any other number at the push of a button! A careful reading of the report will reveal that a major part of its effort was directed at denying this hypothesis. It rejected the "naive data bank concept"—or what some call "data dumps"—and indicated that its widespread acceptance among some advocates of extended statistical systems was a matter of concern.

For statistical purposes the main consideration in developing a more serviceable information system is not the assembly of a large data bank of files from a wide variety of sources. The effective use of data in statistical analysis requires data that have classification attributes *relevant* to the decision problem and that have *reliable* qualitative characteristics. Without these conditions being fulfilled you can push numbers around in machines ad infinitum without effectively serving the decision process—in fact you would more likely confuse and mislead it. Those who know the problem of effective computer use and statistical analysis have a favorite acronym—GIGO. This stands for "Garbage In—Garbage Out."

The biggest problem in developing a more effective statistical system has little to do with the development of computer hardware systems to do the job; it has to do with needed changes in production processes that generate and make available the statistical records and synthetic series that form the basic analytical capability.

Most of the report dealt with the institutional and procedural anomalies that result in statistical files that are unresponsive to the needs of many vital policy programs. Briefly, they are such constraints as the following:

1) Important historical records are sometimes lost because of the absence of a consistent policy and procedure for establishing and maintaining archives.

2) The absence of appropriate standards and procedures for file maintenance and documentation lead to low quality files that contain many technical limitations in statistical usage.

3) Many useful records are produced as a by-product of administrative or regulatory procedures by agencies that are not equipped to perform a general purpose statistical service function.

4) No adequate reference service exists that would allow users to determine easily whether or not records have the characteristics of quality and compatibility that are appropriate to their analytical requirements.

5) Procedures for collecting, coding and tabulating data that were appropriate when developed now lead to some incompatibilities in record association and usage required by current policy problems and made possible by computer techniques.

6) There are serious gaps in existing data records that stand in the way of bringing together records of greatest relevance for today's problems.

7) The need to by-pass problems of record incompatibility in developing statistics appropriate for policy analysis, places severe strains upon regulations restricting the disclosure of information about individuals. Technical possibilities for using the computer to satisfy these statistical requirements without in any way violating personal privacy have not generally been developed and made available by the agencies.

Changing the practices of the Federal statistical agencies to bring about more relevant and effective statistical resources for modern public policy and management will be a time-consuming and resource-consuming job. We could not possibly spare the intellectual and financial resources to make *all* statistical files meet the necessary standards. *And, if they do not meet the necessary standards for effective statistical use, there is no need for them to be incorporated into a computerized statistical service system!*

This means that we must move first to identify the most vital problem areas affecting public policy and management; second, to determine the statistical requirements that will meet these needs; third, to establish the standards and practices essential to the generation of *relevant and reliable* statistical records to fulfill these requirements; fourth, to provide the institutional forms and mission concepts to provide effective statistical services; and fifth, to support these records with computer systems able to provide the essential flexible servicing capability. It is the fifth and easiest step that many naively feel is sufficient to solve the problem of statistical services. Anyone familiar with the operation of statistical systems and the history of the federal general-purpose statistical programs will recognize this as a formidable problem that can only be solved in stages over a number of years.

We have examined what the report did not say that people think it did and what the report did say that was unfortunately ignored. Now let's turn to what the report did not say which it should have said.