Article

Journal of Research in Crime and Delinquency
2015, Vol. 52(3) 403-413

DOI: 10.1177/0022427814555770
jrc.sagepub.com

Kids, Groups, and Crime: In Defense of Conventional Wisdom

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Abstract

Objectives: The objective of this analysis is to address the data and conclusions of Lisa Stolzenberg and Stewart D'Alessio in their article "Co-offending and the Age-crime Curve," published in *The Journal of Research in Crime and Delinquency* in 2008. The authors analyze National Incident–based Reporting System (NIBRS) 2002 arrests from seven states and conclude that most arrests at all ages involve only one offender, and therefore group offending is of little etiological significance. *Methods:* To test their claims, we conduct offense-specific analyses of single and multiple arrests using the full 2002 NIBRS arrest data set. *Results:* After disaggregating the data by type of offense, we find group involvement among young offenders dominates the arrest statistics for all serious crimes other than rape and aggravated assault. *Conclusions*: Contrary to the conclusions of Stolzenberg and D'Alessio, co-offending does appear to have a substantial impact on young offenders. The extent of adolescent crime as group behavior may

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be a cliché in criminological circles, but this is because the empirical evidence for it is substantial.

Keywords
causes/correlates, juvenile delinquency, quantitative research, research methods, statistical methods

This article addresses the data and conclusions presented by Lisa Stolzenberg and Stewart D'Alessio in "Co-offending and the Age-crime Curve" (2008). That article used an analysis of arrests from seven states reporting to the National Incident–based Reporting System (NIBRS) in 2002 to make two rather different assertions about "whether co-offending patterns influence the curvilinear relationship between age and crime" (Stolzenberg and D'Alessio 2008:80). First, the authors demonstrated that most arrests at all ages involve only one offender, so that a typical age–crime curve, peaking in early adulthood, exists for arrest rates even when only individual arrests are analyzed. Second, they read the arrest data to suggest that "solo offending is the primary form of offending among all ages" (p. 80) and "because we find that solo offending is the dominant form of offending for all ages, it does not appear that co-offending plays a role in the initiation or onset of delinquent behavior" (p. 81).

It is this second conclusion that provoked us to reexamine the evidence presented in the article and to write this analysis. When the NIBRS arrest data used in their analysis are disaggregated and carefully quantified, it *does* appear that co-offending has a substantial impact on young offenders and therefore can play "an important role in the ... onset of delinquent behavior." A short first section of this article discusses the nature of the data used in the original study. The second section presents a disaggregated offense specific analysis of the 2002 NIBRS data set and shows the dominant role of group involvement among young offenders in the arrest statistics for all serious crimes other than aggravated assault and rape.

The Promise and Limits of NIBRS Data in Stolzenberg and D'Alessio

The original study analyzed a population of arrests from 2002 from the seven states in which all law enforcement agencies had participated in NIBRS. While the behavior of central interest to the authors was crime, the

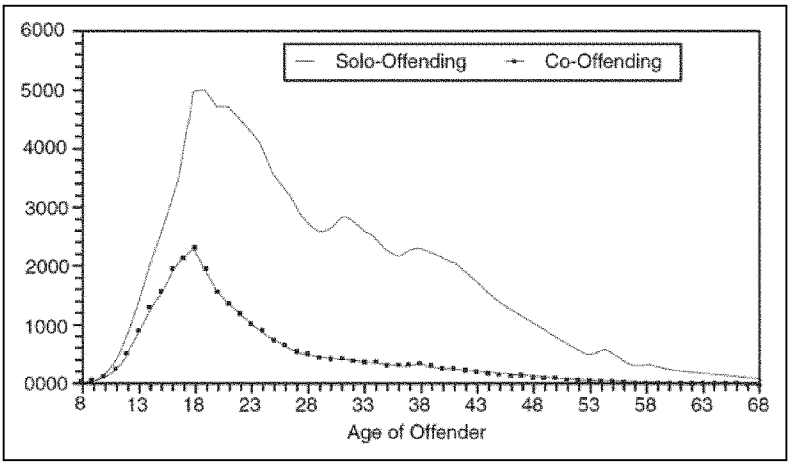

Figure 1. Relationship between offender's age and solo- and co-offending arrest rates. *Note:* Arrest rate is for 100,000 age-specific population. Ages 0 to 8 are excluded from the figure because they account for an insufficient number of cases.

information in their analysis was arrest data, and they reported the data as a single set involving a great variety of crimes that generated arrests. The two "age–crime curves" at the center of their analysis were arrests where more than one offender was charged with a crime (what they called their co-offending events) and arrests where only a single person was charged (what the authors called solo offenses).

Figure 2 from their article shows how rate of arrests by age for solo and co-offending arrests are deployed as rates per 100,000 (we reproduce it as Figure 1).

There are two visual impressions from this figure of importance to the authors—the fact that both single and multiple arrest events appear to peak in the same young ages and the fact that single arrests far outnumber multiple arrests at every age-group. But there are also two important and potentially related problems with using this arrest population as an indication of whether the crimes that resulted in arrest were committed by lone offenders or in groups.

The first problem is that arrest patterns may not faithfully reproduce the single or group nature of offending. The arrest of more than one person for a single offense provides good reason to assume that more than one offender participated in the criminal act. But the fact that a single arrest is made is not necessarily an indicator of lone offending. It may instead simply reflect the

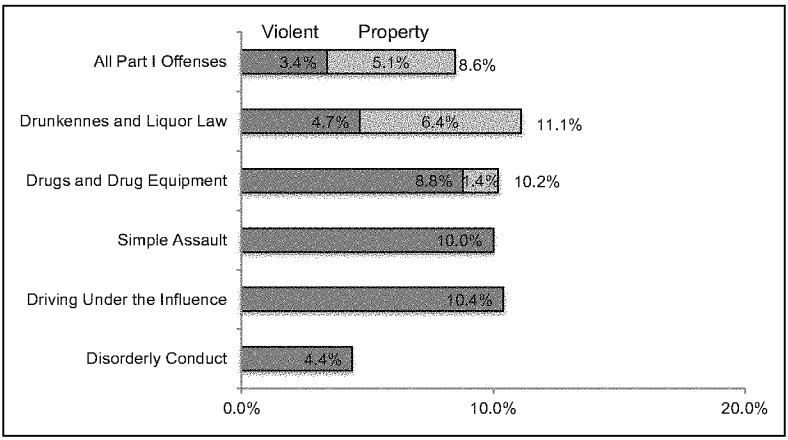

Figure 2. National Incident–based Reporting System (NIBRS) arrests by type of crime, 2002. *Source:* NIBRS (2002).

police officers' limited information about the offense. The only circumstance where a single arrest is a clear indication of a single offender is when the police either witness the totality of an offense or have conducted an investigation of a crime. Neither circumstance happens often, particularly for the offenses of minor importance that are, as we shall show, the vast majority of NIBRS arrests. Stolzenberg and D'Alessio call all single arrests "solo-offending" in their figures and analysis, but that is not the description of the reporting agencies and there is no explicit discussion in their article about why this assumption might be justified. Nor is there any empirical evidence that we know of which tests the relationship between single arrests and single or group offending.

When police make arrests for "status crimes" like drunkenness or possession of drugs, the evidence available will frequently justify only a single arrest even if the drinking or obtaining of drugs involved co-offending. Assuming that all single arrests demonstrate the absence of co-offending cannot, therefore, be justified. And any estimate of co-offending based on that assumption will be an underestimate of unknown magnitude. The higher the proportion of arrests for minor crimes, the more likely a single arrest does not actually provide evidence that the behavior is solo offending.

The second problem is that the data set used to generate the figures and examine patterns of arrest character by age was an aggregation of all arrests, serious and minor, into a single mass population. Again, there are a number

of situations where the single or multiple nature of the arrest in an NIBRS reporting structure may not provide an accurate indication of whether co-offending was present, particularly with less serious crimes that generate little or no police investigation. Even among the more serious "part I" arrests in the NIBRS program, two very large arrest categories—assault and theft—share this problem.[1] For assaults, whenever the circumstances are fights between acquaintances, the crime is social by definition and very frequently the fight begins with joint participation. But police who arrive after the fact may select one participant as a victim and another as a (single) offender. For theft, if one person is found with incriminating evidence, the police may not look further. No matter the participation of others, the only basis for arrest is a single offender.

Of greater statistical importance, the vast majority of "part II" arrests are much less probative of solo crime commission because of the nature of the policing involved. The police role in most of the events is reactive and of low intensity.[2] A person appears intoxicated in public and is arrested. The police do not search for his drinking companions. A young man is found to have a small quantity of marijuana on his person after a police stop. Was he co-offending when the drug was purchased or provided? Probably yes. Will more than one arrest result? Of course not. When minor and miscellaneous arrests dominate the pool of events being analyzed, as is the case in the NIBRS arrest data set, assuming that a single arrest indicates lack of group participation in the criminal behavior is unjustified, and will guarantee a substantial overestimate of the prevalence of lone offending and a corresponding undercount of co-offending cases.

Horse and Hare Stew

The ambiguities of single arrests as an indication of single or co-offending crime commission are compounded in the Stolzenberg and D'Alessio analysis by the failure to disaggregate the arrests into specific offense categories. Recall that nonserious offense arrests are problematic indicators of whether the behavior involved co-offending. The single aggregation of all arrests is dominated by the least serious offenses, as shown in Figure 2. For our analysis, we obtained a distribution of the 1,992,789 arrests in the year reported in Stolzenberg and D'Alessio.[3]

For our analysis, we obtained a distribution of the 1,992,789 arrests from 2002, the year used in Stolzenberg and D'Alessio's analysis. The arrest data are bottom-heavy –91 percent of the arrests are in the part II categories. Figure 2 breaks down some of the major arrest categories in these data to show

the impact of the aggregation on the inferences that might be drawn about age and group involvement in crime.

The vast majority of the 2002 arrests are for minor offenses. A larger proportion of NIBRS arrests are for status crimes like drunkenness or violation of liquor laws (11 percent) or drugs (10 percent) than for all eight index crimes combined. A large volume of NIBRS arrests are for driving while intoxicated (10.4 percent), an offense where only the driver is arrested even if the activities leading to the drinking and driving involved the participation and encouragement of his peers.

The use of a single distribution of arrests for this huge aggregation of various behaviors makes inferences about the nature of co-offending from this overall distribution more than problematic. The 1,450 murder and nonnegligent homicide arrests in 2002 are less than one-tenth of 1 percent of the total arrests and are outnumbered by drugs, by drunkenness and liquor law violations, and by drunk driving arrests by more than 100:1. With such an overwhelming mass of status offenses, there is no opportunity to derive from a population of total arrests any clear picture of the role of co-offending in crimes with victims. The aggregate arrest population recalls the classic British joke about the recipe for horse and hare stew, which was reported as "Equal parts horse and hare: one horse, one hare." The horse is arrests for drunk driving, drunkenness, fighting, and being disrespectful to police. The hare is street crime.

Disaggregated Data on Age and Co-offending from NIBRS

The first important step in reanalyzing the arrest data from NIBRS is to disaggregate the arrest data and to focus on crimes of some seriousness. The shorthand method we adopt is to focus on those arrest statistics subject to meaningful quality control, the so-called part I statistical series. Table 1 provides an offense-specific peak at age patterns for arrest by comparing the median age for single offender arrests and of co-offender arrests for the eight "part I" or "index" offenses.[4]

The median age for single offender arrests varies between 22 and 30 for the eight index offenses. Co-offending arrestees are always substantially younger than single offenders, from five to nine years younger at the median. For five of the eight offenses, the median age for co-offenders is in the teen years, and six of the eight median ages are under 21. There is no

Table 1. Median Age at Arrest for Single and Co-offending Arrests, NIBRS (2002).

	Single	Co-offending	Difference
Homicide	28	22	−6
Rape	27	20	−7
Robbery	25	19	−6
Assault	30	22	−8
Arson	24	15	−9
Burglary	24	18	−6
Motor vehicle theft	22	17	−5
Theft	24	18	−6

Source: NIBRS (2002).

overlap between co-offenders median age and the median ages for single arrests for any part I crime.

Figure 3 divides the persons arrested for the eight index crimes in 2002 into three age categories—juveniles (under 18), young adults (18–24), and adults (over 24), and provides for each age-group and for each offense the proportion of total arrests involving co-offenders.

While the concentration of multiple arrests varies by crime type, the pattern for the different age-groups does *not* vary. When the person arrested is under 18, the percentage of arrested persons who are co-offenders is always at least twice as high as for offenders over 24, and the intermediate age category always has a proportion of co-offending higher than the adults and lower than the juveniles. Figure 4 shows the ratio of group arrests for offenders under 18 as a proportion of the group arrest prevalence for offenders older than 24, using the data reported in Figure 3 from the same year that provided the aggregate pattern reported in Figure 1.

The relative concentration of multiple offender arrests in the youngest age-group varies from a ratio of 2.4:1 for robbery to 6:1 for arson, but shows very strong age effects without exception. These strong concentrations were invisible in the Figure 1 aggregate pattern because they were overwhelmed by the more than 90 percent of minor and status offenses.

There is, however, one major problem with using the data from Figure 3 as an estimate of the prevalence of co-offending for these eight crimes: There are an unknown number of cases where crimes committed by more than one offender nonetheless result in only one arrest. It is therefore prudent to regard the multiple arrest patterns in Figure 3 as only a minimum value. To assess the true extent of group offending requires examining more detailed records of criminal events than can be found in arrest statistics.

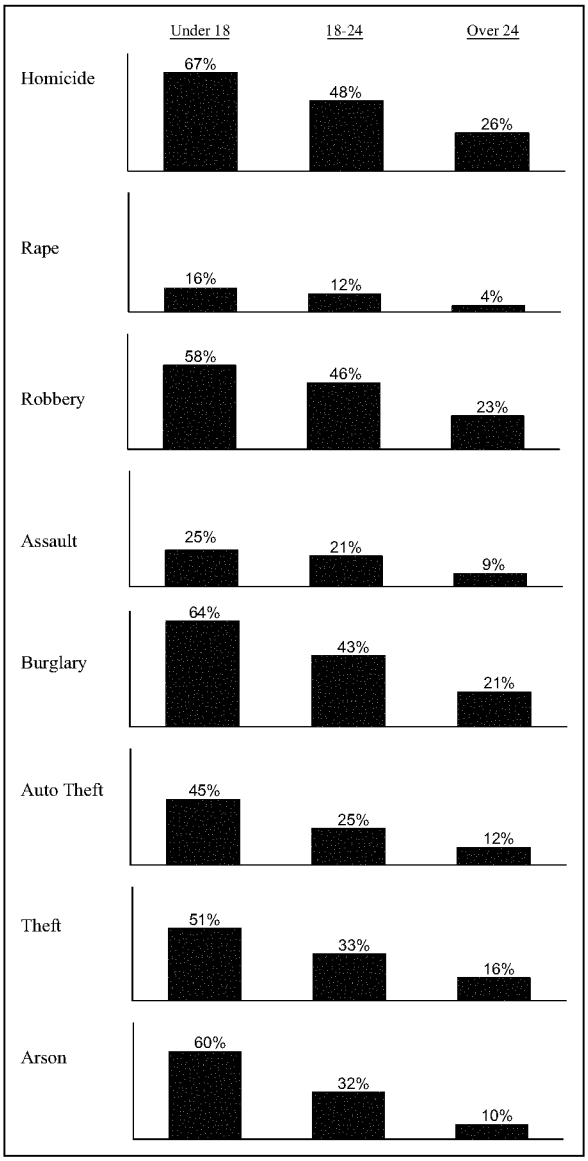

Figure 3. Percentage co-offenders of persons arrested for the eight index crimes, National Incident–based Reporting System (NIBRS) 2002. *Source:* NIBRS (2002).

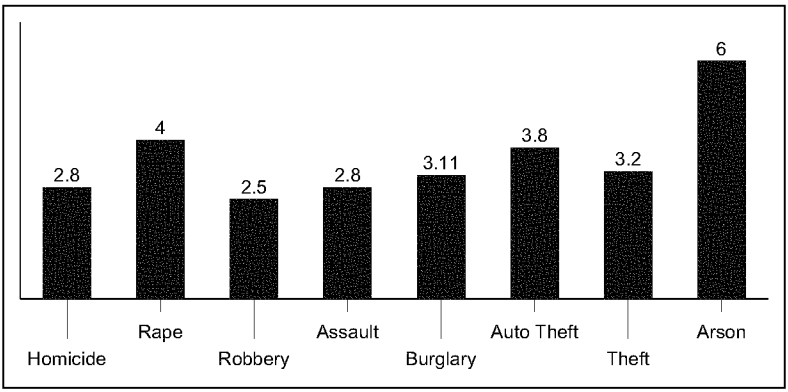

Figure 4. Concentration of multiple arrests in youngest offenders, National Incident–based Reporting System (NIBRS) index crime arrests 2002 (under 18/over 24). *Source:* NIBRS (2002).

Back to the Future

The high proportion of co-offending among the youngest offenders and the universal decline in percentage of co-offending with increasing age is exactly what the traditional criminological studies had reported (see, e.g., Reiss 1986; Zimring 1981), and these patterns are consistent with standard crime causation theories such as differential association. But these patterns are obscured in the figure contrasting solo offending and co-offending rates which we reproduced at the beginning of this article. Stolzenberg and D'Alessio read that set of aggregate arrest curves and concluded that the "companion crime hypothesis" was contradicted because "solo offending is the dominant form of offending for all years ... it seems unlikely that co-offending plays a salient role in the initiation or onset of delinquent behavior ... " (p. 81). The authors reach this conclusion by assuming that single arrests often or always indicate solo offending and then fall victim to the new mathematic of horse and hare stew. Once the data from NIBRS are disaggregated and closely examined, there is no good reason to doubt the conventional wisdom about adolescent crime and group processes.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. Parts I and II crime categories are those used by the Uniform Crime Reporting (UCR) Program. The eight "part I" index crimes are murder, rape, aggravated assault, robbery, burglary, larceny, motor vehicle theft, and arson. Part II offenses are all other crimes.
2. This point is underscored by National Incident–based Reporting System (NIBRS) division of crimes into "group A" offenses, consisting of 36 crimes including the 8 Federal Bureau of Investigation (FBI) part I index crimes along with crimes such as simple assault, drug offenses, and weapons law violations, and 11 less serious "group B" crimes, which include drunkenness, driving under the influence, and disorderly conduct. Neither incident nor offender level files are collected for group B offenses because they are crimes that only become known to the police when an arrest is made. They are crimes in which the police are by definition reacting rather than investigating. Fifty-eight percent in the 2002 NIBRS arrestee records are for group B incidents.
3. Stolzenberg and D'Alessio use a total of 466,311 criminal arrests drawn from the seven states that had completed National Incident–based Reporting System (NIBRS) reporting in all jurisdictions in the state in the year 2002. Since there is no reason to exclude a city's arrests because not every city in a state reported to NIBRS, we use all NIBRS arrestee records for the year. This amounts to a total of 1,992,789 criminal arrests.
4. All of our analyzes are based on the arrestee-level 2002 extract file. We classified single versus multiple arrestees using the "RECSARR" variable, which indicates the number of arrestees for a given originating agency identifier (ORI) and incident number. The age of arrestee was missing is 2,065 cases, and these rows were dropped from the age analyses. While NIBRS records up to 99 arrestees apprehended for the commission of a crime, the extract file only contains information for up to 3 arrestees. In the 2002 data set, 97 percent of arrestee records involve one, two, or three arrestees. Thus, only a minimal amount of data is missing and, in our case, this serves only to slightly underestimate the number of arrests involving multiple offenders. Additionally, it is possible that arrestees for a given incident may not be arrested in the same year, further contributing to a slight undercount of the number of group offending arrests.

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