

CRIMINOLOGICAL THEORY

A Brief Introduction
FOURTH EDITION



J. Mitchell Miller | Christopher J. Schreck | Richard Tewksbury | J. C. Barnes

Fourth Edition

CRIMINOLOGICAL THEORY

This page intentionally left blank

Fourth Edition

CRIMINOLOGICAL THEORY

A BRIEF INTRODUCTION

J. Mitchell Miller

University of North Florida

Christopher J. Schreck

Rochester Institute of Technology

Richard Tewksbury

University of Louisville

J. C. Barnes

University of Cincinnati

PEARSON

Boston Columbus Indianapolis New York San Francisco Upper Saddle River
Amsterdam Cape Town Dubai London Madrid Milan Munich Paris Montréal Toronto
Delhi Mexico City São Paulo Sydney Hong Kong Seoul Singapore Taipei Tokyo

Editorial Director: Vernon R. Anthony
Senior Acquisitions Editor: Gary Bauer
Editorial Assistant: Kevin Cecil
Program Manager: Megan Moffo
Director of Marketing: Dave Gesell
Marketing Manager: Mary Salzman
Senior Marketing Coordinator: Alicia Wozniak
Marketing Assistant: Les Roberts
Senior Managing Editor: JoEllen Gohr
Production Project Manager: Susan Hannahs
Senior Operations Supervisor: Vince Scelta
Operations Specialist: Deidra Skahill
Senior Art Director: Jayne Conte
Cover Designer: Bruce Kenselaar
Cover Art: Vladgrin/Shutterstock
Full-Service Project Manager: Abinaya Rajendran, Integra Software Services, Pvt. Ltd.
Composition: Integra Software Services, Pvt. Ltd.
Text and Cover Printer/Bindery: Edwards Brothers Malloy, Jackson Road
Text Font: 11.5/13 Minion Pro

Credits and acknowledgments borrowed from other sources and reproduced, with permission, in this textbook appear on the appropriate page within the text.

Copyright © 2015, 2011, 2008 by Pearson, Inc. All rights reserved. Manufactured in the United States of America. This publication is protected by Copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or likewise. To obtain permission(s) to use material from this work, please submit a written request to Pearson, Inc., Permissions Department, One Lake Street, Upper Saddle River, New Jersey 07458, or you may fax your request to 201-236-3290.

Many of the designations by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and the publisher was aware of a trademark claim, the designations have been printed in initial caps or all caps.

Library of Congress Cataloging-in-Publication Data

Miller, J. Mitchell.

Criminological theory : a brief introduction / J. Mitchell Miller, University of North Florida, Christopher J. Schreck, Rochester Institute of Technology, J.C. Barnes, University of Cincinnati, Richard Tewksbury, University of Louisville.—Fourth Edition.

pages cm

Includes bibliographical references and index.

ISBN-13: 978-0-13-351237-3 (alk. paper)

ISBN-10: 0-13-351237-1 (alk. paper)

1. Criminology. 2. Crime. I. Schreck, Christopher J. II. Tewksbury, Richard A. III. Title.

HV6018.M545 2015

364.01—dc23

2013048481

10 9 8 7 6 5 4 3 2 1

PEARSON

ISBN 10: 0-13-351237-1

ISBN 13: 978-0-13-351237-3

CONTENTS

Preface xi

Chapter 1 THEORETICAL CRIMINOLOGY: AN INTRODUCTORY OVERVIEW 1

The Origins and Evolution of Criminology 2

The Nature of Theory 5

Assessing Theory 7

*The Influence of General Social Perspectives
on Theories of Crime 8*

Why Theory Matters 9

Summary 11 • Key Terms 12 • Discussion

Questions 12 • References 12

Chapter 2 CLASSICAL AND NEOCLASSICAL CRIMINOLOGY 13

The Classical School 13

Classical Criminology Assumptions 15

Deterrence Theory 17

How Deterrence Works 18

Deterrence Theory Limitations 20

Research on Deterrence Theories 22

Summary 25 • Key Terms 25 • Discussion

Questions 26 • References 26

Chapter 3 BIOSOCIAL THEORIES OF CRIME 27

The Positivist School of Thought 28

Early Biological Research 29

Contemporary Biosocial Criminology 32

Biological Factors 32

Genetic Factors: Behavior Genetics 35

Genetic Factors: Molecular Genetics 38

The Brain 42

The Environment 45

*The Policy Implications of Biosocial
Criminology 45*

Conclusion 46

Summary 47 • Key Terms 47 • Discussion

Questions 48 • References 48

Chapter 4 PSYCHOLOGICAL THEORIES OF CRIME 52

Psychoanalytic Theory 54

Personality Theories 56

Criminal Personality 57

Lifestyle Perspective 58

Dual Systems Theory 59

Self-Control/Self-Regulation 59

Mental Capacity 60

Schizophrenia 60

Antisocial Personality Disorder 61

Affective Disorders 64

Intelligence 65

Developmental/Life Course Theories (DLC) 67

Catalano and Hawkins's Theory 68

LeBlanc's Theory 69

Thornberry and Krohn's Theory 69

Sampson and Laub's Theory 70

Moffitt's Theory 72

Conclusion 73

Summary 74 • *Key Terms* 74 • *Discussion*

Questions 74 • *References* 75

Chapter 5 THE SOCIAL ECOLOGY OF CRIME 78

Social Disorganization Theory 79

Basic Features of Social Disorganization
Theory 79

The Intellectual Origins of Social Disorganization
Theory 80

The Location of Crime 81

Social Disorganization and Its Causes 83

Policy Implications 89

Routine Activities Theory 90

The Necessary Requirements for
Crime 91

The Role of Social Changes 94

Policy Implications 95

Empirical Research and Criticisms 95

Summary 96 • *Key Terms* 97 •

Discussion Questions 97 • *References* 97

Chapter 6 LEARNING AND CULTURAL TRANSMISSION THEORIES OF CRIME 99

Learning Theories 99

Sutherland's Differential Association Theory 100

Akers's Social Learning Theory 102

Akers's Social Learning and Social Structure Theory (SLSS) 104

Cultural Transmission Theories 105

The Rise of the Subcultural Perspective 105

Cultural Norms and Legal Process 106

Cohen's Middle-Class Measuring Rod 107

Cloward and Ohlin's Gang Typology 109

Miller's Focal Concerns 110

The Demise of the Subcultural Perspective 112

Subcultures of Violence and the Rise of the Cultural Perspective 113

Street Codes 115

Summary 116 • Key Terms 117 • Discussion Questions 117 • References 117

Chapter 7 STRAIN THEORIES OF CRIME 120

What Do Strain Theories Assume? 121

Merton's Strain Theory and Its Variants 122

The American Culture 122

The American Social Structure 124

Responses to Strain 124

Later Work on Merton's Theory 126

Empirical Support 127

Agnew's General Strain Theory 129

Types of Strain 129

Types of Coping 130

When Does Strain Lead to Delinquent Coping? 131

Empirical Support 132

Messner and Rosenfeld's Theory of Institutional Anomie 134

Social Support Theory 137

Summary 137 • Key Terms 138 • Discussion Questions 138 • References 138

Chapter 8 CONTROL THEORIES OF CRIME 140

What Do Control Theories Assume about Human Nature? 141

Early Control Theories 143

Hirschi's Social Control Theory 144

Attachment 145

Commitment 146

Involvement 146

Belief 146

Empirical Testing 147

Self-Control Theory 150

Empirical Research and Criticisms of Self-Control Theory 153

Sampson and Laub's Life Course Theory 155

Self-Control Theory Revised? 157

Policy Implications of Control Theory 158

Summary 159 • Key Terms 160 • Discussion

Questions 160 • References 160

Chapter 9 THEORIES OF SOCIAL CONFLICT 163

The Conflict Perspective and Crime 164

The Marxist Heritage 165

Marxist Concepts 166

Orthodox Marxism 166

Structural Marxism 167

Labeling Theory 168

Reintegrative Shaming 171

Marxist Criminology 173

White-Collar and State Crime 174

Left Realism 174

Cultural Criminology 175

The Social Construction of Crime, Postmodernism, and Constitutive Criminology 177

Feminist Criminology 178

Summary 182 • Key Terms 182 • Discussion

Questions 183 • References 183

Chapter 10 EVALUATING AND INTEGRATING THEORY 186

Evaluating Theory 187

Theory Competition 189

Empirical Support for Competing Theories 190

<i>Theoretical Elaboration</i>	193
<i>Theoretical Integration</i>	194
<i>Theory Informing Policy And Practice</i>	197
<i>Summary</i>	199 • <i>Key Terms</i> 199 • <i>Discussion</i>
<i>Questions</i>	200 • <i>References</i> 200

<i>Index</i>	203
--------------	-----

This page intentionally left blank

PREFACE

Criminological theory texts often address crime from a primary ideological viewpoint, such as a critical, feminist, life-course, or biological perspective. Other crime theory texts address crime causation and the nature of theory from an international, cultural, or historical approach. In this fourth edition of *Criminological Theory: A Brief Introduction*, we continue to do neither. Instead, we portray explanations of crime from the major theoretical traditions and survey leading classical and contemporary theories of crime in a straightforward and ideologically neutral manner. We have sought to demonstrate the applicability of criminological theory to everyday life by offering real-world, contemporary illustrations and examples, as well as hypothetical scenarios relevant to society, generally, and college life, specifically, so that the chapters are interesting and relevant to young adults.

While theoretical growth typically transpires slowly, important developments have been occurring in theoretical criminology since the publication of the last edition. Most notably, biosocial criminology has emerged as a newer perspective that both compliments and challenges existing theories. Accordingly, we welcome Dr. J.C. Barnes, a leading biosocial criminologist, to the author group. With updated chapters on biological (Chapter 3) and psychological (Chapter 4) sources of crime, as well as updates and fresh examples across the classical criminology and sociologically themed chapters, this fourth edition provides a much more comprehensive, and yet still concise, survey of leading theories of crime causation.

NEW TO THE FOURTH EDITION

This new edition features several changes and improvements, including:

- Chapter 1 now emphasizes the relevance of crime theories for crime control policy and criminal justice practices to better illustrate the connectivity between theories of crime and public policy prevention and enforcement initiatives.
- Chapter 2, “Classical and Neoclassical Criminology,” has been refined to relate the evolution of the classical perspective to modern deterrence and rational choice theories.
- Chapter 3, “Biological Theories of Crime,” has been rewritten and brings expanded and more contemporary biosocial research-based knowledge to this edition. In order to include the leading elements of the quickly growing biosocial perspective, we have trimmed down the sections on Physiognomy and Body Type Theories and added new discussion of evolutionary psychology, biochemistry, and neurophysiology. The revised chapter also features a completely new section titled “Contemporary Biosocial Criminology.” This section offers an in-depth overview of the four factors highlighted by modern biosocial criminology as being important for understanding criminal behavior: (1) biological factors; (2) genetic factors; (3) the brain; and (4) the environment. Each of these four factors is discussed in turn in separate subsections. This chapter also now includes the role of neurotransmitters and the frontal cortex in the development of human behavior. A thorough treatment of these points has been added to the revised chapter in a subsection covering the brain.

- Chapter 4, “Psychological Theories of Crime,” offers more detail on life course theory (especially Sampson and Laub’s theory), antisocial personality disorder, and IQ. We have expanded these three sections of the chapter substantially. Similarly, the antisocial personality disorder section of the chapter has been revised in two major respects. First, we updated all material referencing the DSM-IV to reflect the recently revised manual (i.e., the DSM-5). The second major update made to the antisocial personality disorder section is that we have revised the discussion of the etiology of the disorder by tying in information discussed in Chapter 3 (i.e., biological and genetic factors). The section covering the IQ–crime link has been revised to discuss the most recent evidence gleaned from intelligence-based research. For example, several studies published in 2013 have been added to the discussion of the IQ–crime relationship. This chapter also now covers psychological constructs such as sensation seeking across two new sections (Dual Systems Theory and Self-control/Self-regulation). These two sections—which are presented consecutively to one another—cover recent evidence gleaned from neuroscience (Dual Systems Theory) and criminology (Self-control/Self-regulation) into the correlations among variables tapping sensation seeking, impulsivity, and criminal behavior.
- Chapter 5, “The Social Ecology of Crime,” offers additional social disorganization theory examples, and Chapter 6, “Learning and Cultural Transmission Theories of Crime,” highlights social learning–social structure theory while better emphasizing the oppositional culture perspective.
- Chapter 7, “Strain Theories of Crime,” and Chapter 8, “Control Theories of Crime,” provide expanded coverage of both seminal (e.g., Hirschi’s original control theory) and extended (e.g., Agnew’s general strain theory) versions of strain theory.
- Chapter 9, “Theories of Social Conflict,” has been heavily revised, and now features expanded coverage of Cultural Criminology, Feminist Criminology, and Labeling Theory. We have also increased attention to reintegrative shaming (the theoretical basis of restorative justice), which is now in a separate new section with new examples illustrating the chapter’s central concepts.
- Chapter 10 is about a fourth longer than the last edition with a new section (Theory Informing Policy and Practice) that ties together in application the idea of what theory is and how it is useful and connects to concepts and issues introduced in Chapter 1, thereby bringing students full circle in regards to the theory-policy link.

The expanded author group remains committed to engaging criminology from a strong social science orientation, bringing distinct theoretical preferences and insights that, hopefully, will motivate students to carefully consider the range of alternative explanations offered for the same crime realities and outcomes. A robust social science orientation indicates a theory–methods symmetry; in the case of criminological theory, this means consideration of proposed theories according to the level of observed research evidence. We have attempted, across all of the chapters, to (1) increase the coverage of the level of empirical support that exists for the numerous theories presented and (2) maintain a little bit of a critical tone so that readers may determine which perspectives are viable and yield implications for criminal justice practices and policies according to scientific backing.

While maintaining social science as a standard by which to assess whether individual theories are correct, this new edition incorporates recent advances in the field that extend and affirm the nature of theoretical criminology as it continues to evolve. While criminological theory necessarily follows real-world crime trends, new theories are not crafted overnight as research confirmation of a new theory is a slow process. New criminal behaviors and unprecedented forms of older crimes have emerged to capture the national conscience since the last edition and, though citable research support is limited, we contemplate new theoretical applications throughout the text.

As with the previous editions, our intention is not to persuade adoption of any particular theory, but rather to familiarize the reader with leading theories, generally. Along the way, we hope that conceptual, analytical, and critical thinking skills are developed as readers compare and contrast the different and sometimes conflicting explanations illustrated. The various supportive ideas and criticisms offered across the theories examined will ideally prompt scrutiny and reconsideration of existing assumptions and beliefs. By engaging an analytical and critical approach to the text, it is also our hope that students will come to view the nature of crime, the development of the criminal law, and the criminal justice system's prevention and reduction efforts with criminological perspective. Such a view goes beyond a mere assessment of various criminal and deviant behaviors as right or wrong and considers outcomes and events in a broader light, wherein explanations reflect a myriad of factors, such as individual, environment, social structure, culture, and group processes represented throughout this edition.

INSTRUCTOR SUPPLEMENTS

Instructor's Manual with Test Bank

Includes content outlines for classroom discussion, teaching suggestions, and answers to selected end-of-chapter questions from the text. This also contains a Word document version of the test bank.

MyTest

This computerized test generation system gives you maximum flexibility in preparing tests. It can create custom tests and print scrambled versions of a test at one time, as well as build tests randomly by chapter, level of difficulty, or question type. The software also allows online testing and record-keeping and the ability to add problems to the database. This test bank can also be delivered formatted for use in popular learning management platforms, such as BlackBoard, WebCT, Moodle, Angel, D2L, and Sakai. Visit www.PearsonMyTest.com to begin building your tests.

PowerPoint Presentations

Our presentations offer clear, straightforward outlines and notes to use for class lectures or study materials. Photos, illustrations, charts, and tables from the book are included in the presentations when applicable.

To access supplementary materials online, instructors need to request an instructor access code. Go to www.pearsonhighered.com/irc, where you can register

for an instructor access code. Within 48 hours after registering, you will receive a confirming email, including an instructor access code. Once you have received your code, go to the site and log on for full instructions on downloading the materials you wish to use.

ALTERNATE VERSIONS

eBooks. This book is available in multiple ebook formats including *CourseSmart* and Adobe Reader. *CourseSmart* is an exciting new choice for students looking to save money. As an alternative to purchasing the printed textbook, students can purchase an electronic version of the same content. With a *CourseSmart* eTextbook, students can search the text, make notes online, print out reading assignments that incorporate lecture notes, and bookmark important passages for later review. For more information, or to purchase access to the *CourseSmart* eTextbook, visit www.coursesmart.com.

ACKNOWLEDGMENTS

The authors offer sincere thanks to the following reviewers for their insightful suggestions: Dr. Holly Ventura Miller, University of North Florida; Dr. Bernadette Olson, Indiana University Southeast; Jesenia Pizarro, Michigan State University; and Christopher R. Williams, Bradley University.

ABOUT THE AUTHORS

J. Mitchell Miller is a Professor in the Department of Criminology & Criminal Justice at the University of North Florida. Dr. Miller teaches and conducts research in the areas of applied criminology, substance abuse, juvenile delinquency, and criminal justice program evaluation. He is a past president of the Southern Criminal Justice Association, a Fellow of the Academy of Criminal Justice Sciences, and the former editor of the *Journal of Crime & Justice* and the *Journal of Criminal Justice Education*.

Christopher J. Schreck is a Professor of Criminal Justice at the Rochester Institute of Technology. Professor Schreck has published extensively on the intersection of criminal offending and victimization risk. He is a past editor of the *Journal of Criminal Justice Education* and the *Journal of Crime & Justice*. Schreck earned his Ph.D. in Crime, Law, and Justice from the Pennsylvania State University.

Richard Tewksbury is a Professor of Justice Administration at the University of Louisville. He holds a Ph.D. in sociology from The Ohio State University. His research focuses on issues of criminal victimization, sex offender management and the intersection of sex, gender and sexuality with criminality. Dr. Tewksbury is a past president of the Southern Criminal Justice Association, former editor of the *American Journal of Criminal Justice and Justice Quarterly*, and the present editor of *Criminal Justice Studies*.

J.C. Barnes is an associate professor in the School of Criminal Justice at the University of Cincinnati. He earned his Ph.D. in criminology from Florida State University. A biosocial criminologist, his research seeks to understand how genetic and environmental factors combine to impact criminological phenomena. He has published more than 70 papers and book chapters in outlets such as *Aggressive Behavior*, *Behavior Genetics*, *Criminology*, *Developmental Psychology*, *Intelligence*, *Journal of Marriage and Family*, *Justice Quarterly*, *Journal of Theoretical Biology*, and *PLoS ONE*.

This page intentionally left blank

Theoretical Criminology

An Introductory Overview

Crime is an unfortunate reality of modern life. Television programs, the Internet, and traditional newspapers report acts of terrorism, violence, and property crime so often that coverage of high-profile criminal cases overlap with regularity. We are often entertained, if not mesmerized, by crime, both through the glamorization of criminal genius and through the bravery of law enforcement. We watch intricate plots accentuated by high drama unfold in the movies, on reality television policing shows, and during live court coverage of highly publicized trials. Crime also heavily impacts our daily lives by affecting our routine choices in ways that are so customary they seem altogether normal. Our daily patterns reflect the concern about crime in terms of where we park, how and with whom we interact, which school to attend, and the constant need to secure property. These and similar quality-of-life matters are directly attributed to both the perception and reality of crime. The safety of neighborhoods and schools, as indicated by crime rates and fear of crime, is a major consideration in choosing where to live. In short, crime is a major force in contemporary society and a leading social problem that demands a considerable portion of our public resources.

The problem of crime is addressed on many levels by the criminal justice system, ranging from prevention and awareness efforts to rehabilitation of offenders. While it is essential that law enforcement, the courts, and the correctional system work to maintain a safe and orderly society, the criminal justice system is logically more effective when informed by a scientific knowledge base on the causes, patterns, and nature of crime and delinquency.

Whereas criminal justice is concerned with the actual practices of law enforcement, legal process, and corrections, **criminology** is focused on the processes of making and breaking laws (Cressey, 1978, p. 3). Criminologists seek to understand how the creation of criminal law defines misbehavior according to different and sometimes competing interests and how the criminalization of behavior interrelates with culture and class status differently throughout society. More importantly, criminologists are concerned with the various causes of crime. It is vital to understand the underlying reasons for crime in order to best inform criminal justice practices and policies. Criminal justice science and criminology are different in that the former seeks to identify “solutions” to the crime problem while the latter is more focused on discovering the basic nature of crime and its many complex forms. The knowledge generated by criminology is an important component in society’s understanding and response to crime and deviance. Anticrime strategies, for example, are ideally designed in sync with the extant knowledge base on criminal behavior and the distribution of crime throughout society.

Numerous facts are known about the causes and nature of crime, and criminologists often disagree about the reasons for crime and its relationship to other social problems. Some contend that the focus should be on individuals and their behavior—particularly the factors involved in the decision-making process leading to crime. Others look, instead, to social factors largely external to the individual, such as poverty, the quality of obtainable education, and the age, gender, racial, and ethnic composition of the population. Regardless of the particular perspective, criminologists attempt to discover, arrange, and make sense of facts about crime in a systematic manner. This process requires the creation of theory, wherein facts about crime are examined in relation to other facts—the major focus of this text.

In the following chapters, the major theories about the complex causes of criminal behavior are presented and discussed, with attention given to each theory's implications for responding to specific types of offenses or offenders. The specific theories examined across these chapters are all unique in that they identify or situate the cause or responsibility for crime in a distinct source. Accordingly, each chapter has something additional to offer in terms of furthering our understanding of crime. The various theories that will be examined address different types of offenses (such as violence, property crime, and morality infractions), the role of various internal (such as biological and psychological) and external (such as social disorganization and culture) factors, and the effects of formal (such as the production of law and enforcement initiatives) and informal (such as shaming and peer effects) social control mechanisms. An effort has been made to illustrate these theories in terms of their relevancy and applicability to everyday life.

Before examining the diversity of theories presented in this book, it is useful to establish a frame of reference or common background against which the individual theories can be considered and compared. In the context of social science theorizing, this framework consists of the following elements: (1) the origins and evolution of criminological thought leading up to the point of formal theory construction, (2) the nature of theory, (3) the criteria for assessing the quality of theory, and (4) the role of theory for criminal justice practices and policies.

THE ORIGINS AND EVOLUTION OF CRIMINOLOGY

Attention to crime can be traced back to ancient Babylonia and the Code of Hammurabi, as well as the Judeo-Christian perspective presented in the Bible. Beyond these edicts of infraction and punishment, contemporary criminologists typically recognize the origins of criminality in the Enlightenment period of the late eighteenth century, particularly the social and intellectual reforms in Western Europe. Philosophers from this period, such as Voltaire, Rousseau, and Locke, observed the superiority of reason based on direct experience and observation over the blind faith and superstition that characterized social life during the previous feudal era. Before this emphasis on reasoning, crime was first dealt with informally within and between families, with great emphasis placed on the realization of revenge (Larson, 1984).

The family-revenge model of justice—for example, multigenerational feuds between Scottish clans—presented social-order maintenance and governing problems for feudal lords, whose solutions were trial by battle and then trial by ordeal.

Under trial by battle, either the victim or a member of the victim's family would fight the offender or a member of his or her family; under trial by ordeal, the accused would be subjected to some "test" that would determine guilt or innocence, such as running through a gauntlet or being repeatedly dunked in water while bound by rope. Both approaches were vested in the spiritual notion of divine intervention. In battle, God would grant victory to the innocent side and likewise protect the falsely accused during trial by ordeal, as in the biblical report of protection afforded the prophet Daniel in the lions' den.

Clearly, these methods failed to effect justice relative to a person's guilt or innocence, instead yielding outcomes specific to a person's fighting ability, the capability to withstand various kinds of torture, or simply luck. Although the Enlightenment period introduced a new way of thinking that provided an alternative to the logic of spiritual explanations, spirituality continued to affect interpretations of both crime causation and systems of justice for several centuries. The idea of being controlled by an evil spirit or that one's criminal behavior is attributable to the influence of the devil or some other "dark" force has long been a default logic to account for the unexplainable. Primary examples from early U.S. history include the Salem witch trials, in which crime problems that could not be solved were attributed to witchcraft and demonic possession, and the origins of "correctional" institutions in Philadelphia by Quakers who believed that isolation, labor, and Bible reading would result in repentance—essentially a spiritually based form of rehabilitation. The very term "penitentiary," which referenced institutions where society's crime problems were addressed through religious conversion, illustrates continuation of the belief in spirituality as the source of and solution to crime. Today there is renewed endorsement of the spirituality argument, evident in the previous Bush administration's development and implementation and Obama administration's continuation of "faith-based" initiatives, many of which are crime related or crime specific (Allen, 2003).

While the Enlightenment period did not completely end the belief that spirituality affects crime, the momentum of experience-based reasoning led to a general view of social order that served as a forerunner to criminology. One of the primary concepts from this era that was important for the development of criminology is the idea of the **social contract**. First introduced by Thomas Hobbes (1588–1679), the social contract involves the sacrifice of some personal freedom by endorsement of governmental law enforcement in exchange for protection and the benefit of all. For example, it is likely that there is someone on campus each day from whom, either alone or with the aid of a friend, you could forcibly take personal property such as a wallet, purse, or textbook. Similarly, there is likely an individual or group that could forcibly take your property. Despite these obvious probabilities, everyone comes and goes in relative peace and safety. By sacrificing your ability to take what you might from others, you are protected from such a loss—this trade-off of loss of potential gain in exchange for law and order is an oversimplified example of the social contract.

As a result of the Enlightenment period, then, superstition- and spirituality-based orientations to crime were exchanged for innovative ways of thinking that emphasized relationships between criminal behavior and punishment. This newer approach, exemplified in the writings of the Italian Cesare Beccaria (1738–1794) and the Englishman Jeremy Bentham (1748–1832), is known as the **classical school of criminology**, a major point of origin from which criminological theorizing would

develop (see Chapter 2). Grounded in the concept of deterrence and emphasizing free will and the dimensions of punishment (certainty, severity, and celerity), the classical school is significant for the development of criminological thought in at least two respects: (1) Crime was no longer believed to be a function of religion, superstition, or myth that placed the problem beyond the control of humankind, and (2) crime was seen as the result of free will. Viewing crime as a function of free will, essentially decision making, meant that it could now be explained as an outcome of rational choice. The notion of rational thought (a determination of gains versus risks) suggests that the crime rate is logically related to the elements impacting the decision to offend, such as the amount and relative value of criminal proceeds and the likelihood of getting caught in the act. The principles of the classical school, revised by legal reformers and now referred to as *neoclassicism*, continue to influence the nature of formal social control (the criminal justice system continues in the attempt to achieve deterrence as one of its primary objectives) as well as the study of criminal behavior.

Another perspective on social life began to emerge in Europe during the nineteenth century that first emphasized the application of the scientific method. This perspective, known as **positivism**, stressed the identification of patterns and consistencies in observable facts (Bryant, 1985). By examining known patterns, it was believed that causes of behavior could be determined, which would enable predictions about outcomes when certain conditions exist. For example, we can ascertain a pattern of comparatively high criminality among the lower socioeconomic class. Given the absence of other intervening factors, we can predict a rise in lower-class criminality if a sharp increase in unemployment affects unskilled laborers. Regardless of whether this relationship is true, this line of thinking differs from the classical school's attention to freewill decision making, positing crime instead as a manifestation of **determinism**.

Determinism takes the position that human behavior is caused by factors specific to the individual, such as biological and psychological issues (as discussed in Chapters 3 and 4, respectively) or the environment (as discussed in Chapter 5). Perhaps the most famous figure associated with determinism in the context of criminality is Cesare Lombroso (1835–1909), whose “criminal type” illustrated in his influential work *Criminal Man* (1863) suggests that some people are born criminals. Lombroso's work, along with that of Edwin Sutherland (1883–1950), was essential to viewing crime in a newer, more scientific light.

In the evolution of American criminology, positivism began replacing the classical approach to crime during the 1920s, largely due to the rise of the **Chicago School**, a movement resulting from a series of seminal studies conducted by the University of Chicago Sociology Department. From the 1920s through the 1940s, the Chicago school demonstrated that crime is a product of social ecology, particularly the disorganization that characterizes urban life.

The social ecological approach to crime is less concerned with the ways in which criminals and noncriminals differ in terms of intelligence, physical characteristics, and personality and more attentive to economic disadvantage, community cohesion, and social stability. The Chicago school crime studies of Shaw and McKay (1942), Merton (1938), and Sutherland (1939) grounded U.S. criminology in sociology and established a dominant *paradigm*, or model of inquiry, oriented toward environmental causes of crime. These works (discussed in Chapter 5) represent some

of the first American criminological theories and, more importantly, established a context in which the majority of future theories (presented throughout this text) would be developed. At this point, we need to examine more closely the nature and role of theory.

THE NATURE OF THEORY

What exactly is **theory**? A one-word definition of theory is “explanation.” Too often, theory is erroneously thought of as philosophy or logic that has little relevance for real-world situations. In reality, theory is a part of everyday life, an attempt to make sense and order of events that are otherwise unexplainable. Think, for example, about the following common scenario. After dating for two years, a college couple’s relationship is suddenly ended by one of the parties. Shocked and upset by news of the unwanted breakup, the rejected person will often consider, at great length and with the advice of friends, the reasons or causes leading to the outcome. Even if knowing *why* will not change the reality, we still want to know the answers, perhaps because making sense of seemingly random events reassures us that the social world is not chaotic and arbitrary. On a more pragmatic level, knowing why things happen enables us to modify our behavior or change relevant circumstances for a more preferable outcome in the future.

Developing explanations for everyday events, then, is a common practice that entails mentally sorting causes and effects, which is a form of theoretical expression. Academics, on the other hand, often refer to scientific theory. Simply put, scientific theories are a means of explaining natural occurrences through statements about the relationships between observable phenomena. Observable phenomena are specified as either a cause or an effect and then positioned in a relationship statement. The causes and effects are termed “variables” (a variable is simply something that varies and is not constant). These formal statements, which are often presented as a hypothesis, are formed in order to explain or predict how some observable factor or a combination of factors relates to the phenomena being examined. These relationships, which form specific theories of crime, are developed according to the logic of *variable analysis*. This analytic strategy specifies causal elements as *independent variables* and effects as *dependent variables*.

In criminology, not surprisingly, crime itself is the foremost dependent variable. It is vital to note here that the strategy of variable analysis is not interested in explaining crime per se; that is, the objective is not to explain what crime is in a definitional or legal sense. Rather, the variable analysis process seeks to account for *variation* in crime. Most theories conceptualize crime as a generic dichotomy—that is, the separation of phenomena into one of two categories. When crime is the dependent variable in a theory, further scrutiny usually reveals that theorists are actually referring to either **criminality** or **crime rate**. Criminality denotes the extent and frequency of offending by a societal group, such as the young, minorities, non-citizens, the unemployed, or people from a certain region. Crime rate, on the other hand, denotes the level of crime in a given locale. The focus on either criminality or crime rate is observable in the framing of different research questions: Why is there more homicide in Memphis than in Phoenix? Why are more males than females involved in crime? Again, the goal is not to explain the crime itself, but rather to account for the fluctuation in behavior across time, place, or social group.

After specifying causal and dependent variables, criminologists consider the nature of the relationships to determine inference and possible implications. The information revealed from a theoretical proposition is interpreted by the condition of **correlation**. Correlation speaks to the *covariance* of variables, the direction and strength of fluctuation in a dependent variable attributed to one or more independent variables. Directional correlation refers to either a positive or negative relationship. These terms do not carry the same connotation as when normally used in everyday language. The expressions “The running back rushed for positive yardage” and “She has a negative attitude” are value laden and indicate desirable and undesirable conditions. In the social sciences, a positive correlation means that an independent variable and dependent variable fluctuate in the same direction, such as a group’s level of drug use and criminal involvement. A negative correlation means that independent and dependent variables covary in different directions, such as educational attainment and crime (with the obvious exception of white-collar offenses).

Consideration of the relationship between school grades and the status offense of truancy provides a good example of directional correlation. Suppose a researcher gathers data on both absences and grades from a large sample of randomly selected middle and high school students. Findings supporting the logical hypothesis that increased absences cause lower grades would be a negative correlation, as would better grades covarying with a decrease in absences. In the latter scenario, the correlation, though negative, is also the desirable outcome.

The strength of correlation, on the other hand, specifies the degree of covariance between independent and dependent variables. For example, a gang awareness program delivered to middle school parents (in this case, the independent variable) may effect a minimal decrease in gang membership (the dependent variable). This relationship suggests an undesirable outcome, not because the correlation is negative but due to the finding that the independent variable generated only little change in the dependent variable—perhaps because the parents of gang members are less likely to participate in an awareness program in the first place. The strength of a correlation is ascertained through statistical analysis enabling the exact determination of covariance between variables, a calculation related in terms of statistical significance.

In order to analyze theoretical propositions, independent and dependent variables are respecified from a categorical and conceptual level to a measurable level, a process known as *operationalization*. Operational definitions, then, enable empirical examination of cause-and-effect relationships by specifying measurable indicators for variables. How a variable is defined will affect the nature of a relationship and yield different (and possibly undesirable) implications for addressing crime. The following example of measuring recidivism demonstrates how important the measurement process is and how easily measurement error can occur.

Recidivism (repeat criminal offending) is one of the most common theoretically based dependent variables used in criminological research, especially as an indicator of effectiveness for criminal justice program evaluation. Depending on whether an evaluation is being conducted in a law enforcement, court, or correctional context (all three of which conduct deterrence and rehabilitation programs whose success is largely indicated by recidivism), the act of reoffending is likely to be operationally defined differently according to the immediate context. Repeat offenses are typically measured in a law enforcement context—for example, the rate of rearrest. While it is seemingly natural and understandable that rearrest could be used as a measure of

police activity, it conveys the false assumption that everyone who is rearrested will be convicted and thus overestimates or exaggerates the perceived level of reoffending. Court-based operational definitions more accurately measure repeat offending as reconvictions, which is technically more consistent with legally determined official realities, but in correctional contexts reoffending is often calculated as reincarceration. Measuring reincarceration as an indicator of recidivism can also distort the true level of reoffending by not including those convicted whose sanction did not include jail or prison time.

The strength and direction of correlations, then, serve the objective of determining *causation*, that is, whether the independent variable(s) prompt change in a dependent variable and, if so, in what manner. In order to have confidence in observed causal relationships, there must also be both specificity and accuracy in the measurement process, referred to by researchers as *operationalization*.

ASSESSING THEORY

What makes a theory scientific? And what makes a scientific theory good? As mentioned before, theorizing is a natural part of everyday life. We all need and attempt to make sense of what happens around us; it is just human nature to want to understand. If a one-word definition for theory is “explanation,” we can argue that a one-word definition for untested theory is “opinion.” Just as multiple opinions often exist as to why certain events occur in social and business contexts, alternative and competing theories often attempt to explain the same types of crime. How do we know which theories are accurate and which ones are mistaken?

Characterizing theory as scientific means that inferential claims about relationships (the observed correlations) can be falsified. Research entails gathering data according to the operationalization process so that the theory is framed for systematic observation of cause and effect. The analysis and conclusions concerning the existence and nature of relationships are then compared to the conceptual logic of the theory itself. When observations are inconsistent with the basic premises of a theory, the theory is falsified. Observations that are consistent with a theory’s statements about the relationship between cause-and-effect statements are often deemed more credible, but this does not mean the theory is necessarily true, as alternative theories might explain the same relationships.

Criminologists especially seek the answers to a wide range of research questions that focus on causality: Will increasing the severity of punishment lower the amount of crime in society? Do fines levied against the parents of truant children increase levels of parental responsibility and ultimately result in less truancy? Does a substance abuse treatment program in a correctional setting impact prisoners’ rate of recidivism and drug relapse? These and similar questions reflect the desire to specify causal relationships that, in turn, may yield implications for criminal justice practice. Causation, in the context of scientific theorizing, requires four main elements: (1) logical basis, (2) temporal order, (3) correlation, and (4) a lack of spuriousness.

Scientific theory, just like any type of accurate explanation, requires sound reasoning. There must be a logical basis for believing that a causal relationship exists between observable phenomena. Criminologists are not concerned with offenders’ hair or eye color when attempting to account for their behavior, for example, because there simply is no logical connection between these physical traits and criminal behavior.

A second necessary element for scientific theory construction is *temporal order*—that is, the time sequence of cause-and-effect elements. In short, causal factors must precede outcomes, as in the relationship between religious involvement and morality crime. Faith-based initiatives are vested in the belief that religious-based programs will better social conditions, including a reduction in crime. If offenders participate in religious programs (the independent variable) and subscribe to the convictions of religious doctrine condemning behavior such as gambling, commercial sex, and recreational substance use and abuse, a reduction in their commission of these vice crimes (the dependent variable) would appear to be a causal relationship because the religious programming both preceded and logically prompted the decreased involvement in the specified behaviors. Another example involves a scenario in which parents' concern about a child's misbehavior involves discipline. Theorists would not hypothesize that discipline caused the misbehavior, because it was applied after the fact.

Correlation, described earlier in this chapter, is a third required element of a scientific theory. Correlation, again, indicates the presence of a relationship between observable phenomena and the nature of the relationship in terms of direction and strength.

The last essential element for scientific theory development involves the condition of *spuriousness*. Some theorists argue that internalization of subculturally defined values (the independent variable) causes or influences involvement in crime (the dependent variable). Many subcultures, however, are also characterized by poverty. Poverty confuses the causal relationship between subculture and crime, as it may be poverty that causes crime, and subcultures simply emerge within impoverished groups. So the relationship between subculture, poverty, and crime is spurious because cause and effect cannot be determined. Theorists, then, must frame relationship statements that reflect an absence of spuriousness.

By incorporating these elements, theorists increase the likelihood or probability that relationship statements are accurate, but this does not mean a theory is certain or necessarily true. Also, it is important to observe that these elements neatly align with the logic of variable analysis, reflecting a positivistic inquiry strategy to theory construction.

THE INFLUENCE OF GENERAL SOCIAL PERSPECTIVES ON THEORIES OF CRIME

Criminological theories identify causes of crime at different levels of social realities and interactions. *Micro-level theory* focuses on individual and small-group behavior, such as face-to-face interaction. A decision to rob one person instead of another based on perception of ability to resist or parental role modeling, regardless of whether it is positive or negative, is an example. *Macro-level theory* looks to the structural properties of society, such as social inequality, culture, and demographic characteristics of the population (such as age, gender, race, educational attainment, and citizenship).

Specific theories of crime are framed within larger conceptual frameworks or theoretical traditions. Because criminology is typically considered a specialization within the discipline of sociology, the three leading perspectives of social life significantly condition the development of crime and deviance theories (see Table 1.1). These three perspectives are functionalism, social conflict, and symbolic interactionism (Collins, 1985).

TABLE 1.1 Criminological Theories Grouped by Social Perspective

Functionalism	Social Conflict	Symbolic Interactionism
Classical criminology	Labeling theory	Differential association
Deterrence theory	Marxist radical theory	Learning theory
Rational choice theory	Feminist criminology	Routine activities theory
Subculture theory	Peacemaking criminology	Social control theory
Social ecological theory	Cultural criminology	Reintegrative shaming theory

Functionalism is a theoretical perspective developed by the famous sociologists Emile Durkheim and Talcott Parsons, which contends that social order is realized because people reach a general *normative consensus*; that is, they agree on what is acceptable. Though norms can be either formal or informal, functionalist criminology categorically accepts formal norms as stated in the criminal law as a point of departure for theoretical development. Classical, neoclassical, and many positivistic theories of crime reflect the functionalist tradition of seeing crime as nonconformity.

The *social conflict* perspective does not view norms as representative of societal consensus, but rather as expressions of the interests of those in power. Crime is considered less a violation of normative behavioral standards and more a reflection of conflicting values between social groups and classes, ideas put forth by Karl Marx and Friedrich Engels. The conflict perspective is evident in a number of critical and radical criminological theories, including Marxist criminology, feminist criminology, left-realism, and cultural criminology, all of which view crime as a by-product of social alienation stemming from social inequalities.

The third sociological theoretical tradition influencing criminology is *symbolic interactionism*, an approach developed by the twentieth-century American sociologists George Mead and Herbert Blumer that focuses on shared meanings of social life determining communication and a range of human interaction, including crime. This perspective has shaped the development of several prominent theories including learning theory, reintegrative shaming theory, and routine activities theory.

WHY THEORY MATTERS

Theory is vital to criminology for several reasons. It provides a scientific orientation to the phenomenon of crime, in which observations of facts are specified and classified as causes and effects. It grounds several styles of inquiry in a logic of systematic analysis. More importantly, the relationships between causes and effects can be identified, thus composing a knowledge base to guide decision making and planning concerning how to best address the problems presented by crime. Some theorists examine the relationships between observable phenomena to simply find out for the sake of advancing knowledge, the goal of *basic* or *pure research*. Most criminological theorizing, however, generates practice and policy implications and, as such, is *applied research*. Even the pure theorists, who may have no particular interest in addressing a specific crime or delinquency issue, may generate the knowledge necessary for others to modify the criminal justice system's efforts. Recently, new concepts have emerged that are redefining the relationship between the academic study of crime and its control that are serving to increase the relevance of crime research and thus theoretical criminology for crime prevention.

Evidence-based Practice: While the fields of juvenile and criminal justice generally recognize the need for research input so as to maximize decision making regarding practice and policy, historically applied research has received fluctuating levels of support across justice system stakeholders. Too often, the consequence is evident by processes and policies selected more so by tradition and ideology rather than actual research-generated knowledge. Following other disciplines, “evidence-based practice” (EBP) has emerged in recent years as an important concept and signals a movement toward system betterment through research knowledge. The EBP concept entails scientific research to identify the best practices (basically determination of what works the best) of an applied field such as criminal justice. To be considered evidence based, a program, treatment modality, or practice must meet three basic criteria: (1) previous implementation and delivery, (2) scientific evaluation finding effectiveness, and (3) successful replication.

The EBP movement originated in medicine and nursing during the 1990s, then quickly spread to other professions including psychology, education, social work, and now criminal justice. Toward closing the problematic “knowledge gap” issue in the justice systems, various federal funding agencies, such as the U.S. Bureau of Justice Assistance, the U.S. Office of Juvenile Justice and Delinquency Prevention, and the National Institute of Corrections, have been emphasizing EBP as a fresh way of addressing the nation’s crime problems. These and similar U.S. Department of Justice agencies sponsor research activity intended to enhance the juvenile and criminal justice systems through both applied (e.g., effectiveness evaluations of rehabilitation and treatment programs) and pure (e.g., extension of criminological theories to new forms of crime as well as the development of newer explanations) research. While the EBP movement stands to increase the role and relevance of the academic study of crime in terms of shaping future justice system activity, the actual collaboration between criminologists and the justice system is increasingly engaged through another fairly new and related concept—research–practitioner partnership (RPP).

Research–practitioner partnership: Researcher–practitioner partnerships that embrace and facilitate an EBP approach can be mutually beneficial in multiple respects. Criminal justice practitioners can better identify and customize best practices to address their crime problems through the advances of science. Criminologists and similar social scientists, in turn, are provided with meaningful research opportunities in applied settings. By partnering with researchers, administrators and service providers can realize better outcomes with enhanced efficiency through hard data-driven decision making. Offenders benefit from proven intervention and treatment protocols that are both most apt to help them and a good use of public resources, and, to the extent that treatment reduces recidivism and probation status revocation, the larger community also benefits in terms of enhanced public safety and cost savings through system efficiency.

The research skills necessary to conduct the scientific process necessary to realize “evidence-based” status are rarely already in-house for the majority of criminal justice agencies; therefore, RPPs are necessary to demonstrate effectiveness and accountability. Through these partnerships, programming implementation can synergize staff and agency culture through enhanced professionalism marked by best practices service delivery. An evidence-based culture not only redefines priorities around data analysis to gauge performance but also provides an objective and justifiable rationale for implementing programs that might otherwise be deemed too progressive or

innovative (Melnik & Fineout-Overholt, 2005). Increasingly, federal funding agencies are establishing formal criteria (including and sometimes beyond the three EBP requirements listed above) and processes for designating justice system practices and rehabilitative modalities as being officially evidence based (Miller, 2012). While the processes for becoming listed as evidenced based varies somewhat across agencies, a fairly new government website (crimesolutions.gov) provides a menu of strategies and programmatic orientations for responding to crime problems. Accordingly, EBP designation is important both because the practice or intervention being considered is much more apt to be replicated in other settings due to inclusion in official EBP lists of successful approaches and because agency grant requests for funding support are more likely to be successful if evidence-based activity is proposed for delivery in a RPP context (Lynch, Miller, Miller, Heindel, & Wood, 2012). Ideally, the research conducted in RPPs, while intended to address real problems an agency is facing, will be grounded in established criminological theory. It would be difficult to overstate the significance of criminological theory—explanations of crime—for crime control policy as it is requisite to first understand the nature and scope of a problem before attempting to solve it. The larger message communicated by concepts such as EBP and RPP is that crime policy and justice system programming should be guided by science rather than adherence to agency customs or ideology.

There is, then, a direct connection between theory and policy. Theoretically based research may, for example, shed light on a better way of doing things, meaning that new programs should be developed and implemented or that existing programs are not working. Different theories may suggest similar or quite alternative practices and policies, often depending on what is proposed as the root cause of criminal behavior in a particular situation or context. Regardless, justice system practices and programs are typically shaped per the logic of one or more criminological theories. The leading theories of crime described in this text certainly suggest various paths of action. This is to be expected because it is only natural that the identification of a problem's source and its defining attributes will affect the solution as noted above. As you become familiar with the different perspectives in the following chapters, notice that each theory indicates different directions for how society should address crime.

Summary

Criminological theorizing is vital to both the study of and response to crime. It is illogical to solve the problem of crime without first fully understanding its complex nature. Theory furthers this understanding by identifying factors associated with crime and examining causal relationships. Ideally, criminological theory is based in logic and is temporally ordered in terms of causes preceding effects. Also, good theories must exhibit correlation and a lack of spuriousness. Criminological theory is diverse, having identified multiple sources of crime over time that are reflected in a sequence of philosophical perspectives: spirituality and superstition, free will, determinism, and positivism. Theories reflect both macro- and

micro-perspectives on both criminality and crime rate, as illustrated in the subsequent chapters of this book. In a sense, the various theories surveyed in this book affix responsibility for crime to a wide range of sources, and students sometimes view theories as “blaming” groups of people or certain social policies for either contributing to or failing to adequately address the crime that exists in society. Accordingly, it is important to approach the various theories with an attitude of objectivity and open-mindedness rather than attempting to identify perspectives that reinforce existing attitudes. Doing so will enable a greater understanding and appreciation for the multifaceted nature of crime and its many causes.

Key Terms

Chicago school an important movement influencing the social sciences that was concentrated in the University of Chicago Sociology Department during the 1920s through the 1940s; demonstrated that crime is a product of an area's social ecology, particularly social disorganization in urban areas

classical school of criminology a movement accentuating rational thought as the major influence on human behavior; major theorists include Jeremy Bentham (1748–1832) and Cesare Beccaria (1738–1794), whose works emphasized the concepts of free will and deterrence in the context of crime and punishment

correlation the presence of a relationship between observable phenomena, usually characterized in terms of strength and direction

crime rate the level of crime attributable to a geographic locale such as a city, county, or country

criminality the extent and frequency of criminal offending by a group of people

criminology the study of the various factors and processes of making and breaking laws; a social science address of crime characterized by a theoretical–methodological symmetry

determinism a philosophy contending that human behavior is caused by biological and psychological factors specific to individuals and/or structural factors composing the environment

evidence-based practice refers to approaches and interventions that have been scientifically tested and proven effective

positivism a philosophy contending that scientific inquiry should focus on the study of relationships between observable facts

social contract the sacrifice of individual freedoms in exchange for protection and social benefit; first introduced by Thomas Hobbes (1588–1679)

theory a systematic explanation composed of statements indicating an outcome's causal and associated elements

Discussion Questions

1. Theory is a systematic way of developing explanations—something we do in everyday life to solve problems and to better understand the social world around us. What are a couple of problems or issues that you've dealt with recently that have involved theoretical thinking?
2. How does criminology differ from criminal justice?
3. What are the basic assumptions of the three leading perspectives (classical school, determinism, and positivism), and how do they contribute to the development of criminological theorizing?
4. How are the general social perspectives of functionalism, social conflict, and symbolic interactionism important to the construction of criminological theory?

References

- Allen, M. (2003, September 23). Bush presses faith-based agenda. *Washington Post*, p. A10.
- Bryant, C. G. A. (1985). *Positivism in social theory and research*. London: Macmillan.
- Collins, R. (1985). *Three sociological traditions*. New York: Oxford University Press.
- Cressey, D. R. (1978). *Principles of criminology* (10th ed.). Philadelphia: Lippincott.
- Larson, C. J. (1984). *Crime—justice and society*. Bayside, NY: General Hall.
- Lombroso, C. (1863). *Criminal man*. Turin, Italy: Fratelli Bocca.
- Lynch, J. P., Miller, J. M., Miller, H. V., Heindel, T. L., & Wood, A. (2012). Embracing evidence-based practices. *American Jails*. (September/October).
- Melnik, B. M., & Fineout-Overholt, E. (2005). *Making the case for evidence-based practice*. Philadelphia: Lippincott Williams & Wilkins.
- Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, 3, 672–682.
- Miller, J. M. (2012). The rise of the evidence based practices movement and new opportunities for criminal justice research. *ACJS TODAY*, 37 (1).
- Shaw, C., & McKay, H. D. (1942). *Juvenile delinquency and urban areas*. Chicago: University of Chicago Press.
- Sutherland, E. H. (1939). *Principles of criminology* (3rd ed.). Philadelphia: Lippincott.

Classical and Neoclassical Criminology

Have you heard anyone lately, say a politician, a friend, or even yourself, complaining that the laws against crime are a joke and that criminals simply do not fear the system? We can all readily think of at least one crime that is often committed but rarely enforced. Are you surprised at how long it takes simply to find someone guilty? Do you believe that the system is such that the rich can easily commit a crime and get away with it? Many Americans believe that there is a “price-tag” of justice in our system today that unfairly benefits the advantaged. If you agree with these notions, then your belief about the criminal justice system and how it ought to work shares many similarities to what criminologists refer to as the *classical school*, one of the oldest and most enduring perspectives of crime.

This chapter surveys some basic assumptions about human nature and related conceptual elements that shape *classical criminology*, both in its original and revised theoretical forms. After acknowledging the seminal classical theorists and their major contributions, *deterrence theory*—the criminological theory descended from the classical school—is explained and discussed. Deterrence theory is critically considered and its limitations are identified. Theoretical revisions addressing these shortcomings lead to *rational choice theory*, the leading deterrence perspective today in both science and real-world applications. The chapter concludes with examples of research testing deterrence and rational choice theories in various contexts as this theoretical tradition continues to unfold. Thinking about classical criminology in chronological terms, then, the theoretical lineage and development of the perspective comprises three connected phases (classical, deterrence, and rational choice), with the second and third phases reflecting increasing influence of social-ecological and situational factors. The incorporation of deterrence and rational choice elements constitutes what is often referred to as neoclassical criminology.

THE CLASSICAL SCHOOL

Classical theory is one of the oldest explanations of crime and certainly the oldest continuing to influence law and social control in modern society. Following only older supernatural explanations that date from the earliest attempts to account for evil acts in a demon-haunted world, classical theory derives from the ideas and writings of early Greek philosophy. That is the reason for the “classical” label—because its roots are in the classical period of Greek rationalism (the so-called golden age of Greece). Thus, while we identify classical theory below as formally originating in the eighteenth century (as the fulfillment of the seventeenth- and eighteenth-century Enlightenment

movement), it actually has a much older lineage (e.g., Hobbes, 1651). At the same time, the classical model is also among the “latest and greatest” theories of crime, rediscovered by modern criminologists in the 1970s and elaborated as the logical foundation for contemporary rational choice theory (Morris, 1966; Walters & Grusec, 1977). In these terms, it simultaneously represents very old and very new thinking about crime.

The *classical school of criminology*, obviously, wasn’t really an actual school but rather a general philosophy regarding crime and human nature. Though philosophical in nature, classical criminology was very much pragmatic in that its proponents sought to reform the criminal justice systems of their day. Revised or neoclassical perspectives today typically emphasize deterrence and punishment and are identified with conservative public policy, an interesting reversal of perception from the original version, which was characterized as progressive social activism.

Classical theory in criminology formally began in 1764 with the publication in Italy of *Dei Delitti e Delle Pene* (*On Crimes and Punishments*) by Cesare Bonesana, Marchesa de Beccaria. This small document of slightly more than 100 pages was a protest piece, arguing against a system characterized by unwritten law, secret trials, hideous punishments, and arbitrary methods of adjudicating guilt based on religion and superstition. Beccaria desired a more enlightened, rational system for controlling crime. Initially published anonymously to avoid possible prosecution and reprisals for its criticism of the existing political and religious order (Beccaria’s book was in fact banned by the Catholic church for more than a century), it was the only significant publication its author ever produced. However, the influence of this publication, which you have probably never heard about before, was such that it bears great responsibility for much of how our justice system looks today and how we think crime ought to be addressed.

Beccaria drew on the newly developing ideas of the Enlightenment movement in Europe (shaped by such figures as Rousseau, Voltaire, Locke, and Hobbes) to outline a model of criminal law, punishment, and justice that would be free of the unpredictability, brutality, and inequality of the existing legal systems based on a supernatural or spiritual view of government, law, and human nature. Adopting a utilitarian framework that viewed the establishment of governments and legal systems as “social contracts” among free citizens (rather than divine grants imposed by God), Beccaria’s theory identified social harm prevention rather than moral retribution as the legitimate function of criminal law. According to Beccaria (1764/1963, p. 93), “It is better to prevent crimes than to punish them. This is the ultimate end of every good legislation, which, to use the general terms for assessing the good and evils of life, is the art of leading men to the greatest possible happiness or to the least possible unhappiness.” For Beccaria, the **deterrence** of crime (through rational, enlightened administration of legal punishments) was the central purpose of criminal justice.

In *On Crimes and Punishments*, Beccaria elaborated the features of a rational, enlightened justice system that would effectively deter crime while correcting the injustices of the existing system, protect the liberty and dignity of individual citizens, and achieve the greatest good for the greatest number. Such a system would embody the ideals of the Enlightenment movement, including such now-familiar concepts as presumption of innocence until proven guilty, equality of all people before the law, guarantee of due process, public and impartial trials, adherence to rules of evidence

and procedure to ensure fair judgments, right to a jury trial of one's peers, and equal punishment for equal crimes.

According to Beccaria's model of justice, the prevalence of crime in a society reflects irrational and ineffective law, rather than the presence of evil or abnormal human natures. Thus, legal reform implementing a more rational and fair justice system, which would effectively deter people from choosing criminal acts, was the answer to the problem of crime. Clearly, this perspective is rooted in the fundamental assumptions that (1) people are generally good but need negative motivation, (2) behavior is calculated, and (3) crime control is an attainable goal.

Another seminal figure whose writings heavily shaped the classical perspective was Englishman Jeremy Bentham. In opposition to the operations of eighteenth-century legal and penal systems, Bentham also developed reformist propositions that were based on rationality in his famous work *An Introduction to the Principles of Morals and Legislation* (1789). Bentham is credited with developing the principle of utility, which is based on the central assumption that people inevitably pursue pleasure and avoid pain. He identified the elements by which individuals could calculate the value of pleasure or pain according to the level of intensity, duration, certainty, and extent. It is from these basic observations that later and very consequential deterrence-based models of justice and more elaborate criminological theories rooted in free will and the nature of the criminal calculus were shaped.

The contributions of Beccaria and Bentham constitute the foundational tents of classical criminology that, in subsequent conjunction with mechanisms factoring the complexities of human behavior, mark the development of both pure and applied criminological theories more so than any other general or specific perspective. Prior to moving on to deterrence and other theories derived from the classical school, it is important to first consider in greater detail basic assumptions about human behavior on which virtually all classical and **neoclassical theory** is based.

Classical Criminology Assumptions

Theories have to begin with an idea about what people are naturally like. Are we naturally criminal or do we naturally obey the law? Also, does behavior result from rational decision making or is it a function of external forces and conditions largely beyond our immediate control? The answers to these two seemingly simple questions profoundly affect our outlook on crime and how we should respond to it.

Beccaria's assumptions of human nature were based on the Enlightenment image of human nature developed by Hobbes and Locke. The classical model holds simply that people deliberately do things because they expect to benefit from them in some way. In fact, just about everything that people do is oriented around anticipated pleasures and benefits either directly or indirectly (the classroom experience, for example, is sometimes painful, but most plow on toward the future goal of earning a degree and realizing a higher salary). According to the classical perspective, you read this chapter or even show up for class solely because you anticipate doing so will provide some advantage. Maybe you wish to gain an insight about human behavior (we professors are such optimists), so the costs of spending time reading required assignments appear to be a worthwhile sacrifice. Or maybe you fear failing a test. But crime as well as conformity to the law occurs because we get something out of it and we don't sacrifice too much either. The model of human nature assumed by the

classical school is that (1) people have **free will** (to choose what to do), (2) people exhibit **hedonism** (they seek pleasure and avoid pain) and egoistic (self-seeking) behavior, and (3) people have **rationality** (to anticipate the consequences of different actions and to calculate the most beneficial outcomes).

The classical perspective dominated enlightened thinking about crime through the beginning of the nineteenth century, with the above concepts shaping law, sentencing, and crime prevention efforts. As mentioned before, no other theory has so consequentially affected law, justice systems, and crime prevention efforts. Today, as we shall soon observe, the classical approach and its basic assumptions regarding human nature are alive and thriving after a dip in popularity in intellectual and academic circles.

Given its long history and lasting prominence, it is a little surprising that the classical perspective had to rebound after being gradually supplanted in the nineteenth century by the alternative philosophy of *positivism* that pointedly rejected several key classical model premises, namely, the assumptions of free will and rational choice. The newer positivist perspective, which based its analysis of behavior on empirical research and experimentation, rather than logical deduction, was critical of the “mere philosophy” of the classical model (Akers, 1994). Critics noted that the classical theory was an idealistic philosophical doctrine that based its conclusions on universalistic assumptions about rationality and free will. It presumed that all people had free will and all behaviors were the result of rational calculation. Interpersonal differences in free will and rationality were minimized or ignored; criminals were not regarded as physically or mentally different from noncriminals—both were rational, hedonistic choice makers.

In contrast, positivism embodied a scientific perspective in which events were explained in causal rather than volitional terms—as the result of cause-and-effect dynamics rather than free-willed choices. The natural causal framework of positivism presumed that there must be a causal reason for every event—including criminal acts. We can really understand and explain an event only when we can identify scientifically what caused it to happen. The assumption of free will was viewed by positivists as incompatible with the scientific principle of causality and the idea of general causal laws. If a behavior were explained as entirely the result of identifiable causes, then there was no room left for free will. Moreover, free will was generally identified with the *soul*, which was an inherently unobservable and unscientific concept.

The growth of positivism was spurred by dramatic scientific advances during the nineteenth century, especially in biology, botany, and the medical sciences, that illustrated that science applied to all natural phenomena—living systems as well as inanimate objects. In these terms, scientific knowledge based on careful empirical research, measurement, and experimentation has more validity than philosophical doctrines based on abstract speculation and argumentation. Thus, to be fully modern and enlightened, the study of crime must adopt a rigorously scientific perspective and abstain from explanations based on philosophical argument and intuitive appeal.

Thus, by the end of the nineteenth century the classical model came to be regarded as a “prescientific,” philosophical construction—imaginative and enlightened, but ultimately to be replaced by more scientifically rigorous theories of behavior. Through the middle of the twentieth century, classical theory receded from criminological view, eclipsed by positivist theories for explaining crime. While the classical model continued to provide the philosophical rationale for the American legal system, even here the

positivist framework made substantial modifications to fit with scientific analysis. These changes included the widespread adoption of the rehabilitation model of corrections (based on treating the scientifically diagnosed causes of criminal behaviors rather than punishing moral/legal transgressions), the implementation of the juvenile justice system (developed at the start of the twentieth century as a rehabilitative alternative to the criminal justice system), and the expansion of the insanity defense during the twentieth century (Andenaes, 1974; Barnes & Teeters, 1951; Gibbs, 1975). The latter evolved in this period from a limited neoclassical exemption in rare cases where rationality was clearly absent to a wide-ranging defense applicable to all cases where mental illness was present in some form. Such innovations represented a fairly radical movement away from the deterrence-oriented vision of the classical theory.

As with an eclipse, which is not a permanent condition but an event of limited duration in which what is hidden during the eclipse reemerges into view, the classical theory also reemerged with a renewed focus on deterrence. By the 1970s, positivist domination of criminology and criminal justice was declining, as scholars and administrators began losing faith in the social engineering model of crime control and the rehabilitative model of corrections, along with the underlying causal models of crime on which they are based. Crime rates were steadily increasing during the 1960s and 1970s, as more and more positivist-based crime control policies were enacted with little apparent effect on the crime trend; recidivism rates of “corrected” prisoners remained depressingly high; and researchers were beginning to conclude that “nothing works.” Public concern and fear translated into political pressure on policymakers to generate demonstrable results in terms of lower crime rates, in general, and recidivism reduction by social (i.e., rehabilitation) programs.

This resulted in an ironic reversal of fortunes; the classical perspective was replaced by positivism in the nineteenth century because its punishment-oriented policies were seen as ineffective in controlling crime (Vold, Bernard, & Snipes, 2002). That is, as more states and nations instituted governmental and legal systems based on Beccaria’s models, the crime rates in most European countries continued to rise (along with the recidivism rates of punished criminals). While this largely reflected the rapidly changing social conditions in Europe during this period, it led to a questioning of the underlying classical theory as unrealistic or misguided, and it supported a movement to replace the classical ideas with a more scientific theory of criminality. Ironically, the revival of classical theory in the United States during the 1970s represented exactly the reverse pattern. As more states implemented legal and correctional policies based on positivist theories of causality and rehabilitation, crime rates continued to climb alarmingly. Many criminologists viewed this as evidence of the failure of positivist theory and of the need to reconsider other theoretical perspectives, which notably included the classical model of rational choice.

DETERRENCE THEORY

The renewal of classical theory in the 1970s was a combination of a number of different developments. In his well-known requiem article affirming the failure of rehabilitation policy—that is, “nothing works”—Robert Martinson (1974) questioned the viability of positivist explanations for criminality and suggested that the traditional idea of deterrence should be seriously reconsidered. As crime rates continued to rise in the 1960s and 1970s, criminologists had been giving increased attention to the impact of

sentencing policies on crime rates. Although most of the initial attention had been on variations in capital punishment—concluding that there was little systematic evidence of a deterrent effect of executions on capital crime rates—additional research was done on the effects of more frequent and ordinary forms of punishment, including imprisonment (Gibbs, 1986; Sherman, 1993). This latter research found that such ordinary criminal punishments often did show deterrence-like correlations with crime rates, consistent with classical theory (Marvell & Moody, 1994).

Coincident with the increasing uneasiness about the growing crime rates was a widespread “postmodern” rejection of the assumption of causal determinism as a reasonable premise for explaining human actions. This came with a renewed openness to volitional or voluntaristic models of behavior, which necessarily contained elements of free will or indeterminacy. The growing omnipresence of computers toward the end of the twentieth century brought with it a growing interest in artificial intelligence and cognitive models of information processing, which also prompted a renewed interest in decision making and an emphasis on rationality in human behavior (Becker, 1968). Thus, a variety of different factors all pointed toward a revival of interest in classical theorizing.

A final factor facilitating the reemergence of classical theory is recognition that it is not necessarily incompatible with scientific theory and research (Cook, 1980). The traditional argument portraying positivist and classical perspectives as antithetical were based on idealized and exaggerated premises. That is, original positivist assumptions about causal determinism were as overstated and scientifically untenable as were the original classical assumptions about universal free will and rational thinking. Contemporary theories depict people as having limited free will (in which many external and internal factors limit the options people have) and their behaviors as being shaped by a “soft” causal determinism (in which causal variables influence behavioral outcomes but do not completely determine them).

A slightly modified version of the original perspective emerged during the 1970s and was quickly dubbed *neoclassical*. Changes were subtle but very important. For one thing, it synthesizes the original philosophical argument with a more scientific orientation, expressing the original philosophical concepts as measurable variables and behavioral hypotheses. For another, this neoclassical model—or *postclassical*, as Roshier (1989) calls it—moderates the original universalistic assumptions, allowing for individual differences in motivation, rationality, and free will, and allowing these to be situationally variable as well. Rather than universal free will, the new model assumes a “bounded free will” (acknowledging some environmental and biological constraints on behavioral choice) and a “bounded rationality” (presuming only that most people *usually* behave in a “mostly rational” manner). However, while the new version allows for individual differences in motivation, it regards such variations less significant than external structures of rewards and punishments. The primary focus of neoclassical theory, however, is on deterrence—in fact, most contemporary criminologists refer to early neoclassical work as simply deterrence theory.

HOW DETERRENCE WORKS

To understand how deterrence works, you must at least momentarily accept basic classical ideas about human nature. You are someone who loves pleasure and hates pain, who is egocentric, and who can anticipate the consequences of your actions.

Now pretend you are at a party at someone's home, and you have the opportunity to sneak into a bedroom and steal some jewelry. The advantages are obvious—you can use the stolen items yourself (wear them or share with significant others as gifts) or you might pawn them for some quick money. But what would make you stop yourself in spite of potential advantages? This is the fundamental question for deterrence, and Beccaria's ideas offered insights about how to get people to not selfishly gratify their desires at the cost of the happiness of others.

At the root of the problem is that crime feels so *good*. And because criminal acts are frequently beneficial—yielding pleasure or monetary gain at less effort than non-criminal actions—there is a naturally occurring, universal motivation to engage in prohibited acts. Thus, crime has to be controlled by negative means (such as by ratcheting up the costs). It must be legally discouraged by increasing the likelihood that its outcomes will be unpleasant (e.g., painful, disgusting, embarrassing, or aversive), at least more unpleasant than the potential rewards of the criminal act. Once the advantages are offset by the costs, then one should have no desire to commit crime. Everything so far is pretty straightforward.

Beccaria also argued that the deterrent effectiveness of criminal punishments will depend on three characteristics of how punishments are administered: (1) **certainty** (the probability that a misdeed will be detected and punished), (2) **celerity** (the swiftness with which punishment follows the criminal deed), and (3) **severity** (the painfulness or unpleasantness of the punishing outcome). To achieve maximum deterrence, a punishment needs to be unpleasant (at least more unpleasant than the benefits the act would yield), certain, and swift.

Beccaria argued that of the three characteristics, maximizing certainty and swiftness is more important for deterrence than severity. The latter, if disproportionate, may result in irrational brutality and have counterproductive effects on crime, inciting revolution, defiance, revenge, and even martyrdom. This is perhaps one aspect of deterrence that most students have a hard time grasping. If the punishment for selling drugs is death, then woe to the police officer who tries to arrest the drug dealer! Woe especially if the justice system is imperfect and has a habit of arresting and condemning the innocent. Put differently, you might reason that it is better to kill others to protect yourself from the excessively severe legal consequences of your actions. Ideally, a punishment should be just severe enough to offset the pleasure attained from crime. In effect, in the cost-benefit analysis performed by a potential offender, the cost must now weigh heavier than the benefit.

Another, less extreme, problem with severity has to do with relativity. Deterrence functions through the criminal law, which must necessarily make assumptions about which crimes are to be punished more severely and what degree of harshness in sanctioning will move people to realize that committing a crime being contemplated is simply not worth it. The problem here is that criminal statutes, such as the U.S. sentencing guidelines, affix penalties to the severity and associated characteristics of criminal offenses, not the characteristics of individual offenders. This seems fair and democratic and seemingly minimizes factors that a judge or jury might otherwise use as bias against individual offenders (e.g., race, religion, social class, and sexual orientation), because all offenders, in theory, are punished based on the crime. This is also why offenders receive harsher sanctions for repeat offenses, because it is assumed that, under this “let the punishment fit the crime” model, a previous punishment did not deter and must be increased to

discourage further offending. In a general sense, this philosophy views all offenders as equal—it is their criminal behavior that varies and the severity of punishment must also vary accordingly.

Deterrence Theory Limitations

The cost-benefit conceptualization of deterrence theory is often referred to as *the economic model* or *objective deterrence* because the trade-off elements comprising gains and losses are calculated through accounting for the most apparent variables. As noted above, costs and benefit calculations are actually based on a number of factors, not all of which are always known to potential offenders. Additionally, different offenders do not engage rational decision making in a monolithic or uniform way, rather as variable as human behavior itself. Moreover, deterrence theory assumptions are exposed as faulty in practice. A model of justice such as sentencing guidelines, for example, assumes that for each crime there is an average punishment that will deter most potential offenders. To set a sanction at a level that is appropriate to effect deterrence but not so severe that it is blatantly unfair assumes that most offenders generally weigh the costs and benefits of crime similarly.

Our society, however, is quite diverse, stratified, and pluralistic. Is an offense punishable by a fine—littering or speeding, for example—really an equal punishment for all? Certainly the wealthy are impacted less than the poor by loss of an equal amount of money. Yet, the law penalizes both the same. The threat of incarceration is another good example that also likely varies according to class status and socialization environment. Middle- and upper-class people may opt out of a potentially rewarding property crime due to the threat of violence in prison. If they have never been incarcerated, this threat may be heightened by media portrayals of prison gangs and sexual predators, an understandable fear of the unknown. Others who have been in and out of the system and previously incarcerated have firsthand knowledge of the correctional system, an understanding of its subculture, and may be less afraid. Therefore, it is the perception of the costs of punishment as well as the actual costs themselves that matter. Unfortunately, the costs are not the same for everyone, but, according to the deterrence model, the penalties are fairly uniform.

The variability of the true severity of punishment across the offender pool also has an intangible element. A third grader from a mainstream American suburb caught shoplifting may suddenly be socially ostracized (“Don’t invite Johnny to the birthday party—he is a bad influence!”), and the penalty may also extend to negatively impact the delinquent’s family. Such a youth may choose not to shoplift because doing so may render a threefold negative effect: (1) the direct punishment for the offense, (2) indirect punishment from both family and peers in terms of shame and embarrassment, and (3) indirect penalties attached to the family such as damaged reputation.

Of course, this assumes that the family and peer group disapprove of shoplifting and that negative informal sanction will occur. What if they do not? In a different neighborhood in the same town, another juvenile’s shoplifting arrest may be viewed as little more than bad luck by both the family and community. If so, there are less costs associated with choosing to offend—again demonstrating the variability across offenders in calculations of the costs and benefits of crime.

In response to these numerous problems and shortcomings of the economic deterrence model, then, scholars recrafted the deterrence perspective to better emphasize the

boundedness of decision making and the role and variability of perception resulting in what criminologists recognize as *bounded choice* or *perceptual deterrence theory*. There have been many recent updates in the classical–deterrence perspective, but the account of deterrence provided by Beccaria (1764/1963) remains a primary theoretical cornerstone affecting justice policy. Beccaria provided a surprisingly modern analysis that clearly identified the subjective or psychological nature of deterrence and the critical role of perceptions as determinants of behavior. The rise of rational choice theory further accentuates the environmental, social, and individual variables shaping perception and decision making across social-ecological contexts. The emergence of the life course perspective, emphasizing the points of criminal birth—entry to criminality/onset of criminal activity, criminal life—period of offending, and death or desistance from crime, couples nicely with rational choice approaches and enables criminologists to better focus on how offenders assess costs and benefits at various life stages.

People’s decisions to engage in criminal behavior will be shaped by their *perceptions* of what the punishment would be, how likely they *think* they are to get caught, and how personally unpleasant they *expect* the punishment to be. The objective properties of the punishment are far less relevant to these decisions than what people think these properties are. Deterrence occurs when perceptions of likely punishments for criminal acts cause would-be offenders to refrain from committing those acts (even though they are otherwise motivated and willing to do so). The specific mechanism that inhibits would-be offenders from criminal actions is their *fear* of punitive consequences. Thus, the process of deterrence is inherently psychological, based on an aversive emotional response to what people think will occur.

Recent modern analyses of deterrence have mostly affirmed the ideas developed by Beccaria but also have noted that things are a bit more complex than he could know. For one thing, deterrence effects are divided into two distinct types, reflecting two distinct ways in which punishments may influence people’s behaviors. Beccaria implicitly recognized these but did not recognize or discuss the importance of the distinction. In *specific deterrence*, the offender is inhibited from repeating criminal behavior by the unpleasant experience of being punished for the original misdeed. It involves the direct experience of punishment by the offender (who experiences the punishment).

In *general deterrence*, punishing offenders has a discouraging effect on other would-be offenders (i.e., members of the general public, other than the person getting punished, who witness or hear about the punishment). This kind of deterrence involves the indirect or vicarious experience of punishment through seeing others receive unpleasant outcomes for their actions, which provides an example of what might happen to other would-be offenders if they were to commit the same acts. These two deterrence processes seem very similar (and Beccaria lumped them together), but they refer to different psychological events and may occur quite independently of each other. Moreover, they represent separate problems in crime prevention as revealed in different patterns of criminal behaviors. Specific deterrence involves reducing recidivism (repeated offenses committed by convicted, punished offenders), while general deterrence involves reducing general crime rates (offenses committed among the general public that have not been punished).

Let’s consider a couple of examples that help distinguish between specific and general deterrence. Posted speed limit signs serve as a form of general deterrence and are frequently reinforced in a public fashion, as we’ve all seen motorists stopped

for speeding and receiving citations. The speed limit has far more impact on us, however, when applied as specific deterrence—that is, when we are the ones to be pulled over. Perhaps the most frequent and controversial debate over the effectiveness of deterrence concerns the use of capital punishment. Most criminologists observe that there is very little empirical evidence to support the argument that the death penalty effectively deters additional homicide. This is a complicated issue, but a primary reason that homicide is not responsive to harsher penalty is because it is a highly emotive crime (most of the time people are very angry and out of control, and the degree of violence happens as a result). According to deterrence theory, offenders consider the benefits and costs, but these are not weighed or weighed sufficiently in the context of extreme emotional states wherein people act based on impulse and adrenaline. Arguably, their anger would have led to the same outcome regardless of the level of punishment, because the punishment is simply not considered in a rational manner. Homicide statistics and empirical examinations of the use of capital punishment tend to reinforce this argument that there is little general deterrent effect of capital punishment. On a more basic level, however, it is hard to argue that capital punishment does not have a specific-level deterrent effect, as the executed are no longer capable of reoffending.

Research on Deterrence Theories

As a scientific theory, the validity of the deterrence notion depends on the ability to conduct empirical research that provides empirical tests of the key premises (hypotheses). While considerable efforts have been made in the past three decades, research to persuasively test deterrence theory has been surprisingly difficult to accomplish. A large number of studies, encompassing a broad assortment of different types of research, have been carried out on this topic, but they have yielded an ambiguous and inconclusive pattern of findings (Nagin, 1998; Sherman, 1990).

Part of the difficulty in many of these studies may be simply their failure to fully express deterrence as a scientific theory with clearly defined (measurable) concepts and fully specified (testable) hypotheses. But the most fundamental difficulty is that deterrence is not directly observable; it can be inferred only from observable events. Quite literally, deterrence refers to *nonevents* (i.e., a person does *not* commit a crime). Moreover, these occasions when “nothing happens” occur because of a psychological process not observable to an outside observer (i.e., an expectation of punishment accompanied by a feeling of fear or aversion). Failure to act is meaningful information about deterrence only if we clearly expect that the action *should* have occurred but did not, as in Sherlock Holmes’s famous reference to “the dog that didn’t bark.”

We can infer deterrence only when we know that the person would have acted criminally but refrained because he or she considered the likely consequences of the act and feared the legal punishments that might result. People may refrain from committing a crime for lots of reasons other than fear of legal sanctions. They may simply have no desire to assault another person, sexually abuse their children, steal someone else’s property, set fire to a building, drive 80 miles per hour on a busy highway, or inject heroin into their veins. They may find such actions uninteresting, uncomfortable, too much work, personally unattractive, morally offensive, physically risky to personal health and safety, likely to produce strong negative reactions from their friends and family, or sure to cause their eternal damnation. If so, then

deterrence is irrelevant no matter how severe the legal punishment since they would not have committed the crime anyway.

The obvious difficulties of trying to study something that did not happen for reasons we cannot see means that almost all research on deterrence has involved studying only the *failures of deterrence*—that is, occurrence of criminal acts, which we *can* observe (at least in theory). But even here, we do not directly observe even deterrence failure, but must still infer it. We can observe when people commit crimes, but whether this indicates a failure of deterrence depends on what they knew and thought about before committing their crimes. To infer a failure of deterrence, we must know (or assume) that they were aware of and considered the punitive consequences of their acts before deciding to act anyway; otherwise, it is not a failure of deterrence but rather a thoughtless behavior oblivious to its possible outcomes.

In the face of these difficulties, how can researchers prove the scientific validity of the deterrence theory? A large body of deterrence studies have accumulated that employ a variety of research procedures, yielding a diverse array of findings. Findings range from strongly supporting deterrence theory to strong refutations, with the vast majority being in the ambiguous or inconclusive middle of these polar positions. These studies include four broad types of research, each with its strengths and weaknesses for informing us about deterrence effects: (1) anecdotal studies, (2) crime rate analysis, (3) natural/field experiments, and (4) self-report surveys.

First are anecdotal studies that rely on qualitative interviews, observations, and impressions of serious criminal offenders for evidence that their actions did or did not embody deterrence processes. Katz's (1988) qualitative analysis of the "nonrational seductions" of crime provided insightful evidence that rational calculations may not cover the thought processes of real criminals very adequately. Tunnell's (1990) excellent in-depth interview study of incarcerated repeat property offenders amply documented that most of the offenders studied did not really think about the likely legal consequences of their actions. They had unrealistic perceptions about the likelihood of being caught and irrational expectations about what would happen to them if they did get caught. However, while such anecdotal studies are insightful and revealing about the perceptions and feelings of criminals, they are also selective and difficult to replicate or generalize from. For this reason, even though they may tell us a lot about the phenomenology of crime and punishment, they cannot provide a very definitive test of deterrence theory.

The second type of research involves ecological studies of aggregate crime and justice statistics, such as correlation of imprisonment rates and index crime rates across states or counties in the United States. *Index crimes* refers to the eight major commonly occurring crimes reported annually in the uniform crime reports, which are compiled by the Federal Bureau of Investigation. These crimes include homicide, aggravated assault, arson, theft, robbery, motor vehicle theft, forcible rape, and burglary. These range from the original simple bivariate correlation studies in the late 1960s to the latest elaborate multivariate, multiple-equation econometric analyses. In this approach, the deterrence prediction is that punishment and crime rates will be negatively correlated, even after controlling for other social factors that may be confounded with crime and punishment patterns. Many of these studies show results consistent with a deterrence prediction, but these correlations vary considerably in size and direction, making interpretation ambiguous. The difficulty with this approach is its indirect assessment of deterrence events. It deals only with aggregated

events and does not measure individual perceptions or correlate perceptions with individual behaviors. Thus, the findings of the ecological studies are, at best, suggestive but inconclusive.

The third category of deterrence research has involved what are called natural experiments or field experiments—that is, tracking patterns of crime levels before and after a dramatic change in punishment or enforcement policy (Nagin, 1978, 1998). The change or intervention that constitutes the experimental treatment may be a political event such as a reinstitution of the death penalty, a statutory revision of the criminal law to provide mandatory prison terms for certain crimes, a judicial moratorium on death sentences, or a police strike. The change might also be a deliberately targeted intervention such as a scheduled police crackdown on DUI drivers or implementation of a mandatory arrest policy for domestic violence cases in some precincts—that creates a kind of natural experiment. In all such cases, the deterrence prediction is that crime levels will be higher after an interruption that lowers the risk of punishment (such as during a police strike or a judicial moratorium on death sentences). Correspondingly, crimes will be lower after an intervention that increases the risk of punishment (such as reinstituting the death penalty or instituting random roadblocks to catch drunk drivers). This kind of research design seems more rigorous than the ecological studies, which are merely correlational. However, it still provides only indirect assessment of actual deterrence events, since individual perceptions and behaviors are not measured in these studies. Although they seem more scientific, the findings from these kinds of studies have shown only mixed evidence for deterrence. Some of the studies show a definite deterrence-like effect. Some studies show an opposite pattern from the predicted deterrence effect—one in which more punishment seems to lead to more crimes (sometimes termed a “brutalization effect” or a “facilitation effect”).

The fourth type of research relies on sample surveys of the general public using self-reported measures of people’s punishment perceptions (such as perceived likelihood of getting caught or expected harshness of punishments) and their criminal behaviors (Williams & Hawkins, 1986; Zimring & Hawkins, 1973). Here again, deterrence predicts a negative correlation between people’s perceptions of the certainty and severity of punishment and their reports of actually doing the illegal behavior. Alternative versions of the surveys have asked people not about their actual perceptions and behaviors, but about their predicted reactions in hypothetical scenarios. This type of deterrence research has the obvious advantage of dealing much more directly with perceptions and with directly correlating individual perceptions and behaviors. However, two weaknesses limited the ability of this kind of research to yield conclusive tests. One is the cross-sectional nature of surveys, which make the time ordering of variables somewhat ambiguous. The other limitation is the hypothetical nature of the questionnaires, which deal with abstract predictions about what people would do in hypothetical situations rather than their actual responses and behaviors. Thus, even though they deal more directly with the psychological aspects of deterrence, perceptual surveys provide suggestions, rather than definite conclusions, about deterrence effects (Ross, 1982).

Across these different types of deterrence research, criminologists generally agree that policies and practices that increase the certainty of punishment are preferable in terms of generating a deterrent effect than alternative efforts emphasizing more severe or intense punishment (Wright, 2010). After considering all the

research carried out on deterrence, most scholars agree that it is impossible to assign a simple “true” or “false” to the deterrence doctrine (Paternoster & Piquero, 1995). It is clear that the general question, “Does punishment of criminals deter crime?” is too simple to be answered meaningfully. It is clear from the considerable research carried out over the past three decades that punishment of criminals can and does have deterrent effects. However, the effects are generally weaker, and far more variable and inconsistent, than classical theory predicts. Thus, while there is some support for classical theory, the explanation it provides for crime is by no means complete and final. Classical theory remains a viable and useful theory for explaining many crime patterns, as well as for developing crime control policies, but it does not replace or eliminate any of its theoretical competitors—at least on scientific grounds.

Overall, it is clear that the dominant appeal of the theory is not entirely an outcome of scientific progress. The appeal of classical rational choice theory is substantially ideological rather than utilitarian. That is, it agrees with other values and beliefs people have about human nature, law, and morality; it fits with other things they believe about human nature and moral philosophy. Classical theory “works well enough” in terms of empirical research and policy evaluations, but it does not work demonstrably better than its more positivist theoretical competitors. And it does not work as well—as invariably and universally—as the theory claims it will. We know from research and criminal justice policy analysis that legal punishments provide an effective deterrent for crime in many circumstances. However, we also know that the effects of criminal punishments are limited and variable across situations and individuals. They are not universally and invariably effective; they do not always work as our philosophy prescribes.

Summary

The classical school of criminology is the first general perspective on crime that attempted to understand its complex nature in a systematic and scientific nature. The perspective has had lasting impact as a leading explanation of crime for well over a century and has been vital in influencing the very nature of criminal justice systems around the world and, especially, in the Western Hemisphere. The daily efforts of law enforcement, the sanctions delivered through our court

system, and certainly the deterrence and rehabilitation programs of our correctional institution all directly reflect ongoing efforts to lower the crime rate generally, and recidivism rates especially, by manipulating the criminal calculus. Deterrence theories and similar neoclassical perspectives incorporate deterministic and environmental factors that mitigate the decision-making process, but crime is ultimately seen as an outcome of free will and ineffective deterrence.

Key Terms

celerity the swiftness with which punishment follows a crime

certainty the probability that a crime will be detected and punished

deterrence prevention of a certain act or acts (such as crime)

free will humans’ ability to control their own actions and destiny

hedonism humans’ tendency to maximize pleasure and minimize pain

neoclassical theory a revised version of classical theory that acknowledges individual and situational differences in motivation, rationality, and free will (i.e., bounded free will)

rationality humans’ ability to anticipate the consequences of different actions and to calculate the most beneficial outcomes

severity the painfulness or unpleasantness of a sanction

Discussion Questions

1. How did the Enlightenment period influence classical theories?
2. Identify some of the classical theory's key assumptions about human nature. Do you think that humans generally behave according to these assumptions?
3. Why did classical theory come under fire from the positivistic school of criminological thought?
4. What are some modifications of the neoclassical movement that influenced the resurgence of deterrence theory?
5. Discuss some of the ways criminologists test deterrence theory today. Can you envision a study that would also test modern deterrence theory?

References

- Akers, R. L. (1994). *Criminological theories: Introduction and evaluation*. Los Angeles: Roxbury.
- Andenaes, J. (1974). *Punishment and deterrence*. Ann Arbor: University of Michigan Press.
- Barnes, H. E., & Teeters, N. K. (1951). *New horizons in criminology* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Beccaria, C. (1963). *On crimes and punishments* (H. Paolucci, Trans.). Indianapolis: Bobbs-Merrill. (Original work published 1764)
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76, 169–217.
- Bentham, J. (1879). *An introduction to the principles of morals and legislation*. Oxford: Clarendon Press.
- Cook, P. (1980). Research in criminal deterrence: Laying the groundwork for the second decade. In N. Morris & M. Tonry (Eds.), *Crime and justice: An annual review of research* (Vol. 2, pp. 211–268). Chicago: University of Chicago Press.
- Gibbs, J. P. (1975). *Crime, punishment, and deterrence*. New York: Elsevier.
- Gibbs, J. P. (1986). Deterrence theory and research. In G. B. Melton (Ed.), *The law as a behavioral instrument* (pp. 87–130). Lincoln: University of Nebraska Press.
- Hobbes, T. (1962). *Leviathan*. New York: Macmillan. (Original work published 1651)
- Katz, J. (1988). *Seductions of crime: Moral and sensual attractions in doing evil*. New York: Basic Books.
- Martinson, R. (1974). What works? Questions and answers about prison reform. *Public Interest*, 35, 22–54.
- Marvell, T., & Moody, C. (1994). Prison population growth and crime reduction. *Journal of Quantitative Criminology*, 10, 109–140.
- Morris, N. (1966). Impediments to penal reform. *University of Chicago Law Review*, 33, 627–656.
- Nagin, D. (1978). General deterrence: A review of the empirical evidence. In A. Blumstein, J. Cohen, & D. Nagin (Eds.), *Deterrence and incapacitation: Estimating the effects of criminal sanctions on crime rates* (pp. 95–139). Washington, DC: National Academy Press.
- Nagin, D. (1998). Criminal deterrence research at the outset of the twenty-first century. In M. Tonry (Ed.), *Crime and justice: A review of research* (Vol. 23, pp. 1–42). Chicago: University of Chicago Press.
- Paternoster, R., & Piquero, A. (1995). Reconceptualizing deterrence: An empirical test of personal and vicarious experiences. *Journal of Research in Crime and Delinquency*, 32, 251–286.
- Roshier, B. (1989). *Controlling crime: The classical perspective in criminology*. New York: Open University Press.
- Ross, H. L. (1982). *Deterring the drinking driver: Legal policy and social control*. Lexington, MA: Heath.
- Sherman, L. W. (1990). Police crackdowns: Initial and residual deterrence. In M. Tonry, & N. Morris (Eds.), *Crime and justice: A review of research* (Vol. 12, pp. 1–48). Chicago: University of Chicago Press.
- Sherman, L. W. (1993). Defiance, deterrence, and irrelevance: A theory of the criminal sanction. *Journal of Research in Crime and Delinquency*, 30, 445–473.
- Tunnell, K. D. (1990). Choosing crime: Close your eyes and take your chances. *Justice Quarterly*, 7, 673–690.
- Vold, G. B., Bernard, T. J., & Snipes, J. B. (2002). *Theoretical criminology* (5th ed.). Oxford: Oxford University Press.
- Walters, G. C., & Grusec, J. E. (1977). *Punishment*. San Francisco: Freeman.
- Wright, V. (2010). *Deterrence in criminal justice: evaluating certainty vs. severity of punishment*. Washington, D.C.: The Sentencing Project.
- Williams, K. R., & Hawkins, R. (1986). Perceptual research on general deterrence: A critical overview. *Law and Society Review*, 20, 545–572.
- Zimring, F. E., & Hawkins, G. J. (1973). *Deterrence: The legal threat in crime control*. Chicago: University of Chicago Press.

Biosocial Theories of Crime

Explaining how and why some persons become criminal can be an especially challenging endeavor. Although most people have their own ideas about what causes criminality, the answers are sometimes difficult to see, and unexpected. Consider the case of Andrew, a nine-year-old, who lives in a Midwestern, middle-class suburb with both of his parents, goes to a good school, has a number of friends, and is active in sports and school activities. For most of his life, Andrew has been a good child, listening to his parents, rarely getting into any trouble, and being popular with his friends, teachers, and everyone in his neighborhood. The only thing that seemed to make Andrew stand out among his friends and peers was that he was physically smaller than most other boys his age, and he was always very skinny. As Andrew approached his ninth birthday, his behavior started to change. He became withdrawn, began to resist going to school, talked back to his parents, saw his grades drop in school, and soon began to be in fights with a number of other kids in his school. At first Andrew's parents were not too concerned, thinking that this was just normal behavior, and probably a phase he was going through. They thought maybe he was entering puberty a bit early, and his change in behavior was normal adolescent rebellion and change. But, his behavior continued to deteriorate; he became more and more withdrawn from his old activities, and his fights with other children became more frequent. As Andrew's ninth birthday approached, his mother took him to the doctor for his annual checkup, and mentioned to the doctor that the bruises on his arms and chest were from a recent fight he had at school. Andrew's mother told the doctor that they did not know what was causing this change in behavior and were starting to get worried. The doctor did not have any suggestions for Andrew's mother, and told her not to worry too much, unless Andrew's behavior continued to get worse.

As part of Andrew's physical, the doctor drew some blood and did some normal tests to make sure that Andrew was healthy. When the test results came back, the doctor noticed that Andrew had very low levels of several important vitamins, most notably vitamin B₁₂. This stood out to him as somewhat rare for nine-year-olds, and he called Andrew's mother and asked her to come back in for a follow-up appointment. When the doctor met with Andrew's mother, he asked questions about both Andrew's behavior and his diet. Andrew's mother reported that his behavior had not changed since the last appointment, and that Andrew seemed to eat well. However, she also mentioned that the family ate a strict vegan diet, in an effort to be healthy. The family ate only fruits and vegetables, and avoided all meat, fish, dairy products, and eggs. The doctor pointed out to Andrew's mother that this could be the source of Andrew's socially withdrawing, apparent depression, and increasing violence. The very low level of vitamin B₁₂ in Andrew's body was a result of his diet—B₁₂ is typically found in meat, dairy, and eggs. And, B₁₂ deficiency has been shown to be related to the development of depression, withdrawal, and aggressive/violent tendencies. The doctor suggested that Andrew

(and in fact his whole family) either start to take vitamin supplements or add foods to their diet that would provide high levels of vitamin B₁₂. The family soon added three meals a week of eggs to their diet, and within a couple of months Andrew returned to his old self, being social, friendly, and no longer getting into fights at school. The cause of Andrew's behavior change had been identified and solved with a simple solution of a change in his diet.

Do most people ever think that simple things like what we eat can have such a profound impact on what we do and how we act? Probably not. However, as this simple story shows, sometimes the answer to the question of what causes our behavior can be very simple, if we just know where to look. Biological issues, including those stemming from our diet, are important for both our overall health and our mental and emotional states, which are often directly tied to our behavior. Biological factors impact many aspect of our lives, and as criminologists have argued for nearly 250 years, parts of our biological and physical makeup as persons may be the causes of criminal behavior. These ideas, having their foundation in some of the original criminological theories, are today being recognized once again as important and potentially very influential theories about crime and criminal behavior.

Biosocial theories of crime focus on identifying and understanding unique qualities or characteristics of individuals and showing how the presence (or absence) of some chemical, hormonal, or physical structure in our bodies is related to participation in illegal activities. The connections between criminal activities and biological aspects of individuals have gained a great deal of attention in recent years, as a perspective known as **biosocial criminology** has grown in popularity. Biosocial criminology is an approach to studying the etiology of criminal behavior that focuses on both environmental *and* biological factors. Note that the perspective is referred to as biosocial, hinting that it is not “purely” a biological focus, nor is it “purely” a sociological focus. Rather, biosocial criminology approaches the study of criminal behavior through an interdisciplinary lens where knowledge gained in the biological sciences such as molecular genetics and neuroscience is combined with information gleaned from the social sciences (e.g., criminology and sociology).

Biosocial criminology highlights many factors that may be related to criminal behavior, and often these factors differ from those identified by traditional criminological theories. Indeed, biosocial criminology suggests that at least four factors play a role in shaping a person's behavior: (1) biological factors such as hormone levels, (2) genetic factors, (3) the brain, and (4) the environment. This chapter offers an introduction to biosocial criminology and will, therefore, cover each of these four domains. Before discussing the four domains of biosocial criminology, however, we must first discuss the positivist school of thought and how it has shaped biosocial criminology over the past few centuries.

THE POSITIVIST SCHOOL OF THOUGHT

The foundation for biosocial theories comes from the school of positivism. **Positivism** is an approach to the study of human behavior that seeks to identify the underlying causes of that behavior using the principles and tools of the scientific method. The positivist school of thought has its roots in the scientific revolution of the sixteenth century. This means that when we say we can use scientific means to identify specific causes of criminal behavior, we need to think of science in a very

broad way (Rafter, 2010). Obviously, what we think of as science today (use of DNA, sophisticated medical procedures, etc.) is not what was meant by this idea 500 years ago. Scientific investigation conducted by the early positivist thinkers and biological theorists compared the characteristics of known criminals with others in the population. If it could be shown that all (or at least most) criminals had a particular characteristic—such as large ears or pointy chins—and noncriminals did not have this characteristic in large numbers, it was assumed to indicate one's criminal ways. Science in these early theories was based on observation and simple comparisons; sophisticated tools, analytic methods, and advanced statistics are all modern developments.

Positivist thinking in biosocial criminology is based on three core assumptions about individuals and how their bodies relate to their behavior. First, it is assumed that individuals are biologically unique and different from all other people. Second, these differences in our individual makeup are believed to account for differences in our behavior. Third, criminal behavior is assumed to be a result of specific differences in physical constructions and characteristics of individuals that can be identified through observation or other scientific means.

EARLY BIOLOGICAL RESEARCH

Taking a decidedly positivist approach to the study of crime, early biological research focused on identifying distinct characteristics of criminals' faces, sizes, shapes and bumps on their heads, and overall body size and shape. The focus of these scientific investigations was to locate features that could be found among criminals but not among noncriminals, and then use these features to identify who is (or would be) a criminal. Physiognomy, made popular by Johan Caspar Lavater during the 1770s, was an early form of science that sought to identify distinct facial features of people who committed crimes. The ideas of physiognomy were well received by society and caused people to watch out for people with a wide range of facial features believed to be associated with criminal behavior. Included among the indicators of dangerousness were men without beards (and, interestingly, women *with* beards), weak chins, and “shifty” eyes. Although today these types of traits clearly are not seen as indications that someone is dangerous or a criminal, it is most important that such “scientific” conclusions were considered salient and prompted further development of the search for criminal characteristics in the faces and bodies of individuals. And, physiognomy encouraged people to protect themselves by watching out for others who showed signs of being dangerous.

A second, and similar, form of biological research closely followed on the heels of physiognomy and focused on the shape and contours of the head (assumed to be indications of the shape and development of the brain) and the relation of such to behavior. **Phrenology**, as this science was called, was popular in the 1790s and early 1800s. The basic idea of phrenology was that different parts of the brain controlled different types of social activities and thinking, and when particular areas of the brain were more developed, they would be larger and therefore create bumps or protrusions on the skull. Based on beliefs about what behaviors or characteristics were located in different areas of the brain, it therefore was believed possible to feel an individual's head and know what areas of his or her brain were more developed and, consequently, what his or her behavior was likely to be. As we will see later in this chapter, some of the core ideas of phrenology—that different areas of the brain

control different forms of behavior—have once again become important in biosocial research, albeit of a much more sophisticated form. Phrenology and physiognomy, however, were rather short-lived scientific endeavors.

While physiognomy and phrenology had limited influence on public policy and theory, they did set the stage for a more fully developed and influential set of ideas that came about in the latter half of the nineteenth century. Probably the best known of the early biological theorists was **Cesare Lombroso** and his ideas of **atavism**. Lombroso became widely known following the publication of his book *The Criminal Man* (1876), in which he argued that criminals are essentially less evolved forms of humankind. As he explained it, criminals tended to be “throwbacks” to a lower form of humans, more similar to our apelike ancestors than to noncriminals. Building on the growing influence of evolutionary science, Lombroso referred to such individuals as atavistic and argued that as less-evolved examples of humans, criminals were likely to display a number of physical characteristics that were common and pronounced among apes but not among “evolved” people. And, most important for our discussion here, Lombroso initially argued that atavistic people were criminals because of their less-evolved nature. Many people attribute the idea of a “born criminal” to Lombroso; however, this reference was not used until coined by Lombroso’s son-in-law and student Enrico Ferri. The visible features of atavistic people were referred to as “stigmata,” suggesting that they were clear signs of something being “wrong” or less developed in the person. Among some of the more common of the atavistic characteristics that Lombroso said suggested one’s lower status—and greater likelihood of criminality—were the following:

- An overly large head
- Facial features in which one side differs from the other
- Protruding lips
- Large jaw and/or cheekbones
- Very narrow forehead
- A large number of wrinkles (especially very noticeable ones) on the face
- Long arms, fingers, or toes
- Pouchlike cheeks
- Eyes or ears that stand out from the head
- Large nose

This is only a partial list of Lombroso’s characteristics. Lombroso and his followers identified several dozen characteristics, many of which they associated not only with “criminals” in general but also with particular types of criminals.

The scientific methods used to validate these characteristics initially suggested that there was some truth to these claims; numerous researchers were able to document at least some of the stigmata among known criminals. However, this should not be surprising. Consider the individuals that we all encounter in our daily lives. How many of the people we know could we identify as having one or a few of the characteristics listed here?

The fact that many of these characteristics are fairly common among people, and the fact that it was fairly easy to identify noncriminals possessing some of these characteristics, led Lombroso to eventually modify his position and add to his theory social and environmental influences. In this line of modified thinking—combining biology with social/environmental forces—Lombroso argued that criminals need

to be examined not as a universal group or class, but more productively on a case-by-case basis. In this way, he suggested that criminals existed in three basic forms: born criminals, insane criminals, and criminaloids. The first type of criminal, the born criminal, is his original idea of an atavistic individual: less developed physically, mentally, and socially than “normal” people. The insane criminal commits crime(s) because of a mental deficiency or due to alcohol and/or drugs. The third group, the criminaloids, is a general class of people who do not have special physical characteristics or mental disorders, but who, under certain social conditions (such as an emotional event or a “need” for some item), may engage in some type of crime. In this way Lombroso’s revised theory could pretty easily be applied to crime. Criminals were either born bad, mentally ill, intoxicated, or had some social force that pushed or pulled them into crime. With these as our options, it is fairly easy to explain just about any crime and criminal.

Enrico Ferri, one of Lombroso’s most notable protégés, built on Lombroso’s work and added in a sizable component of social, economic, and political factors as contributors to crime. Ferri also proposed a categorization of types of criminals, arguing that offenders could be identified as either born, insane, occasional, or criminal by passion. The born and insane criminals are essentially Lombroso’s ideas. Occasional criminals and criminals by passion were categories that refined Lombroso’s criminaloid category. Ferri, however, believed that to understand the causes of crime it was necessary to look at physical characteristics of both people and environments, anthropological issues (including an individual’s age, sex, and physical conditions), and social aspects (culture, religion, economic and political structures, etc.) of the environments where criminals lived. Ferri’s ideas fit well with the socialist thinking of the time in Italy, and he was a political activist who was asked to chair a committee charged with rewriting the criminal laws for Italy following the end of World War I. However, with the rise to power of the Fascist political party his efforts were put aside, and his ideas did not become codified into law.

A third influential early positivist to come from Italy was Raffaele Garofalo. He also believed, like Lombroso and Ferri, that scientific approaches were necessary to understand the cause of crime and focused his efforts on developing a “universal” definition of crime. Garofalo referred to this as “natural crime.” The idea of natural crime is infused with many psychological influences, showing a break in thinking from that originally put forth by Lombroso and modified by Ferri. In fact, Garofalo rejected any association with Lombroso or Ferri and at times was quite critical of their theorizing.

The thinking of Lombroso (and subsequent others) gave rise to an often-unrecognized development in the study of crime: the field of criminal anthropology (see Rafter, 1992). This line of thinking began in Europe and developed in the United States in the 1890s. In 1893, Arthur MacDonald introduced the term “criminology” in the United States. This was the first use of the term in the United States, and MacDonald was the first American to be identified as a *criminologist* (a specialist in the study of crime and its causes). The focus of this work and of the criminal anthropological work that was published in the United States through 1911 was on the underdeveloped nature (or “degeneracy”) of criminal offenders. As a specialized field, criminal anthropology never gained a stronghold in American intellectual thinking, and the field failed to soundly define itself. As a result, it faded from importance and influence (see Rafter, 1992). But, it should be noted that criminal

anthropology was largely based on the idea of observable physical characteristics of offenders. The passing of criminal anthropology was really the end of the period of influence for theories based on the idea that criminals were less developed or evolved than “normal” people. However, both core ideas—that criminals have distinct physical features and evolution—would resurface in subsequent biologically based theories.

The ideas originally put forth by Lombroso and added to and modified by Ferri and Garofalo were popular in Europe for several decades (and in the United States for a shorter time) and inspired numerous followers, as well as those who sought to test and/or refute Lombroso’s ideas. The end of Lombroso’s influence was most pointedly brought about by the work of Charles Goring in the second decade of the twentieth century. Goring (1913–1972) took Lombroso’s ideas and tested them using a comparison between imprisoned recidivist criminals in England and a group of noncriminals—university students. Although some have argued that Goring was too determined to prove Lombroso wrong (rather than seeking to do a truly objective assessment of Lombroso’s ideas), the results suggested that physical features were not associated with criminality. However, Goring did show that people who experienced frequent and long imprisonments were physically smaller (in both height and weight) than others. Beyond this, however, Goring argued that physical features were not associated with one group or the other, but there was actually a greater degree of variation within each group than between the groups. In simple terms, Goring’s results brought Lombroso’s ideas into question.

CONTEMPORARY BIOSOCIAL CRIMINOLOGY

The previous section traced the origins of biosocial criminology back to the very basic idea that criminals shared a distinct set of characteristics that was identifiably different from noncriminals. These early ideas received much criticism, leading in large part to their removal from the criminological lexicon for several decades. Nonetheless in recent years, biosocial research has begun to reemerge as a viable approach to studying criminal behavior. As was noted in the introductory portion of this chapter, today’s biosocial criminology focuses on at least four factors and the role that each plays in the etiology of criminal behavior. Those four factors are (1) biological factors, (2) genetic factors, (3) the brain, and (4) the environment. Each of these four influences is discussed in separate sections below.

Biological Factors

One of the more commonsense approaches that has been developed to explain crime is a focus on **hormones**—chemicals released into the blood stream by endocrine glands—and their effects on behavior. These views have looked both at men and women separately and suggest that the levels of sex hormones (testosterone and estrogen) in our bodies influence our emotions and levels of aggression. Research on men has focused on the idea that high levels of testosterone produce high levels of aggression. And some theories about women’s criminality have suggested that varying estrogen levels are behind criminal behavior.

The research on men’s testosterone levels begins with the idea that men commit most crime. And when we think about the men who do commit crime, especially violent crimes, we often think of a certain type of man. Very masculine, large, and

aggressive men are often described as the prototypical criminal. These men are often found to have higher levels of testosterone in their bodies, so it seems logical to assume that when a man has more testosterone, he would likely be predisposed to violence (i.e., crime). Decades of research have shown that boys in general are more aggressive than girls, even at very young ages. Numerous researchers (Booth & Osgood, 1993; Olweus, 1987; Rada, Laws, & Kellner, 1976; Rubin, 1987; Rushton, 1995) have shown that boys and men with higher testosterone levels are more likely to be involved in violence and crime compared to others, suggesting that testosterone levels influence criminal impulses.

This line of thinking is often offered as an explanation for the high levels of crime committed by athletes. Recent years have shown a higher-than-expected amount of crime (especially violent crime) committed by high school, college, and professional male athletes. At least once a month a news story appears about either an individual athlete or a group of athletes (such as the murder investigation surrounding the former New England Patriot tight end, Aaron Hernandez) who are alleged to be involved in assaults, domestic violence, robberies, or sexual assaults. Athletes typically have high levels of testosterone, which facilitate not only muscular development but also competitiveness and aggression. The testosterone–aggression link has received a great deal of attention as a result of a number of highly publicized incidents in recent years, whereby men (especially bodybuilders and other athletes) who take anabolic steroids have engaged in criminal and violent behavior (Pope & Katz, 1990). When men take anabolic steroids, they boost their production of testosterone and in turn facilitate their muscular development and competitiveness. One common consequence (some would say “side effect”) of taking steroids is that the individual often becomes very aggressive and sometimes violent (“roid rage”) (Beaver, Vaughn, DeLisi, & Wright, 2008). Researchers (Dabbs & Hargrove, 1997) have shown that testosterone levels are related to violent behavior among women as well as men.

Though there are many reasons to suspect testosterone levels impact our behavior, it is important to note that the evidence discussed above cannot definitively identify testosterone levels as a *cause* of aggressive/antisocial behavior. In fact, researchers have long noted that testosterone levels wax-and-wane over very short periods of time and, therefore, may reflect the body’s reaction to stimuli rather than as a cause of behavior (Mazur, 2009; Van Goozen, 2005). This poses a serious complication for a researcher wishing to interpret the correlation between testosterone levels and criminal behavior by suggesting that the relationship may reflect reverse causal direction or even a bidirectional influence (Horney, 1978; Katz & Chambliss, 1991). Thus, research on testosterone levels and aggression/violence/crime needs to be viewed with caution because a number of social influences may affect both testosterone levels and behavior. In fact, one review of the research in this area suggests that testosterone levels may be the result of hostility and not the cause of or contributor to aggression (Aromaki, Lindman, & Eriksson, 1999). Viewed in this way, we start to get into a proverbial “chicken and egg” question.

Another approach to looking at biological factors and their relation to crime draws a bit more on social influence and suggests that diet may play a role in determining behavior. One of the first studies to examine this came from the Italian researcher Liggio (1969), who studied the diets of both delinquent and nondelinquent adolescents and found a correlation between their diets and their

status as delinquents. Specifically, delinquents were found to eat more pasta, bread, and potatoes—foods that are high in starch, which when eaten is transformed into sugar. As a result, adolescents who ate more of these foods had shorter attention spans, reduced learning abilities, and a greater likelihood of being delinquent. Since Liggio's (1969) early study, a string of studies by Schoenthaler (1982, 1983a, 1983b) and experiments by others (e.g., Gesch, Hammond, Hampson, Eves, & Crowder, 2002) have provided support for the idea that nutrition impacts delinquent behavior among juveniles (see also Rocque, Buster, & Rowe, 2012).

It is not only the nutritional intake of the individual that matters; the nutrition of an expectant mother is influential on the behavior of her child, too. A recent series of studies by Joseph Hibblen, including one that tracked over 14,000 women and children, has shown that women who eat diets rich in fatty acids are likely to have children who later test higher on IQ tests, have better fine-motor skills, and are least likely to be involved in antisocial behaviors. Pregnant women who consume fewer fatty acids in their diets have children with a greater likelihood of mental illness, including depression and aggression. Some of the strongest evidence to support these claims comes from a series of randomized trials, referred to as the Nurse Home Visitation Program (NHVP) (see Olds, 2006). The NHVP was built on a few simple intervention techniques that proved to have large-scale and long-term impacts on child development. A major focus of the NHVP was to improve mothers' health during pregnancy (i.e., prenatal health). Nurses were sent to the homes of expecting mothers in order to educate them about the potential harms of substance abuse, about the benefits of healthy eating, and about other factors known to impact the child's health at birth, among other things. As summarized by Olds (2006), the effects of the NHVP are quite impressive. The mothers evinced improved prenatal health, they gave birth to children who were healthier, and those children were less likely to have been arrested by age 15 (Olds et al., 1998), among many other positive outcomes.

Not only is the diet of a pregnant woman important for her health and the health of her baby, but a growing body of evidence suggests how a new mother feeds her infant can affect the child's later behavior. Data from more than 102,000 parents and guardians of children who participated in the 2003 National Survey of Children's Health have shown that infants who were breastfed are significantly less likely to have a diagnosis of behavioral/conduct problems and also less likely to receive mental health care (Knutson, 2008). Not only did the fact of whether or not a baby was breastfed influence the child's subsequent behavior, but the longer that a mother breastfed, the lower the likelihood of behavioral problems. The link between breastfeeding and the child's later outcomes has, however, received some criticism and it is quite likely that the relationship is more complex than researchers currently understand (Gibson-Davis & Brooks-Gunn, 2006). Thus, caution should be exercised when interpreting the relationship between breastfeeding and child outcomes.

More recently other research (Liu, Raine, Venables, & Mednick, 2004) has shown that malnourished children are significantly more likely to be aggressive, hyperactive, and involved in delinquent behavior as they approach and reach adulthood. It has also been shown that nutritionally deprived pregnant women are 2.5 times as likely as other women to have male children with personality disorders (Neugebauer, Hoek, & Susser, 1999). Furthermore, individuals with vitamin and mineral deficiencies are more likely to display aggressive and violent behavior (Breakey, 1997; Grantham-McGregor & Ani, 2001; Werbach, 1992).

As you can see, biological influences on human behavior are myriad and work in complicated ways. Though there is still much research to be done, biosocial criminologists have little doubt that biological elements like hormone levels, nutrition, and prenatal factors play at least some role in the development of our personalities and, therefore, the likelihood that we will display criminal behavior.

Genetic Factors: Behavior Genetics

Theories that emphasize an individual's **genetic predisposition** as being important in the etiology of criminal behavior say that antisocial behavior is inherited and runs in families. The central premise in these explanations centers on the belief that genes play a role in the cause of crime, and criminality is passed along some lines of families just like other inherited traits such as physical appearance and medical diseases. While these theories do not claim to explain all criminals or all crime, they do argue that a significant amount of crime can be explained by looking to families where crime “runs in the family.” Indeed, a great deal of research has sought to determine whether “criminal families” result from socialization or from other factors inherited genetically (Farrington, 2011).

The impact of genetic factors on criminal behavior can be studied in two different ways: through behavior genetic analysis or through molecular genetic analysis. Behavior geneticists utilize biometric modeling to analyze the impact of genetic factors on behavioral outcomes relative to environmental factors (for more detail on behavior genetic research, see Plomin, Defries, Knopik, & Neiderhiser, 2013). Biometrical models rely on one key piece of information, which we can refer to as **behavior genetic theory**. Briefly, behavior genetic theory identifies the amount of genetic overlap between two individuals and hypothesizes that, to the extent that the trait under observation is under genetic influence, two people who share more genes will tend to be more similar to one another as compared to another set of people who share less genetic material. Behavior geneticists often rely on information gleaned from samples of twins because they represent a natural experiment that can be capitalized upon to answer questions asked by these researchers. Identical twins (i.e., monozygotic [MZ] twins) begin life with a relatively normal conception where a single sperm cell fertilizes a single egg cell. For reasons that remain unknown, however, identical twins “split” into two independent embryos that develop into two children. In contrast, fraternal twins (i.e., dizygotic [DZ] twins) begin life as two separate sperm cells and two separate egg cells that eventually develop into two children. In short, because identical twins start out as one zygote (hence, the monozygotic label), they share all of their DNA and, for all intents and purposes, can be considered genetic clones of one another. Fraternal twins, however, only share 50 percent of their DNA, just like any other set of normal siblings.

Because identical and fraternal twins share a womb but have different levels of genetic relatedness, scientists can use information gleaned from these types of twins to produce estimates about whether and how much genetic factors influence the development of a trait. It should be noted, though, that these same studies also identify the relative impact of the environment in creating variance in the trait being studied. Nonetheless, behavior geneticists who study twins are often interested in calculating the **heritability coefficient**. The heritability coefficient is a statistical estimate that provides information on how much genetic factors influence variance

in a particular trait. Heritability coefficients range between 0.00 (indicating no genetic influence) and 1.00 (indicating that variance in the trait being studied is completely accounted for by genetic factors).

Let us use height as an example of a trait that may be studied and used to calculate a heritability estimate. As we all know, humans vary widely in their height; some people are quite tall while others are shorter. Behavior geneticists can study a trait like height (i.e., one that varies from person to person) among identical and fraternal twins to get an idea of whether and how much genes matter for creating variance in that trait. In order to do so, the researcher must calculate a correlation coefficient. A correlation coefficient is a number that represents the direction and degree of relatedness between two variables. For example, if respondents who score high on one variable also tend to score high on another variable, those two variables will show a strong positive correlation. Correlation coefficients range from -1.00 (indicating a perfect negative correlation) to 1.00 (indicating a perfect positive correlation). A correlation coefficient of $.00$ indicates that there is no correlation between the two variables. The correlation coefficient, though often used to calculate the correspondence between two separate variables, can be used to estimate the degree to which certain groups of people are similar to one another on a trait (like height). The latter case is often referred to as an intraclass correlation. Intraclass correlations can be calculated separately for identical and fraternal twins and then they can be used to estimate the heritability coefficient by carrying out the calculation in Equation 3.1:

$$h^2 = 2(r_{MZ} - r_{DZ}) \quad \text{Equation 3.1}$$

In Equation 3.1, h^2 refers to the heritability coefficient, r_{MZ} refers to the intraclass correlation for identical (i.e., MZ) twins, and r_{DZ} refers to the intraclass correlation for fraternal (i.e., DZ) twins. To estimate the heritability coefficient, a researcher must first calculate an intraclass correlation for identical twins and then a separate intraclass correlation for fraternal twins. Next, the fraternal twin correlation coefficient is subtracted from the identical twin correlation coefficient. Finally, this difference is multiplied by 2. The resulting value provides an estimate of the proportion of variance in the outcome (e.g., height) that is explained by genetic differences among the respondents in the sample. In short, Equation 3.1 utilizes the level of trait similarity between identical twins and compares it to the level of trait similarity observed between fraternal twins. If identical twins are more similar than fraternal twins, the heritability coefficient will be larger. The larger the heritability coefficient, the more genetic influences are believed to influence variance in the trait being studied. Traits that are less influenced by genetic factors will show smaller heritability estimates and, therefore, the environment is identified as playing a larger role in trait variance.

The study of twins and criminality was especially popular in the United States, as well as Europe and Japan, starting in the 1930s. Some large-scale, longitudinal studies continue to be done today, although most are focused on issues other than criminality (e.g., health issues, psychological functioning, etc.). One of the largest studies of twins was done with more than 6,000 sets of twins born between 1881 and 1910 in Denmark (Christiansen, 1977). Identical twins showed a concordance rate three times as high as fraternal twins (36 vs. 12 percent). Similar findings were reported for a 1985 study in Ohio (Rowe, 1995). In this study, the findings went a bit

further and showed that not only criminality is highly correlated among twins but so too are emotions and actions such as anger and impulsiveness. And in a review of all of the available studies of twins done over nearly a half-century, Wilson and Herrnstein (1985) reported that across the studies identical twins showed a concordance rate (similar to a correlation coefficient) of 69 percent compared to only 33 percent for fraternal twins. These studies, taken as a whole, strongly support the importance of genetics in affecting behavior, especially criminal behavior.

Twin studies, however, are not a panacea. One of the most important criticisms of these studies is that when twins are raised in the same household, they are exposed to the same sets of social influences. And, as many people know, identical twins are more likely to be treated “identically” than fraternal twins (especially when the fraternal twins are different sexes), which raises the question of whether identical twins act more similarly because they are raised to be more similar to one another? We have all seen twins who are dressed alike, given very similar names, and treated more or less as copies of one another. The problem this raises for research on the possible genetic link to crime is that if identical twins are more likely to be treated the same than fraternal twins, it may not be possible to conclude that similarities in criminality are due to genetics. This criticism is referred to as the **equal environments assumption (EEA)**. The EEA states that the environmental experiences of identical twins are no more similar than those experienced by fraternal twins. If this assumption does not hold up, then heritability coefficients will be biased upward. Research has shown that identical twins are often treated more alike than are fraternal twins (Loehlin and Nichols, 1976; Scarr, 1968). Loehlin and Nichols (1976), for example, reported that identical twins were more likely to be dressed alike, sleep in the same room, and be treated similarly by their parents than fraternal twins, though recent evidence raises questions about measurement strategies (Goodman and Stevenson, 1991; Reiss, Neiderhiser, Hetherington, & Plomin, 2000:170). Thus, the question becomes whether the more similar treatment experienced by identical twins *has any lasting effect on personality development*. If so, heritability estimates may be artificially inflated.

One way to try to circumvent the problem of the EEA is to study children who are not raised by their biological parents. Studies of adopted children enable researchers to compare the influence of genetics with that of one’s social environment. The basic approach of such studies is to compare an adopted child’s criminality with that of their biological parents (who provided his or her genetic structure) and that of the adoptive parents (who provided his or her social environment). One of the first large-scale studies to do this was based on data collected on more than 4,000 Danish boys (Mednick, Gabrieli, & Hutchings, 1984). This study suggested that genetic factors do play a role in criminality. Indeed, adopted boys who had both biological and adoptive parents who were criminal were more likely (24.5 percent) than those boys who had only criminal adoptive parents (14.7 percent) and only criminal biological parents (20 percent) to be criminal themselves. It is important to keep in mind, though, that even at the level of having both sets of parents being criminally involved, only one in four of the boys were identified as criminal, revealing that neither genetic factors nor environmental factors can make criminal behavior a certainty. More on this point, one in eight (13.5 percent) of boys with neither a biological nor adoptive parent who was a criminal ended up as criminal himself.

There are now many studies that utilize behavior genetic methods (typically twin studies but often adoption studies too) to estimate the heritability coefficient for criminal, aggressive, and antisocial behavior. Barnes and Boutwell (2012), for example, utilized the twin-based design to estimate the heritability coefficient for adolescent delinquency and for adulthood criminality. Their estimates suggested the heritability coefficient to be .45 for adolescent delinquency, meaning that 45 percent of the variance in adolescent delinquency was attributable to genetic factors. A similar finding was reported for adulthood criminal behavior: Genetic factors accounted for 36 percent of the variance. Barnes and Boutwell's (2012) findings were quite similar to those observed in prior twin studies (Rodgers, Buster, & Rowe, 2001) and in several recent meta-analyses.

Indeed, there are at least six meta-analyses (a meta-analysis is a review paper that seeks to estimate an average effect size across the papers included in the review) that summarize the available literature on the heritability of antisocial behavior (Burt, 2009a, 2009b; Ferguson, 2010; Mason & Frick, 1994; Miles & Carey, 1997; Rhee & Waldman, 2002). Despite gathering information from a wide range of papers across more than two decades, the pattern of evidence gleaned from these meta-analyses is impressive. Specifically, each of the meta-analyses concluded that genetic factors play a role in the etiology of antisocial behavior. Though the estimates varied from study to study, we can combine the available information and arrive at a general range for the heritability estimate. Gathering the information from these six meta-analyses appears to suggest that the heritability coefficient for antisocial behavior is somewhere between .30 and .60 (Burt, 2009a; Ferguson, 2010) with an average somewhere around .50 (see generally, Moffitt, 2005). In other words, genetic factors account for roughly half of the variance in antisocial behavior.

Genetic Factors: Molecular Genetics

As noted in the preceding section, behavior genetic research has consistently shown antisocial behavior is a heritable trait. Indeed, the bulk of the evidence appears to suggest that antisocial behavior such as aggression and criminality carry heritability coefficients of approximately .50. This means that genetic factors account for a portion of the variance in criminal behavior, but a heritability coefficient does little to identify *which* genes play a role. This section will offer a quick introduction to human molecular genetics, with an eye toward the application of molecular genetic principles to the study of criminal behavior.

Perhaps the most straightforward way to identify a genetic influence on crime is to locate the genes that lead to a predisposition for crime. Note that we say "genes," plural, because it is well established that *there is no crime gene*. This is not the same as saying genes do not matter, however. On the contrary, *most* human outcomes result from the combination of many genes (e.g., hundreds of genes working in concert) interacting with environmental stimuli. Nonetheless, the push for genetic research into criminal behavior began in the 1960s following the discovery that a small percentage of men (about one-tenth of 1 percent or fewer, or one in every 1,000–2,000) have a genetic anomaly where they carry two Y chromosomes (see Amir & Berman, 1970; Fox, 1971). So, whereas women have an XX pair of sex-determining chromosomes and most men have an X and a Y chromosome, this very small proportion of men have an extra Y chromosome. Research of these men