

THURSDAY, SEPTEMBER 30, 1875

*THE SCIENCE COMMISSION REPORT ON
THE ADVANCEMENT OF SCIENCE**

IN our last article under the above head we commenced our analysis of that part of the Commissioners' Report which deals with the Administration of Science. In our present article we shall conclude our notice of the Report by stating the chief arguments and opinions of the witnesses regarding the formation of a Council of Science. Thus, following the evidence of Sir Wm. Thomson and Dr. Frankland, to which we have before referred, we find Dr. Hooker, Admiral Richards, General Strachey, Dr. Roscoe, Dr. Balfour Stewart, Dr. Sclater, Mr. De la Rue, Sir H. Rawlinson, and others in favour of a Council, while the Astronomer Royal, Prof. Owen, Lord Salisbury, and Lord Derby are opposed to its formation.

Admiral Richards, late Hydrographer to the Navy, is of opinion that the appointment of a Minister of Science and of a Council stand and fall together; and thinks "that the one would not be of very much value without the other."

Dr. Sclater's idea of the Council is as follows:—

"The heads of the different scientific institutions that are put under the control of the department of science and the minister of education might form a consultative body and be called a council of science, and that there might be certain other members added to assist them in deliberation, if it were thought necessary, such as representatives of the College of Physicians, the College of Surgeons, and of the scientific branches of the army and navy.

"Most men of science, I think, see that something of the sort is imperatively required. All lament the piecemeal way in which scientific subjects are dealt with by Government, in consequence of their being subdivided amongst all these different offices, and of there being nobody to appeal to upon a question of science, and therefore I think the proposal to establish such a Council would meet with universal acceptance amongst scientific men."

Dr. Hooker, the President of the Royal Society, gives it as his opinion "that the general proposition, that the Government should be aided by scientific persons, is an excellent one, both with respect to the administration of the existing Government scientific institutions and with respect to the occasional grants which the Government may be called upon to make for scientific objects." Like Dr. Roscoe, he thinks that the Council should not consist exclusively of scientific men.

Mr. De la Rue considers that the usual permanent staff of a secretary and assistant secretaries, as suggested by Prof. Owen, even if they were men of science, would not be sufficient; urging as a reason that science is really now so extensive that one could hardly imagine any secretary to be so intimately acquainted with every branch of science as to be able, even with the aid of his assistant secretaries, to advise, or to point out where to obtain specific information on every question which might be brought under consideration. Nor does he think the Government Grant Committee, a body regarded with favour by many witnesses, could be so modified as to render a special Council unnecessary.

Sir Henry Rawlinson regards the nomination of a

* Concluded from p. 432.

Permanent Council of Science as the natural remedy for the "spasmodic" action on the part of the Government; and another Indian officer, General Strachey, gives the following important evidence:—

"The persons who are employed in the public administration are certainly as a class not amongst those who have anything deserving the name of scientific education; therefore, for a long time to come, it is not to be expected that the members of the Government, or their chief subordinates, will have any such general knowledge of science as would enable them at all satisfactorily to deal with the scientific questions which come before them. Therefore I conclude that it is absolutely essential for the Government, under any circumstances, to get advice from outside; and then comes the question as to how this advice is to be got. If there is no recognised and regularly organised body whose business it is to give advice to the Government on such subjects, then the only thing that a minister can do is to get his information from unrecognised and irresponsible authorities, persons whose opinions, perhaps, may be very valuable, but still persons of whom the public never can have any cognisance; and private advice given in that way seems to me given in the worst possible form. If, then, that form of advice is bad, how can you obtain advice of proper intrinsic value on the multifarious subjects on which it is certain to be needed by an administration really striving to advance science to the utmost, and how can you secure its being given under a sufficient sense of responsibility, and in such a way as to carry the greatest weight possible to the mind of the minister who is expected to act upon it? And here I would repeat that any specific proposal to give effect to such an idea must be made to fit into the general form of the administration; and I therefore consider that the best course would be to adopt the proposal that has been made by many persons, that there shall be some sort of council constituted to advise the responsible Government department as to its proceedings in connection with science."

He then proceeds:—

"I would take the opportunity of saying that it is a question that is open, and which I believe has been discussed, whether the Council, for instance, of the Royal Society, with or without any addition, might not be made to perform satisfactorily some or all of the functions which it has been suggested should devolve upon this Commission. But I think not. And the principal reason that I have for thinking that such a body as the Council of the Royal Society is not suitable for the purpose is, that it cannot have that specific responsibility put upon it which should be put upon a body such as I have spoken of, and that it is got together for totally different purposes and objects. The Council of the Royal Society has to manage the business of the Royal Society, and is not at all selected to advise the Government on matters connected with the advancement of science, or the application of science in the operations of the public departments."

He further points out that the Minister would have a perfect right to repudiate any scheme which the Royal Society might put forward, or any advice they gave—that he would be justified in doing so on the ground that he was not responsible for their selection.

Capt. Galton points out that "the institutions which are maintained by the State for scientific purposes are maintained upon no principle whatever with regard to their administration. You have got the British Museum under trustees, you have got South Kensington under the President of the Council, you have Kew under the Office of Works, you have the Botanic Gardens at Edinburgh, I think, under the Queen's Re-

membrancer. You have the Observatory at Edinburgh as part of the University of Edinburgh, and you have the Observatory at Greenwich under the Admiralty, besides several others. You have every possible variety of jurisdiction, and, consequently, it seems to me that you have a great waste of power; there is the School of Chemistry, and the School of Mines, and the Museum at Edinburgh, all under South Kensington Museum, and the Meteorological Department, which is partly under the Royal Society and partly under the Board of Trade. There is no possibility of getting any correlation between those different scientific bodies, and if you are to get proper unity of administration you must bring them all under one head, or to one focus. I should recommend placing them all under a scientific commission or council, and I should place that council probably under the Privy Council; but I should make it a body for administering all questions connected with all the scientific institutions, or all grants made by the Government for scientific purposes in the country, and I should give to this council the same status, with regard to its administration, or very much the same, that the Indian Council have. . . . The parliamentary head of the department, if he differed from them in opinion as to their recommendations upon the scientific questions connected with those institutions, or any other that might be founded, should record his differences of opinion in a minute."

Dr. Siemens would "assemble the heads of departments at frequent intervals for the discussion of general questions, and would propose to add to their number such men as the president of the Royal Society, the president of the Institution of Civil Engineers, and at least one representative of the two great Universities. This Board would decide general questions appertaining to the advancement of science."

We could fill many more columns with evidence analogous to the above samples. Making due allowance for the different ways in which a new and complex question like this, compounded of scientific, political, and administrative elements, must present itself to a variety of minds trained to dissimilar pursuits and habits of thought, the almost general consensus as to the necessity of some such advising body as that proposed is most striking.

Still those who object to the creation of a Council on various grounds are not wanting, and we now glance briefly at the evidence of these witnesses.

Sir G. Airy thinks a paid Consultative Council could not do very much to assist the Government, and that the Council of the Royal Society would be the best body to which the Government could have recourse in any matters of that kind.

Prof. Owen prefers a Minister of Science, with a permanent Under-secretary and administrative staff, as in his opinion the representative of any particular branch of science on the Board would have too great an influence.

The Earl of Derby is very sceptical either as to the necessity, or as to the utility, or as to the successful working of such a Council. One objection he urges is that if matters for which the head of a department is responsible are to be referred to the Council, and if upon those matters the Council is to pronounce an

authoritative opinion, the responsibility of Ministers to Parliament will be considerably lessened.

In reply to the suggestion that one function of the Council would probably be to advise the State as to the application of money for the higher teaching of science and for scientific research, and also to advise the Government with respect to any applications that may come before it for grants of money connected with science, whilst objecting to a Council, Lord Derby thinks that it is a matter which falls strictly within the province of the Minister of Education.

Lord Salisbury is opposed to a Council because he has never seen anything to lead him to believe that such a Council of Science would have anything to do; and he considers that the Government would always get better opinions on any scientific point that arises, by applying to the most distinguished scientific man in that particular branch at the time, than it would by having a set of permanent officers to give advice on such subjects.

There appears to have been before the Commission practically three solutions of the question. First, that no change should be made in the present condition of things. The Astronomer Royal is apparently the sole witness of eminence in science who seems to desire no reform in the scientific administration of the country. Secondly, that the Council of the Royal Society should be constituted the official advisers of the State—a view held generally by those who are adverse to the creation of a new Council; and third, that a Council be provided to assist the Minister charged with science and the Departments concerned with science.

The Commission arrive at the conclusion that the balance of argument and authority is in favour of the last-named arrangement, which accordingly they recommend in terms which, though general, leave no doubt that they contemplate the creation of a new official body so constituted as fairly to represent the various branches of science. We think that no unprejudiced and competent person can read the whole evidence without accepting this conclusion as undeniably sound, if not indeed absolutely unavoidable.

THE GOVERNMENT RESEARCHES IN PATHOLOGY AND MEDICINE

THE third volume of the "New Series of Reports of the Medical Officer of the Privy Council and Local Government Board," brings before us another instalment of the work paid for by the annual grant of 2,000*l.* "in aid of scientific investigations related to pathology and medicine." This grant has been actively opposed by a small minority in the House of Commons mainly upon the narrow and invidious ground that the medical profession was thereby obtaining knowledge and instruction which the medical profession ought to obtain at its own expense. "The medical profession lives upon the public; the medical profession makes use of its knowledge to extract money from the public; the grant will add to the knowledge which the medical profession uses with such object—therefore the grant is money drawn from the pockets of the public to aid in the further depletion of the pockets of the public."

Such appears to be the main inspiration of the