

Outline: Difficulties of Conducting  
Social Science Research

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1. Descriptive Studies. Most research sponsored by government agencies falls into this category. These studies do not isolate variables, but merely describe the environment. They often provide a mass of data, but are not problem-oriented and therefore provide little information that would be relevant to policymaking. For example, day care studies typically describe the number of children in day care, the type of day care, the age of the child, and a number of other first-order facts, but do not examine those variables (e.g., the behavioral effects of group care on children of different ages, the social and political issues involved in placing children in day care, etc.) in a context which would be relevant to a decision concerning the advisability of a large-scale government day-care program. The data are usually collected before any hypotheses are set forth or problems are articulated.

2. Experimental Demonstration Studies. Typically, these studies are designed to test the effectiveness of government programs, generally by comparing individuals who have participated in the program with those who have not. Results of even well-designed research in this area are often conflicting and difficult to interpret.

For example, a number of studies have been done to determine the "effect" of Headstart programs on IQ and achievement. Even this relatively straightforward issue is deceptively complex. The studies have not succeeded in demonstrating consistently that children participating in Headstart subsequently perform better in school. This is at least partially due to the large number of uncontrolled variables present in the environment which affect a child's school performance -- family background, income level, school experiences following Headstart programs, etc. It is difficult to demonstrate the impact of one relatively minor program on a child's general behavior when there are so many more powerful variables operating in the environment, and when the measure of this behavior is a rather broad one (IQ or subsequent school achievement). It is unlikely that we can prove the effectiveness of a program when the tests are only remotely related to the skills that were learned. We might perhaps more easily demonstrate superior performance by testing for a particular skill taught as part of the Headstart program. Perhaps for similar reasons, Coleman's study could not demonstrate an impact of school facilities per se on student performance. Fortunately, we frequently do not accept the rather negative results of large demonstration studies. If studies show little learning advantage for Headstart programs or for superior school facilities, we, justifiably, do not eliminate Headstart or downgrade school facilities, but rather assume that the experiments were not sensitive enough to demonstrate the effects.

The income maintenance experiments (New Jersey and rural experiments) presently being conducted are examples of comprehensive large-scale demonstration studies in which there is an attempt to provide for central groups and isolate variables. (In these experiments, payments are given to families under different circumstances in order to measure the effect of this added income on a variety of behavioral patterns.) The research is in its early stages and the results are not yet available.

3. Experimental Research on Basic Social and Psychological Variables. Operating government agencies conduct this type of research infrequently because it is slow, often tackles just one aspect of a problem, and is difficult to apply to practical situations. However, because this research manipulates a small number of narrow variables (as distinguished from the broad experimentation above), it can be easily controlled and interpreted. For example, instead of studying the overall effects of Headstart, we can design basic learning research to determine the most effective methods of presenting educational materials to young children. These are straightforward "learning theory" experiments. Or, we can design intensive, well-controlled experiments to demonstrate the impact of early stimulation on IQ. This approach was used effectively by Earl Schaeffer at NIMH who demonstrated that low-income young children given individualized learning experiences over an extended period of time score significantly higher in IQ tests than a control group not receiving these experiences. The problem here is that the experiments are often considered too "academic" and have little political impact.

4. Nonexperimental Data Analysis. This type of data analysis can be econometric or less complex. Here, existing data are used; experimental treatments are not imposed. The most important point is that the data analysis is or should be problem-oriented as distinguished from the random and rather overwhelming mass of data presented in the descriptive studies referred to in 1. above. This type of research is frequently less conclusive than experimental research, but, if well-designed, can be meaningful and useful.

For example, in a staff background paper for the President's Commission on Income Maintenance Programs, we used this type of data analysis to provide answers to the question whether AFDC recipients bear additional children in order to increase welfare payments. The analysis provided indirect evidence that:

- a. Welfare recipients do not appear to have higher fertility rates than low-income groups in the general population.
- b. Welfare recipients in high-paying states do not have larger families than those in low-paying states.
- c. Fertility rates are inversely related to income for the low and middle income ranges. Family size appears to be related to level of income rather than to its source.

Considerable care must be taken not to draw positive conclusions or causation from this type of nonexperimental analysis.