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SAGE reference

Experimental Criminology

Experimental criminology is the body of criminal justice research that employs experimental designs to test the effectiveness of criminal justice interventions. While experimental designs abound in other disciplines, they tend to be less common in criminal justice research. Several explanations have been offered for the relative underutilization of experimental designs in criminological research. Experimental designs have been described as impractical, time-consuming and cost-prohibitive to implement. In some instances, researchers cannot meet the requirements of an experimental design. In other instances, implementing an experimental design would be considered unethical. Despite these and other obstacles, in recent years numerous influential criminologists have advocated for more frequent and systematic utilization of experimental designs in the **evaluation** of criminal justice policies and practices.

THE EXPERIMENTAL DESIGN

Virtually every undergraduate textbook on research methods describes experimental designs as the "gold standard" of research methodology. While there are many variations on the experimental design, the classic experimental design involves an independent and a dependent variable, random assignment to experimental and control groups, and pre- and posttesting. In the classic experiment, the independent variable can be thought of as the cause, and the dependent variable as the effect. The researcher believes that the independent variable causes changes in the dependent variable and conducts an experiment to test this belief. To conduct a classic experiment, the researcher selects a target population and randomly assigns subjects to either an experimental or a control group. Random assignment of subjects to the treatment and control groups ensures equivalency of the groups. The researcher then conducts a pretest by measuring both groups on the dependent variable. Following the pretest, the experimental group receives the experimental stimulus while the control group does not. The researcher then remeasures both groups on the dependent variable. Changes in the dependent variable seen in the experimental group (but not in the control group) are presumed to result from exposure to the experimental stimulus.

A criminal justice example might be helpful to demonstrate these points and clarify the definitions. Imagine a researcher interested in the effectiveness of juvenile "boot camps." Specifically, the researcher decides to test the hypothesis that juvenile boot camps increase a juvenile delinquent's respect for authority. The researcher identifies a target population as juvenile delinquents and draws subjects for the experiment from that population. The researcher then randomly assigns juvenile delinquents to the experimental and control groups and pretests each group's respect for authority prior to any intervention. The researcher then exposes only the subjects in the experimental group to the experimental stimulus, in this case boot camp. Following boot camp, both the experimental and control groups are remeasured on the dependent variable (respect for authority). Changes in the dependent variable observed in the experimental group but not the control group are presumed to result from exposure to the experimental stimulus (the boot camp). If the experimental group exhibits a greater respect for authority in the posttest, the researcher has proved his or her hypothesis and demonstrated the positive effect of boot camps on respect for authority.

The advantages of the experimental designs are widely acknowledged. Random assignment in an experimental design reduces conscious (or subconscious) bias in the assignment of subjects and also controls for the possibility of chance affecting the **outcome**. Control groups, a key element of an experimental design, provide a

distinct advantage. The control group allows the researcher to attribute any changes in the dependent variable observed only in the experimental group to the experimental stimulus. Without a control group, it would be almost impossible to know whether the experimental stimulus, or something else, affected the experimental group. Due to the unique features of experimental designs, these research designs more readily allow for "causal inferences" (a statement of the cause-and-effect relationship between the experimental stimulus and **outcome**). While researchers frequently acknowledge the benefits of experimental designs, they also recognize that there are often significant barriers to conducting such experiments. Some of these barriers are particularly salient in the field of criminal justice.

EXPERIMENTAL DESIGNS IN CRIMINOLOGY

Although experiments provide the most scientifically sound evidence of the effect of an experimental stimulus, experimental studies can be particularly difficult to design in criminology. Criminal justice policy and agency cooperation are two additional obstacles to employing experimental designs in criminological research. As a result of criminal justice policies, criminological researchers are restricted in both the types of interventions they can study and the assignment of subjects to those interventions. Criminal justice policy frequently dictates both the nature of the design of criminal justice interventions and the exposure of individuals to those interventions. For example, current sentencing policy mandates prison for certain crimes. In mandatory sentencing schemes, prison is the only criminal justice intervention permitted. It is difficult for criminological researchers to develop an experimental research design to test the effects of the prison when a control group of similar offenders who are not sentenced to prison cannot be generated because of mandatory sentencing. Even if these sentencing policy requirements could be overcome, securing agency cooperation to conduct the research would present an additional obstacle. Judges and other criminal justice personnel are often reluctant to permit disparity in sentences for the purposes of research. Moreover, this type of experimental design might be widely condemned as unethical. Despite the additional obstacles that often face criminological researchers, experimental designs can be and have been successfully employed in criminological research.

EXPERIMENTAL CRIMINOLOGY: PAST AND PRESENT

In recent years, there has been a resurgence of literature on experimental methods in criminology. While this resurgence might seem to suggest the birth of a burgeoning field, the experimental method actually enjoys a rather extensive history in the social sciences. Within the social sciences, the field of psychology is widely accepted as having pioneered the use of the experimental method. As early as 1880, psychological researchers recognized the need for control groups in order to distinguish experimental effects and began utilizing controlled randomized studies. In the late 1890s, sociologists at the University of Chicago were applying experimental methods to studies of a wide variety of social problems. Not long after, criminologists began employing randomized experimental designs in studies of criminal justice policies and practices.

A delinquency prevention experiment conducted in Cambridge and Somerville, Massachusetts, in the 1930s is recognized as one of the earliest randomized experiments in criminal justice. In the Cambridge-Somerville experiment, a researcher hypothesized that delinquency might be preventable through friendship. Young boys were scored based on their risk for delinquency, matched in pairs on the basis of those scores, and then randomly assigned to either the intervention or control group. The intervention in this study consisted of the friendly counseling of a social worker over a period of several years. The results seemed to indicate that those who received the intervention were actually more likely to engage in delinquent behavior. More important, the research demonstrated that the levels of delinquency among these at-risk boys were actually much lower than was expected. Had there not been a control group, these low levels of delinquency might have been attributed to the intervention. The surprising results of the Cambridge-Somerville experiment demonstrated the potential importance of experimental designs in criminological research.

Early applications of the experimental method in the social sciences eventually led to "the flourishing in America

of a golden age of **evaluation** between the 1960s and the 1980s" (Oakley 2000: 322). During this "golden age," social scientists utilized experimental methods to test the effectiveness of numerous social policy interventions, beginning with further controlled trials of delinquency prevention programs. Following the golden age, experimental designs seemed to largely fade from the criminal justice landscape with only a few diligent researchers continuing to employ these methods. However, toward the end of the 1990s, numerous influential criminologists began once again advocating for the increased use of experimental methods in criminological studies.

Over the past few years, several indicators of the growing popularity of experimental criminology have surfaced. In 1997, the American Society of Criminology (ASC), the largest national membership organization in the field of criminal justice, was prepared to officially endorse the use of experimental methods in criminal justice **evaluation** research and make a statement in support of the principle "that random assignment to treatment options is the best scientific method for determining the effectiveness of options" (Short et al. 2000: 296). In the year 2000, several important events marked the increasing stature of experimental criminology. Several distinguished scholars founded the Academy of Experimental Criminology (AEC), an academy whose fellows have significantly advanced criminal justice knowledge through conducting experiments within the field. In the same year, the Campbell Collaboration, an international group committed to collecting and evaluating randomized experiments in criminal justice and other social science fields, was also established. Finally, an entire issue of the journal *Crime & Delinquency* was devoted to experimental criminology (July 2000). The articles in the special issue explored the possibilities, limitations, and ethical implications of employing experimental methods in criminal justice research. These recent events demonstrate the growing interest in applying classical experimental research methods to the field of criminology.

SUMMARY

True experiments are the gold standard in social science research. Carefully designed experiments that employ the random assignment of subjects to experimental and control groups provide the best evidence of the effectiveness of interventions. These experiments allow the researcher to measure the effects of the independent variable on the dependent variable while controlling for the operation of bias or chance. While formidable obstacles must sometimes be overcome to conduct an experiment in criminological research, these research designs are once again becoming more common. Advocates of experimental criminology argue that randomized controlled experiments add to the knowledge base and will ultimately lead to more informed criminal justice policy. With the recent coalescence of activity highlighting the importance of utilizing experimental designs in criminological research, enthusiasm for experimental criminology continues to grow.

—Natasha A. Frost

Further Reading

Feder, Lynette and Robert F. Boruch. *"The Need for Experiments in Criminal Justice Settings." Crime and Delinquency* vol. 46 no. (3 (July)) pp. 291–294 (2000).

Maxfield, Michael G. , and Earl Babbie. (1998). *Research Methods for Criminal Justice and Criminology.* Belmont, CA: Wads-worth Publishing Company.

Oakley, Ann. *"A Historical Perspective on the Use of Randomized Trial in Social Science Settings." Crime & Delinquency* vol. 46 no. (3 (July)) pp. 315–329 (2000).

Petrosino, Anthony , Carolyn Turpin-Petrosino , and James O. Finckenauer. *"Well Meaning Programs Can Have Harmful Effects! Lessons from Experiments of Programs Such as Scared Straight." Crime & Delinquency* vol. 46 no. (3 (July)) pp. 354–379 (2000).

Sherman, Lawrence. *"Reducing Incarceration Rates: The Promise of Experimental Criminology." Crime & Delinquency* vol. 46 no. (3 (July)) pp. 299–314 (2000).

Sherman, Lawrence and David Weisburd. *"General Deterrent Effects of Police Patrol in Crime 'Hot Spots': A Randomized Controlled Trial." Justice Quarterly* vol. 12 pp. 625–648 (1995).

Short, James F. , Margaret Zahn , and David P. Farrington. *"Experimental Research in Criminal Justice Settings: Is There a Role for Scholarly Societies?" Crime & Delinquency* vol. 46 no. (3 (July)) pp. 295–298 (2000).

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