The individual may be open-minded to the work of others but be very conservative when considering facts which tend to upset his own published conclusions.

Of course open-mindedness can be carried to an extreme. To be open-minded does not mean to accept all statements with equal freedom. That would be credulity and not open-mindedness in the sense of the scientific attitude. The scientist does not receive the statement that the earth is flat by saying: "That may be so; some say it is round. I will look into the matter."

I now wish to speak of a not infrequent tendency among scientists against which we all need to struggle. We may retain the scientific attitude in our specialty or in science in general but lose this attitude when we approach such subjects as politics, religion or business. During the recent war there were people who under the influence of war hysteria hated everything German, even German music, and belittled the achievements of German science—an attitude scarcely to be called unprejudiced. Can we say that all scientists were free from this feeling? Since the war many people, good and true, fearful for the foundation of things as they are, have been stampeded into condemning others because they were said to hold radical views and, Heaven protect us! they even might be Bolshevists. This, though these good people might not know what a Bolshevist was—the word was enough, it sounded bad. Can we say that all scientists were entirely free from this feeling—this unreasoning mass action?

Clear thinkers are responsible for social progress. Scientists are well in the van among leaders of the world's thought. But we are of the people. We are not separated as a class phylogenetically. We are not moving in a definite direction by means of physical evolutionary processes, as is the Morgan horse or the collie dog. Our ranks are being ever added to from the mass of the species. The roots of our lives lie in the prejudices of the past. From this standpoint one may well express surprise that so many have disentangled themselves from the past and have progressed so far toward the ideal of absolute open-mindedness. These links with our common heritage have been largely severed by scientists so far as concerns their own special field. But in other fields the links may still hold us. We require verification concerning statements of scientific facts; but we may accept without hesitation the most unverified statements about the League of Nations or German reparations. Propaganda could make no headway were statements met with scientific inquiry.

Finally, I believe strongly that scientists as a class should carry their scientific attitude into the realms of affairs outside the world of science. The scientific method of thought has been applied chiefly in a material way and not sufficiently toward the solution of economic problems. It is absurd for a scientist to shiver with fear if he sees a black cat cross his path or if he walks under a ladder. It is equally absurd to believe that all Germans or all democrats, or all Roman Catholics or all I. W. W.'s, or all the members of any social, political or religious class are undesirables and a menace to society. Why should we hesitate to apply scientific methods of thought to the tariff, to ship subsidy, to birth-control, to the recognition of Russia, to the ancient custom of marriage, to the Centralia trials, to the Ku Klux Klan and to a thousand other subjects upon some of which we may have formed opinions based upon unverified statements, thus often being the victims of systematic propaganda? Until we can do this we have not attained freedom; until then our ancestors are reaching up from the oblivion of the past to direct our course.

A. S. HITCHCOCK

U. S. DEPARTMENT OF AGRICULTURE

UNIVERSITIES AND LEARNED SOCIETIES

IT is with gratitude that we of the universities return once a year to this ancient society, and we depart again with confidence renewed. Here, but seldom elsewhere in our country, we find an unchanging devotion to the truth for its own sake, and a simple conviction, such as a plain man may grasp, of the *value* of truth. This is a society which has and feels no need to advertise its wares, and thereby to cheapen them, which happily escapes the tendency that is turning our institutions into mechanisms, which still believes in the individual, and does *not* believe in committees and councils of the elect.

These rare and surpassing merits of the Philosophical Society perhaps are, and have been, more the result of good fortune than of deliberation. They are due to detachment, to a failure to cooperate in setting up visionary projects which are not adapted to the nature of man; in short, to a blessed inactivity on the part of the society and to a corresponding free activity on the part of the members.

How uncommon elsewhere are these old-fashioned virtues! The colleges and universities, their equilibrium disturbed by the addition of vast schools of journalism and of pedagogy, of summer schools, evening schools and correspondence schools, move on with the civilization which they serve into a future that we can not prophesy. This is as it should be. But the change is painful, it is often directed by ignorance, and it leads to the worship of many strange new gods.

[1] Speech at the annual dinner of the American Philosophical Society, Philadelphia, April 26.

Too often the universities have taken over from the world of affairs a conception of useful knowledge and a concept of usefulness that would have chilled the heart and stirred the indignation of Franklin. Practical men, it has been said, are those who practice the errors of their forefathers.

But this society remains true to Franklin's tradition. He knew, and we do not forget, what Sadi Carnot's reflections on the motive power of heat and Pasteur's studies of wine making, of anthrax and of rabies illustrate, that there is common ground for the theoretical and the practical, just because the most abstract knowledge is the most general, and thus the most useful, and again because what is important often owes this to the operation of an important principle.

Let this pass. It is not the changes in the universities, it is the national organization of science through national societies, councils and committees that one holds in smallest esteem to-day—this, and the dependence of such organization upon money, upon money provided in the expectation of a return and in the hope, occasionally, of a disproportionately great return.

There has grown up in America as a legacy of the war an activity that is administrative, an administration that is bureaucratic, a bureaucracy that is unconsciously guided by any consideration but that of the true interest of science, or, in the proper sense, of true usefulness.

The men of science of America, in their corporate capacity, happily only not through this society, now find themselves allied and almost in partnership with industry and business for the study of such questions as the place of sandwiches in the diet; they have been won for the support of the researches of the Baby Goose Society and are about to consider an alliance with the National Selected Morticians.

From this state of affairs escape will be difficult. The fact is that a mechanism, excellent for some purposes, and conceived with the highest motives, has all but taken control of the men whom it should serve. Such a mechanism can not be actuated by the forces which actuate true science, but in spite of every difficulty it *must* be controlled by them.

To its honor and glory our society has had nothing to do in bringing about this disgraceful and ridiculous condition. May it, by continuing to cultivate its garden, contribute to the cure of that which it has not caused.

LAWRENCE J. HENDERSON

THE BRITISH ASSOCIATION AND THE TORONTO MEETING

The British Association for the Advancement of Science, which was founded in 1831, meets annually for one week or longer at important centers, other than London, England, and it occasionally meets in other parts of the British Empire. The association has met in Canada on three previous occasions, *viz.*, in 1884, 1897 and 1909. Other overseas meetings have been held once each in South Africa, 1905, and Australia, 1914.

The average attendance at annual meetings of the association for the 83 years previous to 1920 was 2,330. A proportion of the attendance consists always of residents in the locality where the meeting is held, but the large proportion are visitors. The Toronto meeting affords an exceptional opportunity for intercourse between British, Canadian, American and European workers in science.

A preliminary program will be forwarded on application to the local secretary, British Association, Physics Building, University, Toronto, and those who intend to be present at the meeting are particularly requested to apply for this as soon as possible.

No technical qualification is required on the part of an applicant for admission as a member of the association, nor is there any limitation in respect of nationality. The form of membership of most interest to Americans and Canadians, who are very cordially invited to join for 1924, is that of annual member.

Payment of $7.50 made before or at the meeting entitles the annual member to attend the meeting and to receive the report. Payment of $5.00 entitles the member to attend the annual meeting and the membership ticket admits the holder to any of the sectional meetings and to the various popular lectures, receptions, local excursions, etc., which are features of the meeting.

Membership tickets for the meeting may be obtained from the local Honorable Treasurer, British Association, Room 50, Physics Building, University, Toronto; cheques should be made payable to the British Association for the Advancement of Science.

Arrangements are being made with the railway companies for reduced rates on the return fares of those who hold membership cards. Hotel accommodation should be reserved in advance of the date of the meeting.

SCIENTIFIC MEETINGS

The inaugural general meeting will be held on Wednesday, August 6, when Major-General Sir David Bruce, K.C.B., F.R.S., will assume the presidency in succession to Professor Sir Ernest Rutherford, F.R.S., and will deliver the presidential address.

The association is organized in thirteen sections with presidents for 1924 as follows:

A. Mathematical and Physical Science: Sir Wm. Bragg, K. B. E., F. R. S.