Scientists and National Policy

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For some time there has been wide concern within the scientific community with the need to improve the public's understanding of science, and, gradually, something has been done about it with the help of scientists themselves. The results to date may be far from satisfactory, but there is some cause for modest gratification. Many newspapers now employ specially trained science writers to interpret scientific events for their readers, and the number of books written for the layman, by both scientists and nonscientists and covering a wide range of technical fields, has risen markedly. Even the television networks have displayed some encouraging initiatives of late in going beyond the usual rubrics of space and medicine and in using scientists to discuss molecular biology and masers.

Unfortunately, there has been nothing like the same concern within the scientific community with the need to improve the public's understanding of the various roles played by scientists in the development of national policies. While there has been an increasing, though still slight, volume of scholarship concerned with the interactions of science and public policy, it has been largely the work of political scientists and historians. Much of this work has been exceedingly valuable and stimulating, and we need more of it. But there is still a need for scientists who have participated in government, particularly at the policy level, to speak out for themselves.

This need could not be more fully demonstrated than from reading **America's New Policy Makers: The Scientists' Rise to Power** (Chilton, Philadelphia, Pa., 1964. 298 pp. $6.95), by Donald W. Cox. This latest entry in the field of government and science, by a nonscientist (Cox has an Ed.D. from Columbia), is not only wholly lacking in the scholarship, judgment, and perspective of earlier studies of the subject by other nonscientists such as Don K. Price, A. Hunter Dupree, and Robert Gilpin, but it cries for a rebuttal from some of the scientist policy-makers the author speaks about with such unwarranted authority.

In his preface to the book, Cox notes that nearly a decade has passed "without a comprehensive discussion in print of the expanding role of the American scientist in our political system" and that there never has been an attempt "to present a popular history of the rise of American science in Government from its humble beginnings to the present." For these reasons, he has undertaken with this book to "fill a gulf in the public's need to know until the academic historians, who are still struggling to unravel the mass of valuable scientific material accumulated during World War II years, can catch up." He then proceeds to describe his "analysis," which is divided into two parts: "Part I presents a history of the relationship of science to Government from the origins of our nation to the present attempts at Geneva to achieve a nuclear test ban" (all accomplished, though admittedly in a "selective" fashion, in 134 pages). "Part II is an analysis of the unsolved problems stemming from the invasion of the political arena by the scientists" (treated in 126 pages).

While these are, indeed, lofty purposes and comprehensive tasks, the gulf is, alas, not filled but rather deepened by the author's rambling narrative. For without a more serious recourse to history and a more penetrating analysis of the facts, the reader is left with an all too superficial, often misleading, and frequently inaccurate account of what some scientists said to some other scientists or to some government officials about some very important issues.

The questions asked are important: "Do we need a national science policy?" But the answers are superficial: "If the nuclear, defense, and civil scientists in government, universities, and industry could prepare [science] plans for their respective agencies, and if some central office like Dr. Wiesner's Office of Science and Technology in the White House could put them all together into a codified form—with Congressional approval—then we would have a true *natural* science policy for the first time in our history" (p. 156).

The book also is full of errors that range from misspelling ("Hartshering" for Hartgering, p. 235) to wrong titles (Detlev Bronk is not "head of the Rockefeller Foundation," p. 151) to misstatements of fact (there is no President's Committee on Biology of the FCST," p. 235). But most disconcerting of all is the lack of a single footnote to document the hundreds of quotations which make up much of the author's narrative and which serve as the basis for many of his conclusions.

Unhappily, this book is likely to add to the confusion and uncertainty in the public mind about the role of scientists in government. Let us hope, therefore, that some of the scientists who have served the government in posts that require scientific competence, and political skills as well, will help write the public record.

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Geological Microbiology

Introduction to Geological Microbiology. Sergey Ivanovich Kuznetsov, Mikhail Vladimirovich Ivanov, and Natal'ya Nikolayevna Lyalikova. Translated from the Russian edition (Moscow, 1962) by Paul T. Broneer. Carl H. Oppenheimer, Ed. McGraw-Hill, New York, 1963. xviii + 252 pp. Illus. $8.95.

A peripheral but significant branch of bacteriology, to which the Russians have devoted much effort, is concerned with the geological significance of microbial activity. This book is unique in that it is probably the first to treat exclusively with this branch of science. It does not cover the entire field but is "merely a first attempt to generalize some of the existing information on the role of microorganisms in the formation and alteration of economic mineral deposits." Such topics as the distribution of bacteria in geological formations,