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Science in Parliament

THAT there should be some machinery for the purpose of establishing a connecting link between Parliament and science is a proposition to which much lip-service has been paid, but, until recently, little more than that. Much might be written to demonstrate the desirability of such liaison. The effort would only amount to pushing an open door; the outlook for achievement would be more promising if that door were *not* open. To have aspirations accepted without their translation into action is a far less healthy situation than to encounter a virile opposition which engenders conflict. An unchallenged ideal which is not translated into action only finds an inglorious resting place in 'no man's land'.

Under any democratic constitution, scientific workers cannot hope to convince politicians that they control enough votes in a constituency to be able to influence representation in Parliament. Votes dominate the atmosphere in which politicians live and have their being; they are the politicians' oxygen. Roughly speaking, the electorate of the United Kingdom is thirty millions. At a liberal estimate the workers in pure and applied science in the United Kingdom number thirty thousand—or one thousandth part of the whole. It has been said that under a democracy heads are counted rather than what is in them; and the late Augustine Birrell once remarked "Minorities must suffer: 'tis the badge of their tribe". Nevertheless the sufferings of minorities frequently prove to be their salvation. Sufferings beget clamour; clamour begets attention; and attention precedes achievement. But the clamorous must first of all know what they want, and, above all, speak with a united voice. Having mastered that fact, the world is your oyster—be you a majority or a minority.

In recent months it has been suggested on several occasions that scientific workers and scientific methods might be usefully employed in the construction of schemes for the national well-being. At the Leicester meeting of the British Association in September, the idea of establishing a connecting link between science and Parliament found support, and Sir Frederick Gowland Hopkins in his presidential address, as well as in his speech at the anniversary dinner of the Royal Society, gave strong approval to the movement for promoting closer contact between science and social problems. Some time before these views had been

publicly expressed, the British Science Guild and the Association of Scientific Workers had taken definite steps towards the project of establishing a Parliamentary Science Committee. With the support of these two bodies, the Royal Institute of British Architects, the Institution of Professional Civil Servants, the Society of Engineers, the Institution of Mechanical Engineers, the Institute of Metals, the Institution of Naval Architects, the Joint Council of Qualified Opticians, the Oil and Colour Chemists' Association, the Pharmaceutical Society of Great Britain, the Institute of Physics, and the South Eastern Union of Scientific Societies, the Parliamentary Science Committee has become a corporate entity on strictly non-party lines. Now that the birth-pangs are a matter of past history, there is little doubt that other scientific organisations will desire to be represented in the important and urgent work to be done.

It may not be out of place here to mention a few of the aims and aspirations of this Parliamentary Science Committee. It is proposed to promote discussions in both Houses of Parliament on scientific matters in their application to economic policy and national well-being; to arrange periodical addresses by scientific authorities to the chief Parliamentary committees and groups; to consider Bills before Parliament which involve the application of scientific method; and to urge the proper representation of science on public committees—departmental and otherwise. In the very forefront of the programme will be the modernisation of the system of financing scientific research, with the view of ensuring that State aid to science should either take the form of block grants or outright endowment. It is felt that the present system of fluctuating annual grants alternating between foresighted vision and nervous gusts of parsimony must be relegated to the limbo of oblivion if wise and prudent progress is to characterise national policy. Pressure will be exerted to secure that all scientific and technical departments in the public service, and all work involving scientific knowledge, must be under the direct control of persons of adequate scientific attainments, and that the highest appointments in the public service shall be open to scientific and technical men who possess the necessary administrative ability. It may be said that these are aspirations; but, although the Parliamentary Science Committee is only newly created, it has already given a taste of its quality in compiling

from "Hansard" and other sources a summary of all scientific matters dealt with in Parliament during the 1932-33 session, completely indexed. This compilation is entitled "Science in Parliament", and in future it will be issued to subscribers monthly.

Before long, the Committee is likely to have referred to it the report of the Joint Committee of the British Science Guild and the Association of Scientific Workers on the financing of industrial research. The Joint Committee is actively engaged in collating the facts, and in considering the formulation of a desirable future policy. When the task is completed it will then become the function of the Parliamentary Science Committee to persuade Parliament—and Parliament's hydra-headed master, the electorate—of the wisdom of the policy adumbrated. This task will call for all the energy of which the young body is possessed. Nevertheless, it is possible of achievement; and the same cannot be said of the aspirations of all newly-formed bodies. It must be emphasised that the propaganda of the new Committee has to be directed not only to the Parliamentarians, but also to the general public. Possibly it is more important to convince the public than it is to convince the Parliamentarians, for the convictions of the latter are particularly fluid once Demos has made up his—and her—mind.

A start having been made in forging an effective connecting link between science and Parliament, it only remains to emphasise the paramount importance of science speaking with one voice and presenting an unbroken front. So long as Parliamentary committees of scientific bodies work as isolated units, they are regarded with more or less derision by the politicians, who have a very shrewd idea that these bodies represent very limited constituencies. But a united Parliamentary Science Committee, supported by many eminent bodies, each representing in the aggregate thousands of members, *has perforce* to be treated with some show of respect. It is imperative, therefore, that the largest possible number of scientific bodies should be represented upon the Parliamentary Science Committee in order to give it the necessary strength to make it the spear-head of science as a whole, and a worthy co-partner with our rulers at Westminster.

The Royal Society is perhaps in a different position from other scientific and technical societies, as it has almost a semi-official relation to the State through the administration of the

Government grants for publication and scientific investigation, and is often consulted upon scientific matters of national importance. The British Association may also hold the view that, as its sections cover all the chief branches of science, its relation to the Parliamentary Science Committee would be different from that of societies concerned only with particular fields of scientific work. Sir Frederick Gowland Hopkins, who is president of both the Royal Society and the British Association, has shown in no uncertain way that he is strongly in favour of bringing scientific methods into the consideration of social affairs, and the Parliamentary Science Committee is a practical—and practicable—way of achieving this end. Whatever actions the Royal Society and the British Association may take, it is to be hoped that they will assist in the linking up of scientific and technical societies which is the aim of the Committee, so that, when action is necessary, Parliament may be faced with the unity which betokens strength, rather than with that disunity which is regarded as the inevitable sign of weakness and inefficiency.

When the organising committees of the various sections of the British Association meet on January 5 to decide upon their programme for the meeting in Aberdeen next September, they will have before them a memorandum from the Council suggesting that papers, discussions, or symposia should be included bearing upon the relations between the advance of science and the life of the community. As the result of the lead given by the Council in this memorandum, much valuable material is likely to be brought together for consideration and co-ordination. The Association is to be congratulated upon adopting a policy urged upon it thirty years ago by Sir Norman Lockyer, and the neglect of which led him to found the British Science Guild "to promote the application of scientific methods and results to social problems and public affairs". It may confidently be anticipated that the inquiry now instituted by the Council, through the organising committees of the Sections, will make the Aberdeen meeting one of the most notable in the history of the Association. Such an analysis of the scientific factors which affect human welfare and economic life should be illuminating and afford profitable guidance for the future, but if it is to influence our legislature, the best means of promoting this end will be through such a Parliamentary Science Committee as has now been established.

Mass-Spectra and Isotopes

Mass-Spectra and Isotopes. By Dr. F. W. Aston. Pp. xii+248+8 plates. (London: Edward Arnold and Co., 1933.) 15s. net.

THE phenomenon called 'autocatalysis' by the chemists is most conspicuously exemplified by the way in which natural sciences develop. A single discovery often leads to a rapid advance in scientific knowledge, each result becoming a nucleus of further progress. The man of science, although fortunate to live in such an illuminating epoch of scientific progress, has the uneasy feeling that he may not be able to keep pace with such gigantic developments. Occasionally he is bewildered by the rapidity of the advance in scientific knowledge. Even if he concentrates on one special field, the development may be so rapid, the papers published so numerous, that he has difficulty in keeping the pace.

It is, therefore, not the lack of admiration at the amazing progress, but rather their shortcoming of being unable to follow its trend, that makes not a few scientific workers secretly wish for a form of disarmament in the field of publication. A few men of science are even so bold as to advocate openly such ideas. Without slackening down the rapid development of science or decreasing the number of papers published, there exists another solution to this state of affairs; namely, the publication of books dealing fully and conscientiously with the field in question, emphasising the main points and leaving aside details of lesser interest. Thus the fellow-worker would be fed on sound dietetic lines and not on those of the bo-constrictor. Dr. Aston is to be congratulated on his admirable way of dealing with his subject on the above-mentioned lines; no one is so qualified as he to do this, since practically all of the work on isotopes has been done by him.

Our knowledge of the nature of isotopes and the numerous fundamental conclusions to which this knowledge leads, becomes a chapter of utmost importance for the chemist and physicist alike. Aston's "Mass-Spectra and Isotopes" covers 250 pages containing all the important information on this many-sided subject, and is written with an admirable lucidity. It is interesting to compare the present edition with the previous one published in 1924. In that second edition, 101 atomic species were enumerated whilst the number of known isotopes has increased since to 190, in spite of the fact that the interest of mass-spectroscopic