GENERAL SCIENCE

Science and Politics

There is great need for resolving the conflicts between scientists and politicians, Dr. Mather declares in his retiring presidential address to AAAS.

By DR. KIRTLEY F. MATHER

Retiring president, American Association for the Advancement of Science, and professor of geology, Harvard University.

Excerpts from address delivered at the AAAS meeting in St. Louis, Dec. 28, 1952.

➤ . . . AT FIRST reading, there are those who might cynically inquire "is there any common ground at all between two such antagonistic fields of activity as science and politics?" Conflicts between scientists and politicians have been so widely publicized in recent months that there might seem to be adequate basis for such a question. Scientists have criticized politicians for their ignorance of the strategy and procedures that have proved so efficient in the progress of science. Politicians have berated scientists for their impractical idealism and have even denounced them as subversive, when they object to security regulations and procedures that seem to them inimical to the continuing development of scientific knowledge. . . .

Surely, all will agree that if the interdependence of science and politics is not as clearly comprehended as it ought to be, something should be done to make their common ground more visible. The time is certainly at hand for a moratorium on mutual recrimination, suspicion and jealousy between scientists and politicians, and for a rebirth of a spirit of fair play, constructive cooperation and mutual understanding among and between both groups. . . .

"Red Tape Curtain"

Friction between scientists and politicians extends, even more unfortunately, far beyond the area in which the politicians hold the purse-strings and therefore can enact the detailed regulations which the scientists must obey. The Internal Security Act of 1950, popularly known as the McCarran Act, and the McCarran-Walter Immigration Act of 1952 have dropped a "Red Tape Curtain" around the United States, which in many evil ways resembles the Iron Curtain around the Soviet Union. Each of those measures was passed by the Congress over the veto of President Truman. In his veto messages, the President spelled out their harmful consequences to the nation and displayed a far clearer comprehension of the bad effect they would have upon science in America than was displayed by those who voted to enact them. The dire impact of that legislation upon science in America is so well known to all of you that I do not need to tell that sordid story here.

This whole question of the conflict between intellectual freedom, essential to the further progress of science, and national security, essential to the preservation of our country in this period of real danger, ought to have much more careful study than it has yet received. It is so confused by prejudice, suspicion and fear that it is almost impossible to remove it from the fires of emotion and weigh it on the balances of reason. But unless this is done the welfare of our country will be seriously jeopardized.

Freedoms Are Relative

Most of the freedoms that we hold so dear are relative freedoms, to be exercised only within more or less clearly defined limits. Some of them have to be abandoned or more sharply restricted in time of war, either hot or cold. The most basic freedom of all is intellectual freedom, the right of a man to think his own thoughts and announce them without fear to those who will listen to him. This is the freedom that is safeguarded by our Constitution's Bill of Rights, although there it is spelled out in terms of freedom of speech, of the press, of peaceful assembly and of the free exercise of religion. It is in fact the very touchstone of democracy, the creator and preserver of the orderly flexibility that makes democracy so much more efficient and desirable than any autocracy. The real test of democracy is not applied by asking questions about the statements embodied in a nation's constitution or the presence or absence of ballot boxes and universal suffrage. If anyone wants to know whether the community, state or nation, in which he resides, is truly democratic, let him ask this question: What actually happens to the member of an unpopular minority when he dares to speak his mind in opposition to the spokesmen of the popular majority?

When that test is applied to the organizations and communities of scientists in the United States, they are found to place well out within the democratic bands of the broad spectrum that ranges from stark autocracy at one end to perfect democracy at the other. In fact, many of the significant new ideas that have led to progress in each sector along the expanding frontier of science have been first proposed by an individual, or a small minority, in opposition to views widely held by large majorities. The novel concepts have been appraised in the market place of public opinion. Each scientist has been encouraged to form and express his own independent judgment. No hierarchy of academicians has decreed what is orthodox, or branded as subversive any one who deviated from the approved "line." Even though one scientist may strongly disagree with another's opinions, he knows he must defend the other's right to express them, else he will be false to his high calling as a seeker for more accurate understanding of the ways of nature. If the suspicion should enter his mind that perhaps in times of ideological conflict a little thought control might be desirable, he has only to remind himself of the sorry plight of the biological sciences in the Soviet Union.

Intellectual freedom for scientists inevitably conflicts with the necessity for national security. To what extent and in what ways should it be limited? The answer to that $64 question has thus far been given by the politicians, with woefully inadequate consideration of the scientist's point of view. Political screening is necessary in certain sensitive areas where scientists deal with military secrets. Unfortunately, those areas have been either too loosely or too broadly defined. They should be restricted to the absolute minimum. The ideas of competent scientists, concerning what that minimum should be, ought to have far more respectful consideration than they have thus far received.

Goal Is Understanding

The nature of the political tests also needs re-examination. The fundamental difficulty here arises from a basic disparity between the mental processes of scientists and politicians. In debates across a frontier, the primary aim of the true scientist is to understand rather than to refute. In such debates, most politicians aim to demonstrate their own worth and insist upon the correctness of their own views, rather than attempt to understand an opponent's ideas. All too few of the politicians in America display the intellectual qualities of political scientists.

Consequently, the scientist who tries to understand the motives and the behavior of people on the other side of the current ideological conflict is engaging in an intellectual enterprise quite foreign to the politician's mental and emotional habits. He is therefore open to suspicion and will almost certainly be caught by the political screen of "reasonable doubt." There is of course some truth in the well-known saying that a man is known by the company he keeps. But that method of appraisal is valid only when it is taken to mean: a man is known by all the company he keeps. To base conclusions solely upon a man's associations with a few organizations or individuals, specially selected by angry politicians, is both unscientific and unjust. Either all of his associations, or none, should be considered by those responsible for political screening to insure national security.