SCIENCE AND POLITICS

AT the St. Louis meeting of the American Association for the Advancement of Science, the council passed the following resolution:

That sectional officers avoid placing on their programs papers relating to acute political questions on which public opinion is divided.

I know nothing of the circumstances leading to this resolution. If papers offered to the sections were inspired by partisan politics rather than by science, they would deserve condemnation and exclusion. But the resolution does not refer to such papers; it implies that scientific men should not discuss matters relating to acute political questions on which public opinion is divided. To one who believes that in the present chaos of conflicting opinions and purposes the finger of science should point the way to safety, this seems almost incredibly stupid. I am of course aware that a scientific man who tries to throw the light of truth on the field of political discussion is not unlikely to be abused for his pains. He may find honest people doubting his integrity or his intelligence. He himself is only too well aware of his liability to error. But in the face of all this, he must and should persevere, knowing well that his feet are set upon the path of progress.

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January 14, 1920

QUOTATIONS

THE DUES OF THE AMERICAN ASSOCIATION AND THE SALARIES OF SCIENTIFIC MEN

THE revised constitution of the American Association for the Advancement of Science, as presented at the Baltimore meeting, was adopted at St. Louis with only one substantial change—an increase of the annual dues to five dollars. This change had been recommended, after careful consideration, by the committee on policy and the council and was adopted by unanimous vote at the opening general session of the association. The increase in the dues only meets the general situation. All the expenses of the association have increased in some such proportion, except the salaries of the officers, and it would be unfair to them and a bad example to other institutions, to retain nominal salaries paid in depreciated dollars. This has been done in the case of teachers in many institutions of learning and for scientific men in the service of the government, while commensurate with the increased cost of living have been the increases in wages for many of the working classes, and of the earnings of most professional and business men.

Institutions of learning and the scientific bureaus of the government have suffered alarming losses from their staffs. At the present time many men of science are hesitating between loyalty to their institutions and research work, on the one hand, and duty to their families and the attraction of new opportunities, on the other. In one government bureau three men are now holding open offers of twenty to thirty thousand dollars a year to see whether the Congress will increase their salaries to six or eight thousand.

If men are driven away from positions where they are using their ability and their training for the general good, and if those who remain are compelled to use time that should be devoted to research or teaching to earning money from outside sources, the future of science and with it the welfare of the nation will be jeopardized. A generation might pass before there would be recovery from the resulting demoralization. It would be indeed humiliating to conquer Germany in war and then permit it to surpass us in the arts of peace.

It is certainly unfortunate that the American Association should be compelled to increase its dues, as measured in dollars, at a time when all costs are advancing to such an extent that those living on fixed salaries find it extremely difficult to make both ends meet. It would, however, be a still more serious misfortune to permit the work of the association and its publications to be crippled. These are important factors in the advancement of science and in impressing on the general public the place of science in modern civilization and the need of maintaining research work for the national welfare.

The meetings of the association and the

publications going to its members and read by a wide public are forces making for appreciation of the value of science to society and the need of giving adequate support to scientific research and to scientific men. Each member of the association contributes to this end and does his part to improve the situation for others as well as for himself. It is consequently to be hoped that no one will permit his membership to lapse on account of the necessary increase in nominal dues, but, on the contrary, that every member use all possible efforts to increase the membership of the association and to promote its influence and its usefulness.—*The Scientific Monthly.*

SCIENTIFIC BOOKS

The System of the Sciences; Principles of the Theory of Education. By Wilhelm Ostwald. The Rice Institute Pamphlet, Vol. II., No. 3, Nov., 1915.

These two lectures were prepared to be given at the inauguration of Rice Institute but the author was prevented from delivering them in person by the outbreak of the Great War. The purpose of the lectures is ambitious, being no less than to propose a fundamental system or classification for the branches of science and, on the basis of this system, to suggest a system of pedagogy which should replace, in some measure, our present system. The subjects now taught, in our universities, in particular, have grown up in an irregular, hit-or-miss fashion, especially as regards the introduction of new subjects, because "Wherever there is a gifted representative of a new discipline who is an excellent teacher and at the same time scientifically productive, he will be able sooner or later to acquire the means and influence to develop this new discipline into a recognized science." Professor Ostwald wishes to substitute for this accidental development a rational, systematic cultivation of those fields which will be most useful—presumably, though he avoids saying so directly, with the repression and discouragement of the gifted individual who does not properly fall into the scheme which has been laid down. This is scarcely in accord with that "Lehrfreiheit" of which the older Germany was so proud.

The historical method is used, in part, to discover the proper system. "All sciences in the early stages of their development formed one great whole, which, together with all other departments of human activity having to do with mental work and cogitation, was intrusted to the oversight of a single corporation—the priesthood." And so the theological faculty is the oldest—then came law—he might have said, perhaps, the Roman Law, for our modern world—and medicine. All the remaining sciences are united in the fourth, the philosophical faculty. The great technical schools form, practically, a fifth faculty, which is not, however, recognized as such.

The statement on p. 112 that "the pure and abstract sciences grow by degrees out of the applied sciences" seems scarcely consistent with the beginnings of the higher forms of knowledge in the hands of the priesthood. Nor does it agree with the development of science through such great masters as Gallileo, Newton, Boyle and Lavoisier. Applied sciences made very slow progress until men came who were interested to know the secrets of nature rather than to apply their knowledge to practical ends. The same idea is emphasized again on p. 121 in the statement that "all sciences have had their origin in the needs and desires of life." This is a utilitarian point of view which we are scarcely prepared to accept.

The over-emphasis on classical and linguistic studies is traced back to the time of the Renaissance when such studies opened to the world a wealth of material from an old and superior, but half-forgotten civilization. At such a time the exact knowledge of the languages which should bring back the old life and philosophies of the Greeks and Romans was well worth while. But now that we have developed a different and very much better civilization of our own the time devoted to classical studies can not be so well justified. It is possible, however, that the author under-