could then be provided any any level with special subject classifications and thesauri for any desired depth of classification.

for a number of products there are many potential savings. But this requires a rationalization and a co-ordination which might become commonplace towards the end of the century.

3.2.1 In the meantime we must meet rising costs by organizational adjustments based on more realistic approaches to aims and purposes. Are too many new periodicals being started in the field? We cannot do much about commercial publications except deprecate unnecessary births and withhold support as authors, editors and subscribers, if they are of low quality. But we can also use our influence as members of professional associations to insist that the content and the purpose of their periodicals should be defined and justified in practice.

3.2.2 The core of good periodicals could probably be reduced in size or at least maintained at present levels, if they were not puffed up with news items and detailed reports (with all the accompanying statistical information) of surveys and descriptions of specific libraries and services. News items, announcements, reports of progress of institutions are desirable and useful, but would not "home-produced" bulletins prepared on small offset duplicators be a cheaper and quicker method of printing them? Furthermore should it be necessary to repeat the same piece of news, however significant, in every local periodical? Here there is a need for perhaps three clearing houses - for documentation, libraries and archives respectively - which could ensure that through their news sheets most of the relevant international news is published once-only. This would mean that the national groups could confine themselves to local news. But they would have to undertake to rapidly transmit news of international importance to the relevant clearing house. Unesco should perhaps undertake a study of the need for and the implementation of such networks. Admittedly this sort of sharing of the load across national frontiers is not easy, but ICSU/AB has shown what can be done in organizing better communication and exchange between primary periodicals and abstracting services in the natural sciences.

3.2.3 With regard to extended articles or reports of surveys and special studies there is a strong case for publishing them in official numbered reports series, produced by the institution concerned, using office-duplication methods. This would greatly reduce printing costs for periodicals and transfer the outlay, at a much lower level of cost, to the institution that has sponsored the study. This would conform with the good general principle, that the full publication of the results of a survey or a piece of research should be considered as part of the whole cost of the project. When a project has produced a number of related reports, a summary of the methodology and the results, if they warrant publication, could then be submitted to a periodical, with indications as to where the full details are available in the form of reports.

3.2.4 Part of the problem of financial solvency is tied up with the difficulties of distribution, especially outside national boundaries. This is very well illustrated in the disturbing way excellent Unesco publications are hardly known and certainly not bought by those who would appreciate them in some countries, even in Europe. The printing run of most of the key periodicals in librarianship and documentation is probably below what is economically sound. Figures are hard to come by and it might well be worth an international investigation to study the economic structure of this periodical literature. Co-operative methods of marketing the non-commercial periodicals would be an attractive solution, but in practice there may be many snags. None the less the NGO's should be encouraged to investigate the possibilities.

3.3 General. The profession has a strong obligation to maintain standards in its literature and that implies some restraint by authors in hasty publication. But it is up to editors to be eternally vigilant in the prevention of multi-publication of essentially the same paper. The Unesco Guide (5) makes this suggestion for an ethical code. "Manuscripts should not be submitted for publication if they have already been published or accepted for publication elsewhere. They should not be submitted for simultaneous consideration by more than one journal." Of course the problem is more complex than this - substantially the same content can be dressed up to look like two or more different papers. Authors and editors have a legitimate concern in some cases where articles, either by content or essential purpose, should appear in a periodical which has world-wide currency. With the exception of the "Unesco bulletin for libraries", which has editions in four major languages, there are few periodicals truly "international" in this sense. In fact quite understandably there are very few periodicals that will print articles in languages other than their working language (except of course in polylingual countries like Switzerland). While there are no obvious solutions, this question should be studied at the international level in the hope that some arrangements could be elaborated.

4. The coverage of professional literature in secondary publications (Agenda item 3)

The extent to which the secondary publications cover the primary literature has been a topic much in the forefront of documentation especially since the International Conference on Science Abstracting (10) organized by Unesco in 1949. While it is not easy to measure the duplication and the gaps in the literature of the sciences, much work has been done and there is a body of fairly reliable information. In librarianship and documentation the situation is utterly obscure and seemingly haphazard. The reason for this is clear - the lack of accepted definition of the field. Each language group uses different criteria and thus ends up with widely different sub-sets of the literature.

4.1 Fortunately there are a few recent studies (11) which make some diagnosis possible, but the therapy is as intractable as ever.

4.1.1 In their evaluation of the first two years of "Library and information science abstracts" (LISA) Gilchrist and Presanis (12) have compared it with "Referativnyj Zhurnal: Informatics" and "Information science abstracts" (ISA), especially from the point of view of annual number of abstracts, number of periodicals covered and delay times between the availability of the original paper and the appearance of the abstract. The figures for 1969 for two of the parameters are as follows:

	Number of abstracts published*	Number of periodicals covered
LISA	2,567	239
Ref. Zh.	2,973	309
ISA	2,638	[illegible]

* These figures are totals, including both articles appearing in periodicals and abstracts of reports and monographs. In the case of LISA 83% are from periodicals.

The corresponding figure for the total number of abstracts for the fourth competing service, "Bulletin signalétique: Information scientifique et technique" (which started in this form in 1970) was 2,994 for 1970. Thus all four services produce roughly around the same number of abstracts each year (average = 2,800). At a first glance this looks like wasteful duplication. In fact the situation is quite different.

4.1.2 The number of periodicals which are common to each pair is low (12).

Ref. Zh.		Ref. Zh.		LISA	
	70		74		98
LISA		ISA		ISA	

The number common to all three is only 51 titles, which is about one-twelfth of the total number of different titles covered by all three (about 604). Thus as Gilchrist and Presanis put it "an exhaustive coverage can still only be obtained by using the three services". They also point out that this common list is the best guide we have to the "core" periodicals of librarianship and information science and they give the titles in their paper. Actually the list includes five titles (e.g. "Nature") which cannot be considered as "our" periodicals. Thus we arrive at 46 periodicals which is certainly the minimum size of the core. In the case of LISA it also turns out (for 1969) that 1,140 abstracts (53.7%) were found in only 33 periodicals. The 239 periodicals covered by LISA can be broken down into the following zones:

Type of periodical	Number of periodicals	% yield of abstracts
Most productive	33	53.7
Remainder in librarianship and inf. science	156	42.1
Outside the field	50	4.2
	239	100.0

4.1.3 Not only is the coverage of periodicals of the four all-inclusive services significantly different but the intellectual organization, the structure of the indexing and presentation in categories, is basically at variance. (See Appendix 5.) As mentioned above this is a reflection of the immaturity, the disagreement on the scope of our discipline. If we could agree on what is meant by librarianship, documentation, informatics, there would be a better match in the lists of periodicals scanned. Instead of the three services in English (LISA, ISA, Ref. Zh. - English version "Informatics") would it not be sensible to have only one in English? It is relevant to compare the subject of chemistry where after decades of three independent services (one German, one American, one English), by bilateral agreements there is now only one - "Chemical abstracts". Economics and the computer certainly point in that direction.

4.1.4 On the question of compatibility, and therefore the potentiality for exchange between the services, there is perhaps some hope in the Intermediate Lexicon (13) which provides the basis for the indexing structure of the "Bulletin signalétique". The Intermediate Lexicon was designed by the Gardin group in Marseilles as a switching language, which would enable documents, initially indexed in one system to be made compatible for those using other indexing

languages. OSTI has provided a grant to the School of Librarianship of the Polytechnic of North London to elaborate and test such an Intermediate Lexicon for documentation (14).

4.1.5 The most recent edition (3) of the FID list of periodicals gives information for some 46 abstracting and indexing services including card services and periodicals which carry a regular section of such secondary information. As we have seen, only four of them (Ref. Zh., LISA, ISA, BS) aim to cover the whole field comprehensively (by critical selection), from the point of view of abstracts. A fifth "Library literature" does the same at the level of indexing. Among the others there are some which, like "Indian library science abstracts", confine themselves to their own national periodicals. The national distribution of these services shows a rather uneconomical state of affairs. Thus from the point of view of any serious future development the Big Five are the only important ones. A discussion of their aims and performances, as far as they can be ascertained, is very relevant to plans for a more efficient future.

4.1.5.1 Timeliness. Gilchrist and Presanis (12) studied the delays on a sample of 16 titles, all drawn from the list of periodicals common to the following three services and fairly representative of the range of variables. They found the mean delays to be:

LISA	99 days
Ref. Zh.	165 days
ISA	427 days

4.1.5.2 Printing run. Figures are available for four of the services:

Ref. Zh.	3,140	LISA	2,200
LL	2,900	ISA	1,200

Obviously some of the limitations of these services arise from such comparatively small printing runs.

4.1.5.3 Indexing structure (special characteristics).

(a) Ref. Zh. The author index consists of two sequences: one in Cyrillic and the other in Latin script. There is a KWIC index based on the Cyrillic form of each title. Further each issue gives the full contents list of each fascicule covered in that particular number. Where necessary, the title is also given in a Russian translation. Each reference is given a UDC number, but the order is based on the broad categories of the system.

(b) LISA. Each issue contains a subject index which gives the relationship between the various elementary subjects used in the CRG classification scheme, which is considered as difficult by some users.

(c) BS. The "Index metières" is repeated in English as the "Subject index". There is a separate index, by subject, of work by authors carried out in any French organization. The abstracts are indicative and very brief.

4.1.5.4 Computer-based methods. Any printed service, supported by a machine-readable data base will have implications for input, speed, sharing and exchange and it is very significant for retrospective retrieval.

(a) BS. Since 1971 as a part of the change to computer-aided typesetting using the Système PASCAL, this monthly section has been greatly improved from the point of view of production. The SDI service started in July 1971 and on-line searching is planned for the end of 1972 (15).

(b) Ref. Zh. A Descriptor Information Retrieval System in Informatics (DIPSI) has been in operation in VINITI since May 1970. With a data base of 25,500 abstracts (1963-1970) and a specially prepared thesaurus it produces two forms of output for retrospective retrieval: punched cards with three-digit codes, and magnetic tapes for use with a MINSK 22 computer (16).

4.2 It is fairly clear that much more data is needed before a reliable analysis of the state of bibliographical control can be made. At least as much detail as has been provided in the study (12) on LISA should be assembled for the other four services. Actually much more data and better techniques for measuring the adequacy of the secondary services are needed. We do not know quantitatively which periodicals give the best yields of abstractable/indexable material and to what extent there are gaps in the coverage. Methods analogous to those used in evaluating the secondary publications in science and technology will have to be applied. Two such approaches are:

(a) Use of comprehensive bibliographies for parts of the subject as lists against which each secondary publication can be checked as reported by Martyn and Slater (17) in 1964.

(b) A ranked list of the "best" periodicals in the field can be established on the basis of the frequency with which they are cited over a selected period by authors (4).

Admittedly citation studies have their inherent weaknesses but computer methods allow of the handling of the large number of references that must be related to achieve statistical validity. Once such a list emerges, the extent to which these periodicals are covered by each secondary service provides some measure of their adequacy.

4.3 Archives (only those aspects dealing with administration, methodology and the profession).

Bibliographical control here is understandably rather limited and mainly national. Of the 20 odd periodicals in the field the numbers covered are:

LISA 8	ISA 3	Ref. Zh. 2

and in effect they supplement each other. If LISA were to extend its scope to the extent of doubling the number of archives periodicals covered it would be fairly complete.

4.4 Reviews. The inadequacy of abstracting services can be compensated partly by good reports of progress of a subject. To be of real value they should appear periodically, if possible annually. The English language is now fairly well served with such annual reports for both librarianship and documentation.

(a) Advances in librarianship, 1970- . Ed. by M.J. Voigt, New York, Academic Press.

(b) Annual review of information science and technology, 1966- . Ed. by C.A. Cuadra. Chicago, American Society for Information Science.

Although (b) is improving its world coverage, inevitably and understandably the concentration especially in (a), is on the American literature. There is no harm in this as evaluation (and all selection involves appraisal) tends to be based on national traditions and attitudes. Unfortunately similar regular surveys written from the point of view of the other main producers of the literature do not exist. Admittedly such publications require a large investment in resources, both human and financial. Until we have such reviews written from the point of view of the French, Russian, German and other areas we shall continue to have a rather one-sided picture of the state of our art.

4.5 Possibilities for the future. Before any practical system for bibliographical control can be developed it is necessary to know the size of the operation. As already explained above, while we have precise figures for the annual output of abstracts of the Big Four, we do not know how big the duplication is and where the gaps are. Estimates for library science, essentially guesses, have been given as 10,000 (1) and 6,000 (110) articles per annum. The Big Four are working to an average of about 2,800. Clearly one of the first studies to be made will be to establish this figure for at least the past ten years with some attempt at extrapolation into the immediate future. This will not be easy as it will have to be based on some agreement on the scope of the subject. Clearly a certain number of the articles which are printed, for various reasons, do not need to be abstracted, though they should be brought to our notice by some form of current awareness. This situation is one that is increasingly being faced in other fields, particularly as computer operation facilitates speed of communication and national co-operation at the input stage.

4.5.1 Thus since May 1970 "Atomindex" has been appearing as a printed product of the INIS system (18) operating at the International Atomic Energy Authority in Vienna. This is a computer-produced monthly index which is compiled from full references (with index terms from the Euratom Thesaurus) supplied by some 20 national co-operating centres. Each country takes full responsibility for monitoring its own atomic energy literature and providing standardized input for merging at the IAEA in Vienna. In this way duplicate magnetic tapes are prepared for all participants as well as the computer typeset print-out, "Atomindex". The printed product is essentially a current awareness tool, while the cumulated magnetic tapes can also be used for retrospective search.

4.5.2 In similar fashion the Food and Agriculture Organization in Rome has been planning a service called AGRIS during the past three years which will attempt to provide a computerized service. Although the detailed procedures will be different, the purpose is the same - the provision of a single comprehensive index which will record and rapidly communicate the bibliographical references of documents in agriculture and the related sciences. Again it is likely to be based on the interrational management at FAO of material supplied from national sources. The printed output and the magnetic tapes can then become the tool from which the secondary services (the large number of abstracting organizations in the field) can be alerted and make their selection of material worth abstracting.

4.5.3 An analogous system for librarianship and documentation could be envisaged at Unesco. After all, in the same way as IAEA has responsibility for atomic energy and FAO for agriculture, Unesco according to its Constitution must "maintain, increase and diffuse knowledge ... by initiating methods of international co-operation". Increasingly it is being realized that even the largest national services can no longer ensure world-wide coverage, and many subject fields, especially in terms of bibliographical control, are exploring forms for international co-operation and sharing. Of course, work on any such project would involve agreement in two very difficult areas, the scope of the subject and an adequate indexing language. However, it would be a sorry reflection on our professional impotence if such international agreement could not be worked out.

5. Promotion of international co-operation between editors of journals (Agenda item 4)

5.1 For various reasons librarianship is more national in outlook and practice than the world of the natural sciences. Therefore the case for positive efforts to improve contacts between editors and promote active exchange is strong and urgent. At the meetings of editors in the past there have been much goodwill and hopes for collaboration but in practice, in the feverish world of press date lines, printers and other stresses, there is an inertia which is hard to overcome. Consequently the relationships probably will have to be formalized and thus placed on a more regular basis, through action at both the NGO and the international governmental level.

5.1.1 With the main interests well represented in the FID and other interested NGO's the formal mechanism could start at these levels. Each NGO could form a section of editorial personnel, representative of the main national periodicals. These sections would then be in a position to speak internationally for the three main areas. Since there is much ground in common, representatives from each of the these sections could be brought together by Unesco at suitable intervals to recommend practical measures for co-operation and exchange of news items, research reports, general articles etc. To supplement the national approaches it might be advisable for the NGO's to arrange occasional meetings of editors by language groups, e.g. all Francophone countries, all users of the Russian language.

5.1.2 As part of the Unesco Fellowship Programme or UNDP aid, study trips for national groups of editors and members of their staffs could be arranged both within one language group and from one language culture to another. They could study editorial problems of form and content and examine production and distribution methods at close range. All such trips should also include contacts with the editors of abstracting and indexing services, partly to help in an understanding of indexing problems, and partly to organize rapid transmission of proofsheets, etc. ICSU/AB which has had years of experience in such co-operative work should be one of the agencies to be brought into active collaboration.

5.2 Articles by foreign authors in national periodicals. This is an attractive proposition which would greatly stimulate international understanding. However this, like other human relationships, is not easily brought about by formalized or bureaucratic arrangements. A first-class article submitted to a leading periodical is on the one hand a tribute to that periodical, and on the other hand a case of "jumping onto the bandwagon". The outstanding article is not really the problem, it will nearly always find a good international outlet. In some

ways the outstanding periodical has the bigger problem. It can be inundated, as "Physical review" (2) found, and editors are very reluctant to reject good articles. Thus it is the good, the just above average article, that we must try to accommodate.

5.2.1 This sort of article in a foreign language raises two main problems: the procedures for its translation, and the criteria for selection of such material, which also involves the mechanism for transmission. As to the first, it is true that occasionally English periodicals publish articles in French or German, or German periodicals do the same for an English contribution, even though this is not always welcome locally. However the real problem is for languages that are less related to each other. Thus, if this practice is to be encouraged, the articles must be translated and the question is by whom; arrangement by the author, by the periodical or by some international agency. Any one of these three methods, introduces barriers to this becoming a common practice. A translation made in the author's country is usually inadequate and needs serious rewriting by the editorial staff of the publishing periodical. Translation by the receiving periodical is an extra cost and is often unsatisfactory. Translation through the intermediary of an international organization is administratively difficult. One of the ways of achieving the same aim is to use a different approach. If it is thought important enough, annual anthologies of translations from say German to Spanish, or Russian to English could be published, financed by either an international organization or by grants from foundations. But there still remains the very thorny question of selection - at least an international jury would be needed to make the choice.

APPENDIX 1

PERIODICALS BY COUNTRY

Argentina	1	Netherlands	5
Australia	5	New Zealand	1
Austria	2	Nigeria	1
Belgium	4	Norway	2
Brazil	3	Pakistan	2
Bulgaria	1	Panama	1
Canada	7	Peru	1
Chile	1	Philippines	1
China (Taiwan)	3	Poland	7
Colombia	2	Portugal	2
Cuba	2	Rhodesia	1
Czechoslovakia	7	Romania	3
Denmark	6	Singapore	1
El Salvador	1	South Africa	2
Finland	1	Spain	3
France	7	Sweden	4
Germany (Fed. Rep. of)	10	Switzerland	1
Germany (Dem. Rep. of)	5	Tunisia	1
Ghana	1	Turkey	1
Hungary	7	UAR	1
India	7	United Kingdom	26
Iran	1	USSR	9
Ireland	1	U.S.A.	32
Israel	1	Venezuela	2
Italy	8	Yugoslavia	4
Japan	16	Zambia	1
Korea	1		229
Madagascar	1	International	11
Mexico	2		240
	114		

APPENDIX 2

PERIODICALS BY LANGUAGE

English	97	Arabic)	
French	21	Bulgarian)	
Spanish	18	Finnish)	
German	17	Hebrew)	
Japanese	16	Korean)	1 each
Russian	12	Malagasy)	
Dutch	9	Persian)	
Italian	8	Slovene)	
Czech	7	Turkish)	
Hungarian	7	Polyglot	8
Polish	7		
Portuguese	5		
Swedish	4		
Danish	3		
Chinese	3		
Serbo-Croat	3		
Romanian	3		
Norwegian	2		

APPENDIX 3

PERIODICALS BY ROUGH CATEGORIZATION

This is an attempt at a functional breakdown rather than a subject classification of the periodicals included. It is inevitably somewhat arbitrary and involves some cross-classification.

A. General (mainly nationally oriented)

1.	Broad areas - Librarianship	59	
	Documentation (including inf. science)	19	
	Archives administration	26	(of which 11 partly also deal with libraries)
2.	Professional or official organs	36	
3.	News-sheets/Information bulletins	25	
4.	Technical and administrative services	12	
5.	Research and development	19	
6.	Educational	19	(schools 10, higher education 9)

B. Specialized (universal in coverage, but sectional in main interest)

1.	Special libraries	19	
2.	Special technologies	14	(e.g. reprography, mechanization)

APPENDIX 4

PERIODICALS OUTSIDE THE STRICT FIELD OF LIBRARIANSHIP AND DOCUMENTATION

Based on a subjective judgement the number of such periodicals found in the lists of periodicals covered by the various services are:

Ref. Zh.	34
ISA	28
LISA	23
LL	0

The numbers of periodicals common to each pair are:

Ref. Zh. LISA	14	ISA LISA	13	Ref. Zh. ISA	13

Finally there are eight periodicals common to all three lists:

Communications of the Association of Computing Machinery

Datamation

IEEE Transactions - Engineering, writing and speech

Journal of the Association for Computing Machinery

Journal of typographical research

Nature

New scientist

Publishers' weekly

APPENDIX 5

SUBJECT PRESENTATION USED BY THE LARGE ABSTRACTING SERVICES

Ref. Zh.

1. General (1.1 information theory and practice; 1.2 terminology; 1.3. history; 1.4 manuals)

2. Information analysis (2.2 primary documents; 2.3 secondary documents)

3. Scientific translation

4. Automatic translation (4.2 linguistic problems; 4.3 machine dictionaries)

5. Information retrieval (5.1 classiciations and indexing; 5.2 information retrieval systems; 5.3 information and library services)

6. Technical tools (6.2 collection, preparation and transmission of documents and information; 6.3 IR tools; 6.4 document reproduction; 6.5 storage and restoration of documents; 6.6 office and library equipment)

7. Organization of library and information activities (national and international, personnel training)

LISA (CRG scheme) - Core subjects A/Z - Fringe subjects 1/9

A	Library science
B/D	Common sub-divisions
E/F	Organization and administration
G	Processing library materials
15/18	Management
2	Knowledge, education, archives
3	Authorship
4	Reading, writing
5	Bibliography
H/J	Information retrieval (including classification, cataloguing and indexing)
K	Information work
L/M	Library materials and stock
N/Z	Library ownership and use
6	Printing, reprography, bookbinding
7	Publishing, bookselling
8	Non-book materials
9	Other subjects (sub-divided by UDC)

ISA

Information science - documentation (bibliographies; professional organization; social, economic and legal aspects)

Information centres and libraries (operations, conventional and mechanized)

Specialized information services and systems (evaluation, networks, secondary publications)

Information generation, dissemination, collection (data recording, editing, primary sources)

Information publishing and reproduction (including printing, conventional and mechanized)

Information identification and translation (conventional and mechanized)

Analysis of information (indexing, classifying, cataloguing, abstracting)

Storing and retrieving of information (search strategy, file structures, display)

Utilization of information (user studies and surveys)

Supporting research (computers, linguistics, mathematics, sciences)

RS (classification scheme of the Intermediate Lexicon)

01 Information scientifique, étude d'ensemble (généralités; documents; distribution, normalisation, utilisation, mécanisation; organismes; enseignement, personnel; systèmes d'information)

02 Fondements théoriques (linguistique; méthodes mathématiques; comportement et intelligence artificiels)

03 Outils documentaires (langage documentaire; analyse documentaire du langage naturel; équipements)

04 Applications documentaires (systèmes; matériaux, données; produits documentaires, extraction, condensation, organisation; traduction automatique)

ABBREVIATIONS AND ACRONYMS

BS	Bulletin Signalétique 101: Information scientifique et technique (CNRS, Paris)
CRG	Classification Research Group (London)
FID	Fédération Internationale de Documentation (den Haag)
ICSU/AB	International Council of Scientific Unions/Abstracting Board (Paris)
ISA	Information Science Abstracts (American Society for Information Science)
ISO	International Organization for Standardization (Geneva)
LISA	Library and Information Science Abstracts (Library Association and Aslib)
LL	Library Literature: an index to library and information science (H.W. Wilson, N.Y.)
NGO	Non-governmental organization
OSTI	Office for Scientific and Technical Information (Department of Education and Science, London)
PASCAL	Programme Appliqué à la Sélection et à la Compilation Automatiques de la Littérature)
Ref. Zh.	Referativnyj Zhurnal 59 Informatika; English version, Informatics (VINITI)
SDI	Selective dissemination of information
UNDP	United Nations Development Programme
VINITI	All-Union Institute for Scientific and Technical Information (Moscow)

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8. International Organization for Standardization, Geneva

8a. Presentation of contributions to periodicals. ISO/R215

b. International system for the transliteration of Slavic Cyrillic characters. ISO/R9

c. Bibliographical references. Essential elements. ISO/R77

d. Bibliographical references. Essential and supplementary elements. ISO/R690

e. Abbreviations of typical words in bibliographical references. ISO/R832

f. Abbreviations of generic names in titles of periodicals. ISO/R833

g. Bibliographical strip. ISO/R30

h. Short contents list of periodicals or other documents. ISO/R18

i. Index of a publication. ISO/R999

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