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DELINQUENCY IN A BIRTH COHORT: A NEW DIRECTION IN CRIMINOLOGICAL RESEARCH?*

MAYNARD L. ERICKSON**

The University of Chicago Press is launching a new series of monographs on crime and justice. Their inaugural book is *Delinquency In A Birth Cohort** written by Marvin E. Wolfgang, Robert M. Figlio, and Thorsten Sellin. This book, writes Norval Morris, series editor, "is one of those turning points in criminological research in the United States—like the Shaw and McKay area studies in the 1930's."¹

This book may well represent a much needed model for a new thrust in empirical research on juvenile delinquency, especially in light of the present theoretical emphasis. Whether it will be a turning point is contingent on a number of important factors, not the least of which is the feasibility of doing similar studies in the future in light of the present crisis in federal funding for social sciences.

The research reported utilizes a new methodological approach in the study of delinquency—time series analyses of delinquency rates of a birth cohort. The birth cohort used in this study is composed of all males born in 1945 who resided in the city of Philadelphia, at least from their 10th until their 18th birthday, but in most cases from birth until their 18th birthday, a total of nearly 10,000 males. *All available data* on this cohort were compiled and collated, e.g., school records from all public and private institutions, police records, and dispositions from juvenile and criminal court records. Based on these data a variety of highly creative and interesting statistical analyses were conducted, the results of which are presented in a style which is cogent and parsimonious and which can be followed easily by the non-mathematically trained reader. This book very likely represents the

most systematic and sophisticated mathematical analyses of delinquency yet written.

The authors utilize two quite distinct types of analyses. The first is descriptive in nature and is primarily concerned with explicating the personal and social characteristics of delinquents and non-delinquents as reflected by all available official records. Efforts are made to relate these characteristics to the extent and nature of delinquency within the birth cohort. The second type of analysis is largely an attempt to predict, through the use of stochastic mathematical models (Markov probability methods), the career patterns of delinquents over the entire span of their adolescent years. Due to the marked difference in these two types of analyses, each will be discussed separately. However, first a few general comments about the methods utilized in this research.

ABOUT THE METHOD

Although the desirability of investigating delinquency and crime of cohorts has been recognized for a long time, longitudinal and panel studies are notably absent from the literature. Questions concerning patterns of career delinquency, maturational reform, the preventive and/or labeling effects of different official reactions and processing techniques are probably only resolvable with longitudinal data. The use of a birth cohort is one method of providing much needed evidence on these aspects of delinquency.

There are questions as to whether the findings derived from a single birth cohort are subject to generalization. These questions are far too complicated to go into here except to say that the basic question of representativeness of a single birth cohort in a single city raises all of the questions that are ordinarily raised in discussions of sampling. In the final analysis, the selection of a single birth cohort is nothing more than the purposive selection of a sample from the universe of all possible birth cohorts that might have been selected, in all cities for any year in the United States or elsewhere.

* This review-article is the first in a new series of article length reviews of *significant* books in the field. The first book chosen is DELINQUENCY IN A BIRTH COHORT, by Marvin E. Wolfgang, Robert M. Figlio, and Thorsten Sellin; Chicago: University of Chicago Press, 1972. Pp. X, 327. \$12.50.

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¹ M. WOLFGANG, R. FIGLIO & T. SELLIN, DELINQUENCY IN A BIRTH COHORT (1972) vii.

There are a host of very interesting questions that arise in contemplating additional birth cohort studies. For example, what would be revealed by replicating the authors' analyses on selected age/birth cohorts in any city every three years over a period of 15 to 20 years? Would there be differences in these cohorts in terms of patterns of delinquency involvement in juvenile gangs or group offenses, in relative importance of family, school, and other etiological variables? All of this, of course, leads to the observation that the birth cohort methodology merely points to a whole series of new studies that might be done to help understand a host of historical dimensions of delinquency in various cities, counties, and states, if not countries. However interesting the possibilities may seem, there is a haunting reality about the prospect of such a trend in criminological research. The authors of *Delinquency In A Birth Cohort* fail to tell us what the study cost in research funds, but it is safe to say that the costs were substantial. If the number of birth cohort studies required to answer many of the interesting questions posed by its possibilities were to actually be conducted, one has to wonder what the total costs would be. This is not a criticism of the present work but speculation that the extent to which this becomes a new direction in criminological research rests heavily on the feasibility of funding such studies in sufficient numbers to derive maximum benefit.

In selecting a birth cohort, the authors were influenced by their confidence in the records of the Juvenile Aid Division of the Philadelphia Police Department. The question is raised, however, as to how much faith other researchers would have in the data available to them. A corollary question has to do with the confidence that one has in the reliability and validity of official police records to reflect adolescent behavior. Self-report and victimization studies supply ample evidence to suggest that there are a number of systematic biases in official records, especially in reflecting actual adolescent behavior. Although official records are "social facts par excellence," reflecting official reaction to adolescent behavior, their ability to reflect all illegal behavior of adolescents undoubtedly varies considerably from jurisdiction to jurisdiction and within the same jurisdiction over time. There is also the likely possibility that official records reflect offenses for some genuinely innocent individuals. The point is that given the inadequacies of official records and the lack of confidence

that many researchers have in them, many researchers will see birth cohort analyses as having limited value unless supplemented by other kinds of data. My position is less extreme; I would merely suggest that given the known inadequacies of official sources of data, it is wise to use language that reflects that fact rather than attempting to interpret findings based on official records as reflecting offenses actually committed by individuals.

This point is not a direct criticism of Wolfgang, Figlio, and Sellin. In the early chapters of the book, they make every conceivable effort to elucidate their awareness of the limitations of official sources of data. Furthermore, they use the accuracy of the Juvenile Aid Division statistics as one of the criteria for selecting a cohort—one which would have the least amount of error in the data. But although they properly qualify many of the interpretations of their results, there are occasions when they refer to *offenses committed* rather than *official offenses*.

DESCRIPTIVE ANALYSES

The authors selected as the birth cohort for their study all the boys born in 1945 who lived in Philadelphia at least between their 10th and 18th birthdays. This complete enumeration (within the limits of the accuracy of official school and police records) yielded 9,945 boys. School records supplied the source of background data, and the records of the Juvenile Aid Division of the Philadelphia Police Department provided the major source of data on official offenses. As a check on the whereabouts of members of the cohort during their 18th year, the authors utilized selective service registration records for Philadelphia residents.² The collation of all of these data made it possible to account for the physical location of cohort members at least from their 10th birthday, and generally from birth, through their 18th birthday.³

Records showed that 35 percent of the boys were involved with the police at least once during their adolescent years.⁴ Of the total cohort, 71 percent (7,043) were white and 29 percent (2,902) were non-white. Of the whites, 28.6 percent were classified as offenders whereas 50.2 percent of the non-white boys were so designated. In terms of socioeconomic status (SES), 54 percent of the total cohort were from the higher socioeconomic status group of whom 26.5 percent had had some official contact

² *Id.* at 245.

³ *Id.* at 244-45.

⁴ *Id.* at 245.

with police; 46 percent of the cohort were from the lower SES classification of whom 44.8 percent were delinquent.⁵

These findings are consistent with most findings of the relationship between race, SES, and delinquency when official records are utilized.⁶ There are much higher probabilities associated with having contacts with official police and juvenile courts for non-white and individuals from the lower SES levels. Also consistent with previous research is the finding that, of all background variables included in the analysis, two variables emerged as most important—race and socioeconomic status.

An excellent summary of these findings is provided by the authors:

Thus, we found a nexus of factors related to race and delinquency which we referred to as a "disadvantaged" position. The non-white delinquent boy is likely to belong to the lower socioeconomic group, experience a greater number of school and residential moves (that is, be subject to the disruptive forces of intracity mobility more than the non-delinquent) and have the lowest average grade completed, the lowest achievement level, and the lowest I.Q. score.⁷

Another series of analyses focusing on these same variables divided the cohort into three categories: non-offenders, one-time offenders, and recidivists. Of the delinquents, 54 percent were classified as recidivists whereas 46 percent were classified as one-time offenders. The analysis of background variables indicates that these categories fall systematically on a continuum. The recidivists are most disadvantaged, non-offenders fall at the opposite end of the continuum, and one-time offenders fall between the two. All of this, of course, comes as no surprise. When race and SES are considered jointly, low SES white boys have a higher rate of recidivism than one-time offenders. Such, however, is not the case for non-whites. Both high and low SES non-white boys generate high rates of recidivism.

In terms of overall offense rate rather than offender rate, the non-white rate is about three times as high as that for whites (1,983.4 compared

to 623.9 per thousand). The offense rate for the whole cohort is 1,027 offenses per thousand cohort members.⁸ Using the new standard of offense severity (the S-W seriousness index), more serious forms of bodily harm were found to be committed by non-whites than whites. The weighted rate, based on seriousness scores, indicated that 14 homicides were recorded for non-white recidivists. This represented more community harm than the weighted rate for the 465 acts recorded for all white offenders during the same time period.⁹ Most property damage offenses on the other hand were trivial (under \$10 in value). The median amount of damage done by whites was \$14.63, higher than that inflicted by non-whites, median amount \$11.43. Official records thus showed white boys were involved in fewer thefts but stole more per offense.

Additional subgroupings of offenders were devised for further analysis—chronic offenders (four or more offenses) and non-chronic recidivists (one to four offenses). Analysis of the offenses of chronic offenders revealed that the 627 boys (18 percent of the delinquents) accounted for over half of all offenses of the birth cohort. The non-chronic recidivists (33 percent of the cohort) accounted for 33 percent of all offenses.¹⁰ As would be expected based on earlier findings, there was a close relationship between being classified a chronic offender and coming from the non-white racial and lower SES category. In fact, non-whites were five times as frequent in the chronic offender category as were whites and twice more frequent in the non-chronic recidivist category. When SES is controlled the same pattern emerges but it is less dramatic than when controlling for race. Furthermore, chronic offenders were found to have the same combination of variables as was found earlier to be associated with race and delinquency, namely, the disadvantaged syndrome.

The relationship between total number of offenses and mean seriousness of those offenses is direct and positive; the mean seriousness score of one-time offenders is lower than for non-chronic recidivists, which, in turn, is lower than the mean for chronic offenders. As the authors point out, however, this finding is not tantamount to the claim that as a delinquent commits more offenses his seriousness score escalates. In fact, evidence is presented which clearly shows that

⁵ *Id.*

⁶ See, e.g., V. EISNER, *THE DELINQUENCY LABEL: THE EPIDEMIOLOGY OF JUVENILE DELINQUENCY*, (1969); J. EATON and K. POLK, *MEASURING JUVENILE DELINQUENCY A STUDY OF PROBATION DEPARTMENT REFERRALS*, (1961); C. REASONS and J. KUYKENDALL, *RACE, CRIME AND JUSTICE*, (1972).

⁷ M. WOLFGANG, R. FIGLIO, & T. SELLIN, *DELINQUENCY IN A BIRTH COHORT* 246 (1972).

⁸ *Id.*

⁹ *Id.* at 247.

¹⁰ *Id.* at 248.

the seriousness score for all offenses except attacks against persons by non-whites remained almost constant over time and, in a few instances, actually diminished as the number of offenses for individuals increased.¹¹

TIME SERIES ANALYSES

One of the most interesting questions posed by the authors involves the extent to which the involvement (official offenses) over time of offenders becomes more serious. They began their exploration of this question by classifying offenses into types (non-index, injury, theft, damage, and combinations of injury, theft, or damage).¹² The probabilities of each of these types of offenses occurring over a whole string of 15 offenses were then calculated using Markov probability methods. They report that the probability of any one of these offenses occurring is relatively constant over offense number. By conducting a dynamic analysis of the offense histories,¹³ a number of other interesting findings emerged. For example, it was found that once a boy had a recorded index offense, the likelihood of a repeat sometime in his career is much greater than the initial commission of an offense whatever type it might be. However, with the exception of injury offenses by non-white (which are typified by a positive relationship between offense number and severity), the plots of offense severity by type of offense are not more likely to be more serious with each additional offense regardless of the type of previous offense. Under such conditions escalation does appear in some offense types but the increase is very small and cannot be considered as support for the escalation hypothesis.¹⁴

When type of previous offense is considered the repetition of the same type of offense (if it occurs) is very likely to be more serious. The magnitude of that increase, however, depends upon the type of offense and the race of the offender. The accumulation of seriousness scores by cohort members is a complex phenomenon which the authors stipulate as being a function of the following factors:

- (a) the number of offenses under the assumption of a fixed transition matrix, (b) some increase in

¹¹ *Id.*

¹² The classification is derivative of their early work on measuring delinquency. See T. SELLIN & M. WOLFGANG, *THE MEASUREMENT OF JUVENILE DELINQUENCY* (1964).

¹³ M. WOLFGANG, R. FIGLIO, & T. SELLIN, *DELINQUENCY IN A BIRTH COHORT* 174-207 (1972).

¹⁴ *Id.* at 159-73.

seriousness score of repeats of like offense types, and (c) a weak propensity toward offense type specialization.¹⁵

The implication of these findings is clear: there is very low specialization among delinquent offenders in this study. Or, as the authors put it,

The delinquents in this cohort are not shifting in any *uniform way* to index offenses as offense numbers increase. If such shifts were to exist, the probabilities of offense commission for those types of offenses having such increased likelihoods of occurrence would become higher with each additional offense. Thus we would have evidence of a hypothesis of 'channeling' along these index pathways. Although the scopes of the regression lines of offense probabilities on offense number are positive for most offense types and for all race and SES groups, the increment for offense number is *quite small . . .*¹⁶

Even more surprising are the findings that emerge when this type of analysis is carried a step further. It is discovered, for example, that the offense transition matrices appear to be independent of offense number and, in fact, the same process seems to operate at each step in the offense history. On this point the authors conclude that:

[T]he probability of offense commission, when classified by type, is independent of offense number. Conversely, the probability of desisting from further delinquency is also unrelated to the number of offenses committed, especially after the first two offenses.¹⁷

Another interesting analysis concerns the relationship between age and offense commission. The proportion of the total number of offenses committed as well as the proportion of boys violating the law increased steadily from age 10 to just under age 16. From that point on however the proportions systematically decreased; this pattern held for all race and SES sub-combinations. The likelihood of violent criminality, however, increased with age and the pattern for property offenses was irregular. In examining the relationship between age, and delinquency within race categories, it is reported that both whites and non-whites account for a greater number of violent crimes as they get older although the rate of increase is greater for non-whites.¹⁸ For property offenses, however, the

¹⁵ *Id.* at 249-50.

¹⁶ *Id.* at 250 (emphasis added).

¹⁷ *Id.*

¹⁸ *Id.* at 251.

number declines with age for non-whites and remains unchanged for whites. Another interesting analysis explores the dimension of time spans between offenses.

In terms of accrued offense rate and age of onset of delinquency, 72 percent of the delinquents experienced their first police contact between ages 12 and 16. The probability of first offense commissions increased from age 7 to 14, sharply peaked at age 16 and decreased to 18. This pattern was uniform for all race and SES combinations.

Given the fact that race was found to be so highly related to police contacts, it is not surprising that the most important variables associated with a great likelihood of court penalties included (1) being non-white, (2) being from the lower SES level, (3) committing an index offense, (4) being a recidivist, and (5) committing an offense with a relatively high seriousness score. The most significant factor related to being processed to the full extent by the juvenile justice system was being non-white.

The authors also analyzed the effect of disposition on the offense history of cohort members and concluded that the effects are unclear. Although it is conceded that the juvenile justice system seems to be able to isolate the hard core offender fairly well (to produce hard core offenders, some might argue) the product of this encounter with sanctioning authorities is far from desirable. They claim, as others have, that the juvenile justice system at its best has no effect on the subsequent behavior of adolescent boys and at its worst has a deleterious effect on future behavior.¹⁹ This conclusion is based on the argument that if there was a random entrance into the juvenile justice system from the delinquent population,

... then we would expect either (1) no difference in subsequent offense rates and seriousness scores between those who were treated and those who were not, under the hypothesis that the justice system has no effect, or (2) higher subsequent offense rates and more serious offenses committed by those who were treated when compared to those who were not, under the hypothesis that the juvenile justice system is in fact doing more harm than good.²⁰

Although they admit to the inadequacies of their data to properly evaluate these interrelation-

ships, the authors' analysis suggests several detrimental conditions which directly or indirectly accompany the delinquent state, e.g., withdrawal from the school without graduating, poor school achievement, weak performance in I.Q. tests, repeated intracity migration, and membership in lower socioeconomic groups:

[T]hese factors are indirectly related to delinquency because they are strongly correlated with race, specifically with being non-white, which in turn relates to the likelihood of (a) being an offender, (b) being a recidivist or chronic offender, and (c) being an offender who commits serious, violent crimes.²¹

CONCLUSION

Delinquency In A Birth Cohort provides a fresh methodological approach to the empirical study of juvenile delinquency. The introduction of birth cohort analyses to the study of criminology in America is welcomed. The findings that emerged from the use of this new method are not totally surprising, but this is not meant to minimize their importance. At the very least they provide strong support for many previous findings based on more limited methods and samples. The relationship between official delinquency and race and socioeconomic status is by no means new but does serve as a reminder that there may still be discrimination and differential treatment toward the poor and minority groups.

Yet, as has been pointed out many times before, these findings must be taken with a certain amount of caution. They may not reflect accurately differences in actual adolescent behavior since they are based solely on official records of delinquency. However, it must also be pointed out that there are other factors which might produce differential official rates of delinquency among racial and socioeconomic groups—the amount of surveillance imposed on neighborhoods in general and such factors as differential access to public and private places in particular. Yet even after all the available intervening variables are enumerated, there is some evidence in this research and elsewhere of possible legal reactive discrimination against the poor and the non-white groups in our society by police and the courts.

The analysis aimed at explicating the career patterns of delinquency represents, to my knowl-

¹⁹ *Id.* at 252.

²⁰ *Id.* at 253.

²¹ *Id.*

edge, the first substantial empirical analysis of career patterns over the entire span of adolescent years of a cohort. The findings are both fascinating and provocative and provide grounds for clearly rejecting a number of commonly held notions about the typical delinquent career. Perhaps the most important findings of this book are that *there is no*

systematic specialization nor escalation in offense seriousness over time. These findings ought to have profound implications for developing and modifying prevention and rehabilitation strategies.

The total impact of this book in establishing a new trend in American criminological research must await the test of time.