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Interfaces between Science and Public Policy

With the second World War, and ever since, we have had an increasing concern for the power of science and technology in the national service. Yesterday we hardly thought of science in its relation to foreign policy; today it is all too easy to think of it only in that connection. And over the long future we may find that questions posed by the intricate relationship between matters of science and technology and our domestic public affairs and public policy may prove yet more urgent. Even today one can see the lengthening shadows of various problems that surely lie in wait for us if they are not already at our doorstep.

Who in the future will man the frontiers at the many interfaces between science and public policy? Where will these people come from? What should their training be? The scientific and technical skills and knowledge and judgment that are brought to the service of the nation at the governmental level are multiple in the points at which they enter and the avenues through which they serve. They are also multiple in kind. In the realm of policy one can distinguish at least four general kinds of function: the execution of policy involving matters of science and technology on the domestic front; the corresponding function in relation to foreign policy; the formulation of foreign and domestic scientific policy; and the integration of scientific policy with the wider formulation of a general foreign policy. There is also the fundamental task of scientific planning at the substantive level—the task, essentially, of scientific creativity. The several levels of scientific planning have their counterparts in the kinds of background and talents required of those who would discharge these functions.

At the creative level, the function must depend on the intellect, vigorously disciplined and highly prepared. The level of general and administrative scientific policy requires extensive and intensive scientific training combined with administrative judgment and acumen in the most comprehensive connotations of these terms. Scientific originality in the narrower sense may be less essential. The formulation of "political scientific policy" will require men and women with the broadest kind of scientific competence. They should comprehend the substantive aspects of the questions with which they deal, and their personal scientific achievements should command the respect and the service of the men of science of high calibre who must be their advisers. They must also have a fundamental understanding of public policy and of the modes and patterns of public representation and negotiation. There are not many such men among us. How are we to increase their numbers to the maximum that our population and our resources will afford? H. M. Dowling, for many years headmaster of the Crewe County Grammar School in England, has observed that good minds introduced early enough to the sciences and humanities together, and introduced to them as coherent subjects rather than as collections of isolated and apparently unrelated facts and ideas, will retain a lifelong sympathy with, and a general understanding of, the objectives of both. Such men can truly evaluate the currents of their time.

Among all the demands of our day in the field of science in national policy, the challenge of finding men and women who are equipped to work in this most exacting field, and of properly preparing them to assume their burdens, stands preeminent. Upon how well that task can be accomplished in the years to come will depend to no inconsiderable degree the welfare of America.

—CARYL P. HASKINS, *Carnegie Institution of Washington*

(From the Walter E. Edge lectures, Princeton University, March 1964)