

freedom everywhere. When we understand them, we are better prepared to ward off their aggression. More important still is awareness of the forces *within* free societies that endanger liberty. In both respects, there is still much we can learn from the Athenians.

It seemed to me, therefore, that the setting here would be eminently suited to a discussion of certain developments in modern democracies that have an adverse effect upon the liberties of the individual and the social and moral values cherished by free men. The causative factor of this new threat to liberty is science and science-based technology.

This new science-technological threat is but the latest version of the age-old conflict between civilization and liberty—a conflict that has no permanent solution but reappears perennially in new form.

Liberty is never gained for once and for all. Each generation must win it anew. Each must defend it against new perils. These perils arise because men, being endowed with free will, continually alter the conditions of life. Countless decisions made in pursuit of private objectives may so transform society that institutional safeguards once adequately protecting human liberty become ineffective. It is then necessary to return to first principles and to adapt them to altered circumstances.

The title of my speech "Liberty, Science and Law" expresses my conviction that unless certain practices in the technological exploitation of scientific knowledge are restrained by law, they will cost us our liberties.

Science and technology are, of course, of immense benefit to man. They are so highly regarded that no one would, or for that matter could, prevent their spreading to areas that at present are retarded in this respect. But they may bring about changes in our physical environment of greatest potential danger. Certain technologies admittedly injure man, society, and nature. Yet, even in countries where the people are sovereign and where they recognize the danger, efforts to bring these technologies under social control have had little success. Those who have the use of technology are powerful enough to prevent legal restraint, the main prop of their power being the esoteric character of modern science.

Much of it is incomprehensible even to intelligent and educated laymen. When scientific-technological considerations enter into public issues—as is often the case today—the issues cannot be understood by the electorate, frequently not even by the public officials who are directly concerned. There is then no recourse but to call on scientists for expert advice. In effect, the issue will be decided by them, yet they have not been elected, nor are they accountable to the people. What is left of self-government when public policy no longer reflects public consensus? And, when the public finds that it cannot judge and evaluate issues involving science, will it not become apathetic toward *all* public issues? Does this not spell the doom of self-government, hence of freedom for modern man? Though all the institutions established to safeguard his liberties may remain intact, the substance of freedom will have been lost.

By one of those ironies of fate beloved of Greek dramatists, this new threat to liberty has its source in the noblest Greek achievement, the freeing of the human mind to roam at will in pursuit of truth and knowledge. All things are to be examined and called into question, said the Greeks. Unless men understood the world in which they lived, and because of this understanding felt at home in it and could be useful citizens, they were not truly free. Never before or since was intellectual freedom valued so greatly. "All things were in chaos when mind arose and made order," said Anaxagoras, the mathematician and astronomer.

Everywhere else, the domain of the intellect was the special preserve of powerful priesthoods who jealously guarded their monopoly of knowledge. "To teach the people so that they would begin to think for themselves would destroy the surest prop of their power," wrote Edith Hamilton. "Ignorance was the foundation upon which the priest power rested." The legends of most people are replete with stories of divine punishment for trying to know more than was deemed proper—clear evidence of the determination of this priestly elite to discourage ordinary people from seeking knowledge. Not so in Greece. There curiosity and search for knowledge were held to please the gods, for through these the marvels of the gods were revealed to man. Wisdom and intelligence had their own protective deity—Athena.

When Renaissance man recovered his classical heritage, the most precious treasure he found was freedom of the mind. With his mental powers set free, it took him but three and a half centuries to build on foundations laid in classical