

CONSOLIDATION OF GOVERNMENT SCIENCE UNDER THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION.

BY ARTHUR MACDONALD.

INTRODUCTION.

WITH the knowledge of the Chairman of the Joint Committee on the Reorganization of the Government Departments, and at the suggestion of his Secretary, I endeavored sometime ago to co-operate and advise by obtaining the opinions of Government and other scientists on a general plan of mine for placing some, at least, of the Government bureaus doing scientific work under the jurisdiction of the Board of Regents of the Smithsonian Institution. I, therefore, called upon most of the Government scientists in their laboratories to discuss the plan. I then sent the letter below to them and to the leading scientists of this country. From time to time I made reports to the Secretary of the Joint Committee on Reorganization. The great majority of the Government and other scientists agreed generally with the plan. Some did not wish to express an opinion, and very few were opposed to the general plan.

The bureaus designated below, as doing scientific work, were selected after consultation with leading Washington scientists. I desire, however, to state at the outset that the plan is intended to be elastic; that is, if there are substantial reasons why a scientific bureau at present should not come under the Board of Regents of the Smithsonian Institution, it would not of course be included. The general idea in the following letter is *to place Government science on a University plan, and with University freedom.*

THE SMITHSONIAN INSTITUTION.

The Smithsonian Institution is one of the most honored scientific organizations in our country, but it has a relatively small ap-

propriation from the Government. I have never been able to see any good substantial reason why this appropriation should not be greatly increased, so that the Institution can do its work more fully, affording the many scientific men of national and international reputation their opportunity to develop their specialties more adequately, for I know from private conversations with its experts that the appropriations for their work are very inadequate.

The Secretaryship of the Institution is a great scientific honor and very much sought after, but the position seems to be regarded by some, more as a place for a scientist to maintain, retire in and enjoy the honor, than to develop. To promote the growth of the Institution does not seem to have been uppermost in mind. If what I say should be construed as a criticism, it is not in the least intended so by me. I have no one in mind in anything I state, but it is a condition of Government science, which has grown up, and for which no one is responsible. But this is no reason why every one interested in Government science, should not strive to improve the conditions in Washington. The Smithsonian Institution should be developed, many new scientific positions created and adequate salaries and appropriations provided by the Government. The reclassification bills in Congress, when enacted into law, are intended to help especially scientific employees who have been greatly underpaid, but they will create but few new positions and not increase appropriations so much needed for scientific work.

A LETTER TO AMERICAN SCIENTISTS AND OTHERS INTERESTED.

Consolidation of Government Science, Under Board of Regents of Smithsonian Institution.

Washington, D. C.

Dear Doctor:

I trust you will consider this letter as if I had written it out with my own hand and honor me with as early a reply as possible.

It is very desirable that the opinions of leading American scientists be obtained as to the reorganization and more especially consolidation of Government scientific bureaus under one head or department. I desire, therefore, to present a tentative plan for this purpose. Any suggestions or criticisms from you will be presented with those of other leading scientists to the joint committee on the reorganization of the administrative branch of the Government for their careful consideration and action.

It is the first time in the history of our Government that the

Executive and both parties in Congress have all been seriously in favor of reorganization and consolidation of Government bureaus and departments. If the scientific bureaus are to be benefited they must receive serious and early consideration.

It is self-evident that if Government sciences are consolidated under one head they would receive more attention and obtain much greater support. But there is nothing to be gained in forming a new department for this purpose when already there exists an institution which has great prestige and represents the science of the Government in a general way. It is the Smithsonian Institution. It is proposed that this organization should be developed not only in its own bureaus but also by placing scientific bureaus of the Government under its Board of Regents. It is sometimes said that the Smithsonian Institution is a private organization. This, of course, is not true, as it already receives more than \$600,000 annually from the Government as an appropriation for its work.

A scientific reorganization and consolidation of the Government departments and bureaus is the purpose of this general movement, inaugurated by the President, and this is especially needed in the scientific bureaus.

Here the great aim in view is eventually to have our Government science developed to the highest possible efficiency.

It is generally agreed that too many departments or cabinet officers are undesirable and unwieldy and that the number should not be increased but rather diminished. The reorganization and consolidation of scientific bureaus is right in line with this idea. Moreover, the scientific bureaus are scattered all over the Government, many of them illogically or haphazardly placed, and as a result they may have little or no influence, and consequently the scientific workers are paid shameful and minimum salaries. The consolidation of governmental science under the Board of Regents of the Smithsonian Institution will tend to give more influence and efficiency to science and divorce it, as far as possible, from politics.

If, for instance, any scientific bureau is taken from a department and placed under the Board of Regents of the Smithsonian Institution, having all its personnel and appropriations intact, the main and perhaps only important difference will be that the chief director of this bureau will be under a scientific man with knowledge of and sympathy for scientific work, instead of under a cabinet officer, who is not expected to be very conversant with science. Moreover, the cabinet officer is liable to be changed every four

years, and sometimes oftener, so that the chief of a scientific bureau whose heart is in his work, not to mention uncertainty as to his tenure of office, for other than scientific reasons, is kept in much uncertainty as to sympathetic help in his endeavor to develop his work.

The Smithsonian Institution deals mainly with pure science and scientific bureaus of the Government function principally with applied science. As an applied science is based upon pure science, they both help one another. Sometimes pure science gets a little too pure and drifts in the air, and sometimes applied science becomes a little too practical or commercial or mercenary. But if both these phases of science are put together they tend to reach a happy medium. The foundation, pure science, should not be separated from its superstructure, applied science.

A tentative plan is to place the following 33 bureaus, or as many of them as is practicable, under the Board of Regents of the Smithsonian Institution, together with all their personnel and appropriations intact:

1. Geological Survey.
2. Reclamation Service.
3. Bureau of Mines.
4. Patent Office.
- 5-16. All scientific bureaus of the Agriculture Department (12 in number), affording these bureaus still greater opportunity to develop and benefit still further the agriculture of our country.
17. Vital and criminalological and other abnormal statistics of the Census Bureau.
18. Bureau of Standards.
19. Bureau of Fisheries.
20. Hygienic Laboratory.
21. Bureau of Public Health Service.
22. Army Medical Museum and Library.
23. Government Hospital for the Insane.
24. Coast and Geodetic Survey.
25. Library of Congress, to be called Library of the United States.
- 26-32. Bureaus of the Smithsonian Institution itself (seven in all). These bureaus are named as a concrete working basis. The inclusion of all or any particular one is not necessary to the plan.

33. Naval Observatory.

In reading over this list of scientific bureaus objections occur to us instinctively, but when we analyze them we will find that most of these objections are from a long-established habit of regarding various bureaus in connection with the particular department under which we have been accustomed to associate them. I assume that every bureau chief with the scientific spirit will not object to the consolidation of Government science on account of some personal inconvenience to himself. The true scientific man is always willing to make some sacrifice, if necessary, when the good of all Government science is sought.

The prospect of being under a sympathetic man rather than a political appointee should encourage every scientific man to consider any plan with this in view most seriously. If any one of these 33 bureaus should be found not to function as well as formerly in connection with the Smithsonian Institution, it will be very easy to put such a bureau back in its old position or some other better place. But it is very probable that a great scientific independent and nonpolitical Department would be considered a most desirable place to be in, where every one is imbued with the same spirit for the advancement of science in all its branches, pure and applied, working together mutually for this common end. Such an atmosphere would please any scientist.

Now, it may occur to some that 33 different scientific bureaus under one head is rather a large proposition. My answer to this objection is that, on the contrary, it is an advantage from the scientific point of view, because too much organization and resultant red tape are not desirable in scientific work. My idea is to put this plan on a high university plane, with university freedom for each bureau. Thus the president of a large university would not think of suggesting or dictating, for instance, to the professor of chemistry how he should conduct his experiments. One of the main duties of a university president is to distribute the available funds among the different faculties according to their real needs and not to interfere in the least with the professors' methods.

The president of a large university has a hundred or more professorships, divisions, laboratories, and faculties under his jurisdiction; these are practically bureaus. Moreover, this plan would be in fact a department of science without a cabinet officer, but with a permanent nonpolitical head or secretary. Such a department of science would do research work, both in applied

and pure science, and for this very reason there should be more freedom allowed than in a university, which is mainly a lecture and pedagogical system, where there might be reason for restriction. Yet, curious to say, the opposite condition seems to exist in scientific bureaus of our Government.

I fail to understand why the public money should not be spent on as high a plane as the private funds of a large university.

Nearly all, if not all, of the objections to this plan apply to a large university under a president elected by a board of trustees. The main objections that have been made are the following: That too much power is given to one man; that there are too many bureaus under one head; that the work would not have immediate contact with the people; that many Government bureaus are held strictly accountable by the public for definite lines of research; that some of the bureaus mentioned would be out of place; that politics might creep in if there were larger allotments; that it might discourage scientific spirit by taking a scientific bureau from a department; that it is a plan for the Washington men to work out.

The president of a large university like Michigan is elected by a board of trustees; the Secretary of the Smithsonian Institution is chosen by a board of regents. There is little, certainly no substantial, difference, and if there should prove to be Congress could remedy it.

Are not the Universities of Michigan, California, Minnesota, and Wisconsin (all State institutions) successful?

Are they not near to the people? Has the politics that may have crept in spoiled them? Is not scientific spirit encouraged in large universities? The objections to the plan prove too much.

Briefly, this consolidation plan for science in our Government is to give each chief of each bureau free and full independence as far as the work of his bureau is concerned and then to hold him responsible for results. As it is, he may be under narrow or even arbitrary limitations, if not meddled with, and yet held responsible, at least by the public, to whom he cannot explain.

Each chief or director of a bureau would send in his estimates for new specialists, experimental work, and clerical service to the head of the Smithsonian Institution, who would study these estimates and recommend them to Congress. Later the head could take each one of the specialists before the Appropriations Committee to present to that committee the reasons why he wants

these additional appropriations. This procedure would be wholesome, for the specialists would become acquainted with the committee and its legislative point of view, and the committee would be educated up to the real needs of science. When the late Secretary of Agriculture, Wilson, first came into this department, over which he presided 16 years under both political parties, he said to his bureau chiefs, "Gentlemen, I am not here to boss you but to help you." Secretary Wilson fulfilled his promise, and the result is that agriculture is the leading scientific department of the Government. Secretary Wilson, of Agriculture, is a model for every one in power in our Government to follow.

While it is not at present my purpose to go into too many details of this plan, I will venture to make a few suggestions as to certain bureaus and also some general observations. The Census Bureau should be called the United States Statistical Bureau; the word "census" is misleading, since it is only appropriate once in 10 years when the census is taken. The Library of Congress should be called the Library of the United States or National Library. This change in name and its transfer to the Smithsonian Institution would not in the least curtail any privilege accorded to members of Congress. The name Library of Congress was appropriate once, but at present this library is much more than a Library of Congress. The title of a library should at least cover its field of action like the title of a book.

The Smithsonian Institution has a library of nearly 100,000 volumes and the United States Surgeon General's library has nearly 200,000 books, and most of these scientific bureaus to come under the Smithsonian Institution have specialistic libraries. This combination of the several libraries under the Smithsonian Institution would tend, of course, to reduce expenses by avoiding duplication of books. As it is at present, the libraries are scattered about, making it very difficult to find out where the duplication exists. There may be an objection to placing the Library of Congress under the Smithsonian Institution, but the main difference would be that the office of the Library of Congress would not be an independent institution under Congress, but just as independent under the Smithsonian Institution. Instead of leaving the present and most competent incumbent alone in his efforts to develop his great library, he would receive additional aid and encouragement from the head of this new and greatest department of the Government. In such an atmosphere library science could develop

more freely and more easily. The same would be true practically for all bureaus coming under this independent department of science in its broadest sense. In fact, there is already a Smithsonian Division in the Library of Congress. The term "library science" has come to stay; the Library of Congress, which is developing library science to a high degree of efficiency could well come under the Smithsonian Institution.

But some one says, How about literature and history? Yes; there is a science of literature and history, at least there are scientific methods being applied to them; also scientific philological studies are already being carried on under the science of anthropology.

Helmholtz once said that the number of sciences would become so great that it would be almost impossible to learn their names. Science and scientific methods have now the floor in the realm of knowledge, and are fast entering into all new fields. Let the United States lead the world in these new directions on the frontiers of knowledge; the United States can do this if it will, and an opportunity now is given to take the first step which is to place Government science under the Board of Regents of the Smithsonian Institution.

In our country medical science is already leading other nations in certain respects. But Government medical science has not been very influential nor is it taking the position which its importance demands. A beginning has been made, however, in the Bureau of Public Health Service, the Army Medical Museum and Library, and the Government Hospitals for the Insane. In all these three bureaus, to be placed under the Smithsonian Institution Board of Regents, scientific work is carried on. The catalogue of the Surgeon General's library, consisting of a very large number of volumes, in three separate series, is considered in Europe the best work in this line in the world. Yet, through the mistaken economy of Congress, this library has been compelled to reduce this most valuable catalogue in size and practically hamper its utility. The Government Hospital for the Insane has done some most advanced and valuable work on the brain. These medical organizations fall naturally under the consolidation of Government science. At present they have inadequate appropriations and salaries, but under the present proposed plan they would receive special attention and help.

I might suggest also that in inviting scientific men to take up permanent work under the Government, it is understood, and

so stated, that they cannot be removed from their positions without very serious cause; that their work is their life work, and considered from the point of view of a university professorship. If such a plan should be followed, there would not be any great difficulty—as there is now—of obtaining the best scientists to work under our Government. The salary should be adequate but not necessarily large. A true scientific man in love with his work is more concerned about permanency of his position and independence in his work than salary. We would then have, probably, under this plan, the greatest department of Government, without a cabinet officer, but under a permanent head.

But how about getting the right man for such a place? The men who elect the head of the Smithsonian Institution are the Chief Justice of the United States, who is chancellor of the Board of Regents, which consists of the Vice President, three members of the Senate, including both political parties, three members of the House, also including both parties; and six citizens of the United States, who are at present: Alexander Graham Bell, John B. Anderson, both of Washington, D. C.; George Gray, of Delaware; Charles F. Choate, Jr., of Massachusetts; Henry White, of Maryland; and Robert S. Brookings, of Missouri. There could hardly be a much more trustworthy body of men for choosing a scientist for the place, when at some future time it becomes necessary to elect a successor to the very able and distinguished scientist who now is at the head of the Smithsonian Institution.

The scientist elected to be the head of this new scientific department would probably not be thoroughly conversant with more than three or four sciences, so that there would be under him, say, some 30 scientific bureaus, the domain of which he really knows little or nothing about. If he should favor his own science to the disadvantage of other sciences, or if he should meddle in the work of the other bureaus, he would not be able to stand long the criticism of scientific men. But there is very little probability of this, and if it should occur, publicity, the greatest power in this country, would soon correct it.

In most of the departments, except the agricultural, there are relatively very few scientific bureaus, usually only two or three, over against some 15, 20, or 30 other divisions or bureaus. Of course, such scientific bureaus are generally only helped by their departments to the extent they are useful to the department itself, and this depends upon the opinion of a cabinet officer who is

usually ignorant of science. The result is that many of these scientific bureaus scattered about in the departments are developed very slowly, if not standing still. Their appropriations are very inadequate, their service much crippled, and, worst of all, their independence greatly limited. Of course, no first-class scientist would take such a place or remain in it long unless compelled by force of circumstances. With very few exceptions, these scattered bureaus of science could serve these departments at least just as well and probably much better if under the jurisdiction of the Smithsonian Institution.

SUMMARY OF PLAN.

The purpose and advantages of this plan for the consolidation of Government science under the Smithsonian Institution are summed up as follows:

1. To develop Government science to the highest possible efficiency.
2. To correct illogical and haphazard arrangements of bureaus or departments.
3. To reduce political influence in scientific bureaus to a minimum.
4. The efficient development of science bureaus under a scientific head is much more probable than under a political head.
5. To unite pure and applied science into a happy medium, increasing the efficiency of both.
6. To encourage scientific men in their work, which makes toward efficiency.
7. To put Government scientific work upon the high university plane.
8. To avoid duplication of scientific work, appropriations, and duplication of library books. It also facilitates their proper distribution.
9. To advance Government medical science, which has been much neglected.
10. To give permanency of position and independence to experts, making it possible to get the best men of science to work for the Government.
11. To make very improbable interference or meddling of the head in the work of the many bureaus under him.
12. To lessen one cabinet officer and one independent bureau.

I trust you and every scientist to whom this letter is sent will express his views freely as to this plan or propose any new plan at earliest possible convenience, and should he not desire his name mentioned will so indicate, in which case I shall, of course, follow his wishes.

Requesting that all letters be typewritten, I have the honor to remain,

Most faithfully, •

ARTHUR MacDONALD.

(Address: Arthur MacDonald, the Congressional Apartments, East Capitol Street, Washington, D. C.)

N. B.: If you are a member of any scientific or medical organization, I should be glad if you would have, as soon as possible, the following resolution (or some similar one) presented and acted upon as early as possible.

Resolved, That the.....favors the general plan of putting the scientific bureaus of the Government at Washington, as far as practicable, under the jurisdiction of the Board of Regents of the Smithsonian Institution, with the view of developing Government science to its highest possible efficiency by affording workers permanent tenure of office, greater freedom in investigations, noninterference of politics and adequate salaries.

After the resolution is acted upon kindly have it sent to me at once, to be presented to the joint committee on the reorganization of the administrative branch of the Government, and also to your Senators and Congressmen.