Introduction

*Crime, History, Science*

The Van Nest murder case of 1846, while unique in its tragic details, illustrates many of the issues typically raised by biological explanations of crime. The killings occurred in an isolated farmhouse on the shore of one of New York’s Finger Lakes, on a March evening just as the seven members of the Van Nest family and their hired man retired to bed. Someone slipped into the house and butchered the farmer, his pregnant wife, his elderly mother-in-law, and his two-year-old son, whose small body was eviscerated by the knife, leaving several feet of intestines dangling from the wound. Within days, the authorities arrested William Freeman, a man in his early twenties of African and Native American descent. Freeman confessed to the massacre, although he was never able to clearly explain why he had singled out the Van Nests. At times, he suggested that he had been revenging himself for an earlier wrongful imprisonment (a case in which none of the Van Nests had been involved) and at others that he “had no reason at all.”

While William Freeman was still in his teens, he had been sentenced to five years in prison for horse theft—a crime for which he was evidently framed by the actual thief, a far more sophisticated man. In any case, Freeman maintained his innocence, and as he served his time in New York State’s formidable Auburn Prison, he became increasingly bitter about the conviction, especially as he was cruelly flogged for rule infractions. But he showed no signs of mental peculiarity until after an altercation with one of the prison’s keepers. When ordered to strip for a flogging, Freeman instead attacked the keeper, who struck back, hitting the prisoner so hard on the head with a wooden plank that the board split. From then on, Freeman suffered from deafness and an inability to think clearly. He deteriorated mentally to the point of becoming (one eyewitness reported) “a being of very low, degraded intellect, hardly
above a brute.”

On release, Freeman sought the arrest of the people who had had him locked up; when he got nowhere with that approach, he started planning another sort of revenge. His determination to right his wrongs may have come to include the Van Nests because when he sought work at their homestead shortly before the massacre, the farmer had declined to hire him.

Freeman’s arrest triggered a ferocious debate that became typical of cases in which an appalling crime is attributed to biological abnormality. In the majority were the local citizens who initially tried to lynch Freeman and then demanded that he be legally hanged. These included members of a first jury, which determined that Freeman was “sufficiently
sane in mind and memory, to distinguish between right and wrong,” and of a second jury, which found him guilty of the crime. “Many of the voices that screamed for retribution,” writes Andrew Arpey in his book on the Freeman case, “did not hesitate to cite the killer’s race as a source of his depravity.” The other side included a local clergyman, who, observing that the community treated its black population as outcasts, asked, “Is not society in some degree, accountable for this sad catastrophe?” Freeman’s brother-in-law agreed, claiming that white men’s mistreatment turned his people into “brute beasts.” A former New York State governor, William H. Seward, and his law partners volunteered to defend Freeman, arguing before the two juries that the prisoner was insane (“unable to deduce the simplest conclusion from the plainest premises”) and thus not responsible. Seward managed to get a stay of execution and, eventually, an order for a new trial, for which he enlisted the assistance of a number of physicians and psychiatrists, including Dr. Amariah Brigham, superintendent of the local lunatic asylum and one of the country’s leading authorities on insanity. But Freeman, having declined mentally to the point of idiocy, died before the new trial began. In the autopsy report, Brigham wrote that he had seldom seen such extensive brain disease.

In Freeman’s case, biological abnormality was offered not as an account for criminal behavior in general but as an explanation for Freeman’s particular offenses. Shortly after the Van Nest murders, a local newspaper editor, speculating on the rumor that a relative of Freeman’s had been executed for murder six years earlier, reasoned that there “must be some bad blood running in the veins of the Freeman tribe,” a conclusion that seemed to him especially compelling in view of the killer’s Indian (and therefore presumably violence-prone) ancestry. Unlike later biological theorists, the editor did not try to claim that crime in general is caused by a biological factor such as “bad blood.” However, the case in its broad contours, resembled many others that preceded and followed it in the history of biological theories of crime: a crime or sometimes series of crimes that seemed monstrous and inexplicable; a mentally disordered defendant; medical and legal specialists who were confident that mental abnormality had caused the criminal behavior; and a philosophical tension between free will and determinism. Moreover, the Freeman case became a focal point for issues of criminal re-
sponsibility and punishment that were coming to a head in the broader community, and in this respect, too, it was typical of notorious cases in which a novel biological defense is attempted for the first time.

Among those issues, most influential was an intensifying debate over proposals to eliminate capital punishment. Abolitionists held that Christians should practice forgiveness, while retentionists fought back with biblical exhortations for retribution. Opinions were further inflamed by a growing debate over the insanity defense: Should insanity be defined in terms of severe mental illness or the more stringent requirement that the defendant had at the time of the offense been totally incapable of distinguishing right from wrong? (If the latter standard were used, Seward grumbled, the insanity defense could never be used, for it would require a “complete obliteration” of memory, attention, and reason of which “the human mind is not capable.”) Should courts allow a defense based on the new diagnostic category of moral insanity, according to which a person can be ethically insane while normal in other mental functions? And how should insanity be determined? The latter was a particularly hot issue for those who suspected that Freeman was feigning madness.

Related was a debate over court leniency and its effects. In the view of some members of the Auburn community, an acquittal by reason of insanity in a case immediately preceding the Van Nest murders probably encouraged Freeman to think he could get away with murder. Another such acquittal would foster more violence. Here the opposition countered that it was legal harshness that had sent the innocent young man to prison for horse theft in the first place and that had led, ultimately, to the Van Nest killings. Further exacerbating feelings about the Freeman case was a growing debate over the causes of human action. Is criminal behavior determined by social and biological factors beyond the individual’s control, as the popular science of phrenology was then teaching, or do humans freely choose their courses of action? The Freeman trial, then, played out in the context of heated arguments over major social issues such as capital punishment, the insanity defense, the appropriate degree of severity in criminal punishments, and the causes of criminal behavior. Politically, legally, and racially, the case raised contentious issues, pitting medicine against law, religion against science.

There have been periods in which biological theories aroused strong resistance, as Brigham’s and Seward’s explanations did in mid-19th-
century New York, but at other times biological theories have enjoyed easy acceptance. Just twenty-five years after William Freeman’s trials, for example, Americans were far more receptive to biological explanations of crime, and in the early 20th century, the feeblemindedness or weak intelligence explanation of crime became almost instantly popular, a kind of fad. But today, efforts to explain criminality in terms of what the sociologist Nikolas Rose terms the “biology of culpability” once again arouse strong reactions.¹⁰

Currently, liberals tend to view biological theories as efforts to shift responsibility away from social factors that cause crime and onto criminal individuals. Conservatives embrace biological theories more enthusias-
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Critically but grow uneasy when one speaks (as I do throughout this book) of their history, a perspective suggesting that scientific truths are contingent upon social factors. Sociologists look askance at the identification of biological “risk” factors and other indications that social influences do not fully explain crime. On the other hand, biocriminologists—meaning those who produce biological theories of crime—tend to dismiss sociological and historical analyses as a distraction from the important work of scientific research. The political fault lines have shifted since the mid-19th century, when the liberal faction, including Seward and Brigham, proposed the biological explanation; but the polarization itself recurs, and today’s issues remain much the same as they were when William Freeman sat, bewildered, in the prisoner’s dock.

These issues resurfaced in the case of Andrea Kennedy Yates, the Houston, Texas, woman who in 2001 systematically drowned her five children in a bathtub. Yates had been a bright, athletic student, and she had worked as a nurse until 1993, when she married Rusty Yates, became pregnant six times in seven years (one pregnancy ended in a miscarriage), and adopted Rusty’s evangelical religion. Rusty insisted that she homeschool the children and take full care of them herself (part of the time the family lived in a former bus), circumstances that placed heavy burdens on Andrea and isolated her from social support. One of her few close friends was a religious extremist who taught that “the role of women is derived from the sin of Eve.” Andrea deteriorated mentally after each pregnancy, attempting suicide, hallucinating, mutilating herself, denying the children food. When her father (for whom she had also been caring) died in 2001, she became catatonic. A doctor prescribed antipsychotic drugs but warned the couple that they should have no more children, given that childbirth triggered Andrea’s most severe mental problems. They ignored his advice, however, and after Andrea gave birth to their last child, she went into postpartum psychosis (a condition far more severe than postpartum depression). She confessed immediately after drowning the children, explaining that she was not a good mother, that the children were not developing correctly, and that she was possessed by Satan.

In her first trial, Andrea Yates was found guilty of capital murder and sentenced to life in prison. The jury rejected the defense argument that postpartum psychosis made it impossible for her to tell right from
Figure 1.3. Andrea Yates in court. Andrea Yates walks into the courtroom during the closing arguments in her retrial for capital murder. Yates, charged in the 2001 drownings of her five children in a bathtub, pleaded not guilty by reason of insanity—postpartum psychosis—in her first trial but was convicted. In 2006, however, the earlier decision was overturned, and she was declared insane at the time of the crime. (Associated Press/Brett Coomer, Pool)
wrong, reasoning that she would not have phoned the police immediately after the killings, or attributed them to Satan, had she not recognized the evil of her action. Rusty divorced her and remarried. But the case reopened in 2005 when it was discovered that a prosecution witness had given false testimony. On retrial, a jury found Yates not guilty by reason of insanity, deciding that due to postpartum psychosis she had in fact not known right from wrong when she killed the children. As a result, she is now incarcerated in a mental hospital rather than a prison.

Many of the same factors that had galvanized the public in the Freeman case did so again during Andrea Yates’s trials: the atrocious and inexplicable nature of the crimes, the multiple victims and the fact that they included an infant, the mentally disordered defendant, and the relative novelty of the defense. Vituperative Internet postings testified to the way this case, too, tapped into the hot-button issues of the day. The columnist Mona Charen felt that Rusty should also have been put on trial: “The word negligent doesn’t even begin to describe his malfeasance. How is it possible that a man who knows his wife’s sanity has been compromised by childbirth can nonetheless impregnate her five more times . . . ? How could he leave her alone when he knew she was, at the very least, suicidal?” Others were outraged by what they saw as the court’s leniency: “If she does not merit an IV in the death chamber, no one does.” Once again, factors in the social context help explain such inflamed anger—in this case, evangelicalism; debates over women’s proper roles; the still-rankling memory of John Hinkley’s successful insanity defense after he tried to kill President Ronald Reagan; and the unfamiliarity of the postpartum psychosis defense.

While there is currently a good deal of resistance to biological explanations of crime, that opposition has started to crumble. Such hostility is often strongest when new biological theories are first proposed, shaking up tried-and-true ways of thinking about crime. But when a new theory resonates with other culturally dominant factors, as current genetic, evolutionary, and neurological explanations do, opponents often come around. We seem to be on the threshold of a major shift that could lead to various genetic and other biological “solutions” to criminal behavior. Whether or not the shift leads to a brave-new-world scenario in which, say, babies’ genes are inspected for criminogenic risk factors
depends on how we decide to shape our future. And that, in turn, depends on how well informed we are about the past and present biological theories of crime.

Why Bother with Biocriminology?

Biological theories raise profound and inescapable issues about the nature of justice. If William Freeman had been hanged, would an innocent man have been executed? Had he been sent to Brigham’s Utica State Lunatic Asylum, would justice have been achieved, or would the Van Nest victims have gone unavenged? Which of the two Andrea Yates juries got it right—the one that found her guilty or the one that acquitted her? If some crimes are indeed biological in origin, then it is impossible to achieve justice or to improve crime prevention without grasping the nature of such causes. And yet few ideas are more dangerous than that of innate criminality, which has long been associated with eugenics, the science that promises to eradicate social problems by cleansing the gene pool. In the past, eugenic solutions have led to sterilizations, life imprisonment to prevent reproduction, and (in the Nazi instance) wholesale executions of mere suspects in minor crimes.

No one today advocates executing people with allegedly criminogenic genes, but less draconian forms of eugenics continue to find advocates. The former U.S. education secretary William Bennett has remarked, “If you wanted to reduce crime, you could . . . abort every black baby in this country and your crime rate would go down.” In the 1990s, a grassroots group called Children Requiring a Caring Kommunity (CRACK) started offering drug-addicted and alcoholic women $200 to go on long-term birth control or be sterilized. Due to technological advances, genetic theories of crime now raise the specter that fetuses might be inspected for genetic risk factors, with abortion required for those that do not pass muster. We already have genetically modified crops; maybe gene policing and genetically modified criminals are not far behind. Indeed, the possibility of genetically modified humans has already been raised by movies such as *Gattaca* (1997). But criminologists are not debating or even recognizing the ethical implications of eugenic measures looming on the horizon or already in place, perhaps because those measures seem less dramatic today than in the Nazi era, enabling
us to contemplate without alarm the quiet genetic death of individuals such as those CRACK mothers. Then, too, it is easier to contemplate (or ignore) eugenics measures against criminals than against more “innocent” groups.

Today’s biocriminologies call for critical attention quite apart from the eugenics issues they raise. Recent work in biochemistry, genetics, and neuroscience is revitalizing biocriminology and understandings of the workings of offenders’ brains. The decoding of the genome, the intensifying study of gene-environment interactions, improvements in the understanding of human brain development and functioning—these and other aspects of biological research are affecting criminological theory. For instance, recent investigations indicate that gene-linked traits such as impulsivity may increase people’s likelihood of engaging in criminal behavior. Although no behavioral geneticist expects to discover anything so simple as a crime gene, it is nonetheless true that twin studies and other evidence point to the influence of heredity on offending.  

In addition, interest is growing in the contested but provocative field of evolutionary psychology, according to which at least some criminal behavior may have an evolutionary basis—may, in other words, be genetically programmed into offenders’ brains. And yet the ways in which biological sciences are applied to criminality are sometimes suspect, as in the William Bennett example and also in the case of criminologists who, with little background in the hard sciences, rush to appropriate the new findings. We need to be able to evaluate biological claims about criminal behavior, just as the juries that condemned William Freeman and Andrea Yates needed to be able to intelligently weigh the defendants’ biological arguments.

Furthermore, the history of biological theories can help us understand the nature of criminology itself—its scope, development, and means of generating knowledge. The scientific study of crime actually began with biological theories, in the late 18th century. They were the first type of scientific explanation for criminal behavior, and they dominated for a full century before sociological explanations began to flower. The history of biological theories of crime is in many ways the history of criminology itself. And yet most criminology textbooks and even histories of criminology show little awareness of the evolution of biological theories. Even more disconcerting, contemporary biocriminologists themselves
seem unaware of their own intellectual background and traditions.\textsuperscript{20} The Criminal Brain offers a genealogy of biocriminological knowledge that goes back to the first efforts to analyze crime scientifically.

The Making of Criminological Knowledge

Until the 1960s, histories of science conceived of science as a progressive march of knowledge in which, if everyone stayed in line, collected facts, and followed the procedural rules, research would yield ever more complex and valuable truths. This teleological approach was built on the principles of positivism, a philosophical position that emerged in the 18th century in reaction to then-dominant theological and metaphysical ways of knowing and that viewed facts as neutral, objective truths. “Science in the positivist view,” writes the historian Robert N. Proctor, “is a rational and cumulative enterprise; science grows through accretion of the new and replacement of the old.”\textsuperscript{21}

The assumptions of scientific positivism held firm until 1962, when Thomas Kuhn published The Structure of Scientific Revolutions, arguing that even the hard sciences define their problems and procedures in terms of a dominant paradigm or core set of assumptions about the nature of science. Kuhn’s argument threw positivist assumptions into doubt. Together with the work of the French philosopher Michel Foucault,\textsuperscript{22} it opened up the possibility of both social histories and sociological studies of scientific knowledge, the approaches I use here. These approaches ask basic questions about the making of scientific knowledge: How is this kind of information generated, validated, disseminated, reconfirmed, and eventually superseded? How (in this particular case) is criminology—the scientific study of crime and criminals—produced? How is it shaped by social factors? How does it decide what counts as a fact, and how does it evaluate the credibility of claims about the nature of crime and criminals?

The Criminal Brain is not the first history of biological theories of crime, but it is the most complete and up-to-date. In 1938, Arthur Fink published Causes of Crime: Biological Theories in the United States, 1800–1915, a book rich in detail but, as its subtitle indicates, limited in coverage. Moreover, today its approaches to both history and science are severely dated. Fifty years later, Henry Werlinder published Psychopathy: A His-
tory of the Concepts, a Swedish doctoral dissertation that covers more ground and links mid-20th-century ideas about psychopaths to earlier ideas about born criminals, degenerates, and the morally insane. But Werlinder’s book, too, is dated today, and because it was published in Sweden, it is difficult to access. Stephen Jay Gould’s Mismeasure of Man (1981) took on craniometrists, criminal anthropologists, and intelligence testers, exposing their scientific pratfalls; but Gould, an evolutionary biologist and paleontologist, was a specialist in neither criminology nor historiography. Since then, some excellent general and specific histories of criminology have appeared. Only a few of these deal with biological theories, however, and none attempts comprehensive coverage.

One barrier to social histories of criminological knowledge is the fact that the term criminology did not enter common usage until the late 19th century, and criminology as an academic discipline did not take shape until even later. How are we to talk about criminology before “criminology”—that is, before the study of crime became a specialized field of study with that name? It seems clear that we do not want to include 17th- and 18th-century pronouncements on crime by preachers and pamphleteers—material that in no sense constituted research on crime and that, in any case, as Paul Rock points out, could not “evolve or reproduce itself as a specific discourse.” (Rock calls such material “proto-criminology.”) But it seems equally clear that we would want to include the work of early 19th-century phrenologists and others who did attempt to apply scientific methods to the study of crime, even though they did not think of their work as “criminology.” (Historians of psychology, facing a similar problem, have solved it by covering early scientific psychological research even when it was not formally labeled “psychology”—a solution parallel to the one I adopt here.) In this book, I use “criminology” to refer to all efforts to study crime scientifically, irrespective of whether the authors thought of their work as “criminology.” Changes in the meaning of “criminology” as the field evolved, together with shifts in the meanings of “science” itself, also form part of my story.

The mere raising of questions about the production of scientific knowledge can make people uncomfortable, for it seems to call into question the activity that sits near the apex of our cultural values: science itself. If the content of biological theories of crime can be affected by the
social climate in which they are produced, by competition between scientists, or by government funding policies, does that mean that there are no ultimate scientific truths? Sociologists and philosophers of science respond variously to this question, with some taking the positivist position, according to which facts are neutral, objective, accessible truths, and others taking the constructionist position, according to which facts are historically contingent, shaped by the social circumstances in which they are produced. My own position is constructionist, meaning that we must look to social context to understand how scientific facts are made. Constructionists and positivists argue over the degree to which scientific knowledge is relative—shaped by social context—but the details of this debate are unimportant here. The social history and sociology of criminological knowledge do not force us to confront the really tough constructionist issues raised, for example, by scientific studies of gravity or astrophysics. Just a moment’s reflection shows that it is impossible to reduce criminological explanations to, say, hardwiring of the brain, since the very definition of criminality is so clearly a social phenomenon, determined by cultural definitions of right and wrong, police department arrest policies, the composition of juries, the social backgrounds of criminologists, and the politics of science itself. My interest lies in identifying the social forces behind the sciences of the criminal brain. While scientists must aim at objectivity in their procedures, setting themselves the goal of impersonal investigation, they cannot pretend to have discovered pure, undistorted, eternal truths about the world—especially when the object of study is the social phenomenon of crime. To some extent, criminological facts are always constructed.

The Goals and Nature of This Book

I have written this book neither to promote nor to bash biological theories of crime but to recover their past and discover their fundamental nature. In my view, figuring out how to evaluate new biological theories is the most pressing issue in contemporary criminology. The hard sciences are already revolutionizing the ways in which we investigate the causes of crime and think about preventive measures, and in the years ahead, neurological and genetic research will transform criminological thinking. Now—before the train departs—is the time to decide on the
direction in which we want biocriminological research to travel. The stakes are high, including not only the organization of social control but also the social organization of science itself—the relative power of sociology versus genetics neuroscience and the positions we take in ongoing (but, as I suggest, badly framed) debates over whether criminality is a product of nurture or nature, environmental factors, or the biochemistry of criminal brains. I hope to help sociologically inclined readers learn about biological theories of crime, many of which are much more compatible with sociological perspectives than most people think. I also hope to see widespread debate over the goals we want biosocial criminology to serve in the future.

The early chapters of *The Criminal Brain* are organized around the history of efforts to answer criminological questions scientifically. Instead of attempting to impose today’s criteria for “scientific” on the past, I investigate how earlier researchers established and implemented criteria for scientificness. New biological theories of crime are usually precipitated by developments in the broader culture—by changes in science or new notions of causation that begin to make earlier scientific ideas seem dated. For example, the work of the evolutionist Charles Darwin—especially his *Origin of Species* (1859)—made earlier phrenological explanations, based on the theory of a compartmentalized brain, look obsolete. Not long after Darwin’s book on the evolution of plants and animals appeared, criminologists started explaining criminal behavior in evolutionist terms. Another source of change lies in professional jockeying: multiple discourses converge around criminology (anthropological, biochemical, evolutionist, genetic, managerial, medical, neurophysiological, racist, psychological, psychiatric, religious), all vying for jurisdiction. Social control is a valuable area in which to claim expertise, for it gives those who make their claims successfully the authority to identify deviants and manage them; thus, over time, a number of professions have cast a colonizing eye in the direction of biocriminology.

An additional source of change in biocriminology lies in shifting understandings of the nature of dangerousness and defilement. Fear of crime flows from wellsprings much deeper than worries about stolen silverware or sudden assault; ideas about crime are also colored by broad-ranging and inchoate fears of moral and physical contamination. For instance, in the late 18th century—the so-called Age of Reason, with its
emphasis on logic and rationality—biological theories became a means of explaining irrational and immoderate behavior. During Hitler’s Third Reich—a regime obsessed with fears of the degradation of Aryan racial purity—biological explanations of crime became a means of identifying those who should be eliminated by sterilization, death through labor, or the guillotine. Thus, the story told here is one of shifting social anxieties. I am particularly interested in relationships between the biological sciences and the contexts in which they develop. I am also interested in the implications of biological theories for criminal punishment. Just as biological theories do not develop in a vacuum, so too do they have repercussions beyond themselves, affecting public policy and human lives.

Part 1, on biological theories in the 19th century, begins by showing how, around 1800, biological explanations originated almost simultaneously in three countries: the United States, France, and England. These explanations, cast in the form of speculation about the condition of *moral insanity* (today’s *psychopathy*), marked the start of not only biocriminology but criminology itself, for they constituted the first efforts to account for crime scientifically, in terms of brain defects. Chapter 3 covers phrenology, the science that envisioned rehabilitating criminals by changing the shapes of their brains and skulls. Phrenology was succeeded by criminal anthropology (chapter 4), a theory rooted in Darwinism and based on the riveting figure of the born criminal, scarred by the stigmata of criminality and driven to plunder and kill by his primitive brain. The final chapter in part 1, on late 19th-century evolutionary theories, attempts to go beyond the usual exclusive focus on Italian developments by investigating the impact of Darwin and other evolutionists on not only Cesare Lombroso but also Henry Maudsley (England), Richard Dugdale (United States), and Richard von Krafft-Ebing (Austria). It concludes with a discussion of the work of the English statistician Francis Galton, the founder of eugenics and a man whose work on crime formed a bridge between evolutionary theories and later genetic explanations of crime.

Part 2, on biological theories in the 20th century, opens with a chapter on the weak intelligence explanation of crime that dominated criminology from about 1900 to 1920. Allying itself with the eugenics movement, criminology in this era aimed at identifying and eliminating the “feebleminded,” whose bad genes seemed to carry criminality through
the generations. Eugenic criminology was more than an effort at crime control; it was also an antimodernist science, a nostalgic effort to cope with the challenges of modern life by using science to return to the social structure and values of a simpler, purer, crime-free past. Chapter 7, on constitutional or bodytype theories, concentrates on the midcentury work of Ernest A. Hooton and William Sheldon. Their work contrasted strongly in its eugenicism and antimodernism with the body-type research of their thoroughly modernist contemporaries Sheldon and Eleanor Glueck. Criminology’s darkest hour arrived with the ascent to power of the Nazis in Germany, the criminological consequences of which are related in chapter 8. Part 2 concludes with a chapter on biocriminology in the late 20th century; it surveys then-current research in the areas of acquired biological abnormalities, learning deficits, evolutionary theory, neuroscience, and genetics. Never before had there been anything like this explosion of interest, this diversity of perspective and approach, or this intensity of research into possible biological influences on criminal behavior. And yet sociologically trained criminologists looked askance at these new attempts to explain crime biologically.

Part 3 is concerned with the present and future of biocriminology. Chapter 10 traces the emergence of a new biosocial model, one that does not pit biological and sociological approaches against each other but rather explores ways to merge the two. While the new biosocial criminology presents serious problems, both scientifically and in its policy implications, it also has considerable potential for reaching better conclusions about the causes of crime and for encouraging environmental improvements aimed at crime reduction. Chapter 11 argues that biosocial criminology has the potential to rewrite criminological theory by combining “hard”- and social-science approaches to the problem of crime.

For many years, scholars on the Left have viewed genetic and other biological explanations of crime as a way of pinning blame for social problems on bad individuals and hence avoiding social solutions—better schools, antiracism measures, antipoverty legislation—that might change the social structure. At the same time, scholars on the Right have used biological theories of crime to shift the attention away from what to them seem like ineffective social programs and, instead, explain the behavior of lawbreaking individuals. The traditional Left and Right po-
sitions flourished in a period in which “genetic” was almost synonymous with biological determinism. But today, new understandings of the workings of genes make a “third way” possible (and the older positions obsolete). Genes alone seldom determine personality traits or conditions. While a few diseases have been traced to single genes, most genes work in interaction with other genes and with the environment in which they express themselves.

This new understanding of the complexity, flexibility, and indeterminacy of most genetic development opens the way to generating a new position on the very old (and tired) nature-nurture debate. We no longer have to pit nature against nurture; now we can picture the two as working together to achieve gene expression and to produce the individual. We can now also argue that genetics itself suggests that ameliorating social environments—improving schools, taking steps to alleviate racism, acting against poverty—can be effective anticrime measures. Thus, in the final chapter of this book, I envision a new or third way in which we can harness genetic and other biological explanations to programs of social improvement that would lead to crime reduction. I am not interested in finding a compromise between the former positions of the Left and Right but rather in moving beyond those old disputes in a way that is consonant both with the view of genetic development as indeterminate and with the aim of environmental measures to reduce crime. I want to enlist modern genetics and other biological sciences in progressive social change.