

THE INTERNATIONAL CATALOGUE OF SCIENTIFIC LITERATURE¹

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Since presenting an account of the work of the International Catalogue of Scientific Literature at the first general meeting of the American Philosophical Society thirty-nine volumes have been published and distributed to the subscribers in the United States; that is to say all of the First Annual Issue for 1901, all of the Second Annual Issue, excepting the volumes of zoology, and four volumes of the Third Annual Issue, these constituting a classified index to all original contributions made in all parts of the world to practically all of the pure sciences. Now that the work is well under way a critical examination is possible to determine whether the methods used are calculated to answer the demands of scientific investigators in whose interest the catalogue was primarily undertaken. As is natural in any new enterprise and especially in one having to do with so many and diverse interests, criticism has been aroused; however on the whole the work has been well received and seems to bid fair to completely fill the expectations of its sponsors.

Sins of omissions are the principal ones charged, but as the organization is yet comparatively new this fault is expected to be only a temporary one and capable of being remedied, since the omissions in one volume can be made good in the next on the same subject. It should be understood that these annual issues are not year books, although after the volumes dealing with the literature of the present year (1905) it is expected that the work will be so well in hand and up to date that each subsequent yearly issue will practically index the literature of the previous year.

Leaving aside this question of promptness of treatment, which is only one of available funds and business organization, I come to that of the system of classification.

I believe that, upon reflection, it will be generally admitted that any system to be of permanent value must be elastic not only as regards its details but also in its main heads, which are of course based on the accepted theories of science for the time being.

¹Read at the general meeting of the American Philosophical Society, Philadelphia, April 12, 1905.

As an illustration ; how would an exact and inflexible system of classification of zoology or biology founded before the time of Darwin have treated the literature of his time and after. How would the exact chemical classification of Lavoisier's day deal with Mendeléeff's theory. As the present investigations in radiant energy seem to be setting the teachings of yesterday topsy turvy, so must we constantly expect, as new discoveries are made, radical changes in accepted theories in all branches of science, and as the literature of these subjects must be properly and thoroughly indexed as it appears, it is beyond question that any system of classification to be of any permanent value must be elastic, easily elastic, in root and branch.

The schedules of classification adopted at the beginning of the work and used up to the present time were the result of a systematic investigation made through the representative scientific institutions and societies throughout the world, and the needs of each science were thoroughly considered and made to harmonize, as far as then seemed possible, with the usage of all countries. But it is here that the main difficulty of the work is found both from the scientific and geographical point of view. This, however, was foreseen and provided for when the work was undertaken, as it was decided to hold an international convention in London during the present year to reconsider and revise, if necessary, the regulations under which the work is being carried on. The convention will be held in July and representatives from all countries will be invited there to discuss the result of their experience, with the object of correcting any faults which may exist. Zoological taxonomy seems to be more criticized from the point of view of the generally accepted methods used in the United States than any other branch of the work. However in all of the seventeen branches suggestions from the point of view of the expert user of the catalogue will be of the utmost value in eliminating defect.

I think no more fitting place and opportunity could be found than the present to earnestly solicit the aid of those interested in the welfare of science. Sets of the International Catalogue are in the library of this society and in most of the larger libraries throughout the country and are therefore easy of access. Concise and definite criticisms and suggestions from specialists in any of the sciences coming within the scope of the work will, if sent to the Smithsonian Institution, be brought to the attention of the international convention and as a result the needs of American scientific workers will be furthered and at the same time the undertaking as

a whole improved. Let me emphasize the fact that in order to be useful the criticisms and suggestions must be definite.

That the work is one of magnitude may be gathered from the fact that while now only in its third year of publication over half a million reference cards have been received at the London Central Bureau of which over fifty thousand are references sent for the United States from the Smithsonian Institution. The limited funds at our disposal delay and embarrass the work in this country; however the system as at present organized is capable of expansion at any time either into fields not at present embraced within the scope of the work, such as the so called applied sciences, or in adding to the manner of presenting the index. For instance, cards or proof sheets might be furnished immediately after the appearance of the publications indexed. Such methods would of course only be adjuncts to the yearly volumes which would always be the permanent records.

Recently a plan has been organized whereby authors of papers are in special cases communicated with in order that through the cooperation of author and indexer the subject matter may be completely treated from the point of view of the author and systematically treated from the point of view of the bibliographer.

This method entails considerable clerical work but the results seem to justify the effort. Another plan which is being gradually worked out as time permits is to send to each author from time to time a list of his papers which have been indexed at the institution for the catalogue with the request that attention be called to any omissions or errors which may exist. These two plans, were it possible to devote a sufficient time to them, would render the work as exact as it is possible to make a complex index.

The entire work of preparing cards for the United States is done at the Smithsonian Institution by five persons though we have the advantage of the advice of members of the staff of the Smithsonian Institution and the National Museum and in some cases also of persons connected with other government scientific bureaus.

I wish to specially acknowledge the services of Mr. Leonard C. Gunnell who is in immediate charge of the force to which I have referred.

The cost of the work in the United States thus far has been borne out of an allotment made by the Secretary of the Smithsonian Institution and the actual work is carried on in connection with the library of the institution.