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SCIENTIFIC BIBLIOGRAPHY.

The Theory of National and International Bibliography.
(*With Special Reference to the Introduction of System in the Record of Modern Literature.*) By Frank Campbell
(of the Library, British Museum). Medium 8vo. Pp.
500. (London: Library Bureau, 1896.)

"WHAT is history," said Napoleon, "but a fiction agreed upon." . . . "The only point on which librarians are united is that classification is a question *disagreed upon*." So writes Mr. Campbell, and the quotation is an apt illustration of our present position. At a time, therefore, when the cataloguing and indexing of the literature of the mathematical and natural sciences is being so seriously taken in hand, and it is agreed that it shall be carried out by international co-operation, he is doing a considerable service by issuing in a collected form his various published papers on the theory of bibliography together with others not previously printed. Many of the suggestions made by him are undoubtedly of great value; it is a little unfortunate that his views are not presented in a more coherent, collected form, either at the commencement or end of the book, as it is not easy to extract the pith and marrow of his arguments, although it must be gratefully acknowledged that he has adopted the unusual course of trying, by means of darker type, to aid the eye as much as possible to discern the leading points in the several essays—thereby setting an example which it is worth while to carefully take note of.

The charm of the work is that it is characterised by breadth of view and the advocacy of a go-ahead-without-regard-to-obstacles policy, which give it a peculiar interest; indeed, it is delightful to find so much enthusiasm displayed over so dry a subject as the cataloguing of literature. But Mr. Campbell sees clearly the great importance of the problems to be solved, and that they must be dealt with on a corresponding scale, being evidently a determined supporter of the doctrine laid down by an authority so great as Carlyle ("You must front the difficulties, whatever they may be, of making proper catalogues") in the evidence he gave before the British Museum Commission of 1849, which is appropriately printed at the close of the volume. There can be no doubt that it is only by recognising the truth of this contention, *and carrying it into practice*, that scientific workers will be able in the future to fully secure from books the aid they can afford; it was freely admitted at our recent International Conference, and the fact that the meeting was dominated by such a spirit is the most hopeful omen of ultimate success that could possibly be desired.

"We are already half a century behind the times in bibliography, and are not moving fast enough," says Mr. Campbell; and he then asks, "Why this want of progress?" The reasons he gives, among others, are

"because we fail to recognise what an amount of theoretical and practical investigation of the subject is necessary before we can possibly be in a position to commence operations aright; because we continue to delude ourselves that it is possible for private enterprise

to carry out that which the State alone can perform; and because we expect that Bibliography will evolve itself without a preliminary expenditure of money. We continue to build libraries and to accumulate books, but we have *not* paid sufficient attention to making books still more accessible for research. Our attention has been too exclusively concentrated on collections in particular libraries, to the neglect of the great annual national collection pouring from the press. Moreover, we have become too contentedly accustomed to the idea of confusion, and have grown to regard it as a natural and necessary evil. But it is high time to rise and shake ourselves free from the trammels of past traditions. We have roads and railways and rivers free of access to all. But the channels of *printed* thought communication are yet horribly blocked. It remains for us to clear them."

To all of which every one interested in the subject will say—Amen!

The book is very largely devoted to the discussion of matters of bibliographical reform. It was intended to issue it in time for the International Conference, and it would undoubtedly have been of interest to us. It is satisfactory that the circular letter issued by the Royal Society in 1894, in order to obtain opinions as to the feasibility of preparing a catalogue of scientific literature by international co-operation, is referred to by Mr. Campbell as remarkable as showing how thoroughly the Committee grasped the essential points of importance from a bibliographer's point of view. As we have been assured by over-anxious critics that we were on an altogether wrong track, such recognition is encouraging; and when the steps taken both during the preliminary stages and at the Conference are considered, it is clear that on the whole our action has been substantially in accord with the views set forth in detail in the work under notice, and will involve ultimately the putting into practice of many of its recommendations.

To readers of NATURE, one of the most important chapters in the book is that dealing with the influence and functions of learned societies in regard to bibliography, in which the much-needed and valuable advice is given that the learned societies should try to define their several jurisdictions more sharply, so as not to overlap, if it can be helped; and that they should pay greater attention to the details of publication. A large mass of literature appears every year—Mr. Campbell says—which, through the neglect of certain necessary principles and details, raises gratuitous obstacles in the path of research, and defies the best efforts of librarians to remedy the evil. . . . Learned societies are among the worst offenders in the matter, he asserts. . . . But in the majority of instances, he thinks, it is rather a matter of ignorance, or oversight. There has not been sufficient scientific study of the subject, and men have not yet realised the full necessity for absolute co-operation between the author, printer, publisher and librarian.

Those of us who have to do with the publication of accounts of scientific work are only too well aware that such is the case. There is no doubt that learned societies allow far too much freedom of individual action, and that while taking objection to technical points—the responsibility for which might well be cast entirely upon authors—allow the gravest literary malpractices to pass unnoticed. Writers in scientific periodicals are too often either inexperienced or careless owing to want of leisure,

and consequently offer papers which are ill-arranged and intolerably diffuse, being full of unnecessary detail. I would have all such returned to their authors, although I well know, from sad experience, that nothing gives greater offence. But what a reformation of our scientific literature will follow from the adoption of such a course! We shall then be able to read what is written. Carefully composed and provided with well-chosen titles, our papers will be easy to index; and when memoirs are kept within reasonable compass, library shelves will not be so grievously overburdened with waste-paper as they are under the present want of system.

"The writing out of scientific investigations is usually a troublesome affair; at any rate, it has been so to me. Many parts of my memoirs I have re-written five or six times, and have changed the order about until I was fairly satisfied. But the author has a great advantage in such a careful wording of his work. It compels him to make the severest criticism of each sentence and each conclusion. . . . I have never considered an investigation finished until it was formulated in writing, completely and without any logical deficiencies. Those among my friends who were most conversant with the matter represented to my mind my conscience, as it were. I asked myself whether they would approve of it. They hovered before me as the embodiment of the scientific spirit of an ideal humanity, and furnished me with a standard" (H. v. Helmholtz, Jubilee Address).

May we not say—"Scientific societies, please copy"? No one could take offence if such a quotation were printed at the head of the circular letter requesting an author to revise his manuscript.

To reproduce almost verbally the voluminous notes of a piece of work made from day to day in the laboratory book serves the purpose neither of the writer nor of science, as the results become obscured in a mass of unnecessary detail. And we rarely need to know the process of self-education through which the worker passes. In this matter also we may therefore, as a rule, safely take Helmholtz as our guide, and follow the advice he gives by implication when he says: "In my memoirs I have, of course, not given the reader an account of my wanderings, but I have described the beaten path on which he can now reach the summit without trouble."

Mr. Campbell has much to say on the value of the section in the arrangement of a work which may be commended to scientific writers. All must agree with him that the future of literary study is greatly dependent on special libraries or sections of libraries in which *all* the works on particular subject-groups are to be found; and that, instead of following the principle of first making a muddle and then indexing it, scholars of particular subjects will demand that their material shall be kept separate from other literature. The argument applies equally to individual papers, if these are to be properly indexed in the future; and in principle it is the argument which leads us to insist that carefully classified subject-indexes must be regularly supplied for the use of workers in science.

"One thing is very certain, that people *will* have special bibliographies, whatever we may say, because they supply a legitimate want. We may, therefore, just as well seriously take the matter in hand and see that it is done properly once and for ever, instead of allowing it to be done badly. And on this head be it remembered that the curse of bad work does not always end with itself,

but often not only delays but actually prohibits the work from ever being properly carried out."

Sounder advice could not possibly be given, and it is refreshing to find the opinion expressed by Mr. Campbell that it is a fallacy to suppose that bibliographers can never agree together on any one system of classification; one of the most deadly arguments brought against the idea of special bibliographies, it is one, he says, which he trusts we shall soon trample under foot. And it is important to note that he is not considering books alone; any article on a subject is defined by him as a work to be catalogued and indexed.

Mr. Campbell regards State aid as essential in the preparation of national bibliographies, and his proposals on this head are worthy of the most serious attention; it is more than probable, now that the work of organisation is being put in hand, that effective steps may soon be taken to secure the registration of State publications for which he pleads. One of the most important resolutions adopted at the International Conference had reference to the organisation of national offices in connection with the international central office.

Once set rolling, the ball cannot possibly be brought to rest. The appearance of so many distinguished and representative delegates at the meeting at the Royal Society's rooms—and the complete unanimity which prevailed on all essential questions—was evidence of the general willingness to recognise the importance of the scheme; the vote taken at the outset was a formal ratification of its purpose, and will serve to pledge the various Governments concerned to do their utmost to facilitate the execution of the enterprise. There can be little doubt that scientific bodies generally must now regard it as their duty to promote such a work: those who do not will be guilty of shameful desertion in the face of the enemy, for never was such an opportunity given before.

But the Conference clearly recognised that the individual worker must also take an important share in the work, as in preparing the subject-matter index regard is to be had not only to the title of a paper or book, but also to the nature of the contents. It will be necessary therefore, in the future, that all publishing bodies insist that authors supply subject-indexes with their papers, as the work of reading papers with this object in view cannot possibly be carried out at any central office. The preparation of such subject-indexes will, however, need the greatest care, in order that whilst all points are indicated to which the attention of workers should be drawn, at the same time the entries are, as far as possible, limited in number.

It is to be hoped that serious attention will now be given to the question of indexing, and that the requirements to be met will be fully realised. As Mr. Campbell very properly insists, a large amount of theoretical and practical investigation of the subject is necessary before we can possibly be in a position to commence operations aright and develop a scientific bibliography of the literature of science. How to classify the subject-matter in the various main and sub-branches of science is the great question before us, which needs an immediate answer, and to which we must therefore most earnestly devote our attention.

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