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Co-Offending and Patterns of Juvenile Crime

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This report is based on findings presented by the authors in "Patterns of Juvenile Delinquency and Co-Offending," in *Crime and Social Organization*, vol. 10 of *Advances in Criminological Theory*, E. Waring and D. Weisburd (eds.), New Brunswick, NJ: Transaction Publishers, 2002: 15–30; and "A Longitudinal Examination of the Relation between Co-Offending With Violent Accomplices and Violent Crime," *Aggressive Behavior* 28 (2) (2002): 97–108. These articles are available from the National Criminal Justice Reference Service at www.ncjrs.org.

Findings and conclusions of the research reported here are those of the authors and do not necessarily reflect the official position or policies of the U.S. Department of Justice or the National Institutes of Health.

This research was supported by the National Institute of Justice under grant number 92–IJ–CX–K008, "Delinquent Networks in Philadelphia: Co-Offending and Gangs." The study's final report, "Longitudinal Examination of the Relation Between Co-Offending with Violent Accomplices and Violent Crime," by Kevin P. Conway and Joan McCord (2001), is available at www.ncjrs.org/pdffiles1/nij/grants/192289.pdf.

NCJ 210360

ABOUT THIS REPORT

Observers of juvenile crimes have long noticed that most are co-offenses; that is, they involve more than one offender. An NIJ-sponsored study of juvenile offenders in an urban center uncovered several patterns of crime related to co-offending. This report focuses on three of those patterns—how co-offending is related to (1) the age of offenders, (2) recidivism, and (3) violence.

What did the researchers find?

The distribution of co-offending exaggerates the contribution of young offenders to crime events; ignoring co-offending when computing crime rates may produce severely misleading reports about crime and the effects of incarceration.

Offenders age 13 and under are more likely to commit crimes in pairs and groups than are 16- and 17-year-old offenders. About 40 percent of juvenile offenders commit most of their crimes with others. Co-offenders also are more likely than solo offenders to be recidivists. When very young co-offenders were compared with very young solo offenders, only the co-offenders had high recidivism rates and only the co-offenders committed high numbers of violent crimes. These young co-offenders warrant special attention from the criminal justice system.

Co-offending actually may increase the likelihood that offenders will commit violent crimes. When young offenders affiliate with offenders who have previously used violence, the result appears to be an increase in the likelihood that they will subsequently commit a violent crime. Co-offending violence rose throughout adolescence among the study group.

These trends suggest that an effective strategy would be to intervene early in the development of a criminal trajectory and to especially target co-offenders. For example, police could inquire about co-offending and record all participants in a crime.

Joan McCord and Kevin P. Conway

Co-Offending and Patterns of Juvenile Crime

About the Authors

The late Joan McCord, Ph.D., Professor of Criminal Justice at Temple University, was a groundbreaking criminal justice researcher and an eloquent teacher, speaker, and writer in the field, often focusing on juvenile crime, violence, and the efficacy of intervention programs. Kevin P. Conway, Ph.D., is Deputy Branch Chief of the Epidemiology Research Branch at the National Institute on Drug Abuse. His research interests center on drug abuse etiology and juvenile delinquency, with emphasis on links between antisocial behavior and drug abuse.

Juveniles who commit crimes typically commit them in the company of their peers. This basic fact has been regularly reported in the literature since the late 1920s.[1] Nevertheless, with rare exceptions, contemporary research focuses almost exclusively on juvenile delinquents as individual actors.[2] Indeed, police records tend to undercount co-offending, and published crime rates rarely take co-offending into account.

Most crime rates are computed from individuals, with an assumption that each criminal event reported by or about an individual represents a crime event (see "Measuring Juvenile Crime"). Yet co-offenders provide a basis for multiple reports of single crime events. Not only are those who first offended before age 13 most likely to be co-offenders, but also the sizes of their offending groups (from 2 to 30 in the current study) tend to further exaggerate the contributions of youthful offenders to crimes. This exaggeration seems to contribute to a fear of youths that may be counterproductive.

Analyses that consider both co-offending and age at first arrest show that youthful offenders are most at risk for subsequent crimes if they commit their crimes with accomplices. Although very young offenders are responsible for a high proportion of juvenile crimes, their annual crime rate is not particularly high unless they are co-offenders.

Violence appears to be learned in the company of others. Those who commit crimes with violent offenders, even if the group does not commit violent crimes, are likely to subsequently commit violent crimes. This suggests that young offenders pick up attitudes and values from their companions.

To address issues raised by co-offending, including whether co-offending increases violence, the National Institute of Justice sponsored a study in Philadelphia that examined

Measuring Juvenile Crime

Data about juvenile crime typically come from three sources: arrest data, reports from victims, and self-reports about crimes committed. These sources have limitations and important intrinsic inaccuracies—one of which is that they ignore co-offending.

Arrest data. Typically derived from the FBI's Uniform Crime Reports, arrest data count each arrest of each individual as a crime, thus relying on such factors as policies of particular police agencies, cooperation of victims, and the skill of crime perpetrators. If more than one person is arrested for a single crime, information from arrests inflates the crime rate. Multiple arrests of a single person also inflate the crime rate when rates are presented as a proportion of the population who are arrested.

Victims' reports. Victims' reports have been systematically collected since 1973 in the National Crime Victimization Survey. Using a nationally representative sample of households, victims over the age of 12 report their experiences with specific crimes (rape, sexual assault, personal robbery, aggravated and simple assault, household burglary, theft, and motor vehicle theft). Data are not available from this source for homicides, victims under the age of 13, or victims who are not parts of households. Information about perpetrators is available from these records only for crimes involving contact between victim and criminal. Estimates of juvenile crimes depend on the victims' estimates of age. Crimes with more than one victim may have multiple reports in these records.

Self-reports. Self-reports about crimes committed are collected in a variety of settings. Many surveys take advantage of the fact that schools provide a convenient location for data collection, but they typically miss the most likely perpetrators of crimes—those absent from school because of illness, dropping out, or truancy. Many self-reporting questionnaires record delinquencies that would not be considered serious enough to call police, and few obtain information about the more serious types of crimes included on the FBI Indexes. Self-reports of crimes tend to reflect social responses to criminality, with accuracy of reporting varying by gender, ethnicity, and recidivism.

the criminal histories of a random sample of juvenile offenders. This Research in Brief discusses the study's findings and implications, considering four questions:

- Why consider co-offending?
- How is co-offending related to the age of offenders?
- How is co-offending related to recidivism?
- How is co-offending related to violence?

Why consider co-offending?

Co-offending distorts reported crime rates by equating number of offenders with number of incidents and may increase a juvenile's risk for committing violent crimes through association with violent peers. Statistics on crimes typically are based on the number of criminals accused or convicted of crimes. Even when self-reports are used, they indicate only which individuals within a stipulated population have committed crimes. Such statistics create a distorted picture of crime because many crimes are committed by more than one criminal

and the proportion differs among different groups.

The distortion can be seen in the rare instances when crimes by lone offenders have been separated from those committed by multiple offenders. For example, the *Sourcebook of Criminal Justice Statistics, 2001,* reports that 64 percent of the violent crimes attributed to lone offenders were committed by white offenders, but only 51 percent of the violent crimes attributed to multiple offenders were committed by offenders in "all white" groups.[3] These figures suggest that nonwhites are more likely to offend in groups. Therefore, crime rates based on arrests may exaggerate the contributions of nonwhites to crime in the United States.

The distortion has a particularly strong effect for juvenile crimes. In 1997, for example, the Supplemental Homicide Reports indicated that 44 percent of murders known to involve juveniles involved more than one perpetrator.[4] According to the Bureau of Justice Statistics, 23 percent of violent crimes in 1999 attributed to lone offenders were committed by juveniles under the age of 18, whereas over 40 percent of violent crimes attributed to multiple offenders were committed by juveniles.[5]

The fact that particular crimes are committed by more than one criminal not only distorts the connection between criminals and crimes, but also distorts estimates of effects from various crime prevention policies. For example, researchers questioning the focus on incapacitation of high-rate offenders noted that offenders' crime rates would be exaggerated if they had committed a large proportion of their crimes in groups. To more accurately measure the effect of incapacitation on crime rates, attention also must be given to the continued criminal involvement of the co-offenders who remain in the community.[6]

In addition to distorting crime rates based on individuals and distorting the effects of intervention policies, co-offending may actually increase participation in crimes.[7] Furthermore, the present study provides evidence that co-offending may increase violence (see "How co-offending is related to violence," page 8).

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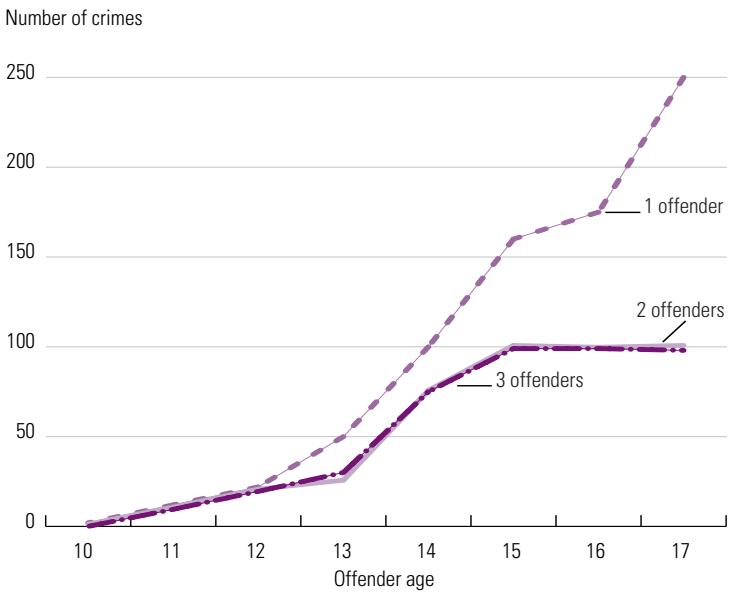
How co-offending is related to the age of offenders

Because prior evidence[8] suggests that youths who start offending early commit more crimes than those who start late, effects of the age of first criminality should be considered along with co-offending. Most offenders in the Philadelphia study committed their first offense between the ages of 13 and 15.

Researchers identified youths who committed a crime before the age of 13 as "young starters" and those who committed a first crime after age 15 as "late starters." They noted a relative decline in co-offending in relation to age, but this reflects a sharp increase in the number of crimes committed by single offenders rather than a decline in the number of co-offenses (see exhibit 1).

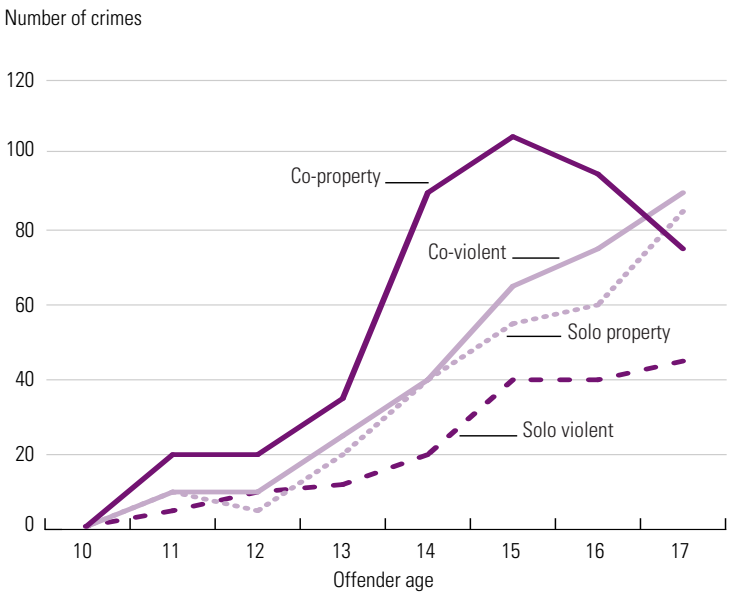
Exhibit 1. Number of crimes by number of offenders and age



From ages 10 to 17, crimes committed alone, in pairs, and in groups increased. The number of crimes committed alone increased more rapidly than the number of crimes committed with accomplices. Rates for pairs and for groups were almost identical after age 14.

When researchers differentiated property crimes from violent crimes,[9] they found a decline in co-offending after the age of 15 for property offenses (see exhibit 2). This decline, however, was paralleled by a rise in solo property offending. Co-offending violence increased throughout adolescence, while solo violent offending leveled off around age 15. Among 16- and 17-year-old offenders, violent crimes were almost twice as likely to be co-offenses as solo offenses.

Exhibit 2. Crimes, age, and co-offending

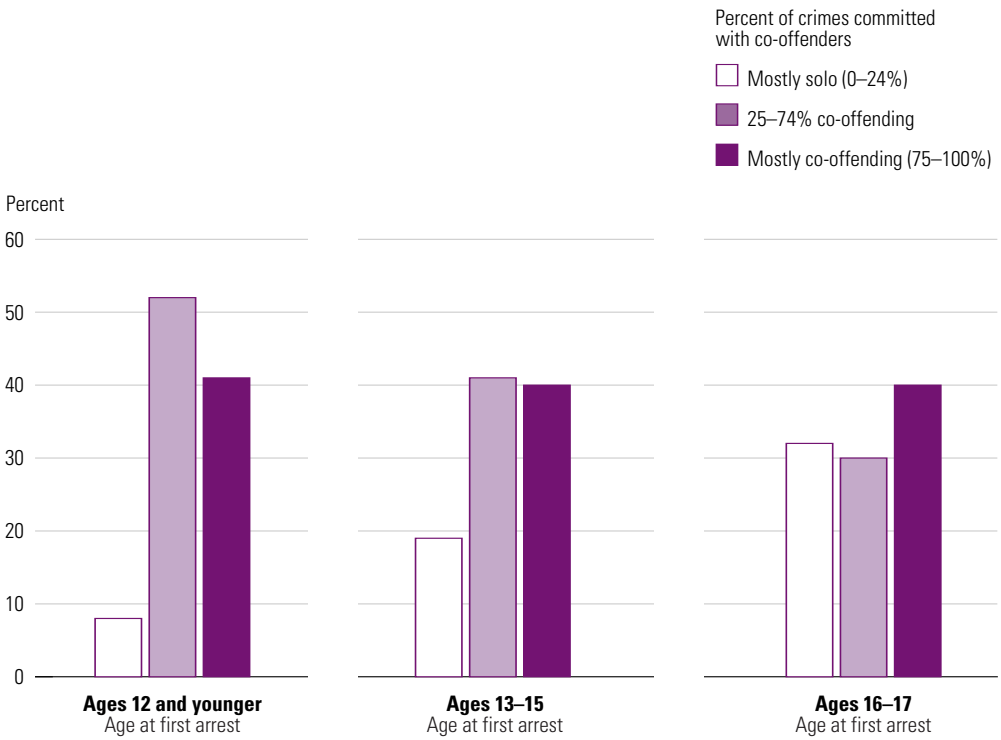


The youngest offenders at first arrest were the most likely to mix co-offending and solo offending, but least likely to commit all their crimes alone. Those first arrested at ages 16 or 17, on the other hand, were most likely to commit crimes alone. About 40 percent of offenders committed most of their crimes with accomplices, regardless of their age at first arrest (see exhibit 3).

How co-offending is related to recidivism

The Philadelphia delinquents first arrested when they were under 13 years of age had higher rates of recidivism than those first arrested when they were older. Co-offending, however, distorts the picture of recidivism because there are actually fewer crime incidents than individual crime rates indicate

Exhibit 3. Age at first arrest and co-offending



(see exhibit 4). Specifically, crime rates are inflated if co-offending is not taken into account. In contrast, crime rates that account for co-offenders count each crime incident once even if multiple offenders have been arrested for the crime. The crime-incident ratio, which accounts for co-offending, is greatest for the young starters—indicating that crime rates for young delinquents are most likely to be inflated when co-offending is not taken into account.

Study findings on recidivism provide a good example of the increased information that comes from recognizing co-offending. The number of Index crimes was consistently higher for delinquents who co-offended at least 25 percent of the time. This pattern was particularly evident for the young starters. The young starters who co-offended at least 25 percent of the time were arrested for almost twice as many Index crimes as the young starters who typically committed solo offenses.[10] Thus, the number of arrests for Index crimes reflected both the age at first arrest and the proportion of crimes that were co-offenses (see exhibit 5), revealing that young-starter delinquents who mostly co-offend committed the most crimes.

An examination of annual crime rates further demonstrates how crime rates can be inflated by inattention to co-offending. In each category of age for first arrest, individual co-offending rates were higher than solo rates (see exhibit 6). The offenders first

To determine whether a decline in group offending with age is a result of smaller groups committing crimes, of reform, or of shifts from co-offending to solo offending, researchers in a 1991 study* analyzed criminal records of 411 male criminals in London. They discovered that individuals with long criminal histories tended to move from group to solo offending. Both recidivism and co-offending declined with increasing age at first offense. The same study also reported that co-offending delinquents committed crimes at higher rates than solo offenders.

*See Reiss, A.J., Jr., and D.P. Farrington, "Advancing Knowledge About Co-Offending: Results From [a] Prospective Longitudinal Survey of London Males," *Journal of Criminal Law and Criminology* 82 (1991): 360–395.

Exhibit 4. Crime incidents and co-offenders

Age at first crime	Mean number of: Reported crimes	Mean number of: Actual incidents*	Crime-incident ratio
< 13 years	7	3	2.3
13–15 years	4	2	2.0
16–17 years	2	1	2.0

*When co-offending is factored in.

arrested at ages 16 and 17 had the highest rates for both solo and co-offenses. However, these high recidivism rates are due to both the compressed duration of their measured criminal activities and the fact that such a high proportion of their crimes are co-offenses.

Despite committing crimes at lower rates, the offenders who had first been arrested under the age of 13 had the highest ratio of co-offending to solo offending. But young starters are not high recidivists if one considers the length of time they are exposed to the juvenile justice system.[11]

These analyses show not only that crime rates based on individuals are most inflated for young-starting delinquents, but also that targeting youthful co-offenders could be the most productive approach to reducing future crime.

Exhibit 5. Age at first crime, co-offending, and Index crimes

Age at first crime and rate of co-offending	Mean number of Index crimes
< 13 years	
Co-offend < 25% of crimes	3
Co-offend 25–74% of crimes	6
Co-offend > 74% of crimes	6
13–15 years	
Co-offend < 25% of crimes	2
Co-offend 25–74% of crimes	4
Co-offend > 74% of crimes	3
16–17 years	
Co-offend < 25% of crimes	1
Co-offend 25–74% of crimes	2
Co-offend > 74% of crimes	1

Note: Figures have been rounded.

How co-offending is related to violence

Those who generally committed crimes with others were more likely to commit violent crimes than were solo offenders. The association between co-offending and violence was strongest for young starters.

Young starters. On average, offenders who had accomplices for at least 25 percent of their crimes and had been arrested before the age of 13 committed more than two violent crimes (see exhibit 7).

Young starters who committed most of their crimes alone, however, were not particularly prone to committing violent crimes. On the other hand, co-offending young starters were considerably more likely to commit violent

crimes than were late starters, especially late starters who mostly worked solo.

Thus, because the vast majority of young starters commit many of their crimes with others, the effects of age and co-offending on violence tend to be confounded.

Is violence learned? The association between co-offending and violence raises the question of whether kids who tend to be violent hang out together and therefore commit violent crimes or whether learning accounts for some of the high level of violence. To test the latter, researchers identified 236 offenders in the random sample of 400 who had not committed violent crimes before committing a crime with others.

These offenders committed their first co-offenses with 514 accomplices. Groups ranged from 2 to 15 offenders. Pairs committed 42 percent of these crimes. Co-offenders typically matched their accomplices in ethnic identity.[12] Age comparisons revealed that most of the offenders identified in their first co-offense were younger than their accomplices.[13]

Among the 236 offenders who had not been violent before their first co-offense, 90 participated in a violent first co-offense; among these, 62 percent committed at least one additional violent

Exhibit 6. Individual crime rates and co-offending

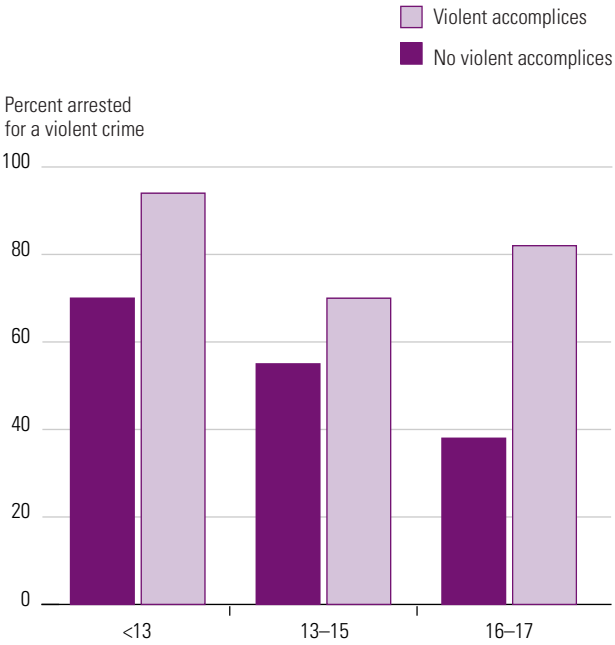
	Individual annual crime rates		
Age at first arrest	**Solo crimes**	**Co-offenses**	**Ratio of co-offending to solo offending**
< 13 years	0.3	0.6	1.9
13–15 years	0.4	0.6	1.5
16–17 years	0.6	0.7	1.2

Exhibit 7. Young co-offenders—at risk for violence

Age at first crime and rate of co-offending	**Mean number of violent crimes**
< 13 years	
Co-offend < 25% of crimes	1.0
Co-offend 25–74% of crimes	2.4
Co-offend > 74% of crimes	2.0
13–15 years	
Co-offend < 25% of crimes	0.9
Co-offend 25–74% of crimes	1.1
Co-offend > 74% of crimes	1.7
16–17 years	
Co-offend < 25% of crimes	0.3
Co-offend 25–74% of crimes	0.8
Co-offend > 74% of crimes	0.8

offense after this first one. Another 61 juveniles participated in a nonviolent co-offense with co-offenders who had previously been violent. These juveniles were even more likely to subsequently commit a violent crime than those who had actually participated in a violent crime for their first co-offense.[14]

Exhibit 8. Violent crimes after first co-offense (percent of category)



To check whether peer contagion[15] may have influenced the learning of violence, researchers divided the previously nonviolent offenders who committed a first co-offense that was not violent into two groups according to whether their accomplices had been violent before the target co-offense. Those who committed a nonviolent offense with violent people were considerably more likely to commit a subsequent violent crime—80 percent of those with violent accomplices, compared with 56 percent of those with only nonviolent accomplices, committed at least one violent crime after the co-offense.[16]

The data showed no systematic relationship between age at first offense and whether or not nonviolent offenders co-offended with violent offenders for a first co-offense. Nevertheless, both whether a violent offender participated in the first co-offense and age at first arrest predicted whether a previously nonviolent offender would commit a violent crime (see exhibit 8).

Committing a first co-offense with violent accomplices

contributed to the likelihood that violent crimes would be committed, regardless of age at first arrest. That is, violent peers increase the likelihood that nonviolent offenders will commit violent offenses.

How may violence be learned? Peer delinquency seems to be more than a training process for learning how to be delinquent. Interaction among delinquent peers apparently encourages and escalates their proclivity to commit crimes. Co-offenders may learn through the influence of violent accomplices that violence can be an effective means for getting money or satisfying other desires. They also may learn that insults or fear provide adequate grounds for violence.[17]

An adequate theory of crime should take into account both how others influence individual behavior and how individuals selectively seek companions who are likely to promote criminal behavior. Construct Theory postulates that co-offending provides a young offender justification for continued delinquency, encouraging him or her to seek out accomplices and commit additional crimes (see "Construct Theory"). This implies that interventions need not be directed at deep-seated emotions. Rather, behavioral change can be expected as a consequence of changing beliefs in relation to grounds for action.

Implications for policy and practice

Because many juvenile crimes are committed in the company of others, crime rates cannot be accurately portrayed unless co-offending is accurately recorded. Yet inspection of official records indicates that attention has not focused on this feature of crime events. Too often, a crime is considered to be solved when a single arrest has been made.

The Philadelphia study demonstrates that crime records should contain accurate information about co-offending. Such accuracy is necessary if the effects of policy shifts are to be measured or if differences in crime rates are to be used as a basis for such preventive actions as deploying police and implementing target-hardening measures.

Co-offenders may learn through the influence of violent accomplices that violence can be an effective means for getting money or satisfying other desires.

Construct Theory

Several theories have been introduced to explain how people learn from their environments. Many of these involve an assumption that learning takes place in response to receiving rewards or avoiding punishments for specific types of actions. Other learning theories refer to the frequency of encountering particular types of behavior. McCord's learning theory—Construct Theory—explains an individual's intentional actions as the natural result of how that individual constructs his or her environment, based on perceptions and experiences.[a]

According to Construct Theory, delinquents learn to classify criminal actions as appropriate partially through finding that others think it normal to commit crimes. It follows that juveniles would be more likely to consider violent behavior to be appropriate when committing crimes if their companions consider violence appropriate.

Construct Theory differs from other theories purporting to explain criminal behavior in that it does not rest on implied or stated feelings or emotions. Rather, it relies on an empirical judgment that *potentiating reasons* provide the impetus for action. For example, in the case of co-offending, Construct Theory holds that an 11-year-old delinquent often accepts a (usually older) companion's belief that violence is justifiable when committing crimes. This belief becomes a potentiating reason for the youth's own actions.

Some interventions may enhance the effects of co-offending by placing youths in groups that unintentionally provide negative peer learning. Peer values that encourage deviant behavior among misbehaving youths can provide potentiating reasons for continued misbehavior.[b]

The Philadelphia study validates Construct Theory, at least in part, by demonstrating that juvenile offenders are influenced by accomplices who had been violent in prior crimes, even though the present crime was not violent.

Notes

a. See McCord, J., "He Did It Because He Wanted To . . . ," in *Motivation and Delinquency*, ed. W. Osgood, Nebraska Symposium on Motivation, Lincoln, NE: University of Nebraska Press, 44 (1997): 1–43.

b. See McCord, J., "Crime Prevention: A Cautionary Tale," presentation at the Third International Inter-Disciplinary Evidence-Based Policies and Indicator Systems conference, July 2001, published in *Evidence-Based Policies and Indicator Systems, Conference Proceedings*, University of Durham, England, 2002: 186–192.

Perhaps the greatest challenge for intervention is to target youthful co-offenders in a way that reduces the likelihood that they will develop attitudes that promote crime. The study's findings imply that lessons of violence are learned "on the street," where knowledge is passed along through impromptu social contexts, including those in which offenders commit crimes together.[18] Interaction among delinquent peers apparently serves to instigate crimes and to escalate their severity.

More research on this issue is warranted, especially studies that measure peer influence on intentional action, track the selection of accomplices across multiple crimes, examine the learning processes involved in the transfer of violence across offenders, and identify individual offenders who may be particularly susceptible to (or unaffected by) the influence of violent accomplices.

When developing and evaluating strategies designed to prevent or reduce violence, practitioners and evaluators may want to consider co-offending patterns, individuals' choices of accomplices, and factors that increase the risk of co-offending, especially among very young offenders.

Study Methodology[a]

A random number generator identified 400 offenders from police tapes listing 60,821 juvenile arrests in Philadelphia during 1987. Half the sample was drawn from a list of offenses the police had recorded as solo offenses and the other half from a list of co-offenses. If an offender's court record could not be found for the listed offense or if the offender had been previously selected, another crime was drawn, again using a random number generator, and that offender became part of the sample. The complete juvenile criminal records were gathered for all 400 offenders in the sample. Adult records were traced through 1994. Accomplices were traced for the 335 randomly selected offenders who had committed at least one co-offense.

Analyses rely on data from court folders, which contained witness, complainant, police, and co-offender reports. A comparison between the court records and police tapes indicated that police records systematically undercounted co-offending.

Some information about the number of offenders was available in more than 95 percent of the incidents. When a range was given, researchers estimated conservatively, taking the lower number. When "group" was mentioned with an unspecified number of offenders, the number was coded as 3.

A crime was considered to be violent if the offenders were accused of murder, attempted murder, rape, robbery, aggravated assault, simple assault, terroristic threatening, intimidating a witness, prowling, or cruelty to animals, or if the complainant, a witness, or the victim reported violence. By these criteria, 38 percent of the crimes were violent. Crimes committed by groups were more likely to be violent.[b]

Notes

a. For a complete description of methodology, see McCord, J., and K.P. Conway, "Patterns of Juvenile Delinquency and Co-Offending," in *Crime and Social Organization*, vol. 10 of *Advances in Criminological Theory*, ed. E. Waring and D. Weisburd, New Brunswick, NJ: Transaction Publishers, 2002: 15–30.

b. Forty-three percent of crimes committed by groups and 32 percent committed by pairs were violent.

Notes

1. A 1928 study found that 82 percent of juveniles brought to court in Cook County, Illinois, committed their offenses as members of groups. See Shaw, C.R., and H.D. McKay, *Juvenile Delinquency and Urban Areas*, revised edition, Chicago: University of Chicago Press, 1969 (first published 1942). For studies that focused on group processes to try to understand juvenile delinquency, see Cohen, A.K., *Delinquent Boys*, Glencoe: Free Press, 1955; Cloward, R.A., and L. Ohlin, *Delinquency and Opportunity*, New York: Free Press, 1960; and Short, J., and F.L. Strodtbeck, *Group Process and Gang Delinquency*, Chicago: University of Chicago Press, 1965.

2. See Carrington, P.J., "Group Crime in Canada," *Canadian Journal of Criminology* (July 2002): 277–315; Hockstetler, A., "Opportunities and Decision: Interactional Dynamics in Robbery and Burglary Groups," *Criminology* 39 (3) (2001): 737–763; McCarthy, B., J. Hagan, and L.E. Cohen, "Uncertainty, Cooperation and Crime: Understanding the Decision to Co-Offend," *Social Forces* 77 (1) (1998): 155–184; Weerman, F.M., "Co-Offending as Social Exchange: Explaining Characteristics of Co-Offending," *The British Journal of Criminology* 43 (2) (2003): 398–416.

3. Maguire, K., and Pastore, A.L., *Sourcebook of Criminal Justice Statistics, 2001,* Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 2003, NCJ 196438. Calculations have omitted "mixed" and "not known."

4. Supplemental Homicide Reports are part of the FBI's Uniform Crime Reporting system. See also Snyder, H.N., and M. Sickmund, *Juvenile Offenders and Victims: 1999 National Report*, Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention, 1999.

5. Bureau of Justice Statistics, *Sourcebook of Criminal Justice Statistics, 1998,* Washington, DC: U.S. Department of Justice, 1999, NCJ 176356.

6. See Reiss, A.J., Jr., "Co-Offending and Criminal Careers," in *Crime and Justice*, vol. 10, ed. N. Morris and M. Tonry, Chicago: University of Chicago Press, 1988: 117–170.

7. See Hindelang, M.J., "With a Little Help From Their Friends: Group Participation in Reported Delinquency," *British Journal of Criminology* 16 (1976): 109–125; and Reiss, A.J., Jr., and D.P. Farrington, "Advancing Knowledge About Co-Offending: Results From [a] Prospective Longitudinal Survey of London Males," *Journal of Criminal Law and Criminology* 82 (1991): 360–395. Also, delinquents in co-offending groups studied in Japan reported that they committed more crimes together than alone. See Suzuke, S., Y. Inokuchi, K. Watanabe, J. Kobayashi, S. Okela, and Y. Takahashi, "Study of Juvenile Co-offending," *Reports of the National Research Institute of Police Science* 36 (1995): 2, 64.

8. Before attention was drawn to co-offending, high recidivism rates had been linked with offenders who were particularly young when they

began to commit crimes. See McCord, J., and K.P. Conway, "Patterns of Juvenile Delinquency and Co-Offending," in *Crime and Social Organization*, vol. 10 of *Advances in Criminological Theory*, ed. E. Waring and D. Weisburd, New Brunswick, NJ: Transaction Publishers, 2002: 16.

9. Property crimes were burglary, vehicle theft, theft other than vehicle, arson, vandalism, criminal trespass, forgery or counterfeiting, embezzlement, fraud, and risking or causing a catastrophe. Violent crimes were murder, attempted murder, rape, robbery, aggravated assault, simple assault, terroristic threatening, intimidating a witness, prowling, and cruelty to animals.

10. Index crimes are eight categories of serious crime collected by the FBI's Uniform Crime Reporting Program. Violent Index crimes are homicide, criminal sexual assault, robbery, and aggravated assault/battery. Property Index crimes are burglary, theft, motor vehicle theft, and arson.

11. If all young criminals spend about 5 years actively committing crimes, only those arrested before their 13th birthdays would spend all their criminal years as juveniles. To compensate for this potential bias, individual crime rates were computed for both solo offenses and co-offenses, on the assumption that once a juvenile committed a crime, he or she would remain a delinquent until the age of 18. Whatever bias this computation introduced affected solo and co-offending rates alike.

12. The ethnic identity of co-offenders and accomplices matched for 96 percent of black offenders, 83 percent of white offenders, and 83 percent of Hispanic or other offenders. Researchers traced the criminal histories of 396 of the accomplices, a success rate of 77 percent.

13. Sixty-three percent were younger, 19 percent were older, and 18 percent were the same age or very close.

14. $X^2_{(1)}=5.626$, $p<.02$.

15. For discussion of this issue, see Dishion, T.J., J. McCord, and F. Poulin, "When Interventions Harm: Peer Groups and Problem Behavior," *American Psychologist* 54 (9) (1999): 1–10.

16. $X^2_{(1)}=9.065$, $p<.003$.

17. Case studies and self-report data converge to suggest that delinquent groups socialize their members in ways that encourage and value violence.

18. See "Construct Theory" sidebar; also see McCord, J., "Understanding Childhood and Subsequent Crime," *Aggressive Behavior* 25 (1999): 241–253.

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