

TOWARDS A STANDARD STYLE FOR BIBLIOGRAPHIC REFERENCES

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1. INTRODUCTION

Journals represent the most important single source of information for the scientific community. Usually journals differ from one another in many ways—physical format, style of presentation, typography, cover-page design, etc. However, there are certain aspects in respect of which standardization can bring uniformity, benefiting the journals as well as authors and users. This paper discusses the need for a standard style for bibliographic references (BRs) or citations given usually at the end of a journal article or a chapter of a book. It also suggests to authors, editors and publishers some ways in which standardization in the preparation of BRs can be achieved.

According to Bureau of Indian Standards a bibliographic reference (BR) is "a sequence of items of information needed for enabling a reader of a work to identify, locate and ascertain the relevance of a document referred to" (1). International Standards Organisation (ISO) defines it as "a set of data sufficiently precise and detailed to enable a publication or a part of a publication to be identified"(2). British Standards Institution defines it as "a

set of data describing a document or a part of a document, and sufficiently precise and detailed to identify and locate it"(3).

The main purpose in providing a BR is to enable identification and location of the original source. It also helps in ascertaining whether it is relevant for further study. Therefore, care should be taken that a BR contains all elements needed for easy retrieval of a cited document.

BRs are different from a bibliography, provided in some cases at the end of an article. For example, in an encyclopedia, bibliography is a reading list provided for further study of the subject. References included in a bibliography may not necessarily be cited in the article/document.

2. NEED FOR BIBLIOGRAPHIC REFERENCES

A research paper builds its base upon earlier scholarly work. This is done by linking the reporting paper to related work in the same subject area or field of research reported earlier. This linking is usually done through BRs which "... operate within a jointly cognitive

and moral framework. In their cognitive aspect, they are designed to provide historical lineage of knowledge and to guide readers of new work 'to sources they may want to check or draw upon for themselves. In their moral aspect, they are designed to repay intellectual debts in the only form in which this can be done : through open acknowledgement of them" (4). Thus, citations serve important functions, since authors refer to previous material to support, illustrate or elaborate on a particular point They may also be referred to for contradicting or negating the conclusions or findings of a reported article. The basic idea in referring is to highlight the relevance and use of the cited item. Many other reasons have been spelt out by Weinstock (5).

An important paper is cited more and more, while a less important or a low quality paper is rarely cited. Thus, "the frequency of citations is a clear measure of the relative importance or quality of a work, for, those of high quality and importance are bound to be cited again and again" (6).

BRs play an important role in the life of a research paper. They enable readers to understand and decide whether they should consult the original publication which is referred to. If the users want to consult it, the BR should enable them to have easy access with minimum effort. Hence, BRs ought to be sufficiently complete, ie all the elements of the cited document must be given.

Though the importance of BRs is felt by editors and publishers of scientific and research journals, there is no consensus on a universal format or style for their presentation. There are many variations in style. Journals in the same subject field or those brought out by the same parent organization or professional body, vary widely in this respect. This chaotic scene is the result of the difference of opinion or subjectivity from publisher to publisher and from author to author over the inclusion of different elements of BRs, viz. author(s), title, affiliation, volume, number, date, month and year, pagination,

etc., their sequence of occurrence and typographical representation. Often, even in a particular publication and in the same issue, variations can be seen. Different styles of punctuation adopted to separate the elements of a BR and different types of documents being referred to make the problem still more complex. Many types of documents are cited, i.e. journal articles, conference proceedings, monographs, books—simple and composite, letters, dissertations, theses, reports, standards, catalogues, etc. All of them do not have the same elements.

These variations pose a big problem for users in literature searches and for authors when they contribute to more than one journal, as they have to change the style of presentation of BRs as per the requirements of the journal.

3. CITING OF BRs IN THE TEXT

There are different practices for citing BRs in the text. Some journals give author's name and year within brackets, e.g. (Garfield,1980). The year is given in brackets only when the author's name is a part of the sentence. *Mausam*, *Pramana-Journal of Physics*, *Optical Engineering*, etc. are some of the journals following this practice. *Journal of Documentation*, *IASLIC Bulletin*, etc. use number as superscript over the name(s) of the author(s) or in parantheses within the text as per the practice of the *Journal of the American Society for Information Science*. Some other journals use first letters of the name(s) of the author(s), as in the case of *Pacific Journal of Mathematics*. When cited by author's name or the first letters of author's name, two or more cited documents published by the same author in the same year are differentiated with numerical or alphabetical suffixes, e.g. Price 1980a, Price 1980b or P1, P2,etc.

4. LISTING OF BRs

The manner in which BRs are listed at the end of the main text is normally based on the method used for citing them in the text. They

are either arranged alphabetically by author's name or in the order of their occurrence in the text. Harvard system is a variant of the former method. Here the year of publication follows the author's name. In the alphabetical and sequential systems the year of publication comes after the name of the journal or publisher. The alphabetical method needs a bit of manipulation for bringing all references into alphabetical order. In the case of a review article this needs more time because of the large number of references cited. The sequential numbering method enables location of the cited reference with ease. The style manuals in the field do not recommend or uniform pattern. Some journals like *The Journal of the Chemical Society* and *Chemical Abstracts* have their own style manuals for manuscript preparation, which include guidelines for the preparation of BRs. These style manuals also differ from one another. For example, initialisation or full form of first and middle names and their placement in the natural way or inverted form, etc. are dealt with in different ways in different style manuals.

5. STANDARDS ON BRs

The available standards on BRs suggest two types of references. International Standard suggests abridged reference and expanded reference, while British Standards Institution recommends minimum reference and expanded reference. American National Standard (ANSI) suggests abbreviated reference and comprehensive reference. The relevant Indian standards identifies two types of elements—essential and supplementary and leaves the choice to the user, It recommends the use of any catalogue code for punctuation. The ISO, BSI and ANSI standards are not specific, but recommend examples given by them to be followed. British Standard provides the following examples in the case of a composite book :

Minimum reference

RAMSBOTTOM, JOHN. Fungi pathogenic to man. In: Med.Res.Council. A system of bacteriology in relation to medicine, vol.8. 1931. pp.11-70.

Expanded reference

RAMSBOTTOM, JOHN. Fungi pathogenic to man. In: Medical Research Council. A system of bacteriology in relation to medicine. vol.8. London: HMSO, 1931. pp.11-70.

As regards typography for a BR, ANSI recommends the use of single type face for the sake of simplicity and convenience. However, the user is free to use any typography desired, such as placing titles in italics or giving volume number in bold face(7). IS recommends differentiation of the various items of information and highlighting of the essential items in an entry. However, it advises that a uniform practice should be followed in the same publication. BS and ISO standards are silent on this aspect. While ANSI prefers the use of author's name(s) in ordinary upper/lowercase, IS, BS and ISO recommend their capitalization. ANSI limits the maximum number of authors of a multiauthored work to two, while ISO and BS limit it to three. All the four standards recommend title of journal article to be included in the BR. ANSI recommends full name of the journal, while others suggest use of abbreviated titles using as per related standards. All standards recommend the use of inclusive pages. But the placement of year differs.

BS and ISO standards do not provide examples of papers pertaining to conference/ symposia proceedings. IS and ANSI recommend the use of the title of the paper/chapter of a conference proceedings or a composite book. BS prefers citation of a standard by the organization responsible for bringing out the standards, while IS prefers citation of standard number.

ISO limits its coverage to three types of documents—book or separately issued publication; periodical or serial publication, and contributed article. Proceedings of conferences/symposia, reports, patents, theses, etc are not covered. BS too does not cover conference proceedings. The Indian Standard gives an example of citation pertaining to conference proceedings, but no example is given in respect of technical report. Only ANSI covers exhaustively all types of documents, including computer outputs, music disks.etc.

6. GUIDELINES FOR BRs

6.1 Sources of Information for the Preparation of BRs

The main sources of information for authors on the preparation of BRs are the guidelines or instructions to authors /contributors included in most of the journals. A few supply them on request as a separate booklet. But such guidelines differ from one another in coverage with respect to their own requirements. Some journals follow existing standards. Others give full examples of different types of BRs for different documents, such as a monograph, a book, a chapter from a book, a journal article, a paper from proceedings of a conference or symposium, a report, a thesis, etc. A few journals like *Science* advise authors to consult the latest issue for the pattern of BR to be adopted.

6.1.1. Indian Scene

None of the Indian journals explicitly follows the national standard, or provides full details regarding the preparation of BRs. *Indian Journal of Technology* (IJT) provides more details than many other journal on the preparation of BRs. It is interesting to note that journals brought out by the same organization lack uniformity in providing examples. Journals like *ILA Bulletin* and *IASLIC Bulletin* give very little information in their guidelines. Many of the Indian journals pay little attention

to providing adequate examples of different forms of BRs. Many journals do not provide examples for rendering BRs of papers contributed to conferences /symposia /seminars, which are as important as journal literature for research work.

6.2 Rendering the Name(s) of Author(s)

In the arrangement of authors' names, majority of journals follow natural way of upper/tower case letters. Some of the important library and information science (L&ISc) journals prefer capitalization, many journals invert author's name in listing BRs.

6.3 Title

L & ISc journals include title of the cited document while most science & technology (S&T) journals do not. Out of 200 journals surveyed by Dutta & Rajgopalan, only 98 provided the title. In general, among the physical sciences journals only 23 % of the sample provided the title (8).

6.4 Name of the Journal

While citing the name of the journal most of the journals recommend italicization of the title of the journal for distinguishing it from other elements. For abbreviations of the journal titles, standard guides, such as Butterworth's World List of Scientific Periodicals, International Serials Catalogue of the ICSU-AB, are followed. However, some inconsistencies in abbreviations are seen quite often. The following examples show variations :

Journal of the American Medical Association is abbreviated as JAMA ; J. Am. Med. Assoc.;and JI. Amer. Med. Ass.

Annals of the New York Academy of Sciences is abbreviated as Ann. N.Y. Acad. Sci. and Ann. New York Acad. Sci.

6.5 Volume, Year of Publication, Pagination

Giving volume number in bold type face is very common in S&T journals, but is less common in L&ISc journals. Placement of the year of publication is a matter of style. Those who cite through author and year list the references as per Harvard system where the year follows the author's name. Other practices prevalent are placement of the year before and after volume number and as the last element of the BR. A few place year within circular brackets. This would avoid the confusion in the case of journals which run to a few thousands of pages and where the page number exceeds 1900. In such cases, distinguishing year of publication from page number is a problem. Giving inclusive pagination can avoid this confusions.

6.6 Sequence of Elements in BRs

Journals in the field of L&ISc follow the following sequence: place of publication, publisher and year of publication. Others give publishers name first followed by place of publication. Many variations are seen when a chapter of a composite book or a paper from proceedings of a symposium or conference is cited. It is important to provide both titles of the main document and its part for obvious reasons but many journals in S&T provide only the title of the original publication or name of the conference/symposium. In most of the journals, the name(s) of the editor(s) are preceded by the title of the original publication and the connecting words 'ed by' different styles are used for BRs pertaining to thesis and dissertations. The commonly used order is: title (in italics), the degree for which it is submitted (e.g. Ph.D. M Phil, Masters' thesis, etc), name of the university, place and year. In some journals, the degree comes as the last element. Reports are cited, but not as frequently as other documents. Here again, many S&T journals do not include title. The key element namely the report number, is provided by almost all the journals along with

the name of the organization/publisher, place and year of publication.

7. IMPORTANCE OF PUNCTUATION

Punctuation is important to avoid ambiguity and pitfalls. A few journals (*Nature*, *Optical Engineering*, *Journal of Physical Chemistry*, etc) divide the BR into three or four parts by using a period(.) in between them. Some use a comma between the elements (*Defence Science Journal*, *IJT*, *JSIR*, *Journal of Applied Physics*, etc. A few (like *Pramana*) do not use any punctuation, except between authors, publisher and place of publication, etc. They prepare to distinguish different elements through typography. A few of the ambiguities due to absence of punctuation are listed below:

- (a) In a journal without a volume number, differentiation of the year and in the absence of inclusive page numbers, the year and page number may cause confusion. For example: E.S. Josephson, *J.Chem.Soc.*, 1983, 1986.
- (b) When conference title is abbreviated, it may be confused as a journal title as:
Proc.Ind.Nat.Sci.Acad. (a journal)
Proc.Int.Conf.Aerobiol. (conference)
- (c) In the absence of punctuation, initials of the authors, particularly 'J' may mistakenly be read as part of the abbreviated form of the title of the journal. For example: Robertson P J *Design Engineering*, October 1978, 16-23. Here J is the initial of the author, but it could also be taken as part of the name of the journal.
- (d) In the case of corporate authors, when only comma is used to separate elements, it may be mistaken for the title of the document or vice versa. For example: Department of Health, Education and Welfare, Public Health Service, Environmental Service, National Air Pollution Control Administration, Air Quality Control, Administrative Criteria for Hydrocarbons, NAPCA pub. No.AP-64 (Govt. Printing Office, Washington, D.C.), 1976.

- (e) In the case of a composite book or a series with a common title and with specific titles for different volumes (i.e. multivolume series), the volume number should be placed at the appropriate place. Volume number should follow the main title and the specific title should be given thereafter. For example:

Button, K.J.(Ed). Infrared and millimeter waves, Vol 5: coherent sources and applications, Part I.(NY, Academic Press, 1982).260p.

7. CONCLUSIONS AND SUGGESTIONS

Standardization in BRs would help authors, editors and publishers alike. For efficient and unambiguous information retrieval a standard style of presentation of BRs is necessary. The following suggestions are given to arrive at a standard style for BRs:

1. The main purpose of providing a BR would not be served if the title of the document being cited (a journal article or a paper from a proceedings or a chapter from a book or the title of a report.etc) is not included. It is important for taking quick decision whether a cited work is to be consulted or not considering that the title is a true representation of the content of the work.

2. Dividing the BR into convenient groups or parts—say three or four—would make the BRs unambiguous. For example, author(s)/ editor(s); title of the cited document; title of journal, volume(issue no),year in brackets, inclusive pages punctuated appropriately or conference/symposium name (preceded by 'paper presented at'),etc.; place, month and year or the title of the original work followed by editors' name (s) (in the case of a composite book); place of publication, publisher, year, etc. are some convenient groupings.

3. Giving inclusive page numbers and use of parentheses for the year avoid confusion of pages with the year of publication (in the case of journals running into thousands of pages). Inclusive pagination also provides information regarding the size of the document cited in terms of pages. It helps the user as well as the librarian to calculate the cost in case the document is to be procured from a copy supply centre.

4. Usage of upper and lower type faces for author's name would be simple and also easy for typesetting.

5. Giving imprint information ,i.e. place of publication, publishers name and year of publication within circular brackets avoids unambiguity . This would also avoid confusion about place and year of conference in the case of conference/symposium proceedings.

REFERENCES

1. Indian Standards Institution. 13:2381-1975 : Recommendations for bibliographical references—essential and supplementary elements (first revision). (New Delhi, ISI, 1979),16p.
2. International Standards Organization. ISO: 690-1975(E): Documentation-bibliographical references—essential and supplementary elements. (Switzerland, ISO, 1975),8p.
3. British Standards Institution. BS 1629:1976: Recommendations : Bibliographical references. (London, BSI, 1976),11 p.
4. Merton, Robert K. Foreword. In Citation indexing: its theory and applications in science, technology and humanities, ed by Eugene Garfield. (New York, John Wiley, 1979),p vii.
5. Weinstock, M. Citation indexes. In Encyclopaedia of Library and Information Science, ed by Allan Kent and Harold Lancour. Vol 5. (New York, Marcel Dekker, 1971),p 16-40.
6. Lawani, S.M. Validity of citation criteria for assessing the influence of scientific publications: new evidence with peer assesment. *J Amer Soc Inform Sc.*34(1), 1983; 59-66.
7. Mount, Ellis. A national standard for bibliographical references. *J Amer Soc Inform Sci* 28(1),1977; 3-18.
8. Dutta, S and Rajagopalan, T.S. Literature citations in scientific and technical periodicals—A survey. *J Scient Industr Res*17A(7), (1958)259-61.