Bibliography is a pathway, not a destination, a route by which men may reach an objective; it is not the objective itself. As a result, bibliography takes many forms, from the short reading list at the end of an undergraduate essay, to national bibliographies such as Canadias; from the minute study of the editions and impressions of a single book to the brief listing of thousands of works in the Short-Title Catalogue. Although language purists attempt to restrict the meaning of the word "bibliography", common usage continually broadens it. Dr. Pierce Butler reflects modern thought in his definition: "Bibliography is the systematic process by which civilized man finds his way about in the world of books that he has created". In the following survey of the present state of the teaching of bibliography in Canada the word is used in its widest sense.

A knowledge of bibliography is the key to all that has been written; it systematically lays open the literature of the subject fields, and is essential to the work of every scholar. Ideally the teaching of bibliography should begin with the beginning student, not with the candidate for a doctoral degree; it should permeate all teaching, not be confined to any one series of lectures.

To a first year student in many of the Canadian universities, bibliography means only two things: the list of references at the end of an essay, in which he often attempts to combine the functions of footnotes with a short reading list; and secondly, the long rows of bibliographies, catalogues and indexes shown to him in a short orientation course on the use of the library. Unfortunately some students graduate with no further understanding of the place of bibliography in scholarly work. The beginning student seldom receives any specific instructions for the making of a reading list for his essay. In a few courses he may be advised to purchase a manual such as Scholarly Reporting in the Humanities, by the Humanities Research Council, or he may be given a short set of instructions and examples compiled by members of the

staff.

A lecture, or series of lectures, given as an introduction to the use of the university library is sometimes dignified with the name "Bibliography". If the lecture is nothing more than a talk at the library, instructions on the procedure for borrowing books, and an indication of the location of some of the major bibliographies and encyclopaedias, it has no claim to the name of bibliography, valuable as it may be as an introduction to library services. On the other hand the name may not be entirely inappropriate if the course extends to several lectures and affords sufficient time for a demonstration of the uses of some of the major bibliographies and indexes, and even offers an opportunity for the student to try his skill with some model questions. These classes, which include an introduction to the library, are almost always given by a librarian and carry no credit towards a degree.

While the figures for university registration remained comparatively low, librarians found it possible to offer such classes to all freshmen, and to vary the content of the lectures according to the faculty in which the students were enrolled. As first year registration mounted into the thousands, librarians found it increasingly difficult, and in some universities the practice was abandoned or limited to students in special courses or to those who expressed a desire for such instruction.

Mechanical teaching aids are in use or under consideration on some campuses for the ever-growing numbers of first-year students. It is obvious that a filmstrip or motion picture by which a lecturer demonstrates the important features of a given bibliography enables hundreds of students to see a page thrown on a screen more clearly than a dozen could see the book itself in the hands of a lecturer. One step further substitutes a film with a sound track for both the book and the lecturer. A few Canadian librarians are interested in American experiments with "programmed instruction" or teaching machines, both simple and complex, for giving elementary instruction to beginning students on bibliographies, indexes, and printed catalogues.

Librarians in a few universities are also giving more specialized instruction to students beyond the freshman year. For example, at the University of British Columbia a one-hour compulsory lecture on bibliography is given to all students in English 200, and at the University of Toronto a librarian is responsible for two out of twelve lectures in French 2F
"Bibliography and Methods of Criticism". University and college librarians who are specialists in a subject field occasionally give a course on the bibliography of the subject to advanced students.

Before considering the teaching of bibliography beyond the introductory level, it is necessary to look at the nature of bibliography itself and consider the aspects which may be taught. Bibliographies in the strict sense of the word are often divided into two types, analytical or critical, and enumerative or systematic. Analytical bibliography is concerned more with the book as a physical object, as the visible form in which an author's thoughts are transmitted to a reader. It identifies editions, issues, impressions, and so may aid in determining which of variant readings is the closest to the author's intent. It may help in dating the undated, reveal wrongly dated works, and detect forgeries. A knowledge of analytical bibliography is a keen instrument in the hands of a scholar engaged in textual criticism.

Enumerative or systematic bibliography is concerned with the logical arrangement of titles and with the ideas put forth by the author rather than with the physical volume in which those ideas appeared. It includes lists of titles on a given subject, lists of works published in a given country or by a given author. However the two types of bibliography are far from mutually exclusive, since the characteristics of both may appear in one work. In the field of Canadians, for example, Marie Tremaine's A Bibliography of Canadian Imprints, 1751-1800 is both analytical and enumerative.

In Canada a course in bibliography is sometimes compulsory for undergraduates, especially for those in honour courses, and almost always compulsory for candidates for the master's and doctoral degrees in the humanities. The content of the courses varies greatly according to the subject, but usually stresses the enumerative aspect of bibliography. Fields in which the literature of the past is of first importance, such as English, Romance Languages, Germanic Languages, and History, usually offer a course that includes the following: general bibliographies, catalogues, and checklists, both author and subject arranged; the bibliography of the specified field of interest; training in the use of analytical and enumerative bibliography; instruction in the making of an enumerative bibliography adequate for a doctoral dissertation. The methodology of research in the subject concerned is frequently included and may determine the name of the course. In the History department the course is frequently known as Historiography and may be divided
into parts according to historical periods. In the English department it emphasizes textual criticism.

In general these courses are strongest in the special bibliographies of the subject and weakest in general bibliography and in the resources of related fields. In many courses training in the making of a bibliography is limited to the enumerative type and little attention is given to the techniques required for the minute description of a book which is essential in analytical bibliography. Even in courses for candidates for the doctoral degree in Canada there is little instruction in analytical bibliography such as that available both in Great Britain and the United States. A possible explanation may be the absence in Canada of large specialized research collections such as those which exist in the Bodleian, the Henry E. Huntington, and the Folger Shakespeare Library.

A related subject, palaeography, which is essential for scholarly work in the bibliography of certain historical periods, is the subject of a two-year graduate course at the Pontifical Institute of Mediaeval Studies, Toronto. Beginning in the second year of the course the students prepare a critical edition of a hitherto unedited text.

The teaching of bibliography in a university is the task of many departments and in each must conform to the special requirements of the subject. In only one, the library school, or department of library science, does it form the central core of the curriculum. There, bibliography is not only the subject of separate courses, but also permeates courses such as book selection and government publications. One of the prerequisites for admission to an accredited library school is a bachelor's degree or its equivalent. As a result, students entering a library school already have had some bibliographical training in the various undergraduate courses from which they came. The library school attempts to broaden the students' previous knowledge of general bibliographies and to add to it the major bibliographies in many special fields.

The library school, unlike other departments of the university, stresses general bibliographies, the great universal, national, and trade bibliographies, and the printed catalogues of some of the largest libraries, which form the nearest approach to world bibliography. Students become familiar with the important author-arranged bibliographies, both general and specialized, which are tools for the identification of a given title, and with the subject-arranged bibliographies, which afford lists of works, either complete or selective, on a given subject. They develop skill in the use of bibliographies, the ability to locate
titles rapidly, to interpret the abbreviations, to identify incomplete or incorrect references. Graduates of a library school who continue toward the degree of Master of Library Science have an opportunity of studying the bibliography of subject fields more extensively.

If bibliographical work is to develop in Canada, students must acquire not only a knowledge of existing bibliographies, but some understanding of the problems involved in compilation, and skill in techniques. All students at the library schools receive some instruction in bibliographical style and arrangement, and often may take additional work in elective courses. For example, the University of Toronto Library School offers an elective course in which each student examines critically some outstanding bibliographies and in addition compiles a fairly extensive bibliography on some subject in which he has a special interest. These bibliographies are usually enumerative or systematic rather than critical or analytical. Canadian library schools, in common with other departments of the universities, are teaching little analytical bibliography, although the background for such work is given in courses on the history of books and printing, as well as in courses on bibliography proper.

A knowledge of the process by which a book was produced alone makes possible the adequate description of the physical aspect of the work. E.G. Willoughby states that the history of printing "may be termed the basic study of bibliography." Survey courses in the history of writing, printing, papermaking, binding and other aspects of book production are included in the curricula of Canadian library schools. Palaeography is touched only briefly in courses leading to the degree of Bachelor of Library Science, but candidates for the Master's degree at the University of Toronto Library School who have the required background in Latin may register for the course given at the Pontifical Institute of Medieval Studies mentioned above.

There is a close relationship between the teaching of bibliography and the teaching of classification and cataloguing in the library schools. Courses in book classification develop in the student a knowledge of the major classification schemes and an appreciation of the logical arrangement of material. Some

well-known bibliographies are arranged by a library classification such as Dewey Decimal, Universal Decimal, or Library of Congress; others have special schemes developed by bibliographers for the works in question. In either case, the success of the arrangement depends on the bibliographer's understanding of the underlying principles of classification. Similarly the study of subject headings for a library catalogue emphasizes the consistent use of words, and stresses the relationships between subjects. This is important in a bibliography arranged by subject headings or one in which there is a detailed subject index.

Dr. Jean Lunn stressed the similarity between the rules for bibliography and cataloguing in the words: "With all their faults in theory and practice, cataloguing rules are far more highly developed and more generally accepted than are rules for bibliography, and although cataloguing codes will not satisfy all the requirements of bibliography it would be well if they were given greater recognition by some bibliographers". Cataloguing rules instil a respect for systematic forms of entry and accuracy of detail. They go far toward eliminating references that cannot be identified because of incomplete authors' names, incorrect titles, or missing series notes, and they lessen the inconsistencies too often found in the physical description of books. On the other hand the rules for the naming of bibliographies and for cataloguing must never be confused. Cataloguing rules by their very rigidity make it possible for generation after generation of cataloguers to work toward the building of a great library catalogue; they ensure that work done by one library may be interfiled with that done by another, and so encourage the growth of union catalogues and bibliographical centres. Rules for the making of bibliographies must be more flexible in order to comprehend the great variety of author and subject-arranged lists. They must be applicable in a bibliography that puts all its stress on the ideas contained in the works which it lists, and equally applicable in a bibliography that stresses only the physical nature of the books.

The courses, as outlined above, offered by the library schools in bibliography, the history of books and printing, classification, and cataloguing, provide a foundation for the development of bibliographers in Canada. It is not by accident that a majority of the members of the Bibliographical Society of Canada are graduate librarians.

One of the problems in teaching bibliography in Canada, as in other countries, is the lack of universally accepted style for the entry and description of books and articles. The style generally adopted for work in English studies varies from that in history and even more from that in physics and chemistry and in addition the individual universities and publishers have their own variants. A Manual of Style issued by the University of Chicago Press is followed widely in Canada with certain local variations. Other departments follow Scholarly Reporting in the Humanities, or a guide issued by the Library of Congress for its own bibliographers, Bibliographical Procedures & Style, which is more closely related to cataloging than the other manuals mentioned above. Such variations in style, although superficial, cause considerable confusion to students and are an annoyance to faculty members who are teaching bibliography in departments other than their own, or writing books and articles in more than one subject field.

Traditional methods of bibliography used for generations in the humanities have proved inadequate for the almost incredible number of periodical articles and research reports the entry and description of fields. Small pieces of material must be analyzed "in depth" at high speed to meet the demands of research in subjects where time is of first importance. Whether the listing, indexing, and abstracting of this literature is bibliography or not depends on the definition accepted for the latter word. Following the Second World War when the problem of access to the flood of scientific material became urgent, the phrases "bibliographical control" and bibliographical organization were common. These have been replaced largely by the terms "subject analysis" and "documentation". Meanwhile machine methods ranging from edge-punched cards to computers have been developed by the documentalists to provide multiple subject approaches with a rapidity impossible through standard bibliographical procedures.

A recent article⁴ on the teaching of bibliography in Russia shows the importance placed on the bibliography of science and technology in that country. In 1961 a sixteen-hour course was set up in institutions of higher learning to teach learning to handle scientific and technical information, Russian and foreign publications, the meaning of bibliographical terms, and the place of mechanization and automation.

In the United States a similar recognition of the importance of new methods for the subject analysis of scientific literature was evident in the recently published report of the President's Science Advisory Committee called the Weinberg report. The Committee recommended that the scientist himself take an interest in the problems of handling the information that he and his fellow scientists produced, and that the techniques of handling information be widely taught: "Familiarity with modern techniques of information processing is necessary for the modern scientist and engineer. Our colleges and universities must provide instruction in these techniques as part of the regular scientific curriculum".

Instruction in "modern techniques of information processing", or documentation, is available in Canada at the moment only on a comparatively elementary level. Library schools, especially through their courses in cataloguing, classification, reference, and administration, call attention to the problem and lay a theoretical foundation for further study. They frequently invite special lecturers in documentation and may arrange for the students to visit a computer centre such as the Institute of Computer Science at the University of Toronto. One course is available at McGill University Library School for credit toward the degree of Master of Library Science; occasionally a seminar is held at one of the universities, or a series of lectures is sponsored by a commercial organization. As computer centres develop in the universities, machine methods in documentation are certain to become the subject of teaching and research in Canada as they are in a few of the American universities. Such work might well be carried on at a computer centre in close cooperation with members of the teaching staff from a number of departments, especially mathematics, the sciences, and the library school.

All bibliographers are not trained in the universities. In Canada, as in other countries, many are self-taught, or have learned by experience in publishing or bookselling firms. Antiquarian book dealers and book collectors who specialize in some narrow field, from constant familiarity with their treasures, from the reading of booksellers' catalogues, and from "shop talk" often acquire a knowledge of bibliography more exact than that learned in university classes.

The success or failure of the teaching of

bibliography in Canada is evident in the number and quality of the bibliographies and works of literary criticism that are being produced. Since World War II there has been a marked development in bibliographical work in this country. The National Library, with its great union catalogue, together with the National Research Council of Canada are affording active leadership in the publication of bibliographies and in the setting of standards. Catalogues of federal government publications have been developed by the Queen's Printer, and indexes to Canadian periodicals have been reorganized and extended. Several outstanding bibliographies have been published such as A Bibliography of Canadian Imprints, 1751-1800, by Marie Tremaine, and A Bibliography of the Prairie Provinces to 1951, by Bruce E. Peel.

In spite of these examples, Canada is not in the forefront of bibliographical development. Canadians have taken a limited part in the bibliographical work of UNESCO and other international organizations. They have published almost no books or articles on the theory and development of bibliography and have no periodical carrying regular articles on analytical bibliography such as those which appear in The Records of the Bibliographical Society of America. There are no adequate bibliographies of Canadian history, few for local history; some of the provinces still have no catalogues of their early government publications; the works of many of our Canadian authors are covered only by preliminary lists, if at all.

In the related field of indexing and abstracting, the Canadian record is no more satisfactory. In the recently published Guide to the World's Abstracting and Indexing Services in Science and Technology there are nine entries under Canada compared with forty under Czechoslovakia. It may be argued that since Canada shares a common language with countries such as Great Britain and the United States it has less need of developing indexing services of its own. This defense would have more weight were it not that many subjects of strictly Canadian interest still lack adequate coverage.

As would be expected from the pattern of teaching in Canada, most of the general bibliographical work is being published by libraries or by individual librarians. Important examples are: Canadians from the National Library; catalogues of government

publications prepared in the library of the Queen's Printer: A Bibliography of Canadiana from the Toronto Public Library; Bibliography of Canadian Bibliographies, by Dr. Raymond Tanguay; A Bibliography of Canadian Imprints, 1751-1800, by Marie Tremaine; A Bibliography of the Prairie Provinces, by Bruce B. Peel. Closely related to bibliography are the Union List of Scientific Serials in Canadian Libraries, compiled and edited by the library of the National Research Council, and the Canadian Index to Periodicals and Documentary Films, published by the Canadian Library Association.

Bibliographers other than librarians, often members of the teaching staffs of the universities, have also been responsible for the compilation of a few general bibliographies in recent years. For example, A Check List of Canadian Literature and Background Materials, 1625-1950, was compiled by Dr. R.E. Watters of the English Department of the University of British Columbia, and A Bibliography of Canadian Cultural Periodicals was issued by the Department of Italian, Spanish and Portuguese at the University of Toronto in 1955. Much of the scholarly bibliography in special fields such as English literature, the classics, and geological sciences has been compiled by faculty members of the universities or by the research staff in scientific organizations.

This brief survey of the state of the art in Canada suggests that the teaching of bibliography could be strengthened at three points: at the undergraduate level by ensuring that no student receives a bachelor's degree without some understanding of the importance of bibliography as a key to the world's literature; at the graduate level by more emphasis on the great universal and national bibliographies and printed catalogues, and by additional training in the compilation of bibliographies; in the library schools by further opportunities for students to specialize in the bibliography of subject fields.

These objectives could be achieved most readily through closer cooperation between university libraries, library schools, and the subject departments in the universities. As indicated above, some university and college libraries are taking an active part in the bibliographical training of students, especially at the undergraduate level. This could be further developed if staff were available. Interdepartmental teaching in the library schools and the subject departments of the universities would be profitable. Professors on the staff of a library school who are trained bibliographers could offer courses, or share in the teaching of bibliography courses in other departments. Similarly more members of the
staff in departments such as medicine, physics, chemistry, music, and fine arts, could offer courses to those library school students who have the necessary background to enable them to specialize in the literature of the subjects concerned. This sharing of knowledge and experience between the departments within a university could do much to advance bibliographical work in Canada.

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