

# 13

## Thinking Experimentally

*Christopher Uggen*

**T**aken together, the chapters in this volume articulate a clear and convincing scientific rationale for experimental studies in law and criminology. If the reader will indulge a more personal perspective, however, I would like to relate my own story of “researcher meets experiments, researcher loses experiments, and researcher rediscovers experiments.”

### RESEARCHER MEETS EXPERIMENTS

As a wide-eyed new graduate student at the University of Wisconsin, I was fortunate to experience the sort of thrilling *gedankenblitz* of realization and understanding that I thought only great scientists could experience. In contrast to Archimedes, who famously shouted “Eureka!” from his bathtub, I was simply taking notes one day during a particularly engaging lecture by Chuck Halaby in a research methods class. I made no great discovery myself that day, but I nevertheless emerged from the assigned material on causal inference with a new perspective on social science that I have yet to shake. Then, as now, I found myself extremely skeptical of observational approaches to the study of crime, law, and deviance, and enthralled with the potential of experimental research in this area.

The shift in orientation was instant and dramatic. I knew almost nothing about lab experimentation but had learned about policy interventions and field experiments while working in social services prior to graduate school. In social services, we tend to consider social interventions as a means to serve the public good. Of course, one cannot determine whether such interventions are serving the public good or the “public bad” without conducting a rigorous

analysis of their effects, so I took a keen interest in methods to determine “what works.”

Upon entering graduate school, I dutifully studied survey research, panel designs, and statistical techniques such as covariate adjustment, but I was quick to jump ship when confronted with a powerful logical and statistical critique of nonexperimental methods. Upon embracing experimental methods and reasoning, I had both a legitimate license to manipulate or intervene in the world, which appealed to my inner social worker, and a powerful means to judge the success or failure of such interventions. As a sociological criminologist in training, I could not help but think of Cesare Lombroso’s great moment of discovery, reported in his address to the Sixth Congress of Criminal Anthropology in 1906:

In 1870 I was carrying on for several months researches in the prisons and asylums of Pavia upon cadavers and living persons, in order to determine upon substantial differences between the insane and criminals, without succeeding very well. Suddenly, the morning of a gloomy day in December, I found in the skull of a brigand a very long series of atavistic anomalies, above all an enormous middle occipital fossa and a hypertrophy of the vermis analogous to those that are found in inferior vertebrates. At the sight of these strange anomalies, as a large plain appears under an inflamed horizon, the problem of the nature and of the origin of the criminal seemed to me resolved. (see Parmelee 1912:25)

In my case, however, the “skull of the brigand” turned out to be Paul Holland’s (1986) exposition of the Rubin/Holland causal model. With the appearance of a few simple equations and a short dictum in capitalized letters, as on a large plain under an inflamed horizon, the problem of the nature of causal inference seemed to me resolved: *No Causation Without Manipulation* (Holland 1986:959). I left the lecture resolved to devote my own researches to experiments, or at least to think experimentally whenever designing a project.

The Rubin/Holland model is attractive, in part, because it directs researchers to seek the effects of causes rather than the causes of effects. Much social research, including most of my own work, seeks to trace or reconstruct the causes of observed effects. Indeed, the disciplinary field of “criminology” is largely organized around a single dependent variable. We observe the effect—conditions of crime and noncrime—in an observational sample, and then make heroic statistical efforts to disentangle the myriad forces that give rise to it. Rubin (1974) and Holland (1986) make a convincing case that it is much more sensible for a researcher to actively manipulate a cause and then to observe its effects—to *do* something and watch what happens. In doing so, researchers can compare the effects of the cause they subject to treatment (*t*) with the counterfactual case in which some other cause or a control condition is applied (*c*).

Irving Piliavin and I offered an extended application of the model to the study of criminal desistance (Uggen and Piliavin 1998). For Rubin and Holland, the fundamental problem of causal inference is that it is impossible to observe the effects of both cause  $t$  and cause  $c$  on the same person or unit. That is, we simply cannot observe the counterfactual condition in standard observational studies. For example, if a parolee is unemployed upon release from prison and commits a new crime within a month, we cannot tell whether she would have recidivated had she secured employment.

If we could assume *unit-homogeneity*, we could measure the causal effect as the difference in recidivism rates between an employed and an unemployed parolee. But, of course, unemployed parolees are not identical to employed parolees. Alternatively, we could assume *temporal stability* and compare the criminal activity of the *same* parolee during periods of employment and unemployment. But, of course, a spell of unemployment in the first few weeks of freedom could be far more consequential than unemployment after two years of law-abiding behavior in the community.

This is why we typically try to estimate an *average* causal effect based on the expected value of the difference over everybody in a population. In this case, that would mean deviating the average number of crimes among employed parolees from the average number of crimes among unemployed parolees. This replaces the impossible-to-observe effect of employment on a person with the possible-to-estimate average effect of employment over a population. But this approach breaks down in practice because it relies on an untenable assumption regarding *mean independence*: that the average number of crimes for the employed and unemployed groups are independent of the selection mechanism that determines whether we observe treatment  $t$  (employment) or treatment  $c$  (unemployment) for a given person.

Under what conditions would the assumption of mean independence hold? If the selection mechanism is random assignment to jobs, this is a reasonable assumption. If the mechanism is one of self-selection, we are likely to encounter big omitted variable problems. In particular, working is likely to be associated with factors such as ambition or self-control that can be extremely difficult to name and measure.

Criminological research is particularly vulnerable to violations of mean independence because the processes guiding selection into levels of our independent variables are so poorly understood. Without control over the assignment of treatments, we must assume "*strong ignorability*": that we can safely ignore the selection process into each variable of causal interest. Such an assumption would require fine-grained data on selection process into work as well as theory and data on all other factors related to both employment and recidivism.

The case of prisoner reentry might offer a best-case scenario for applying experimental methods in the field. The state has a legitimate and expansive license to intervene in the lives of former prisoners, so random assignment to strong but benign treatments such as employment is well within their purview. While treatments such as marriage are less amenable to intervention, random assignment to family support *programs* or supervision conditions is certainly feasible. While experiments on self-control, social control, and legal systems may be best administered in the sort of laboratory settings described in this volume, experimental methods remain criminally underutilized in criminal justice settings.

### RESEARCHER LOSES EXPERIMENTS

Given their obvious advantages, why do so few criminologists and legal scholars employ experimental techniques? This volume of original research, along with the new studies appearing in the *Journal of Experimental Criminology*, speaks to a resurgence of interest in the application of experimental methods. An earlier collection of experimental studies on deviance (Steffensmeier and Terry 1975) reprinted powerful work that truly reoriented thinking on some central issues in the field: the Stanford prison experiments (Haney, Banks, and Zimbardo 1973), Stanley Milgram's (1965) classic laboratory experiments on obedience to authority, Schwartz and Skolnick's (1962) field experiments on legal stigma, and quasi-experiments such as H. Laurence Ross and colleagues' (1970) analysis of the British "Breathalyser" crackdown. More recent reviews (Farrington and Welsh 2005) show a significant increase in the number of randomized experiments in criminology, albeit from a low base rate. According to Farrington and Welsh, there were thirty-five experimental studies during the period from 1957 to 1981 and eighty-three during the period from 1982 to 2004.

Apart from the raw numbers, field experiments have yielded some of the most provocative and influential recent articles published in the criminology, criminal justice, and law and society literatures. Lawrence Sherman and Richard Berk's (1984) mandatory arrest experiment for domestic violence cases, Devah Pager's audit study of the effects of race and criminal records on employment decisions (2003), and David Olds and colleagues' powerful (1998) study of the long-term effects of nurse home visits on delinquency surely rank among the most important and useful articles published in criminology in recent decades.

Nevertheless, I confess that my personal resolve has weakened since graduate school and—despite my professed commitment—I have conducted pre-

cious few experiments in the intervening years. Unless young scholars receive graduate training in a lab-based research shop and retain access to similar facilities as assistant professors, they can have an exceedingly difficult time getting an experimental research agenda off the ground. Outside the lab, the difficulties are equally daunting for those doing field experiments. The experimental data that I analyzed for my dissertation, for example, cost in excess of \$100 million dollars (Uggen 2000; Hollister et al. 1984). A commitment to experimental thinking, however, has nevertheless served me well, whether studying criminology, the sociology of law, or deviance more generally. Jeff Manza and I adopted a simple counterfactual approach in estimating the political consequences of laws that bar convicted felons from voting, asking whether election outcomes would have differed had the disenfranchised been permitted to vote (Uggen and Manza 2002). In criminology, when Melissa Thompson and I (2003) tried to estimate the unique contribution of heroin and cocaine use to illegal earnings, we employed a model of within-person change to address the unit homogeneity problem, albeit not the temporal stability assumption inherent in most observational studies. While it seems unreasonable to randomly administer heroin and cocaine to research subjects, lab experiments such as those presented in the chapters by Fetchenhauer, Simon, and Fetchenhauer and by Kalkhoff and Willer can certainly help elucidate the mechanisms—economic versus sensation-seeking, for example—thought to link substance use and criminal activity.

With regard to the sociology of law, similar logics may be applied in the study of legal consciousness or mobilization (Ewick and Silbey 1998). In trying to understand why some targets of discrimination or harassment remain silent and others come forward, one cannot randomly assign an experience such as severe discrimination (Edelman et al. 1999) or sexual harassment (Blackstone and Uggen 2003) in the field. While statistical selectivity techniques may be employed to mimic the logic of an experiment, however, the lab-based work on legal systems and compliance in this volume offers a tremendously promising approach in understanding legal environments and the individual and social determinants of consciousness and mobilization (Vidmar and Schuller 1987).

With regard to deviance, lab experiments on stigma offer tremendous promise in elucidating the strong effects observed in audit studies (Pager 2003; Pager and Quillian 2005), public opinion polls (for example, Manza et al. 2004), and surveys (Steffensmeier and Kramer 1980) that incorporate experimental designs. In addition to its scientific contribution, such lab work surely has the potential to facilitate the reentry and reintegration of millions of former felons in the United States.

### RESEARCHER REDISCOVERS EXPERIMENTS

When students have difficulty identifying an appropriate method for their work, I often ask them what sorts of evidence they find most convincing. Most of them make some reference to experiments in their answer, but few then go on to conduct experiments in the field or in the lab. I too have long been convinced that experiments provide the most persuasive evidence on the social science questions that I consider most important. Yet, I too have rarely employed such methods for reasons of expedience and expertise.

The laboratory experiments reported in this volume constructively engage some of the most compelling theories and questions in the study of crime, law, and deviance. As is the case for many other criminologists, I may be late to the party. Nevertheless, I attempt to incorporate experimental design and thinking into every new project, making a halting but inexorable return to the Rubin/Holland model that so inspired me upon my first encounter with the dictum of “no causation without manipulation.” In fact, my recent projects have involved small-scale survey experiments, the design of a networked experimental computer lab, and the submission of a grant application on a new audit study. In my view, advancement in crime, law, and deviance research hinges upon its engagement with experiments in the field and in the lab. Properly conducted, such work can serve a public criminology mission as well, creating the knowledge that makes for a safer and more just society.

### REFERENCES

- Blackstone, Amy, and Christopher Uggen. 2003. “‘If I didn’t like something, I’d tell them’: Making Sense of Responses to Sexual Harassment.” Paper presented at the annual meetings of the Law and Society Association. Pittsburgh, PA.
- Edelman, Lauren B., Christopher Uggen, and Howard S. Erlanger. 1999. “The Endogeneity of Legal Regulation: Grievance Procedures as Rational Myth.” *American Journal of Sociology* 105:406–54.
- Ewick, Patricia, and Susan S. Silbey. 1998. *The Common Place of Law*. Chicago: University of Chicago Press.
- Farrington, David P., and Brandon C. Welsh. 2005. “Randomized Experiments in Criminology: What Have We Learned in the Last Two Decades?” *Journal of Experimental Criminology* 1:9–38.
- Haney, Craig, Curtis Banks, and Philip Zimbardo. 1973. “Interpersonal Dynamics in a Simulated Prison.” *International Journal of Criminology and Penology* 1:69–97.
- Holland, Paul W. 1986. “Statistics and Causal Inference.” *Journal of the American Statistical Association* 81:945–60.
- Hollister, Robinson G. Jr., Peter Kemper, and Rebecca A. Maynard. 1984. *The National Supported Work Demonstration*. Madison: University of Wisconsin Press.

- Manza, Jeff, Clem Brooks, and Christopher Uggen. 2004. "Public Attitudes toward Felon Disenfranchisement in the United States." *Public Opinion Quarterly* 68:276–87.
- Milgram, Stanley. 1965. "Some Conditions of Obedience and Disobedience to Authority." *Human Relations* 18:57–75.
- Olds, David L., Charles R. Henderson, Jr., Robert Cole, John Eckenrode, Harriet Kitzman, Dennis Luckey, Lisa Pettitt, Kimberly Sidora, Pamela Morris, and Jane Powers. 1998. "Long-Term Effects of Nurse Home Visitation on Children's Criminal and Antisocial Behavior: 15-Year Follow-Up of a Randomized Controlled Trial." *Journal of the American Medical Association* 280:1238–44.
- Pager, Devah. 2003. "The Mark of a Criminal Record." *American Journal of Sociology* 108: 937–75.
- Pager, Devah, and Lincoln Quillian. 2005. "Walking the Talk? What Employers Say versus What They Do." *American Sociological Review* 70:355–80.
- Parnelee, Maurice 1912. *The Principles of Anthropology and Sociology in Their Relations to Criminal Procedure*. New York: Macmillan.
- Ross, H. Laurence, Donald T. Campell, and Gene V. Glass. 1970. "Determining the Effects of a Legal Reform: The British 'Breathalyser' Crackdown of 1967." *American Behavioral Scientist* 13:493–509.
- Rubin, Donald B. 1974. "Estimating Causal Effects of Treatments in Randomized and Nonrandomized Studies." *Journal of Educational Psychology* 66:688–701.
- Schwartz, Richard D., and Jerome H. Skolnick. 1962. "Two Studies of Legal Stigma." *Social Problems* 10:133–38.
- Sherman, Lawrence W., and Richard A. Berk. 1984. "The Specific Deterrent Effects of Arrest for Domestic Assault." *American Sociological Review* 49:261–72.
- Steffensmeier, Darrell J., and John H. Kramer. 1980. "The Differential Impact of Criminal Stigmatization on Male and Female Felons." *Sex Roles* 6:1–8.
- Steffensmeier, Darrell J., and Robert M. Terry. 1975. *Examining Deviance Experimentally*. Port Washington, NY: Afred Publishing.
- Uggen, Christopher. 2000. "Work as a Turning Point in the Life Course of Criminals: A Duration Model of Age, Employment, and Recidivism." *American Sociological Review* 65:529–46.
- Uggen, Christopher, and Jeff Manza. 2002. "Democratic Contraction? Political Consequences of Felon Disenfranchisement in the United States." *American Sociological Review* 67: 777–803.
- Uggen, Christopher, and Irving Piliavin. 1998. "Asymmetrical Causation and Criminal Desistance." *Journal of Criminal Law and Criminology* 88:1399–1422.
- Uggen, Christopher, and Melissa Thompson. 2003. "The Socioeconomic Determinants of Ill-gotten Gains: Within-Person Changes in Drug Use and Illegal Earnings." *American Journal of Sociology* 109:146–85.
- Vidmar, Neil, and Regina A. Schuller. 1987. "Individual Differences and the Pursuit of Legal Rights: A Preliminary Inquiry." *Law and Human Behavior* 11:299–317.

