Patterns of Juvenile Delinquency and Co-offending*

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Co-offending is endemic to delinquency (e.g., see Cloward, & Ohlin, 1960; Cohen, 1955; Sarnecki, 1986; Shaw, 1930; Shaw & McKay, 1942/1969; Short & Strodtbeck, 1965; Sutherland & Cressey, 1924/1974; Suttles, 1968). Yet the study of co-offending and its implications for theory and practice have a short history, a history to which Albert J. Reiss, Jr. made seminal contributions. In 1980, he introduced the term "co-offenders" in his carefully reasoned criticism of the assumption that incarceration of offenders necessarily reduces the number of criminal events. Reiss wrote that group offending throws off models of incapacitation. Putting an offender in prison, he noted, may actually increase the number of crimes committed--if it leads to added recruiting or to increased rates of offending alone. In 1986, extending his consideration of co-offending, Reiss commented about the implications of group offending for potential intervention policies. He suggested that group affiliation is fundamental to understanding criminal careers. Participation in group offending, he pointed out, could have critical effects on "onset, persistence, and desistance from offending" (Reiss, 1986, p. 122).

Questioning the focus on identification and early incapacitation of high-rate offenders, Reiss (1980, 1986, 1988) demonstrated the inadequacy of computations regarding a relation between individual crime rates and rates for crime events. Reiss noted that the proportion of crimes accounted for by high-rate offenders is exaggerated if the high-rate offenders commit a large proportion of their crimes in groups. On the other hand, the proportion of crimes accounted for by high-rate offenders is underestimated if they commit most of their crimes alone.

At least since early in the 20th Century, when Goring (1913) reported criminal statistics for England, being young at the time of first arrest has been linked with habitual or frequent recidivism. Similar linkages have been found, for example, in a sample of discharged juvenile offenders (Glueck & Glueck, 1945), among a general cohort of males born around 1928 in congested areas of Cambridge and Somerville Massachusetts (McCord, 1981), among a cohort born in 1945 in Philadelphia (Wolfgang, Figlio, & Sellin, 1972), and for a London cohort born around 1953 (Farrington, 1983; Nagin & Land, 1993).

Juveniles tend to commit their crimes with others. For example, Shaw and McKay (1942/1969) found that 81.8% of the juveniles brought to court in Cook County during 1928 committed the offenses for which they were brought to court as members of groups. In reviewing such evidence in 1988, Reiss reported that co-offending tends to decrease with the age of offenders. Such variation could, of course, have a dramatic impact on estimates of the relation between age and crime events. A systematic positive correlation between age of offending and amount of co-offending would reduce the number of crimes that should be attributed to young offenders as measured against calculations based on participation rates.

The tendency for younger offenders to commit their crimes in groups gives an inflated estimate of the number of crimes for which they are responsible if a separate crime is counted for each member of a co-offending group. Both the F.B.I. reports and self-report studies use individual participants as though each report of a crime indicates a different event.

To address some of the questions regarding how age is related to co-offending, Reiss and Farrington (1991) analyzed criminal records from London. Their sample was garnered from a prospective longitudinal study of 411 8-year-old boys who were living in a particular working class area in 1961-62. Criminal records of these subjects and their co-offenders had been collected when they were 32. Reiss and Farrington discovered that individuals with long criminal histories tended to move from group to solo offending, although the probability that an offense would be a co-offense remained relatively constant through the first eight offenses. The authors remarked the fact that both recidivism and co-offending declined with increasing age at first offense. Whereas 34% of the juvenile delinquents who were first arrested between the ages of ten and thirteen (N=35), only 20% of those first arrested between the ages of fourteen and sixteen (N=50) offended with others.

Co-offending delinquents tend to commit crimes at higher rates than do solo offenders (Hindelang, 1976; Reiss & Farrington, 1991). Further, the British longitudinal data indicated that age at first official offense interacts with effects of co-offending on subsequent offending (Reiss & Farrington, 1991). Among those under fourteen, offense rates were higher for boys whose first

offense had been committed with others. On the other hand, among the boys first convicted between ages fourteen and sixteen, offense rates were somewhat lower for boys whose first offense had been committed with others.

To show the implications of the distribution of co-offending for the age-crime distribution, Reiss and Farrington (1991) computed alternative age-crime curves. When computed for offenders, crime among the London cohort appears to peak around the age of seventeen. When computed for offenses, the peak appeared around age twenty. In short, the data considered by Reiss and Farrington point to a confounding between age effects and co-offending effects.

The age-crime curve for offenders has given rise to age-based typologies of offenders. Terrie Moffitt (1993, 1994) proposed an explanation for both the age curve of criminality and the persistence of antisocial behavior by positing that there are two groups of adolescent delinquents. The first consists in youths who have been antisocial since early childhood and will probably continue to be so as adults. Moffitt believes they have neuropsychological deficits that predispose them to criminality and account for persistence in antisocial behavior. The second group is composed of youths who have a short period of criminality as a consequence of an adolescent gap between biological maturity and social immaturity combined with exposure to opportunities to learn delinquent behavior. This group accounts for the sharp rise in participation in crime late in adolescence. Their delinquencies are prompted by perceived rewards from delinquency, including separation from intrusive adults and rejection of roles assigned to them as immature adolescents. Moffitt suggested that the late starting delinquents sought the rewards they perceived as accompanying misbehavior and learned to misbehave by mimicking those whose criminality had been persistent.

Moffitt tagged the first group "life-course persistent" criminals and the second, "adolescent-limited." Although Moffitt's theory suggests that peer influences have greatest impact on adolescent-limited delinquents (Bartusch, Lynam, Moffitt, & Silva, 1997), Moffitt does not directly consider the possibility that co-offending might affect the developmental trajectory of crime.

Like Moffitt, Gerald Patterson developed an etiological theory that focuses on differentiating early onset delinquents from late onset delinquents (Patterson, 1995; Patterson, Capaldi, & Bank, 1991; Patterson & Yoerger, 1993, 1997). Patterson emphasizes family socialization practices and association with deviant peers as having strong influences on early onset for delinquency. He hypothesized that "the more antisocial the child, the earlier he or she will become a member of a deviant peer group" and that "young antisocial children form the core of the deviant peer group" (Patterson & Yoerger, 1997, p. 152).

Several patterns of offending could produce what appears as age-related decreases in co-offending. For example, most very young delinquents might commit their crimes with others and then desist. Those early delinquents who persist in committing crimes might not change their behavior, but rather, be among the minority of young offenders who committed their crimes alone. Because data have been collected from individuals, asking them whether they committed crimes alone or with others, the age-related pattern might be produced by an age-related reduction in the size of co-offending groups. Larger co-offending groups would inflate reported co-offending without reflecting a greater number of crimes. An alternative possibility is that young delinquents commit most of their crimes with others, but as they mature, those who continue to commit crimes increasingly do so alone. This transition may or may not be a consequence of group processes. Delinquents might learn from their co-offenders techniques for misbehaving that they would not otherwise have learned.

Several studies have shown that gang membership contributes to high rates of criminal activities (e.g., Battin, et al., 1998; Esbensen, Huizinga, & Weiner, 1993; Huff, 1998; Thornberry, 1998; Thornberry, Krohn, Lizotte, & Chard-wierschem, 1993). These and other studies (e.g., Pfeiffer, 1998) also suggest that gangs facilitate violence. The heightened criminality and violence of gang members seems not to be reducible to selection. That is, although gang members, prior to joining a gang, tend to be more active criminals than their nonjoining, even delinquent, peers during periods of gang participation, they themselves are more active and more frequently violent than before or after being members of gangs. The literature on gang participation, however,

does not go much beyond suggesting that there is a process that facilitates antisocial, often violent, behavior. Norms and pressure to conform to deviant values have been suggested as mechanisms. How and why these are effective has received little attention.

Research by Thomas J. Dishion and his colleagues point to reinforcement processes for understanding why deviance increases when misbehaving youngsters get together. Delinquent and nondelinquent boys brought a friend to the laboratory. Conversations were videotaped and coded to show positive and neutral responses by the partner. Among the delinquent pairs, misbehavior received approving responses -- in contrast with the nondelinquent dyads, who ignored talk about deviance (Dishion, Spracklen, Andrews, & Patterson, 1996). In addition, reinforcement of deviant talk was associated with violence, even after statistically controlling the boys' histories of antisocial behavior and parental use of harsh, inconsistent and coercive discipline (Dishion, Eddy, Haas, Li, & Spracklen, 1997).

A modification of Dision's interpretation of why talk among delinquents encourages delinquency, one with broader implications for understanding the impact of others on a person's behavior, is that the feedback contributes structure to how a person reasons about the world. This latter interpretation, one based on Construct Theory (McCord, 1997), suggests that co-offending provides grounds for delinquents to see criminal behavior as appropriate in a wide variety of circumstances. The role of co-offenders, at least for young children, would be that they promote potentiating reasons for a form of action that is delinquent. The contribution of group processing, according to this theory, is different from that of enhancing the probability of finding accomplices, though group processes may lead delinquents to seek accomplices for further actions.

Studies of co-offending only incidentally have considered age at first offending. Neither gang studies nor typological studies that consider early- and late-starters as having different types of personality have focussed on the role of co-offending in production of crime. Therefore, in the present analysis, we consider the age of first crime to create a typology (following Moffitt and Patterson) in the light of questions about co-offending raised in the work by Reiss. To do this, we use

longitudinal data from Philadelphia to focus on co-offending in relation to age at first arrest.

The sample

Subjects for the study consisted in a random sample of 400 offenders drawn from police tapes listing the 60,821 crimes committed in Philadelphia during 1987. Because we wanted to compare solo offending with co-offending, half the sample was drawn from a list of offenses the police had recorded as being solo offenses; the other half, from a list of co-offenses.[1]

To avoid defining late-starting juvenile delinquency as not-early-starting (which can mask the source of differences) we divided the sample into three categories of age at first crime. Early starters were offenders whose first offense occurred before their 13th birthdays (N=106). Late starters were offenders whose first offense occurred after achieving the age of 16 (N=103). The modal offenders (32.5% of the sample) were black males whose first offense occurred when they were between 13 and 15 years in age.[2]

Offenses and Co-offenses

This analysis is based on court incidents, that is, on offenses for which a docket number assigned by a police officer had been recorded in the juvenile court files. When more than one charge was made for a particular incident, we coded the most serious one. The offenders averaged 4.6 crime incidents (SD=3.8), with a range of 1 to 24. They averaged 3.5 Index crimes (SD=3.4), with a range of 0 to 24. These included an average of 1.4 violent crimes (SD=1.6), with a range of 0 to 11.

We tracked complete juvenile histories. The 400 identified offenders were listed for 1843 crime incidents, for a mean of 4.61 incidents per offender. The records included 20 incidents for which two of the randomly selected offenders had been listed. Six pairs committed one offense together, four pairs committed two offenses together, and two pairs committed three offenses together. The number of offenders for these double-counted incidents ranged from two to six, with a mode of three.

In over 95% of the incidents, some information about the number of offenders was available. When a range was given, we estimated conservatively, taking the lower number. When "group" was mentioned with an unspecified number of offenders, we coded the number as 3. We were unable to code the number of offenders for

91 crime events, including 26 thefts, 19 robberies, 9 vehicular thefts, and a smattering of other crimes.
On average, each of the 1752 crime incidents with information about the number of co-offenders involved 2.18 offenders (SD=1.79), with a range of 1 to 30. Among these, 725 were solo offenses. The 1027 incidents that were co-offenses included a mean of 3.01 offenders.

Age and Co-offending

The proportion of co-offences varied in relation to the age at first offense. Those who committed their first offenses prior to their 13th birthdays were unlikely to have committed all their crimes alone. Less than 5% committed no crimes with accomplices whereas 20% committed all their crimes with others. Offenders who committed their first crimes when they were 16 or 17, on the other hand, were almost as likely to have committed all their crimes alone (30%) as all their crimes with someone else (37%). Those in the modal category, having a first offense between the ages of 13 and 15, were about half as likely to commit all crimes alone (15%) as to commit them all with someone else (29%). A majority of the offenders committed some crimes alone and some with others.
The data show quite clearly that co-offending is inversely related to age at first offense. Approximately two-thirds (66%) of the 224 offenses committed prior to age 13 had been committed with others. In contrast, only a little over half (54%) of the 745 offenses committed by offenders who first committed a crime at age 16 or 17 had been committed with others. In addition, 39% of the crimes committed by offenders who began their criminal careers early committed crimes with at least two accomplices. Only 26% of the crimes committed by offenders who began their criminal careers late committed them with at least two accomplices.
In keeping with studies of other populations, recidivism was inversely related to age at first offense in this Philadelphia cohort. The individual recidivism rates inflate crime rates, however, to the extent that they represent offenses committed by more than one person.
Those who committed crimes prior to age 13 committed 3.43 times as many crimes as those 16 or 17 years old when they committed a first offense. Yet when the size of offending groups is taken

into account, their criminality ratio is 3.00 to 1, a 14% reduction in crime ratio.
The three groups, of course, had different lengths of time during which they had committed crimes as juveniles. Individual crime rates were computed for both solo offenses and co-offenses. These were computed on the assumption that a juvenile who committed a crime would remain a delinquent until the age of 18. That is, the number of years of exposure and the age at first crime varied inversely. Whatever bias this computation introduced affected solo and co-offending rates similarly. Individual co-offending rates were higher than solo rates regardless of the age at first offense (Table 1A).

(Table 1 about here)

Computed in terms of individual offending rates, these data suggest that the high recidivism rates of those who are particularly young when they begin offending are due, in part, to the duration of their criminal activities as well as to the fact that so many of their crimes are with accomplices. They do not indicate that early starters commit offenses with greater rapidity than do offenders who start when older.
Individual crime rates -- at least as measured through official records -- appear to decline with experience. In terms of annual rates, those who started committing crimes under the age of 13 were not more active than those who started later. Among the 106 offenders who began offending prior to the age of 13, 89 (84%) offended between the ages of 13 and 15 and 84 (79%) offended at ages 16 or 17. Among the 191 offenders who began offending between the ages of 13 and 15, 75% reoffended at ages 16 or 17. Even the active criminals seem to have reduced their rates of crime (Table 1B).
Individual crime rates for offenders who began to offend prior to age 13, at ages 13 through 15, and at ages 16 or 17 are remarkably similar during the early years of offending. Whether the subsequent reduction in crime rates should be attributed to

reduced criminality, to increased ability to escape detection, or to some other cause is a matter that cannot be settled by the data available.

The size of offender groups ranged from one (solo offenders) to 30. To make analyses manageable, offenders were divided into three groups based on their co-offending: Those who committed less than a quarter of their offenses with someone else (N=88); those who committed between a quarter and 74% of their offenses with someone else (N=152); and those who committed at least 75% of their offenses with another person (N=160).

Two patterns emerged. First, the probability of solo offending increased as a function of increasing age at first offense. Second, the mix of co-offending with solo offending in relatively balanced proportions declined with age at first offense. There was no trend relating age at first crime to committing crimes largely with others. Among those under 13 at first offense, 41% committed at least three quarters of their crimes with others; but among those over thirteen, 40% committed at least three quarters of their crimes with others.

The division of offenders by their proclivity to co-offend revealed a consistent pattern. For each age at first offense, those who mixed solo with co-offending committed crimes at slightly higher rates than those whose crimes were almost exclusively with others or almost exclusively alone.

The analyses reported above pertain to all types of offenses. It is important to add, however, that co-offending had an impact on the more serious street crimes as well. Age at first offense was inversely related to the frequency of Index crimes, controlling for participation in co-offenses. Yet regardless of age at first offense, offenders whose crimes included accomplices, especially those who committed about equal numbers of crimes alone and with others, committed more Index crimes than did offenders who committed relatively few crimes with others.

Both age at first crime and co-offender type (independently and sequentially) predicted number of Index crimes committed by individuals. Within each category of co-offending type, those who first offended under age 13 committed the most Index crimes. Further, within each category of age at first offense, those whose crimes were least likely to be co-offenses committed the fewest Index crimes. Thus, co-offending appears to increase the

likelihood of persistent criminality, particularly among those whose criminality began prior to age 13.

Similarly, both age at first crime and co-offending type were related to the number of violent crimes (aggravated assault, attempted murder, rape, robbery) for which the offenders were arraigned in juvenile court. Offenders who first offended before the age of 13 committed a larger number of violent crimes if they were co-offenders (Table 1C).

Effects of co-offending on violence ($F_{(2)}$=5.76, p=.0034) were significant independent of the effects of age at first crime ($F_{(2)}$=12.05, p=.0001). Early starters who committed most of their crimes alone were not particularly prone to committing violent crimes. On the other hand, co-offending early starters were considerably more likely to commit violent crimes than were late starters, especially those who committed most of their crimes alone. The vast majority of early starters commit many of their crimes with others. Therefore, the impact of age and that of co-offending tend to be confounded.

Summary and Discussion

The analyses of offending in this randomly selected cohort of offenders active in an urban center during 1987 suggests that co-offending is a key ingredient to high rates of criminality. Co-offending should become a feature in reckoning crime rates and understanding changes in them. Co-offending is also central to understanding individual differences in recidivism. Co-offenders should become targets of intervention strategies. And understanding the mechanisms by which peers influence intentional behavior should become a focus for theoretical developments.

Inspection of official records indicates that little attention has been given to identifying co-offending in relation to crime events. Indeed, police records tend to undercount co-offending, and published crime rates rarely take co-offending into account. Yet, without records that take account of co-offending, it is impossible to know how public safety is affected by crime prevention policies.

The distribution of co-offending exaggerates the contribution of young offenders to crime events. Not only are those who first offended before age 13 most likely to be co-offenders, but also, the size of their offending groups are most likely to be large.

Most crime rates are computed over individuals, with an assumption that each criminal event reported by or about an individual represents a crime event. Yet co-offenders provide a basis for multiple reports of single crime events. The consequent reported crime rates are invalid measures of public harm.

The dynamics of co-offending appear to have an effect on crime rates and violence that is independent of the effect of age at first offense. The data therefore give reason to doubt the sufficiency of a division of delinquents into two classes in terms of the age of onset for their offending. The insufficiency of age of onset as basis for a typology is brought out most clearly by the comparison of early co-offenders with early solo offenders: Only the co-offenders have high recidivism rates and only the co-offenders commit unusually high numbers of violent crimes. These young co-offenders warrant special attention by the criminal justice system.

Peer delinquency seems to be more than a training process for learning how to be delinquent. The interaction among delinquent peers apparently serves to instigate crimes and to escalate severity. An adequate theory of crime ought to take into account both the ways that others influence individual behavior and the ways in which individuals selectively seek companionship with others who are likely to promote criminal behavior.

One such theory, as noted above, is the Construct Theory (McCord, 1997). This theory differs from most criminological theories in that it eschews desires (wants) as being necessary grounds for action. Rather, it rests motivation on reasons that appear to the acting individual as descriptions of conditions that warrant actions. These potentiating reasons serve for actions as arguments do for beliefs. Once a person develops a set of potentiating reasons, that person will use the set to organize the environment and to act upon it. Co-offending can provide such reasons by illustrating types of behavior under particular circumstances. Therefore, a young co-offender is likely to seek out co-offenders and to commit additional crimes.

The Construct Theory of motivation merges the concepts of cause with those of a certain type of reasons, potentiating reasons, reasons that are grounds for action. In doing so, the Construct Theory differs from cognitive theories that rely on actors'

judgments regarding what are presumed to be the private world of motives, justifications, and values. According to the theory, motives are not purely private events. Just as we come to understand a language by watching and listening, we can discover the potentiating reasons of others by watching how they act and the conditions under which they act.

The Construct Theory of Motivation differs from other theories purporting to explain criminal behavior by specifically recognizing that actions are not "naturally" self-interested. It provides a theory of volitional action without postulating the existence of mysterious entities ("volitions"). The Construct theory of motivation is empirical and seems to provide an account of what we know about relative risks for criminal behavior. Because potentiating reasons are useful organizing categories, they tend to be stable. Yet experiences can alter intentional behavior through changing what a person believes about the world.

The Theory implies that interventions need not be directed at deep-seated emotions. Rather, behavioral change can be expected as a consequence of changing grounds for action. Such changes come about in a variety of ways, sometimes indirectly through the acquisition of loves or friendships and sometimes through direct (possibly traumatic) experiences.

Motivation can be acquired, according to Construct Theory, by watching how others respond to the ways in which one talks as well as how one acts. Therefore, the Theory gives a basis for understanding how contexts influence behavior. Socialization practices influence action by teaching children what to count as potentiating reasons. Peer influences, too, make a difference in terms of creating potentiating reasons. The Construct theory of motivation has the advantage that it gives a plausible account of how criminal behavior can be voluntary action by showing potentiating reasons in their roles as causes for motivated actions.

To summarize: This exploration of co-offending suggests that young co-offenders ought to be targets of particular attention in a quest for crime reduction. It suggests, too, that ignoring co-offending in the computation of crime rates may result in severely misleading reports regarding public safety and effects of incarceration. It further suggests that the mechanisms of

peer influence on intentional action deserve attention and that a theory of criminal behavior ought to provide an account of these influences.

Footnotes

[1] Our data come from court folders both because the police tapes lacked information about many of the offenders' dates of birth and because our validity check indicated that the police were under-counting co-offenses. We used witness, complainant, and co-offender reports to amplify police records. If a court record could not be found for the listed offense, another crime was drawn from the appropriate list, using a random number generator.

[2] The sample of 400 included 370 males (14% white, 75% black, 11% Hispanic, 1 listed as "other") and 30 females (3% white, 90% black, 7% Hispanic). Sixteen offenders were not arrested for their first "known" offenses. At the time of their first official offenses, they ranged in age from 6 to 17, with a mean of 14 years (SD=2.02), mode of 15, and median of 13.5.

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TABLE 1

A. AGE AT FIRST CRIME & INDIVIDUAL ANNUAL CRIME RATES BY TYPE

	Age at First Crime		
Age	<13	13-15	16-17
	(N: 106)	(N: 191)	(N: 103)
Solo crimes	0.34	0.42	0.64
Co-offenses	0.63	0.63	0.78

B. AGE AT FIRST CRIME & INDIVIDUAL ANNUAL CRIME RATES BY AGE

	Age at First Crime		
Age	<13	13-15	16-17
<13	(N:106) 1.3		
13-15	(N: 89) 0.9	(N:191) 1.4	
16-17	(N: 84) 0.8	(N:143) 0.8	(N:103) 1.4

C. AGE AT FIRST CRIME & NUMBER OF VIOLENT CRIMES BY CO-OFFENDING

(mean number of violent crimes)

Age at First Crime

Age	<13	13-15	16-17
Co < 25%	(N: 11) 1.0	(N: 45) 0.9	(N: 32) 0.3
Co 25-74%	(N: 52) 2.4	(N: 70) 1.1	(N: 30) 0.8
Co > 74%	(N: 43) 2.0	(N: 76) 1.7	(N: 41) 0.8