Contents

1 Introduction ........................................................................................................ 1
   Alex R. Piquero and David Weisburd

Part I-A Descriptive Approaches for Research and Policy: Innovative
Descriptive Methods for Crime and Justice Problems

2 Crime Mapping: Spatial and Temporal Challenges ................................. 5
   Jerry Ratcliffe

3 Look Before You Analyze: Visualizing Data in Criminal Justice .............. 25
   Michael D. Maltz

4 Group-Based Trajectory Modeling: An Overview ................................... 53
   Daniel S. Nagin

5 General Growth Mixture Analysis with Antecedents
   and Consequences of Change .............................................................. 69
   Hanno Petras and Katherine Masyn

6 Spatial Regression Models in Criminology: Modeling Social
   Processes in the Spatial Weights Matrix ........................................... 101
   George E. Tita and Steven M. Radil

7 Mixed Method Research in Criminology: Why Not Go Both Ways? ........ 123
   Shadd Maruna

Part I-B Descriptive Approaches for Research and Policy: New Estimation
Techniques for Assessing Crime and Justice Policy

8 Estimating Costs of Crime ............................................................................ 143
   Mark A. Cohen and Roger Bowles
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Estimating Treatment Effects: Matching Quantification to the Question</td>
<td>Thomas A. Loughran and Edward P. Mulvey</td>
</tr>
<tr>
<td>10</td>
<td>Meta-analysis</td>
<td>David B. Wilson</td>
</tr>
<tr>
<td>11</td>
<td>Social Network Analysis</td>
<td>Jean Marie McGloin and David S. Kirk</td>
</tr>
<tr>
<td>12</td>
<td>Systematic Social Observation in Criminology</td>
<td>Stephen D. Mastrofski, Roger B. Parks, and John D. McCluskey</td>
</tr>
<tr>
<td></td>
<td>Part II New Directions in Assessing Design, Measurement and Data Quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13 Identifying and Addressing Response Errors in Self-Report Surveys</td>
<td>James P. Lynch and Lynn A. Addington</td>
</tr>
<tr>
<td></td>
<td>14 Missing Data Problems in Criminological Research</td>
<td>Robert Brame, Michael G. Turner, and Ray Paternoster</td>
</tr>
<tr>
<td></td>
<td>15 The Life Event Calendar Method in Criminological Research</td>
<td>Jennifer Roberts and Julie Horney</td>
</tr>
<tr>
<td></td>
<td>16 Statistical Power</td>
<td>Chester L. Britt and David Weisburd</td>
</tr>
<tr>
<td></td>
<td>17 Descriptive Validity and Transparent Reporting in Randomised Controlled Trials</td>
<td>Amanda E. Perry</td>
</tr>
<tr>
<td></td>
<td>18 Measurement Error in Criminal Justice Data</td>
<td>John Pepper, Carol Petrie, and Sean Sullivan</td>
</tr>
<tr>
<td></td>
<td>19 Statistical Models of Life Events and Criminal Behavior</td>
<td>D. Wayne Osgood</td>
</tr>
<tr>
<td></td>
<td>Part III-A Estimation of Impacts and Outcomes of Crime and Justice: Topics in Experimental Methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 An Introduction to Experimental Criminology</td>
<td>Lawrence W. Sherman</td>
</tr>
<tr>
<td></td>
<td>21 Randomized Block Designs</td>
<td>Barak Ariel and David P. Farrington</td>
</tr>
<tr>
<td></td>
<td>22 Construct Validity: The Importance of Understanding the Nature of the Intervention Under Study</td>
<td>John S. Goldkamp</td>
</tr>
</tbody>
</table>
Contents

23 Place Randomized Trials .......................................................... 481
    Robert Boruch, David Weisburd, and Richard Berk

24 Longitudinal-Experimental Studies ........................................ 503
    David P. Farrington, Rolf Loeber, and Brandon C. Welsh

25 Multisite Trials in Criminal Justice Settings: Trials
    and Tribulations of Field Experiments .................................. 519
    Faye S. Taxman and Anne Giuranna Rhodes

Part III-B Estimation of Impacts and Outcomes of Crime and Justice:
Innovation in Quasi-Experimental Design

26 Propensity Score Matching in Criminology and Criminal Justice .... 543
    Robert J. Apel and Gary Sweeten

27 Recent Perspectives on the Regression Discontinuity Design ........ 563
    Richard Berk

28 Testing Theories of Criminal Decision Making: Some Empirical
    Questions about Hypothetical Scenarios ............................... 581
    M. Lyn Exum and Jeffrey A. Bouffard

29 Instrumental Variables in Criminology and Criminal Justice ........ 595
    Shawn D. Bushway and Robert J. Apel

Part III-C Estimation of Impacts and Outcomes of Crime and Justice:
Non-Experimental Approaches to Explaining Crime and Justice Outcomes

30 Multilevel Analysis in the Study of Crime and Justice ............... 615
    Brian D. Johnson

31 Logistic Regression Models for Categorical Outcome Variables ....... 649
    Chester L. Britt and David Weisburd

32 Count Models in Criminology ................................................. 683
    John M. MacDonald and Pamela K. Lattimore

33 Statistical Analysis of Spatial Crime Data ................................ 699
    Wim Bernasco and Henk Elffers

34 An Introduction to Statistical Learning from a Regression
    Perspective ............................................................................ 725
    Richard Berk

35 Estimating Effects over Time for Single and Multiple Units .......... 741
    Laura Dugan

Index ......................................................................................... 765