

Institute doings

SCIENTIFIC MANPOWER

It is characteristic of Government, as well as other enterprises of the human race, that adequate measures to meet an emergency are seldom fully taken before the emergency arises. It is not surprising therefore that we have come to a state of extensive military mobilization in advance of a clear decision on, or even understanding of, what to do about scientists in such a situation.

The American Institute of Physics, the American Chemical Society, and especially the National Research Council under the lead of M. H. Trytten, have made long and continued efforts to urge agencies of the Government to grapple with the problem in good time. A formal report to the War Department in 1947 included some strong recommendations on the basis of the experience of World War II. More recently we have been in touch on frequent occasions with the Selective Service System and the National Security Resources Board.

Such actions by representatives of the scientific fraternity have by no means been fruitless. In many cases they have met with full approval and understanding. At the worst a measure of progress in the right direction has been achieved. It is none the less a fact that actions which are, in our view, contrary to the national interest and security are already being taken or are threatened. These are to be found in the process of calling up members of the armed forces reserves, in the channeling of much of the cream of college students into ROTC situations where they are committed to two years service after graduation just when some of them should be pursuing graduate studies, in the lack so far of well established draft regulations governing the cases of scientists and science students, and in the suggestions for universal service for a period of at least two years at the age of eighteen.

However successfully regulations, reservations, deferments, and exceptions may be devised to ameliorate the above procedures, the approach is still a negative one. The scientist goes against the stream. This is not popular, it is politically difficult and it puts the scientist in a false defensive light when all he wants is to serve the nation in a conscientious manner. No one of these procedures is based on a positive approach, namely that of trying and testing the aptitudes of young men and then training them in the ways each can contribute most to national strength and defense. Admittedly no perfect program to do this is feasible, but some broad distinctions could be made. It should be possible to identify scientific talent before training time is wasted in unrewarding directions. It should be possible to get the scientist on the job sooner, lengthening his all too few productive years.

What indeed does the national emergency call for from scientists? It depends on the timing. An immediate war would require the direct operation of technical military devices and the training of others in the use of such devices, backed up by production development of better military devices. For a war several years from now scientists should currently be helping weapons and protective devices through the pilot plant stage, and accelerating the development of still newer weapons and devices. A more remote emergency

would call now for research and development on weapons backed up by general development of scientific strength. If, as many have said, we are locked in an international struggle which may persist without major warfare for more than a generation, then scientists should bend most of their efforts to fundamental research and the improvement of scientific training. Lacking advice from Stalin or any other conceivable antagonists we shall have to make calculated allowance for each of these possibilities. The point is that all are in the nation's interest and any one might represent the best contribution scientists can make in the defense of their country. Cannot a thoughtful appraisal of the situation be made and a positive manpower development program be designed on the basis of such an appraisal?

Not until such a program becomes a clearly established and generally accepted national policy can we expect proper attention to be given to the small numbers of scientists, engineers, and other professionals involved. The over-all manpower pinch is too great. When there are not enough men, the sparing of any is feared as a precedent.

Several pertinent figures may serve to point up the difficulty. The armed services have a goal of 3,000,000 men. It does not seem much for a country of this size, but experience shows that only half this number can be attracted voluntarily from among men above draft age. This means, if we assume draft service for two years, that 750,000 have to be inducted each year. Now the total number of men coming of age each year is about 1,100,000. Unless some 70 percent of these are acceptable physically and mentally (contrary to current experience), this is not enough. It is all too evident that unpopular exemptions will have dwindling magnitude in the face of such an analysis.

With such a degree of mobilization—even more if a greater is ordered—it is clear that scientists must be prepared to accept an involuntary directing of their services involving sacrifices comparable to those of the drafted. They should then, of course, be accorded the same degree of public respect. The authority giving direction must be well informed of the over-all situation and must really understand scientists and what makes them tick. The result may actually approach the concept of national service within the draft ages, but the less apparent this is and the greater is the reliance on reason and on an individual consideration of each case, the better the results will be.

This all is written to set out certain facts and considerations that are in the minds of the staff of the Institute and which guide us in working with government agencies. We are now heavily so engaged, along with companion organizations. Suggestions for the amendment or augmentation of our line of thinking are very much in order.

We naturally concern ourselves first with physics, then with science and finally with all fields of learning requiring long and rigorous training—the professions. We have more things in common with all branches of learning, including the social sciences and the humanities, than first meet the eye. The contest with the common enemy is not only military and not only scientific. It may even be won without intensive application of either of these fields. Everything which, along with science, contributes to the over-all strength and integrity of this nation and its influence upon the world is important. This is no time for a self-centered view of what is essential. If there is to be a war and it is won, then there will be a peace to be won and a world to rebuild. Who is wise enough to upset the balance of advanced education at this stage by discrimination between fields?

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