

## A SCIENTIST REBELS

The letter which follows was addressed by one of our ranking mathematicians to a research scientist of a great aircraft corporation, who had asked him for the technical account of a certain line of research he had conducted in the war. Professor Wiener's indignation at being requested to participate in indiscriminate rearmament, less than two years after victory, is typical of many American scientists who served their country faithfully during the war.

Professor of Mathematics in one of our great Eastern institutions, NORBERT WIENER was born in Columbia, Missouri, in 1894, the son of Leo Wiener, Professor of Slavic Languages at Harvard University. He took his doctorate at Harvard and did his graduate work in England and in Göttingen. Today he is esteemed one of the world's foremost mathematical analysts. His ideas played a significant part in the development of the theories of communication and control which were essential in winning the war. — THE EDITOR

SIR: —

I have received from you a note in which you state that you are engaged in a project concerning controlled missiles, and in which you request a copy of a paper which I wrote for the National Defense Research Committee during the war.

As the paper is the property of a government organization, you are of course at complete liberty to turn to that government organization for such information as I could give you. If it is out of print as you say, and they desire to make it available for you, there are doubtless proper avenues of approach to them.

When, however, you turn to me for information concerning controlled missiles, there are several considerations which determine my reply. In the past, the comity of scholars has made it a custom to furnish scientific information to any person seriously seeking it. However, we must face these facts: The policy of the government itself during and after the war, say in the bombing of Hiroshima and Nagasaki, has made it clear that to provide scientific information is not a necessarily innocent act, and may entail the gravest consequences. One therefore cannot escape reconsidering the established custom of the scientist to give information to every person who may inquire of him. The interchange of ideas which is one of the great traditions of science must of course receive certain limitations when the scientist becomes an arbiter of life and death.

For the sake, however, of the scientist and the public, these limitations should be as intelligent as possible. The measures taken during the war by our military agencies, in restricting the free interchange among scientists on related projects or even on the same project, have gone so far that it is clear that if continued in time of peace this policy will lead to the total irresponsibility of the scientist, and ultimately to the death of science. Both of these are disastrous for our civilization, and entail grave and immediate peril for the public.

I realize, of course, that I am acting as the cen-

sor of my own ideas, and it may sound arbitrary, but I will not accept a censorship in which I do not participate. The experience of the scientists who have worked on the atomic bomb has indicated that in any investigation of this kind the scientist ends by putting unlimited powers in the hands of the people whom he is least inclined to trust with their use. It is perfectly clear also that to disseminate information about a weapon in the present state of our civilization is to make it practically certain that that weapon will be used. In that respect the controlled missile represents the still imperfect supplement to the atom bomb and to bacterial warfare.

The practical use of guided missiles can only be to kill foreign civilians indiscriminately, and it furnishes no protection whatsoever to civilians in this country. I cannot conceive a situation in which such weapons can produce any effect other than extending the kamikaze way of fighting to whole nations. Their possession can do nothing but endanger us by encouraging the tragic insolence of the military mind.

If therefore I do not desire to participate in the bombing or poisoning of defenseless peoples — and I most certainly do not — I must take a serious responsibility as to those to whom I disclose my scientific ideas. Since it is obvious that with sufficient effort you can obtain my material, even though it is out of print, I can only protest *pro forma* in refusing to give you any information concerning my past work. However, I rejoice at the fact that my material is not readily available, inasmuch as it gives me the opportunity to raise this serious moral issue. I do not expect to publish any future work of mine which may do damage in the hands of irresponsible militarists.

I am taking the liberty of calling this letter to the attention of other people in scientific work. I believe it is only proper that they should know of it in order to make their own independent decisions, if similar situations should confront them.

NORBERT WIENER

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