

the system cannot be estimated with any accuracy in advance of the existence of the capability. We can say from experience that there is a tendency to grossly underestimate the value of new systems in the information field. Let me give you two examples. Back in 1950 when the Eckert-Mauchly group were putting out the Univac I, which was the first large-scale commercial computer, IBM undertook a careful market study to determine whether they should try to get into this market. They concluded that there was a market for something like five or six of these machines in the entire United States and decided to stay out of the field. With 5 years 1,275 machines had been sold and the industry was turning to the design of a whole new generation of computers. IBM was late getting into the market for this reason. Another example, I was told recently by an official of the National Academy of Sciences that before they first acquired a Xerox machine they made a careful survey of the staff to estimate its use and decide upon appropriate equipment. Within a period of less than 2 years they had exceeded their estimate by something like a factor of 10 and had gone through two changes of equipment.

The great value of an innovation in statistical services of the kind envisaged cannot be measured by trying to find out who is going to use it, for what purpose, and then estimate their benefits. Indeed, if we could identify and measure the uses to which it would be applied we could be sure that we would have, in fact, a more limited capability than we seek. The value lies in the great flexibility that is inherent in its design. It can more easily respond to the needs of different requirements and adapt to the needs of new requirements. No techniques in technology or social organization is more prized in a complex and changing world than one which is flexible to changing requirements—that incorporates a basic or generic capability. This is the prize we seek. And, while recognizing that the governmental statistical programs are by no means the only or always the most important sources of information for policy, it is still fair to say that the real stake is the degree of our success in public policy and public management in a complex and changing world. Good information is the root of success in that endeavor.

*How, then, are we to achieve such reforms in the servicing capabilities of government statistical programs?*

There are those who know the problems well who maintain that the best solution (some say the only real solution) is the development of a centralized National Statistical Bureau that would integrate in the same agency all of the general-purpose, public-serving statistical programs of the Federal Government. (This should not be taken to mean that the statistical programs specific to the other missions of operating agencies should not continue to be decentralized.) Indeed, the United States is one of the few, if not the only country that has such a decentralized statistical program—and it has been becoming progressively more decentralized. However, if one is sensitive to the political and bureaucratic milieu in which such a radical transformation would have to take place, one cannot help but feel that the changes of such a reform are very slim. Furthermore, one can at least make a case that the way for such a centralized bureau to come into being is through an emergent or evolutionary process tied to the solution of problems.