

bow would be) and knowing what to look for. The chance of success would justify many trials, for the game would be worth the candle.

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THE NAMING OF METHODS, PROCESSES AND TECHNIQUES FOR AUTHORS

FOR some time, it has been the custom to give the name or names of authors to various types of discoveries and methods. However, it is not always easy to assign credit to a particular individual, since two or more workers or scientific groups may announce some new fact or series of facts at about the same time. There are probably a great number of such instances that have occurred and the following serve to illustrate the point: (1) the discovery of oxygen by Scheele and Priestley, and (2) the isolation of and the identification of crystalline Vitamin C by King and Szent-Györgyi.

The purpose of this note is to call attention to the name of the reaction or process for determining alcohol by the potassium bichromate-sulphuric acid method. In 1846, Thomson¹ announced that alcohol was oxidized to aldehyde in the presence of potassium bichromate and sulphuric acid and that the green oxide of chrome was produced, in an article, "On the Mode of Testing the Presence of Minute Quantities of Alcohol." It was not until 1896 that Nieloux² reported the use of this reaction in a method for determining alcohol. However, the recent literature gives credit to Nieloux for the method, and some authors have even called it the Nieloux method.

The oversight by Nieloux in not referring to the paper by Thomson does not detract from the latter's report, and, because of the priority of this report, we suggest that the procedure that involves the reduction of a potassium bichromate-sulphuric acid solution be named the Thomson-Nieloux method. The solution not only gives a green color with alcohol, but it does when it is treated with a variety of substances such as glucose, levulose, formalin, paraldehyde, diethyl ether, ethyl acetate and lactic acid.

It is possible that Nieloux did not notice the paper by Thomson, since that sort of oversight has inadvertently happened many times. One is often aware that the authors of certain publications have either made no great effort to search the literature or else ignored contributions by other individuals.

The reason for not referring to previous work in one's field of study is always difficult to explain and the custom, if practiced continuously, will lessen the

value of one's contributions. The custom of using only the references to papers from one's own laboratory or chiefly those references by one's countrymen seems to be practiced more widely in some other countries than in the United States. This latter condition might be partially explained by the fact that numerous abstracting and indexing facilities are readily available to most scientists in this country.

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GOVERNMENT AID TO EDUCATIONAL INSTITUTIONS

DR. COWDRY's article in the June 22, 1945, issue of *SCIENCE* ably presents the plight of endowed institutions of higher learning resulting from the drying up of endowment sources and the fall in interest rates. As a remedy he advocates a federal subsidy in the form of permission to purchase specially issued Government bonds yielding an interest rate higher than that presently obtainable on other securities, but desires that the aid be granted without federal control being exercised upon the institutions thus aided.

There appears to be a feeling that Government control is akin to a plague which defiles whatever it touches. While some projects may have experienced unfortunate results under Government control, others, such as the Interstate Commerce Commission and the Securities Exchange Commission, are admitted even by their early critics to have substantially achieved their objects; and may I suggest that, in any case where a grant of public money is involved, the granting of such money for any project, however worthy, without suitable controls, would be a betrayal of public trust. When private wealth bestows its largess upon educational institutions, it invariably does so under carefully stipulated conditions. By what logic can it be maintained that public funds should be granted to the same institutions without Government control being exercised in the public interest?

However excellent our private institutions of advanced learning may be, and however well they may have carried the torch of independent thought, it is rumored that certain undemocratic practices have crept into the administration of some of them relating to discrimination in the faculties and student bodies against certain groups. It would therefore appear that any Government subsidy should be granted only on full compliance with certain minimum requirements. An institution to receive such help should be one in which:

¹ Robert D. Thomson, *Monthly Jour. Med. Sc. London*, 6: 411-413, 1846.

² Maurice Nieloux, *Compt. rend. Soc. de biol.*, 10.s., 3: 841-846, 1896.

(1) the faculty is chosen solely on the grounds of professional competence, teaching ability and personal integrity; and

(2) the student body is admitted solely on the criteria of ability to assimilate and profit by the instruction given (again assuming personal integrity);

and Government supervision adequate to enforce compliance with such requirements should, in the public interest, be instituted in respect to those institutions receiving the subsidy.

Dr. Cowdry quotes from Mr. Hilpert, a professor of constitutional law, to establish the legality of such subsidies. Professor Hilpert holds that granting such "would not exceed the delegated powers of Congress" and "would not violate the due process clause of the Constitution." I am not qualified to pass upon these two dicta, but I should like to direct attention to the third conclusion of Professor Hilpert, that the proposed scheme does not "constitute an establishment of religion in violation of the First Amendment, *even if benefits are extended to so-called sectarian institutions*"; to support which, he adds: "Realistically, sectarian colleges and universities (I exclude avowed theological seminaries) *do not exist to perpetuate a religion but to provide secular education . . .*" [italics mine].

While this may be true in a measure for certain sectarian colleges of the so-called "more liberal" sects, it is scarcely the case with many others. Though the latter sectarian colleges may teach some non-controversial subjects substantially as they are taught in secular institutions, their teachings in other subjects are colored by their particular sectarian doctrines in a manner which can scarcely provide what may be termed a "secular education." And as to the suggestion that such sectarian institutions "do not exist to perpetuate a religion"—the exact opposite would appear to be the situation. This is evidenced by the active support they receive from their respective sects,

the assiduity with which new institutions of this class are sought to be founded, and by the reports in the daily press of the many sermons and sectarian addresses which inveigh against so-called "Godless" education, *i.e.*, the secular education, the providing of which Professor Hilpert naively suggests is the object of the generality of sectarian colleges.

According to the current "World Almanac," the followers of the 256 different religious bodies in the United States, in the 1936 census, numbered some 56,000,000. Thus more than one half our population is without religious affiliation. Regardless of any technical constitutional interpretation, what equity could be claimed for a scheme which would tax the greater part of our population without religious affiliation to provide support for religious institutions of the lesser part? And in a democratic society, the argument is just as potent were the proportions reversed. To the non-legal mind, at least, the granting of such a subsidy to sectarian institutions seems to contravene the spirit, if not indeed the letter, of the constitutional provision against the establishment of religion.

It would seem, therefore, that there should be added to the two minimum requirements as to which an institution of higher learning (or in fact any educational institution of whatever grade) must qualify before receiving any public funds, another which would provide that in order to receive such help:

(3) the institution shall not be controlled by or affiliated with any religious sect or organization, shall not require any religious qualification of any of its governing personnel or boards, or of its faculty, or of its student body, and shall not require attendance at any course in religious instruction, or at any religious services.

The subsidy which Dr. Cowdry advocates, if protected by the three fundamental restrictions suggested, might well be deemed to be in the public interest.

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SCIENTIFIC BOOKS

AMERICAN FORESTS

Behold Our Green Mansions. A Book about American Forests. By RICHARD H. D. BOERKER. xiv+313 pp. 96 full-page plates from photos, arranged through the text in groups of sixteen, plus numerous maps, graphs and tables of data. The University of North Carolina Press. 1945. \$4.00.

THIS book, bound in blue cloth with green title patch, is essentially a volume on the scientific and practical aspects of forest conservation in the United States. It has been written by a man who has spent

his entire professional career of thirty-five years very close to the subject. At the outset he outlines his purpose to depart from the traditional, passive, "woman's club" ideas of conservation and to accept as his guiding light the more dynamic and scientific principles that underlie the restoration and maintenance of American forests for multiple use and with human welfare in a very broad sense as the ultimate object.

The book contains about all that one could wish in a one-volume treatment of so complex a subject. It impresses us as one of the very best publications