

# Biological Factors and Criminal Behavior

This chapter focuses directly on the role that biological characteristics play in the origins of criminal behavior, independent of any association with physical appearance or mental deficiency. Some of these biological characteristics are genetic and inherited—i.e., they are the result of the genes individuals receive from their parents at the time of conception. Others result from genetic mutations that occur at the time of conception or develop while the fetus is in the uterus. These biological characteristics are genetic but not inherited. Still others may develop as the result of the person's environment, such as from injury or inadequate diet. These biological characteristics are neither genetic nor inherited.<sup>1</sup>

Early biological theories in criminology took the view that structure determines function—that is, individuals behave differently because of the fundamental fact that they are somehow structurally different. These theories tended to focus strongly on inherited characteristics. Modern biological theories in criminology, in contrast, examine the entire range of biological characteristics, including those that result from genetic defects (and thus are not inherited) and those that are environmentally induced. In addition, modern theories do not suggest that biological characteristics directly “cause” crime. Instead, they argue that certain biological conditions increase the likelihood that an individual will engage in maladaptive behavior patterns (e.g., violent or antisocial behavior), and that those behavior patterns can include actions that are legally defined as criminal.<sup>2</sup> Finally, modern theories increasingly focus on the

interaction between biological characteristics and the social environment, rather than looking solely at the effects of biology itself. These are called *biosocial* theories of crime, and most biological criminologists recognize that this is where the field must go in the future.

This chapter is organized in the following way. First, research and theory about strictly hereditary factors will be presented. Next we discuss research on factors that may be hereditary and genetic but which may change during the life course in response to environmental conditions. Finally, the chapter will examine biological factors that are most likely caused by the environment.

## FAMILY STUDIES

Explanations of human behavior in terms of heredity go far back in antiquity and are based on the common sense observation that children tend to resemble their parents in appearance, mannerisms, and disposition. Scientific theories of heredity originated around 1850 and were more extensively worked out over the next fifty or seventy-five years.<sup>3</sup> In connection with the development of the theory of heredity, new statistical methods were devised by Francis Galton and his students (notably Karl Pearson) to measure degrees of resemblance or correlation. Charles Goring<sup>4</sup> used these new statistical techniques in the analysis of criminality, arriving at the conclusion that crime is inherited in much the same way as are ordinary physical traits and features.

Goring assumed that the seriousness of criminality could be measured by the frequency and length of imprisonments.<sup>5</sup> He therefore attempted to find out what physical, mental, and moral factors were correlated with that measure. Goring found that those with frequent and lengthy imprisonments were physically smaller than other people and were mentally inferior.<sup>6</sup> Although there could be an environmental component to these factors, Goring believed that they both were primarily inherited characteristics.

Goring also found that there were high correlations between the frequency and length of imprisonment of one parent and that of the other,

3. A review of the development of theories of heredity can be found in most textbooks on genetics. See, for example, Eldon J. Gardner and D. Peter Snustad, *Principles of Genetics*, 7th ed., John Wiley, New York, 1984.

4. Charles Goring, *The English Convict*, His Majesty's Stationery Office, London, 1913; reprinted by Patterson Smith, Montclair, N.J., 1972. For discussions of Goring's work, see Thorsten Sellin, “Charles Buckman Goring,” *Encyclopedia of the Social Sciences*, Macmillan, New York, 1931, vol. 6, p. 703; Edwin D. Driver, “Charles Buckman Goring,” in Hermann Mannheim, ed., *Pioneers in Criminology*, Patterson Smith, Montclair, N.J., 1972, pp. 429–42; and Driver, Introductory Essay in Goring, *The English Convict*, reprint edition, pp. v–xx.

5. Goring treated crime as a strictly legal category, and thus preferred the term *convict to criminal*. See Driver, “Charles Buckman Goring,” pp. 431–33, and Introductory Essay, pp. ix–x.

1. Saleem A. Shah and Loren H. Roth, “Biological and Psychophysiological Factors in Criminality,” in Daniel Glaser, ed., *Handbook of Criminology*, Rand McNally, Chicago, 1974, pp. 103–6.

2. Diana H. Fishbein, “Biological Perspectives in Criminology,” *Criminology* 28(1): 27–72 (1990).

between the imprisonment of parents and that of their children, and between the imprisonment of brothers. Goring argued that these findings could not be explained by the effect of social and environmental conditions, since he found little or no relationship between the frequency and length of imprisonment and such factors as poverty, nationality, education, birth order, and broken homes. He also argued that these findings could not be explained by the effect of example among people who were closely associated with each other. For example, the imprisonment of one spouse could not be explained by the example of the other spouse, since most of them were already engaged in crime at the time they got married. Goring therefore concluded that criminality (i.e., frequent or lengthy imprisonment) was associated with inherited, but not with environmental, characteristics and recommended that to reduce crime, people with those inherited characteristics not be allowed to reproduce.<sup>7</sup>

There are serious problems with each of Goring's arguments.<sup>8</sup> The most important problem concerns the fact that Goring attempted to establish the effect of heredity by controlling for and eliminating the effect of environment. To accomplish that, it is necessary to have accurate measurements of all the environmental factors involved, which he obviously did not have. Goring dealt with only a few environmental factors, quite imperfectly, and these were roughly measured. Though these particular ones may have shown low correlation with his measure of criminality, other environmental factors might still be very important. By his method of reasoning, the failure to measure environmental influence adequately has the result of overemphasizing the significance of the influence of heredity.

Later studies of the families of criminals have been faced with a similar problem. Ellis reviewed these studies and found remarkably little evidence for the widespread belief that crime tends to "run in the family."<sup>9</sup> The evidence that does exist suggests that it is less rampant than is commonly believed.

In spite of these shortcomings, the significance of Goring's work should not be underestimated. Whereas others had argued that crime was caused either by environment or by heredity, Goring was the first to postulate that it might be the result of the interaction between the

6. The fact that no other physical characteristics were associated with criminality was taken as a refutation of Lombroso's theory. See the discussion of Lombroso and Goring in Chapter 4.

7. Driver, "Charles Buckman Goring," pp. 439-40.

8. See Edwin H. Sutherland and Donald R. Cressey, *Criminology*, 10th ed., Lippincott, Philadelphia, 1978, p. 120.

9. Lee Ellis, "Genetics and Criminal Behavior," *Criminology* 20(1): 43-66 (May 1982).

two, a view that is held by many criminologists today. Although his findings emphasized hereditary factors, Goring did not reject the influence of the environment as a cause of crime. He maintained only that empirical evidence was required to support this view, and that such evidence was not found in his study.<sup>10</sup> His major contribution, however, was his use of statistical methods in a comparative study of criminals and noncriminals. Karl Pearson correctly pointed out that anyone who wished to refute Goring's arguments would have to adopt Goring's methods to do so.<sup>11</sup> Pearson concluded: "Strange as it may seem, the contradiction of his conclusions would be a small matter compared with the fundamental fact that Goring's methods have ploughed deeply the ground, and traced firmly the lines on which the scientific criminologist of the future will be compelled to work."

#### TWIN AND ADOPTION STUDIES

Studies attempting to address the hereditary bases of criminality by examining traditional families have largely been abandoned, since it is essentially impossible to disentangle the effects of nature (such as genes) from those of nurture (environment). This prompted researchers to study twins and adoptees. Instead of attempting to eliminate environmental factors, one may control the hereditary factor. The study of the relative criminality of twins suggests this possibility, since in genetics there is a clear-cut distinction between identical and fraternal twins. Identical twins (monozygotic) are the product of a single fertilized egg and have identical heredity; fraternal twins (dizygotic) are the product of two eggs simultaneously fertilized by two sperms, and therefore have the same relation as ordinary siblings.<sup>12</sup> Differences in the behavior of identical twins therefore may not be attributed to differences in heredity, and presumably similarities of behavior could be attributed to their identical inheritance. Obviously this need not be true, since the similarities could be due to similarities in training. But any general tendency to greater similarity of behavior when heredity is identical sets up a strong presumption that the similarity is due to the influence of heredity.

A number of investigators have used this approach in trying to determine the role of heredity in criminality. One of the earlier and more

10. Driver, *Introductory Essay*, p. xiii.

11. Karl Pearson, *Introduction to the Abridged Edition of 1919*, in Goring, *op. cit.*, p. xix.

12. Most humans share 99 percent of their genes with other humans. Dizygotic twins share 50 percent of the remaining 1 percent, whereas monozygotic twins share all of the remaining 1 percent. See Adrian Raine, *The Psychopathology of Crime*, Academic Press, Inc., San Diego, 1993, p. 54.

dramatic of these studies was that of the German physiologist Johannes Lange, published in 1929.<sup>13</sup> He found that, in a group of thirteen pairs of adult male identical twins, when one twin had a record of imprisonment, the other similarly had been imprisoned in 77 percent of the cases; whereas in a comparable group of seventeen pairs of fraternal twins, when one twin had been imprisoned, the other had a prison record in only 12 percent of the cases. In a matched control group of 214 pairs of ordinary brothers of nearest age, when one brother had a prison record, the other brother of the matched pair had a prison record in only 8 percent of the cases. Lange's conclusion is seen in the dramatic title he gave his book, which translates as "crime as destiny."

In similar studies a variety of results have been reported but all tend to show greater similarity of criminal behavior among identical than among fraternal twins.<sup>14</sup> Each of these studies begins with criminals who are known to have twins and determines whether the twins are also criminals. Such a procedure is open to subtle bias, however, since the investigator may attribute criminality in borderline cases only when it is convenient to do so.<sup>15</sup> To avoid the possibility of bias Christiansen used the official *Twins Register* of Denmark to study all twins born in the Danish Islands between 1881 and 1910 when both twins lived at least until the age of 15.<sup>16</sup> They totaled about 6,000 pairs. He then used the official *Penal Register* to determine whether either twin, or both, had been found criminal or delinquent. He found sixty-seven cases in which at least one of a pair of male identical twins was registered as a criminal, and in twenty-four of these cases (35.8 percent) the other twin was also registered. For male fraternal twins he found this to be true in only fourteen out of 114 cases (12.3 percent). For females he found "criminal concordance" in three out of fourteen cases of identical twins (21.4 percent) and in one out of twenty-three cases of fraternal twins (4.3 percent). Christiansen later demonstrated that concordance was higher for more serious criminality than for less serious.<sup>17</sup>

13. Johannes Lange, *Verbrechen als schicksal: Studien an Kriminellen Zwillingen*, Georg Thieme, Leipzig, 1929. English translation by Charlotte Haldane, as *Crime and Destiny*, Charles Boni, New York, 1930.

14. See a summary of such studies in Juan B. Cortes, *Delinquency and Crime*, Seminar Press, New York, 1972, pp. 31–35; David Rosenthal, *Genetic Theory and Abnormal Behavior*, McGraw-Hill, New York, 1970, pp. 225–36; and Karl O. Christiansen, "A Review of Studies of Criminality among Twins," in Sarnoff Mednick and Karl O. Christiansen, eds., *Biosocial Bases of Criminal Behavior*, Gardner Press, New York, 1977, pp. 45–88.

15. Cf. Sutherland and Cressey, op. cit., p. 116.

16. K. O. Christiansen, "Threshold of Tolerance in Various Population Groups Illustrated by Results from the Danish Criminologic Twin Study," in A. V. S. de Reuck and R. Porter, eds., *The Mentally Abnormal Offender*, Little, Brown, Boston, 1968.

17. K. O. Christiansen, "Seriousness of Criminality and Concordance among Danish Twins," in Roger Hood, ed., *Crime, Criminology, and Public Policy*, The Free Press, New York, 1974.

The principal difficulty with this method is that the greater similarity of behavior noted in the case of the identical twins may be due to the greater similarity of training and environmental experience just as well as to their identical hereditary makeup.<sup>18</sup> There is no certain way of separating environment and heredity as contributing factors in this situation. Referring to his own study, Christiansen pointed out:<sup>19</sup>

Nothing in these results, however, can be interpreted as indicating that a higher twin coefficient in [identical] than in [fraternal] twins, or in pairs with more serious than in pairs with less serious forms of criminality, is due to what Lange called the quite preponderant part played by heredity in the causation of crime.

One way to control for the possibility that identical twins share a more common environment than fraternal twins would be to study twins who were reared apart. Grove and his colleagues looked at thirty-two sets of identical twins who were separated shortly after birth,<sup>20</sup> and Christiansen looked at eight pairs of identical twins raised apart.<sup>21</sup> Although these studies were based on a small sample of twins, they both found evidence that antisocial behavior can be inherited. Finally, Walters performed a meta-analysis of fourteen twin studies published from 1930 to 1984, attempting to assess whether these studies on the whole find evidence of a gene-crime relationship.<sup>22</sup> He took into account such factors as the sample sizes of the studies, the quality of the research designs, the gender and nationality of the twins, and the year of the studies. Walters concluded that on the average these studies show evidence of a hereditary basis of criminality.

Another method for determining the effects of heredity on criminality is to study the records of adoptees. One of the first such studies was

18. As Raine (op. cit.) points out (p. 58), there are also problems in the accuracy of labeling twins as monozygotic or dizygotic. The most accurate method is DNA fingerprinting, which is not usually employed. Other methods have varying degrees of reliability.

19. Ibid., p. 77. For a similar conclusion, see also Steffen Odd Dalgaard and Einar Kringlen, "A Norwegian Twin Study of Criminality," *British Journal of Criminology* 16: 213–32 (1976). They found that when twins were grouped according to their mutual closeness, all differences between identical and fraternal twins disappeared. They concluded that "the significance of hereditary factors in registered crime is non-existent." For a criticism of this study, see R. A. Forde, "Twin Studies, Inheritance and Criminality," *British Journal of Criminology* 18(1): 71–74 (Jan. 1978). See also Shah and Roth, op. cit., pp. 133–34.

20. W. M. Grove, E. D. Eckert, L. Heston, T. J. Bouchard, N. Segal, and D. T. Lyken, "Heritability of Substance Abuse and Antisocial Behavior: A Study of Monozygotic Twins Reared Apart," *Biological Psychiatry* 27: 1293–1304 (1990).

21. Christiansen, "A Review of Criminality Among Twins," in S.A. Mednick and K.O. Christiansen, eds., *Biosocial Bases of Criminal Behavior*, Gardner Press, New York, 1977, pp. 89–108.

22. Glenn D. Walters, "A Meta-Analysis of the Gene-Crime Relationship," *Criminology* 30(4): 595–613 (1992).

carried out by Schulsinger<sup>23</sup> in a study of psychopathy, which he defined as a consistent pattern of impulse-ridden or acting-out behavior lasting beyond the age of 19 years. He selected fifty-seven psychopathic adoptees and matched them with fifty-seven nonpsychopathic adoptees on the basis of age, sex, age at transfer to adoptive homes, and social class of adoptive parents. He then searched hospital records and found that 14.4 percent of the biological relatives of the psychopathic adoptees had suffered from disorders related to psychopathy, such as alcoholism, drug abuse, or criminality, compared to only 6.7 percent of the biological relatives of the nonpsychopathic adoptees.

A much broader study was done by Hutchings and Mednick, who examined the records of all nonfamily male adoptions in Copenhagen in which the adoptee had been born between 1927 and 1941.<sup>24</sup> First, the authors grouped the boys according to whether they had criminal records, and then looked at the criminal records of the biological fathers. A total of 31.1 percent of the boys who had no criminal record had biological fathers with criminal records, but 37.7 percent of the boys who had committed only minor offenses and 48.8 percent of the boys who themselves had criminal records had biological fathers with criminal records.<sup>25</sup> These figures indicate adopted boys are more likely to commit crime when their biological fathers have a criminal record.

Next, the researchers grouped the biological and adoptive fathers according to whether they had criminal records, and then looked at the criminal records of the boys. They found an interactive effect between the criminality of the biological and the adoptive fathers.<sup>26</sup> When only one was criminal, the effect was not as significant as when both were criminal. In addition, the effect of the criminality of the adoptive father was not as great as the effect of criminality of the biological father.

Hutchings and Mednick then selected all the criminal adoptees whose fathers (both biological and adoptive) had been born after 1889 to maximize the reliability of police records. The 143 adoptees who met this criterion were matched with 143 noncriminal adoptees on the basis of age and occupational status of adoptive fathers. The criminal adoptees were found to have a higher percentage of criminal adoptive fathers (23 percent vs. 9.8 percent), of criminal biological fathers (49 percent vs. 28 percent), and of criminal biological mothers (18 percent vs. 7 percent).<sup>27</sup>

23. Fini Schulsinger, "Psychopathy: Heredity and Environment," *International Journal of Mental Health* 1: 190-206 (1972); reprinted in Mednick and Christiansen, op. cit., pp. 109-25.

24. Barry Hutchings and Sarnoff A. Mednick, "Criminality in Adoptees and Their Adoptive and Biological Parents: A Pilot Study," in Mednick and Christiansen, op. cit., pp. 127-41.

25. *Ibid.*, p. 131, Table 4.

26. Hutchings and Mednick, op. cit., p. 132, Table 6. See also *ibid.*, p. 137, Table 8.

27. Hutchings and Mednick, op. cit., p. 134.

This sample of Danish adoptees was expanded to females and the entire country of Denmark, and re-analyzed by Mednick and his colleagues.<sup>28</sup> These researchers found that the adoptee's probability of being convicted of a crime was influenced by the number of court convictions of their biological parents, but not their adoptive parents. This was true for property offenses but not for violent offenses. Later re-analyses of the same data found that the socioeconomic status of adoptive and biological parents, personality disorders of the biological parents, and the number of placements before final adoption all influenced adoptee convictions.<sup>29</sup> Again, these relationships held mostly for property offenses but not for violent offenses.

Somewhat similar results were found in another large study of adoptees born in Stockholm between 1930 and 1949.<sup>30</sup> Initial analyses indicated that the adoptees were no more apt to be criminals than the general population,<sup>31</sup> but later analysis found some evidence of the heritability of petty crime and alcohol abuse, especially among males.<sup>32</sup>

Walters performed a meta-analysis of thirteen adoption studies published between 1972 and 1989, finding significant evidence for heritability of crime and antisocial behavior.<sup>33</sup> However, two limitations of adoption studies might be mentioned. First, in several of the studies, adoptive parents engaged in criminal behavior at much lower rates than

28. Mednick, W. H. Gabrielli, and Hutchings, "Genetic Influences in Criminal Convictions: Evidence from an Adoption Cohort," *Science* 224: 891-94 (1984). For a review of all adoption analyses see Gregory Carey, "Genetics and Violence," in Albert Reiss, Klaus Miczek, and Jeffrey Roth, eds., *Understanding and Preventing Violence*, vol. 2, National Academy Press, Washington, D.C., 1994, pp. 34-39.

29. K. T. VanDusen, Mednick, Gabrielli, and Hutchings, "Social Class and Crime in an Adoption Cohort," *Journal of Criminal Law and Criminology* 74: 249-69 (1983); L. A. Baker, "Estimating Genetic Correlations among Discordant Phenotypes: An Analysis of Criminal Convictions and Psychiatric Hospital Diagnoses in Danish Adoptees," *Behavior Genetics* 16: 127-42 (1986); Baker, W. Mack, T. E. Moffitt, and Mednick, "Etiology of Sex Differences in Criminal Convictions in a Danish Adoption Cohort," *Behavioral Genetics* 19: 355-70 (1989); Moffitt, "Parental Mental Disorder and Offspring Criminal Behavior: An Adoption Study," *Psychiatry: Interpersonal and Biological Processes* 50: 346-60 (1987).

30. M. Bohman, "Some Genetic Aspects of Alcoholism and Criminality: A Population of Adoptees," *Archives of General Psychiatry* 35: 269-76 (1978); Bohman, C. R. Cloninger, S. Sigvardsson, and A. L. vonKnorring, "Predisposition to Petty Criminality in Swedish Adoptees. I. Genetic and Environmental Heterogeneity," *Archives of General Psychiatry* 39: 1233-41 (1982).

31. Carey, op. cit., p. 36.

32. Bohman et al., op. cit.; Cloninger, Sigvardsson, Bohman, and vonKnorring, "Predisposition to Petty Criminality in Swedish Adoptees. II. Cross-fostering Analysis of Gene-Environment Interaction," *Archives of General Psychiatry* 39: 1242-47 (1982); Sigvardsson, Cloninger, Bohman, and vonKnorring, "Predisposition to Petty Criminality in Swedish Adoptees. III. Sex Differences and Validation of the Male Typology," *Archives of General Psychiatry* 39: 1248-53 (1982).

33. Walters, op. cit., pp. 604-5. The overall effect in the adoption studies was somewhat stronger than that in the twin studies, but this is probably because the adoption studies had larger samples than the twin studies, making it easier to achieve statistical significance.

the normal population.<sup>34</sup> This makes it difficult to generalize about the effects of family environment, and to examine the interaction between environment and genetics in its potential joint influence on behavior. Second, several studies found hereditary effects for petty and property offenses, but not for more serious and violent offenses. But this result may reflect the fact that petty and property offenders are more likely to be frequent offenders. Thus, hereditary effects would be much easier to find with those offenders than with serious and violent offenders, who commit crimes very infrequently.

### NEUROTRANSMITTERS

Neurotransmitters are chemicals that allow for the transmission of electrical impulses within the brain and are the basis for the brain's processing of information. As such, they underlie all types of behavior, including antisocial behavior.<sup>35</sup> About thirty studies have examined the linkage between neurotransmitters and antisocial behavior. These studies at least tentatively suggest that the levels of three different neurotransmitters may be associated with antisocial behavior: serotonin, dopamine, and norepinephrine. Most of these studies have been published since the late 1980s, so that this area is on the cutting edge of research on biology and crime.<sup>36</sup>

Scerbo and Raine performed a meta-analysis of studies on the relationship between neurotransmitter levels and antisocial behavior.<sup>37</sup> They reported that twenty-eight studies, on average, found that antisocial people have significantly lower levels of serotonin than normal people. Studies of norepinephrine and dopamine did not show any overall differences in these transmitter levels across the groups of subjects,<sup>38</sup> but when only studies using a direct measure of neurotransmitter functioning were considered, an effect of norepinephrine on antisocial behavior was also found.<sup>39</sup> The authors concluded that it is important to control for alcohol abuse when examining the effects of neurotransmitters, since alcoholism itself is associated with differences in neurotransmitter levels.<sup>40</sup>

34. Carey, *op. cit.*, p. 43.

35. P. A. Brennan, S. A. Mednick, and J. Volavka, "Biomedical Factors in Crime," in James Q. Wilson and Joan Petersilia, eds., *Crime*, ICS Press, San Francisco, 1995, p. 82. For an introduction to neurotransmitters see also Raine, *op. cit.*, pp. 83–84.

36. Raine, *op. cit.*, p. 82.

37. A. Scerbo and A. Raine, "Neurotransmitters and Antisocial Behavior: A Meta-analysis," reported in Raine, *op. cit.*, p. 87.

38. *Ibid.*

39. *Ibid.*, p. 91.

40. *Ibid.*, pp. 92, 98–99.

Investigators also have isolated DNA from blood samples to identify specific genetic features that may be involved in the link between neurotransmitter levels and antisocial behavior.<sup>41</sup> Genetic defects in two neurotransmitters, dopamine and serotonin, have been identified in violent individuals and certain drug abusers. These defects seem to play a role in certain types of excessive and compulsive behaviors that are associated with violence.<sup>42</sup> Researchers speculate that the neurotransmitters affect the sensitivity of the brain to both abusable drugs and to other sources of arousal such as aggression. The use of drugs and/or aggression may then provide relief from or stimulation to brain systems that are essentially "out of balance." In other words, these individuals may attain a "neurological high" from both drug use and from antisocial behavior.<sup>43</sup>

Although neurotransmitter levels initially are determined by genetics, it is possible to manipulate them with drugs, such as lithium carbonate (for serotonin), reserpine (for norepinephrine) and various antipsychotic drugs (for dopamine). The research on whether these manipulations can actually reduce antisocial behavior is mixed, but includes some encouraging results.<sup>44</sup> Neurotransmitter levels can also be affected by changes in the environment. For example, changes in diet can significantly increase the levels of serotonin, dopamine, and norepinephrine, which could possibly reduce the tendency to engage in violent or antisocial behavior. In addition, living in very stressful conditions (such as in inner-city areas) can dramatically lower serotonin levels, which could increase the tendency to engage in these behaviors.<sup>45</sup>

### HORMONES

In addition to neurotransmitter levels, much research has been generated relating to the effect of hormone levels on human behavior, including aggressive or criminal behavior. Interest in hormones dates back to the mid-1800s, when biochemists were first able to isolate and identify some of the physiological and psychological effects of the secretions

41. Diana Fishbein, "Selected Studies on the Biology of Antisocial Behavior," forthcoming in John Conklin, *Criminology*.

42. *Ibid.*

43. *Ibid.*

44. For a review see D. A. Brizer, "Psychopharmacology and the Management of Violent Patients," *Psychiatric Clinics of North America* 11: 551–68 (1988).

45. As mentioned earlier, some researchers have posited that property crimes have a genetic basis, whereas violent crimes may be affected by environmental conditions. Whether this holds for neurotransmitter effects is uncertain. Raine urges that future research on neurotransmitter differences clearly separate out property offenders from violent offenders, so that stronger inferences can be made. See Raine, *ibid.*, p. 95.

of the endocrine glands (hormones).<sup>46</sup> Most recent attention paid to hormone levels and aggressive or criminal behavior relates to either testosterone or female premenstrual cycles.

The role of testosterone in the aggressiveness of many animal species has been well documented,<sup>47</sup> but a question remains as to whether testosterone plays a significant role in human aggressive and violent behavior. Raine reviews some of this literature, finding mixed results.<sup>48</sup> Effects of testosterone on aggression are slight when aggression is measured using personality questionnaires, but much stronger when behavioral measures of aggression are employed.<sup>49</sup>

A major problem with this research is that there are several possible causal paths between testosterone and aggressive behavior. In general, researchers want to know whether high testosterone levels cause increased aggression. But it is possible that the causal path is in the opposite direction: certain types of aggressive behavior might cause an increase in testosterone production.<sup>50</sup> Thus, aggressive individuals might have higher testosterone levels, but those higher testosterone levels do not cause the aggressive behavior. A third possibility is that some individuals might generally have normal levels of testosterone, but they may respond to certain types of situations with very large increases in testosterone. These people may have an increased tendency to engage in aggressive behavior due to their high testosterone levels, even though their testosterone levels measured as normal most of the time. A fourth possibility is that exposure of a fetus to abnormal levels of testosterone during pregnancy may result in more sensitivity to it later on. Thus, the actual level of testosterone in the person may be normal, but people who had been "sensitized" to it during pregnancy may respond more aggressively when testosterone increases, such as during puberty.<sup>51</sup> Fi-

46. For a review of some of the early studies of the impact of hormonal imbalances on criminal behavior, see the 3rd edition of this book.

47. For an excellent overview, see Paul Brain, "Hormonal Aspects of Aggression and Violence," in Reiss, Miczek, and Roth, eds., *Understanding and Preventing Violence*, vol. 2, op. cit., pp. 173-244.

48. Adrian Raine, *The Psychopathy of Crime*, op. cit. For another review of recent research on testosterone and aggression, see David Benton, "Hormones and Human Aggression," in Kaj Björkqvist and Pirkko Niemelä, eds., *Of Mice and Women: Aspects of Female Aggression*, Academic Press, San Diego, 1992, pp. 37-48.

49. Ibid., p. 206. In addition, effects of testosterone may be higher when saliva is used to measure testosterone, rather than blood samples. However, the study that found this had measured testosterone in females rather than in males.

50. Brain, op. cit., p. 221. See also Albert J. Reiss and Jeffrey Roth eds., *Understanding and Preventing Violence*, National Academy Press, Washington, D.C., 1993, p. 119.

51. See Diana Fishbein, "Selected Studies on the Biology of Antisocial Behavior," op. cit.

nally, social variables may intervene in the relationship between testosterone and antisocial behavior. A recent study by Booth and Osgood examines the relationships between testosterone, social integration, prior involvement in juvenile delinquency, and adult deviance.<sup>52</sup> They found that although there is a strong initial association between testosterone and adult deviance, the magnitude of this effect is reduced substantially when controlling for social integration. In other words, testosterone may reduce social integration, and reduced social integration is associated with higher deviance levels. In addition, testosterone is associated with juvenile delinquency, and when controlling for delinquency, the relationship between testosterone and adult deviance diminishes further. Research such as this highlights the need for more biosocial theories of criminal behavior and deviance.

Although most research on hormones and crime has focused on males, some work has examined the role hormones play in female crime, especially in connection with the menstrual cycle. Biological changes after ovulation have been linked to irritability and aggression.<sup>53</sup> Research is mixed on the strength of this linkage, but Fishbein's recent review of the literature suggests that at least a small percentage of women are susceptible to cyclical hormone changes, resulting in a patterned increase in hostility.<sup>54</sup> This patterned increase is associated with fluctuations in female hormones and a rise in testosterone, to which some women appear to be quite sensitive.

## THE CENTRAL NERVOUS SYSTEM

The central nervous system contains neurons and systems that exist within the brain and spinal cord. Of particular importance in research on aggression and violence is the outer portion of the brain, the cerebral cortex. This consists of two hemispheres divided into four lobes: frontal, temporal, parietal, and occipital. Most attention paid by investigators studying antisocial behavior is to the frontal and temporal lobes, since these lobes are involved with goal-directed behavior, impulses, and emotions. Disturbances or irregularities within the frontal lobe generally influence neu-

52. Alan Booth and D. Wayne Osgood, "The Influence of Testosterone on Deviance in Adulthood: Assessing and Explaining the Relationship," *Criminology* 31(1): 93-117 (1993).

53. See R. F. Haskett, "Premenstrual Dysphoric Disorder: Evaluation, Pathophysiology and Treatment," *Progress in Neuro-Psychopharmacology and Biological Psychiatry* 11: 129-35 (1987); and E. P. Trunell and C. W. Turner, "A Comparison of the Psychological and Hormonal Factors in Women with and Without Premenstrual Syndrome," *Journal of Abnormal Psychology* 97: 429-36 (1988).

54. Diana Fishbein, "The Psychobiology of Female Aggression," *Criminal Justice and Behavior* 19: 99-126 (1992).

ropsychological performance, while the temporal lobe in general appears to involve behaviors more directly emotional in expression.

In the past, research on the relationship between the central nervous system and aggressive behavior has been done using a variety of relatively indirect measures.<sup>55</sup> More recently, however, more direct measures of the central nervous system have become available: brain imaging techniques. These techniques include computerized tomography (CT), magnetic resonance imaging (MRI), positron emission tomography (PET), and single photon emission tomography (SPECT). These new brain imaging procedures have been used to detect structural and functional abnormalities in both the frontal and temporal lobes.<sup>56</sup> After a comprehensive review of brain imaging studies, Raine concludes that<sup>57</sup>:

An integration of findings from these studies gives rise to the hypothesis that frontal dysfunction may characterize violent offenders while temporal lobe dysfunction may characterize sexual offending; offenders with conjoint violent and sexual behavior are hypothesized to be characterized by both frontal and temporal lobe dysfunction.

Another common way of measuring brain abnormalities is through the use of the electroencephalograph (EEG). The EEG measures electrical brain activity, and can detect abnormalities in brain wave patterns. Hundreds of studies have examined EEG activity in various types of criminals.<sup>58</sup> Most reviewers agree that repeat violent offenders are characterized by EEG abnormalities, but the relationship between psychopathy and EEG indicators is more uncertain.<sup>59</sup> Raine points out that most of this research is too broad in focus, and while it may point to some general relationship between dysfunctional behavior and EEG abnormalities, we need to know much more specific information about the processes by which brain wave activity may affect behavior.<sup>60</sup>

55. These neuropsychological measures have been used extensively in the past to study CNS abnormalities, and the findings from these studies have formed the basis for the newer, more direct research using brain imaging. For a review of neuropsychological indicators of brain dysfunction and abnormal behavior, see Raine, *op. cit.*, pp. 103–27.

56. Raine, *op. cit.*, p. 130.

57. *Ibid.*, p. 155.

58. *Ibid.*, p. 175.

59. *Ibid.*, pp. 175–76.

60. *Ibid.*, pp. 177–80. EEG abnormalities and EP (evoked potential) responses may be indicative of several possible problems, including CNS instability, underarousal, or subcortical epilepsy. Lumping all EEG abnormalities together is a mistake, since they may refer to different problems that may have different effects on behavior.

## THE AUTONOMIC NERVOUS SYSTEM

In addition to the central nervous system, there is a relatively separate part of the nervous system, called the autonomic nervous system (ANS), which controls many of the body's involuntary functions such as blood pressure, heart and intestinal activity, and hormone levels. The autonomic nervous system is, in turn, modulated by structures within the limbic system in the brain (such as the hypothalamus) that control motivation, moods, hunger, thirst, reproductive and sexual behaviors, anger and aggression, memories, and other feeling states.

The ANS is especially active in a "fight or flight" situation, when it prepares the body for maximum efficiency by increasing the heart rate, rerouting the blood from the stomach to the muscles, dilating the pupils, increasing the respiratory rate, and stimulating the sweat glands. Lie detectors measure these functions and use them to determine whether the subject is telling the truth. The theory is that, as children, most people have been conditioned to anticipate punishment when they tell a lie. The anticipation of punishment produces the involuntary fight or flight response, which results in a number of measurable changes in heart, pulse, and breathing rate, and, because sweat itself conducts electricity, in the electric conductivity of the skin.

The anxiety reaction in anticipation of punishment has been described by some researchers as the primary socializing agent for children.<sup>61</sup> Children are conditioned by their parents to anticipate punishment in certain types of situations, and the anxiety they then feel (usually called conscience or guilt) often leads them to avoid those situations. Because the anxiety reaction in anticipation of punishment is essentially an autonomic nervous system function related to the fight or flight response, the level of socialization in children may depend at least in part on the functioning of that system. Specifically, if the fight or flight response is activated slowly or at low levels in situations in which punishment is anticipated, or if it fails to deactivate quickly when the situation changes, then the child will be difficult to socialize.

The first to examine this question was Eysenck, who based his discussion on Jung's concepts of introversion and extroversion as the major attitudes or orientations of the personality.<sup>62</sup> The introvert is oriented toward the inner, subjective world, and tends to be more quiet, pessimistic, retiring, serious, cautious, reliable, and controlled. The ex-

61. H. J. Eysenck, *Crime and Personality*, Houghton Mifflin, Boston, 1964, pp. 100–119; Gordon Trassler, "Criminal Behavior," in H. J. Eysenck, ed., *Handbook of Abnormal Psychology*, Putnam, London, 1972; Samoff A. Mednick, "A Biosocial Theory of the Learning of Law-Abiding Behavior," in Mednick and Christiansen, *op. cit.*, pp. 1–8.

62. Eysenck, *Crime and Personality*, pp. 34–36.



trovert is oriented toward the external, objective world, and is more sociable, impulsive, carefree, optimistic, and aggressive. Extroverts crave excitement, like to take chances, tend to be undependable, and lose their temper easily. Eysenck notes that the diagnosis of this personality dimension is highly reliable, with self-ratings, ratings by others, and ratings by objective tests all highly consistent.

Eysenck also utilized Pavlov's concepts of excitation and inhibition.<sup>63</sup> Excitation means simply that the stimulus that was presented to the organism has successfully passed through the autonomic nervous system to be registered in the cortex. Obviously this concept is central to the explanation of all learning and behavior. But to explain the patterns of conditioning, Pavlov also found it necessary to postulate that something like brain fatigue occurs after a period of excitation. Conditioning was found to slow down after a period of time, but would resume at a higher level after a period of rest. Pavlov called this phenomenon inhibition.

Eysenck hypothesized that these two sets of concepts were connected, and that introverts were characterized by higher levels of excitation and/or lower levels of inhibition, whereas extroverts were characterized by the opposite. Because extroverts have lower levels of stimulation coming into the cortex, they experience "stimulus hunger," whereas introverts, whose brains receive stronger stimulation for longer periods of time, will be oriented toward "stimulus avoidance."<sup>64</sup> The possibility of punishment is therefore much more threatening to introverts—they experience high anxiety reactions in these situations and seek to avoid them. Extroverts, on the other hand, experience less anxiety (also termed arousal) both because they are less sensitive to pain and because they more readily seek out prohibited activities in their search for stimulation. Eysenck further argued that psychopaths are extreme extroverts and that they fail to develop adequate consciences because of the way their autonomic nervous systems function.<sup>65</sup>

A number of more recent studies on autonomic nervous system functioning have involved measuring the same peripheral functions that are monitored by a lie detector. For example, Mednick<sup>66</sup> maintains that the rate of skin conductance response (SCR) recovery—the time between when the skin conducts electrical current at its peak amplitude and when that conductance returns to normal levels—can be taken to measure the general rate of recovery in the autonomic nervous system. If so, it would

63. Ibid., pp. 68–87.

64. Ibid., p. 99.

65. Ibid., pp. 39–43.

66. Mednick, "A Biosocial Theory," op. cit., pp. 2–4.

measure the rate at which the anxiety reaction in anticipation of potential punishment is diminished following removal from the threatening situation. Mednick argues that the rate at which the anxiety dissipates is crucial, since fear reduction is the most powerful reinforcer known to psychology. When fear is dissipated quickly, the individual receives a large reinforcement for avoiding the situation of potential punishment, and conditioning is much more likely to occur.

Raine reviews studies on conditioning using skin conductance responses and concludes that "these data provide good support for Eysenck's conditioning theory of crime. . ."<sup>67</sup> However, he points out that in the past decade and a half, there has been little research on this topic, so that most of our data come from the late 1970s and early 1980s. He offers some ways in which skin conductance research on conditioning and criminal behavior may be improved.<sup>68</sup> Raine also reviewed studies (ranging from 1979 to 1990) that related skin conductance measures to general antisocial behavior, without necessarily using a conditioning framework.<sup>69</sup> Overall the findings are mixed, but it seems possible that the ANS does play some role in antisocial behavior.

#### ENVIRONMENTALLY INDUCED BIOLOGICAL COMPONENTS OF BEHAVIOR

To this point we have discussed research on hereditary factors influencing antisocial and criminal behavior (such as the family, twins, and adoption studies), and research addressing factors that may be hereditary but may also change over time due to environmental influences (such as hormones, neurotransmitter levels, and skin conductance responses to stimuli). Now we examine research on several biological factors that may influence criminal behavior but which clearly are environmental, in the sense that they have nothing to do with the person's hereditary or genetic makeup. These are drug and alcohol abuse, diet and toxins, head injury, and pregnancy or birth complications.

There are many possible types of relationships between *drug and alcohol abuse* and violent behavior: biological, psychosocial, social, cultural, and economic. For example, violence and crime may result from an addict's need to get money to buy drugs, or from "wars" between rival drug gangs over the rights to sell drugs in a certain area. Because the range of literature is so broad in these areas, we do not summarize

67. Raine, op. cit., p. 229.

68. Ibid.

69. Ibid., pp. 161–64.



it here.<sup>70</sup> Instead, we present a few brief comments on the strictly biological links between violence and alcohol or drug use.

Alcohol is known to temporarily increase aggressive behavior in lower doses (when people get nasty), and temporarily decrease aggressive behavior in higher doses (when people pass out).<sup>71</sup> Many people believe that the increased aggressiveness at lower doses is because of alcohol's "dis-inhibiting" effect—alcohol tends to release people from their inhibitions—but there is little evidence for this. An alternative explanation is that alcohol increases the production of the endocrine system, especially testosterone, but again, there is little evidence for this. Other possible neurobiological explanations involve serotonin functioning and EEG abnormalities, but experiments have yet to confirm any of these possible explanations. Some researchers believe that there may be a genetic basis for the relationship between alcohol and violence, but there is no confirmation of this to date. So while there is a strong relationship between alcohol and violence (probably the strongest of any drug), the reason for this relationship remains unclear.

Other drugs that may have a biological association with violence are opiates, amphetamines, cocaine, and hallucinogens. Opiates are known to temporarily reduce aggressive and violent behavior, although chronic use may increase the possibility of violent behavior. Withdrawal from opiates is related to aggressive behavior as well.<sup>72</sup> Chronic amphetamine use may provoke violent outbursts in humans, but usually only when the individuals already are prone to violent behavior.<sup>73</sup> There is still no direct evidence of a biological effect of cocaine use on violent behavior.<sup>74</sup> Marijuana use most likely decreases or does not affect violent human behavior; PCP, when used over a long term, may increase aggressive behavior; and LSD may intensify violent behavior in those already prone to aggression.<sup>75</sup>

Research on the relationship between *nutrition or toxins* and antisocial or aggressive behavior often is comprised of correlational studies with methodological shortcomings. Most commonly studied are sugar, cholesterol, and lead toxicity.<sup>76</sup>

70. For a broad review of the drug and violence literature, see Diana H. Fishbein and Susan E. Pease, *The Dynamics of Drug Abuse*, Allyn and Bacon, Boston, 1996. See also Reiss and Roth, eds., *Understanding and Preventing Violence*, op. cit., ch. 4.

71. The discussion of alcohol and violence is summarized from Reiss and Roth, *ibid.*, pp. 189–91.

72. *Ibid.*, p. 192.

73. *Ibid.*

74. *Ibid.*, p. 194.

75. *Ibid.*, p. 195.

Research in the 1980s showed hypoglycemia (low blood sugar), which is caused in part by excess sugar intake, to be common in habitually violent criminals. Numerous methodological problems with these studies are cited by Kanarek,<sup>77</sup> casting significant doubt on whether sugar intake causes antisocial behavior. Sugar has also been associated with hyperactivity in children, but again, there is reason to doubt the validity of most of this research.<sup>78</sup> More research that is methodologically solid, examining potential negative consequences of sugar, is needed before any conclusions should be drawn on the sugar-violence link. Research has also purported that there is a link between blood cholesterol and violent behavior, but these studies suffer from the same sorts of problems as the research on sugar and violent behavior.<sup>79</sup> Finally, exposure to lead in diet and environment has been shown to negatively affect brain functioning, bringing about learning disabilities and hyperactive attention deficit disorder in children, and may increase the risk for antisocial behavior.<sup>80</sup> Future research is certain to continue examining the linkages between lead exposure and negative behavioral consequences.

Several studies have found a correlation between *head injury* and criminal and antisocial behavior; whether the relationship is causal is another matter.<sup>81</sup> Such head injury can be detected by medical tests such as X-rays, CAT scans, and spinal taps. A variety of studies have found that prisoners and violent patients report a large number of head injuries involving loss of consciousness. Mednick found some support for a relationship between brain damage and violent behavior among juveniles in a study of children born at a hospital in Copenhagen between 1959 and 1961.<sup>82</sup> Those who later became violent delinquents had generally good medical, physical, and neurological reports during pregnancy and delivery, despite relatively poor social conditions. However, they had significantly worse physical and neurological status at 1 year of age. Similar findings were reported by Dorothy Lewis and her

76. This discussion is taken primarily from Robin B. Kanarek, "Nutrition and Violent Behavior" in Reiss, Miczek, and Roth, eds., *Understanding and Preventing Violence*, Vol. 2, op. cit., pp. 515–39.

77. *Ibid.*, pp. 523–26.

78. *Ibid.*, pp. 530–31.

79. *Ibid.*, pp. 533–34.

80. Fishbein, "Selected Studies on the Biology of Antisocial Behavior," op. cit.

81. Mednick et al., "Biology and Violence," pp. 52–58.

82. *Ibid.*, p. 55

colleagues.<sup>83</sup> Lewis also found a strong association between parental criminality and the presence of serious medical problems in their children. She suggested that delinquency among children with criminal parents may reflect the combined physical and psychological effects of parental neglect and battering, rather than any genetic factors.<sup>84</sup>

Raine discusses some possible scenarios that would account for the association between head injury and criminal behavior. For example, in abusive homes children are more likely to incur head injuries, and these homes may also be more conducive to criminal behavior among offspring raised in them.<sup>85</sup> Still, Raine cites evidence that the link between head injury and criminal behavior may be at least partially causal.<sup>86</sup> Some processes by which head injury may influence negative behaviors are: (1) increasing sensitivity to effects of alcohol; (2) decreasing cognitive and social skills; (3) causing headaches and irritability, which increase the possibility of violent outbursts; and (4) damaging the frontal and temporal lobes of the brain, increasing anxiety, anger, and hostility.<sup>87</sup>

Another possible source of CNS deficits (which have been linked to aggressive behavior) is *pregnancy and birth complications*. A recent study by Kandel and Mednick examined data on 216 children born between 1959 and 1961 in Copenhagen.<sup>88</sup> The group of 216 was selected from an original cohort of 9,125 children because their parents were schizophrenic, psychopathic, or character-disordered, and therefore they were considered to be at high risk of becoming delinquent. The research examined pregnancy complications (such as infections, chemotherapy, and jaundice) and delivery complications (such as ruptured perineum, weak secondary labor, and ruptured uterus), and measured criminal behavior with arrest records for property and violent offenses when the subjects were 20 to 22 years old. Pregnancy complications were not significantly related to offending rates, but delivery complications were related to violent offending: 80 percent of violent offenders ranked had greater than average delivery complications,

83. Dorothy Otnow Lewis et al., "Perinatal Difficulties, Head and Face Trauma, and Child Abuse in the Medical Histories of Seriously Delinquent Children," *American Journal of Psychiatry* 136 (4): 419–23 (April 1979). See also Lewis et al., "Violent Juvenile Delinquents: Psychiatric, Neurological, Psychological, and Abuse Factors," *Journal of the American Academy of Child Psychiatry* 18(2): 307–19 (1979); and Lewis, ed., *Vulnerabilities to Delinquency*, Spectrum, New York, 1981.

84. Dorothy Otnow Lewis et al., "Parental Criminality and Medical Histories of Delinquent Children," *American Journal of Psychiatry* 136(3): 288–92 (March 1979).

85. Raine, op. cit., p. 193.

86. Ibid., pp. 193–94.

87. Ibid., pp. 194–95.

88. Elizabeth Kandel and Sarnoff A. Mednick, "Perinatal Complications Predict Violent Offending," *Criminology* 29(3): 519–29 (1991).

compared to 30 percent of property offenders and 47 percent of nonoffenders.<sup>89</sup> A subsequent study found that violent offending occurs most often among individuals with both a high number of delivery complications and parents with psychiatric problems.<sup>90</sup>

## IMPLICATIONS AND CONCLUSIONS

Biological theories are necessarily part of a "multiple factor" approach to criminal behavior—that is, the presence of certain biological factors may increase the likelihood but not determine absolutely that an individual will engage in criminal behaviors. These factors generate criminal behaviors when they interact with psychological or social factors. Mednick, for example, has suggested a possible interaction between biological and social factors<sup>91</sup>:

Where the social experiences of an antisocial individual are not especially antisocial, biological factors should be examined. The value of the biological factors is more limited in predicting antisocial behavior in individuals who have experienced criminogenic social conditions in their rearing.

In the past, biologically oriented and sociologically oriented criminologists have often been at odds with each other. Both sides have overstated their own positions and refused to acknowledge partial validity in their opponents' views. This is changing, as criminologists on both sides are recognizing the need for biosocial theories that examine not only the separate contribution of sociological and biological phenomena to criminal behavior, but the interaction of these perspectives as well. This emerging synthesis of perspectives will probably benefit biological criminology, since extreme biological views often raise images of determinism among some audiences, who subsequently react negatively to the furthering of such research and to any policies based on it.

89. Ibid., p. 523.

90. P. Brennan, S. A. Mednick, and E. Kandel, "Congenital Determinants of Violent and Property Offending," in D. J. Pepler and K. H. Rubin, eds., *The Development and Treatment of Childhood Aggression*, Erlbaum, Hillsdale, N.J., 1993, pp. 81–92.

91. Mednick et al., "Biology and Violence," op. cit., pp. 55, 68. A similar conclusion is reached in Mednick et al., "An Example of Biosocial Interaction Research," in Mednick and Christiansen, op. cit., pp. 9–23.

# The Personality of the Offender

The term *personality* refers to the complex set of emotional and behavioral attributes that tend to remain relatively constant as the individual moves from situation to situation. This chapter examines theories that explain criminal behavior primarily in terms of the enduring personality attributes of the individual. In general, psychological and psychiatric theories include the personality of the offender within their explanations of criminal behavior. Thus, these theories are the focus of the present chapter.

Psychological and psychiatric theories also consider biological and situational factors in their explanations of criminal behavior. Much of the biological research presented in Chapter 6 has been done by psychologists and psychiatrists and can be considered as part of psychological or psychiatric theories of crime. Those theories also consider the impact of the situation on the individual, and they explain behavior by interrelating the situation with individual's biological and psychological characteristics. Situational factors, however, will be discussed in the chapters on sociological theories of criminal behavior. In addition, some psychological theories argue that criminal behavior is the result of normal learning processes. These theories are discussed below in Chapter 12.

The present chapter considers only those psychological and psychiatric theories that argue that criminal behavior originates primarily in the personalities of offenders rather than in their biology or in situation. This includes psychoanalytic theories that argue that the causes of criminal behavior are found in unconscious elements of the personality. It also includes research on the conscious personality, using a type of psychological test called the personality inventory. Finally, the present

chapter discusses the antisocial personality and impulsivity as specific personality characteristics thought to be associated with criminality.

## HISTORICAL BACKGROUND: PSYCHIATRY AS A SPRINGBOARD FOR PSYCHOANALYTIC THEORY

Before looking at the psychoanalytic view of the causes of criminal behavior, it is necessary to consider the differences between psychiatry in general and the psychoanalytic movement. Psychiatry grew out of the experience of medical doctors in dealing with the basic problem of mental disease. Control of the dangerous and often outrageous behavior of the mentally and emotionally disturbed has been a problem in organized societies from the earliest times. Historically it has often been indistinguishable from the control of the dangerous and often outrageous behavior of the criminal.

In early societies spiritual explanations—the influence of evil spirits or the devil—were generally accepted for both crime and insanity.<sup>1</sup> Yet there was an objective, naturalistic school of medical thought in ancient Greece that goes back to roughly 600 B.C. This medical thought rested on the science of Pythagoras (580–510 B.C.), Alcmaeon (550–500 B.C.), and Empedocles of Agrigentum (490–430 B.C.), and had as its most distinguished member Hippocrates (460?–?377 B.C.), the father of medicine. This last name is, of course, well known and honored for the Hippocratic oath, which is solemnly assumed by physicians today.

Pythagoras and his pupil Alcmaeon identified the brain as the organ of the mind, and conceived of mental illness as a disorder of that organ. Empedocles introduced certain explanatory principles of personality (namely, the qualities of heat, cold, moisture, and dryness; and the humors—blood, phlegm, black bile, and yellow bile) that were to be in use for hundreds of years, through the Middle Ages into almost modern times.

In this conception delirium and various other kinds of mental disorders were explained as aspects of special functions of the brain. Hysteria, mania, and melancholia were recognized, described, and prescribed for just as objectively and scientifically as were the medications suggested for a long list of wounds and other human afflictions.<sup>2</sup> In this

1. For good accounts of principal historical developments, see Erwin H. Ackerknecht, M.D., *A Short History of Medicine*, rev. ed., Johns Hopkins University Press, Baltimore, 1982; Brian Inglis, *A History of Medicine*, World, Cleveland, 1965; Charles Singer and E. Ashworth Underwood, *A Short History of Medicine*, Oxford University Press, New York, 1962; or George Rosen, *Madness in Society*, University of Chicago Press, Chicago, 1968.

2. "To those women suffering from hysteria, Hippocrates recommended marriage and pregnancy as general treatment, while the immediate attacks were to be met with substances causing unpleasant tastes and odors combined with purges and pessaries." N. D. C. Lewis, *A Short History of Psychiatric Achievement*, Norton, New York, 1941, p. 35.

sense psychiatry constituted an important division of the developing field of medical knowledge from the very beginning.<sup>3</sup>

As knowledge of physical disease slowly grew, knowledge of mental disease did also. By the time of Sigmund Freud (1856–1939), all the basic concepts of abnormal psychology had been developed out of experience in dealing with disturbed persons. This included a distinction between *organic disorders*—for example, head injuries that leave the mind blank or that distort vision or hearing or cause a ringing in the ears, or those due to disease or degeneration, such as syphilitic paresis or the senility of old age—and *functional disorders* in which there is strange behavior but no known organic cause. Even the central concept of psychoanalysis, the *unconscious*, was developed before Freud by von Hartman (1842–1906), and was extensively utilized and further developed by Morton Prince (1854–1929).<sup>4</sup> Somewhat the same is true of several other ideas or concepts that have been used extensively in psychoanalysis, including repression, projection, symbolic behavior, and various notions of substitute responses. These all were part of psychiatry before Freud.<sup>5</sup>

### SIGMUND FREUD AND PSYCHOANALYSIS

While psychiatry is as old as medicine, psychoanalysis is a relatively recent development associated with the life and work of Sigmund Freud and some of his pupils, notably Alfred Adler (1870–1937), Carl Jung (1875–1961), and Wilhelm Stekel (1868–1940). Psychoanalysis is an extremely complicated and not particularly unified set of ideas, due to the fact that Freud himself revised his most fundamental ideas at several points in his life, and his followers continued to propose revisions and extensions after his death. Nevertheless, it has had a profound impact on almost all modern thought, including philosophy, literature, and conceptions of human (and, consequently, criminal) behavior. The following is only a very brief overview of some basic ideas associated with psychoanalysis, meant to give a sense of what it is about.

3. For a good short review of the history and general development of contemporary psychiatry, see *ibid.*, or Winfred Overholser, "An Historical Sketch of Psychiatry," *Journal of Clinical Psychopathology* 10(2): (April 1949), reprinted in Richard C. Allen, Elyce Z. Ferster, and Jesse G. Rubin, *Readings in Law and Psychiatry*, Johns Hopkins University Press, Baltimore, 1975.

4. Lewis, *op. cit.*, p. 134; Morton Prince, *The Dissociation of a Personality: A Biographical Study in Abnormal Psychology*, Longmans, Greens, New York, 1906, reprinted by Greenwood Press, Westport, Conn., 1969; Morton Prince, *The Unconscious*, Macmillan, New York, 1914, reprinted (1921 edition) by Arno, New York.

5. See J. R. Whitwell, *Historical Notes on Psychiatry*, H. K. Lewis, London, 1936; E. A. Strecker, *Fundamentals of Psychiatry*, Lippincott, Philadelphia, 1943; Lewis, *op. cit.*, pp. 66–159; E. C. Mann, *Manual of Psychological Medicine and Allied Nervous Disorders*, Blakiston, Philadelphia, 1883.

Sigmund Freud lived most of his life in Vienna and published most of his important ideas during the first forty years of this century.<sup>6</sup> Like other psychiatrists before him, he was a physician who was concerned with the medical treatment of a variety of functional disorders that seemed to be unrelated to any organic causes. Freud first adopted the idea of the unconscious, as used by earlier psychiatrists, arguing that the behaviors could be explained by traumatic experiences in early childhood that left their mark on the individual despite the fact that the individual was not consciously aware of those experiences.

As a way to treat these problems, Freud invented a technique he called "psychoanalysis." The central idea of psychoanalysis was free association: The patient relaxed completely and talked about whatever came to mind. By exploring these associations the individual was able to reconstruct the earlier events and bring them to consciousness. Once the patient was conscious of these events, Freud argued that the events would lose their unconscious power and the patient would gain conscious control and freedom in his or her life.

Freud later revised his conceptions of the conscious and unconscious, in a sense redefining the conscious as ego, and splitting the unconscious into the id and superego. *Id* was a term used to describe the great reservoir of biological and psychological drives, the urges and impulses that underlie all behavior. That includes the libido, the full force of sexual energy in the individual, as diffuse and tenacious as the "will to live" found in all animals. The id is permanently unconscious, and responds only to what Freud called "the pleasure principle"—if it feels good, do it. The *superego*, in contrast, is the force of self-criticism and conscience and reflects requirements that stem from the individual's social experience in a particular cultural milieu. The superego may contain conscious elements in the form of moral and ethical codes, but it is primarily unconscious in its operation. The superego arises out of the first great love attachment the child experiences, that with his or her parents. The child experiences them as judgmental, and ultimately internalizes their values as an *ego-ideal*—that is, as an ideal conception of what he or she should be. Finally, what Freud called the *ego* is the conscious personality. It is oriented toward the real world in which the person lives

6. A very readable account of Freud's life, interwoven with accounts of his theories and those of his companions, can be found in Peter Gay, *Freud: A Life for Our Time*, Norton, New York, 1988. A briefer but very thorough account is found in Harold I. Kaplan and Benjamin J. Sadock, *Synopsis of Psychiatry*, 6th ed., Williams and Wilkins, Baltimore, 1991, pp. 171–92. A brief account of psychoanalytic theory as applied to the explanation of crime is found in Ronald Blackburn, *The Psychology of Criminal Conduct*, John Wiley, Chichester, 1993, pp. 111–16; or Fritz Redl and Hans Toch, "The Psychoanalytic Explanation of Crime," in Hans Toch, ed., *Psychology of Crime and Criminal Justice*, Holt, Rinehart, and Winston, New York, 1979.

(termed by Freud the “reality principle”), and attempts to mediate between the demands of the id and the prohibitions of the superego.<sup>7</sup>

Given this basic organization of the personality, Freud explored how the ego handles the conflicts between the superego and the id. The basic problem is one of guilt: The individual experiences all sorts of drives and urges coming from the id, and feels guilty about them because of the prohibitions of the superego. There are a variety of ways the individual may handle this situation. In *sublimation* the drives of the id are diverted to activities approved of by the superego. For example, aggressive and destructive urges may be diverted to athletic activity. Sublimation is the normal and healthy way the ego handles the conflicts between the drives of the id and the prohibitions of the superego. In *repression*, in contrast, those drives are stuffed back into the unconscious and the individual denies that they exist. This may result in a variety of strange effects on behavior. One possible result is a *reaction formation*, such as when a person with repressed sexual desires becomes very prudish about all sexual matters. Another result might be *projection*, in which, for example, a person with repressed homosexual urges frequently sees homosexual tendencies in others.

Freud believed that these basic conflicts were played out in different ways at different points of the life cycle. Of particular interest to him were the experiences of early childhood. He argued that each infant goes through a series of phases in which the basic drives were oriented around, first, oral drives, then anal drives, and finally genital drives. During the genital stage (around the ages of 3 and 4) the child is sexually attracted to the parent of the opposite sex and views the same-sex parent as competition. This is the famous Oedipus complex in boys, and the comparable Electra complex in girls. If the guilt produced by these urges is not handled adequately by the ego, it leaves a lasting imprint on the personality that affects later behavior.

The major tool Freud used to treat these problems was *transference*, the tendency for past significant relationships to be replayed during current significant relationships. As the relationship with the analyst takes on increasing significance in the patient’s life, the patient will tend to replay with the analyst the earlier relationships that are presently generating the problems. For example, if a patient’s problems stem from an earlier traumatic relationship with a parent, the patient will tend to create a similar traumatic relationship with the analyst. Treatment then consists of straightening out the current relationship between analyst

7. Redl and Toch, op. cit.

and patient, which has the effect of also straightening out the earlier relationship the patient had with the parent.

### PSYCHOANALYTIC EXPLANATIONS OF CRIMINAL BEHAVIOR

While the preceding is only a brief presentation of psychoanalytic theory, it provides the basic orientation for psychoanalytic explanations of criminal behavior. Within the psychoanalytic perspective criminal and delinquent behaviors are attributed to disturbances or malfunctions in the ego or superego. The id, in contrast, is viewed as a constant and in-born biologically based source of drives and urges; it does not vary substantially among individuals.

Freud himself did not discuss criminal behavior to any great extent. He did, however, suggest that at least some individuals performed criminal acts because they possessed an overdeveloped superego, which led to constant feelings of guilt and anxiety.<sup>8</sup> There is a consequent desire for punishment to remove the guilt feelings and restore a proper balance of good against evil. Unconsciously motivated errors (i.e., careless or imprudent ways of committing the crime) leave clues so that the authorities may more readily apprehend and convict the guilty party, and thus administer suitably cleansing punishment. This idea was extensively developed by later Freudians.<sup>9</sup> Criminality of this type is said to be appropriate for treatment through psychoanalysis, since it can uncover the unconscious sources of guilt and free the person from the compulsive need for punishment.

While excessive guilt from an *overdeveloped* superego is one source of criminal behavior within the psychoanalytic framework, August Aichhorn, a psychoanalytically oriented psychologist, suggested alternate sources for crime and delinquency based on his years of experience running an institution for delinquents.<sup>10</sup> He found that many children in his institution had *underdeveloped* superegos, so that the delinquency and criminality were primarily expressions of an unregulated id. Aich-

8. Sigmund Freud, “Criminals from a Sense of Guilt,” in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, Hogarth Press, London, vol. 14, pp. 332–33.

9. This idea is elaborated in such works as Walter Bromberg, *Crime and the Mind: A Psychiatric Analysis of Crime and Punishment*, Macmillan, New York, 1965; Seymour L. Halleck, *Psychiatry and the Dilemmas of Crime*, Harper & Row, New York, 1967; David Abrahamsen, *The Psychology of Crime* (1960) and *Crime and the Human Mind* (1944), both published by Columbia University Press, New York; also his *Who Are the Guilty?*, Rinehart, New York, 1952; Kate Friedlander, *The Psychoanalytic Approach to Juvenile Delinquency*, Kegan Paul, Trench & Trubner, London, 1947; Erich Fromm, *Escape from Freedom*, Farrar & Rinehart, New York, 1941; Ben Karpman, *The Individual Criminal*, Nervous and Mental Disease Publishing Co., Washington, D.C., 1935; William A. White, *Crimes and Criminals*, Farrar & Rinehart, New York, 1933; and Theodor Reik, *The Compulsion to Confess*, Farrar, Straus, and Cudahy, New York, 1945.

10. August Aichhorn, *Wayward Youth*, Viking, New York, 1963.

horn attributed this to the fact that the parents of these children were either absent or unloving, so that the children failed to form the loving attachments necessary for the proper development of their superegos. Aichhorn treated these children by providing a happy and pleasurable environment, so as to promote the type of identification with adults that the child failed to experience earlier. He commented that most training schools "attempted through force, through fear of punishment, and without rewards of love to make the delinquent socially acceptable. Since most of their charges belong to the type just described, they only exaggerated what the parents had already begun and consequently they were doomed to failure."<sup>11</sup> Freud approved of these techniques in his foreword to Aichhorn's book, and concluded that they, rather than psychoanalysis per se, were appropriate in the case of young children and of adult criminals dominated by their instincts.<sup>12</sup>

Aichhorn also suggested that other types of delinquents existed, including those who, from an overabundance of love, were permitted to do anything they wanted by overprotective and overindulgent parents.<sup>13</sup> He did not find that there were many of these, but they required different treatment techniques than the delinquents created by the absent or excessively severe parents described above. Finally, there also were a few delinquents who had well-developed superegos but who identified with criminal parents.<sup>14</sup> Again, these required very different treatment techniques.

Much of later psychoanalytic theorizing with respect to criminal behavior is consistent with these three types of delinquents first suggested by Aichhorn.<sup>15</sup> Healy and Bronner, for example, examined 105 pairs of brothers, in which one brother was a persistent delinquent and the other was a nondelinquent.<sup>16</sup> They concluded that the delinquent brother had failed to develop normal affectional ties with his parents due to a variety of situational factors. Delinquency, they argued, was essentially a form of sublimation in which delinquents attempt to meet basic needs that are not being met by their families. Bowlby focused on early maternal deprivation as the origin of delinquency, arguing similarly that

11. *Ibid.*, p. 209.

12. Sigmund Freud, Introduction, in *ibid.*

13. Aichhorn, *op. cit.*, pp. 200-202.

14. *Ibid.*, pp. 224-25.

15. Blackburn, *op. cit.*, pp. 113-15.

16. William Healy and Augusta Bronner, *New Light on Delinquency and Its Treatment*, Yale University Press, New Haven, Conn., 1931.

the basic affectional ties had failed to form.<sup>17</sup> Redl and Wineman found that "children who hate" lacked factors leading to identification with adults, such as feelings of being wanted, loved, encouraged, and secure.<sup>18</sup> They said that these children not only lacked adequate superegos, but their egos had been organized to defend the unregulated expression of their id desires. Redl and Wineman called this the "delinquent ego." Like Aichhorn, they recommended that these children be treated with unconditional love, to promote the identification with adults they lacked in earlier childhood.

The most common criticism of psychoanalytic theory as a whole is that it is untestable. Against this criticism, several authors have argued that Freud's ideas can be expressed in testable hypotheses, that these hypotheses have been tested in a great deal of empirical research, and that the results of the research have generally supported the theory.<sup>19</sup> A more specific criticism is that the psychoanalytic explanation of a particular individual's behavior often seems subjective and out of reach of objective measuring devices. These explanations are formulated after the behavior has occurred and rely heavily on interpretations of unconscious motivations. They may make a great deal of sense, but there is generally no way to determine the accuracy of the analyst's interpretation of an individual case within the framework of accepted scientific methodology. Cleckley, for example, made the following comment<sup>20</sup>:

When teaching young physicians in psychiatric residency training I was often also impressed by the influence of the examiners' convictions on items of experience reported by such patients. I found that some of these patients could be led on in almost any direction to report almost any sort of infantile recollection one sought to produce. . . . I have become increasingly convinced that some of the popular methods presumed to discover what is in the unconscious cannot be counted upon as reliable methods of obtaining evidence.

In addition to these criticisms of psychoanalytic theory in general, several criticisms also have been made about psychoanalytic explana-

17. John Bowlby, *Child Care and the Growth of Love*, Penguin, Baltimore, 1953. A review of research about his theory is presented in J. E. Hall-Williams, *Criminology and Criminal Justice*, Butterworths, London, 1982, pp. 59-68.

18. Fritz Redl and David Wineman, *Children Who Hate*, The Free Press, New York, 1951. See also Redl and Wineman, *Controls from Within*, The Free Press, New York, 1952.

19. Seymour Fisher and Roger P. Greenberg, *The Scientific Credibility of Freud's Theories and Therapy*, Basic Books, New York, 1977; Paul Kline, *Fact and Fantasy in Freudian Theory*, 2nd ed., Methuen, New York, 1981.

20. Hervey Cleckley, *The Mask of Sanity*, Mosby, St. Louis, 1976, pp. 406-7.

tions of crime. The central assertion of this explanation is that at least some crime is caused by "unconscious conflicts arising from disturbed family relationships at different stages of development, particularly the oedipal stage."<sup>21</sup> This argument may apply to some crimes that would appear "irrational," but many crimes seem quite conscious and rational and therefore not caused by unconscious conflicts. In addition, as a treatment technique, psychoanalysis requires a lengthy and usually quite expensive process that simply is not available to ordinary criminals. To date, psychoanalysis has not been particularly useful in either understanding crime or responding to it.

### RESEARCH USING PERSONALITY TESTS

Commonsense notions of what constitutes personality generally have focused on qualities of the individual other than intellectual ability. Words such as *aggressive*, *belligerent*, *suspicious*, *timid*, *withdrawn*, *friendly*, *cooperative*, *likable*, *argumentative*, and *agreeable* have long been used to describe or express impressions of some of these qualities. Psychological tests to measure personality differences have been developed more or less parallel to intelligence tests. Inevitably, delinquents and criminals have been tested with these "personality inventories" to discover how their personalities differ from those of nondelinquents and noncriminals.

In 1950 Schuessler and Cressey<sup>22</sup> published the results of a survey of studies made in the United States during the preceding twenty-five years, in which comparisons between delinquents and nondelinquents were made in terms of scores on objective tests of personality. Somewhat less than half the studies showed that personality differences between delinquents and nondelinquents existed. But because of the doubtful validity of these studies and the lack of consistency in their results, Schuessler and Cressey stated that it was "impossible to conclude from these data that criminality and personality elements are associated."<sup>23</sup>

The same year that Schuessler and Cressey reached that conclusion, the Gluecks published an intensive study that compared 500 delinquent and 500 nondelinquent boys.<sup>24</sup> They argued that "the delinquent per-

21. Blackburn, *op. cit.*, pp. 115-16.

22. Karl F. Schuessler and Donald R. Cressey, "Personality Characteristics of Criminals," *American Journal of Sociology* 55: 476-84 (March 1950).

23. *Ibid.*, p. 476.

24. Sheldon Glueck and Eleanor Glueck, *Unraveling Juvenile Delinquency*, Commonwealth Fund, New York, 1950.

sonality" is not so much a matter of the presence or absence of certain characteristics, but is more a matter of the interrelatedness of these characteristics. The Gluecks summarize their impression of this interrelationship of characteristics as follows<sup>25</sup>:

On the whole, delinquents are more extroverted, vivacious, impulsive, and less self-controlled than the non-delinquents. They are more hostile, resentful, defiant, suspicious, and destructive. They are less fearful of failure or defeat than the non-delinquents. They are less concerned about meeting conventional expectations, and are more ambivalent toward or far less submissive to authority. They are, as a group, more socially assertive. To a greater extent than the control group, they express feelings of not being recognized or appreciated.

There are a number of desirable features in this description of the delinquent, which can be confusing from the point of view of theory. Often, theories about the "delinquent" or "criminal" personality are based on the implicit assumption that delinquents are somehow defective and therefore inferior to nondelinquents. This, of course, is the same assumption found in earlier theories related to biology and intelligence. But the Glueck's description would suggest that a delinquent may be, and often is, as attractive and socially acceptable as a non-delinquent.

Even if these findings are confusing from the standpoint of theory making, the differences between delinquents and nondelinquents nevertheless lend themselves to making statistical predictions. The Gluecks developed three prediction tables,<sup>26</sup> one based on factors in the social background, one based on character traits as determined by the Rorschach test, and one based on personality traits as determined in the psychiatric interview. All three are said to give impressive results. For example, only about 10 percent of juveniles in the best-score class may be expected to become delinquent, as opposed to about 90 percent in the worst-score class.<sup>27</sup>

25. *Ibid.*, p. 275.

26. *Ibid.*, pp. 257-71 for detailed tables.

27. *Ibid.*, Table XX-3, p. 262. The predictive validity of a revised table was supported in studies by M. M. Craig and S. J. Glick ("Ten Years' Experience with the Glueck Social Prediction Table," *Crime and Delinquency* 9: 249-61 [1963]); and "Application of the Glueck Social Prediction Table on an Ethnic Basis," *Crime and Delinquency* 11: 175-78 [1965]) and N. B. Trevett ("Identifying Delinquency-Prone Children," *Crime and Delinquency* 11: 186-91 [1965]). Kurt Weis ("The Glueck Social Prediction Table: An Unfulfilled Promise," *Journal of Criminal Law, Criminology and Police Science* 65: 397-404 [1974]), however, argued that its results are only slightly better than chance.



Similar results have been obtained with the Minnesota Multiphasic Personality Inventory (MMPI), which is a list of 550 statements developed to aid in psychiatric diagnosis.<sup>28</sup> People who take the MMPI indicate whether the statements in the test are true or false about themselves. Ten different scales are then scored and assumed to measure different aspects of the personality. These scales were originally identified by the names of the psychiatric symptoms or pathologies they were assumed to measure, such as hypochondriasis, depression, or hysteria. Since the MMPI is now often used with normal individuals, the scales are now identified by number only (Scale 1, Scale 2, etc.). The ten scores a person gets on the ten scales are then arranged into a "profile," so that no single score indicates a person's performance on the MMPI.<sup>29</sup>

Waldo and Dinitz examined ninety-four personality studies performed between 1950 and 1965 in an update of Schuessler and Cressey's study, and found that about 80 percent of these studies reported statistically significant differences between criminals and noncriminals.<sup>30</sup> The most impressive results were found with Scale 4 of the MMPI, previously called the "psychopathic deviate" scale, which consistently produced significant results. These studies generally concluded that delinquents and criminals were more "psychopathic" than nondelinquents and noncriminals.

Scale 4, however, includes statements such as "I have never been in trouble with the law," "Sometimes when I was young I stole things," "I like school," and "My relatives are nearly all in sympathy with me." On the average, nondelinquents and noncriminals responded to four of these statements differently than did criminals and delinquents. This may simply reflect differences in the situations and circumstances of their lives, rather than any increased "psychopathy" among delinquents and criminals.<sup>31</sup> It seems best to conclude that the differences that ap-

28. For a full discussion of the use of the MMPI, see S. R. Hathaway and P. E. Meehl, *An Atlas for the Clinical Use of the MMPI*, University of Minnesota Press, Minneapolis, 1951; for an account of its application and use in the study of delinquency, see S. R. Hathaway and E. D. Monachesi, *Analyzing and Predicting Juvenile Delinquency with the MMPI* (1953) and *Adolescent Personality and Behavior* (1963), both published by the University of Minnesota Press, Minneapolis. A more recent review of studies using the MMPI on criminals can be found in Edwin I. Megargee and Martin J. Bohn, Jr., *Classifying Criminal Offenders*, Sage, Beverly Hills, Calif., 1979.

29. For a full discussion of the profiles, see Hathaway and Meehl, *An Atlas*; a short account may be found in Hathaway and Monachesi, *Analyzing and Predicting . . .*, pp. 19-23.

30. Gordon P. Waldo and Simon Dinitz, "Personality Attributes of the Criminal: An Analysis of Research Studies, 1950-1965," *Journal of Research in Crime and Delinquency* 4(2): 185-202 (July 1967).

31. In fact, Scale 4 had originally been constructed by listing statements that "normal" persons said were true about themselves while "psychopaths" said were not. The original "psychopathic" group consisted largely of young delinquents, so that a person who scores high on Scale 4 makes responses to the statements that are similar to the responses of a group consisting primarily of young delinquents. It should not be surprising if that person is also a delinquent.

pear between criminals and noncriminals on personality tests do not have any theoretical relevance to understanding the causes of criminal behavior or to treating it.<sup>32</sup>

### ANTISOCIAL PERSONALITY DISORDER

In addition to appearing on personality inventories, the term psychopath is used by psychiatrists to describe individuals who exhibit a certain group of behaviors and attitudes.<sup>33</sup> When used in this way, the term psychopath can be considered synonymous with the more recent terms sociopath and antisocial personality disorder. The three terms are used interchangeably in this section.

The fourth edition of the official *Diagnostic and Statistical Manual* (DSM-4) of the American Psychiatric Association states that "the essential feature of Antisocial Personality Disorder is a pervasive pattern of disregard for, and violation of, the rights of others that begins in childhood or early adolescence and comes into adulthood."<sup>34</sup> The diagnosis may be made when there are at least three of the following six characteristics: (1) repeated violations of the law that are grounds for arrest; (2) repeated lying, use of aliases, or conning others for personal profit or pleasure; (3) impulsivity or failure to plan ahead; (4) repeated physical fights or assaults; (5) repeated failure to sustain consistent work behavior or honor financial obligations; and (6) lack of remorse.

The DSM-4 distinguishes "antisocial personality disorder" from "adult antisocial behavior," which is criminal behavior that occurs without the presence of any personality disorder. A person should be diagnosed as having "antisocial personality disorder" when these characteristics are "inflexible, maladaptive, and persistent, and cause significant functional impairment or subjective distress." The DSM-4 also states that the antisocial personality disorder "has a chronic course but may become less evident or remit as the individual grows older, particularly by the fourth decade of life."

The DSM-4 attempts to provide a fairly precise definition of the term "antisocial personality," especially so that it can be distinguished from criminality. In practice, however, Cleckley points out that "the term psychopath (or antisocial personality) as it is applied by various psychiatrists and hospital staffs sometimes becomes so broad that it can be ap-

32. Blackburn, op. cit., pp. 185-86; Jack Arbutnot, Donald A. Gordon, and Gregory J. Jurkovic, "Personality," in Herbert C. Quay, ed., *Handbook of Juvenile Delinquency*, John Wiley, New York, 1987, pp. 139-83.

33. See Blackburn, op. cit., pp. 80-86; Kaplan and Sadock, op. cit., pp. 532-33.

34. *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed., American Psychiatric Association, Washington, D.C., 1994, pp. 645-50.

plied to almost any criminal."<sup>35</sup> He argues, however, that the majority of psychopaths are not criminals, and the majority of criminals are not psychopaths. Psychopaths may be found in any profession, including business, science, medicine, and psychiatry.<sup>36</sup> Typical psychopaths differ from typical criminals in that their actions seem less purposeful, they cause themselves needless sorrow and shame, and they usually do not commit major crimes or crimes of violence.<sup>37</sup>

These terms "psychopath" and "antisocial personality" are not merely descriptions of behavior patterns, but also imply that those behaviors originate in the personality of the individual. It is possible, however, that the behaviors may be explained by factors other than personality. For example, Yablonsky argued that "core" members of violent gangs were sociopaths who led the gang in moblike violence as a way of acting out their own hostility and aggression.<sup>38</sup> Other gang researchers described the behavior of core gang members in a similar way, but argued that the behavior resulted from the need to create and maintain a leadership position in the gang.<sup>39</sup> Thus, the origin of these behaviors may not lie in personality characteristics.

Because psychiatrists tend to assume that antisocial actions originate in the personality of the offender, some psychiatrists have recommended that people with "antisocial personality disorder" be locked up until they reach middle age,<sup>40</sup> and even that they be executed.<sup>41</sup> This is because psychiatrists have no effective methods for treating this disorder, so they assume that the person will continue to commit antisocial actions if allowed to remain free. But this assumption is not supported by a study by William McCord, who has done extensive work on psychopaths and crime.<sup>42</sup> McCord found that delinquents who had been diagnosed as psychopathic at two juvenile institutions had only slightly worse recidi-

35. Cleckley, *op. cit.*, p. 263.

36. *Ibid.*, pp. 188–221.

37. *Ibid.*, pp. 261–63.

38. Louis Yablonsky, *The Violent Gang*, Penguin, New York, 1970, pp. 236–47.

39. James F. Short, Jr., and Fred L. Stodtbeck, *Group Process and Gang Delinquency*, University of Chicago Press, Chicago, 1974, especially pp. 248–64. This material had been previously published in *Social Problems* 12: 127–40 (fall 1964).

40. E.g., Samuel B. Guze, *Criminality and Psychiatric Disorders*, Oxford University Press, New York, 1976, p. 137.

41. Charles Patrick Ewing, "Preventive Detention and Execution: The Constitutionality of Punishing Future Crimes," *Law and Human Behavior* 15(2): 139–63 (1991).

42. William McCord, *The Psychopath and Milieu Therapy*, Academic Press, New York, 1982. See also William McCord and Jose Sanchez, "The Treatment of Deviant Children: A Twenty-Five-Year Follow-Up Study," *Crime and Delinquency* 29(2): 238–53 (April 1983).

ivism rates than other delinquents at the same institutions, and that several years after release the recidivism rates were identical.

### PREDICTING FUTURE DANGEROUSNESS

Some psychiatrists recommend that offenders with antisocial personality disorder be locked up for extended periods of time. While this may be a reasonable policy for frequent and serious offenders, psychiatrists go further by arguing that they are able to identify these offenders through psychiatric means. If that is their claim, then their track record so far has been poor.<sup>43</sup>

For example, a ten-year study in Massachusetts by Kozol and associates<sup>44</sup> involved the use of extensive psychiatric and social casework services in the attempt to predict the future likely dangerousness of a group of high-risk offenders prior to their release from prison. As it turned out, the researchers were unable to predict nearly two thirds of the violent crime that ultimately occurred (thirty-one crimes out of forty-eight), and nearly two thirds of the persons whom they predicted would be violent (thirty-two persons out of forty-nine) were not. Because of the probable occurrence of such errors, Morris argues that it is fundamentally unjust to detain anyone on the basis of a prediction of his future behavior.<sup>45</sup> In addition, the idea that a person can be punished for what he *might* do rather than for what he has actually done seriously threatens the basic notions of freedom of the individual from unwarranted governmental control.<sup>46</sup>

Monahan extensively reviewed the clinical techniques for predicting violent behavior and concluded that it can only be done within very restricted circumstances.<sup>47</sup> Specifically, he concluded that it is possible to estimate the probability of a violent act in the immediate future when the person is going to remain in a situation that is essentially similar to ones in which he or she had committed violent acts in the past. Monahan presented a complex procedure for estimating this probability, which included: (1) a comparison of the circumstances the offender was likely to encounter in the near future with the circumstances in which the offender had committed violent acts in the past; (2) the recency,

43. For a review, see Blackburn, *op. cit.*, pp. 328–35.

44. Harry L. Kozol, Richard J. Boucher, and Ralph F. Garofalo, "The Diagnosis and Treatment of Dangerousness," *Crime and Delinquency* 18: 371–92 (1972).

45. Norval Morris, *The Future of Imprisonment*, University of Chicago Press, Chicago, 1974, pp. 71–73.

46. *Ibid.*, pp. 83–84.

47. John Monahan, *Predicting Violent Behavior*, Sage, Beverly Hills, Calif., 1981.

severity, and frequency of violent acts the individual had committed in the past; and (3) general statistics on the probability of violence for individuals who are similar in age, sex, race, class, history of drug abuse, residential and employment stability, and educational attainment. Monahan stated that it is not possible to predict violence over a long period of time, or to predict it when a person was moving from one situation to a very different one (e.g., on being released from prison). He also maintained that this type of prediction is entirely separate from the diagnosis of mental disease, and that if mental disease is also of interest, a separate examination must be undertaken. Finally Monahan argued that psychologists should confine themselves to estimating the probability of a violent act and should not recommend whether any official action should be taken in a given case. According to Monahan, criminal justice officials are responsible for deciding whether or not to take official actions while the role of psychologists and psychiatrists is to provide accurate information on which to base those decisions.

Psychological and psychiatric research has now turned away from the question of trying to predict whether particular people will commit acts of violence in the future. Instead, this research has turned to the more general question of identifying factors associated with an increased or decreased likelihood that a person will engage in any type of crime in the future. Most of this research has focused on delinquency rather than adult criminality, and on less serious crime rather than more serious violence, since these are considerably easier to predict.

This research shows that the strongest predictor of later delinquent behavior is earlier childhood problem behaviors such as disruptive classroom conduct, aggressiveness, lying, and dishonesty.<sup>48</sup> This means that the same individuals who caused the most problems when they were young children will also cause the most problems when they are adolescents and adults. The stability of behavioral problems over time suggests that these people may have certain personality characteristics, even if they do not show up on personality tests, that are associated with antisocial or troublesome behavior.

Other factors in early childhood associated with later delinquency include poor parental child management techniques, offending by parents and siblings, low intelligence and educational attainment, and separation from parents.<sup>49</sup> This suggests that the personality characteristic

48. E.g., Rolf Loeber and T. Dishion, "Early Predictors of Male Delinquency: A Review," *Psychological Bulletin* 94(1): 68-99 (1983); Rolf Loeber and Magda Stouthamer-Loeber, "Prediction," in Herbert C. Quay, ed., *Handbook of Juvenile Delinquency*, op. cit., pp. 325-82.

49. Loeber and Dishion, op. cit.; David P. Farrington, "Introduction," in Farrington, ed., *Psychological Explanations of Crime*, Dartmouth, Aldershot, England, 1994, p. xv.

may be associated with or caused by early childhood experiences. This research will be further discussed in Chapter 18 on developmental theories of criminology, but it has also led to several theories that focus on impulsivity as a key personality characteristic related to crime and delinquency.

### IMPULSIVITY AND CRIME

A rather diverse group of researchers have recently suggested that impulsivity is the key personality feature associated with antisocial behavior.<sup>50</sup> In general, these researchers assume that impulsivity is manifested in high levels of activity (especially where the person acts without thinking), a tendency to become impatient and to seek immediate gratification, and a tendency to become distracted.<sup>51</sup>

One theory that focused on this characteristic was by Wilson and Herrnstein.<sup>52</sup> Farrington describes this as a "typical psychological explanation of crime, incorporating propositions seen in several other psychological theories."<sup>53</sup> In general, those propositions include the assumption that crime is inherently rewarding, so that everyone would commit it unless we were restrained by internal inhibitions. These internal inhibitions are associated with what is normally called "conscience," and are developed primarily in early childhood by parents through their child-rearing practices. While criminal behavior may be directly learned through modeling by parents, peers, or the media, most crime is assumed to be the result of the failure to learn internal inhibitions against it.

Within the context of these general assumptions, Wilson and Herrnstein propose that the key individual-level factor associated with criminality is the tendency to think in terms of short-term rather than long-term consequences. The rewards from not committing crime almost

50. David P. Farrington, "Have Any Individual, Family, or Neighbourhood Influences on Offending Been Demonstrated Conclusively?" in Farrington, Robert J. Sampson, and P. O. Wikstrom, eds., *Integrating Individual and Ecological Aspects of Crime*, National Council for Crime Prevention, Stockholm, 1993, pp. 3-37; E. E. Gorenstein and J. P. Newman, "Disinhibitory Psychopathology," *Psychological Review* 87: 301-15 (1980); Jennifer L. White et al., "Measuring Impulsivity and Examining Its Relationship to Delinquency," *Journal of Abnormal Psychology* 103(2): 192-205 (1994); Marvin Zuckerman, "Personality in the Third Dimension," *Personality and Individual Differences* 10: 391-418 (1989); Jeffrey A. Gray, "Drug Effects on Fear and Frustration," in Leslie L. Iversen, Susan D. Iversen, and Solomon H. Snyder, eds., *Handbook of Psychopharmacology: Drugs, Neurotransmitters, and Behavior*, vol. 8, Plenum, New York, 1977.

51. White et al., op. cit.

52. James Q. Wilson and Richard J. Herrnstein, *Crime and Human Nature*, New York: Simon & Schuster, 1985. See especially ch. 7.

53. Farrington, "Introduction," op. cit., pp. xix-xx.

always are in the future, while the rewards from committing it almost always are in the present. The tendency to think in terms of short-term consequences is associated with a variety of factors, including impulsivity and low intelligence. Wilson and Herrnstein also argue that the tendency to engage in criminal actions is associated with five other types of factors: (1) certain features of family life, such as poor child-rearing techniques can produce weak internalized inhibitions; (2) membership in subcultures such as street gangs can increase the value placed on crime; (3) the mass media can directly affect aggressiveness through modeling and can indirectly affect it by convincing people they are being treated unfairly; (4) the economic system can influence that ability to achieve rewards through legitimate activity; and (5) schools can influence whether children believe they can achieve rewards through legitimate activity. Wilson and Herrnstein reviewed a massive amount of data to support their theory, but the extent to which this data support the theory has been questioned by several reviewers.<sup>54</sup>

Glenn Walters also proposed a theory with a strong focus on impulsivity as an enduring personality characteristic.<sup>55</sup> Walters defines "lifestyle criminals" as those who are characterized by "a global sense of irresponsibility, self-indulgent interests, an intrusive approach to interpersonal relationships, and chronic violation of societal rules, laws, and mores." He argues that these criminals have eight specific thinking patterns that allow them to perpetuate this pattern of actions. With *mollification*, these criminals point out the inequities and unfairnesses of life, and blame others for their own choices. The *cutoff* is some visual image or verbal cue (e.g., "f\_\_ it") which has the effect of terminating all thought in the moment and simply allows the criminals to act without worrying about the consequences. A sense of *entitlement* means that any actions are considered justifiable to achieve what is desired. *Power orientation* means that these criminals believe it is a dog-eat-dog world, and those who are strong can do whatever they can get away with. *Sentimentality* is the tendency for these criminals to look back at all the good things they have done in their lives, and to claim that they there-

54. See book reviews by Lawrence E. Cohen, (*Contemporary Sociology* 16: 202-5 [March 1987]); Jack P. Gibbs (*Criminology* 23[2]: 381-88 [May 1985]); Philip Jenkins (*Contemporary Crises* 10: 329-35 [1986]); and Joseph Gusfield (*Science* 231: 413-14 [January 1986]). In addition, Michael R. Gottfredson and Travis Hirschi (*A General Theory of Crime*, Stanford University Press, Stanford, Calif., 1990) have criticized the theory as being theoretically contradictory.

55. Glenn D. Walters, *The Criminal Lifestyle: Patterns of Serious Criminal Conduct*, Sage, Newbury Park, Calif., 1990. Walters's work is based in part on the earlier description of fifty-two "thinking errors" by Samuel Yochelson and Stanton E. Samenow, *The Criminal Personality*, Jason Aronson, New York, vol. I, 1976; vol. II, 1977. For a description of Yochelson and Samenow's theory, see George B. Vold, *Theoretical Criminology*, 2nd ed. prepared by Thomas J. Bernard, Oxford University Press, New York, 1979, pp. 153-56.

fore should not be held responsible for the bad things. *Superoptimism* is the tendency to believe that nothing bad will ever happen to them, including being punished for the crimes they commit. *Cognitive indolence* means that they just don't pay attention to the details in life. *Discontinuity* means they fail to follow through on commitments, carry out intentions, and remain focused on goals over time.

A third theory with a strong focus on impulsivity is Moffitt's theory of "life-course-persistent" offenders.<sup>56</sup> Moffitt describes these as a small group of people who engage "in antisocial behavior of one sort or another at every stage of life." Examples of such behavior would be biting and hitting at age 4, shoplifting and truancy at age 10, drug dealing and car theft at age 16, robbery and rape at age 22, and fraud and child abuse at age 30.<sup>57</sup> Moffitt argues that these behaviors begin with early neuropsychological problems that are caused by factors such as drug use or poor nutrition by the mother while she is pregnant, complications at birth resulting in minor brain damage, or deprivation of affection or child abuse and neglect after birth. These neuropsychological problems then tend to generate a cycle that results in an impulsive personality style. Parents dealing with children who have these problems often have psychological deficiencies themselves, and their attempts to discipline and socialize their children tend to intensify the children's problem behaviors.<sup>58</sup> As the children age, these problems can directly cause problems by interfering with their ability to control their behavior and to think of the future consequences of their actions. In addition, these problems can disrupt the children's success in school, which can reduce their ability to acquire rewards in legitimate activities and increase the likelihood they will turn to illegitimate, antisocial actions for rewards. Although this theory is quite recent, a number of studies have produced supportive results.<sup>59</sup>

56. Terrie E. Moffitt, "Life-Course-Persistent and Adolescent-Limited Antisocial Behavior," *Psychological Review* 100: 674-701 (1993).

57. *Ibid.*, p. 679.

58. *Ibid.*, p. 682.

59. Moffitt contrasted the "life course persistent" offenders with what she called "adolescent-limited" offenders who desist from delinquency as they mature to adults. Daniel Nagan and Kenneth Land ("Age, Criminal Careers, and Population Heterogeneity," *Criminology* 31[3]: 327-62 [1993]) identified separate groups of "life course persistent" and "adolescent-limited" offenders. They also found that the "life course persistent" group can be separated into low- and high-level chronic offenders. Nagan, Land, and Moffitt ("Life-Course Trajectories of Different Types of Offenders," *Criminology* 33[1]: 111-39 [1995]) then explored the nature of these groups of offenders further. They found that adolescent-limited offenders do not completely desist from antisocial behavior after adolescence, but still engage in behaviors such as heavy drinking, drug use, fighting, and minor criminal acts. Finally, Moffitt, Donald Lynam, and Phil Silva ("Neuropsychological Tests Predicting Persistent Male Delinquency," *Criminology* 32[2]: 277-300 [1994]) found that poor neuropsychological status predicts delinquency that begins in early childhood but not that which begins in adolescence.

More recently, Caspi, Moffitt and their colleagues examined personality traits in two very different groups: about 1,000 youths born in Dunedin, New Zealand, in 1972–73, and about 500 ethnically diverse 12- and 13-year-old boys from Pittsburgh.<sup>60</sup> They found that crime-proneness was associated with a combination of impulsivity and “negative emotionality,” which they described as “a tendency to experience aversive affective states such as anger, anxiety, and irritability.” Youths with “negative emotionality,” they suggested, perceive more threats and dangers than other people in the normal affairs of daily life. When these youths also have “great difficulty in modulating impulses,” they tend to quickly turn those negative emotions into actions. Using an analogy from the Wild West, they describe these youths as “quick on the draw.”

### IMPLICATIONS AND CONCLUSIONS

There is a widespread perception that some people are more likely to commit crime and that this increased likelihood remains relatively stable as these people grow older and as they move from situation to situation. This suggests that these people have some personality characteristic that is associated with crime that they carry with them through time and space.

There may be considerable truth to this widespread perception, but the research linking personality to crime has been beset with a whole host of methodological problems.<sup>61</sup> These problems have led many criminologists, even those who are largely favorable to this approach, to discard much of the research as meaningless. For example, Wilson and Herrnstein assert that delinquents score higher than nondelinquents on fourteen separate personality dimensions.<sup>62</sup> Gottfredson and Hirschi comment that this evidence is “at best, unimpressive” since most of it “is produced by attaching personality labels to differences in rates of offending between offenders and nonoffenders.”<sup>63</sup> They conclude that “all these ‘personality’ traits can be explained without abandoning the conclusion that offenders differ from nonoffenders only in their tendency to offend.”

60. Avshalom Caspi, Terrie E. Moffitt, Phil A. Silva, Magda Stouthamer-Loeber, Robert F. Krueger, and Pamela S. Schmutte, “Are Some People Crime-Prone?” *Criminology* 32(2): 163–95 (1994).

61. These are reviewed in Robert F. Kruger et al., “Personality Traits Are Linked to Crime among Men and Women: Evidence from a Birth Cohort,” *Journal of Abnormal Psychology* 103(2): 328–38 (1995). See also Moffitt, op. cit., 1993. For a brief defense of trait-based personality theories, see Caspi et al., op. cit., pp. 164–65.

62. Wilson and Herrnstein, op. cit., ch. 7.

63. Gottfredson and Hirschi, op. cit., p. 209. Their own theory of crime is quite close to a personality theory, and is presented in Chapter 13.

Recent research, such as that focused on impulsivity, seems to be addressing these methodological problems, so that researchers may be closing in on personality characteristics that are actually associated with crime. On the other hand, the relation between impulsivity and crime has been the subject of a great deal of research in the past without producing the consistent results suggested by these recent studies.<sup>64</sup> For example, Scale 9 on the MMPI, previously described as the “hypomania” scale, is largely a measure of impulsivity, but this scale never consistently distinguished between offenders and nonoffenders. How these earlier findings can be reconciled with the more recent research on impulsivity is unclear at present.

Thus, it is not yet clear how large a role personality plays in explaining crime in general. Some individuals may be more likely to commit crime regardless of the situation they are in. But it is also true that some situations are more likely to be associated with crime, regardless of the people who are in them. To understand the behavior of most criminals and delinquents, it may be more profitable to start by analyzing the situations people find themselves in rather than the personalities they carry from situation to situation.

64. Blackburn, op. cit., pp. 191–96.

# Crime and Economic Conditions

In sharp contrast to the explanations of criminal behavior that focus on the characteristics of the individual are those theories that minimize or ignore entirely the significance of the individual's biological or psychological makeup. Perhaps the oldest and most elaborately documented of the theories with a nonindividual orientation are those that explain criminal behavior in terms of economic differences or influence. Discussions of the sad state of the poor, with arguments about the undesirable consequences of poverty such as sickness, crime, and despair, go far back into antiquity.<sup>1</sup> These discussions have generated a great many empirical studies concerning the relationship between poverty and crime.

Some of these studies focus on variations in economic conditions to see if they correspond to variations in crime rates. If crime is caused by poverty, so the reasoning goes, then there should be more crime in places and at times where there are more poor people. Thus these studies have compared times of economic depression with times of economic prosperity, and wealthy areas of a country with poor areas, to see if there are any systematic differences in their crime rates. Later studies looked at whether there is any systematic relationship between crime rates and unemployment rates, and whether crime is associated with economic inequality, that is, with poverty that exists next to wealth.

From the very beginning, however, there has been disagreement about the findings and debate about whether the conclusions being drawn were justified. This chapter examines some of the studies to

demonstrate those disagreements and to draw conclusions about the relationship between crime and poverty.

## RESEARCH ON CRIME AND ECONOMIC CONDITIONS: CONTRADICTIONS AND DISAGREEMENTS

There is an enormous amount of research on the relationship between crime and economic conditions. Many of the results of this research are inconsistent with each other and result in contradictory conclusions about the relationship between these two phenomena. The following is a brief review of a few of these studies to give a sense of the general situation.

As discussed in Chapter 3, as soon as national crime statistics were available in France in the early 1800s, attempts were made by Guerry and Quetelet to demonstrate the relationship between crime and poverty. Both compared wealthy areas of France with poor areas, expecting to find more crime in the poor areas because there were more poor people there. Neither found what he had expected. Guerry found that the wealthiest regions of France had more property crime but less violent crime. He concluded that the higher levels of property crime were caused by opportunity. There were more things to steal in the wealthy provinces. Quetelet found a similar pattern, and also suggested that opportunity might be a factor. But he also pointed to the great inequality between poverty and wealth in the wealthy provinces. This, he suggested, might generate resentment among the poor. In contrast, poor provinces tended to have less inequality because everyone was poor although people generally had enough to survive.

Since that time, hundreds of studies have been published on this subject in Europe and in the United States. These studies, extending back over a period of almost 200 years, often have given complicated and apparently contradictory results. For example, numerous studies have been done on the relationship between crime and the business cycle.<sup>2</sup> The thinking was that there should be more crime during times of economic downturns, when there would be more poor people, and less crime during times of economic expansions. Most of these studies, however, find that the general crime rate does not increase during economic

2. European and American studies up to 1935 are reviewed in Thorsten Sellin, *Research Memorandum on Crime in the Depression*, Social Science Research Council Bulletin No. 27, New York, 1937; reprinted by Arno Press, New York, 1972. A number of these studies are also reviewed in the first and second editions of the present book. See George B. Vold, *Theoretical Criminology*, 2nd ed., prepared by Thomas J. Bernard, Oxford University Press, New York, 1979, pp. 168–71. Abstracts of more recent studies may be found in Thomas C. Castellano and Robert J. Sampson, "Annotations and References of the Literature on the Relationship between Economic Conditions and Criminality," in Kenneth R. Danser and John H. Laub, *Juvenile Criminal Behavior and Its Relation to Economic Conditions*, Criminal Justice Research Center, Albany, N.Y., 1981.

1. For a brief history of these arguments as they relate to crime, see Lynn McDonald, *The Sociology of Law and Order*, Faber and Faber, London, 1976.

recessions and depressions.<sup>3</sup> Some studies even find the opposite situation—that crime actually decreases during such periods. For example, Henry and Short found that crimes of violence in American cities from the late 1920s to the late 1940s declined during times of economic downturn, and increased during periods of economic expansion.<sup>4</sup>

Quetelet had pointed out that even wealthy areas may have many poor people in them. Similarly, it may be that there are more poor people even in times of economic expansion, and this would account for the increases in crime rates. A more direct measure of poverty therefore would be to count the number of poor people in a particular time or place, to see if times or places with more poor people have greater amounts of crime. Results of such studies, however, have also proved inconsistent and even contradictory.

For example, using 1970 statistics, Cho found that the percentage of people below the poverty line in the forty-nine largest cities of the United States was not associated with any of the seven index crimes reported by the FBI.<sup>5</sup> Jacobs reached a similar conclusion with respect to the crimes of burglary, robbery, and grand larceny.<sup>6</sup> In contrast, Ehrlich found that there was a positive relationship between state property crime rates for 1940, 1950, and 1960 and the percentage of households receiving less than half the median income.<sup>7</sup> An even stronger result was found by Loftin and Hill, who created an index of “structural poverty” including measures of infant mortality, low education, and one-parent families, as well as income.<sup>8</sup> They found very strong correlation between this measure and state homicide rates. Similar results using the same index of structural poverty were found in two additional studies, one of which concluded that it was strongly correlated with homicides involving families and friends but not in homicides involving strangers.<sup>9</sup> To make matters even more confusing, some studies have found that there

3. Sharon K. Long and Ann D. Witte, “Current Economic Trends: Implications for Crime and Criminal Justice,” pp. 69–143, in Kevin Wright, ed., *Crime and Criminal Justice in a Declining Economy*, Oelgeschlager, Gunn and Hain, Cambridge, Mass., 1981.

4. Andrew F. Henry and James F. Short, Jr., *Suicide and Homicide*, The Free Press, New York, 1954.

5. Y. H. Cho, *Public Policy and Urban Crime*, Ballinger, Cambridge, Mass., 1974.

6. D. Jacobs, “Inequality and Economic Crime,” *Sociology and Social Research* 66: 12–28 (Oct. 1981).

7. Isaac Ehrlich, “Participation in Illegal Activities,” in Gary S. Becker and W. M. Landes, eds., *Essays in the Economics of Crime and Punishment*, Columbia University Press, New York, 1974.

8. Colin Loftin and R. H. Hill, “Regional Subculture and Homicide,” *American Sociological Review* 39: 714–24 (1974).

9. Steven F. Messner, “Regional and Racial Effects on the Urban Homicide Rate: The Subculture of Violence Revisited,” *American Journal of Sociology* 88: 997–1007 (1983); M. Wayne Smith and Robert Nash Parker, “Type of Homicide and Variation in Regional Rates,” *Social Forces* 59(1): 136–47 (Sept. 1980). Smith and Parker argue that structural poverty is related to homicides between families and friends, but not between strangers.

are different poverty-crime relationships in different regions of the country.<sup>10</sup> One of these studies concluded that the results are best explained by variations in the way crimes are reported and recorded, rather than by variations in the incidence of crime.<sup>11</sup>

#### CRIME AND UNEMPLOYMENT: A DETAILED LOOK AT RESEARCH

Many people believe that unemployment causes crime, so they believe that crime should increase when unemployment is high and decrease when unemployment is low. This popular view presumably is based on the assumption that unemployment causes poverty, and then poverty causes crime. Unemployment also is an indicator of general economic conditions, since it goes up in times of economic slowdown and goes down in times of economic expansion. The popular assumption that crime is related to the business cycle probably is based on an assumption about a relationship between crime and unemployment. A more detailed look at research on unemployment and crime is presented here both to explore this specific issue and to give a general sense of the problems that arise with research that attempts to relate crime to economic conditions.

Consider first the studies that focus on the relationship between unemployment and juvenile delinquency. A study by Glaser and Rice found that delinquency is inversely related to unemployment; that is, delinquency is high when unemployment is low and vice versa.<sup>12</sup> Glaser and Rice suggested that this might be because in times of unemployment parents are more available to their children. Two econometric studies, however, concluded that delinquency is directly related to unemployment, and that a 1 percent increase in unemployment results in an approximately .15 percent increase in delinquency.<sup>13</sup> A third econo-

10. Steven F. Messner, “Regional Differences in the Economic Correlates of the Urban Homicide Rate,” *Criminology* 21(4): 477–88 (Nov. 1983); John D. McCarthy, Omer Galle, and William Zimmern, “Population Density, Social Structure, and Interpersonal Violence,” *American Behavioral Scientist* 18(6): 771–89 (July–Aug. 1975); Booth, Johnson, and Choldin, op. cit.

11. Booth et al., op. cit.

12. Daniel Glaser and Kent Rice, “Crime, Age, and Employment,” *American Sociological Review* 24: 679–86 (Oct. 1959). Additional support for this study can be found in Jack P. Gibbs, “Crime, Unemployment and Status Integration,” *The British Journal of Criminology* 6(1): 49–58 (Jan. 1966). The study was criticized as a statistical artifact in Marcia Guttentag, “The Relationship of Unemployment to Crime and Delinquency,” *Journal of Social Issues* 24(1): 105–14 (Jan. 1968).

13. Larry D. Singell, “An Examination of the Empirical Relationship Between Unemployment and Juvenile Delinquency,” *The American Journal of Economics and Sociology* 26(4): 377–86 (1965); and Belton M. Fleischer, “The Effect of Unemployment on Juvenile Delinquency,” *Journal of Political Economy* 71: 543–55 (Dec. 1963). Related works by Fleischer are “The Effect of Income on Delinquency,” *The American Economic Review*, March 1966, pp. 118–37, and *The Economics of Delinquency*, Quadrangle Books, Chicago, 1966. This position is supported in Harold L. Votey, Jr., and Lad Phillips, “The Control of Criminal Activity: An Economic Analysis,” in Daniel Glaser, ed., *Handbook of Criminology*, Rand McNally, Chicago, 1974, pp. 1065–69.



metric study found that unemployment had no effect on the criminality of urban males in the age group 14 to 24.<sup>14</sup> Danser and Laub used victimization data rather than official police statistics, and concluded that there was no relationship between juvenile delinquency and adult unemployment, contradicting Glaser and Rice's findings.<sup>15</sup> They also found that there was no relationship between delinquency and juvenile unemployment rates, even within specific age, sex, and racial groups. Calvin, in contrast, argues there is a close relationship between unemployment and crime for black youths, and that those who argue there is no relationship are using incorrect data or faulty interpretations.<sup>16</sup>

There also have been contradictory findings on the question of the relationship between unemployment and adult crime. Nagel found a strong correlation between crime rates and unemployment rates when he ranked each of the fifty states on those two measures.<sup>17</sup> Brenner concluded, on the basis of a study of national crime and unemployment statistics from 1940 to 1973, that a sustained 1 percent increase in unemployment results in a 5.7 percent increase in murder.<sup>18</sup> Berk and his colleagues studied programs that provide unemployment benefits to released prisoners, and concluded: "For ex-offenders at least, unemployment and poverty do cause crime."<sup>19</sup> In contrast, a number of other authors have concluded that there is either no relationship between unemployment and crime or that the relationship (sometimes found to be positive and sometimes negative) is insignificant.<sup>20</sup>

These inconsistent and contradictory results continue to be generated by research. In 1983, Freeman reviewed eighteen of these studies and concluded that higher unemployment rates are associated with

14. Isaac Ehrlich, "Participation in Illegitimate Activities: A Theoretical and Empirical Investigation," *Journal of Political Economy*, May-June 1973, pp. 521-64.

15. Danser and Laub, op. cit.

16. Allen D. Calvin, "Unemployment among Black Youths, Demographics, and Crime," *Crime and Delinquency* 27(2): 234-44 (1981).

17. William G. Nagel, "A Statement on Behalf of a Moratorium on Prison Construction," *Crime and Delinquency* 23(2): 154-72 (April 1977).

18. Harvey Brenner, *Estimating the Social Costs of National Economic Policy*, U.S. Government Printing Office, Washington, D.C., 1976. See also a summary of his testimony before the House Judiciary Committee's Subcommittee on Crime in *Criminal Justice Newsletter*, Oct. 10, 1977, p. 5.

19. Richard A. Berk, Kenneth J. Lenihan, and Peter H. Rossi, "Crime and Poverty: Some Experimental Evidence from Ex-Offenders," *American Sociological Review* 45: 766-86 (Oct. 1980). See also their *Money, Work, and Crime: Experimental Evidence*, Academic Press, New York, 1980.

20. See, for example, Long and Witte, op. cit.; D. Jacobs, "Inequality and Economic Crime," *Sociology and Social Research* 66: 12-28 (Oct. 1981); Alan Booth, David R. Johnson, and Harvey Holdin, "Correlates of City Crime Rates: Victimization Surveys Versus Official Statistics," *Social Problems* 25: 187-97 (1977); and Paul E. Spector, "Population Density and Unemployment," *Criminology* 12(4): 399-401 (1975).

higher crime rates, but that the relation is weak and generally insignificant.<sup>21</sup> His conclusion was consistent with two earlier and somewhat smaller reviews of the research on unemployment and crime.<sup>22</sup> In 1987, however, Chiricos reviewed sixty-three studies of crime and unemployment.<sup>23</sup> He concluded that the relationship between unemployment and crime is positive and frequently significant, especially for property crime, and that this effect was especially strong after 1970.<sup>24</sup> Chiricos also argued that the positive relation between crime and unemployment is more likely to be found when smaller units are examined (e.g., neighborhoods) rather than larger units (e.g., nations), because these smaller units "are more likely to be homogeneous."<sup>25</sup> In contrast, economic conditions in larger units often have little impact on the extent of poverty and deprivation in particular areas.<sup>26</sup>

But after Chiricos's review, Land and his colleagues found consistently negative relationships between homicide and unemployment after controlling for other variables related to economic deprivation,<sup>27</sup> and negative relationships more often than positive ones for robbery, and positive but nonsignificant effects for rape and assault.<sup>28</sup> Commenting on Chiricos's conclusion, Land, Cantor, and Russell suggest that all the evidence, taken together, support the inference of a weak negative relationship between crime and unemployment from 1960 to 1980.<sup>29</sup> That is, in their view, crime goes down when unemployment goes up, but not very much. However, they agreed with Chiricos that positive relationships between crime and unemployment (crime goes up when un-

21. Richard B. Freeman, "Crime and Unemployment," ch. 6 in James Q. Wilson, ed., *Crime and Public Policy*, ICS Press, San Francisco, 198

22. Long and Witte, op. cit.; and R. W. Gillespie, "Economic Factors in Crime and Delinquency: A Critical Review of the Empirical Evidence," pp. 601-26 in House of Representatives, *Unemployment and Crime: Hearings Before the Subcommittee on Crime of the Committee on the Judiciary*, U.S. Government Printing Office, Washington, D.C., 1978. See also Thomas Orsagh, "Unemployment and Crime," *Journal of Criminal Law and Criminology* 71(2): 181-83 (summer 1980).

23. Theodore G. Chiricos, "Rates of Crime and Unemployment: An Analysis of Aggregate Research Evidence," *Social Problems* 34(2): 187-211 (April 1987).

24. *Ibid.*, p. 203.

25. *Ibid.*, p. 195.

26. See Kenneth C. Land, Patricia L. McCall, and Lawrence E. Cohen, "Structural Covariates of Homicide Rates: Are There Any Invariances Across Time and Space," *American Journal of Sociology* 95: 922-63 (1990).

27. *Ibid.*

28. Patricia L. McCall, Kenneth C. Land, and Lawrence E. Cohen, "Violent Criminal Behavior: Is There a General and Continuing Influence of the South?" *Social Science Research* 21(3): 286-310 (1992).

29. Kenneth C. Land, David Cantor, and Stephen T. Russell, "Unemployment and Crime Rate Fluctuations in the Post-World War II United States," ch. 3 in John Hagan and Ruth D. Peterson, eds., *Crime and Inequality*, Stanford University Press, Stanford, Calif., 1995, fn. 2 (p. 309).

employment goes up) are more likely to be found with smaller units of analysis and for property crimes.<sup>30</sup>

### PROBLEMS INTERPRETING RESEARCH ON CRIME AND ECONOMIC CONDITIONS

There are six major problems with interpreting this research, leading to all the inconsistent and contradictory conclusions reviewed above. The first problem is that *poverty is always in part a subjective condition*, relative to what others have, rather than the simple presence or absence of a certain amount of property or other measure of wealth. What one person considers poverty another may view as a level of satisfactory comfort, if not of abundance. Because of the lack of any clear definition of poverty, it has been measured in at least twenty different ways in different studies.<sup>31</sup> These different ways of measuring poverty can lead to the inconsistent and contradictory results reviewed above. Unemployment, too, is an unclear concept. Official unemployment rates only count people who are "able and available" for work. This often is defined in terms of having actually applied for more than one job in the previous week. People who do not actively seek work therefore are not counted as unemployed in official unemployment statistics.<sup>32</sup> In addition, many people are "underemployed" in low wage, dead-end jobs with terrible working conditions. Regardless of how they feel about those jobs, these people are counted as employed.<sup>33</sup> Thus, despite the fact that poverty and unemployment are genuine kinds of human experience, they nevertheless do not lend themselves readily to the accurate and consistent gathering of information.

The second problem is that *there are two contradictory theoretical assumptions* about the relationship between economic conditions and crime. The first assumption is that the relationship is inverse or negative; that is, when economic conditions are good, the amount of crime should be low, while when economic conditions are bad, crime should be high. That assumption is found throughout history and is still fairly commonly believed by the public.

30. *Ibid.*, pp. 56–57.

31. Sampson and Lauritsen, *op. cit.*, p. 5.

32. Elliott Curry, *Confronting Crime*, Pantheon, New York, 1985, ch. 4, argues that "labor market participation" is more likely to be related to crime than "unemployment." "Labor market participation" measures the number of people who are in the labor market, which includes those who are employed and those who are unemployed but "able and available" to work. This contrasts with those who have dropped out of the labor market altogether. These are the people who are not counted in unemployment statistics, and they are more likely to be involved in crime than "unemployed" people who are actively seeking work.

33. For some of the problems of counting unemployed persons, see Gwynn Nettler, *Explaining Crime*, 3rd ed., McGraw-Hill, New York, 1984, pp. 127–29.

But as described above, many studies found the opposite of that assumption. As a result, a second theoretical assumption has arisen about the relation between crime and economic conditions—that the relationship is direct or positive. This second assumption looks at criminality as an extension of normal economic activity (a criminal fringe, as it were), and therefore assumes that it increases and decreases in the same manner as other economic activity. If the second assumption is correct, the amount of crime should increase and be at its highest point when economic conditions are good, and it should decrease when economic conditions are bad.

In 1931, Morris Ploscowe used the second assumption in an attempt to explain the generally accepted belief that crime had increased throughout much of the Western world during the previous 150 years, despite an obvious increase in the economic well-being of nearly everyone.<sup>34</sup> Ploscowe argued that the unparalleled economic and social progress had given ordinary workers a much better economic position than they had ever enjoyed in the past, but it also brought new pressures and demands that often resulted in criminality. Ploscowe concluded: "Where increased incentives and increased occasions for illegitimate activities result from an increased amount of legitimate activity, there is apt to be an increase in crime."<sup>35</sup>

But Ploscowe's assumption that crime has been rising for 150 years was later contradicted in a study by Gurr and his colleagues, which found that the crime rates of London, Stockholm, and Sydney had actually decreased from the 1840s to the 1930s (Ploscowe wrote his report in 1931) and at that time were only about one-eighth of their earlier levels.<sup>36</sup> Gurr also found that from the 1930s to the 1970s crime had increased by approximately the same amount as the previous decrease. He speculated that some of the recent increases in crime rates may be due to more complete police reporting of crimes, but argued that, in general, these statistics reflected basic trends in the incidence of criminal behavior.

34. Morris Ploscowe, "Some Causative Factors in Criminality," *Report on the Causes of Crime*, vol. 1, part 1, no. 13, Report of National Commission on Law Observance and Law Enforcement, Washington, D.C., June 26, 1931, pp. 115–16.

35. *Ibid.*, p. 114.

36. Ted Robert Gurr, *Rogues, Rebels, and Reformers*, Sage, Beverly Hills, Calif., 1976. This study also considers crime rates of Calcutta, a non-Western city that had a different pattern of crime rates. For the complete study, see Ted Robert Gurr, Peter N. Grabosky, and Richard C. Hula, *The Politics of Crime and Conflict: A Comparative History of Four Cities*, Sage, Beverly Hills, Calif., 1977. A shorter version is found in Gurr's article "Contemporary Crime in Historical Perspective: A Comparative Study of London, Stockholm, and Sydney," *Annals of the American Academy of Political and Social Science* 434: 114–36 (Nov. 1977).

Gurr considered the relationship between crime and economic conditions, and found support for both assumptions<sup>37</sup>:

The evidence of the city studies is that poverty *and* wealth are correlated with the incidence of common crime, not only theft but crimes against the person as well. In nineteenth century London, Stockholm, and New South Wales both theft and assault increased during periods of economic slump and declined when economic conditions improved again. Economic distress had very little effect on crime rates in either direction in the twentieth century, but as total productivity (wealth) increased, so did common crime. Evidently two separate causal processes were at work at different times.

Gurr's notion that separate causal processes may be at work at different times raises the possibility that both of these interpretations may be correct. This gives rise to the third problem, which lies in *specifying the amount of time* before economic changes are said to have an effect on criminality. Should one assume that changes in crime rates will occur at the same time as changes in economic conditions, or should one assume that there will be some period of delay, or "lag," before the crime rates are affected? Some studies find very different relationships between economic conditions and criminality when different time lags are considered.<sup>38</sup> The same study can then be cited as support for both contradictory theoretical assumptions simply by selecting the data at different time lags.

Cantor and Land argue that these two theoretical assumptions are correct but that they operate at different times.<sup>39</sup> On the one hand, they agree with the general and widely held view that unemployment increases the motivation to commit crime. Thus, higher unemployment rates should be associated with higher crime rates. But this "motivation" effect, they argue, should be "lagged" by some period of time. People only experience the full effects of unemployment after some period of time because of their own savings, support from their families and friends, and government programs such as unemployment compensation.

37. Gurr, *Rogues, Rebels, and Reformers*, p. 179.

38. See, for example, Dorothy Swaine Thomas, *Social Aspects of the Business Cycle*, Routledge & Kegan Paul, London, 1925, p. 143. This point is argued more extensively and with supporting data in earlier editions of the present text. See George B. Vold, *Theoretical Criminology*, Oxford University Press, New York, 1958, pp. 177–81; see also the 2nd ed., prepared by Thomas J. Bernard, 1979, pp. 176–78.

39. David Cantor and Kenneth C. Land, "Unemployment and Crime Rates in the post-World War II United States: A Theoretical and Empirical Analysis," *American Sociological Review* 50: 317–23 (1985).

On the other hand, they agree with Ploscowe's argument that economic activity is associated with increased opportunities to commit crime. When unemployment rates are higher, overall economic activity tends to be lower and there should be lower crime rates because there are fewer opportunities to commit it. But, they argue, this "opportunity" effect should occur immediately. As economic activities decline, the opportunities to commit crime decline simultaneously with them. Thus, there should be no "lag" in the effect of decreased opportunities on crime rates.

Using national data on unemployment rates and index crimes in the United States from 1946–1982,<sup>40</sup> these researchers found the predicted positive-negative effect for the property-related crimes of robbery, burglary, and larceny-theft. That is, in each case, they found both an immediate "opportunity" effect and a lagged "motivation" effect. Thus, when unemployment went up, robbery, burglary, and larceny-theft decreased immediately but then increased the next year. The overall impact of these two contradictory trends was negative—i.e., when unemployment increased, these crimes declined overall but not by much. Homicide and auto theft showed only the immediate negative "opportunity" effect—that is, they declined when unemployment went up but did not increase the next year. Finally, rape and assault did not seem to be associated with unemployment at all.

The fourth problem with interpreting this research relates to Chiricos's conclusion that the positive relation between crime and unemployment was more likely to be found in smaller units, such as neighborhoods and communities, rather than in larger units such as metropolitan areas and nations. The problem is *determining the size of the unit* that economic factors affect. Thus, economic conditions in a neighborhood might strongly affect crime in that neighborhood, but economic conditions in a nation might have little impact on national crime rates.

The conclusion that unemployment is associated with crime at the community level is consistent with research on the experience of people who live in areas with high unemployment. Individuals in those areas may mix crime and employment in a variety of ways, and participation in illegal work may depend considerably on the nature of the legal

40. Cantor and Land, *op. cit.* This analysis was replicated and extended, using data to 1990, in Land, Cantor, and Russell, *op. cit.* See also the interchange between Chris Hale and Dima Sabbagh ("Unemployment and Crime") and Cantor and Land ("Exploring Possible Temporal Relationships of Unemployment and Crime: A Comment on Hale and Sabbagh") in *Journal of Research in Crime and Delinquency* 28(4): 400–425 (1991).

work market.<sup>41</sup> Especially since the 1980s, the legitimate work traditionally available to “unskilled” young males in inner-city areas has declined significantly, while the illegal work available to them, particularly those associated with illegal drug markets, has expanded rapidly. The illegal work pays better and provides better working conditions than legal work, so these youths have an incentive to become involved in crime. Early involvement in crime and incarceration as an adolescent then further limits their access to legal jobs as an adult. In contrast, youths who have early successful legitimate work experiences tend to have limited access to illegal work later in life.

Fagan argued that these experiences shape the cultural and social context of inner-city adolescents<sup>42</sup>:

With limited access to legal work, and in segregated neighborhoods with high concentrations of joblessness, alienated views of legal work and diminished expectations for conventional success spread through social contagion and become normative. Tastes and preferences are driven by definitions of status dominated by material consumption. Violence substitutes for social control as a means to resolve disputes and attain status, increasing the likelihood either of mortality or incarceration. Legal work at low pay is defined poorly and carries a negative social stigma. With intergenerational job networks disrupted, the ability of young people to access increasingly complex labor markets with limited human capital or personal contacts foretells poor work outcomes.

The fifth problem with interpreting research on economic conditions and crime is illustrated by this description. High crime communities usually have a whole host of factors that might cause crime—poverty, unemployment, high rates of divorce and single-parent households, high population density, dilapidated housing, poor schools and other social services, frequent residential mobility and population turnover, and concentrations of racial and ethnic minorities. Any or all of these factors might cause crime, but all of them tend to be found in the same places at the same times. The problem, then, is *determining which factors actually cause crime* and which ones just happen to be there but have no

41. Jeffrey Fagan, “Legal and Illegal Work: Crime, Work and Unemployment,” in Burton Weisbrod and James Worthy, eds., *Dealing with Urban Crisis: Linking Research to Action*, Northwestern University Press, Evanston, Ill., 1996. For relatively similar conclusions, see Richard B. Freeman, “The Labor Market,” ch. 8 in James Q. Wilson and Joan Petersilia, eds., *Crime*, ICS Press, San Francisco, 1995.

42. Fagan, op. cit., pp. 37–38. See also John Hagan, “The Social Embeddedness of Crime and Unemployment,” *Criminology* 31(4): 465–91 (1993). Hagan argues that there are different directions of causality between crime and unemployment at different levels of analysis. Macro-level theory and research tends to view unemployment as a cause of crime, but micro-level theory and research tends to view crime as a cause of unemployment. What is missing in this literature is “an understanding of the proximate causes of joblessness in the lives of individuals.”

actual effect. This problem is called “multicollinearity”—i.e., a number of possible causal factors are all highly intercorrelated with each other.<sup>43</sup> In this situation, relatively small changes in statistical techniques can result in different conclusions about which factors have a causal impact and which do not. Thus, it can give rise to the type of inconsistent and contradictory results that are reviewed above.

To address this problem, Land and his colleagues incorporated all the variables used in twenty-one studies of homicide at city, metropolitan area, and state levels into one “baseline regression model.”<sup>44</sup> They then “clustered” these variables to see what would “hang together” over time and place. The most important clustering of variables was around what they called “resource deprivation/affluence,” which included measures of poverty and income inequality, as well as percent black and percent of children not living with both parents. While these factors are conceptually separate, the statistical techniques could not separate them from each other in the effects they had on homicide. This cluster of variables had a significant positive effect on city, metropolitan area, and state levels of homicide in 1960, 1970, and 1980, with some tendency for this effect to increase over time.

The sixth problem with interpreting research on crime and economic conditions has to do with adequately *distinguishing between concepts of poverty and economic inequality*.<sup>45</sup> The “resource deprivation/affluence” cluster described above includes both poverty and economic inequality. These are quite different concepts. Poverty refers to the lack of some fixed level of material goods necessary for survival and minimum well-being. In contrast, economic inequality refers to a comparison between the material level of those who have the least in a society and the material level of other groups in that society. Countries in which everyone has an adequate material level have little or no poverty, but they may still have a great deal of economic inequality if there is a very large gap between those who have the least and those who have the most. On the other hand, countries in which everyone is poor have a great deal of poverty but little or no economic inequality.

43. Robert J. Sampson and Janet L. Lauritsen, “Violent Victimization and Offending,” in Albert J. Reiss, Jr., and Jeffrey A. Roth, eds., *Understanding and Preventing Violence—Social Influences*, vol. 3, National Academy Press, Washington, D.C., 1994, p. 66; Land et al., 1990.

44. Land, McCall, and Cohen, op. cit., 1990.

45. Many studies of inequality use the Gini coefficient, which is a statistic that measures the extent to which incomes are dispersed in a society relative to the average income in that society. The coefficient ranges from “0,” where everyone has equal shares of the total income, to a “1,” where one person has all the income and everyone else has none. See S. Yitzhaki, “Relative Deprivation and the Gini Coefficient,” *Quarterly Journal of Economics* 93: 321–24 (May 1974); and M. Bronfenbrenner, *Distribution Theory*, Aldine-Atherton, New York, 1971.

Hsieh and Pugh analyzed thirty-four studies that had been published between 1980 and 1991 that focused on the relationship between poverty, economic inequality, and violent crime.<sup>46</sup> The sampling units ranged from neighborhoods to nations, and most focused either on homicide or on violent crime in general, while a few focused on rape, robbery, or assault. These thirty-four studies produced seventy-six correlation coefficients relating violent crime to either poverty and economic inequality. Seventy-four of those coefficients were positive, and fifty-six of the seventy-four were at least moderately strong ( $>.25$ ). These are very consistent results suggesting that both poverty and economic inequality are associated with higher levels of violent crime. Hsieh and Pugh concluded that these results were somewhat stronger for homicide and assault than they were for robbery and rape.

More recently, attention has turned to the specific effects of racial inequality in the United States. The issue is whether the specific inequality between blacks and whites, rather than general inequality in the entire society, has a specific effect on black crime rates. For example, Messner and Golden examined the effect of inequality between whites and blacks in the 154 largest U.S. cities.<sup>47</sup> First, they performed analyses similar to the one done by Land and his colleagues, as described above, and found similar results about the “resource deprivation/affluence” cluster. But then they went on to construct a measure of racial inequality, which included the gap between whites and blacks in income, education, and unemployment levels, and the extent of residential segregation. They found that increased levels of inequality between the races were associated with higher black, white, and total homicide rates, separate from the effects of the “resource deprivation/affluence” cluster. They concluded that “Racial inequality evidently affects the social order in some generalized way that increases criminogenic pressures on the entire population.” Other results on this subject, however, have been very mixed.<sup>48</sup>

46. Ching-Chi Hsieh and M. D. Pugh, “Poverty, Income Inequality, and Violent Crime: A Meta-Analysis of Recent Aggregate Data Studies,” *Criminal Justice Review* 18(2): 182–202 (1983).

47. Steven F. Messner and Reid M. Golden, “Racial Inequality and Racially Disaggregated Homicide Rates: An Assessment of Alternative Theoretical Explanations,” *Criminology* 30(3): 421–45 (1992).

48. E.g., Edward S. Shihadeh and Darrell J. Steffensmeier, “Economic Inequality, Family Disruption, and Urban Black Violence,” *Social Forces* 73(22): 729–51 (1994); Gary LaFree, Kriss A. Drass, and Patrick O’Day, “Race and Crime in Postwar America: Determinants of African-American and White Rates, 1957–1988,” *Criminology* 30(2): 157–85 (1992); Miles D. Harer and Darrell J. Steffensmeier, “The Different Effects of Economic Inequality on Black and White Rates of Violence,” *Social Forces* 70: 1035–54 (1992).

## IMPLICATIONS AND CONCLUSIONS

Both poverty and inequality are clearly associated with crime, especially violent crime, but whether they *cause* crime is another matter. At present, a stronger case can be made that the level of general economic inequality in a society—i.e., the gap between its wealthiest and its poorest citizens—has a causal impact on the level of violent crime in that society.

If that is the case, then criminologists may have been looking at the wrong end of the social scale in their attempts to explain the relationship between crime and economic conditions. Poor people may have higher crime rates when there are many wealthy people around them, but they may have lower crime rates when other people around them are also poor. If this is true, then the key factor needed to explain the amount of crime in a particular location would be the number of wealthy people, not the number of poor people.<sup>49</sup> This would be consistent with the general trend for crime to expand along with the expansion of wealth in society.

In addition, the case for poverty as a cause of crime is much weaker than the case for economic inequality. Since the 1970s, there has been a general expansion of wealth in American society, consistent with an overall expansion of the economy. But there has also been an increasing concentration of extreme poverty in inner-city areas, leading to the development in the United States of a relatively isolated and impoverished segment of the population sometimes called “the underclass.” It is within this group that the relationship between crime and economic conditions seems to have the most direct effect.<sup>50</sup>

Certainly, at the community level, there is a clear association between poverty and crime. For example, after reviewing numerous studies about local areas, Sampson and Lauritsen concluded that “Almost without exception, studies of violence find a positive and usually large correlation between some measure of area poverty and violence—especially homicide.”<sup>51</sup> But in the end, they conclude that poverty itself does not directly cause crime because crime rates do not consistently increase and decrease as the number of poor people increases and decreases. Consistent with this conclusion, Sampson and Lauritsen suggest that, de-

49. E.g., Sheldon Danziger and David Wheeler, “The Economics of Crime: Punishment or Income Redistribution,” *Review of Sociology and Economics* 33: 113–31 (1975); Paul Eberts and Kent P. Schwirian, “Metropolitan Crime Rates and Relative Deprivation,” *Criminologica* 5: 43–52 (Feb. 1968).

50. In general, see John Hagan and Ruth D. Peterson, “Criminal Inequality in America,” and Robert J. Sampson and William Julius Wilson, “Toward a Theory of Race, Crime, and Urban Inequality,” chs. 1 and 2 in Hagan and Peterson, eds., *Inequality and Crime*, Stanford University Press, Stanford, Calif., 1994. See also John Hagan, *Crime and Disrepute*, Pine Forge Press, Thousand Oaks, Calif., 1994.

51. Sampson and Lauritsen, *op. cit.*, p. 63.

spite the overwhelming association between violence and poverty, the data suggest that the direct effect of poverty on crime is weak and probably is conditional on other community factors. They particularly point to factors involved in the processes of rapid community change. For a further discussion of these factors, we turn to one of the most important early sociological theories, that by Emile Durkheim.

## Durkheim, Anomie, and Modernization

The preceding chapter concluded that economic inequality might be associated with crime. In contrast Emile Durkheim viewed inequality as a natural and inevitable human condition that is not associated with social maladies such as crime unless there is also a breakdown of social norms or rules. Durkheim called such a breakdown *anomie* and argued that it had occurred in his own society as a result of the rapid social changes accompanying the modernization process. Like Lombroso's theories, written approximately twenty years earlier, Durkheim's theories were in part a reaction to the classical assumptions that humans were free and rational in a contractual society. But where Lombroso had focused on the determinants of human behavior within the individual, Durkheim focused on society and its organization and development.

Durkheim's theories are complex, but his influence on criminology has been great. The present chapter examines his theories and discusses them in the context of later research on the relationship between crime and modernization. But Durkheim's ideas also appear in several later chapters. In the 1920s a group of Chicago sociologists used his theories, among others, as the basis for an extensive research project linking juvenile delinquency to rapid social changes in urban areas. These studies are presented in Chapter 10. In 1938 Robert K. Merton revised Durkheim's conception of anomie and applied it directly to American society. This and other similar theories are now known as *strain* theories of crime and delinquency and are presented in Chapter 11. In 1969 Travis Hirschi returned to Durkheim's original conception of anomie and used it as the basis for his *control* theory of delinquency. Control theories are discussed in Chapter 13. Finally, Durkheim's view of "crime

as normal” is the basis for social reaction views of the law-enactment process, which are discussed in Chapter 14.

### EMILE DURKHEIM

Emile Durkheim (1858–1917) has been called “one of the best known and one of the least understood major social thinkers.”<sup>1</sup> Presenting his thought is no easy task, since “the controversies which surround this thought bear upon essential points, not details.”<sup>2</sup> For this reason it is best to approach his work by first considering the political and intellectual climate in which it evolved.

The nineteenth century in France was an age of great turmoil generated by the wake of the French Revolution of 1789 and by the rapid industrialization of French society. Speaking of these two “revolutions,” Nisbet has pointed out that “In terms of immediacy and massiveness of impact on human thought and values, it is impossible to find revolutions of comparable magnitude anywhere in human history.”<sup>3</sup> The writings of the day were filled with a “burning sense of society’s sudden, convulsive turn from a path it had followed for millennia” and a “profound intuition of the disappearance of historic values—and with them, age-old securities, as well as age-old tyrannies and inequalities—and the coming of new powers, new insecurities, and new tyrannies that would be worse than anything previously known unless drastic measures were taken. . . .”<sup>4</sup>

Sociology had been developed by Auguste Comte in the first half of the century largely in response to the effects of these two revolutions; it was part of a more general effort to construct a rational society out of the ruins of the traditional one.<sup>5</sup> Sociologists saw themselves as providing a rational, scientific analysis of the monumental social changes that were occurring, in order to “mastermind the political course of ‘social regeneration.’”<sup>6</sup> This regeneration would consist primarily of the reestablishment of social solidarity, which appeared to have substantially disintegrated in French society.

Emile Durkheim was born in a small French town on the German border, one year after the death of Comte. After completing his studies

1. Dominick LaCapra, *Emile Durkheim, Sociologist and Philosopher*, Cornell University Press, Ithaca, N.Y., 1972, p. 5.

2. *Ibid.*, p. 5.

3. Robert A. Nisbet, *Emile Durkheim*, Prentice Hall, Englewood Cliffs, N.J., 1965, p. 20.

4. *Ibid.*, p. 20.

5. LaCapra, *op. cit.*, p. 41.

6. Julius Gould, “Auguste Comte,” in T. Raison, ed., *The Founding Fathers of Social Science*, Penguin, Harmondsworth, U.K., 1969, p. 40.

in Paris he spent several years teaching philosophy at various secondary schools in the French provinces near Paris. He then spent a year in Germany, where he studied social science and its relation to ethics under the famed experimental psychologist Wilhelm Wundt. Durkheim’s publication of two articles as a result of these studies led to the creation of a special position for him at the University of Bordeaux, where in 1887 he taught the first French university course in sociology. In 1892 Durkheim received the first doctor’s degree in sociology awarded by the University of Paris, and ten years later he returned to a position at the university, where he dominated sociology until his death in 1917.

Durkheim’s analysis of the processes of social change involved in industrialization is presented in his first major work, *De la division du travail social (The Division of Labor in Society)*,<sup>7</sup> written as his doctoral thesis and published in 1893. In it he describes these processes as part of the development from the more primitive “mechanical” form of society into the more advanced “organic” form. In the mechanical form each social group in society is relatively isolated from all other social groups, and is basically self-sufficient.<sup>8</sup> Within these social groups individuals live largely under identical circumstances, do identical work, and hold identical values. There is little division of labor, with only a few persons in the clan or village having specialized functions. Thus there is little need for individual talents, and the solidarity of the society is based on the uniformity of its members.

Contrasted with this is the organic society, in which the different segments of society depend on each other in a highly organized division of labor. Social solidarity is no longer based on the uniformity of the individuals, but on the diversity of the functions of the parts of the society. Durkheim saw all societies as being in some stage of progression between the mechanical and the organic structures, with no society being totally one or the other. Even the most primitive societies could be seen to have some forms of division of labor, and even the most advanced societies would require some degree of uniformity of its members.<sup>9</sup>

Law plays an essential role in maintaining the social solidarity of each of these two types of societies, but in very different ways. In the mechanical society law functions to enforce the uniformity of the members of the social group, and thus is oriented toward repressing any deviation from the norms of the time. In the organic society, on the other

7. Emile Durkheim, *The Division of Labor in Society*, translated by George Simpson, The Free Press, New York, 1965.

8. Raymond Aron, *Main Currents in Sociological Thought*, vol. II, translated by Richard Howard and Helen Weaver, Basic Books, New York, 1967, p. 12.

9. *Ibid.*, pp. 12–13.



hand, law functions to regulate the interactions of the various parts of society and provides restitution in cases of wrongful transactions. Because law plays such different roles in the two types of societies, crime appears in very different forms. Durkheim argued that to the extent a society remains mechanical, crime is "normal" in the sense that a society without crime would be pathologically overcontrolled. As the society develops toward the organic form, it is possible for a pathological state, which he called anomie, to occur, and such a state would produce a variety of social maladies, including crime. Durkheim developed his concept of "crime as normal" in his second major work, *The Rules of the Sociological Method*,<sup>10</sup> published in 1895, only two years after *The Division of Labor*; he went on to develop anomie in his most famous work, *Suicide*,<sup>11</sup> published in 1897. These concepts will be explored in the following sections.

### CRIME AS NORMAL IN MECHANICAL SOCIETIES

Mechanical societies are characterized by the uniformity of the lives, work, and beliefs of their members. All the uniformity that exists in a society, that is, the "totality of social likenesses," Durkheim called the *collective conscience*.<sup>12</sup> Since all societies demand at least some degree of uniformity from their members (in that none are totally organic), the collective conscience may be found in every culture. In every society, however, there will always be a degree of diversity in that there will be many individual differences among its members. As Durkheim said, "There cannot be a society in which the individuals do not differ more or less from the collective type."<sup>13</sup>

To the extent that a particular society is mechanical, its solidarity will come from the pressure for uniformity exerted against this diversity. Such pressure is exerted in varying degrees and in varying forms. In its strongest form it will consist of criminal sanctions. In weaker forms, however, the pressure may consist of designating certain behaviors or beliefs as morally reprehensible or merely in bad taste.

If I do not submit to the conventions of society, if in my dress I do not conform to the customs observed in my country and my class, the ridicule I pro-

10. Emile Durkheim, *The Rules of the Sociological Method*, translated by Sarah A. Solovay and John H. Mueller, edited by George E. G. Catlin, The Free Press, New York, 1965.

11. Durkheim, *Suicide*, translated by John A. Spaulding and George Simpson, edited by George Simpson, The Free Press, New York, 1951.

12. Durkheim, *Division of Labor*, p. 80, n. 10. In French, the term *conscience* has overtones of both "conscience" and "consciousness," but the term is usually translated as "collective conscience."

13. Durkheim, *Rules*, p. 70.

voke, the social isolation in which I am kept, produce, although in attenuated form, the same effects as a punishment in the strict sense of the word. The constraint is nonetheless efficacious for being indirect.<sup>14</sup>

Durkheim argued that "society cannot be formed without our being required to make perpetual and costly sacrifices."<sup>15</sup> These sacrifices, embodied in the demands of the collective conscience, are the price of membership in society, and fulfilling the demands gives the individual members a sense of collective identity, which is an important source of social solidarity. But, more important, these demands are constructed so that it is inevitable that a certain number of people will not fulfill them. The number must be large enough to constitute an identifiable group, but not so large as to include a substantial portion of the society. This enables the large mass of the people, all of whom fulfill the demands of the collective conscience, to feel a sense of moral superiority, identifying themselves as good and righteous, and opposing themselves to the morally inferior transgressors who fail to fulfill these demands. It is this sense of superiority, of goodness and righteousness, which Durkheim saw as the primary source of the social solidarity. Thus criminals play an important role in the maintenance of the social solidarity, since they are among the group of those identified by society as inferior, which allows the rest of society to feel superior.

The punishment of criminals also plays a role in the maintenance of the social solidarity. When the dictates of the collective conscience are violated, society responds with repressive sanctions not so much for retribution or deterrence, but because without them those who are making the "perpetual and costly sacrifices" would become severely demoralized.<sup>16</sup> For example, when a person who has committed a serious crime is released with only a slap on the wrist, the average, law-abiding citizen may become terribly upset. He feels that he is playing the game by the rules, and so everyone else should too. The punishment of the criminal is necessary to maintain the allegiance of the average citizen to the social structure. Without it the average citizen may lose his overall commitment to the society and his willingness to make the sacrifices necessary for it. But beyond this, the punishment of criminals also acts as a visible, societal expression of the inferiority and blameworthiness of the criminal group. This reinforces the sense of superiority and right-

14. *Ibid.*, pp. 2-3.

15. Kurt Wolff, ed., *Emile Durkheim et al., Writings on Sociology and Philosophy*, Harper & Row, New York, 1960, p. 338.

16. Nisbet, *op. cit.*, p. 225. See also Jackson Toby, "Is Punishment Necessary?" *Journal of Criminal Law, Criminology and Police Science* 55: 332-37 (1964).

eousness found in the mass of the people, and thus strengthens the solidarity of the society.

Crime itself is normal in society because there is no clearly marked dividing line between behaviors considered criminal and those considered morally reprehensible or merely in bad taste. If there is a decrease in behaviors designated as criminal, then there may be a tendency to move behaviors previously designated as morally reprehensible into the criminal category. For example, not every type of unfair transfer of property is considered stealing. But if there is a decrease in the traditional forms of burglary and robbery, there then may be an associated increase in the tendency to define various forms of white-collar deception as crime. These behaviors may always have been considered morally reprehensible, and in that sense they violated the collective conscience. They were not, however, considered crimes. Society moves them into the crime category because criminal sanctions are the strongest tool available to maintain social solidarity.

Since the institution of punishment serves an essential function, it will be necessary in any society.

Imagine a society of saints, a perfect cloister of exemplary individuals. Crimes, properly so called, will there be unknown; but faults which appear venial to the layman will create there the same scandal that the ordinary offense does in ordinary consciousnesses. If, then, this society has the power to judge and punish, it will define these acts as criminal and will treat them as such. For the same reason, the perfect and upright man judges his smallest failings with a severity that the majority reserve for acts more truly in the nature of an offense.<sup>17</sup>

Thus a society without crime is impossible. If all the behaviors that are presently defined as criminal no longer occurred, new behaviors would be placed in the crime category.<sup>18</sup> Crime, then, is inevitable because there is an inevitable diversity of behavior in society. The solidarity of the society is generated by exerting pressure for conformity against this diversity, and some of this pressure will inevitably take the form of criminal sanctions.<sup>19</sup>

Let us make no mistake. To classify crime among the phenomena of normal sociology is not merely to say that it is an inevitable, although regrettable, phenomenon, due to the incorrigible wickedness of men; it is to affirm that it is a factor in public health, an integral part of all societies.

17. Durkheim, *Rules*, pp. 68–69.

18. *Ibid.*, p. 67.

19. *Ibid.*, p. 67.

The abnormal or pathological state of society would be one in which there was no crime. A society that had no crime would be one in which the constraints of the collective conscience were so rigid that no one could oppose them. In this type of situation crime would be eliminated, but so would the possibility of progressive social change. Social change is usually introduced by opposing the constraints of the collective conscience, and those who do this are frequently declared to be criminals. Thus Socrates and Jesus were declared criminals, as were Mahatma Gandhi and George Washington. The leaders of the union movement in the 1920s and 1930s were criminalized, as were the leaders of the civil rights movement of the 1960s. If the demands of the collective conscience had been so rigidly enforced that no crime could exist, then these movements would have been impossible also.

Thus crime is the price society pays for the possibility of progress. As Durkheim wrote,<sup>20</sup>

To make progress, individual originality must be able to express itself. In order that the originality of the idealist whose dreams transcend his century may find expression, it is necessary that the originality of the criminal, who is below the level of his time, shall also be possible. One does not occur without the other.

In a similar way individual growth cannot occur in a child unless it is possible for that child to misbehave. The child is punished for misbehavior, and no one wants the child to misbehave. But a child who never did anything wrong would be pathologically overcontrolled. Eliminating the misbehavior would also eliminate the possibility of independent growth. In this sense the child's misbehavior is the price that must be paid for the possibility of personal development. Durkheim concluded<sup>21</sup>:

From this point of view, the fundamental facts of criminality present themselves to us in an entirely new light. Contrary to current ideas, the criminal no longer seems a totally unsociable being, a sort of parasitic element, a strange and unassimilable body, introduced into the midst of society. On the contrary, he plays a definite role in social life. Crime, for its part, must no longer be conceived as an evil that cannot be too much suppressed. There is no occasion for self-congratulation when the crime rate drops noticeably below the average level, for we may be certain that this apparent progress is associated with some social disorder.

20. *Ibid.*, p. 71.

21. *Ibid.*, p. 72.

**ANOMIE AS A PATHOLOGICAL STATE IN ORGANIC SOCIETIES**

To the extent that a society is mechanical, it derives its solidarity from pressure for conformity against the diversity of its members. The criminalizing of some behaviors is a normal and necessary part of this pressure. But to the extent that a society is organic, the function of law is to regulate the interactions of the various parts of the whole. If this regulation is inadequate, there can result a variety of social maladies, including crime. Durkheim called the state of inadequate regulation anomie.

Durkheim first introduced this concept in *The Division of Labor in Society*, where he argued that the industrialization of French society, with its resulting division of labor, had destroyed the traditional solidarity based on uniformity. But this industrialization had been so rapid that the society had not yet been able to evolve sufficient mechanisms to regulate its transactions. Periodic cycles of overproduction followed by economic slowdown indicated that the relations between producers and consumers were ineffectively regulated. Strikes and labor violence indicated that the relations between workers and employers were unresolved. The alienation of the individual worker and the sense that the division of labor was turning people into mere "cogs in the wheel" indicated that the relation of the individual to work was inadequately defined.<sup>22</sup>

Durkheim expanded and generalized his notion of anomie four years later with the publication of his most famous work, *Le Suicide*. In it he statistically analyzed data that showed that the suicide rate tends to increase sharply both in periods of economic decline and economic growth. Whereas suicide in a time of economic decline might be easily understood, the key question is why suicide would increase in a time of prosperity. Durkheim proposed that society functions to regulate not only the economic interactions of its various components, but also how the individual perceives his own needs. Durkheim's theory of anomie has been used as the basis for later explanations of crime and a variety of other deviant behaviors.<sup>23</sup> Because of its importance in criminology and sociology, the theory is presented here at some length, and in Durkheim's own words.<sup>24</sup>

a. No living being can be happy or even exist unless his needs are sufficiently proportioned to his means. In other words, if his needs require more than can

22. Durkheim, *Division of Labor*, pp. 370-73.

23. Marshall B. Clinard, ed., *Anomie and Deviant Behavior*. The Free Press, New York, 1964.

24. Reprinted with permission of The Free Press, a Division of Simon & Schuster, from *Suicide* by Emile Durkheim, translated by John A. Spaulding and George Simpson © 1951, copyright renewed by The Free Press.

be granted, or even merely something of a different sort, they will be under continual friction and can only function painfully.

b. In the animal, at least in a normal condition, this equilibrium is established with automatic spontaneity because the animal depends on purely material conditions.

c. This is not the case with man, because most of his needs are not dependent on his body. . . . A more awakened reflection suggests better conditions, seemingly desirable ends craving fulfillment. . . . Nothing appears in man's organic nor in his psychological constitution which sets a limit to such tendencies. . . . They are unlimited so far as they depend on the individual alone. . . . Thus, the more one has, the more one wants, since satisfactions received only stimulate instead of filling needs.

d. A regulative force must play the same role for moral needs which the organism plays for physical needs. . . . [S]ociety alone can play this moderating role; for it is the only moral power superior to the individual, the authority of which he accepts. . . . It alone can estimate the reward to be prospectively offered to every class of human functionary, in the name of the common interest.

e. As a matter of fact, at every moment of history there is a dim perception, in the moral consciousness of societies, of the respective value of different social services, the relative reward due each, and the consequent degree of comfort appropriate on the average to workers in each occupation. . . . Under this pressure, each in his sphere vaguely realizes the extreme limit set to his ambitions and aspires to nothing beyond. . . . Thus, an end and goal are set to the passions. . . .

f. But when society is disturbed by some painful crisis or by beneficent but abrupt transitions, it is momentarily incapable of exercising this influence; thence come the sudden rises in the curve of suicides which we have pointed out above.

g. In the case of economic disasters, indeed, something like a declassification occurs which suddenly casts certain individuals into a lower state than their previous one. Then they must reduce their requirements, restrain their needs, learn greater self-control. . . . So they are not adjusted to the condition forced on them, and its very prospect is intolerable. . . .

h. It is the same if the source of the crisis is an abrupt growth of power and wealth. Then, truly, as the conditions of life are changed, the standard according to which needs were regulated can no longer remain the same; for it varies with social resources. . . . The scale is upset; but a new scale cannot be immediately improvised. Time is required for the public conscience to reclassify men and things. So long as the social forces thus freed have not regained equilibrium, their respective values are unknown and so all regulation is lacking for a time. The limits are unknown between the possible and the impossible, what is just and what is unjust, legitimate claims and hopes and those which are immoderate. Consequently, there is no restraint upon aspirations. . . . Appetites, not being controlled by a public opinion, become disoriented, no longer rec-

ognize the limits proper to them. Besides, they are at the same time seized by a sort of natural erethism simply by the greater intensity of public life. With increased prosperity desires increase. At the very moment when traditional rules have lost their authority, the richer prize offered these appetites stimulates them and makes them more exigent and impatient of control. The state of de-regulation or anomy is thus further heightened by passions being less disciplined, precisely when they need more disciplining.

Durkheim went on to argue that French society, over the previous 100 years, had deliberately destroyed the traditional sources of regulation for human appetites.<sup>25</sup> Religion had almost completely lost its influence over both workers and employers. Traditional occupational groups, such as the guilds, had been destroyed. Government adhered to a policy of laissez-faire, or noninterference, in business activities. As a result human appetites were no longer curbed. This freedom of appetites was the driving force behind the French industrial revolution, but it also created a chronic state of anomie, with its attendant high rate of suicide.

#### ASSESSING DURKHEIM'S THEORY OF CRIME

Durkheim presented his theory of crime in the context of an overall theory of modernization—the progression of societies from the mechanical to the organic form. One of the problems with assessing his theory is that he predicted that different things would happen at different times. Specifically he argued that: (1) the punishment of crime would remain fairly stable in mechanical societies, independent of changes in the extent of criminal behavior; (2) as those societies made the transition to organic societies in the process of modernization, a greater variety of behaviors would be tolerated, punishments would become less violent as their purpose changed from repression to restitution, and there would be a vast expansion of “functional” law to regulate the interactions of the emerging organic society; and (3) in organic societies, the extent of criminal behavior would increase during periods of rapid social change. Each of these ideas has generated additional theories and research in more recent times.

Erikson reformulated Durkheim's theory about the stability of punishment in mechanical societies, based on a study of the Puritan colony in seventeenth-century Massachusetts.<sup>26</sup> This society had a relatively constant level of punishment throughout the century despite three “crime waves” attributed to Antinomians, Quakers, and witches. Erik-

25. *Ibid.*, pp. 254–58.

26. Kai T. Erikson, *Wayward Puritans*, John Wiley, New York, 1966.

son concluded<sup>27</sup>: “When a community calibrates its control machinery to handle a certain volume of deviant behavior it tends to adjust its . . . legal . . . definitions of the problem in such a way that this volume is realized.”

Blumstein and his colleagues attempted to demonstrate a similar process in modern societies.<sup>28</sup> They examined imprisonment rates in the United States from 1924 to 1974, in Canada from 1880 to 1959, and in Norway from 1880 to 1964, arguing that these rates remained stable over the time periods and that the stability was maintained by adjusting the types of behaviors that resulted in imprisonment. Later studies either failed to find a similar effect or have criticized the research methods of studies that do find an effect.<sup>29</sup> More recently, the explosion of incarceration in the United States associated with the “get tough” era has clearly demonstrated that punishment in the United States is no longer “stable,” if it ever was. For example, before 1970, the imprisonment rate in the United States had generally remained somewhere around 100 prisoners for every 100,000 people in the population, whether crime rates were high or low. Since then, however, the imprisonment rate has been steadily rising and at midyear 1996 it was 615 prisoners for every 100,000 people in the population.

Durkheim's theory, however, does not predict that punishment levels in modern industrialized societies will remain constant, since those cannot be considered mechanical societies. The Puritan colony in Massachusetts can reasonably be considered such a society, so that Erikson's study supports Durkheim's theory while the others neither support nor challenge it. On the other hand, Erikson's interpretation has been challenged by Chambliss, who suggests that “his conclusion is hardly sup-

27. *Ibid.*, p. 26.

28. Alfred Blumstein and Jacqueline Cohen, “A Theory of the Stability of Punishment,” *Journal of Criminal Law and Criminology* 64: 198–207 (June 1973); Alfred Blumstein, Jacqueline Cohen, and Daniel Nagin, “The Dynamics of a Homeostatic Punishment Process,” *Journal of Criminal Law and Criminology* 67: 317–34 (Sept. 1977); and Alfred Blumstein and Soumyo Moitra, “An Analysis of the Time Series of the Imprisonment Rate in the States of the United States: A Further Test of the Stability of Punishment Hypothesis,” *Journal of Criminal Law and Criminology* 70: 376–90 (Sept. 1979). See also Nils Christie, “Changes in Penal Values,” in Christie, ed., *Scandinavian Studies in Criminology*, vol. 2, Scandinavian University Books, Oslo, 1968, pp. 161–72. For a review of these studies, see Allen E. Liska, “Introduction,” in Liska, ed., *Social Threat and Social Control*, State University of New York Press, Albany, N.Y., 1992, pp. 13–16.

29. M. Calahan, “Trends in Incarceration in the United States,” *Crime and Delinquency* 25: 9–41 (1979); David F. Greenberg, “Penal Sanctions in Poland,” *Social Problems* 28: 194–204 (1980); David Rauma, “Crime and Punishment Reconsidered: Some Comments on Blumstein's Stability of Punishment Hypothesis,” *Journal of Criminal Law and Criminology* 72: 1772–98 (1981); Richard A. Berk, David Rauma, Sheldon L. Messinger, and T. F. Cooley, “A Test of the Stability of Punishment Hypothesis,” *American Sociological Review* 46: 805–29 (1981); and Richard A. Berk, David Rauma, and Sheldon L. Messinger, “A Further Test of the Stability of Punishment Hypothesis,” in John Hagan, ed., *Quantitative Criminology*, Sage, Beverly Hills, Calif., 1982, pp. 39–64.

ported by the data he presents."<sup>30</sup> Erikson, following Durkheim, had described the three crime waves as being generated by the need to establish the moral boundaries of the community. Chambliss pointed out that each of these crime waves occurred when the power and authority of the ruling groups were threatened. He concluded:

Deviance was indeed created for the consequences it had. But the consequences were not "to establish moral boundaries"; rather, they aided those in power to maintain their position. . . . Erikson gives no evidence that any of these crime waves actually increased social solidarity except through the elimination of alternative centers of authority or power.

Durkheim made three arguments about crime during the process of transition from mechanical to organic societies: a greater variety of behaviors would be tolerated, punishments would become less violent as their purpose changed from repression to restitution, and there would be a vast expansion of "functional" law to regulate the interactions of the emerging organic society. Wolfgang has stated that contemporary American society illustrates Durkheim's first argument about the increasing tolerance for diversity in more advanced societies: "My major point is that we are currently experiencing in American culture, and perhaps in Western society in general, an expansion of acceptability of deviance and a corresponding contraction of what we define as crime."<sup>31</sup> A similar argument has been made more recently by conservative commentators who argue that Western societies are losing all their morals.

With respect to Durkheim's second argument, Spitzer found that more developed societies were characterized by severe punishments, while simple societies were characterized by lenient punishments, which is the opposite of what Durkheim predicted.<sup>32</sup> Spitzer's findings are consistent with several studies that have found that rural areas in Western societies before modernization were characterized by fairly high levels of violence, and also by a considerable degree of tolerance for it.<sup>33</sup> It was only after modernization, with the concentration of populations in anonymous cities, that societies began to punish violence consistently and severely. Durkheim may have derived his idea from the fact that

30. William J. Chambliss, "Functional and Conflict Theories of Crime," in Chambliss and Milton Mankoff, eds., *Whose Law? What Order?*, John Wiley, New York, 1976, pp. 11-16.

31. Marvin E. Wolfgang, "Real and Perceived Changes in Crime," in Simha F. Landau and Leslie Sebba, *Criminology in Perspective*, D. C. Heath, Lexington, Mass., 1977, pp. 27-38.

32. Steven Spitzer, "Punishment and Social Organization," *Law and Society Review* 9: 613-37 (1975).

33. See, for example, Howard Zehr, *Crime and Development of Modern Society*, Rowman & Littlefield, Totowa, N.J., 1976.

punishments in European societies were becoming much less severe at the time, due to the reforms introduced by Beccaria and other classical theorists. But the extremely harsh punishments that had been imposed prior to those reforms were not associated with simple, undeveloped societies, but rather with absolute monarchies. Those types of punishments were not found in earlier, simpler societies.<sup>34</sup>

Third, Durkheim predicted a great expansion in functional law as modern societies attempt to regulate all their new functions. In his case study of four cities from 1800 to the present, Gurr found "the veritable explosion of laws and administrative codes designed to regulate day-to-day interactions, in domains as dissimilar as trade, public demeanor, and traffic."<sup>35</sup> While some of this was generated by "the functional necessity of regulating the increased traffic and commercial activities of growing cities," as Durkheim had argued, Gurr also found that a great deal of other legislation was passed defining and proscribing new kinds of offenses against morality and against "collective behavior" such as riots and protests.<sup>36</sup> Gurr argued that the new offenses against morality arose primarily from the effort to apply middle-class values to all social groups, while the offenses against collective behavior arose from efforts of the elite groups to maintain their power.<sup>37</sup>

Finally, Durkheim argued that the source of high crime rates in organic societies lay in normlessness or anomie generated by the rapid social changes associated with modernization. Durkheim's theory of anomie led to the later ecological, strain, and control theories of crime, so that the assessment of this argument must, to a certain extent, await the presentation of those theories in Chapters 10, 11, and 13. But those theories do not directly link the breakdown of social norms to the processes of modernization, as did Durkheim's theory. Durkheim's theory of anomie is therefore assessed here in the context of his theory of modernization.

Durkheim attributed the high rates of crime and other forms of deviance in his own society to the normlessness generated by the French and Industrial revolutions. One very basic criticism of this argument is that crime in France was not rising at the time. Lodhi and Tilly conclude that between 1831 and 1931 the incidence of theft and robbery declined in France, citing a massive decline in the statistics for serious

34. Michel Foucault, *Discipline and Punish*, Pantheon, New York, 1977, pp. 3-69. See also Philippe Ariès, *Centuries of Childhood*, Knopf, New York, 1962, ch. 1, for a discussion of the tendency to idealize the past as harmonious and peaceful.

35. Ted Robert Gurr, *Rogues, Rebels, and Reformers*, Sage, Beverly Hills, Calif., 1976, p. 180.

36. *Ibid.*, p. 177.

37. *Ibid.*, pp. 93-115.

property crime during that period.<sup>38</sup> The statistics for violent crime remained approximately stable over the same period, with some tendency toward a decline. Durkheim had formulated his theory of anomie in the context of a study of suicide rates, not crime rates. Having done so, he simply presumed that crime was also increasing, although he nowhere presented data to support his conclusion. McDonald argues that the statistics showing decreases in crime rates were available to Durkheim, as well as to other prominent criminologists of the time who also presumed that crime rates were increasing, but that none of them took any notice<sup>39</sup>: "Marxists of that time were no more willing to admit that social and economic conditions were improving than Durkheimians that industrialization and urbanization did not inevitably lead to higher crime."

Recent research has led to a generally accepted conclusion that economic development is associated with increases in property crime but with decreases in violent crime.<sup>40</sup> For example, Neuman and Berger reviewed seventeen cross-national crime studies and concluded that urbanism and industrialization are both associated with increased property crime, but neither was associated with increases in violent crime.<sup>41</sup> In addition, they found no support for the argument that the increases in property crime were caused by the change from traditional to modern values. All of this is inconsistent with Durkheim's basic argument.

Neuman and Berger therefore question the continued dominance of Durkheim's theory in explaining the link between modernization and crime. They suggest that much more attention be paid to the role of economic inequality in this process, as opposed to Durkheim's emphasis on the breakdown of traditional values. They point out that the relationship between economic inequality and homicide is "the most consistent finding in the literature,"<sup>42</sup> and suggest that criminologists examine the large literature on the relation between inequality and eco-

38. A. Q. Lodhi and Charles Tilly, "Urbanization, Crime and Collective Violence in Nineteenth Century France," *American Journal of Sociology* 79: 297-318 (1973). See also A. V. Gatrell and T. B. Hadden, "Criminal Statistics and Their Interpretations," in E. A. Wrigley, ed., *Nineteenth-Century Society*, Cambridge University Press, Cambridge, U.K., 1972, pp. 336-96.

39. Lynn McDonald, "Theory and Evidence of Rising Crime in the Nineteenth Century," *British Journal of Sociology* 33: 404-20 (Sept. 1982), p. 417.

40. For a review, see Gary D. LaFree and Edward L. Kick, "Cross-National Effects of Development, Distributional and Demographic Variables on Crime: A Review and Analysis," *International Annals of Criminology* 24: 213-36 (1986). A single recent study found that, with proper controls for the age structure of populations and for region, both homicide and theft rates rise with modernization. See Suzanne T. Ortega et al., "Modernization, Age Structure, and Regional Context: A Cross-National Study of Crime," *Sociological Spectrum* 12: 257-77 (1992).

41. W. Lawrence Neuman and Ronald J. Berger, "Competing perspectives on Cross-National Crime: An Evaluation of Theory and Evidence," *Sociological Quarterly* 29(2): 281-313 (1988).

42. *Ibid.*, p. 296.

omic development.<sup>43</sup> The basic finding of this literature is that in developing nations, foreign investment by multinational corporations and dependency on exports of raw material slow long-term economic growth and increase economic inequality. The economic inequality, then, increases both criminal behavior and the criminalization of that behavior by criminal justice agencies. This is particularly true in moderately repressive, as opposed to highly repressive or democratic regimes. They conclude that "future studies should examine the relationship that exists between multinational penetration, inequality, and type of regime."

A study by Bennett also challenged Durkheim's theory as the explanation of the linkage between crime and modernization.<sup>44</sup> Durkheim had argued that crime is caused by rapid social change. If that is true, Bennett reasoned, then: (1) the rate of increase in crime would be directly proportional to the rate of growth in the society; (2) both theft and homicide should increase during periods of rapid growth; and (3) the level of development itself (i.e., whether the country is underdeveloped or advanced) should not affect crime rates as long as the country is not rapidly changing. Using data from fifty-two nations from 1960 to 1984, Bennett then showed that the rate of growth does not significantly affect either homicide or theft, and that the level of development itself, independent of the rate of growth, significantly affects theft offenses but not homicides. Bennett concludes: "These findings refute the Durkheimian hypotheses."<sup>45</sup>

## CONCLUSION

Durkheim's influence has been extremely broad in criminology and sociology. His primary impact was that he focused attention on the role that social forces play in determining human conduct at a time when the dominant thinking held either that people were free in choosing courses of action or that behavior was determined by inner forces of biology and psychology. Although the focus on social forces is now the dominant view used to explain crime, it was considered quite radical at the time.<sup>46</sup>

43. *Ibid.*, pp. 298-99. A still different causal path was suggested by Sethard Fisher ("Economic Development and Crime," *American Journal of Economics and Sociology* 46[1]: 17-34 [1987]) who argued that crime is associated with the unplanned drift of rural populations into urban areas and with changes in elite groups as the society attempts to modernize and achieve economic growth.

44. Richard R. Bennett, "Development and Crime," *Sociological Quarterly* 32(3): 343-63 (1991).

45. *Ibid.*, p. 356.

46. See the chapter on Durkheim in Ian Taylor, Paul Walton, and Jock Young, *The New Criminology*, Harper, New York, 1973, pp. 67-90.

There is now considerable evidence that the basic patterns of crime found in the modern world can only be explained by a theory that focuses on modernization as a fundamental factor. Shelley reviewed studies of crime and modernization and found that the same changes in crime patterns that occurred first in Western Europe have reoccurred in Eastern European socialist nations and in the emerging nations of Asia, Africa, and Latin America as they have undergone modernization.<sup>47</sup> She concluded: "The evidence . . . suggests that only the changes accompanying the developmental process are great enough to explain the enormous changes that have occurred in international crime patterns in the last two centuries."

Many of the changes that have accompanied the modernization process, however, are not those predicted by Durkheim's theory. Pre-modern societies were characterized by high levels of violent crime, in contrast to Durkheim's arguments about their stability. There appears to have been a long-term decline in crime over the last several hundred years as the process of modernization has occurred, something that Durkheim's theory does not predict.<sup>48</sup> Short-term increases in that long-term decline occurred in the early stages of urbanization and industrialization, but those short-term increases seem to have been associated with the retention, not the breakdown, of rural culture. Gurr argues that other sources of short-term increases in crime rates include wars and growths in the size of the youth population.<sup>49</sup> Thus Durkheim may have been right in pointing to modernization as a fundamental factor in the explanation of crime, but he did not accurately describe the effect that it has.

On the other hand, Durkheim's basic argument was that modernization is linked to crime through the breakdown of social norms and rules—that is, he associated crime with the absence of social controls. It may be that Durkheim's argument itself is correct but that Durkheim was wrong in assuming that premodern societies had strong social controls and little crime. In contrast, it now seems more likely that they had little social control and a great deal of crime, especially violent crime. The long-term decline in violent crime may then be explained by the

47. Louise I. Shelley, *Crime and Modernization*, Southern Illinois University Press, Carbondale, Ill., 1981, pp. 141–42.

48. See Steven F. Messner, "Societal Development, Social Equality, and Homicide," *Social Forces* 61: 225–40 (1982).

49. Ted Robert Gurr, "Historical Forces in Violent Crime," in Michael Tonry and Norval Morris, eds., *Crime and Justice*, vol. 3, University of Chicago Press, Chicago, 1981, pp. 340–46. See also Gurr, "On the History of Violent Crime in Europe and America," in Hugh David Graham and Ted Robert Gurr, eds., *Violence in America*, 2nd ed., Sage, Beverly Hills, Calif., 1979.

continuously increasing level of social controls associated with increasing modernization.<sup>50</sup> The relationship between crime and social controls will be further explored in Chapter 13. At the same time, the long-term increase in property crime may be associated with increasing opportunities that industrialization and urbanization provides. This relationship will be further explored in Chapter 10.

50. This is basically Gurr's interpretation. See the sources in n. 49.



# The Ecology of Crime

One of Durkheim's arguments was that rapid social change was associated with increases in crime due to the breakdown of social controls. This idea was one of several used by members of the Department of Sociology at the University of Chicago in the 1920s in their attempt to pinpoint the environmental factors associated with crime and to determine the relationship among those factors. However, instead of focusing on rapid change in entire societies, they focused on rapid change in neighborhoods.

Their procedure involved correlating the characteristics of each neighborhood with the crime rates of that neighborhood. This first large-scale study of crime in America produced a mass of data and a large number of observations about crime that led directly to much of the later work in American criminology. Since this research was based on an image of human communities taken from plant ecology, it became known as the Chicago School of Human Ecology.

## THE THEORY OF HUMAN ECOLOGY

The term *ecology*, as it is used today, is often linked to the idea of protecting the natural environment. In its original meaning, however, it is a branch of biology in which plants and animals are studied in their relationships to each other and to their natural habitat. Plant life and animal life are seen as an intricately complicated whole, a web of life in which each part depends on almost every other part for some aspect of its existence. Organisms in their natural habitat exist in an ongoing balance of nature, a dynamic equilibrium in which each individual must struggle to survive. Ecologists study this web of interrelationships and interdependencies in an attempt to discover the forces that define the activities of each part.

Human communities, particularly those organized around a free-

market economy and a laissez-faire government, could be seen to resemble this biotic state in nature. Each individual struggles for his or her survival in an interrelated, mutually dependent community. The Darwinian law of survival of the fittest applies here as well.

Robert Park proposed a parallel between the distribution of plant life in nature and the organization of human life in societies.<sup>1</sup> He had been a Chicago newspaper reporter for twenty-five years and had spent much of that time investigating social conditions in the city. Chicago at that time had a population of over 2 million; between 1860 and 1910 its population had doubled every ten years, with wave after wave of immigrants. Park was appointed to the Sociology Department at the University of Chicago in 1914. From the study of plant and animal ecology he derived two key concepts that formed the basis of what he called the "theory of human ecology."

The first concept came from the observations of the Danish ecologist Warming, who noted that a group of plants in a given area might have many characteristics that, in combination, were similar to those of an individual organism.<sup>2</sup> Warming called such groups "plant communities." Other ecologists argued that the plant and animal life in a given habitat tended to develop a "natural economy" in which different species are each able to live more prosperously together than separately. This is called "symbiosis," or the living together of different species to the mutual benefit of each. Since each plant and animal community was said to resemble an organism, the balance of nature in the habitat was said to resemble a super-organism.

Park's work as a newspaperman had led him to view the city in a similar way—not merely as a geographic phenomenon, but as a kind of "super-organism" that had "organic unity" derived from the symbiotic interrelations of the people who lived within it.<sup>3</sup> Within this super-organism Park found many "natural areas" where different types of people lived. These natural areas, like the natural areas of plants, had an organic unity of their own. Some of them were racial or ethnic communities, such as "Chinatown," "Little Italy," or the "Black Belt." Other natural areas included individuals in certain income or occupational

1. Park's background and a review of the theory of human ecology are presented in Terence Morris, *The Criminal Area*, Humanities Press, New York, 1966, pp. 1–18. See also Winifred Raushenbush, *Robert E. Park: Biography of a Sociologist*, Duke University Press, Durham, 1979; and Amos H. Hawley, "Human Ecology," *International Encyclopedia of the Social Sciences*, vol. 4, Macmillan and The Free Press, New York, 1968, pp. 328–37.

2. Eugenius Warming, "Plant Communities," in Robert E. Park and Ernest W. Burgess, *Introduction to the Science of Sociology*, University of Chicago Press, Chicago, 1969, pp. 175–82.

3. Robert E. Park, *Human Communities*, The Free Press, Glencoe, Ill., 1952, p. 118.

groups, or they were industrial or business areas. Still other areas were physically cut off from the rest of the city by railroad tracks, rivers, major highways, or unused space. Symbiotic relationships existed not only among the people within a natural area (where the butcher needed the baker for bread and the baker needed the butcher for meat), but also among the natural areas within the city. Each natural area was seen as playing a part in the life of the city as a whole.

The second basic concept Park took from plant ecology involved the process by which the balance of nature in a given area might change. A new species may invade the area, come to dominate it, and drive out other life forms. For example, a cleared field in one of the southern states will first be covered with tall weeds. Later this field will be invaded and dominated by broomsedge and, even later, by pine trees. Finally the field will stabilize as an oak-hickory forest. Ecologists call this process "invasion, dominance, and succession."

This process can also be seen in human societies. The history of America is a process of invasion, dominance, and succession by Europeans into the territory of Native Americans. And in cities one cultural or ethnic group may take over an entire neighborhood from another group, beginning with the shift of only one or two residents. Similarly, business or industry may move into and ultimately take over a previously residential neighborhood.

The processes of invasion, dominance, and succession were further explored by Park's associate, Ernest Burgess, who pointed out that cities do not merely grow at their edges. Rather, they have a tendency to expand radially from their center in patterns of concentric circles, each moving gradually outward. Burgess described these concentric circles as "zones."

Zone I is the central business district, while Zone II is the area immediately around it. Zone II generally is the oldest section of the city, and it is continually involved in a process of invasion, dominance, and succession by the businesses and industry that are expanding from Zone I. Houses in this zone are already deteriorating, and will be allowed to deteriorate further because they will be torn down in the foreseeable future to make way for incoming business and industry. Since this is the least desirable residential section of the city, it is usually occupied by the poorest people, including the most recent immigrants to the city. Zone III is the zone of relatively modest homes and apartments, occupied by workers and their families who have escaped the deteriorating conditions in Zone II. The final zone within the city itself is Zone IV, the residential districts of single-family houses and more expensive apartments. Beyond the city limits are the suburban areas and the satel-

lite cities, which constitute Zone V, the commuter zone. Each of these five zones is growing and thus is gradually moving outward into the territory occupied by the next zone, in a process of invasion, dominance, and succession.

Natural areas occur within each zone, and often are linked to natural areas in other zones. For example, Burgess noted the location in Chicago's Zone II where Jewish immigrants initially settled. Zone III was an area of Jewish workers' homes that was constantly receiving new residents from Zone II and at the same time was constantly losing residents to more desirable Jewish neighborhoods in Zones IV and V.<sup>4</sup>

Within the framework of these ideas Park and his colleagues studied the city of Chicago and its problems. They attempted to discover "the processes by which the biotic balance and the social equilibrium are maintained once they are achieved, and the processes by which, when the biotic balance and the social equilibrium are disturbed, the transition is made from one relatively stable order to another."<sup>5</sup>

#### RESEARCH IN THE "DELINQUENCY AREAS" OF CHICAGO

Park's theories were used as the basis for a broadly ranging study of the problem of juvenile delinquency in Chicago by Clifford R. Shaw. The problem of crime and delinquency had become of increasing concern to social scientists in the 1920s because the country was gripped in a crime wave generated by resistance to Prohibition, a problem that was particularly severe in Chicago.

Shaw worked as a probation and parole officer during this period and became convinced that the problem of juvenile delinquency had its origin in the juvenile's "detachment from conventional groups" rather than in any biological or psychological abnormalities.<sup>6</sup> Following his appointment to the Institute for Juvenile Research in Chicago, Shaw devised a strategy, based on the theory of human ecology, to study the process by which this "detachment from conventional groups" occurred.

4. Ernest W. Burgess, "The Growth of the City," in Park, Burgess, and Roderick D. McKenzie, Jr., *The City*, University of Chicago Press, Chicago, 1928, p. 62.

5. Robert E. Park, "Human Ecology," *American Journal of Sociology* 42: 158 (1936).

6. James F. Short, Jr., "Introduction to the Revised Edition," in Clifford R. Shaw and Henry D. McKay, *Juvenile Delinquency and Urban Areas*, University of Chicago Press, Chicago, 1969, p. xlvii. Additional background material on Shaw and his colleague Henry McKay can be found in Jon Snodgrass, "Clifford R. Shaw and Henry D. McKay: Chicago Criminologists," *British Journal of Criminology* 16: 1-19 (Jan. 1976). A detailed assessment of their impact on criminology can be found in Harold Finestone, "The Delinquent and Society: The Shaw and McKay Tradition," in James F. Short, ed., *Delinquency, Crime and Society*, University of Chicago Press, Chicago, 1976, pp. 23-49; and Finestone, *Victims of Change: Juvenile Delinquency in American Society*, Greenwood, Westport, Conn., 1977, pp. 77-150.

Because he saw delinquents as essentially normal human beings, he believed that their illegal activities were somehow bound up with their environment. Therefore the first stage of his strategy involved analyzing the characteristics of the neighborhoods that, according to police and court records, had the most delinquents. But even in the worst of these neighborhoods only about 20 percent of the youth were actually involved with the court. Shaw therefore compiled extensive "life histories" from individual delinquents to find out exactly how they had related to their environment.

Shaw first published his neighborhood studies in 1929 in a volume entitled *Delinquency Areas*, and he subsequently published more of his research in two studies coauthored with Henry D. McKay, *Social Factors in Juvenile Delinquency* (1931) and *Juvenile Delinquency and Urban Areas* (1942). Shaw and McKay reached the following conclusions as a result of studying neighborhoods:

1. *Physical Status*: The neighborhoods with the highest delinquency rates were found to be located within or immediately adjacent to areas of heavy industry or commerce. These neighborhoods also had the greatest number of condemned buildings, and their population was decreasing. The population change was assumed to be related to an industrial invasion of the area, which resulted in fewer buildings being available for residential occupation.<sup>7</sup>
2. *Economic Status*: The highest rates of delinquency were found in the areas of lowest economic status as determined by a number of specific factors, including the percentage of families on welfare, the median rental, and the percentage of families owning homes.<sup>8</sup> These areas also had the highest rates of infant deaths, active cases of tuberculosis, and insanity. But Shaw and McKay concluded that economic conditions did not in themselves cause these problems. This conclusion was based on the fact that the rates of delinquency, of adult criminality, of infant deaths, and of tuberculosis for the city as a whole remained relatively stable between 1929 and 1934, when the Great Depression hit, and there was a tenfold increase in the number of families on public or private assistance. Median rentals, welfare rates, and other economic measures continued to show that the areas with the highest concentrations of these problems were in the lowest economic status relative to other areas of the city. These problems appeared to be associated with the least privileged groups in society, regardless of the actual economic conditions of that society as a whole.
3. *Population Composition*: Areas of highest delinquency were consistently associated with higher concentrations of foreign-born and African-American

7. Clifford R. Shaw and Henry D. McKay, *Juvenile Delinquency and Urban Areas*, University of Chicago Press, Chicago, 1969, p. 145.

8. *Ibid.*, pp. 147-52.

heads of families.<sup>9</sup> To determine the precise role of racial and ethnic factors in the causation of delinquency, Shaw and McKay further analyzed these data. They found that certain inner-city areas in Zone II remained among those with the highest delinquency rates in the city despite shifts of almost all the population of these areas. In 1884 approximately 90 percent of the population in these areas was German, Irish, English, Scottish, or Scandinavian. By 1930 approximately 85 percent of the population was Czech, Italian, Polish, Slavic, or other. In spite of this dramatic shift in ethnic populations, these eight areas continued to have some of the highest delinquency rates in the city. At the same time there was no increase in delinquency rates in the areas into which the older immigrant communities moved.

They also found that, within similar areas, each group, whether foreign-born or native, recent immigrant or older immigrant, black or white, had a delinquency rate that was proportional to the rate of the overall area. No racial, national, or nativity group exhibited a uniform characteristic rate of delinquency in all parts of the city. Each group produced delinquency rates that ranged from the lowest to the highest in the city, depending on the type of area surveyed. Although some variation associated with the group could be seen, it was apparent that the overall delinquency rate of a particular group depended primarily on how many individuals of that group resided in "delinquency areas." Shaw and McKay concluded<sup>10</sup>:

In the face of these facts it is difficult to sustain the contention that, by themselves, the factors of race, nativity, and nationality are vitally related to the problem of juvenile delinquency. It seems necessary to conclude, rather, that the significantly higher rates of delinquents found among the children of Negroes, the foreign born, and more recent immigrants are closely related to existing differences in their respective patterns of geographical distribution within the city. If these groups were found in the same proportion in all local areas, existing differences in the relative number of boys brought into court from the various groups might be expected to be greatly reduced or to disappear entirely.

In addition to this research, Shaw compiled and published a series of "life histories" of individual delinquents, including *The Jackroller* (1930), *The Natural History of a Delinquent Career* (1931), and *Brothers in Crime* (1938). The basic findings of these histories are summed up in the following points.

9. *Ibid.*, p. 155.

10. *Ibid.*, pp. 162-63.

1. Delinquents, by and large, "are not different from large numbers of persons in conventional society with respect to intelligence, physical condition, and personality traits."<sup>11</sup>
2. In delinquency areas "the conventional traditions, neighborhood institutions, public opinion, through which neighborhoods usually effect a control over the behavior of the child, were largely disintegrated."<sup>12</sup> In addition, parents and neighbors frequently approved of delinquent behavior, so that the child grew up "in a social world in which [delinquency] was an accepted and appropriate form of conduct."<sup>13</sup>
3. The neighborhoods included many opportunities for delinquent activities, including "junk dealers, professional fences, and residents who purchased their stolen goods" and "dilapidated buildings which served as an incentive for junking." There was also a "lack of preparation, training, opportunity, and proper encouragement for successful employment in private industry."<sup>14</sup>
4. Delinquent activities in these areas began at an early age as a part of play activities of the street.<sup>15</sup>
5. In these play activities, there is a continuity of tradition in a given neighborhood from older boys to younger boys.<sup>16</sup> This tradition includes the transmission of such different criminal techniques as jackrolling, shoplifting, stealing from junkmen, or stealing automobiles, so that different neighborhoods were characterized by the same types of offenses over long periods of time.<sup>17</sup>
6. The normal methods of official social control could not stop this process.<sup>18</sup>
7. It was only later in a delinquent career that the individual began "to identify himself with the criminal world, and to embody in his own philosophy of life the moral values which prevailed in the criminal groups with which he had contact."<sup>19</sup> This was due both to the continuous contact the delinquent had with juvenile and adult criminals on the street and in correctional institutions, and to rejection and stigmatization by the community.

11. Clifford R. Shaw, *Brothers in Crime*, University of Chicago Press, Chicago, 1938, p. 350. See also Shaw's *The Jackroller*, University of Chicago Press, Chicago, 1930, p. 164; and *The Natural History of a Delinquent Career*, University of Chicago Press, Chicago, 1931, p. 226.

12. Shaw, *Natural History*, p. 229. See also *The Jackroller*, p. 165, and *Brothers in Crime*, p. 358.

13. Shaw, *Brothers in Crime*, p. 356. See also Shaw and McKay, op. cit., p. 172; *The Jackroller*, p. 165; and *Natural History*, p. 229.

14. *Ibid.*, p. 356.

15. Shaw, *Brothers in Crime*, pp. 354, 355; *Natural History*, p. 227; *The Jackroller*, p. 164. See also Short, op. cit., p. xli.

16. Shaw and McKay, op. cit., pp. 174-75.

17. *Ibid.*, p. 174.

18. Shaw, *Natural History*, p. 233; *Brothers in Crime*, p. 260; Shaw and McKay, op. cit., p. 4.

19. Shaw, *Natural History*, p. 228. See also *The Jackroller*, pp. 119, 165; *Brothers in Crime*, p. 350.

Shaw concluded that delinquency and other social problems are closely related to the process of invasion, dominance, and succession that determines the concentric growth patterns of the city.<sup>20</sup> When a particular location in the city is "invaded" by new residents, the established symbiotic relationships that bind that location to a natural area are destroyed. Ultimately this location will be incorporated as an organic part of a new natural area, and the social equilibrium will be restored. Meanwhile the natural organization of the location will be severely impaired.

These "interstitial areas" (so called because they are *in between* the organized natural areas) become afflicted with a variety of social problems that are directly traceable to the rapid shift in populations. The formal social organizations that existed in the neighborhood tend to disintegrate as the original population retreats. Because the neighborhood is in transition, the residents no longer identify with it, and thus they do not care as much about its appearance or reputation. There is a marked decrease in "neighborliness" and in the ability of the people of the neighborhood to control their youth. For example, in an established neighborhood, a resident who is aware that a child is getting into trouble may call that child's parents or may report that child to the local authorities. But because new people are continuously moving into the interstitial area, residents no longer know their own neighbors or their neighbors' children. Thus children who are out of their parents' sight may be under almost no control, even in their own neighborhood. The high mobility of the residents also means that there is a high turnover of children in the local schools. This is disruptive both to learning and to discipline. Finally, the area tends to become a battleground between the invading and retreating cultures. This can generate a great deal of conflict in the community, which tends to be manifested in individual and gang conflicts between the youth of the two cultures.

Although other areas only periodically undergo this process, areas in Zone II are continually being invaded both by the central business district and by successive waves of new immigrants coming into the city from foreign countries and from rural areas. These new immigrants already have many problems associated with their adjustment to the new culture. In addition, the neighborhood into which the immigrant moves is in a chronic state of "social disorganization." This presents the immigrant with many additional problems, and there is almost no help available to solve any of them. Thus recent immigrants tend to have a wide

20. Morris, op. cit., pp. 77, 78; Ian Taylor, Paul Walton, and Jock Young, *The New Criminology*, Harper & Row, New York, 1973, pp. 110-14.

range of social problems, including delinquency among their youth. These problems are resolved as recent immigrants acquire some of the resources necessary both to solve their own problems and to move into the better-established neighborhoods of Zone III, with its natural processes of social control.

### POLICY IMPLICATIONS

Because Shaw believed that juvenile delinquency was generated by social disorganization in interstitial areas, he did not believe that treatment of individual delinquents would have much effect in reducing overall delinquency rates. Rather, he thought that the answer had to be found in "the development of programs which seek to effect changes in the conditions of life in specific local communities and in whole sections of the city."<sup>21</sup> In Shaw's view these programs could only come from organizations of neighborhood residents, so that the natural forces of social control could take effect. Thus, in 1932, he launched the Chicago Area Project, which established twenty-two neighborhood centers in six areas of Chicago.<sup>22</sup> Control of these centers rested with committees of local residents rather than with the central staff of the project, and local residents were employed as staff.

These centers had two primary functions. First, they were to coordinate such community resources as churches, schools, labor unions, industries, clubs, and other groups in addressing and resolving community problems. Second, they were to sponsor a variety of activity programs including recreation, summer camping and scouting activities, handicraft workshops, discussion groups, and community projects.<sup>23</sup> Through these activities the project sought "to develop a positive interest by the inhabitants in their own welfare, to establish democratic bodies of local citizens who would enable the whole community to become aware of its problems and attempt their solution by common action."<sup>24</sup>

The Chicago Area Project operated continuously for twenty-five years, until Shaw's death in 1957, but its effect on delinquency in these areas was never precisely evaluated.<sup>25</sup> A similar project in Boston was

21. Shaw and McKay, op. cit., p. 4.

22. See Solomon Kobrin, "The Chicago Area Project—A 25-Year Assessment," *Annals of the American Society of Political and Social Science*, March 1959, pp. 19–29; or Anthony Sorrentino, "The Chicago Area Project After 25 Years," *Federal Probation*, June 1959, pp. 40–45. A review of this and other similar programs is found in Richard Lundman, *Prevention and Control of Juvenile Delinquency*, 2nd ed., Oxford, New York, 1993, ch. 3.

23. Shaw and McKay, op. cit., p. 324.

24. Morris, *The Criminal Area*, p. 83.

25. Short, op. cit., p. xlv.

carefully evaluated by Walter B. Miller over a three-year period.<sup>26</sup> Here it was found that the project was effective in achieving many admirable goals. It established close relationships with local gangs and organized their members into clubs, it increased their involvement in recreational activities, it provided them with access to occupational and educational opportunities, it formed citizens' organizations, and it increased interagency cooperation in addressing community problems.

The goal of all these activities, however, was to reduce the incidence of delinquent behavior. To assess the impact of the project on the behavior of the youth, Miller analyzed the daily field reports of the outreach workers, which included a description of the activities of each youth. The behaviors were then classified as "moral" or "immoral" (where "immoral" meant disapproval by the community, but not necessarily a violation of the law) and as "legal" or "illegal." It was found that the ratio of moral to immoral behaviors remained relatively constant throughout the project, and that, although the total number of illegal acts decreased slightly during the project, the number of major offenses by boys increased. In addition, data were compiled on the number of court appearances made by each youth before, during, and after contact with the project, and these data were compared with the number of court appearances by a control group. There was almost no difference in these statistics. Miller concluded that the project had had a "negligible impact" on delinquency.<sup>27</sup> The failure of this and other similar projects led Lundman to conclude that it was likely that "the Chicago Area Project also failed to prevent juvenile delinquency."<sup>28</sup>

### RECENT THEORY AND RESEARCH ON NEIGHBORHOODS AS CAUSES OF CRIME

Despite the failure of the Chicago Area Project to prevent delinquency, criminologists have continued to argue that neighborhoods themselves are important as causes of crime and delinquency and that they are appropriate targets for crime prevention programs. To a considerable extent, this continuing focus is the result of Shaw and McKay's discovery of *residential succession*, the fact that neighborhoods often retain their high crime and delinquency rates despite total turnovers in population.

26. Walter B. Miller, "The Impact of a 'Total-Community' Delinquency Control Project," *Social Problems* 10: 168–91 (fall 1962).

27. Ibid., p. 187.

28. Lundman, op. cit., p. 81.

Bursik and Webb tested this concept using data on Chicago neighborhoods directly comparable to that of Shaw and McKay.<sup>29</sup> They found that the residential succession argument was supported by data from 1940 to 1950. However, after 1950 all neighborhoods undergoing racial change were characterized by high delinquency rates, regardless of their delinquency rates before the change. Bursik and Webb interpret their finding in terms of community stability. At the time Shaw and McKay wrote, the zones of transition were found exclusively in the inner-city areas, and the process of dispersion to outlying residential areas was gradual. This “natural” process was disrupted in more recent times as African Americans attempted to follow in the footsteps of other ethnic groups. Strong white resistance to any blacks moving into the neighborhood would be followed by total white flight and total racial turnover in a very short time. In such situations social institutions disappeared entirely or persevered but were resistant to including the new residents, resulting in the high delinquency rates associated with social disorganization. Bursik and Webb found that, after the neighborhoods had stabilized, they “had delinquency rates not much different than would have been expected from their previous patterns.”<sup>30</sup> This finding was consistent with several other studies that found that delinquency rates were increasing in African-American neighborhoods that had recently undergone residential changes but were decreasing in African-American neighborhoods that had been stable for some time.<sup>31</sup>

Beginning with an assumption about residential succession, Stark asked what it is about neighborhoods themselves that is associated with high crime rates, independent of the people who live there. As an answer to this question, he presented a formal theory in thirty integrated propositions.<sup>32</sup> These thirty propositions focused on five structural aspects of urban neighborhoods: density (many people in a small area), poverty (people have little money), mixed use (residences, industries, and stores are all in the same place), transience (people frequently move into, out of, and around the neighborhood) and dilapidation (the buildings themselves are falling apart). Stark argues that, in a variety of ways, these five structural characteristics increase moral cynicism among com-

29. Robert J. Bursik, Jr., and Jim Webb, “Community Change and Patterns of Delinquency,” *American Journal of Sociology* 88(1): 24–42 (1982).

30. *Ibid.*, p. 39.

31. Robert E. Kapsis, “Residential Succession and Delinquency,” *Criminology* 15(4): 459–86 (Feb. 1978). See also more recent findings by McKay reported in the 1969 edition of Shaw and McKay, *op. cit.*, p. 345, and interesting comments by Snodgrass, *op. cit.*, pp. 5–6.

32. Rodney Stark, “Deviant Places: A Theory of the Ecology of Crime,” *Criminology* 25(4): 893–909 (Nov. 1987).

munity residents, provide more opportunities to commit crime, increase motivations to commit crime, and decrease informal surveillance by which crime in a community is held in check. As a consequence, crime-prone people are attracted to the neighborhood, while law-abiding people get out if they can. This results in high crime rates that tend to persist even when there are complete turnovers in the people who live there.

Similarly, Sampson reviewed recent research on the relation between neighborhoods and crime in an attempt to determine how community structures and cultures create different crime rates.<sup>33</sup> Poor neighborhoods have higher crime rates, but Sampson found that poverty itself is not related to crime. Rather, poverty combined with residential mobility (i.e., frequent moves by residents) seems to be associated with higher levels of violent crime. Neighborhood rates of family disruption (divorce rates and rates of female-headed households) are strongly and consistently related to rates of violence. Neighborhoods with high percentages of African Americans have higher crime rates, but race itself tends to drop out when family disruption and poverty are taken into account. Finally, neighborhoods with high population density, many apartments, and high concentrations of individuals who do not live within a family situation tend to have higher rates of crime and violence.

Sampson explained this pattern of research findings with Shaw’s concept of social disorganization. Sampson defined social disorganization as the inability of the community to realize its common values. An example would be when community residents oppose drug use but cannot get rid of the drug dealers who have taken over a nearby corner or house for a drug market. There may be a variety of reasons that some communities cannot realize their common values, but one reason is the lack of what Coleman calls “social capital”—i.e., networks of relationships among people that facilitate common actions and make possible the achievement of common goals.<sup>34</sup> In general, when there are many social relationships among community residents (i.e., a lot of “social capital”), there is less crime. This is because no one wants crime in their own neighborhood, and the social relationships allow people to achieve their common goal of driving the crime out.

33. Robert J. Sampson, “The Community,” pp. 193–216 in James Q. Wilson and Joan Petersilia, eds., *Crime*, ICS Press, San Francisco, 1995. See also Sampson and Janet Lauritsen, “Violent Victimization and Offending: Individual, Situational, and Community-Level Risk Factors,” pp. 1–114 in Albert J. Reiss and Jeffrey A. Roth, eds., *Understanding and Preventing Violence*, vol. 3, National Academy Press, Washington, D.C., 1994.

34. James Coleman, “Social Capital in the Creation of Human Capital,” *American Journal of Sociology* 94 (Supplement): 95–120, 1988.

Sampson then proposed a causal sequence that ties all this research together in a way that resembles Shaw's earlier work.<sup>35</sup> Poverty, family disruption, and residential instability are community characteristics that result in anonymity and the lack of relationships among neighborhood residents and low participation in community organizations and in local activities. Because of this "low social capital," neighbors are not able to exert effective control over public or common areas, such as streets and parks, and so they are free to be taken over by criminals. In addition, local teenagers have considerable freedom because the anonymity of the neighborhood means that they and their friends are unknown to adults even though they may be only a short distance from their homes. All of this results in increased crime and violence in the neighborhood, independent of the people who live there. The high crime and violence then promotes further disintegration of the community, as law-abiding residents withdraw from community life and try to move out of the neighborhood.

At least some of the concentration of crime among African Americans, according to Sampson, is caused by differences in the neighborhoods in which they live. About 38 percent of poor blacks live in extremely poor neighborhoods, where the above processes are likely to occur, and only 16 percent of poor blacks live in neighborhoods that are not poor. In contrast, poor whites are much more widely dispersed in society. Only about 7 percent of poor whites live in extremely poor neighborhoods, while around 70 percent of them live in neighborhoods that are not poor at all. The "worst" urban contexts in which whites reside, in terms of poverty and family disruption, are considerably better than the average urban contexts in which blacks reside.<sup>36</sup> To the extent that neighborhoods themselves have a causal impact on crime, this would produce marked differences in the crime rates of these two groups.

Sampson proposed a variety of policy recommendations that are focused on "changing places, not people." These include targeting "hot spots" in the community where there is frequent criminal activity; stopping the "spiral of decay" by cleaning up trash, graffiti, and so on; increasing the social relationships between adults and teenagers through organized youth activities; reducing residential mobility by enabling residents to buy their homes or take over management of their apartments; scatter public housing in a broad range of neighborhoods rather than

35. *Ibid.*, pp. 200–201.

36. *Ibid.*, pp. 201–2; Robert Sampson and William Julius Wilson, "Toward a Theory of Race, Crime, and Urban Inequality," in John Hagan and Ruth Peterson, eds., *Crime and Inequality*, Stanford University Press, Stanford, Calif., 1995.

concentrating it in poor neighborhoods; maintain and increase urban services, such as police, fire, and public health services, especially those aimed at reducing child abuse and teen pregnancy; and generally increase community power by promoting community organizations. He conceded that such programs have had limited success in the past, but argued that small successes can produce cumulative changes that result in a more stable community in the long run.

#### SITUATIONAL CONTEXTS OF CRIME

The term "situation" refers to the immediate setting in which behavior occurs, and "situational analysis" refers to the search for regularities in relationships between behaviors and situations.<sup>37</sup> Neighborhoods are one situational context that can influence the occurrence of crime. Recent research has looked at a variety of other situational contexts to explain both the likelihood that crimes will occur and the likelihood that particular people will be victimized by them.

Essentially, these theories assume that there are always people around who will commit a crime if given a chance, so they do not explain the motivation to commit crime. Rather, they explain the situations and circumstances in which motivated offenders find that they have the opportunity to commit a crime. Therefore, these theories sometimes are called "opportunity theories" of crime.

For example, looting often accompanies large-scale disasters such as floods, earthquakes, violent storms, wars, and riots. Home owners and store owners flee the disaster, leaving their property unprotected. The police often are busy with more pressing matters, such as saving human lives. Many people who normally would not commit crime take advantage of the opportunities in the situation and steal whatever they think they can get away with.

The preceding example would be a theory of "situational selection," in that it describes the types of situations that motivated offenders select to commit their crimes.<sup>38</sup> In general, motivated offenders consider ease of access to the target, the likelihood of being observed or caught, and the expected reward. This perspective assumes that offenders are largely rational in their decision-making processes, so it is associated with "rational choice" explanations of crime.<sup>39</sup>

37. For a review, see Christopher Birkbeck and Gary LaFree, "The Situational Analysis of Crime and Deviance," *Annual Review of Sociology* 19:113–37 (1993).

38. *Ibid.*, pp. 124–26.

39. *Ibid.* See also Darrell B. Cornish and Ronald V. G. Clarke, eds., *The Reasoning Criminal: Rational Choice Perspectives on Offending*. Springer-Verlag, New York, 1986.



A similar approach has been used to explain differences in the rates at which groups are victimized.<sup>40</sup> Hindelang and his colleagues argued that the differences in risks of victimization are associated with differences in “lifestyles,” which they describe in terms of “routine daily activities, both vocational activities (work, school, keeping house, etc.) and leisure activities.”<sup>41</sup> In general, they argue that people who are younger, male, unmarried, poor, and black have higher risks of victimization than people who are older, female, married, wealthy, and white because each of these groups has an increased tendency to be away from home, especially at night, to engage in public activities while away from home, and to associated with people who are likely to be offenders.<sup>42</sup> All this leads to increased risk of property and personal victimization.

Hindelang and his colleagues argued that the routine activities of some groups expose them to much greater risks of victimization than others. Similarly, Cohen and Felson argue that certain changes in the modern world have provided motivated offenders with a greatly increased range of opportunities to commit crime.<sup>43</sup> They point out that most violent and property crimes involve direct contact between the offender and the “target”—i.e., the person or property of the victim.<sup>44</sup> These crimes therefore require the convergence in time and space of a motivated offender, a suitable target, and the absence of a capable guardian (e.g., police) to prevent the crime. Most criminology theories assume that changes in crime rates reflect changes in the number

40. Michael J. Hindelang, Michael R. Gottfredson, and James Garofalo, *Victims of Personal Crime*, Ballinger, Cambridge, Mass., 1978. James Garofalo, “Reassessing the Lifestyle Model of Criminal Victimization,” in Michael Gottfredson and Travis Hirschi, eds., *Positive Criminology: Essays in Honor of Michael J. Hindelang*, Sage, Beverly Hills, Calif., 1987, updates the theory and argues that there is no substantive difference between the “lifestyle” and the “routine activities” approaches. See also Michael G. Maxfield, “Lifestyle and Routine Activity Theories of Crime,” *Journal of Quantitative Criminology* 3(4): 275–82 (1987).

41. *Ibid.*, p. 241.

42. For a good summary, see Robert F. Meier and Terance D. Miethe, “Understanding Theories of Criminal Victimization,” in Michael Tonry, ed., *Crime and Justice: An Annual Review of Research* 17: 459–99 (1993). See also Birkbeck and LaFree, *op. cit.*

43. Lawrence E. Cohen and Marcus Felson “Social Change and Crime Rate Trends: A Routine Activity Approach,” *American Sociological Review* 44: 588–608 (1979). Where Cohen and Felson focused on crime rate trends of predatory crimes, Felson has extended this approach to a broader range of crimes and examined the implications of routine activities for individual offending. See Marcus Felson, “Linking Criminal Choices, Routine Activities, Informal Control, and Criminal Outcomes,” pp. 119–28 in Cornish and Clarke, *op. cit.*; Marcus Felson, *Crime and Everyday Life*, Pine Forge Press, Thousand Oaks, Calif., 1994; and Felson and Michael R. Gottfredson, “Social Indicators of Adolescent Activities Near Peers and Parents,” *Journal of Marriage and the Family* 46:709–14 (1984).

44. Some crimes do not involve direct contact—e.g., many white-collar crimes. Cohen and Felson do not explain these types of crime, but the organization of the modern world obviously has made crimes without direct contact much more available to motivated offenders.

of motivated offenders or changes in the strength of their motivation. But Cohen and Felson argue that changes in the crime rates instead may be explained in terms of changes in the availability of targets and in the absence of capable guardians. This is exactly what happens when looting follows a disaster—there is no increase in criminal motivation, but suddenly there are many available targets and no capable guardians.

Cohen and Felson argue that there have been a great increase in the availability of targets and in the absence of capable guardians in the modern world as a result of changes in “routine activities”—i.e., how normal people live their lives, including activities related to work, home life, child rearing, education, and leisure. When people are home, they function as “guardians” for their own property. But the routine activities of modern life have led to the “dispersion of activities away from family and household.” This means that many households no longer have “capable guardians” for extended and fairly predictable periods of time. In addition, there has been a large increase in goods that are portable and therefore suitable as a target for thieves. For example, Cohen and Felson calculate that, in 1975, \$26.44 in motor vehicles and parts were stolen for each \$100 of these goods that were consumed. In comparison, \$6.82 worth of electronic appliances were stolen for every \$100 consumed, and 12¢ worth of furniture and nonelectronic household durables. The vast differences in these amounts is due to the suitability of these items as targets for theft. Cohen and Felson then demonstrated that changes in crime rates in the United States from 1947 to 1974 could be explained largely by these trends. That is, in 1947, people were home more of the time and more of what they owned was like furniture, while by 1974 people were away from home more of the time and more of what they owned was like cars and electronic appliances. So despite large increases in crime over that time period, there may be no changes in offender motivations at all.

The routine activities approach offers an alternative to Durkheim’s theory of modernization as an explanation for changes in crime rates as nations undergo economic development. As discussed in the preceding chapter, Durkheim explained these changes primarily in terms of the breakdown of traditional values and beliefs. Neuman and Berger reviewed seventeen studies that compared Durkheim’s and the routine activities approaches, and found only weak support for either one.<sup>45</sup> Bennett also compared the two, using data from fifty-two nations from

45. W. Lawrence Neuman and Ronald J. Berger, “Competing Perspectives on Cross-National Crime,” *The Sociological Quarterly* 29(2): 281–313 (1988).

1960 to 1984.<sup>46</sup> In general, he found that neither approach could account for changes in homicide rates, since homicide was not affected either by developmental level or the rate of growth. But the changes in theft rates were consistent with the routine activities approach—i.e., more development was associated with more theft, independent of the rate of growth at which the development was occurring. He also found a “threshold” point at a very high level of development, at which further economic development did not seem to be associated with more theft. Bennett suggested that this was probably due to a variety of “adaptive social mechanisms” that began to become effective at that point, such as “theft target hardening (e.g., better locks, higher fences, burglar alarms), development of community watches increasing surveillance over goods, and more effective police strategies and tactics (e.g., community-oriented policing).”<sup>47</sup>

### CONCLUSIONS

The Chicago School of Human Ecology can be described as a gold mine that continues to enrich criminology today. The individual case studies remain classic portrayals of delinquents and their social worlds, the urban research methods have led to a wide variety of empirical studies, and the social disorganization theory forms the basis for several other theories in contemporary criminology.

Despite the richness of this historic legacy, the ecological approach to crime was somewhat stagnant for many years. Recently, however, there has been a veritable explosion of new theory and research that has ecological theory as its foundation. The basic point of this new theory and research is that crime cannot be understood without also understanding the context in which it occurs. The immediate contexts are the neighborhoods in which people live and the situations that their lifestyles frequently place them in, while the broadest context is formed by the routine activities found in the entire society.

Ultimately, all these studies implicitly rely on a view of society as having an organic unity that includes symbiotic relationships among all its various parts. Crime is part of that symbiotic unity and so it can only be understood in the context of its relation to the activities in the rest of the organism. As Meier and Miethe state, this whole line of research suggests that there is a “symbiotic relationship between conventional and illegal activities” in such a way that “victims and offenders are in-

46. Richard R. Bennett, “Development and Crime,” *The Sociological Quarterly* 32(3): 343–63 (1991).

47. *Ibid.*, p. 356.

extricably linked in an ecology of crime.”<sup>48</sup> Thus, criminologists must look to the social contexts to understand the parallel processes by which victims come to experience the risk of crime and offenders come to be motivated to commit crime.

48. Meier and Miethe, *op. cit.*, p. 495.