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Delinquency in Two Birth Cohorts

Executive Summary

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by

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Foreword

In 1984, an astonishing number of juveniles were arrested for violent crimes—more than 1,000 for murder, almost 4,300 for rape, and more than 30,000 for aggravated assault. Yet we know that these arrest statistics vastly underestimate the number of offenses committed. The following study by Drs. Paul Tracy, Marvin Wolfgang, and Robert Figlio of the University of Pennsylvania demonstrates that only a small group of juvenile offenders are responsible for committing such crimes. Other studies, such as the one conducted in Columbus, Ohio, by Donna Hamparian (*The Violent Few*), show that a substantial proportion of these serious, chronic offenders continue to commit crimes as adults. Using a group of offenders who had each been arrested for at least one violent crime, Ms. Hamparian found that those arrested as adults were likely to have committed index violent offenses as juveniles and to have been first arrested at age 12 or younger.

We have learned a great deal about chronic juvenile offenders through Dr. Wolfgang's earlier groundbreaking research. Using for his base group some 10,000 males born in Philadelphia in 1945, Dr. Wolfgang discovered that 627 of the young men had been arrested five or more times prior to their eighteenth birthday. This group of chronic offenders, less than 7 percent of the birth cohort, was responsible for nearly 70 percent of all juvenile crimes. Dr. Wolfgang repeated his study using 14,000 young men born in 1958 and reared in the turbulent 1960's and 1970's. He discovered some similarities between the two groups: as with the first group, roughly 7 percent of the birth cohort were responsible for the majority of juvenile crimes.

But juvenile justice must be discerning; it should react strongly to the small cadre of vio-

lent juveniles and to less serious offenders accordingly. The main objective of our intervention strategies should be to incapacitate the small proportion of chronic, violent offenders. Strong intervention often means restricting offenders in order to protect society. But it can also mean helping offenders to become worthwhile and productive citizens.

But there were also disturbing differences. From the first study to the second, Dr. Wolfgang found that the rate of crimes committed per 1,000 youths had doubled for rape and aggravated assault, tripled for murder, and increased fivefold for robbery. The second group of chronic offenders accounted for 75 percent of the reported rapes and robberies. In short, Dr. Wolfgang says, "We have a very violent criminal group, a handful of brutal offenders who took to violence early in life and need to be controlled just as early."

Results of the Wolfgang cohort studies and other similar research are beginning to change the attitudes of criminal justice practitioners. Many juvenile justice professionals used to believe that juvenile crime could best be controlled by diverting offenders from the system. We have come to recognize, however, that the lasting impact of diversion on the chronic offender is negligible; for the chronic offender, diversion simply facilitates another arrest. We are beginning to accept the idea that juvenile correctional institutions, if managed rationally and efficiently, can be a vital resource in the system.

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Introduction

Delinquency in a Birth Cohort was the first large-scale birth cohort study of delinquency undertaken in the United States based upon a generalizable, urban population. The delinquency careers of all boys born in 1945 who resided in Philadelphia from their 10th to their 18th birthdays were described and analyzed. It is important to note that the 1945 cohort study developed baseline, cohort delinquency rates from a data source unlike any other previously investigated in this country. Desistance and recidivism probabilities, offense switching, offense severity escalation, disposition probabilities, and their effect on subsequent delinquency are all measures that were best estimated from that longitudinal, birth-cohort data base.

Because the 1945 birth cohort study was unique and valuable, the present study was undertaken to replicate the prior research. Replications of scientific findings are common and necessary in the physical sciences; they are relatively rare, albeit still necessary, in the social sciences.

This kind of study is even less common in criminology and criminal justice. In a discipline closer to its nascency than most, criminology requires replications to determine or to ensure reliability and validity. Researchers in criminology are often more interested in trying to break new ground than to confirm an earlier traveled terrain. But when a methodology, capable of generating a new set of findings and important to theory and empirical application is demonstrated, it should be reiterated in order to determine whether it is possible to buttress consistency and to affirm the observed findings.

Prevention of crime, invasion of the biographies of people, deterrence, and purposefully promoted change are significant forms of social

intervention, especially in a democracy. These actions have serious policy effects that require the best available insight based on the best available evidence. Birth cohorts, or longitudinal analyses, help provide this knowledge. Replications of studies in the same setting maximize the chances of affirming the validity and reliability of these data for the benefit of science and of social policy.

Another birth cohort in Philadelphia, the site of the first cohort, thus affords the opportunity to examine the effects on delinquency of growing up in a different time and sociocultural setting. The 1945 cohort was born in the final year of World War II, which sets its years of delinquency involvement in the period from 1955 through 1962. The 1958 cohort, born 13 years later, experienced delinquency involvement in the years from 1968 through 1975.

The social milieu of the two cohorts differ and may represent different pushes toward or pulls away from delinquency. For the 1958 cohort, the delinquency years coincide with America's involvement in the Vietnam War, the rise in drug abuse, social protest, etc. This period of rapid social change and pervasive social unrest is in sharp contrast to the more tranquil period of adolescence experienced by the 1945 cohort.

Although the social environments differ considerably, the criminal justice environments of the two cohorts are much alike. The policies and procedures for law enforcement, especially in the handling of juvenile offenders, was the same for both cohorts. Likewise, juvenile court policy followed the same statutory provisions for the disposition of delinquents in both the 1958 and 1945 cohorts.

This consistency in official policy does not preclude the possibility of differences in the in-

formal handling of delinquents in the two cohorts, either by the police or by juvenile court authorities. However, the uniformity of the criminal justice process applied to the two cohorts at least ensures that differences in either the extent or character of delinquency probably are not artifacts of the system.

Thus, cohort changes can be displayed in a setting that had a political, police, and juridical background similar to the earlier cohort. Whether offense probabilities by age, race, sex, crime types, seriousness, etc. are different will be measurable and recordable within the same geographic boundaries. Another birth cohort study in another jurisdiction would be useful but differences from the present study would be more difficult to explain by generational differences than by geography and demographic factors, whereas differences in a new Philadelphia cohort would rest more likely upon real differences in offensivity.

Changes, if any, in drug offenses, crimes by females, amounts and locations of victimization through violence, kinds and length of court and institutional sentences can be specifically attributable to the specific cohort variations if the new cohort was in Philadelphia rather than elsewhere.

Are crimes of violence more pervasive in the generational wave of a cohort born 13 years later than the World War II birth cohort of 1945? Or is the rate essentially the same and only swelled by the total volume of children produced in the cohort? Is juvenile crime more serious on the scale of gravity than it was in the earlier cohort? Is the second generation more specialized in offensivity than the older group? Do offense careers have similar desistance rates? Is racial differentiation in juvenile justice dispositions still evident?

These are only a few of the more obvious questions answerable by a birth cohort replication in the same jurisdiction.

To ensure that the present study was comparable to its predecessor, the 1958 cohort was defined and the data collection procedures and sources used were the same as in the 1945

cohort. Thus, the present cohort consisted of those youths born in the target year who had continued residence in the City of Philadelphia at least from age 10 through age 17. The residence restriction not only ensures that each cohort member is exposed to the environment at the same time, but also guarantees that the individual will face the same period at risk of delinquency.

The data were gathered from three sources—schools, police and the juvenile court. Background data pertaining to the race, sex, date of birth, and residential history of the subject were obtained from school records. The last, together with the Bureau of Census address data, provided the means for determining the social class of the cohort members. The school records also yielded data pertaining to school achievement, graduation status, and other school-related measures.

The delinquency data were produced from the records of the Juvenile Aid Division of the Philadelphia Police Department. These data consisted of all the police contacts recorded for a juvenile, whether or not the offense resulted in official arrest processing.¹ These rap sheets were supplemented with the police investigation reports containing essential details concerning the offense. These details include information about physical injury, property theft or damage, use of weapons, and any other

1. In Philadelphia, when a police officer has contact with a juvenile, he or she has the option to handle the offender informally (remedial) or to make an arrest. In the case of a remedial, the offense is recorded on a rap sheet but, instead of any further processing, the offender is released to the custody of his or her parents. With an arrest, the offense is also recorded but the offender is referred to a city agency for counseling or to the juvenile court for possible adjudication. Because the delinquency data consist of all police contacts, regardless of whether they were handled informally or resulted in an official arrest, the delinquency measure is more complete than other measures based solely on arrest or court appearance data. Most important, because arrest- and court appearance-based delinquency measures can involve differential selection of some offenders versus others, the present delinquency measure is less subject to such selection biases.

relevant information about the event, victim, or offender which are important for this or future analysis.

From the records of the Juvenile Court Division of the Court of Common Pleas for Philadelphia data were collected pertaining to how the case was handled by the juvenile court system.

The 1958 birth cohort was composed of 13,160 male subjects:

- 6,216 (47.2 percent) were white, while 6,944 (52.8 percent) were nonwhite.
- 6,414 (48.7 percent) were low SES, while 6,746 (51.3 percent) were high SES.

Compared to the 1945 cohort, the 1958 cohort is noticeably different. The 1958 cohort is larger, with almost one-third more members. More important, the racial composition of the 1958 cohort is more even than was the case for the earlier cohort. Whereas the 1945 cohort consisted of 71 percent white and 29 percent nonwhite boys, the 1958 cohort was about 47 percent white and 53 percent nonwhite. Further, both cohorts had slightly more than one-half high SES subjects (54 percent in Cohort I and 51 percent in Cohort II), and the racial differences in SES are about the same for one in 1958 and 1945 birth years. That is, in Cohort I about 70 percent of the whites, compared to just 16 percent of the nonwhites, were high SES, and in Cohort II, about 79 percent of the white boys, compared to 27 percent of the nonwhite boys, were high SES.

In Cohort II, therefore, nonwhites are not the minority of subjects nor is either group as disadvantaged as its counterpart in the previous cohort, although the racial proportions of high SES membership remained about the same.

The 1958 birth cohort analyses, unlike the previous cohort, included females. The present cohort contained 14,000 female subjects who, when added to the number of males, produced a total of 27,160 persons in the cohort.

The race and SES distributions of the females were virtually identical to those for males in the 1958 cohort:

- 6,637 (47.4 percent) of the females were white, while 7,363 (52.5 percent) were nonwhite.
- 6,948 (49.6 percent) of the females were low SES, while 7,052 (50.4 percent) were high SES.
- among white females, 78 percent were high SES and 22 percent were low SES.
- for nonwhite females the breakdown was 26 percent high SES and 74 percent low SES.

Thus, the second birth cohort was substantially larger than its predecessor. It contained about one-third more males and included 14,000 females. The second cohort also reflected a more even distribution by race and a somewhat higher socioeconomic status for both race groups.

Results

Because this research investigated a number of topics surrounding the issue of delinquency, it is desirable to summarize the major findings with respect to the various topic areas of interest. These areas are prevalence, incidence, delinquent subgroups, age, recidivism, and dispositions.

Prevalence

Of the 13,160 males in the 1958 birth cohort, 4,315, or about 33 percent, had at least one police contact before reaching their 18th birthdays. The proportion of delinquents is thus extraordinarily close in the later cohort to that observed in the first (34.9 percent).² Both cohorts show a relationship between race and delinquency and SES and delinquency, but the relationships are somewhat less pronounced in the 1958 cohort.

In the present cohort, about 42 percent of nonwhites were delinquent, compared to 23 percent of whites, for a difference of 19 percent. In the earlier cohort, delinquency involved 50 percent of the nonwhite boys, compared to 29 percent of the white boys, for a difference of 21 percent. Similarly, the SES differential was 18 percent in Cohort II, compared to 19 percent in Cohort I.

In addition to race and SES, several other background variables were related to delinquency

status. Delinquents showed more residential instability than did nondelinquents. Delinquents exhibited much lower scholastic achievement levels than nondelinquents. Perhaps as a consequence, the former completed fewer years of school than did the latter.

For all these variables, nondelinquents fared better than delinquents regardless of race, SES, or cohort.

With respect to the levels of delinquency status, the 1958 cohort had a different concentration than did the 1945 cohort. Of the delinquents in Cohort II, about 42 percent were one-time offenders, 35 percent were nonchronic recidivists, and 23 percent were chronic recidivists. Cohort I contained about 4 percent more one-time delinquents (46 percent) but a very nearly equal percentage of nonchronic recidivists (35 percent). Most important, the prevalence of chronic delinquents in the earlier cohort (18 percent) was 5 percent less than in Cohort II.

Concerning race, the wide disparity in Cohort I had declined in the second cohort. That is, in the 1945 cohort white delinquents were much more likely to be one-time offenders than were nonwhite delinquents (55 percent vs. 35 percent) and much less likely to be chronic offenders (10 percent vs. 29 percent). In Cohort II, however, the white vs. nonwhite proportions were 52 percent vs. 37 percent at the one-time offender level and 15 percent vs. 27 percent at the chronic offender level.

In particular, therefore, chronic delinquency increased for whites from 10 to 15 percent while it declined among nonwhites from 29 to 27 percent in the 1958 cohort, compared to the 1945 cohort.

2. Because our delinquency measure is based on total police contacts, not just arrests, court appearances, or adjudications, caution is needed when comparing our prevalence data to results obtained in other research. The present proportions of delinquents could be greater owing to the measure used or to differences in the populations being studied.

The same set of factors that were related to the status of nondelinquent versus delinquent were also related to the level of delinquency. In both cohorts, one-time offenders compared to recidivists moved less often, had higher achievement scores, completed more years of school, and were much less likely to have been disciplinary problems in school.

The prevalence results for females clearly showed that the phenomenon of delinquency was very different among girls than among boys. Of the 14,000 females in the cohort, 1,972 or about 14 percent had at least one police contact before age 18. Thus, males were almost 2 1/2 times more likely to be delinquent than females.

When prevalence was broken down by levels of delinquency status, the gender differences were pronounced. Among females, 60 percent of the delinquents were one-time offenders, 33 percent were nonchronic recidivists, and 7 percent were chronic recidivists.

Thus, females were about 1 1/2 times more likely to be one-time delinquents and about as likely to be recidivists with fewer than five offenses. But at the level of chronic delinquency, the male to female ratio was over 3:1.

Despite the gender disparity in the prevalence of delinquency, males and females showed a very similar set of correlates. Among females, nonwhites and subjects of low SES were almost twice as likely to be delinquent and about 1 1/2 times more likely to be recidivists. With respect to the three levels of delinquency status, nonwhites and those of low SES were just slightly more likely to be nonchronic recidivists and more likely by a ratio of 1.5:1 to be chronic recidivists.

Only at the level of one-time delinquency were whites and high SES offenders predominant, and here the ratios were less than 1.2:1. All of these race and SES differences were approximately the same magnitude for females as they were for males.

Also like their male counterparts, the females in Cohort II showed distinct relationships be-

tween delinquency and background/school variables. Nondelinquents evidenced more residential stability, as they moved on average about half as often as did delinquents. Nondelinquents showed much higher levels of school achievement; more than 50 percent of the former compared with 30 percent of the latter scored in the top two quartiles on national achievement tests.

Nondelinquents were more than twice as likely as delinquents to graduate from school (69 percent vs. 29 percent), and the former completed an average of almost three-quarters of a year more of education.

It was also found that these relationships held when levels of delinquency status were considered. Thus, nondelinquents fared better than delinquents, one-time offenders fared better than recidivists, and nonchronic recidivists had higher or better scores than chronic recidivists. This pattern held regardless of race or SES.

Incidence

The results pertaining to the character and extent of delinquency in the two cohorts revealed important differences. The 1958 cohort was responsible for 15,248 delinquent acts up to the age of 18, while the 1945 cohort committed 10,214 offenses, nearly 50 percent fewer (49.2 percent). Although the volume of delinquent acts is properly a function of the number of delinquents in the cohort, which automatically results in more expected offenses for the 1958 cohort by virtue of its larger delinquent population, the rates of delinquent behavior confirmed that the later cohort was more offensive per unit of population.

Thus the Cohort II offense rate (1.159 offenses per 1,000 subjects) was higher than that of Cohort I (1.027).

This cohort effect is slight compared to the differences that overall were found for specific offense types, especially serious acts of delinquency. For UCR Index offenses, the Cohort II

rate (455) was about 1.6 times higher than the Cohort I rate (274). The discrepancy increased to a ratio of over 3 to 1 when violent Index rates were compared.

With respect to specific offenses, the data clearly showed the more serious character of delinquency in the 1958 cohort. The Cohort II rate exceeded the Cohort I rate by factors of 3:1 for homicide, 1.7:1 for rape, 5:1 for robbery, and almost 2:1 for aggravated assault and burglary.

When the incidence data were examined by race, the predominant race effect in Cohort I diminished in Cohort II. For the earlier cohort, the overall offense rate for nonwhites (1,984) was three times higher than that for whites (633). The disproportionate involvement of nonwhites in serious delinquency in Cohort I was 4.6 times higher for UCR Index offenses and 15.2 times higher for violent offenses compared to the white rates.

In the second cohort, the nonwhite-to-white comparisons revealed smaller differences for overall offenses for which the ratio was 2.6:1, and for Index offenses for which the ratio was 3.7:1. Most important, the Cohort II violent offense rate for nonwhites was less than six times higher (5.8:1) than the rate for whites. This differential is large but clearly less startling than the ratio of 15:1 obtained in Cohort I.

When expressed in terms of percentage increases from one cohort to the other, the data further confirmed the sharper increase for whites. Violent delinquency increased by about 300 percent in Cohort II over Cohort I, but for nonwhites violent offenses increased by only 86 percent, while for whites violent delinquency increased by almost 500 percent.

In the two birth cohorts, the severity of delinquent acts is analyzed as a quantitative measure as well as the legal categories by which offenses are usually classified.³ When severity is

examined as a metric, the greater harm caused by the 1958 cohort was found once again. Thus, for example, while 87 percent of the Cohort I offenses fell in the lower end of the severity continuum, 56 percent of the Cohort II offenses were so rated. More to the point, less than 1 percent of the offenses committed by the 1945 cohort fell at the upper ranges of severity, compared to 20 percent for the 1958 delinquent acts.

The severity data further confirm the finding that offense seriousness reflected a smaller race effect in Cohort II than in Cohort I. Offense rates weighted by the severity of the act showed that in Cohort I the nonwhite severity rate was about 4.4 times greater than the white severity rate. In Cohort II, the nonwhite rate was still higher but the ratio declined to 3:1. When offense type is considered with a particular focus on injury offenses, strong race and SES effects are found in both cohorts. In Cohort I, the weighted injury rate for nonwhites was higher than that for whites by a factor of 4 among low SES subjects and by a factor of 5¹/₂ among high SES subjects. In Cohort II, the nonwhite rates exceeded the white rates by factors of 3 and 4 at the low and high levels of SES, respectively. In terms of SES, the low status rates exceeded those of the higher status regardless of race. The ratio was 4:1 in Cohort I and 3:1 in Cohort II.

Injury offenses can involve a range of injury level from minor harm to death. When the distributions of injury levels by cohort and by race within each cohort are examined, injury offenses were not only more prevalent in Cohort II than in Cohort I but these offenses also resulted in greater amounts of harm.

The least serious level of injury, minor harm, accounted for 58 percent of the injury offenses

assignment of numerical weights to various components of an offense. The components are level of injury, amount of property theft or damage, victim intimidation, premises entered, and vehicles stolen. The specific weights were derived from our national survey of crime severity (M.E. Wolfgang, R.M. Figlio, and P.E. Tracy, *The Seriousness of Crime: Results of a National Survey*, forthcoming).

3. Offense severity was measured according to a procedure developed by T. Sellin and M.E. Wolfgang (*The Measurement of Delinquency*, New York: Wiley, 1964). The procedure involves the

in the 1958 cohort, compared to 71 percent in the 1945 cohort. An increase of 7 percent more treated and discharged cases occurred in Cohort II (28 percent) than in Cohort I (21 percent). For the two most severe levels of physical injury there were twice as many hospitalizations and nearly three times as many deaths in the proportions of these events in Cohort II compared to Cohort I.

The results by race indicated that nonwhites were more likely to inflict the two most severe levels of physical harm than were whites. For the 1945 cohort, about 8 percent of nonwhite injury offenses, compared to about 5 percent of white injury offenses, involved death or hospitalization. For the 1958 cohort, the proportions for both races were higher but maintained about the same ratio differences between them. About 14 percent of the injury offenses by nonwhites and 9 percent by whites involved either death or hospitalization to the victim.

In addition to offenses involving injury, analyses of offenses involving the two other major components of severity, property theft and damage, indicated in both cohorts that few offenses involved substantial dollar losses. In Cohort I, 27 percent of the theft offenses and 13 percent of the damage offenses involved a monetary loss of \$100 or more. In Cohort II, about 19 percent of the theft offenses and 30 percent of the damage offenses involved dollar losses exceeding \$100.

In the aggregate, the offenses in the 1958 cohort had a greater level of theft and damage than in Cohort I. For theft offenses, the median dollar loss in Cohort II (\$40) was over two times greater than the median value in Cohort I (\$17). Concerning damage offenses, the Cohort II median was also about twice as high as that in Cohort I (\$25 vs \$12).

With respect to race differences in the level of property theft or damage, distinct cohort effects appear. For the 1945 cohort, the weighted property theft rate for nonwhites (834.6) was almost four times higher than the rate for whites (214.7) and the weighted property damage rate for the former (408.7), was also about four times higher than that of the latter (103.6).

However, in the 1958 cohort the nonwhite predominance was much smaller among property offenses of theft and was replaced by a white differential among damage offenses. For theft offenses, the nonwhite weighted offenses rate (610) was less than twice as high as the white rate (352) compared to the factor of 4 found in Cohort I. For damage offenses, the white severity rate (523) was higher than that of nonwhites (465); the reverse of the situation observed in Cohort I.

Thus the incidence and severity results obtained in this research showed distinct differences between the cohorts. The offense rates, overall and for serious offenses, were appreciably higher in the 1958 cohort than in its predecessor. Serious and violent offenses composed a greater share of delinquency and were of greater severity in Cohort II than in Cohort I. The two cohorts were only alike in the rates and concentration of the relatively minor or trivial acts of delinquency.

Further, although both cohorts showed race and SES differences, with nonwhites and low SES subjects appearing to be more delinquent and more involved in serious delinquency, the results clearly indicated that these effects were more pronounced in the earlier cohort than in Cohort II. Of special note was the finding that the race differences were much less striking in the later cohort.

The incidence and severity results obtained for females pointed to even greater gender differences than were found for prevalence data. Essentially, when the frequency, type, and seriousness of delinquent conduct were examined, males predominated in all significant respects.

The 1,972 female offenders were responsible for 3,897 delinquent acts. The offense rate (per 1,000 subjects) was thus 278. Seven hundred and twenty-seven, or 18 percent of the total, were UCR Index offenses with a rate of 52 per 1,000 subjects. One hundred and fifty-seven were violent Index offenses (4 percent of the total and 22 percent of index total) with a rate of 11 per 1,000 subjects.

The gender differences pertaining to these data were pronounced. The male offense rate was four times greater than that for females. The difference increased to a factor of almost 9:1 for UCR Index offenses. The male-to-female ratio increased even further to 14:1 for the violent Index offense rates. By offense type, the male-to-female ratio was 14:1 for homicide, 33:1 for robbery, 10:1 for aggravated assault, 34:1 for burglary, 3.5:1 for larceny, and 37:1 for motor vehicle theft.

By race, the female incidence data showed the greater involvement for nonwhites that was comparable to their predominance among Cohort II males. Nonwhite females had an overall offense rate (376.3) that was 2.2 times higher than that for white females (169.6). The UCR Index rates showed that nonwhite females (78.1) committed about 3.5 times as many Index offenses per unit of population as did white females (22.9). For UCR violent offenses, nonwhite females predominated by a factor of 5.5 (18.3 vs. 3.3). These ratios are very similar to those obtained for males, where nonwhites had greater involvement than whites by a factor of 2.6:1 for total offenses, 3.7:1 for Index offenses, and 5.8:1 for violent Index offenses.

Female delinquency in Cohort II was less frequent and less likely to involve serious charges. It was not surprising to find, therefore, that female offenses had significantly lower severity scores. Over half (54.2 percent) of the delinquent acts by females fell at the lowest range of severity (i.e., less than 100 severity points). By comparison only 6 percent of the offenses by females fell at the upper end of the severity continuum (i.e., < 1,000). Offenses by Cohort II males, on the other hand, were much less likely to fall at the lower end (22 percent) and much more likely to be scored at the higher levels (21 percent).

Thus female offenses predominated at the trivial end of severity by a factor of 2.5, while male offenses predominated at the more severe range by a factor of 3.5. These results were practically invariant to controls for race and SES.

In terms of the components of offense severity, delinquency among females was much less serious than the delinquent acts committed by males. With respect to injury level, half as many violent offenses by females compared to males (6 percent vs. 14 percent) involved the two most severe amounts of harm—death and hospitalization. Female offenses, where injury was present, were more likely to involve minor harm compared to the case for males (65 percent vs. 58 percent).

For property offenses, the median dollar loss for theft and for damage was greater for males than for females, the former being \$40 vs. \$22 and the latter \$25 vs. \$15.

Delinquent Subgroups

One of the most important findings of the 1945 cohort study concerned the issue of chronic delinquency. The data that were uncovered demonstrated that a small fraction of the cohort, those delinquents with at least five police contacts, had committed a far greater share of the offenses than their proportionate representation in the cohort would have suggested. While they constituted just 6 percent of the cohort and 18 percent of the delinquent subset, the chronic offenders were responsible for a total of 5,305 offenses, or 52 percent, of all the delinquent acts. When situated among the recidivists, the chronic offenders composed about one-third of the offenders with at least two contacts, but were responsible for over 60 percent of the offenses attributable to recidivists.

When the severity of the delinquency was considered, the role of the chronic offender became even more apparent. The 627 chronic delinquents had committed 63 percent of the UCR Index offenses, while for the most serious delinquencies, the chronics were responsible for 71 percent of the homicides, 73 percent of the rapes, 82 percent of the robberies, and 69 percent of the aggravated assaults.

These data have been the most enduring results of the 1945 cohort study. Although it had long been suspected that a small group of habitual,

serious offenders had skewed rates of offending, it was not known exactly how small this group actually was or how great a share of offending could be attributed to them. It was with great interest, therefore, that the issue of chronic delinquency in the 1958 cohort was considered. With these new data, the existence of the chronic offender as well as the character and extent of his delinquency could be confirmed.

In short, the chronic offender effect was quite pronounced in the 1958 cohort. The 1958 cohort contained 982 male chronic delinquents. They represented 7.5 percent of the cohort and 23 percent of the delinquents. These chronic delinquents accounted for 9,240 offenses, or 61 percent of all the offenses and 69 percent of the offenses by recidivists. In addition, the expected relationship between the chronic offender and serious delinquency was supported.

Chronic delinquents were responsible for 68 percent of the UCR Index offenses and were similarly overrepresented in the most serious delinquencies—61 percent of homicides, 75 percent of rapes, 73 percent of robberies, 65 percent of aggravated assaults, and 66 percent of the offenses which involved injury.

When the chronic offender was examined by race and SES, the 1958 cohort produced results which, when compared to Cohort I, may prove to be the most significant findings of the research. That is, for the 1945 cohort, the skewed rates and extreme severity of the chronic delinquent held for nonwhites and low SES subjects but not for whites nor high SES subjects. Nonwhite chronics committed 65 percent of all the offenses by nonwhites and 91 percent of the offenses by nonwhite recidivists. On the other hand, white chronics committed a far smaller share of the total delinquency, 35 percent, and less than half (45 percent) of the offenses by white recidivists. Similarly, low SES chronics were responsible for 60 percent of the total offenses by low SES offenders but high SES chronics were involved in only 35 percent of the delinquent acts committed by high SES offenders.

The Cohort II results clearly indicate that the chronic offender was dominant for both races and both levels of SES. Among whites, chronic offenders committed about 50 percent of the offenses, while for nonwhites the chronics committed 65 percent of the offenses. By SES, the results were almost identical to those by race. High SES chronics were involved in 51 percent of the offenses by their SES group and low SES chronics were involved in 65 percent of the delinquent activity of their SES group.

The chronic male delinquent was found in the 1958 cohort as he was in the previous cohort. In the present cohort, however, he accounted for slightly larger shares of the pool of delinquents and the offenses they committed. He had a substantial involvement in the most serious and injurious acts of delinquency. Most important, the chronic offender demonstrated these effects regardless of his race or SES level.

Chronic delinquency among females was a different phenomenon from that observed among Cohort II males. Of the 1,972 female offenders, 147 were chronic delinquents. These chronics represented 1 percent of the females at risk, 7.5 percent of the delinquents, and 18.6 percent of the recidivist subset. The proportion for chronic males exceeded that of his female counterpart by a factor of 7.5 among subjects, 3.0 among delinquents, and 2.0 among recidivists.

The share of delinquent acts attributable to chronic offenders also showed a gender effect. Female chronics committed 1,064 offenses which represented 27 percent of the total offenses and 39 percent of the offenses by recidivists. For males, the chronics were responsible for far greater shares of the offenses—61 percent of recidivist offenses.

When specific offense types were considered, the gender effect was further demonstrated. Female chronics were responsible for 26 percent of the UCR Index offenses and 19 percent of the nonindex offenses. The comparative percentages for males were 68 percent and 53 percent, respectively.

For the most serious offenses, the male chronics were especially predominant. Female chronics committed 60 percent of the homicides, 46 percent of the robberies, 22 percent of the aggravated assaults, and 25 percent of the offenses which involved injury. For males, the chronic offender committed 60 percent of the homicides, 75 percent of the rapes, 73 percent of the robberies, 65 percent of the aggravated assaults, and 66 percent of the injury offenses.

Despite the gender differences in the size of the chronic offender subset and its role in delinquency, males and females were about the same regarding the roles of race and SES. For females, nonwhite delinquents (8.3 percent) were more likely to be chronic by a factor of

1.5 compared to white delinquents (5.6 percent). The SES effect was a little smaller, with 8 percent of low SES delinquents and 6.3 percent of high SES delinquents being classified as chronic. Among males race had the stronger effect, 1.8, while the SES differential was 1.6, with nonwhites and low SES offenders being more chronically delinquent.

Thus although demonstrating similar correlates, the problem of female chronicity was considerably less significant in both size and character compared to males. Female chronics were only a very small proportion of those at risk. Furthermore, their share of offending did not represent either the volume or severity of delinquency as was the case for their male counterparts.

Age and Delinquency

Age at Onset

The point at which a juvenile begins his or her delinquent career is, from the point of view of research on recidivism and related issues, significant in one crucial respect. Age-at-onset, given the fact that delinquency is limited to some maximum age by statute (age 17 for our two cohorts), forever establishes the maximum career length that a delinquent can attain as a juvenile. Because this period at risk is thus set, the extent of further delinquent behavior, or even the character and severity of the subsequent offenses, may be influenced by the offender's age-at-onset.

These data indicate that the 1958 cohort produced higher rates of delinquency, especially the most serious offenses. Age-at-onset may be one possible explanation for the cohort offense differences observed in this research.

However, the proportions of delinquents who began their careers at various ages from 7 through 17 were about the same for both cohorts. From age 7 through age 9, 6.6 percent of the Cohort II delinquents and 5.8 percent of the Cohort I delinquents had started their careers. From ages 10 through 14, 56.1 percent of the delinquents in the 1945 cohort and 45.8 percent of the delinquents in the 1958 cohort had initiated their involvement in delinquency. For the late starters, ages 15, 16 and 17, we found that 47 percent of delinquents in both cohorts were so classified. These findings were generally repeated when race, SES and chronic offender status were examined.

The two cohorts were also alike with respect to the finding that age-at-onset was inversely related to the mean number of offenses. On average, the earlier an offender started, the more offenses he accumulated. The correlation

between age-at-onset and mean number of offenses was strong for both races and SES levels in each cohort. The highest correlation was the same in both cohorts—low SES nonwhites—with values of $-.97$ in Cohort II and $-.99$ in Cohort I. The weakest correlation obtained was also for the same group in the two cohorts—high SES nonwhites—with values of $-.64$ in the 1958 cohort and $-.74$ in the 1945 cohort.

The assumption that a delinquency career started early will produce more severe delinquency was not confirmed by new data. While the mean severity of delinquency was only moderately related to age-at-onset in Cohort I, for Cohort II the severity scores fluctuated across the age-at-onset categories. Although the measured severity of offenses was not strongly related to age-at-onset, that age-at-onset was related to the type of offenses that were committed. That is, the earlier an offender began his career, the more likely he was to engage in index offenses, compared with delinquents who began at the tail end of the age continuum.

On the whole, age-at-onset was not strongly related to offense severity. Most important, the cohorts were sufficiently similar with respect to age-at-onset so that the starting points of the delinquent careers in the two cohorts did not explain the greater severity of delinquency in the later cohort.

The age-at-onset data for females pointed out important gender effects. Females were more likely than males to begin their delinquency careers later. Whereas 6.6 percent of Cohort II males began before age 10, and 56 percent began between ages 10 and 14, only 3 percent and 40 percent of the females began at these ages. On the other hand, 57 percent of the

females began at age 14 or later compared to 47 percent of the males and 37 percent of the females began at ages 16 or 17 compared to 29 percent of the males.

The data for females also showed that age-at-onset was not related to the mean number of offenses. For males, the earlier the delinquent started, the more offenses on average he would accumulate. For females, however, the pattern did not follow an inverse trend. Female delinquents who began at ages 10, 11, or 12 had the highest mean number of offenses.

Females were like males concerning the relationship between age-at-onset and average seriousness. The data for females showed that average severity scores fluctuated across the onset categories. Delinquents who began their careers early were not more likely than others to commit more serious offenses throughout their careers. Females were very likely to engage in nonindex offenses regardless of their age-at-onset, and the more serious varieties appeared to be unrelated to the age-at-onset.

Age at Offense

The age distribution of delinquency was similar for the two birth cohorts. The proportion of offenses increased with age to a peak at age 16. Most of the offenses were committed late in the career. At ages 15, 16, and 17, 64 percent of Cohort II offenses and 60 percent of Cohort I offenses were committed.

The results by race, however, showed a cohort effect. For Cohort I, both whites and nonwhites followed the overall pattern of increasing offenses by age and a peak at age 16. In the 1958 cohort, the nonwhite data followed this trend but the results for whites did not. White offenses continually increased with age and reached their peak at the final year at risk—age 17.

Age-specific crude offense rates and offense rates weighted for severity indicated different race effects for the cohorts. The data for Cohort I showed a wide disparity by race. Overall, the

nonwhite crude rate was three times higher and the weighted rate over four times higher than the white rate.

These discrepancies showed distinct age effects, however. For both crude and weighted rates, discrepancy between races was highest at the early ages and decreased steadily by age. The situation in Cohort II was different. The overall rates were somewhat closer by race, with nonwhites having a crude rate 2.6 times higher and a weighted rate 3.3 times higher. Further, unlike Cohort I data, the results by race in Cohort II were closer across the age continuum.

The age distribution for Index and nonindex offenses differed for the two cohorts. In Cohort I, the proportion of both Index and nonindex offenses increased from age 10 to a peak at age 16. Nonindex offenses predominated at all ages, especially so late in the juvenile career. In Cohort II, the proportions of serious and trivial offenses increased as delinquents aged. But in the 1958 cohort, nonindex offenses were not the dominant type of offense. This type of offense showed the higher percentage at ages 10 and under and 13 to 15. Index offenses were the higher percentage at ages 11 and 12 and late in the career (16 and 17) when a higher percentage of the delinquents were active.

The two cohorts were quite similar in the severity of Index offenses by age. For this type of delinquency, average severity increased with age regardless of race. The cohorts were dissimilar for nonindex delinquency. The 1945 cohort showed no trend for either race in the mean seriousness of nonindex events by age. For Cohort II, the white severity scores were higher and showed sharp increases late in the career. Nonwhite scores followed the Index pattern of increasing severity with age.

When the Index offenses were grouped into four categories—violence, robbery, property and other—these data showed a clear cohort effect. In Cohort I, crimes of violence increased steadily from age 10 and under to age 16, robbery events showed a sharp increase from age 12 to age 13 but then fluctuated to age

17, and property offenses generally increased from age 10 to age 15. Thus although the Index offenses of violence, robbery, and property were more likely to occur late in the career, only violent offenses showed a clear and direct relationship with age.

In Cohort II, a clear age effect was evident for all the serious Index offenses. Crimes of violence showed a steady increase from age 11 to age 17. Both robbery and property offenses increased up to age 16. The fact that Cohort II offenses were committed later in the career is clearly evident when the concentration of the offenses at ages 15 to 17 is observed.

The two cohorts were close in violent offenses for which 67 percent of the Cohort I offenses and 70 percent of the Cohort II offenses were committed in the last 3 years of delinquency. For both robbery and property offenses, however, the Cohort II data predominate: 75 percent of the Cohort II robberies compared with only 45 percent of the Cohort I robberies, and 66 percent of the former's property offenses compared with just 51 percent of the latter's were committed at ages 15, 16, and 17.

The age at offense data for females were mostly dissimilar from the results obtained for males. Females were like males in that the proportion of offenses increased with age. Less than 4 percent of the offenses were committed at age 11 or under and the proportion continually increased to its peak at 21 percent at age 17. Further, like males, the majority of the offenses by females (63 percent) were committed at age 15 or later.

The age data for females differed from that for males in several respects. The two major types of offenses, Index and nonindex, did not follow the male age pattern which showed nonindex offenses characterizing the early years and Index offenses dominating the later age period. Females committed predominantly nonindex offenses regardless of age, with no age trend observable. By type of Index offense, the male result, which found at least two-thirds of the burglaries, robberies, and violent offenses having been committed at age 15 or beyond, was not found for females. Females were found

to commit only larceny offenses with regularity and with a high concentration (66 percent) late in the delinquent career. The results for females were insensitive to consideration of the race and SES of the offender.

Taken together, the age-at-onset and age at offense data for the males in the two cohorts leave partially unresolved the reason for the greater delinquency of the 1958 cohort. Delinquents in both cohorts began their careers almost evenly across the age continuum. The age at offense data for Cohort II, however, generally indicate that delinquents were still active beyond the ages when Cohort I offenders reached their peak thus allowing for a possible additional accumulation of offensive behavior.

Recidivism

The starting point of delinquency was similar in the two cohorts. Over 60 percent of the first offenses were nonindex; the most prevalent type of Index offense was theft, which accounted for 13 percent of the first offenses. When the first offenses of one-time offenders were compared with those of recidivists, cohort differences appeared. In Cohort I, 72 percent of one-time offenders committed a nonindex offense, compared to 59 percent of recidivists (at their first offense). In Cohort II, 63 percent of one-time offenders committed a nonindex offense compared to 60 percent of the first offenses of recidivists.

Further, over one-half of the Index first offenders in Cohort I (51 percent) desisted, compared to 43 percent in Cohort II. Thus because Cohort I members committed a higher proportion of nonindex events at the first offense than did Cohort II offenders, and because the probability of desisting for these nonindex offenders was higher in Cohort I than in Cohort II, more offenders in Cohort II moved on to at least a second offense than in Cohort I.

From the second offense onward, the chance of desistance was greater in Cohort I than in Cohort II. In the 1945 cohort, 35 percent of the delinquents desisted after the second offense versus 28 percent of the delinquents in the 1958

cohort. For the third offense, the respective chances of desistance were .28 versus .27. Beyond the third offense, the likelihood of committing further offenses was somewhat higher in Cohort II and ranged between .74 and .83, compared with Cohort I in which the range generally fell between .71 and .79.

Index offense commission is a low probability event compared to nonindex offensiveness at each rank number of offense, although the probability of committing an Index offense of theft was higher than for any other type. These results were obtained for both cohorts, but in Cohort II the probabilities were higher than those in Cohort I.

The recidivism data obtained for the UCR categories of offenses further indicated the cohort effect. Cohort II delinquents were more likely to have engaged in UCR property offenses two, three, or four or more times (.42 to .84 vs. .38 to .65) than were offenders in Cohort I.

The two cohorts differed more substantially with respect to violent offenses. The chance that a delinquent had committed a UCR violent offense was 2.5 times higher in Cohort II (.26) than in Cohort I (.10). After the first violent offense, Cohort II probabilities ranged from .35 to .85 at the point of eight or more violent offenses. Cohort I scores were much lower and with one exception (.5) did not exceed .33.

The severity of offenses across the ranks from the 1st to the 15th offense showed a slight tendency for severity to increase with offense rank. In Cohort I, the overall offense severity scores increased slightly, nonindex and theft offenses showed almost no severity increase, and damage and combination offenses had moderate severity increments. However, for injury offenses, a strong upward trend for the first 10 offense ranks was observed.

For the 1958 cohort, the total offense and nonindex offense severity scores were about 1.5 times as high as those of the lower offense ranks. The range of severity scores was less for theft, damage, and combination offenses but

the upward trend was distinct nonetheless, and for injury offenses the severity scores showed great swings up and down across offense ranks.

In addition to recidivism probabilities and severity scores by rank number of offense, static offense data indicated that the offense histories were compressed over a rather short period, regardless of the type of offense. This result pertained to both cohorts. For the 1945 cohort, delinquents averaged about 14 years of age for the 1st offense and about 16 years of age for the 15th offense, for an interval of about 2 years. For the 1958 cohort, 1st offenses were committed at an average age of just over 14, while the 15th offenses were committed at an average age of just under 16, for an interval of just less than 2 years.

As expected, the time between offenses was related to the rank number of offense. As the offense rank increased, the time between offenses decreased. The time between the first and second offense was 18.5 months in Cohort I, and 17.6 months in Cohort II. The time between the second and third offense was about 10.5 months for both cohorts. Beyond this point, the interval continued to decline but was never shorter than about 3 months between offenses. Thus the time to failure was different in the early offense ranks, but as more and more offenses were accumulated, failure time was effectively a constant.

Offense Specialization

In the previous analyses, the probability of committing a first, second, third, and so on out to the final reported offense was characterized as a "static" probability because in its computation, the likelihood of each offense type was considered without regard to the type of prior offense.

It was unexpectedly found that the probability of committing an offense, even when classified by type, changed very little over offense number. We had assumed that, if more serious offenses were more likely to appear among the later offenses in a delinquent career, the probability distributions of Index offenses

would have shifted noticeably as the number of offenses increased, thus reflecting a propensity toward the commission of more serious offenses. In short, the chances of committing an Index offense should increase more or less directly with offense number.

Because no such increase was found in the offense probabilities by offense number, it can be suggested that the process which generated the offense-specific probability distributions operated in about the same manner at each offense number.

If it is true that the chance of committing a particular type of act is independent of the number of offenses that a juvenile has already accumulated, then the search for patterns in delinquent careers must abandon the static mode of analysis, in which the frequency of delinquency is highlighted. Instead, analyses should be based on dynamic models, which link the chances of subsequent activity both to the number and type of prior events.⁴

Later analyses focus on these transition probabilities. The goal of these analyses was the development of inferential statements about switching from one type of offense to another, or continuing with the same type as offense-rank advances. The first models included all offender types regardless of the number of offenses they had committed. Here the state of

4. The offense types used in the offense specialization analyses were derived from the Sellin-Wolfgang severity scheme. Five offense types were used. If an offense involved the severity component of injury, theft, or damage, it was so classified. If an event involved more than one of these components, it was classified as combination. If an offense did not involve a measurable severity component, it was classified as nonindex. It should be noted that this scheme produces a conservative test of offense specialization. That is, although the combination category involves two or more severity components, it is treated as a separate category. It is possible to classify combination offenses in terms of the most serious component that occurs. We are working on such models but in light of the present effort to replicate the 1945 cohort, we utilized the same procedures for classification used in the earlier cohort.

desistance was used as a transition state. Later models eliminated desistance and concentrated on the offense patterns of recidivists.

We analyzed separately two groups of recidivists: delinquents who had accumulated at least five offenses and delinquents who had committed at least nine acts of delinquency. By focusing on different sets of offenders we were able to investigate whether offense patterns were observable generally or whether offense switching and specialization were dependent on a certain career length.

The offense patterns exhibited by the offenders in both cohorts were found to be very much alike. The most likely transition observed was to a nonindex offense regardless of the type of prior offense. For the 1945 cohort, damage offenders were the most likely to move to a nonindex offense, while for the 1958 cohort, nonindex offenders were the most likely to commit a nonindex offense on their next offense. The next most likely transition was to the state of desistance. In both cohorts, injury offenders were the most likely to move to this state. If offenders did not move to a nonindex event or desist from further delinquency, they were likely to commit an Index offense involving property theft.

The probabilities of like offense repeats and analysis of the residuals to determine the extent of offense specialization, indicated that like offense repeats were evident, but the tendency to specialize was stronger for the 1958 cohort. In Cohort I, theft and combination offenders showed the strongest tendency to specialize. Injury offense repeats were moderately greater than chance. Damage offense repeats did not appear to be more frequent than expected by chance.

In Cohort II, the type of subsequent offense was related to prior offense for all offense types. For any offense type, the offender most likely to have committed it next was one who had committed it just prior.

The strongest evidence of offense specialization was found for the recidivism models. The five-time offenders in Cohort I showed a significant tendency to repeat theft, combination

and injury offenses, while damage offense repeats were observed only slightly more often than by chance. The Cohort II data presented the unmistakable finding that the five-time chronic offenders tended to specialize and did so for all offense types. Combination offenses showed the greatest repetition, followed closely by injury and theft repeats. Damage offenses were repeated very often but not with the specialization tendency evident for the other offense types.

When we expanded the delinquent career to include at least nine offenses, specialization was again observed in both cohorts but was more pronounced in Cohort II. The nine-time offenders in Cohort II had the strongest repeat tendency for theft, followed closely by combination offenses. Injury and damage offense repeats were repeated less substantially but the specialization tendency was clear nonetheless.

The overall offense patterns did not show significant race effects. Whites and nonwhites in both cohorts were likely to move to a nonindex offense regardless of prior offense type. When an index transition was made, the type of offense usually committed was theft. When an offender desisted, he was most likely in a prior state of injury offense than any other offense state.

When we eliminated desisters and concentrated on the offense patterns of recidivists, we found both race effects and cohort effects that were substantively important.

In Cohort I, five-time white offenders most often repeated theft offenses. The results for the other offense types showed only a slight tendency to specialize. In the 1958 cohort, the white five-time recidivists appeared to specialize in two offenses strongly (combination and theft). Damage offenses showed only slight specialization.

The five-time nonwhite chronics in Cohort I showed evidence of repeating more offense types than their white counterparts in either cohort. These offenders tended to specialize in combination, theft, and injury offenses. For

Cohort II nonwhite chronics, a strong relationship was found between prior and subsequent offense type for all offenses. The strongest evidence of specialization occurred for injury offenses, while the tendency to repeat theft, damage, and combination offenses was slightly lower.

For the very chronic recidivists, those with at least nine offenses, the findings for five-time offenders were accentuated for all groups.

The nine-time white offenders in Cohort I specialized in theft, damage, and combination offenses, compared to just theft for their five-time counterparts. The Cohort II nine-time offenders specialized in injury, theft, and damage offenses, compared to combination and theft repetitions for their five-time offense counterparts.

The nine-time nonwhite offenders in Cohort I showed the same tendencies to specialize as did their five-time recidivist counterparts. They both tended to repeat theft, combination, and injury offenses. The nine-time nonwhite recidivists in Cohort II displayed the strongest evidence of offense specialization. Even when compared to his five-time offense counterpart, the evidence of offense patterning was stronger across all offense types for the nine-time nonwhite recidivists in Cohort II.

In short, evidence of offense specialization exists among recidivists (as opposed to occasional delinquents). The evidence became more pronounced as the number of offenses increased. The results were clear for both cohorts, although different patterns were found by race.

Offense Escalation

The static analyses showed that offense severity was not greatly influenced by rank number of offense. Thus offenses that were committed late in the career were not found to be more serious than those committed early in the career. This is one way of looking at the issue of escalation. Because this type of analysis does not consider whether the offense being

examined was a repeat or an event being committed for the first time (a high rank number does not ensure that it is a repeat), it is necessary to investigate the issue of offense escalation from a dynamic point of view. These analyses determined whether a repeat offense had a higher severity than its predecessor and whether the number of repeats continued to inflate offense severity.

With only a few exceptions, when an offense was repeated the severity was greater than that of its predecessor. The exceptions were one theft repeat (the seventh in Cohort I and the eighth in Cohort II), two theft repeats (the third and sixth in Cohort I and the fourth and fifth in Cohort II), and one damage repeat (the first in Cohort I). Most important, the injury offenses were repeated in both cohorts with substantial increases in severity. The patterns by race did not depart from these overall patterns in a meaningful fashion.

Multiple regression analyses were not able to identify factors which would explain the greater severity of repeat offenses. Using prior severity, age, time between offenses, and number of intervening offenses as predictors, the models did not explain much variation and none of the predictors seemed to stand out.

Offense escalation was evident in both cohorts (and most substantial for injury offenses) but the possible causes were not identifiable.

The recidivism data for females clearly point to the gender effect in the 1958 cohort. Males and females were initially alike concerning the type of first offense that was predominant—nonindex offenses. Females, however, were slightly more likely to start their career with this type of offense (65 percent vs. 60 percent). Beyond this initial similarity, males and females differed considerably.

Of the female delinquents, 60 percent desisted after one offense compared to 41 percent of males. After the second offense, 48 percent of females desisted compared to 28 percent of males. Similarly, a higher proportion of females (40 percent) desisted after the third offense compared to males (27 percent). There-

fore, from the original pool of delinquents, 87 percent of the females, compared to 70 percent of the males, had ceased committing official acts of delinquency by the third offense. Put another way, only 248 female offenders could have committed another offense compared to an at-risk pool of 1,304 male recidivists.

The probability of recidivism after the third offense was much lower for females, ranging between .59 and .71, compared to males for whom repeat offenses showed probabilities of .74 to .83, out to a tenth offense.

For serious offenses, the gender effect was quite pronounced. For females, UCR violent offenses showed a first offense probability of .07 and .09 for the chance of a second violent offense. The likelihood of a third violent offense was .30 and no female offender was recorded as having committed a fourth. Male offenders showed a probability of .26 for a first violent offense, .35 for a second, .48 for a third, .47 for a fourth, out to .85 for 10 violent offenses.

For the less serious UCR property offenses, female recidivism was higher than for violent offenses but males still predominated by a wide margin. Of female delinquents, 23 percent committed at least one property offense and 27 percent committed at least five. Among males, the chances were .43 of committing at least 1 property offense and the probabilities reached .72 for the commission of at least 10 property Index offenses.

Thus, female recidivism was comparatively infrequent and was particularly rare for the more serious types of offenses. Neither race nor SES appreciably changed this basic result.

Because female recidivism was so limited, analyses of offense specialization and escalation were constrained. From the few cases with sufficient offense repeats to warrant attention, female recidivists tended to repeat only non-index offenses. There was no evidence that any of the Index offenses were likely to be repeated as a function of the prior offense state. Further, it was also found that females did not show a trend of escalating seriousness either by rank number or by offense repeats.

Disposition

The final analyses concerned the handling of the delinquents by the police and juvenile court authorities. These analyses were concerned with two principal issues; first, the determination of whether the various dispositions were related to such factors as race, SES, offender status, type of offense or offense severity, and second, the investigation whether the type and frequency of dispositions, especially court penalties, had an association with recidivism were undertaken. In other words, we examined whether severe dispositions worked to reduce recidivism. Cohort differences were obtained for each of the two issues.

The initial disposition point in the handling of delinquents is the police decision to remedial or to arrest the offender. If the police officer decides to remedial the offender, the delinquent is handled informally and released to his or her parents. If, on the other hand, the police officer decides to arrest the offender, the delinquent is handled officially and may be exposed to a court hearing and possibly a severe penalty.

In both cohorts the police were more likely to expose certain offenders to arrest and further processing in the juvenile justice system than was the case for other offenders. In addition, the extent of the difference between offenders on this variable was greater in Cohort I than in Cohort II.

The 1945 cohort showed race and SES effects in the decision to arrest offenders. Of nonwhite delinquents, 44 percent were officially arrested compared to 23 percent of white offenders. For SES, the difference was only slightly less, as 39 percent of low SES delinquents were arrested compared to 24 percent of high SES offenders.

When race and SES were considered together, the discrepancy persisted. The difference was less at the lower level of SES for which 44 percent of nonwhites compared to 28 percent of whites were arrested. The difference at the higher level of SES was 21 percent, as 41 percent of nonwhites compared to 20 percent of whites were arrested.

For the 1958 cohort, these race and SES differences were diminished. The difference by race was reduced from 19 to 9 percent; 60 percent of nonwhites versus 51 percent of whites were arrested. The SES discrepancy was reduced from 15 to 7 percent; 60 percent of low SES delinquents were arrested versus 53 percent of high SES delinquents.

The joint race and SES relationship to arrest was similarly lower in Cohort II than in Cohort I. At the lower level of SES, nonwhites were arrested more than whites, with a difference of 8 percent (61 percent vs. 53 percent) compared to 16 percent in Cohort I. At the higher level of SES, the race difference of nonwhites to whites was 56 percent versus 51 percent, or just 5 percent, compared to 21 percent in Cohort I.

We considered the possibilities that these differences, especially the large disparities in Cohort I, could be due not to race itself but to the greater likelihood that recidivists, Index offenders and offenders who commit offenses with high severity fell into categories which disproportionately involved nonwhites. But when we examined the race effects, controlling for these other factors, the results did not explain the race difference in arrest status.

Whether the offender was a one-time offender or a recidivist, he was more likely to be arrested if he were nonwhite rather than white. The Cohort I differences disfavoring nonwhites were 17 percentage points (30 percent vs. 13 percent) for one-time offenders and 18 percentage points (45 percent vs. 27 percent) for recidivists. The Cohort II differences disfavoring nonwhites were smaller and amounted to 10 points (46 percent vs. 36 percent) for one-time offenders and 6 points (61 percent vs. 55 percent) for recidivists.

By type of offense, the Cohort I results were most pronounced. Nonwhites were about twice as likely to be arrested for nonindex offenses than were whites (21 percent vs. 10 percent), while for Index offenses the difference was 20 percent for nonwhites (68 percent vs. 48 percent). Cohort II showed no race effect for non-index offenses; nonwhites (35 percent) and

whites (37 percent) were arrested in almost the same proportion, with the slight difference disfavoring whites instead of nonwhites. For Index offenses a race difference was observed, but the difference was 11 percentage points disfavoring nonwhites compared to 20 points disfavoring nonwhites in Cohort I.

Thus in the 1945 cohort study, nonwhites and lower SES subjects were treated more severely at the initial disposition stage of remedial versus arrest. The discrepancies in the 1958 cohort were not as reflective of processing differentials by either race or SES. We also found that offender status and character of the offense, appropriate legal criteria, also influenced the arrest decision in both cohorts.

In addition to differences in the distribution of dispositions, an investigation of the relationship between disposition type and subsequent delinquency indicated that severe dispositions, like court penalties involving at least probation, did not appear to reduce recidivism substantially. It was evident, however, that court penalties were more effective in the 1958 cohort than in its predecessor.

In Cohort I, the probability of committing a subsequent offense increased steadily from the first through fourth offense and, most important, the more severe the disposition, the higher was the probability of recidivism. Thus when an offender did not receive a court penalty for his first Index offense, the probability of any second offense was .62 and the probability of a second Index offense was .25. On the other hand, when an offender received a court penalty at his first Index offense, the recidivism probabilities were higher. The probability of any type of additional offense was .68 and the probability of Index recidivism was .31.

The Cohort II data revealed that court penalties were more effective than in Cohort I. Offenders who were given a court penalty showed a .52 probability of committing another offense, compared to a .62 probability for delinquents who were handled more leniently. For Index recidivism the probabilities were close, as 24 percent of the court penalty cases committed another Index offense compared to 27 percent of the remediated offenders.

When we followed the court penalty cases from the first through the fourth offense, the difference between the cohorts was further evident. Of the first-time Index offenders in Cohort I, 20 percent were given a court penalty. Of these, 68 percent committed a second offense, 47 percent of which were Index offenses. About 53 percent of the two-time offenders received another court disposition, and of them, 77 percent violated the law a third time with 51 percent of these third offenses being Index. After the third offense, 81 percent of the offenders received a court penalty and all of them went on to a fourth offense, with 76 percent committing an Index offense.

When we followed the Cohort II court penalty cases, we found that the proportion of desisters was greater, and if the offender did not desist, the chances that his next offense was of the Index variety were lower than in Cohort I. Of the 1667 first Index offenses, about 19 percent were given at least probation. Of these, 52 percent committed a next offense compared to 68 percent in Cohort I. Of the second offenses, 48 percent (vs. 53 percent in Cohort I) were Index offenses.

At the third offense, we found 64 percent of the offenders, with 52 percent having committed Index offenses (vs. 78 percent and 52 percent in Cohort I). Like Cohort I, all of the three-time recidivists in Cohort II went on to a fourth offense but, unlike the former for which 76 percent of the fourth offenses were Index, the fourth offenses in Cohort II that followed a court penalty showed only 28 percent Index offenses.

It is clear that the use of court penalties made some difference in Cohort II. What is equally important is the fact that repeat court penalties for serious offenses were not used frequently. In Cohort II, a court penalty was given in 18 percent of first Index offenses, 29 percent of second Index offenses, 31 percent of third Index offenses and 54 percent of fourth Index offenses. Thus 46 percent of the recidivists who had accumulated up to four Index crimes had not received a penalty at least as severe as probation for one or more of their Index offenses. The Cohort I data showed a similarly low prevalence of court dispositions.

The disposition of female offenses was unlike that experienced by males. An arrest was made in just 35 percent of the offenses by females compared to 58 percent of the male offenses. Similarly, only 9 percent of the females received a court penalty as severe as probation compared to 16 percent of the males.

The sexes were similar, however, concerning the differences in dispositions by race. Females, like males, were more likely to be arrested if nonwhite (38 percent) than white (39 percent). Males showed the same race differential (60 percent vs. 52 percent). Once the case reached juvenile court, the sexes were

again alike. Nonwhite females (10 percent) were slightly more likely to be given probation or an institutional placement compared to whites (8 percent). For males the difference was about 4 percent (17 percent vs. 13 percent).

The effect of court dispositions on female recidivism was difficult to measure due to the high desistance rates for females. Female offenders were likely to cease delinquency without regard to their handling by the court. It was apparent, however, that for females, contact with the justice system beyond the initial contact with the police was exceedingly rare.

Implications

We have investigated the phenomenon of delinquency in two birth cohorts. The cohorts contained just over 23,000 males and 14,000 females responsible for a total of 29,359 official acts of delinquent behavior. We have been particularly concerned with the differences that were exhibited between the cohorts. But we have also investigated the cohort similarities, the continuity over time exhibited with respect to crucial aspects of delinquency.

Our purpose in this research was to analyze and describe, not to prescribe. Yet the body of findings we have uncovered is such that offering a few recommendations is unavoidable. Our concluding task, therefore, is to draw on the results in order to identify the more salient and more policy-relevant implications of this research.

The data do not support etiological observations and thus we cannot speak of causes. But some of our findings are suggestive of significant relationships that should not be ignored.

Delinquency was more prevalent among non-whites and among subjects of lower SES than among whites and boys of higher SES. Delinquency was also associated with residential instability, poor school achievement, and failure to graduate from high school. These factors were also related to the extent of delinquency as well. Taken together, these factors portray a disadvantageous position which may encourage delinquency, be correlative with it and some other factor, or, in some instances, be a consequence of delinquency.

In criminological terms, these factors indicate the failure of customary control mechanisms and the presence of social structural conditions that disfavor certain segments of the society.

These concepts are not new and, in fact, form the core of two of the most important criminological theories.

What is important, therefore, is not that we found evidence of strain or a breakdown of controls but, rather, that these factors operated for two different cohorts of youth. The cohorts differed with regard to the strength of the relationship to delinquency of the various factors but, essentially, notable similarities and differences were observed.

The implication for criminological research seems clear. Future research should be less concerned with whether the differences we observed, especially with respect to race and SES, are real or an artifact of society's response to delinquency. Rather, attention should be centered on delinquency where it is located most often and on the conditions which foster the differences that are found. Criminology can ill afford to continue a research agenda that so refuses to acknowledge differences in the prevalence of delinquency that it is unable to explain them.

Although our data did not focus on the antecedents or causes of delinquency, they did focus on the phenomenon itself. In this regard the findings suggest several policy-relevant issues.

Cohort II—born 13 years after Cohort I—had more youths and more delinquent youths, but the proportion of delinquents was about the same. Further, the offenders in Cohort II, growing up in the late 60's and early 70's, committed more crimes and much more serious crimes. A pervasive question is whether Cohort II, with a very violent criminal population of a small number of brutal offenders, is a demographic aberration. Would a Cohort III, born,

for example in 1970, be as violent over their juvenile careers? We do not know but we suspect several things.

First, we expect the rate of violent crime by "dangerous" offenders will decrease nationally because of the reduction of the 15-24 age group in the population. We also suspect that, because fertility rates of nonwhites will continue to be higher than white rates, violent crime among nonwhites will probably not abate until the end of this century. Thus, ordinary crimes of violence should, in the aggregate, decline. But a smaller adolescent/young adult population may still have an increase in violent crime. Furthermore, the chronic juvenile offender will be a continuing problem no matter how large or small the demographic base from which he is drawn.

Cohort II may just be an aberrant display of illegal behavior, particularly violent crime. Cohort III may be less offensive and less violent. We need to know. If Cohort II had a social response that was more retributive, perhaps the effect would be reflected in lower rates of violence among offenders in Cohort III.

The social policy of today can affect the behavior of juveniles tomorrow. We need not, however, direct our policy to what the offense rate might be 10 years from now. We should have a policy for the present cohorts. The Cohort II delinquents were violent, more violent than their predecessors. Society must react to the present level of violence, whatever may be the diminished or increased exhibition of criminal violence in the cohorts of the next generation.

Cohort II evidenced an escalation of violent criminality, a fearful phenomenon for the public and a surplus of cases for prosecutors, judges, and other agents of the criminal justice system. But Cohort II was not unusual in the small cadre of serious, chronic, violent offenders. They were simply more delinquent and more violent than their Cohort I counterparts. Our social reaction to such criminality should be related to our knowledge that chronic offenders started their violent harm early in life

and will apparently continue if allowed to do so.

There are many possible ways in which to respond to the problem of the chronic juvenile offender. The specific proposals we offer here are, given the state of our knowledge, the minimum response we can expect of the juvenile justice system.

Juvenile courts should consider close probation supervision for perhaps first-time and certainly for second-time violent Index offenders. When these offenses occur early in the life of delinquents (as they do for chronic offenders), there is a temptation to be lenient and give the delinquent the opportunity for self-induced change. Yet, we know that the chronic offender is detached from the schools and other community-based socialization and control agents.

Failure to impose sanctions—failure to impose necessary controls early—can encourage further delinquency. This situation is apparently what happened in Cohort II. Initial Index offenses were not singled out for severe dispositions early enough to have had a deterrent or rehabilitative effect.

When less severe sanctions fail to curb recidivism, intensive intervention should be considered. Incapacitation in a secure facility, after perhaps the third violent Index offense, should become a viable option in juvenile court. This sanction is already present, of course, but scarce resources have limited the number of spaces that are available.

Often, judges are unable to order incapacitation for some offenders due to space constraints and must rely instead on the continued use of probation. Probably this sanction is not a sufficiently severe penalty for a three-time violent Index offender. Thus, either the available spaces in secure facilities should be reserved for the chronic offender or more space should be created. Most important, the voluntary avoidance of necessary dispositions, like incapacitation, must be remedied.

In order to eliminate sanctioning inconsistencies and system failures in the processing of chronic delinquents, we recommend initiatives that are designed to help the juvenile justice system identify, prosecute, and punish/rehabilitate the chronic offender. Known variously as habitual offender programs, operation hardcore, etc., these programs apply many of the procedures followed in adult career criminal programs to the juvenile justice process. These initiatives are too new for us to know if they work. We expect, however, that they will have a beneficial effect on the juvenile justice process and its clients.

We believe that the improved handling of offenders within the juvenile justice system is, at least for now, preferable to the increasing tendency to remove juveniles from the juvenile process by certifying them for adult prosecution. This process is fostered by the belief that the juvenile system has failed to curb recidivism and that adult courts hold a better promise of severe sanctions. The policy of removing juveniles from the province of juvenile court is not only premature, but is faulty in many respects.

First, the rationale for waiver is based on the assumption that more severe penalties are not just available but will be applied. The available evidence on this issue does not show that juveniles who have been referred for adult prosecution receive more severe sentences. In many instances, these offenders receive more lenient sanctions than comparable offenders in juvenile court.

Second, the waiver procedure assumes a degree of efficiency in predicting dangerousness (usually expressed as the likelihood of an additional serious offense) that is not supported by available evidence. Most waiver statutes specify that an offender's age, in combination with current offense and prior record, are legally permissible factors that predict future misconduct, and thus, may be used as waiver criteria.

We know of no body of research which indicates that these or any other criteria are useful predictors of recidivism generally, or violent

recidivism in particular. Most studies that we are familiar with show a considerable percentage of "false positives," which refers to cases that were predicted to be recidivistic but actually were not. In addition, there is a considerable number of "false negatives," which are actual recidivists who were nonetheless predicted to be desisters.

Thus waiver processes which rely on such faulty prediction criteria will mislabel many offenders with grave consequences. Some will be misidentified as "dangerous" and will be waived to adult court. They will face adult criminal justice procedures and, if convicted, can face harsh sentences and possible incarceration with adult felons. Some offenders, who will be recidivists, will be misidentified and will be exposed to the more benign dispositions of the juvenile court.

Thus juvenile waiver is probably a faulty policy, but even if this were not true, it is premature. Juveniles can and should receive necessary penalties in juvenile court when their instant offense and prior record warrant such action. Although the juvenile justice system is based on the notion of judicious nonintervention, we can revise our thinking and expectations according to the severity of the offender.

The chronic juvenile offender is special and warrants special handling. We need not waive such offenders to adult court before we have tried to improve their handling in the juvenile system. Waiver is not only no substitute for sound juvenile justice policy but may even provide an excuse for not developing such a policy.

Juvenile justice must be flexible so that it can adjust its reaction to different cohorts. It should react strongly to that small cadre of violent people and react softly to nonserious offenders. A Cohort III could be less violent if we had a more rigorous and informed reaction to Cohort II. Or Cohort III may, *sui generis*, be less violent.

Each birth cohort, however large, is but a collection of life histories, an aggregate case study in the demography of time. Although these

biographies march through time together biologically, at least generally so, they do not all cross the threshold from legally conforming to legally violating behaviors. And those who do, have different paces; some start earlier than others and never stop, most turn back over the threshold and are not seen officially again. Now, the application of social control—of social intervention to reduce future crime—can make use of that knowledge by recognizing differential life paths and paces, by taking into account delinquent/criminal transition probabilities.

A juvenile and criminal justice policy that focuses on the few at the most propitious time has the greatest likelihood of effecting change. Social intervention applied to those few need not be merely restrictive and depriving of liberty; it can also be healthful for, and helpful to, those who are under control.

No scheme for the control of criminal violence can have immediate and universal effect. If at all successful, it will have systematic effects rippling through a successive chain of cohorts.

Thus, when and how 15-year-old violent offenders are handled in one decade can have an effect on how 15-year-olds behave in a later decade. By observing several birth cohorts we can hope to measure the socially vertical effects over time.

We are still sufficiently close to the juvenile years of Cohort II to design policy based on what we have learned in analyzing delinquent and violent careers. Preparing now for a program aimed at reducing future violence (of one, two, or three decades) is proper. A Cohort III might be less violent without a concerted policy of social control now, but inaction could be a dangerous and costly social experiment.

Planning for informed social intervention now may or may not produce a less dangerous Cohort III. If Cohort III were to be less violent, we might not know whether it was due to a past policy or to a kind of generational spontaneous remission. But developing policy now, based on what we have observed is, at worst, most likely to be benign and at best, to be benevolent.