GUIDE FOR THE PREPARATION OF SCIENTIFIC
PAPERS FOR PUBLICATION

EXPLANATORY STATEMENT

The "Code of good practice for scientific publications" (document UNESCO/NS/177) was drawn up in 1962 by the FID-ICSU-IFLA-ISO (*) - Unesco Liaison Committee, set up to study ways and means of devising effective international measures to improve the present position as regards scientific information. The Committee considered that the lack of freely accepted discipline in drafting and publishing scientific information was one of the main causes of the tendency to add unnecessarily to the volume of documents published and to the expenditure involved in printing, abstracting, listing and locating them. The Committee, therefore, following a proposal by the Secretary of ICSU's Abstracting Board, drew up a text in as concise a form as possible, the "Code", specifying the rules which should obviously be followed by all authors of scientific publications as well as all editors of scientific journals.

Since its publication, the "Code" has been widely circulated by Unesco and the ICSU Abstracting Board in English, French, Russian, English and Spanish. In addition, Esperanto, German, Polish and Portuguese texts have been published. Following this wide distribution, a number of suggestions and comments were received concerning the text of the "Code", and the International Union of Pure and Applied Physics (IUPAP) made an extensive study of the "Code" and of the "Guide for the preparation and publication of synopses" which was annexed to it. The text submitted as an outcome of this study was compared with the original text of the "Code" and this comparison, which involved the examination of all proposals for modifying the text received by Unesco, has resulted in the present "Guide". In principle, all essential elements contained in the first version have been retained and only a small number of additions and slight changes have been made. It seemed of interest, however, to supplement the main text of the new version by adding a certain number of comments, details and minor suggestions; these have been given in italics in a separate column so as to facilitate consultation of the text.

Unesco is publishing and circulating this "Guide" for the preparation of scientific articles for publication with the conviction that observance of the rules laid down will make it possible to speed up 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.

GUIDE FOR THE PREPARATION OF SCIENTIFIC PAPERS FOR PUBLICATION

PREAMBLE

The essential aim of a scientific paper is to communicate ideas and information clearly, concisely, and honestly. Authors and editors must keep this aim paramount. Most of the specific recommendations in this guide are directed towards this goal.

A code of good practice among scientific journals is needed to facilitate the exchange of information between scientists in all countries, especially because of the increase in the volume of scientific publications.

GENERAL RECOMMENDATIONS

1. Every manuscript submitted for publication in a scientific or technical journal should be accompanied by an informative abstract.

   This abstract should be drawn up in accordance with the recommendations of the "Guide for the Preparation of Authors' Abstracts for Publication".

2. The title should be concise but as informative as possible.

3. A manuscript submitted for publication will normally be in one of the following three categories:

   (a) Original scientific paper, describing new research, techniques or apparatus.

   (b) Provisional communication or preliminary note.

   (c) Subject review article.

4. 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.

   Titles of articles should be sufficiently descriptive and informative concerning their contents to be of practical use in title lists, in indexing and in coding for information storage and retrieval; abbreviations and specialist jargon should be avoided.

   A text is regarded as belonging to the category "original scientific paper" when it constitutes a significant extension of knowledge or understanding and it is written in such a way that a qualified research worker is able, on the basis of the information given, (i) to reproduce the experiment and secure the results described with equal accuracy or within the limits of experimental error specified by the author, or (ii) to repeat the author's observations, calculations or theoretical derivations and judge his findings.

   A text is regarded as a "provisional communication or preliminary note" when it contains one or more novel items of scientific information, but is insufficiently detailed to allow readers to check the said information in the ways described above. Another type of short note, generally in letter form, gives brief comments on work already published.

   A subject review article is a survey of one particular subject, in which information already published is assembled, analysed and discussed. The scope of the article will depend on the journal for which it is intended.

   It is the duty of the author of a review article to endeavor to give credit to all published work which has advanced the subject, or which would have advanced it had it not been overlooked.
5. The introduction should explain the aim of the paper.

6. Authors should make clear what in the paper represents their contribution and what represents the work of others. They should be very careful to specify the limitations of their work - the sources of error and probable errors in their data, and the range of validity of their conclusions. They should not make over-optimistic claims for the precision of the work, the generality of their conclusions, or the applicability of their results. They should avoid "ad hominem" arguments in criticizing other related work. Criticisms should be directed only at the scientific aspects of the related work.

7. Most journals have their own "Instructions to Authors" giving particular details of presentation to be followed. These instructions should be followed carefully. They normally cover general layout, form of bibliographical reference, symbols and abbreviations, etc.

8. Material should be presented as concisely as possible in simple straight-forward language, avoiding words not in common use. Words appropriate to any particular subject should only be used if they have been fully accepted by other workers in the field. If it is essential to introduce new words these should be carefully defined.

9. Authors should try to make their papers reasonably self-contained by including adequate explanation and identification of symbols used.

10. Should industrial or national security considerations lead to a significant restriction of the amount of scientific information which can be published in the article, the text should be presented as belonging to the category 3 (b) a preliminary communication, and not to 3 (a) an original scientific paper. Any restriction should be clearly indicated in the paper.

11. Explicit bibliographical reference should be made to previous work published on the same subject where this is necessary to show how the new material advances knowledge of the subject. Reference should in general only be made to fully

References should be brought up to date to the time of submission of the manuscript. This is especially important in the case of papers submitted for publication a long time after completion of the work being reported. Work discussed in the text may be referred to by naming all the authors, by specifying the first author et al. or by referring to the institution group if the...
published material or to material which has been accepted for publication.

12. Reference to private communications and documents with limited circulation (i.e. not available to the general scientific public) should be avoided whenever possible. Documents of a "classified" nature (company or government restriction) should never be referred to.

RECOMMENDATIONS TO EDITORS

13. Editors are asked to ensure that the instructions for authors compiled for journals under their control do not contravene the basic principles set out in this document.

14. In accepting material for publication the editor, besides satisfying himself of the general good standard and suitability of the paper for publication, should also pay particular attention to the abstract to ensure that it is sufficiently informative, and to the title to ensure that it is concise but adequate.

15. In journals carrying articles of more than one category the editor should request the author to state in which category his work should be classified, e.g. 3 (a) original scientific paper, 3 (b) provisional communication or preliminary note or 3 (c) subject review article.

When the category of a paper is not otherwise made clear in the journal, the editor should ensure that the category is indicated in the abstract.

16. In order to ensure that authors' abstracts may be freely republished anywhere and at any time, it should be clearly stated within the journal that reproduction of authors' abstracts is authorized.

17. Efforts are being made to evolve a consistent series of symbols and abbreviations and a uniform pattern for bibliographical references. As these are determined, editors are being asked to co-operate by using them in the journals under their control.

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1. See page 7.
GUIDE FOR THE PREPARATION OF AUTHORS’ ABSTRACTS FOR PUBLICATION

PREAMBLE

With the increasing amount of publication of scientific material it becomes more and more important that the basic content of all papers, long or short, published in the scientific journals should be easily available. This can be achieved by ensuring that titles are adequate and by inserting at the beginning of every article an author’s abstract of the paper.

The following notes set out the main points to be considered by authors in preparing such titles and abstracts.

GENERAL

1. Titles of articles should be sufficiently descriptive and informative concerning their contents to be of practical use in title lists and in coding for information storage and retrieval.

2. Every article should be preceded by an abstract (in most journals this includes Letters to the Editor).

   In writing abstracts authors should bear in mind that these may be the only parts of the papers that are read.

CONTENT

3. The abstract should contain a brief but informative summary of the contents and conclusions of the paper and should refer to any new information which it contains. The abstract should not contain information or claims not contained in the body of the paper. The abstract should not contain inessential details.

4. The abstract should be self-contained but may refer to the title.

5. It is valuable to indicate the treatment of various aspects of the subject by such words as "brief", "exhaustive", "theoretical", "experimental" etc. The abstract should also mention the category to which the paper belongs (cf paragraph 3 of Guide for Preparation of Scientific Papers for Publication) when it deviates from the standard content of the journal.

* The word "Synopsis" used in the English version of the original edition of this "Guide" is replaced by "Abstract" since the latter term has the most widespread use. The distinction that a "synopsis" is a résumé prepared by the author himself and published simultaneously with the paper after editorial scrutiny, by the editor of the journal and an "abstract" is a résumé prepared by some other person, is no longer generally made.
6. New information should include observed facts, conclusions of an experiment or argument, and essential points of a new method of treatment or of newly designed apparatus, etc.

7. Reference should be made to new material (compounds, etc.) and new numerical data, such as physical constants. Attention should be drawn to these even though they may be incidental to the main purpose of the paper.

8. When an abstract includes experimental results there should also be some indication of the method used. Reference to new methods should include their basic principle, the range of operation and the degree of accuracy of results.

PRESENTATION

9. The abstract should be written to form completely connected sentences and not as a list of headings. Standard terms should be used rather than proprietary names.

10. It should be assumed that the reader has a general knowledge of the subject, and abstracts should be intelligible without reference to the full paper.

11. Specific references and citations should in general not be included in abstracts.

12. The abstract should be as concise as possible while fulfilling the above requirements. It should in general not exceed 200 to 250 words, and will often be much shorter.

13. The International Conference on Science Abstracting recommended that abstracts be published in at least one of the more widely used languages, no matter what the original language of the paper, in order to facilitate its international usefulness.

When feasible, it is preferable to give specific numerical results rather than merely to say what was measured.

Otherwise valuable information may be hidden.

Care should be taken to avoid distortions and misinformation. Statements of conclusions and inferences should be accompanied by an indication of their range of validity.

Comparison with earlier results (when this is of major importance to the paper) should be as specific as possible.

In order that the abstract can be taken over unaltered by an abstracting journal, it should not be written in the first person.

The abstract should not contain non-standard abbreviations, symbols or terminology unless there is space in the abstract itself to identify them. It should not make specific references (by number) to a section, equation, figure or table of the paper.

If such reference is necessary citations to scientific journals should be made in conformity with the standard practice of the journal for which the paper is written. (The Unesco International Conference on Science Abstracting, 1949, recommended the standard proposed by the International Organization for Standardization (ISO), Technical Committee 46 §, names of journals being abbreviated as in the World List of Scientific Periodicals.

It may then, for example, when printed be cut out and mounted on a 7.5cm × 12.5cm card. The International Conference on Science Abstracting commended the practice of certain journals in which all the abstracts appearing in a single issue are printed together either inside the cover or with advertisements on the back in such a way that they can be cut out and mounted on index cards for reference without mutilating the pages of the journal itself. For this purpose the abstract should not be more than about 10cm wide.

1. See page 7.
LIST OF ISO RECOMMENDATIONS AND PROJECTS OF RECOMMENDATIONS
CONCERNING SCIENTIFIC PUBLICATIONS

ISO/R 4  "International code for the abbreviation of titles of periodicals"
Project ISO No. 1278 "Revision of recommendation ISO/R 4"
ISO/R 8  "Layout of periodicals"
ISO/R 9  "International system for the transliteration of Cyrillic characters"
Project ISO No. 1243 "Revision of recommendation ISO/R 9"
ISO/R 18  "Short contents list of periodicals or other documents"
ISO/R 30  "Bibliographical strip"
ISO/R 77  "Bibliographical references. Essential elements"
ISO/R 214  "Abstracts and synopses"
ISO/R 215  "Presentation of contributions to periodicals"
ISO/R 233  "International system for the transliteration of Arabic characters"
ISO/R 259  "Transliteration of Hebrew"
ISO/R 690  "Bibliographical references. Essential and supplementary elements"
Project ISO No. 315 "Transliteration of Greek into Latin characters"
Project ISO No. 1281 "Abbreviations of typical words in bibliographical references"
Project ISO No. 1294 "Abbreviations of generic names in titles of periodicals"
Project ISO No. 1416 "Index of a publication".

The above documents are available either from the Headquarters of I.S.O.
(International Organization for Standardization),
1, rue de Varembe, Geneva,
20, Switzerland,
or from the corresponding National Standards Organization for the countries
members of ISO.