

EXPERIMENTAL CRIMINOLOGY

Experimental criminology is a part of a larger and increasingly expanding scientific research and evidence-based movement in social policy. The chapters in this volume report on new and innovative contributions that experimental criminology is making to basic scientific knowledge and public policy. Contributors explore cutting-edge experimental and quasi-experimental methods and their application to important and topical issues in criminology and criminal justice, including neurological predictors of violence, peer influence on delinquency, routine activities and capable guardianship, early childhood prevention programs, hot spots policing, and correctional treatment for juvenile and adult offenders. It is the first book to examine the full scope of experimental criminology, from experimental tests – in the field and in the laboratory – of criminological theories and concepts to experimental and quasi-experimental evaluations of crime prevention and criminal justice interventions.

Brandon C. Welsh is a Professor of Criminology at Northeastern University and a Senior Research Fellow at the Netherlands Institute for the Study of Crime and Law Enforcement.

Anthony A. Braga is Don M. Gottfredson Professor of Evidence-Based Criminology at Rutgers University and a Senior Research Fellow in the Program in Criminal Justice Policy and Management at Harvard University.

Gerben J. N. Bruinsma is Director of the Netherlands Institute for the Study of Crime and Law Enforcement and a Professor of Environmental Criminology at VU University in Amsterdam.

Experimental Criminology

Prospects for Advancing Science and Public Policy

Edited by

Brandon C. Welsh

Northeastern University and Netherlands Institute for
the Study of Crime and Law Enforcement

Anthony A. Braga

Rutgers University and Harvard University

Gerben J. N. Bruinsma

Netherlands Institute for the Study of Crime
and Law Enforcement



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press & Assessment
 978-1-107-03223-1 — Experimental Criminology
 Edited by Brandon C. Welsh, Anthony A. Braga, Gerben J. N. Bruinsma
 Frontmatter
[More Information](#)



Shaftesbury Road, Cambridge CB2 8EA, United Kingdom
 One Liberty Plaza, 20th Floor, New York, NY 10006, USA
 477 Williamstown Road, Port Melbourne, VIC 3207, Australia
 314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India
 103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781107032231

© Cambridge University Press & Assessment 2013

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press & Assessment.

First published 2013

A catalogue record for this publication is available from the British Library

Library of Congress Cataloging-in-Publication data

Experimental criminology : prospects for advancing science and public policy / edited by Brandon C. Welsh, Northeastern University, Anthony A. Braga, Rutgers University and Harvard University, Gerben J. N. Bruinsma, Netherlands Institute for the Study of Crime and Law Enforcement

pages cm

Includes bibliographical references and index.

ISBN 978-1-107-03223-1 (hardback) – ISBN 978-1-107-61413-0 (pbk.)

1. Criminology. 2. Criminology – Research. I. Welsh, Brandon, 1969–

editor of compilation. II. Braga, Anthony Allan, 1969– editor of

compilation. III. Bruinsma, Gerben editor of compilation.

HV6024.5.E96 2013

364–dc23 2013015852

ISBN 978-1-107-03223-1 Hardback

ISBN 978-1-107-61413-0 Paperback

Cambridge University Press & Assessment has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Contents

<i>Contributors</i>	<i>page</i> vii
<i>Foreword by Philip J. Cook</i>	ix
<i>Preface</i>	xiii
1 Experimenting with Crime and Criminal Justice <i>Brandon C. Welsh, Anthony A. Braga, and Gerben J. N. Bruinsma</i>	1
PART I EXPERIMENTING WITH CRIME	
2 Experimental Tests of Criminological Theory <i>Jean Marie McGloin and Kyle J. Thomas</i>	15
3 Experimental Neurocriminology: Etiology and Treatment <i>Michael Rocque, Adrian Raine, and Brandon C. Welsh</i>	43
4 Computer Simulation Experiments and the Development of Criminological Theory <i>Christopher J. Sullivan</i>	65
5 Experiments in Guardianship Research <i>Maud van Bavel and Henk Elffers</i>	90
PART II EXPERIMENTING WITH CRIME PREVENTION AND CRIMINAL JUSTICE	
6 Randomized Experiments in Criminology: What Has Been Learned from Long-Term Follow-Ups? <i>David P. Farrington and Brandon C. Welsh</i>	111

7	Increasing Equivalence in Small-Sample Place-Based Experiments: Taking Advantage of Block Randomization Methods <i>Charlotte E. Gill and David Weisburd</i>	141
8	Multisite Randomized Trials in Criminology <i>Doris Layton MacKenzie, Janani Umamaheswar, and Li-Chen Lin</i>	163
9	Using Regression Discontinuity Designs in Crime Research <i>Emily G. Owens and Jens Ludwig</i>	194
10	Quasi-Experimentation When Random Assignment Is Not Possible: Observations from Practical Experiences in the Field <i>Anthony A. Braga</i>	223
PART III ASSESSING RESEARCH EVIDENCE AND FUTURE DIRECTIONS		
11	Systematic Reviews and Cost–Benefit Analyses: Toward Evidence-Based Crime Policy <i>Brandon C. Welsh, Peter H. van der Laan, and Meghan E. Hollis</i>	253
12	Integrating Experimental and Observational Methods to Improve Criminology and Criminal Justice Policy <i>Anthony A. Braga, Brandon C. Welsh, and Gerben J. N. Bruinsma</i>	277
	<i>Index</i>	299

Contributors

Anthony A. Braga, Ph.D., is Don M. Gottfredson Professor of Evidence-Based Criminology in the School of Criminal Justice at Rutgers University and a Senior Research Fellow in the Program of Criminal Justice Policy and Management at Harvard University.

Gerben J. N. Bruinsma, Ph.D., is Director of the Netherlands Institute for the Study of Crime and Law Enforcement and a Professor of Environmental Criminology at VU University Amsterdam.

Henk Elffers, Ph.D., is a Senior Research Fellow at the Netherlands Institute for the Study of Crime and Law Enforcement and Professor of Empirical Research on Criminal Law Enforcement at VU University Amsterdam.

David P. Farrington, Ph.D., is Emeritus Professor of Psychological Criminology in the Institute of Criminology at Cambridge University.

Charlotte E. Gill, Ph.D., is a Senior Research Associate in the Center for Evidence-Based Crime Policy at George Mason University and the Managing Editor of the Campbell Collaboration Crime and Justice Group.

Meghan E. Hollis, M.Sc., is a doctoral candidate in the School of Criminology and Criminal Justice at Northeastern University.

Li-Chen Lin, M.A., is a former graduate student of the Crime, Law, and Justice Program at Pennsylvania State University.

Jens Ludwig, Ph.D., is McCormick Foundation Professor of Social Service Administration, Law, and Public Policy at the University of Chicago.

Doris Layton MacKenzie, Ph.D., is a Professor of Sociology in the Crime, Law, and Justice Program and Director of the Justice Center for Research at Pennsylvania State University.

Jean Marie McGloin, Ph.D., is an Associate Professor in the Department of Criminology and Criminal Justice at the University of Maryland.

Emily G. Owens, Ph.D., is an Associate Professor in the Department of Policy Analysis and Management at Cornell University.

Adrian Raine, D.Phil., is University Professor and Richard Perry Professor of Criminology, Psychology, and Psychiatry at the University of Pennsylvania.

Michael Rocque, Ph.D., is a Research Associate in the School of Criminology and Criminal Justice at Northeastern University.

Christopher J. Sullivan, Ph.D., is an Associate Professor in the School of Criminal Justice at the University of Cincinnati.

Kyle J. Thomas, M.A., is a doctoral student in the Department of Criminology and Criminal Justice at the University of Maryland.

Janani Umamaheswar, M.A., is a doctoral student in the Crime, Law, and Justice Program at Pennsylvania State University.

Maud van Bavel, M.Sc., is a doctoral candidate at the Netherlands Institute for the Study of Crime and Law Enforcement and VU University Amsterdam.

Peter H. van der Laan, Ph.D., is a Senior Research Fellow at the Netherlands Institute for the Study of Crime and Law Enforcement and a Professor of Criminology at VU University Amsterdam.

David Weisburd, Ph.D., is Walter E. Meyer Professor of Law and Criminal Justice at the Institute of Criminology, Faculty of Law at Hebrew University, and a Distinguished Professor in the Department of Criminology, Law, and Society at George Mason University.

Brandon C. Welsh, Ph.D., is a Professor in the School of Criminology and Criminal Justice at Northeastern University and a Senior Research Fellow at the Netherlands Institute for the Study of Crime and Law Enforcement.

Foreword

We need this new field of experimental criminology. The design of cost-effective policy requires good evidence on what works well and, equally important, what doesn't. Intuition, casual observation, and good intentions are not enough.

The exceptional case, albeit from another field, helps prove the rule. Cambridge Professor Gordon Smith and his colleague Jill Pell once pointed out that there had been no rigorous evaluations of parachute use as a method of preventing death resulting from jumping out of an airplane. They noted that “advocates of evidence based medicine have criticised the adoption of interventions evaluated by using only observational data” (2003: 1459) and suggested that those advocates participate in a randomized field trial of parachute use. The point is that observational data combined with our understanding of basic mechanisms (gravity, vulnerability to trauma) is entirely persuasive in this case, just as is the usual evidence we have about which switch controls a particular light. But such easy cases are rare. The processes by which innovations in policing or corrections or social policy might influence crime rates are complex and cannot be confidently assessed by what might be called “common sense” alone. More systematic evidence is required. And the new field, well documented in this book, is beginning to provide just that.

Of course, even in the absence of rigorous evidence of the sort discussed in this book, there is no lack of opinions. The abundance of opinions originates not only from laypeople (everyone's a social scientist by virtue of personal experience) but also from those who have a real claim to expertise – police chiefs, judges, criminals, corrections

program administrators, and scholars with a deep knowledge of crime and its making. The marketplace for ideas about crime policy is glutted. The great challenge is sorting through the offerings, creating a sort of quality control that distinguishes ideas that are merely plausible from those that have actually been subjected to rigorous testing and survived. The power of plausibility in influencing public support is strong, as witnessed by programs such as Scared Straight, DARE (Drug Abuse Resistance Education), and gun buybacks that remain popular despite the null or negative findings of well-done evaluations. But the good evidence on these matters is now part of the debate, and that's progress.

Indeed, it is a brave program manager or advocate who opens the door to a rigorous evaluation. He or she is volunteering to raise the bar. As opposed to relying on a convincing narrative, personal testimonials, and outcomes data limited to certain subgroups (those who stayed in the program, say), a randomized controlled trial (RCT) or regression-discontinuity analysis creates a real possibility of a null result. The history of corrections research in particular has Robert Martinson's famously negative conclusions as a cautionary tale – his review of evaluations (primarily from the 1960s), including several high-quality RCTs, has been summarized as “nothing works.” More generally, the leading figure in social policy evaluation, Peter Rossi, has made a strong case for skepticism. His *Iron Law of Evaluation* asserts that the expected value of any large-scale social program is zero, which he coupled with his *Stainless Steel Law of Evaluation*, that the better designed the impact assessment of a social program the more likely is the resulting estimate of impact to be zero. In sum, if you have a pet program, it would be risky to invite a high-quality evaluation.

Of course not every rigorous evaluation has negative results. Sometimes the usual situation is reversed, where the best evidence *supports* interventions that are widely viewed as implausible. My list of counterintuitive interventions that have been shown convincingly to reduce crime would start with raising alcohol excise taxes and implementing coerced abstinence programs for felony probationers. Of particular interest in the context of this book is how much has changed in criminologists' assessment of the influence or potential influence

of the police; it is fair to say that two decades ago most criminologists believed that variations in the size of the police force or policing strategies were pretty much irrelevant to determining a city's crime rate – a view that was also often endorsed by police chiefs. Now, thanks in part to high-quality evaluations conducted by Lawrence Sherman, David Weisburd, Anthony A. Braga, Emily Owens, and others in the experimental criminology movement, we have a much more positive view. Police departments, at least some police departments, have been surprisingly receptive to running experiments, and the accumulation of high-quality evidence in this arena has influenced practice. Hot spots policing is the signature program of experimental criminology.

The publication of this book serves as a milestone in the development of this important new field. The editors and authors make the case that the evidence base for policy making has become stronger thanks to the incorporation of rigorous experimental and quasi-experimental evaluation methods – and that the general approach and mission has gained broad acceptance. The normal science of criminology will never be the same.

Philip J. Cook
Duke University

Smith, Gordon C. S., and Jill P. Pell. 2003. "Parachute Use to Prevent Death and Major Trauma Related to Gravitational Challenge: Systematic Review of Randomised Controlled Trials." *British Medical Journal* 327: 1459–61.

Preface

Experimental criminology is an important area of research and scholarship and is closely linked with the evidence-based movement in social policy. Its profile has been elevated in recent years with any number of new scholarly and policy-oriented developments, methodological advancements, and a rapidly expanding body of experimental studies. Experimental methods have deep roots in criminology and the social and behavioral sciences more generally. These can be found in the study of criminal activities, development and testing of criminological theories, and evaluations of programs and policies to reduce crime. Experiments take place in varied field settings as well as in laboratories and are a rich source of scientific knowledge that has helped to advance the field of criminology and public policy. This book sets out to recapture the full breadth of experimental criminology and report on new and innovative contributions that it is making to basic scientific knowledge and more effective public policy.

The idea for this book originated with an international workshop that was organized and hosted by the Netherlands Institute for the Study of Crime and Law Enforcement (NSCR). Held in Amsterdam on May 9–10, 2011, the NSCR workshop brought together leading scholars and experimentalists from North America and Europe to report on and debate new findings and methodological developments in experimental criminology. Papers were commissioned from the authors and presented at the workshop. Each presentation was followed by a detailed critique from an assigned discussant and discussion among participants. After the workshop, authors submitted revised versions of their papers. Finally, we commenced two rounds

of reviewing and editing, and papers were accepted for inclusion in the volume.

Our journey to completing this book was aided and enriched by many people. We begin by thanking the contributors, all seventeen of them. It was a real pleasure to work with each and every one. For her intrepid work in organizing the Amsterdam workshop and making it a truly great event, we wish to thank Ariena van Poppel of NSCR. We are also grateful to Meghan Hollis for excellent research assistance. The workshop benefited tremendously from those who served as discussants on the presentations, and we wish to give special thanks to the following: Wim Bernasco, Catrien Bijleveld, Henk Elffers, David Farrington, Martin Killias, Friedrich Lösel, Stijn Ruiters, Christopher Sullivan, and Peter van der Laan. Finally, we wish to acknowledge the generous reception and invaluable guidance that we received from Robert Dreesen, Senior Commissioning Editor at Cambridge University Press.