b. Assignment of technical personnel to the Army, Navy and Air Force.

c. Selection of promising youths for educational deferment and training as scientists.

d. Adjudication of the relative requirements for scientists by the Armed Forces, industry, educational institutions and government bureaus.

4. Personnel promotional policies and physical standards can be designed to fit the requirements of scientific rather than military pursuits. . . .

. . .

6. Scientists in the higher echelons of the department would gain the experience in large-scale administrative procedure which would eliminate the need for hasty expedients such as were resorted to in World War II.

7. A scientific intelligence and analysis group as advocated by Bush would function in time of peace as well as war.

8. Administration of the Department by scientists would assure greater continuity of program, and minimization of financial fluctuations. Thus private contractors would be less reluctant to engage in such programs.

9. The plan offers maximum economy of money, manpower and facilities for scientific military requirements.

The plan is consistent with the policy of unification of the Armed Forces. It also is consistent with the recommendations of the Hoover Committee, in that certain independent executive bureaus, such as the Munitions Board, National Security Resources Board, National Advisory Committee on Aeronautics, etc., could and should be integrated into the new Department.

The Department of Science and Technology, as envisioned in this report, would provide the necessary position of the scientist in the over-all planning for the defense of the United States in the capacity stressed so emphatically by Vannevar Bush as an absolute requisite for national safety.

E. L. HESS
S. E. OWEN
H. V. PARSLEY
W. T. SCOTT
H. D. SLADE

Committee on Utilization of Scientists by the Department of Defense
Chicago, Illinois

The Reservist Problem

I WISH to report another facet of the government's mobilization policy which damages the defense effort. This is the indiscriminate recall of reservists from civilian life. With no excuse but the overriding needs of the military, the Services have grabbed men with no consideration of their civilian experience and education. If they had no choice at the time, they have made no attempt to remedy the situation where malassignments were made.

The flaw in the reserve program, if it could be called one, lay in the premise that a reservist was a man who should come on duty at a moment's notice and carry on the same duties he had performed in a previous war. Screening and reclassification of reservists were talked about, but they never occurred, and one doubts whether they would be done properly. So, when the Korean war broke out, the reservist found himself to be just another available body. As reservists have not been hermetically sealed in cans since 1945, one finds examples such as these:

1) A Ph.D. in dairy chemistry is serving again as a junior officer, doing administrative work.

2) A geologist who applied for release documented the oil pools he had discovered and the wells he had brought in to prove he was more valuable as a civilian. He was told there was "no critical shortage in his field."

3) A civil engineer with prestressed design experience was put to work computing cubages of buildings, that being the most use the Corps of Engineers could make of his technical abilities.

4) A candidate for a Ph.D. in mathematics, lacking a few hours of his degree, now counsels men about night school courses.

5) A chemical engineer with experience in materials testing now works at supply matters, while the Air Force combs the country for materials engineers. They are probably being hired away from industries which need them more than the Air Force.

The Congress does not seem to realize the damage that has already been done by giving the military a free hand in grabbing reservist manpower. It is the equivalent of giving a Swiss music box to a gorilla.

A recent example of the danger we are in occurred at an electronics plant being toured by Air Force officers. They found a standard piece of equipment that met requirements, but it had to be modified to another range of frequencies. The company would have been glad to do this, *if* the engineers had had time. They did not because they were understaffed and very busy with other defense contracts. It is ironic that the Air Force is taking all the electronics people it can get, and is assigning them to semi-technical administrative or operational work.

The Services' attitude toward scientific manpower seems to be based on this outlook: (1) Their manpower needs come before all others, even if their policy will eventually damage them from a materiel standpoint. (2) They prefer people with technical or scientific backgrounds, even if they have no appropriate duties for them to perform. (3) They look upon the reservists and draftable students with a proprietary interest, as if the economy or the general welfare of the nation had no claims on their services.

Such a policy will be disastrous if they mean to keep us in a continuous state of partial mobilization. Their present misuse of scientific manpower can be justified only if we are on the eve of a short all-out war. How do they expect to multiply the effectiveness of each soldier by superior equipment, when many of the people who can bring this about are recalled and kept in uniform? The military should be required to answer these questions, and their manpower needs should be carefully screened by civilians who have a better over-all outlook.

From the present attitude, coupled with the damage that was done in the last war, we can be reasonably certain that they would not hesitate to put us on the road to scientific suicide.

RESERVIST
(*Name withheld by request*)

Microfilm Publication

I AM very much concerned about the petition submitted by the two committees on zoological nomenclature to the International Commission on Zoological Nomenclature reported in SCIENCE (**113**, 466 [1951]).

I think these committees have taken an extremely narrow point of view on a subject of great importance to both zoological and botanical nomenclature. The acknowledged shortage of publication space and cost of letterpress, lithoprint, etc., types of publication alone make it imperative that *every type* of publication that is readily available to the public be considered as a legitimate place of "publication" for taxonomic entities.

The paper cited cannot be used as an argument for their petition, for it is only an argument against the waste of money on republishing a paper already effectively published and available to anyone desiring it.

LEROY H. HARVEY
Department of Botany, Montana State University

Nondiffusibility of Alkaline Phosphatase in Fixed Tissue

DR. NOVIKOFF'S intensive examination of the histochemical tests for alkaline phosphatase (*Science,* **113**, 320 [1951]) still leaves unanswered the question of whether the enzyme itself diffuses. That the enzyme does not diffuse during incubation of sections in aqueous medium at pH 9.4 can be shown by a simple test that, to my knowledge, has not appeared in the literature. In this laboratory we have made the test on sets of five slides of mouse duodenum, which are treated as follows:

1) A slide is incubated in standard Gomori medium at 38° for 5 sec. Appropriate further treatment then reveals a dense black precipitate in the striated border, but no sign of activity anywhere else.

2) Another slide is incubated in the medium for 30 min. After conversion of the precipitated calcium phosphate to cobalt sulfide, the entire section appears blackened, with a gradient of darkness extending away from the striated border through the epithelial cells, the intravilline stroma, and the mucosa and musculature. The Golgi bodies are darker than the rest of the cytoplasm. The picture certainly suggests diffusion from the border into inactive material.

3) Three other slides are incubated in barbital buffer (pH 9.4) at 38° for 30 min, and are then placed in buffer-substrate medium for 5, 15, and 30 sec. The pictures obtained after this treatment are the same as in case 1, with the precipitate being strictly limited to the striated border. There was no evidence of diffusion beyond the border, nor was there any apparent loss of enzymatic activity such as Yokoyama, Stowell, and Mathews (*Anat. Record,* 109, 139 [1951]) observed under somewhat similar conditions.

Of course these results do not bear on the possibility that alkaline phosphatase diffuses during fixation. They do, however, show that highly concentrated phosphatase does not alter its position in fixed and mounted sections kept in fluid medium at incubating temperature for as long as ½ hr. This finding is in agreement with Dr. Novikoff's demonstrations that it is possible for calcium phosphate to diffuse and be absorbed at false localizations in mounted sections.

FLORENCE MOOG
Department of Zoology, Washington University

Sui Generis

I READ with interest J. R. Pierce's article on "Science and Literature" in your issue of April 20, but I would like to point out one omission in it. He spoke of a book by Heinlein, tracing the imaginary future of man through many periods but omitted to mention what, in my opinion, is by far the best book on this subject, namely, Olaf Stapledon's *Last and First Men.* This pursued the subject in a most illuminating way, on the assumption that with the vast amount of time still ahead of the human species, it might well produce a succession of totally different types. Stapledon's picture of the society in which all the thinking was done by specialized individuals whose brains were cultured out to a gigantic size on some sort of trellis, is unforgettable!

JULIAN S. HUXLEY
London, England

A Note to the Department of Internal Revenue

THE appearance of the comments on "Scholars and the Root of All Evil" in SCIENCE (**113**, 330 [1951]) on March 23, at a time when scholars along with the rest of the tax-paying public were emerging from the annual struggle with income tax returns, started a trail of thought that poses another point for public attention. In reading the comments in SCIENCE we were confronted with Bauer's formula for deriving an approximately just and fair income for the scientist or scholar who has invested many years of his youth, many dollars of a then nonexistent income, many IQ points of mental capacity, and unbounded personal energy and zeal in preparing his mental equipment for lifetime service.

In making out the federal income tax return we noted the possible channels open to the businessman who also has invested money in ideas but who, on the other hand, has transmitted his investment into material things: buildings, equipment, inventories, etc., against which, in time, the government will allow a proportionate mark-off under a heading on page 2 called "depreciation." By putting the two investments in juxtaposition, the reader discovers that for the learned man, the one who has salted away his money and time and effort and ability in his "brains"—in