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CRIMINAL CAREERS OF JUVENILES IN NEW YORK CITY

by

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ABSTRACT

This research is a prospective analysis of the subsequent arrest-based criminal careers of a cohort of 14- and 15-year-olds arrested and sent to probation intake in New York City during 1977-1978. There were three objectives of the research:

1) Description of the overall career patterns, and the testing of hypotheses (juvenile-adult continuity, early onset, increasing specialization and increasing seriousness);

2) Explanation of the criminal career, and prediction of the high-rate offender;

3) Analysis of dispositional patterns for offenders with different severity levels of juvenile prior record when they first appear in adult court.

Five career types were established, based on the frequency and severity of arrests per year-at-risk. These types ranged from one composed of those who dropped out after the first year, to one of persons arrested on felony charges two or more times per year, for at least two consecutive years. The findings are:

-- The juveniles most likely to become high-rate offenders are minority, living at home with their mother only, in a household where no one is employed and financial support is through welfare. Additionally, they are not likely to be doing well in school.

-- Those who are first arrested at an early age, or have high-rate juvenile careers, are most likely to become high-rate adult careerists. However, even for this subgroup the chance of becoming a high-rate offender is low, less than one out of four.

-- The "folk wisdom" regarding increasing specialization and seriousness is not upheld here. Offenders do not appear to specialize in one type of offense over time, nor to escalate the seriousness of their criminal involvement.

-- The type of information typically available to criminal justice decision makers through the probation pre-sentence investigation does not help predict who will become a high-rate offender. Not only can we not explain much about career type generally, when we apply these factors to the identification of the high-rate offender, approximately half of the time we misclassify those who are actually low-rate offenders. We can do no better than chance with these variables.

-- Even though the inclusion of juvenile priors changed the characterization of offenders when they initially appeared in adult court for close to one-third of this sample, the adult court already appears to sentence those offenders (with high-rate juvenile histories) more punitively than those who have none. Thus, there seem to be informal information transfer procedures in place when apparent public safety issues are concerned.

Given these findings, several conclusions are offered. First, notions on which many arguments for selective incapacitation are based simply are not upheld here. An arrest for a specific crime type has little bearing on the types of subsequent crimes that an offender might commit; we cannot predict much better than chance who will become a high-rate offender, and the adult court apparently makes discriminations among offenders with different levels of juvenile prior records. Thus, we cannot improve much beyond the current state of affairs. Second, the finding of a high proportion of "spontaneous desistance" indicates that perhaps the most useful focus for further research is on the exploration of why a majority of juveniles do not continue to commit offenses after a certain age. This type of information would be useful in developing potential programmatic intervention strategies.

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I. INTRODUCTION

A. Statement of the Problem

During recent years, there has been a groundswell of public concern about crime. At the same time, people have become disillusioned with the capacity of rehabilitative approaches to have a favorable impact on crime, and public support has shifted to more punitive crime control strategies. An increased use of incarceration as punishment for criminal behavior, especially through legislatively mandated sentences for serious crimes, has resulted. Other crime control strategies emphasize increased levels of policing, increasing the severity of sanctions in the juvenile court, and selective incapacitation.

The strategy emphasizing the selective use of incapacitative sentences is based upon the empirical research of Chaiken and Chaiken (1982), Greenwood et al. (1982), and Wolfgang et al. (1972). This research showed that, within the samples studied, there was a small group of habitual offenders who were responsible for a disproportionate share of the criminality of the entire cohort. The proponents of selective incapacitation suggest that this group of offenders -- those responsible for a disproportionate share of the criminal behavior with which the criminal justice system must deal routinely -- is identifiable. Because these offenders may be responsible for predatory crimes of violence about which the public is extremely concerned (Chaiken and Chaiken, 1982), some policy makers believe incarcerating them

would prevent those crimes. This strategy of incarceration to prevent future criminality, as well as to punish, is selective in that it would refrain from using custodial sentences to punish other offenders -- those who do not appear to be frequent, serious criminals.

One central issue that emerges from this crime control focus is the early identification of habitual, or career criminals, before they reach the peak of their criminal activity. If early identification methods could be developed, incapacitation strategies might be improved. Given the relative youthfulness of many repeat offenders, the issue of early identification turns policy makers' attention to juveniles.

Within the area of juvenile justice, both practical experience and systematic research indicate that among the large population of juvenile offenders, there is a small group of chronic, serious delinquents (Strasburg, 1978; Wolfgang et al., 1972). However, much of the research attempting to examine the links between adult chronicity and the frequency and severity of juvenile criminality has been retrospective in nature (Chaiken and Chaiken, 1982, Greenwood et al., 1982; Petersilia et al., 1977).

There are two general approaches to developing predictive models of criminality. The one most frequently used has been retrospective -- that is, a group known to possess a characteristic of concern (e.g., offenders convicted in 1983 are known to have committed crimes) serve as the unit to be studied. Data regarding their activities before that time period (e.g., from age of first arrest to 1983) are collected. The predictive capacity

of these variables is assessed by "looking backwards" (in retrospect) at factors for a group already exhibiting the behavior of concern -- people who had already committed crimes. Because this type of research provides no information on those offenders who have desisted from further criminal activity, it cannot shed light on the question of which serious juvenile offenders do not go on to be severe, repeat adult offenders. To correctly predict future criminality for any group of young persons, both types of offenders (i.e., the "dropouts" as well as the "persisters") must be part of the analysis.

In contrast, a prospective analysis does not preselect the population to be studied based on the outcome of concern (serious adult criminal behavior). Rather, a youthful group more representative of the full range of possible future outcomes is selected; background data are collected as well as subsequent data regarding their criminal activities (those after a given age). These data are used to determine what predicts their future criminality. Because this kind of research provides information on the full range of outcomes, associations that appear strong in retrospective studies may be weaker, and new relationships may be revealed. Because prospective research is a better way of representing real-life processes, this approach should be used whenever possible, especially when the information is to be used to make important decisions about individuals or to pursue serious policy choices like selective incapacitation.

Greenwood et al.'s widely cited research done at Rand, is a retrospective study attempting to link adult criminality with

juvenile criminality (1982). Greenwood and his colleague identified seven factors based upon samples of adult prison inmates that appeared predictive of high-rate serious adult offenders. To the extent that these inmates represent a biased sample of all criminal careers, however, the findings based upon these groups must be treated with caution. Thus, retrospective adult studies, while providing insights upon which further research should be based, are limited in value when policy makers seek to build predictive models that are the basis for implementing a selective incapacitation scheme in a particular criminal justice system.

There have been a few prospective analyses which explore patterns of criminal careers, including the suggested link between delinquent chronicity and adult criminality (Elliot et al., 1984; Polk, 1981; Shannon, 1981; West and Farrington, 1977; West, 1982). This is in part because the development of prospective research studies designed to provide data on desisters as well as persisters has been hampered by the two-track structure of the criminal justice system. Not only are juvenile and adult offenders typically processed in different court systems, but their official records are rarely linked, either because of legal protections for youthful offenders or because of the inefficiency of the recordkeeping systems, or both. Because of the difficulties posed by the jurisdictional boundaries, there has been a lack of prospective research that combines detailed, official criminal history data from the juvenile and the adult period. In addition, while delinquent chronicity may be predictive of becoming a career adult offender, other individual and family background factors

must be explored for their potential contribution to the prediction of early adult criminal behavior.

Thus, despite recently publicized analyses of delinquent and adult criminal careers, it is not yet possible to describe criminal career patterns fully when offenders are followed through the transition from juvenile court to adult criminal court. Additionally, there is still little information about how selective juvenile and adult courts are in their treatment of the increasingly serious offender, and whether, because of the disjunction between these courts, there is an initial "free ride" in adult court for youths with serious juvenile records (Boland, 1982)

There is a need for prospective studies that follow juveniles through the transition from juvenile court to criminal court, so that prospective models can be built both to provide descriptions of early criminal career patterns and to test methods for the early identification of the adult career criminal. The question remains whether "career offenders" can actually be identified early in their careers and whether such identification can be made within levels of error acceptable to the courts and to society. Without prospective research, there cannot be adequate testing of the efficacy of a selective incapacitation approach and other crime-averting or controlling stategies to target the juvenile and very young adult offender.

B. Current Research

Because the concern for controlling crime has not abated, and selective incapacitation is receiving an increasing amount of at-

tention as mandatory sentencing schemes are considered by legislators, the need for information from prospective research is critical. Recognizing this, the Vera Institute proposed a study that would track the criminal activities of a sample of juvenile offenders, known to juvenile authorities in the State's Family Court, as they became adults. This research, funded by the National Institute of Justice, was designed to address some of the disadvantages of the earlier studies. Using a prospective design, a random sample of juveniles, referred by police to the Probation Intake Unit of the New York City Family Court as the result of an arrest on delinquency charges, was followed longitudinally for five years to collect information regarding subsequent arrests and dispositions, both juvenile and adult. Because the sample was a random 10 percent cohort of all referrals to Probation Intake, it included both first offenders and those with lengthy prior juvenile records. Data regarding the juvenile's home and school situations, as well as prior criminal justice involvement, were collected from official records and served as background information. There were four general topics with which this study was concerned. These were:

-- What is the best way to characterize the criminal careers of this group of juveniles as they become adults?

-- What does this group tell us about four major issues regarding criminal careers?

o Juvenile-adult continuity -- Are serious juvenile offenders more likely than non-serious juvenile offenders to become serious adult offenders?

- o Early onset -- Are offenders who begin at a younger age more likely than those who begin when they are older to have more serious criminal careers?

- o Increasing specialization -- As a criminal career progresses, will the offender become skilled at one type of offense and commit that type of crime more frequently, while decreasing the frequency with which s/he commits other types of crimes?

- o Increasing seriousness -- As a criminal career progresses, will the offender commit more serious offenses (e.g., will an offender go from committing larceny, to burglary, and finally to robbery the longer he offends)?

-- How well can we predict who will become a high-rate offender?

-- What happens to juveniles when they first appear in adult court? What proportion of "first time offenders" were, in fact, chronic juvenile offenders? Do these offenders get a "free ride" from the authorities when they first appear as adult offenders?

The results of the study indicate that, when the definition of a "career offender" is more rigorous (i.e., rather than looking simply at those with, for example, five or more arrests, a yearly rate with a minimum number of consecutive years is estabished), the proportion of those considered to be "true careerists" is lower than when other methods of defining careers are applied. Further, although in this sample those youths with high-rate juvenile careers are the most likely to be high-rate adult offenders, only one out of four of that group goes on to become an adult offender. In addition, partly because relatively few juveniles become high-rate adults, we cannot, given this data set, predict with a high degree of certainty who among them will go on to become those adult offenders. Finally, while it is true that the characterization of "first time offender" is not appropriate for

approximately one-third of those offenders appearing in adult court for the first time, more severe sentences are given by the adult court to those first-time adult offenders who have more serious juvenile records than are given to those whose juvenile records are trivial. This occurs despite the very limited formal transfer of criminal history information between the juvenile and adult courts in New York City. We offer some conclusions based upon the findings presented; hopefully, they will help correct some of the misconceptions prevailing in the conventional wisdom regarding the career offender and the promise of selective incapacitation.

C. Review of the Literature on Criminal Careers

The six most recent prospective analyses of juvenile cohorts will be briefly reviewed because they serve to inform the conceptualization and structure of the Vera research effort described in this report. The specific studies are those done by Elliot et al. (1984), Hamparian et al. (1978), Polk (1981), Shannon (1981) West and Farrington (1977), West (1982), and Wolfgang et al. (1972). The issues to be covered are (1) the definition and conceptualization of career offenders; (2) specific hypotheses about career paths or developmental sequences (in particular, the juvenile-adult continuity, early entry, increasing specialization, and seriousness hypotheses); and (3) the prosecutorial issues surrounding the disposition of youthful offenders in adult court.

1. Definition and conceptualization of criminal careers.

With the exception of the work of Elliot et al., the conceptuali-

zation and definition of career has been tied to official record data, and operationalized using measures of police apprehension (arrest) or court conviction. Wolfgang et al. analyzed the official records of approximately 10,000 boys born in Philadelphia in 1945, and defined three groups of offenders based on the number of arrests: one-time offenders, recidivists (2-4 recorded offenses), and chronic offenders (those cohort members arrested for 5 or more offenses). This typology -- commonly cited in the literature on career offenders -- was based exclusively on the number of instances in which arrests by the police were recorded.

For Hamparian et al., the research cohort was all youth born in the years 1956-1960, who had at least one juvenile arrest for a violent offense in Columbus, Ohio prior to January 1, 1967; the chronic offender was defined as any cohort member arrested for five or more offenses before his or her eighteenth birthday. This group was then further delineated by the number of those arrests that were for violent offenses.

Shannon, in his work on three birth cohorts in Racine, Wisconsin (males and females born during 1941, 1949, and 1955 with continuous residence in the area), defined criminal career types somewhat differently from the overall arrest scores Wolfgang et al. and Hamparian et al. used. Police contacts were divided into six categories of offense types, from most to least severe. These were: felonies against persons, felonies against property, major misdemeanors, minor misdemeanors, juvenile conditions, and suspicion-investigation-information contacts. All offenses were categorized and scored, creating an additive index by multiplying

each police contact by its severity score and summing for a total. A typology (with four categories) of offender types was created, based on combinations of numbers of contacts, numbers of referrals, and numbers of sanctions. This typology ranged from one that had no contacts, referrals, or sanctions to one that had all three. Almost all of Shannon's analyses were presented in terms of the six offense types, the geometric score, or collapsed subsets such as all Uniform Crime Reports (UCR) or UCR Part I offenses only (i.e., murder, rape, robbery, assault, burglary, larceny, motor vehicle theft).

West and Farrington, in the Cambridge Study in Delinquent Development, used a longitudinal survey of a purposive sample of all working-class males from a selected area in London, England. Data collection began in 1961-62, when most of the subjects were eight years old, and ended in 1980 when most were 25 or 26 years old. West and Farrington's definition of a chronic offender was a person with two or more convictions before age 19, and at least one conviction after that age.

Polk's research was based upon a multiple cohort study. The first cohort was a 25 percent random sample of all Marion County, Oregon high school students completing the Marion County Youth Project questionnaire in 1964; the second was the total population of Marion County youth with recorded delinquencies; and the third was the total population of Marion County high school dropouts. Polk developed a typology of four kinds of offenders: (1) "reformed youth": former delinquents with no adult arrests; (2) "late reformed youth": juvenile offenders who were also arrested

for adult offenses but stopped by age 21 (i.e., between the ages of 18 and 21 years only); (3) "emergent adult offenders": young men with no prior juvenile who had adult arrests; and, (4) "career offenders": juvenile offenders who also were arrested for adult offenses up through 22 years old.

Finally, Elliot et al. selected a group of youths who were 11 through 17 years old in 1976, drawn from a national probability sample of American households, and interviewed them yearly from 1976 through 1984. This is perhaps the only current research to use self-report information to develop a definition of the criminal career. Additionally, Elliot et al. attempted to incorporate in this characterization of career types both the frequency and the severity of offending within standardized time periods, and to measure the duration of these factors over time. Rather than an aggregate measure (e.g., Wolfgang et al.'s five or more arrests), which simply provides an overview of criminality, Elliot et al.'s approach ranked each individual's annual criminal activity in terms of the severity and frequency of offenses committed, and then established a minimum of two consecutive years of offending behavior as the basis for considering someone a chronic offender. Thus, the notion of career (persistence in a given type of behavior over time) was operationalized in a way which permitted a more detailed analysis of career type.

Based on this review of recent longitudinal research, the most typical measures of criminality or criminal types are aggregate measures which sum information over a number of years. Unfortunately, the utility of these measures is limited because they

do not provide a sufficiently detailed description of the actual distribution of criminal activity over a given time frame. For example, if a chronic offender is defined as someone with five or more arrests by age 18, there is no way of differentiating the offender who accumulated those arrests from age 12 through age 15, and then was not arrested during the next three years, from the offender who began at age 14 and was arrested twice a year for four consecutive years. Typically, criminal justice professionals would view the latter offender as a "careerist," while the former would not necessarily be so defined. As a result, we view Elliot et al.'s approach as the most descriptively and analytically useful approach currently in the literature to enhance our exploration of criminal careers.

It should be noted again that, with the exception of Elliot et al., all of the criminal career categorizations have been tied to official arrest data. These conceptualizations are based not on the actual incidence of illegal behavior, but on official reactions to some unknown portion of that behavior. However, most often it is only official data that are available, not merely to researchers, but also to the criminal justice system decision makers (such as prosecutors, judges, and probation officials), who must make decisions about specific individuals and also develop general policy strategies. Thus it makes sense to use official data when one is exploring the extent to which subsequent criminality may be predicted by actors in the system. Nevertheless, when using official arrests only to categorize criminal careers, care must be taken not to assume that there is a one-to-one rela-

tionship between offenses committed and arrests. This issue is not necessarily problematic when developing typologies of career offending, but it can become so if an attempt is made to predict from arrests the number of actual offenses which might be prevented under alternative crime control models. Although correcting for this problem is usually done by using arrest probabilities to calculate estimated offense rates, this is a sophisticated approach if done properly and is beyond the scope of the current study.

For the research effort discussed in this report, Elliot et al.'s approach to defining the chronic offender will be used, but with official arrest rather than self-report data. No estimation of the amount of overall offending will be offered.

2. Hypotheses regarding the criminal career. There are typically four hypotheses which are tested in the research literature regarding criminal careers and which have relevance to policy makers. These concern juvenile-adult continuity in criminal behavior, the impact of early onset of such behavior, the increasing specialization, and increasing seriousness of such behavior.

Most recent tests of the juvenile-adult continuity hypothesis have been based on the formulation that most serious adult offenders were also arrested as juveniles. When this is examined, a majority of the research using official data indicates that many serious adult arrestees have engaged in serious crime as juveniles. For example, Wolfgang et al. determined that, of those offenders with arrests between the ages of 19 and 26, 43 percent

had been juvenile offenders, while only 12 percent had no record of juvenile contacts. In the Shannon study, the best predictor of police contact during early adulthood (i.e., ages 18 through 20) was the overall seriousness of the juvenile record. Shannon also found that continued police contact during early adult years was the best predictor of later adult contact (after age 20). However, while Polk's findings are generally supportive of the continuity hypothesis (more than half [56%] of the juveniles in his sample continued to commit offenses after leaving high school), he also found that slightly over half the young adult offenders had no delinquency records. Thus, while some subset of juvenile offenders has an increased probability of adult arrests, there also appears to be a substantial proportion of juvenile offenders who stop being arrested. While there is clearly some continuity between juvenile and adult criminality, the linkages are not well defined or understood.*

Research using the official data that focuses on the age of onset (the early entry hypothesis) suggests that a majority of habitual offenders begin as pre-teens or in the early teens (ages 10 to 13). Most persistent offenders in the West and Farrington study were youths first convicted between the ages of 10 and 12. Both Shannon and Wolfgang et al. found that the earlier the age at first arrest, the higher the probability of sustained police

* Similarly, Vera's research on employment and crime showed that age explained a great deal about criminal involvement for young high-risk offenders. Both qualitative and quantitative research revealed patterns of "maturing out" of crime among criminally involved teenagers (Sullivan, 1984; Sviridoff and McElroy, 1984).

contact for serious criminal offenses. On the other hand, data from Hamparian et al. indicate that, in almost 60 percent of the cohort, an early arrest for a violent act was not followed by any subsequent arrests for violent acts. Offenders defined as chronic in the Wolfgang et al. and the West and Farrington studies were arrested earlier, on the average, than were the rest of the cohort members. While it is not possible to know when the first actual offending began, as opposed to the first arrest, these data generally substantiate the notion that early entry into the criminal justice system is associated with a longer, though not necessarily more serious, criminal career.

Findings regarding crime specialization have been mixed. The hypothesis regarding a tendency toward crime specialization over time among active offenders has not been substantiated in studies based on official data. This has been true even in research using arrest histories which, because of reporting biases, may have a tendency to overstate the homogeneity of actual behavior. Rather, several of the studies reviewed suggest that offenders engage in a variety of criminal offenses simultaneously (Hamparian et al., West and Farrington, Shannon).

Finally, the seriousness hypothesis generally has not been supported. When Wolfgang et al. classified arrest data into offense categories ranging from non-serious to serious crimes, no sequences indicating a progression in seriousness across time were found. In Shannon's tests for increasing seriousness, six levels of seriousness were developed. When analyzed in terms of sequence, the seriousness of an arrest did not increase systemati-

cally as its sequential number rose. Thus, the notion that offenders move from trivial to more serious crime throughout their lives has not been supported in research thus far, at least not using measures based on official arrests. However, because the notions of increasing specialization and seriousness are fundamental to the concept of career, we need to test them on this database.

3. Processing youthful offenders in adult court. Within the framework of examining selective incapacitation as policy strategy, the two-track system (i.e., the two different systems for processing juveniles and adults suspected of criminal behavior) has come under a great deal of scrutiny. How does this dual system affect the criminal justice processing of offenders who demonstrated, as juveniles, a sustained commitment to serious predatory crime, and have just crossed the age boundary between the juvenile court and the criminal court?* A number of recent commentaries assert that these youthful career offenders receive the same lenient treatment as do first-time adult offenders. The appropriateness of such presumed leniency has been questioned, particularly in the context of sentencing policies in the adult courts that are moving away from the goals of rehabilitation towards those of punishment and community protection.

In New York City, the debate is not simply academic. There have been recent calls by the Mayor and others for greater inclu-

* In New York State, 16 years old is generally the statutory age at which offenders are treated as adults with original jurisdiction being in adult rather than Family Court.

sion of juvenile records at adult hearings. Additionally, there has been a philosophical shift in public policy away from the notion of rehabilitation for convicted juveniles to that of a get-tough policy in which the sentencing objective becomes punishment.*

To date, there has been little research on the issues of what happens to offenders when they make the transition from juvenile to adult court. While suppositions abound, little is really known about the proportion of serious juvenile offenders who "get a free ride" in either Family Court or the adult courts. Two recent research efforts, however, suggest findings to guide this research -- a Rand report by Greenwood, Petersilia, and Zimring (1980) and an INSLAW report by Boland (1982).

Greenwood et al. explore three specific topics: the relationship between age and crime seriousness, the effect of age on criminal sanctions, and the degree of information sharing between the juvenile and criminal courts. The first two issues are analyzed because of the underlying assumptions in which the "get-tough" argument is usually couched -- that juveniles are responsible for a majority of the predatory violent crimes being committed, and that they receive light sentences for these crimes

* An example of this shift in New York State was the passage of the Juvenile Offender (JO) Law in 1978. This stipulates that original jurisdiction in cases involving juveniles under 16 years old who are arrested for certain serious felonies (e.g., murder, rape, robbery) is in the adult court, although the possibility of transfer to Family Court exists at various stages in the adult proceedings.

either in the juvenile court or, as first-time offenders, in adult court.

The findings indicate that aggregate arrest figures probably exaggerate the amount of serious crime that can be attributed to youthful offenders, due to three factors. First, juveniles usually act in groups, thereby increasing the numbers being arrested. Second, the actual behavior categorized by a criminal offense label (e.g., robbery or theft) is often not as severe among juveniles as that committed by adults (i.e., there are lower dollar amounts involved or a lower degree of arming in offenses involving weapons). Finally, the police are more likely to arrest a juvenile for marginal criminal behavior than they are an adult. Therefore, Greenwood et al. suggest these factors lead to an artificial inflation of the numbers of juveniles being reported in official statistics, and that juvenile offenders may not represent as large a problem as seen previously.

In terms of the differential treatment of offenders once in adult court, the researchers found that in most sites, for more severe crimes, age was less influential in the disposition and sentencing of the offender than was prior record; however, for less severe crimes, both age and prior record were taken into account. When examining the less serious crimes, they found no differences in the probabilities of conviction or incarceration, by age, for cases processed in adult courts in Los Angeles. In Ohio, the youngest adult offenders (in that jurisdiction, this was 18- to 20-year-olds) had the lowest probability of being sentenced to serve one year or more of incarceration. They found that in

New York City the youngest adult offenders (who are the 16- to 17-year-olds) had the lowest probability of being sentenced to incarceration, but that there was no difference between 18- to 20-year-olds and those 21- to 25-years-old. Thus, they concluded that:

> Case disposition patterns disclosed a wide degree of variation among the three different sites, both between offenders of the same age across sites and in the relative severity with which different age groups are treated within sites. Sanction patterns for youth appear to result from the interaction among a number of policy matters such as the maximum age jurisdiction of the juvenile court, the accessibility of juvenile records, the priorities of the prosecutor, and the views of the bench concerning the culpability and reformability of youth (p. ix).

Finally, regarding the current use of juvenile records in adult courts, half the prosecutors surveyed reported that they normally receive little or no juvenile record information even on young adults in their jurisdictions who are charged with the most serious crimes. They reported that even when such information was requested, and it was legally possible to receive juvenile records, the data were often incomplete and difficult to interpret. Contrary to expectations, the researchers found that the state statutes governing the protection of juvenile records did not necessarily restrict access to or use of such records; rather, by limiting the availability of disposition information, statutes appear to affect primarily the completeness and quality of such records.

By analyzing how the inclusion of juvenile arrest information changes the proportion of offenders categorized as first-time

offenders, Boland added important information to the issue of processing youthful offenders in adult court. She analyzed cases being sent to both the lower and upper adult courts during 1979 in New York County (Manhattan), and found that with the inclusion of juvenile arrest records, the proportion of 16- and 17-year-olds who would have been defined as first-time offenders based solely on their adult records, dropped from 59 percent to 34 percent. She also did an analysis of the proportion of youthful Supreme Court felony defendants who would be defined as "chronic," using Wolfgang et al.'s definition of five or more prior arrests. Without juvenile records, 16 percent would have been identified as chronic; with juvenile records, twice as many, 33 percent, would be defined as chronic offenders. All of Boland's analyses suggest it is difficult for the adult courts to identify high-rate offenders without having information from their juvenile records.

To sum up the literature review, although it would be optimal to have information on actual offenses committed, typologies of career offenders have been developed using arrest records. Because the only data available to Vera were the official records of offenders, the typology developed for the current study used only arrest information. Additionally, we used Elliot et al.'s approach of establishing yearly types of offending behavior, basing the definitions of career types on a minimum period of duration, as the model for our development of a career typology, because it appears to us to be the best method currently available for controlling the distribution of arrests over time.

As we have suggested, the literature provides mixed results regarding hypotheses about the character of criminal careers (i.e., juvenile-adult continuity, early onset, increasing severity, increasing specialization). None have been adequately tested; some are not substantiated by existing research. Nevertheless, many of these ideas are the underpinnings on which judicial decisions are based; for this reason, as well as because, as researchers, we need to expand the existing knowledge regarding criminal careers, these hypotheses are tested on the current database.

Finally, in the area of prosecution policies focusing on young offenders, two topics were explored: the effects of differential inclusion of prior record information on offender classification, and the relationship between juvenile careers and adult dispositions. We feel that the findings produced by this research will provide important information on which adequate dispositional policies can be based.

II. RESEARCH DESIGN AND APPROACH TO THE CONCEPT OF A CRIMINAL CAREER

A. The Family Court Disposition Study Data Base

In 1977, the Vera Institute, with the support of the New York State Division of Criminal Justice Services, the Foundation for Child Development, the William T. Grant Foundation, and the Scherman Foundation, undertook the Family Court Disposition Study (FCDS). This study was based upon a random sample of one of ten juvenile delinquency cases appearing at Probation intake in the New York City Family Court during a one-year period, and a one in six sample of all status offense cases.* Citing their own need for basic descriptive information, the agencies making up the New York City Family Court system granted Vera researchers access to their records, without which the research could not have been performed.

The FCDS examined in detail the outcome of the police referral which brought the offender into the sample (Weisbrod, 1981). In describing the offender and the offense, some information about the offender's record prior to the sample case was included, but the main focus of the FCDS was a description of delinquency case processing in the New York City Family Court. Once this important

* After arrest, juveniles charged by the police with a delinquency offense are taken to the New York City Family Court where they are interviewed by juvenile probation officers of the New York City Department of Probation. The charges can be resolved at intake by a referral to social service agencies, or the case can be passed on to the New York City Office of the Corporation Counsel for a decision whether to prosecute the case in the Family Court. Although some delinquency cases are prosecuted by the City's elected District Attorneys, most are prosecuted by the Corporation Counsel.

first step of providing crucial processing information was completed by the FCDS, the database provided a unique opportunity for secondary analysis to explore another important question on which no information existed in the New York City criminal justice system: what types of youthful criminal career patterns do delinquents arrested in New York City have? Building on the FCDS information already collected, the research addressed this question by updating the criminal history information of the subjects on whom data were already available.

For the criminal career analysis, only those offenders brought to probation intake for delinquency offenses, rather than status offenses, were chosen for study. This decision was made for two reasons. First, when attempting to develop a longitudinal analysis of a criminal career incorporating both juvenile and subsequent adult information, it was necessary to begin with those offenders arrested for crimes that would be illegal if committed by an adult. This allowed for the testing of the transition from juvenile to adult offending, without having to make adjustments for different types of behaviors. Second, for New York City, the FCDS study showed no evidence of overlap between the offenders arrested for delinquencies and those charged with Persons in Need of Supervision (PINS) status offenses. When the FCDS study analyzed information regarding the numbers of previous status offenses and delinquencies, there were few 14- or 15-year-olds arrested for the sample case on a delinquency charge who had a history of prior status offense charges. Thus, only the FCDS cases arrested for delinquencies were included in the present study of criminal careers.

The other major selection decision regarding delinquency cases in the FCDS data base involved age. To maximize the length of time that the offenders could be followed as adults, we selected only the oldest juveniles in the FCDS. As stated previously, in New York State, the age at which original jurisdiction is transferred to the adult system is the 16th birthday.* Thus, tracking the 14- and 15-year-olds in the FCDS samples during their early adult years, from approximately age 16 to 22, provided the research with the maximum amount of adult criminal history data. By 1983, the oldest among the 14- and 15-year-olds in the FCDS sample had over six years at risk of arrest as an adult, and the youngest had a maximum of four years. This target group of 14- and 15-year-olds accounted for over two-thirds of all juveniles coming into the Family Court; if the findings of other research studies apply, they are entering the peak years of criminal activity. For the follow-up study then, those 1263 14- and 15-year-olds in the FCDS sample who were arrested and brought to probation intake for a juvenile delinquency offense during 12 months in 1977-1978 constituted the sample for which all subsequent arrests, both juvenile and adult, were collected.

As might be anticipated, the vast majority (95%) of the juveniles entering the Family Court on delinquency arrests during the sample period were male. About half were black and a third were Hispanic. Sixty-seven percent were 14 or 15 years old; only

* This is true except for specific cases covered by the Juvenile Offender Law, as described above. However, the FCDS sample was selected before this law went into effect.

17 percent were 12 years old or less. Most lived with a mother and had no father in the house; about a quarter lived with both parents. Many, but not a majority, were in homes where no one was employed and where welfare was the major support. They were, on the whole, a subgroup of the urban minority poor.

The offenses for which these youths were arrested (on the case that brought them into the FCDS sample) covered the entire spectrum of illegal behavior, from murder and predatory crimes of violence to offenses against the public order. About a third were charged with violent offenses: robbery (the largest subcategory among violent offenses), assault, sexual offenses, arson and murder or manslaughter. Roughly half were charged with property offenses. Burglary was the most common property offense (it led the list of all crimes charged by a wide margin). The remainder of the sample were charged with a variety of victimless crimes, drug offenses, and petty offenses.

The underlying behavior which resulted in these delinquency arrests is even more diverse than the spectrum of official charges. Most (about 8 out of 10) were charged with felonies rather then misdemeanors, though the majority of these felony charges were at the lower rather than the higher penal law levels (D and E class felonies in contrast to A, B and C classes). Most of the crimes charged involved victims and, in about 15 percent of all the crimes charged, someone had been injured. The majority of the victims (injured or not) were adults below the age of 60, and almost three out of ten were other juveniles; only one victim out of ten was elderly. In almost half of all the cases, the victim

was a stranger. In the majority (over 70%), the charge was one where a crime had been committed by one of the sampled juveniles acting in concert with other persons -- most typically another juvenile. The crimes had most often been committed during the day and on the street, although a sizable minority had been committed in the evening or at night, or in a variety of public places and dwellings. Weapons were rarely present, although in about 15 percent of the cases one was present, most typically a knife.

Many of these young offenders and their families were not strangers to the Family Court. Almost a third had siblings already known to the Court, and almost half had themselves been in court on at least one prior occasion on a delinquency charge; among the older subgroup of juveniles (those who were 14 or 15 years old when entering the FCDS sample), one in ten already had five or more court contacts, often on serious allegations. Fifty-seven percent of the sampled 14- and 15-year-olds had previously appeared at Family Court intake on a delinquency charge; of these juvenile repeaters, 58 percent had more than one prior court contact and 21 percent had five or more. (Note that the majority of this older subgroup still had more than a year at risk of further delinquency arrests before passing beyond the jurisdiction of the Family Court.) Within the group who had had more than one court contact, 55 percent had been brought to court at least once on a clearly serious allegation (e.g., robbery, sexual offense, assault or burglary), and 32 percent had been brought to court more than once on such allegations. One very important subgroup of the older, repeat juvenile offenders are the 161

(approximately 9%) who entered the sample on a robbery charge; over half had been to court before on a robbery charge.

B. Data Sources and Collection

The data available from FCDS served as the foundation for our analysis of these juveniles' criminal careers. These data had been collected from a variety of sources, including the Probation Intake logbooks in the Family Court, the Probation Department files on the families of sampled delinquents, Family Court case records, and the arrest reports of the Police Department's Youth Records Unit. The probation file and the Police Department arrest file for each of the 14- and 15-year-olds was checked to identify the individuals in the subsample who were arrested subsequent to the FCDS data collection and brought back to the Family Court.

Collection of the subsample's later contacts with the adult criminal justice system in New York City was a two-step process. Three existing official record systems -- those of the New York City Criminal Justice Agency (CJA), the New York State Division of Criminal Justice Services (DCJS), and the Office of Court Administration (OCA) -- were used.* These files of arrested adult defen-

* The Criminal Justice Agency is the City's pretrial services agency. It is responsible for interviewing detainees, making release recommendations, and providing notification of criminal court appearances. Its database includes all offenders arrested and booked into the New York City criminal justice system, and contains information on arrest, release, and court processing. The Division of Criminal Justice Services is the state repository for criminal history information, and the Office of Court Administration is responsible for the statewide automated court record system.

dants were searched using a variety of personal identifiers obtained from the FCDS database. The CJA system was accessed with personal identifiers (i.e., name and date of birth), which allowed the retrieval of the New York State identification number (NYSID) for many of the sample members. The name, date of birth, and NYSID were then submitted to the New York City Police Department Identification Division, which obtained records from the State's (DCJS) computerized criminal identification system. From this system, the individual's criminal history record (RAP sheet) was obtained, and information on subsequent adult arrests, convictions, and dispositions was collected. The RAP sheets were also used to collect data regarding sentences to incarceration that were used to determine time at risk, or "street time." When there was no disposition data for a case available either on the CJA system or the RAP sheets, we went to OCA and obtained it from the computerized court file.

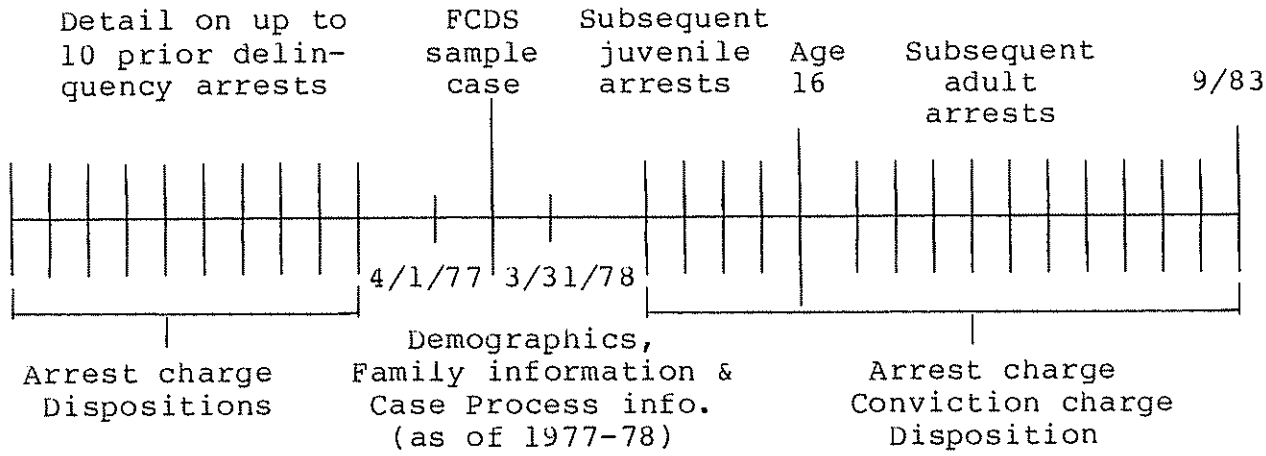
C. Research Design

The data used in our description and analysis of these youths' criminal careers consist of information on the "sample case" (the case which was initiated during the sample time period of April 1, 1977 through March 31, 1978, and brought the juvenile into the original FCDS sample); personal information on the juvenile and his family pertaining to the same time period; and all subsequent arrest, conviction, and disposition information, both juvenile and adult. Additionally, in the FCDS database, information was available on up to ten prior juvenile delinquency arrests

which preceded the sample case. When viewed chronologically, therefore, the available data are depicted in Figure 1.

Figure 1

RESEARCH FRAMEWORK



There are several matters which should be kept in mind when the sample, variables and findings are discussed. First, the sample is composed of offenders known at ages 14 and 15; that is, subjects on whom at least one arrest has been made. We do not have information on two other groups -- those juveniles who are never arrested and those juveniles who are arrested before age 14 and then stop being arrested. This lack of comparison data means that we cannot address the issue of why some youth, as opposed to others, become involved in crime initially. In addition, we can-

not address the causes for which the very earliest desisting from crime occurs. The available data do, however, provide a unique opportunity for describing the criminal careers of 14- and 15-year-old juvenile arrestees as they become young adults, as well as for testing many relevant hypotheses regarding their criminal careers.

A second issue involves the use of official (i.e., arrest) rather than self-reported information as the measure of criminality. Under New York State law, adult cases which result in dismissals and acquittals are supposed to have the related arrest sealed from all official use. These "sealed" cases were not available for analysis unless they appeared on official records, in error, which occurs often despite continued efforts by officials to rectify this problem. The effect of this unestimated degree of undercounting of arrests is compounded by the lack of data regarding time in pretrial detention. The implication of these factors on our development of a career typology based on yearly rates of official offending is that the characterizations are conservative (i.e., the "low-rate" offender is probably not quite as "low-rate" as s/he appears, and the "high-rate" offender is probably more active). However, keeping this in mind, the development of a career criminal typology based on yearly arrest rates is nonetheless an important analytic device.*

* Not only is arrest information frequently the only data available to criminal justice system participants, but is a valid indicator of a certain type of client as well. One of the things that we are trying to identify is those people who will become caught in the "revolving door" of corrections, i.e., those individuals

D. Specific Variables

As shown previously in Figure 1, there are three basic categories of data used in this study: (1) arrest and disposition information both for the delinquencies that occurred prior to the FCDS sample case and for the FCDS sample case itself; (2) a series of family and demographic variables obtained at Probation intake during the processing of the FCDS sample case*; and (3) the subsequent arrest record, with the arrest, conviction, and disposition information collected. Below is a list of the specific variables used in the study.

Prior Delinquencies and Arrest Data

Age at first arrest
Total number of prior delinquency arrests
Detailed information on up to ten prior delinquencies:
  arrest charge, categorized into type (e.g., robbery, burglary) and severity (e.g., felony D)
Date of each arrest, disposition, and sentence

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who will be arrested, prosecuted, and sentenced, and will be again arrested and processed through the criminal justice system. These repeat arrestees are of special interest to police officers, prosecutors, judges, and correctional personnel. Thus, using arrests as the measure of "chronicity," at least from this system's perspective, is valid.

* The family variables were gathered at three times in the Family Court process -- at intake, at the time of filing the petition for delinquency, and at "fact-finding," which is, in New York, the substantiation of delinquency. In this sample, 58% never had a petition of delinquency filed for the sample case, and 28% dropped out without a finding of fact; thus only the information from probation intake was used here.

Information at Time of the FCDS Sample Case*

Arrest charge, categorized into type and severity
Date of arrest for the sample case
Disposition of the sample case, and sentence
Sex and race of the offender
Highest school grade completed by the offender
Person(s) with whom the offender was residing
Employment status of the household members
Welfare status of the household

Subsequent Criminal Information

Arrest charge, categorized into type and severity
Date of the arrest(s)
Conviction charge(s), by type and severity
Disposition of the arrest(s), sentence(s), and date of sentence(s)
If incarcerated, date of admission to facility and length of time (in days) incarcerated.

E. Conceptualizing a Criminal Career

As stated earlier, Elliot et al.'s approach to conceptualizing a criminal career has several important characteristics: it establishes yearly periods used to measure the career, and it differentiates types of offending patterns based on the number of arrests of different levels of severity (e.g., felonies versus misdemeanors). This method allows delineation of career types based on the distribution of various types of offenses over comparable time periods, which the use of aggregate measures, such as Wolfgang et al.'s chronic offender (five or more arrests) does not. Thus, our first step in applying this approach to our sample

* Previous research (see Greenwood et al., 1982) has demonstrated the utility of including the variables of drug and alcohol involvement when predictive models are developed. However, because of the inconsistency and vagueness of probation reports when substance abuse problems of offenders were assessed, we could not include those factors here.

of 14- and 15-year-olds was to establish yearly periods during which the offender was "at risk," that is, when he or she was not incarcerated but was "out on the street" at risk of committing additional offenses and of being arrested for them.

1. Establishing time at risk. To establish a benchmark as the beginning of the career, we chose the subject's birthdate preceding the date of the first arrest.* A computer algorithm was then constructed that established 365.25 day periods of street time -- time the subject was not in custody. To correctly measure "a 365.25 day year at risk," beginning with the birthdate benchmark, incarceration time during each calendar year had to be deleted; then, the amount of time remaining to complete a year (365.25 days) had to be added to generate one year of "street time," as distinct from chronological or calendar time.** This

* For 2% of the subjects the date of first arrest preceded the date of the tenth prior delinquency (the arrest which was immediately before the sample case was called the first prior delinquency; the one which was the second arrest before the sample case was the second prior delinquency; and the one which was the tenth arrest before the sample case was thus the "tenth prior"). For these individuals, the date of the tenth prior served as a proxy for the first delinquency arrest. This was done because we had no information such as charge type or disposition on delinquencies before the tenth prior other than the arrest date. Charge type (especially whether it was a felony or misdemeanor) was used in the career classification schema, and disposition (incarceration) was used to determine time at risk. Since there was no substantive knowledge of the arrests preceding the tenth prior, the tenth prior was used as the start of the career.

** We used the RAP sheets to adjust our time estimates for sentences to incarceration (pretrial detention time was not available). The admission date to facilities was used as the beginning date, and the total time served was subtracted from the amount of time not incarcerated. When there were concurrent or consecutive sentences served, only the first admission date was used, with the

was done by beginning with the benchmark birthdate, checking to see if there were any admission dates to a custodial sentence within the next 365.25 days; if there were, the new "end-date" for the year at risk was extended by the number of days of incarceration.* This iterative process continued until all the arrests and incarcerations had been counted. This adjustment for time at risk, although commonsensical, is often not done in career criminal research, and can lead to gross underestimates of the rates of criminal activity or frequency of arrest.

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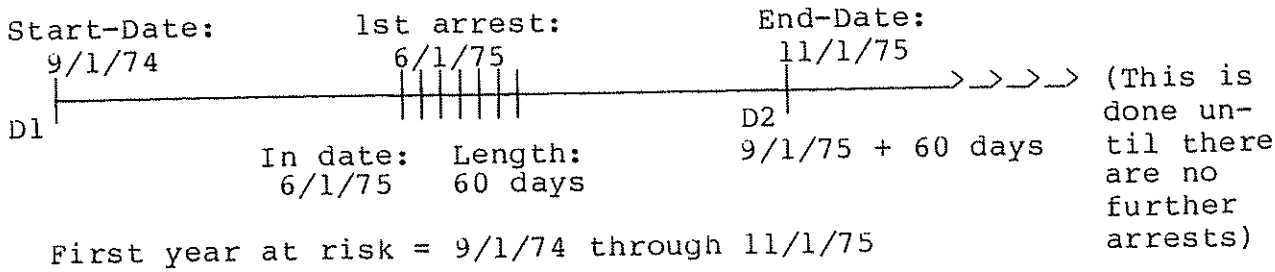
total time served cumulated across the sentences. For cases where there was no admission date available, the conviction date served as a proxy for the admission date. When there was no "parole," or release date, either two-thirds of the maximum sentence or the day before the next arrest (whichever occurred first) was used.

For the juvenile incarcerations, which are not on the adult RAP sheets, estimates of time served by type of sentence were obtained from the Division for Youth. The admission date was the date of arrest (which was all that was readily available in the FCDS data base). The length of sentence was adjusted if an arrest occurred before the estimate indicated the subject had been released, in the same manner as indicated above.

* As an example, let us suppose that a subject was arrested for the first time on June 1, 1975. His birthdate is Sept. 1. Thus, the start-date for his career is September 1, 1974 (D1). Additionally, his June 1, 1975 arrest results in an incarceration, and he spends 60 days in a facility. The end-date (D2) of his first year at risk is thus 11/1/75, assuming he has no more incarcerations. The example history is represented below.



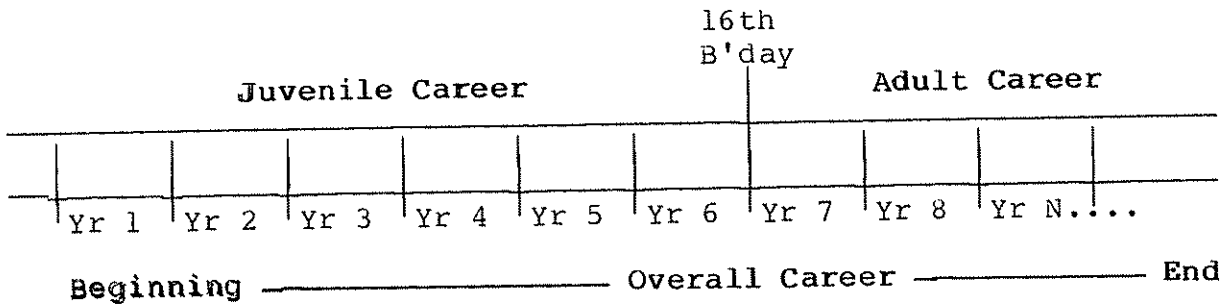
2. Establishing three measurement periods for the criminal career. When analyzing criminal careers, especially using a database spanning both juvenile and adult years, there are several measurement periods that could be used (presented in Figure 2 below). The first begins the career with a specific start-date, such as the benchmark birthdate indicated above, and ends after the last known arrest or offense has occurred. This concept is thus independent of any jurisdictional boundaries of the courts (e.g., juvenile versus adult court). In Figure 2, this is called the "overall career." Because there are no artificial cutoffs for this measurement of the career, this conceptualization is best for testing hypotheses that span the entire length of the career (e.g., increasing seriousness). However, as soon as the notion of juvenile-adult continuity is introduced, or the issue of adult prosecution patterns for different types of juvenile careers is addressed, the overall career must be split into two time periods. The first period is that occurring while the individual is a juvenile (i.e., until the 16th birthday); the second period is that occurring after the individual has reached the age of criminal responsibility (the 16th birthday and after).* Thus, as shown in Figure 2, the start-date for the "juvenile career" is the same

* There were some cases in which a fraction of a year remained between the end of the juvenile career and the beginning of the adult career as a result of the time-at-risk adjustment. When the amount of time was less than six months, that amount of time was deleted from the number of years by which the career was characterized as were any arrests which occurred during that time. When there was six months or more, this was expanded to a year with any arrests included and multiplied by the fraction of the year which remained.

as that of the overall career (the birthday immediately preceding the date of the first arrest), while the end-date is the day before the 16th birthday; the beginning of the "adult career" is the 16th birthday, and the end-date is the same as that of the overall career (the end of the 365-day period in which the last known arrest occurred).

Figure 2

MEASUREMENT PERIODS FOR THE CONCEPTUALIZATION OF THE CRIMINAL CAREER



For each offender, the starting point of the career is defined as the subject's birthday in the year preceding the date of the first arrest.

Measured in terms of "years at risk," i.e., 365.25 day periods that reflect calendar years from which sentences of incarceration have been subtracted so as to count each offender's number of years of "street-time."

The last day of the 365.25 days-at-risk period in which the last arrest occurred.

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3. Developing the criminal career typology. Once the time periods, or years at risk were established, "year-types" were

developed. To do this, the number and types of arrests during each year at risk were categorized as follows:

Year Types

0 = no arrests
1 = 1 misdemeanor arrest
2 = 2+ misdemeanors
3 = 1 felony, and any combination of misdemeanors
4 = 2 felonies, and any combination of misdemeanors
5 = 3+ felonies, and any combination of misdemeanors

Each year across the entire career was searched and, following Elliot et al., the most severe two consecutive year period was identified and used to determine the individual's career type. These are defined:

Career Type Definition and Distribution

Dropout:	0 = if no activity after the first year of arrests
Low-Rate, or Non-Careerist:	1 = if only a single arrest per year in two consecutive years (either felony or misdemeanor) and no other two consecutive years w/felony arrests in both
Residual:	2 = everything else not defined
Modern Careerist:	3 = two consecutive years of felony arrests, one year of which must have only one felony arrest (consecutive Year Types with codes of 3-3, 3-4, 3-5, 4-3, 5-3)
High-Rate, or Serious Careerist:	4 = two consecutive years with multiple felony arrests for both years (consecutive Year Types with codes of 4-4, 4-5, 5-4, 5-5).

Using the definitions above, the distributions of career types for the three different career periods for the sample are presented in Table 1.

Table 1

CAREER TYPES BY CAREER PERIOD

Career Type		Career Period: Overall Career N	Overall Career %	Juvenile Career (thru 15) N	Juvenile Career (thru 15) %	Adult Career (16+) N	Adult Career (16+) %
Drop-out	0	321	26%	687	55%	517	41%
Low-Rate	1	238	19	133	11	284	23
Residual	2	166	13	142	11	162	13
Moderate	3	354	28	218	17	213	17
High-Rate	4	184	15	83	7	87	7

The decision to use a two-year period to classify career types was made for two reasons. First, because of the configuration of the sample, the maximum number of follow-up years on which arrest data were available (either as a juvenile or an adult) was either five or six; two years represents from one-third to almost half of that time. Because most individuals (approximately 70%) were first-time arrestees when included in the FCDS sample, this represents a substantial proportion of the time available for measurement. The second reason was parsimony -- combinations of more than two years would have necessitated including years with

no arrests, making interpretation difficult because of the lack of apparent meaning in all the different permutations.

Because a two-year period (albeit the most serious two years) characterizes the career type, there is no control for what the remainder of the career looks like, except that it is less serious. A "high-rate" offender might, in reality, have two years of high-rate offending, and four subsequent low-rate years in an entire career of six years. To assess this issue, an analysis was performed on the number of years in which individuals had two or more felony arrests per year over their entire criminal career, with the mean number of years in the career and the mean number of high-rate years also calculated.* These data are presented in Table 2.

As is evident from Table 2, the range of career length is from 5.3 to 6.1 years, and there is not much difference across the career types. However, although both Career Type 2 (residual) and Career Type 3 (moderate) offenders have on the average one high-rate year, the Career Type 4s (severe) have almost half their career (2.9) devoted to high-rate years. While the difference between the Career Type 2s and 3s, as opposed to the Career Type 4s, is clear regarding mean number of high-rate years, the main difference between the 2s and the 3s can now be seen as one of consistency over time. By definition, the Career Type 3s (moderates) must consolidate their felony arrests during a given two-

* These analyses could only be done, by definition, for Career Types 2, 3 and 4.

Table 2

CAREER TYPE BY NUMBER OF YEARS WITH TWO OR MORE FELONY ARRESTS

# of Years with 2 felony arrests	Overall Career Type					
	Residual (#2)		Moderate Careerist (#3)		High-Rate Careerist (#4)	
	N	%	N	%	N	%
0	23	14	111	31	0	0
1	105	63	156	44	0	0
2	35	21	77	22	80	44
3	3	2	9	3	69	38
4	0	0	1	.3	27	15
5	0	0	0	0	6	3
6	0	0	0	0	2	1
TOTAL	166	100	354	100	184	100
Mean # years in overall career	5.3		5.7		6.1	
Mean # years with 4+ felony arrests	1.1		1.0		2.9	

year period, thus meeting the minimum definition of career. The Career Type 2s (residuals), on the other hand, have the same number of high-rate years, but also (by definition) have a gap between the years in which they are arrested for felonies. Thus, this analysis demonstrates that a sustained career is lacking for the residuals (Career Type 2s), who have individual severe years but do not demonstrate the consistency of behavior essential to the definition of "career." Although the typology did not encompass more than two years, each of the career types displays different overall patterns of activity.

Another important issue in this method of defining career types is the effect of the artificial cutoff dates used to take account of the different legal jurisdictions of the juvenile and adult courts. This has a direct impact on the distribution of career types. First, there is an increase in the proportion classified as juvenile dropouts (Juvenile Career Type 0). This is due to several characteristics of the sample itself: over 70 percent were first juvenile offenders at the time of the sample case; slightly more than half were in their 15th year; the point at which jurisdiction transfers to the adult court in New York State is the 16th birthday. Thus, the maximum potential length of the juvenile career, for 15-year-olds whose criminal career began with the sample case, is only one year. Because there is a minimum of two consecutive years for a career of any type, not only are those with no further rearrest of any kind classified as dropouts (N=321), but 366 others are as well (this latter group

has continued activity, but as an adult). Hence, these cases have "dropped out," but only as juvenile offenders.

This inflation of the dropout group also occurs for the adult career (for which the beginning date is the 16th birthday). Here there are not only the 321 subjects who did not commit any additional offenses after the sample case (as either juveniles or adults), but also an additional 196 subjects who had only one year of adult offending. While the criterion of two years makes the dropout group more inclusive (i.e., people who had 2 years of total offending are included as either juvenile or adult dropouts), these subjects did, in fact, have only one year of offending in either jurisdiction. This issue becomes salient when the juvenile-adult continuity hypothesis is examined. There is a group of offenders, with two years of arrests, one as a juvenile and one as an adult, who will be classified as both a juvenile and an adult dropout. Technically, these offenders did demonstrate some limited continuity between juvenile and adult activity (i.e., they had one year of arrests in each court), but they did not sustain this long enough to have a "career" in either jurisdiction.

4. <u>The Relationship of incarceration to career type classification</u>. The remaining issue in relation to the method used to classify career types is the influence of an incarceration. An offender who was arrested for a single very serious offense and was immediately incarcerated for a long period (lasting beyond his early twenties) would be classified the same as an offender who

only committed one offense and then remained on the street with no additional arrests (dropout).* There are several ways to determine how frequently this happened in the sample. First, the relationship between career type and incarceration can be measured. If those who were incarcerated are more likely to be classified as serious rather than non-serious careerists, then incarceration is not artificially reducing the seriousness of the career. The data for the overall career are presented in Table 3.

The second way to test whether incarceration is artificially reducing the seriousness of the career classification is to examine the relationship between career length and incarceration. If those who have been incarcerated do not have significantly shorter careers than those who were not incarcerated, then incarceration is not artificially lowering "time at risk," i.e., the time offenders have had on the street. If no difference in career length is found between those who were ever incarcerated and those who were not, we can assume that incarceration had no bearing on the length and thus the potential seriousness of the career. These data are presented in Table 4 for the overall career.

As Table 3 shows, while there is a significant difference in the distribution of career types by incarceration status, the

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* The meaning of "careerist" as separate from "serious" offender must be kept in mind. For our definition, a "serious careerist" is one who demonstrates not only felony arrests but sustained (over a minimum of two years) felony arrests. This is a different type of offender than one who commits a single murder or rape. The latter is the more typical "serious" offender. The operant notion in our definition is continuity of certain levels of activity.

Table 3

INCARCERATION STATUS BY CAREER TYPE

Career Type	Career Measures									
	Overall Career				Juvenile Career				Adult Career			
	Not Incarcerated N	%	Incarcerated N	%	Not Incarcerated N	%	Incarcerated N	%	Not Incarcerated N	%	Incarcerated N	%
0	311	41	10	2	647	60	40	21	486	60	31	7
1	183	24	55	12	116	12	17	9	209	26	75	17
2	73	10	93	18	91	9	51	27	53	7	109	24
3	163	22	191	38	175	16	43	23	63	8	150	33
4	23	3	161	32	43	4	40	21	3	.4	84	19
Total	753	100%	510	100%	1072	100%	191	100%	814	100%	449	100%
	x^2=428.3 DF=4 P=.0001				x^2=169.0 DF=4 P=.0001				x^2=533.0 DF=4 P=.0001			

Table 4

CAREER LENGTH BY INCARCERATION STATUS*

	Career Length in Years															
	2		3		4		5		6		7		8		9+		Total*	
Incarceration	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Not Incarcerated	69	16	59	13	59	13	63	14	80	18	72	16	27	6	13	3	442	100
Incarcerated	16	3	34	7	68	14	96	19	100	20	102	20	59	12	25	5	500	100

* It was impossible to calculate a valid chi square test because of low expected frequencies.
** Not included in this table are the 311 not incarcerated and the 10 incarcerated individuals with career lengths of only one year.

direction is the reverse of what would be expected. If incarceration were artificially reducing the seriousness of the career type, one would expect to find more Career Type 0s and 1s among those who had been incarcerated; rather, for all three Career Periods (overall, juvenile and adult), those who have been incarcerated are likely to be classified as more rather than less serious career types (i.e., Types 3 and 4, rather than 1 and 2). This is confirmed by the data in Table 4, which indicate no shortening of the length of the careers for those who were incarcerated compared to those who were not. In fact, those who are incarcarated are likely to have somewhat longer careers. Incarceration, therefore, does not appear to lessen career severity in this typology, despite the methods used.

5. Validation of the criminal career. Does this classification of criminal career differentiate among severity levels of offenders; that is, do the Career Type 1s (low-rate, non-careerist) have less severe criminal records than do the moderate Career Type 3s, and do the Career Type 4s, the serious careerists, have the most severe records overall? One test for such internal validity of this classification system would be to use another variable with more selectivity than arrests, such as convictions, and compare the distributions. However, there was such a low conviction rate for juvenile offenses in this sample,* that there

* In this sample, only after the eighth juvenile arrest is there a proportion convicted which exceeds 50%.

were insufficient cases to test the arrest-based classification scheme against a conviction-based one.

An alternative test of this typology, indeed a preferable one, is to compare it with similar classification schemes developed by other researchers.* Using our sample, we applied the scoring methods used by Shannon to determine "the career criminal" (the geometric score); we also applied a modified West and Farrington score using arrests (two arrests before age 16 and one after);** a Rand score to determine the categories of violent predator and other offense combinations (Chaiken and Chaiken); and Wolfgang et al.'s definition of the chronic offender (five or more arrests). In addition, indicators commonly used in research to measure the individual's cumulative involvement with the criminal justice system were also used: the total number of arrests; total number of UCR Part 1 Offense Arrests; and total number of convictions. All of these measures were constructed first for the overall career, then separately for the juvenile and the adult career. The correlation coefficients between our Career Type scores and these other indicators of criminality are presented in Table 5.

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* In some respects, this method is sounder than that described above and discarded. If the career criminal typology used here is really measuring the same phenomenon on this sample that is measured in other studies (i.e., the serious offender), then there should be a high degree of association between the classification of offenders using this typology and using those developed by other studies. This is a test of the external validity of our typology.

** It was not possible to use convictions because of the exceedingly low proportion of juveniles convicted.

Table 5

EXTERNAL VALIDATION OF THE CAREER TYPES: CORRELATIONS BETWEEN CAREER TYPE CLASSIFICATION AND OTHER MEASURES OF CAREER SERIOUSNESS

	Career Types			
Other Measures*	Overall	Juvenile	Adult	Signif.
Total Arrests	.666	.665	.575	.001
Total UCR Offenses	.733	.705	.640	.001
Total Felonies vs. Person	.557	.478	.506	.001
Total Felonies vs. Property	.607	.576	.530	.001
Total Convictions	.559	.437	.638	.001
Wolfgang et al.'s Chronic Offender Score	.778	.689	.816	.001
Shannon's Geometric Score	.706	.686	.546	.001
West & Farrington Score w/Arrests	.654	.580	.546	.001
Modified Chaiken and Chaiken Score	.553	.258	.671	.001

* For the correlation coefficients, the comparisons reported are the overall measures and the overall career; the juvenile measures and the juvenile career, and the adult measures and the adult career.

The correlations in Table 5 indicate strong associations between our typology and those used elsewhere (the coefficients range from .5 to .8, with a .001 significance level). Typically, the degree of association between the validation measures and overall career are stronger than for either the adult or the

juvenile career. This is the most important comparison in evaluating the career classification because the overall career measure is not as influenced as the other two by artificial cutoffs. Where the measures of association for the same variable are lower for the juvenile and the adult career types, it is probably a reflection of the influence of the two-year criterion on the classification of career types.

Note particularly the high level of association shown in Table 5 between Wolfgang et al.'s chronic offender score and the overall career type (.778). This is in contrast to the lower degree of association between the Chaiken and Chaiken score and our career type (especially between that score and the score for our juvenile career type -- .258). This difference probably reflects a lower amount of crime switching in the present sample than was found in the Rand samples of prison inmates.* Given the high correlation coefficients, overall, across all nine comparisons, it appears that our career offender typology differentiates among varying levels of career severities in a manner similar to that of other studies in the field.

In sum, both the tests for the possible influence of incarceration and the external validity checks support the adequacy of the career typology used in this research. When examining length of criminal careers and number of years of high-rate offending, there appears to be good differentiation among the career types

* The Chaiken and Chaiken construct counts the number of different types of offenses in which the offender was involved, whereas the Wolfgang et al. measure is simply an overall cumulative score.

uninfluenced by incarceration. Further, the correlation coefficients of the various other ways of measuring serious criminal careers were generally highly correlated to our scheme.

III. RESULTS

A. Descriptors of Career Type

The first issue to explore is whether the overall career type groups have different profiles based on the characteristics that describe the offender at the time of the FCDS sample case. When arrested as 14- and 15-year-olds, were those who became the serious careerists (Career Type 4) different in terms of demographic and family characteristics than those who dropped out (the Career Type 0s)? This is not only of practical but also of analytic interest; if there are no substantive differences among the groups, the prediction task becomes moot.

1. Methods. For this analysis, the offender's personal characteristics and the variables concerning family situation at the time of the sample case were crosstabulated with the three career periods (overall, juvenile and adult). This was done for several reasons. First, those variables which provide significant differentiation among the levels of overall career type will be used in subsequent predictive analyses. Further, while only bivariate relationships are demonstrated here, a "profile" of the different types of career offenders can be developed. The full set of tables for the overall career is presented in Tables 6 through 14.

2. Results. For the overall career, all but two of the variables are significantly correlated with overall career type at the .01 level or better; the exception is the employment status of

Table 6

OVERALL CAREER TYPE BY SEX

	Sex					
	Male		Female		Total	
Career Type	N	%	N	%	N	%
0	251	80	65	21	316	100
1	203	88	27	12	230	100
2	157	95	8	5	165	100
3	346	98	8	2	354	100
4	182	99	1	.1	183	100

$X^2 = 95.3$; DF = 4; P < .001

Table 7

OVERALL CAREER TYPE BY ETHNICITY

	Ethnicity							
	Black		Hispanic		White		Total	
Career Type	N	%	N	%	N	%	N	%
0	117	40	111	37	73	24	301	100
1	109	49	73	33	41	18	223	100
2	99	62	47	29	14	9	160	100
3	195	56	101	29	50	15	346	100
4	117	65	46	25	18	10	181	100

$X^2 = 49.10$; DF = 8; P < .001

Table 8

OVERALL CAREER TYPE BY AGE OF FIRST ARREST

Career Type	Age						Total	
	13		14		15			
	N	%	N	%	N	%	N	%
0	5	2	147	46	169	53	321	100
1	54	23	97	41	87	37	238	100
2	66	40	59	36	41	25	166	100
3	152	43	133	38	69	20	354	100
4	93	51	57	31	34	19	184	100

$X^2 = 227.13$; DF = 8; $P < .001$

Table 9

OVERALL CAREER TYPE BY EMPLOYMENT STATUS OF HOUSEHOLD MEMBERS AT TIME OF SAMPLE CASE

Career Type	Household Member Employed								Total	
	No One		Mother		Father		Both			
	N	%	N	%	N	%	N	%	N	%
0	107	43	42	17	70	28	29	12	248	100
1	94	51	30	16	35	19	25	14	184	100
2	63	51	23	19	23	19	14	11	123	100
3	145	54	48	18	50	19	28	10	271	100
4	90	60	28	19	21	14	11	7	150	100

$X^2 = 20.6$; DF = 12; $P = .056$

Table 10

OVERALL CAREER TYPE BY HOUSEHOLD WELFARE STATUS AT TIME OF SAMPLE CASE

Career Type	Welfare Status: No Welfare N	%	Total Support N	%	Partial Support N	%	Other Public Asst. N	%	Total N	%
0	137	58	66	28	20	8	14	6	237	100
1	79	45	72	41	13	7	11	6	175	100
2	55	46	48	40	11	9	6	5	120	100
3	112	42	109	41	20	8	25	9	266	100
4	46	32	81	56	9	6	9	6	145	100

$X^2 = 37.2$; DF = 12; $P < .001$

Table 11

PEOPLE WITH WHOM CHILD RESIDED AT TIME OF SAMPLE CASE BY CAREER TYPE

Career Type	People with Whom Child Resided: Both parents N	%	Mother Only N	%	Mother & Other Man N	%	Father Only N	%	Relatives N	%	Total N	%
0	111	40	129	46	20	7	18	6	1	0.4	279	100
1	70	36	98	50	19	10	5	3	4	2	196	100
2	38	28	83	60	9	7	7	5	1	1	138	100
3	81	27	171	57	27	9	15	5	7	2	301	100
4	35	22	103	64	14	9	6	4	2	1	160	100

$X^2 = 33.7$; DF = 16; $P < .001$

Table 12

OVERALL CAREER TYPE BY HIGHEST GRADE COMPLETED IN SCHOOL AT TIME OF SAMPLE CASE

Career Type	School Grade								Total	
	0-6		7		8		9+			
	N	%	N	%	N	%	N	%	N	%
0	16	6	48	19	123	48	72	28	259	100
1	20	11	41	22	83	44	46	24	190	100
2	10	8	39	32	50	40	25	20	124	100
3	25	9	67	24	133	48	55	20	280	100
4	14	10	39	29	54	40	27	20	134	100

$X^2 = 18.5$; DF = 12; NS

Table 13

OVERALL CAREER TYPE BY TYPE OF FIRST ALLEGATION

Career Type	Crime Type															
	Crimes vs. Persons*		Robbery		Assault		Burglary		Larceny		Other Property**		Miscell. ***		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0	9	3	41	13	53	17	64	20	82	26	24	8	43	14	316	100
1	6	3	59	25	25	11	54	23	41	17	14	6	39	16	238	100
2	7	4	28	17	10	6	29	18	43	26	12	7	37	22	166	100
3	7	2	90	25	28	8	75	21	85	24	18	5	51	14	354	100
4	5	3	44	24	16	9	47	26	31	17	7	4	33	18	183	100

$X^2 = 58.29$; DF = 24; $P < .001$

* Includes murder, rape, and kidnap.
** Includes criminal mischief, arson, forgery, grand larceny, and criminal trespass.
*** Includes drugs, obstruction of justice, and disorderly conduct.

Table 14

SEVERITY OF FIRST ALLEGATION BY CAREER TYPE

Career Type	Severity										Total	
	Felony A and B		Felony C		Felony D		Felony E		Misd.			
	N	%	N	%	N	%	N	%	N	%	N	%
0	11	4	46	15	111	36	49	16	93	30	310	100
1	12	5	54	25	79	37	15	7	55	26	215	100
2	4	3	27	20	49	35	27	19	32	23	139	100
3	7	2	87	28	117	38	61	20	38	12	310	100
4	3	2	41	26	69	44	26	17	17	11	156	100

$X^2 = 70.2$; DF = 16; $P < .001$

household members (this probability is .05) and school grade completed at the time of the sample case (the probability is .10). All of the variables that reflect the economic and living situation of the subject at the time of the sample case are significantly related to the overall career type.

Generally, when examining the information presented in Tables 6 through 14, the expected picture emerges.* The high-rate offender (Career Type 4) is more likely than the dropout (Career Type 0) to be younger when first arrested, black, and male. S/he is most likely to be living with his mother only, in a household with no one employed, and is supported totally by welfare. The high-rate offender is also more likely not to be in the school grade level appropriate for his age, but several grades lower. Further, when first arrested, s/he is somewhat more likely to be arrested for robbery or burglary than is the dropout; s/he also has a greater likelihood of being arrested for a class C or D felony.

Conversely, the dropout is most likely 15 years old when first arrested, more likely than the high-rate offender to be white, female, and living with both parents in a household where someone is employed and there is no welfare support. S/he is more likely to be working in his grade level in school. S/he was most likely arrested first for either a burglary or a larceny; s/he is

* For ease of discussion, we focus on the extremes -- the dropout versus the high-rate offender. For most of the variables, the progression from least to most severe career type is that which would be expected given the ordering of the types (e.g., see especially household employment status) and is thus not discussed; however, the data are presented for review.

twice as likely as the high-rate offender to be first arrested for an assault. Additionally, s/he is three times as likely to be first arrested for a misdemeanor than is the high-rate offender. The picture which becomes evident is the one so often repeated in criminal justice research: the typical "bad guy" is minority, economically deprived, and likely to begin involvement with the criminal justice system at an early age for a serious offense. The hypothesis testing will help describe the onset and progression of the career itself.

B. Hypothesis Testing

As we have discussed, four hypotheses are generally offered when describing the relevant aspects and correlates of criminal careers. These are: (1) the juvenile-adult continuity hypothesis; (2) the early onset hypothesis; (3) the increasing specialization hypothesis; and (4) the increasing seriousness hypothesis. It is important to test these notions in this sample not only to provide additional independent assessment of these issues for the research field as a whole, but to answer more popular concerns of policy makers as well. Specifically, do most serious juveniles become high-rate adult criminals? Are those arrested at age 10 doomed to a life of crime? If an offender sustains his criminal behavior, does he become more skilled at one thing, and does that type of crime become more serious?

1. Juvenile-adult continuity

a. Methods. This hypothesis generally states that serious juvenile offenders are likely to become serious adult of-

fenders, with the corollary that most serious adult offenders begin their careers as serious juvenile offenders. The difference between these two statements is one of reference point; it mirrors the drug use notion -- while most heroin users may have begun with marijuana, not all marijuana users become heroin users. For empirical testing then, the first statement should be modified -- serious juvenile offenders are more likely than non-serious offenders to become serious adult offenders; this qualification avoids the global assertion that "all marijuana users will become heroin addicts." The modified notion, with its increased specificity regarding the outcome of juvenile careers, is analyzed here.

We did several different types of analyses. First, juvenile career type was crosstabulated with adult career type and the results are presented in Table 15. This determined the degree of association between juvenile and adult career type. Then, in Table 16, the juvenile Career Type 3s and 4s (moderate and high-rate juvenile offenders) are categorized as violent or non-violent juvenile offenders, and crosstabulated with type of adult offender (non-high rate, high-rate violent, or high-rate non-violent).* This determined whether there was juvenile-adult continuity by type of offense, rather than career type overall.

Finally, type and severity of the first juvenile offense was crosstabulated with adult career type (presented in Tables 17 and

* Violent offenses are defined here as murder, rape, robbery, assault, and kidnap.

Table 15

JUVENILE CAREER TYPE BY ADULT CAREER TYPE

Juvenile Career Type	Adult Career Type 0		1		2		3		4		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
0	359	52	160	23	63	9	74	11	31	5	687	100
1	48	36	34	26	17	13	21	16	13	10	133	100
2	41	29	23	16	28	20	41	29	9	6	142	100
3	57	26	52	24	38	17	54	25	17	8	218	100
4	12	15	15	18	16	19	23	28	17	21	83	100

X^2 = 147.1; DF = 16; P < .001

Table 16

JUVENILE VIOLENCE BY ADULT VIOLENCE
FOR JUVENILE CAREER TYPES 3 AND 4

Juvenile Career Types 3 and 4	Adult Career Types 3 and 4: Violent		3 and 4: Non-Violent		Non-High Rate		Total	
	N	%	N	%	N	%	N	%
Non-Violent	22	28	4	5	52	67	78	100
Violent	62	28	23	10	137	62	222	100

X^2= 1.98; DF = 2; NS

18). Here, we tested whether there was a relationship between those first arrested for serious juvenile offenses, and the seriousness of the subsequent adult career.

b. Results. The data presented in Table 15 show that a statistically significant relationship exists between the severity of the subsequent adult career and that of the juvenile career. Clearly, those juveniles who had only one year of juvenile offending (i.e., the 0 category) were much more likely to have no adult arrests, or only one year of adult arrests (75%) than were those juveniles who were categorized as Career Type 4 (33%). Further, the higher-rate juveniles (juvenile Career Types 3 and 4) were most likely to become higher-rate adults (37% were also classified as adult Career Types 3 and 4 while only 16% of juvenile dropouts were so classified). This is even more apparent when only the high-rate juveniles were examined (juvenile Career Type 4); they were approximately four times more likely than the 0 group to be high-rate adult offenders (21% as compared to 5%).

For the higher-rate juvenile career types (Career Types 3 and 4) displayed in Table 16, there are no significant differences in the probability of becoming a violent or non-violent adult offender based on the type of juvenile career. However, the same proportions found in Table 15 are demonstrated, regardless of the type of juvenile career; approximately 33 percent of those offenders are also classified as higher-rate adult careerists. Both of these analyses suggest that, regardless of how the juvenile career is specified, less than half of the high-rate juveniles go

on to become the "higher-rate" adult offenders (the adult Career Types 3 and 4), and less than one-quarter become truly high-rate serious adult offenders (Career Type 4).

Thus, high-rate juvenile offenders are considerably more likely than low-rate juvenile offenders to become high-rate adult offenders, but the probability that any juvenile offender will become a high-rate adult offender is quite low (ranging from .05 for the lowest-rate juveniles to .20 for the high-rate juveniles). This point should be considered when we discuss the predictive capability of the juvenile career in relation to adult careers. It suggests that, given the natural course of events, most juvenile offenders do not become serious adult offenders, and knowledge of the juvenile career will not provide much discrimination between those who become high-rate adults and those who do not.

These findings are further substantiated by the data in Tables 17 and 18. The relationships presented, although statistically significant, are not strong. In fact, the distribution within arrest type and severity generally reflects that which would be expected when just the marginal totals for adult career are examined. Regarding the distribution by type of first juvenile arrest, by looking at the total distribution of adult careers, one would expect to find approximately 40 percent in the adult low-rate category (N=512, 41%). While the range across the type of juvenile arrest of the proportion of offenders becoming low-rate adults is from 30 percent (for robbery) to 54 percent (for assault), four of seven of the arrest types display approxi-

Table 17

TYPE OF FIRST JUVENILE ARREST BY ADULT CAREER TYPE

Type of 1st Juvenile Arrest	Adult Career Type										Total	
	0		1		2		3		4			
	N	%	N	%	N	%	N	%	N	%	N	%
Crimes against Person*	17	50	8	24	3	9	4	12	2	6	34	100
Robbery	78	30	74	29	36	14	50	19	20	8	258	100
Assault	70	54	25	19	12	9	15	12	8	6	130	100
Burglary	113	42	67	25	33	12	35	13	21	8	269	100
Larceny	120	43	53	19	35	13	57	20	15	5	280	100
Other Prop.	30	40	23	31	5	7	12	16	5	7	75	100
Miscell.	84	41	28	14	37	18	40	20	14	7	203	100
TOTAL	512	41	278	22	161	13	213	17	85	7	1249	100

$X^2 = 49.6$; DF = 24; P = .001

* This category included murder, rape, other sexual offenses, and kidnap.

Table 18

SEVERITY OF FIRST JUVENILE ARREST
BY ADULT CAREER TYPE

Severity of 1st Juvenile Arrest	Adult Career Type											
	0		1		2		3		4		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Felony A-B	15	44	12	35	1	3	4	12	2	6	34	100
Felony C	81	32	70	28	34	14	49	19	18	7	252	100
Felony D	189	45	92	22	56	13	58	14	30	7	425	100
Felony E	70	40	30	17	25	14	37	21	15	9	177	100
Misdemeanor	121	52	56	24	18	8	30	13	9	4	234	100
Total	476	42	260	23	134	12	178	16	74	7	1122	100

$X^2 = 38.55$; DF = 16; $P < .01$

mately 40 percent low-rate adults. The same pattern is generally found when severity is examined (Table 18). Although there are some deviations from the 40 percent overall classified as adult dropouts (Career Type 0),* neither severity nor type of first arrest is strongly related, although it is statistically significant when looking at type of adult career.

In summary, of all of the variables presented (juvenile career overall, type of high-rate juvenile, and type and severity of the first offense), juvenile career type seems to be the most strongly associated with adult career type. However, even for this variable, the proportion of the serious juvenile offenders who go on to be classified as high-rate adult offenders is still relatively low.

This finding, consistent with other criminal career research studies, is one of the reasons that it is so difficult to predict correctly who will become serious adult offenders. When the base rate is low (i.e., the phenomenon to which one is predicting is a relatively rare occurrence), it is difficult to get enough instances with which to build highly predictive models. If the highest probability of becoming a serious adult offender is two out of ten, then it will be relatively difficult to determine how those two are different from the other eight offenders than if the probability were fifty-fifty. This will be addressed in more detail in the prediction section.

* Specifically, 32% of those first arrested for class C felony as compared to 52% of those first arrested for misdemeanors are classified as adult Career Type 0.

Second, although the relationships between type and severity of first juvenile arrest and adult career were significant, not much information was gained from knowing type and severity than was available through an examination of the distribution of adult career type alone. Thus, information about the characteristics of the first arrest will not be very helpful in estimating what the individual's adult career pattern is likely to be. Based on the crosstabulation of juvenile by adult career type, while knowing the overall juvenile career will be of some use in understanding adult career patterns, information about the first arrest does not provide much understanding about subsequent adult career patterns.

In the pure sense, then, the juvenile-adult continuity hypothesis was confirmed -- that is, high-rate juveniles are more likely than low-rate juveniles to become high-rate adult offenders, although the proportion of even that juvenile subset who become severe adult offenders is not large (less than 1 of 4). While information regarding juvenile careers provides some insight into the adult career patterns, this in and of itself does not explain why many high-rate juveniles desist. Without the ability to predict who will continue early in the criminal career, selective incapacitation cannot be implemented.

2. Age of onset and career seriousness

a. Methods. The specific hypothesis being tested here asserts that those offenders arrested at an early age are more likely to become serious career offenders than those first ar-

rested later.* To test this, a crosstabulation of age at first arrest and overall career type was performed and is presented in Table 19. Also analyzed, although not part of the formal hypothesis testing but rather of intellectual interest, were the six available personal and family descriptors from the FCDS. We crosstabulated these by age of first arrest (found in Tables 20 through 25), to determine whether there were any significant associations which might help shed light on possible correlations with age of first arrest.

b. Results. As can be seen from Table 19, age of first arrest is significantly related to career type. Subjects who are arrested early (i.e., before age 14) are apt to become more serious career offenders. Of those first arrested before age 14, two-thirds become the higher-rate adult careerists (Career Types 3 or 4**), as compared to 43 percent of those first arrested at 14 or 15 years old. Once again, the hypothesis regarding early onset is substantiated; but, as in the results for the preceding hypothesis, even those arrested earlier (ages 11 and 12) have still

* We were planning on testing a second, related notion -- that those who are arrested early are more likely to have longer careers than those arrested later -- but could not because of the way the sample was drawn. In that only 14- and 15-year-olds were selected for study, those who were arrested before that age and then not arrested at age 14 or 15 were excluded. The ramification is that those in our sample who were arrested before 14 years old, will, because of sampling, automatically have longer careers than those in our sample first arrested at 14 or 15 years old. This confounds any finding which might be observed regarding age of first arrest and career length for this sample.

** 41% are adult Career Type 3; 25% are adult Career Type 4.

Table 19

AGE OF FIRST ARREST BY OVERALL CAREER TYPE

Age of 1st Arrest	Overall Career Type										Total	
	0		1		2		3		4			
	N	%	N	%	N	%	N	%	N	%	N	%
8-10	0	0	11	23	6	13	21	45	9	19	47	100
11	0	0	5	11	7	15	18	39	16	35	46	100
12	1	1	14	12	19	16	47	41	35	30	116	100
13	4	2	24	15	34	21	66	41	33	20	161	100
14	147	30	97	20	59	12	133	27	57	12	493	100
15+	169	42	87	22	41	10	69	17	34	9	400	100

$X^2 = 38.55$; DF = 16; $P < .01$; $r = -.369$

only approximately a one of three probability of becoming the highest-rate adult offender (Career Type 4).

Given the relevance of age at first arrest, it is theoretically important to understand what might be related to the early onset of delinquency. As is shown in Tables 20 through 25, all the Family Court variables except grade in school were significantly related to age of first arrest. When reviewing the tables, we see similarities with the description of the high-rate offender. The subject first arrested early (age 12 or younger) is more likely to be male, black, living with his mother in a household where no one is employed, and the only source of support is welfare. Because age of first arrest is significantly associated with career type, it is not surprising that the same variables which describe the high-rate offender also describe the person arrested early. However, in developing a theoretical model, more than just correlation must be demonstrated.

3. Increasing specialization

a. Methods. This hypothesis states that as the criminal career progresses, an offender will become specialized in one type of crime. In other words, although a person might be involved in a broad spectrum of offenses at the beginning of his career, over time he will find something at which he becomes skilled or for which he develops a preference. A notion related to this issue is that of crime switching. Here, the focus is on whether offenders tend to be generalists (and commit more than one type of crime) or specialists. The typical approach used for measuring crime

Table 20

AGE OF FIRST ARREST BY SEX

	Sex					
	Male		Female		Total	
Age	N	%	N	%	N	%
8-10	46	100	0	0	46	100
11	45	98	1	2	46	100
12	111	97	4	4	115	100
13	150	94	9	9	159	100
14	441	90	50	10	491	100
15	346	89	45	12	391	100

$X^2 = 17.8$; DF = 5; P < .001

Table 21

AGE OF FIRST ARREST BY ETHNICITY

	Ethnicity							
	Black		Hispanic		White		Total	
Age	N	%	N	%	N	%	N	%
8-10	29	66	10	23	5	11	44	100
11	28	64	13	30	3	7	44	100
12	69	62	29	26	13	12	111	100
13	95	61	39	25	23	15	157	100
14	236	50	165	35	73	15	474	100
15	180	47	122	32	79	21	381	100

$X2 = 24.8$; DF = 10; P < .001

Table 22

AGE OF FIRST ARREST BY EMPLOYMENT STATUS OF HOUSEHOLD MEMBERS AT TIME OF SAMPLE CASE

	Household Member Employed									
	No One		Mother Only		Father Only		Both		Total	
Age	N	%	N	%	N	%	N	%	N	%
8-10	26	72	7	19	1	3	2	6	36	100
11	17	52	5	15	8	24	3	9	33	100
12	56	64	16	18	9	10	6	7	87	100
13	73	57	20	16	22	17	13	10	128	100
14	206	54	67	18	73	19	36	9	382	100
15	121	39	56	18	86	28	47	15	310	100

X^2 = 44.4; DF = 15; P < .001

Table 23

AGE OF FIRST ARREST BY HOUSEHOLD WELFARE STATUS AT TIME OF SAMPLE CASE

	Welfare Status									
	None		Total		Partial		Other		Total	
Age	N	%	N	%	N	%	N	%	N	%
8-10	9	24	20	53	3	8	6	16	38	100
11	10	35	15	52	4	14	0	0	29	100
12	26	30	46	52	9	10	7	8	88	100
13	48	38	60	47	15	12	5	4	128	100
14	168	45	147	40	26	7	29	8	370	100
15	168	58	88	30	16	6	18	6	290	100

X^2 = 51.1; DF = 15; P < .001

Table 24

AGE OF FIRST ARREST BY PEOPLE WITH WHOM CHILD RESIDED AT TIME OF SAMPLE CASE

	People with Whom Child Resided									
	Both		Mother Only		Mother & Other		Father Only		Total	
Age	N	%	N	%	N	%	N	%	N	%
8-10	7	17	32	76	1	2	2	5	42	100
11	7	17	26	63	5	12	3	7	41	100
12	19	20	61	64	10	11	1	1	95	100
13	41	29	86	61	9	6	5	4	141	100
14	125	29	233	55	42	10	19	5	427	100
15	136	42	146	45	22	7	21	6	328	100

$X^2 = 45.5$; DF = 15; $P < .001$

Table 25

AGE OF FIRST ARREST BY HIGHEST GRADE COMPLETED AT TIME OF SAMPLE CASE

	School Grade									
	0-6		7		8		9+		Total	
Age	N	%	N	%	N	%	N	%	N	%
8-10	3	8	9	25	15	42	9	25	36	100
11	2	7	8	27	17	57	3	10	30	100
12	8	10	28	34	30	36	17	21	83	100
13	12	10	33	28	58	50	14	12	117	100
14	42	11	122	31	174	45	53	14	391	100
15	10	3	34	11	149	48	118	38	311	100

$X^2 = 107.6$; DF = 15; $P < .001$

switching is the transition matrix. The criminal history is split into pairs, with the first member of the pair being the previous arrest, and the last being the subsequent. Probabilities are computed for the likelihood of the subsequent arrest being the same type as the previous.

While the transition matrix approach is useful for the more general question regarding the degree of crime switching in a given sample, it loses the dimension of temporality crucial to this more specific statement of increasing specialization. This is because the matrix does not distinguish pairs at the end of the career from those at the beginning. We thus developed a different analytic approach.

When we attempted to operationalize this hypothesis to test the notion of change over time, several problems appeared. How should years in which there is only one arrest be handled? Should there be a control for differential career lengths? Is it important to measure the amount of "change in specialization" from year to year over the life of the career, or is it sufficient to just measure the beginning and end of the career? Because of the analytic complexity raised by these questions, we decided on a preliminary analysis to determine whether there was any indication of specialization. If there was, then a more complex analysis, measuring the change between years as well as over time, could be attempted.

The analysis focused on only those offenders who were high-rate (i.e., Overall Career Type categories 3 and 4).* This

* This accounted for almost one-third of the entire sample (474 of 1263).

ensured the fewest number of years with only one arrest. Then, each year in the career was searched and a group found that had a "beginning year" and an "end year" with at least two arrests. A "specialization ratio" was calculated -- that is, the number of different types of arrests in the first and last year was divided by the total number of arrests for that year (a lower ratio is indicative of a higher degree of specialization). Further, the number of years intervening between the first two-arrest-year and the last two-arrest-year were also counted. A paired comparison t-test was used to determine whether the mean of the first year ratio (T1 ratio) was significantly different than that of the second year (T2 ratio). Additional t-tests were done, controlling for the number of intervening years. The results of this analysis are presented in Table 26.

b. Results. In Table 26, we see that, while there is a significant difference between the mean type of arrest ratio at T2 as compared with T1, the direction of that difference is the reverse from that expected. That is, the mean type ratio is greater at T2 than T1, implying that the degree of specialization is less at the end than at the beginning of the career. (It should be remembered that the lower the ratio, the higher the degree of specialization.) Thus, the finding of lack of specialization found in a majority of past criminal career research is upheld here as well, even once the issue of temporality is addressed.

Table 26

INCREASING SPECIALIZATION:
RESULTS OF PAIRED T-TEST

	N	Mean	S.D.	t	DF	P
Group Overall:						
T1	382	.70	.25	4.53	381	<.001
T2	382	.78	.24			
2+ Years between T1 and T2:						
T1	229	.68	.25	4.58	228	<.001
T2	229	.79	.24			
3+ Years between T1 and T2:						
T1	164	.67	.25	4.99	163	<.001
T2	164	.81	.24			
4+ Years between T1 and T2:						
T1	99	.69	.25	3.42	98	<.001
T2	99	.81	.24			

4. Increasing seriousness hypothesis

a. Methods. This hypothesis is similar in logic to the increasing specialization notion, but rather than testing for the types of offenses in which the offender is involved, the focus is on the severity level of offenses over time. The hypothesis states that, over time, an offender is more likely to become involved in a greater number of serious offenses. In lay language, today's purse snatcher will be tomorrow's armed robber. One analysis was performed, following the logic of the second analysis presented in the preceding section.

The same procedure as outlined in the preceding section was used. For the high-rate offenders only, the first two-arrest-year period and the last two-arrest-year period were isolated. A severity ratio was created, which was the number of class A1, A2, B, and C felonies divided by the number of arrests for the year. The same paired comparison t-test analysis was done to test for differences between the means of the T1-T2 proportions, with controls for the number of intervening years. These data are presented in Table 27.

b. Results. In Table 27, results similar to those from the preceding hypothesis are found. There is a significant difference between the T1 and T2 severity ratios, but the direction is the reverse from that expected by the hypothesis. This indicates that there is a lower proportion of severe offenses committed at the end of the career than at the beginning, making sense in light of the lack of increasing specialization over the

Table 27

INCREASING SERIOUSNESS:
RESULTS OF PAIRED T-TEST

	N	Mean	S.D.	t	DF	P
Group Overall:						
T1	211	.39	.17	4.04	210	<.001
T2	211	.48	.20			
2+ Years between T1 and T2:						
T1	122	.41	.18	2.83	121	<.01
T2	122	.50	.20			
3+ Years between T1 and T2:						
T1	89	.41	.17	2.72	88	<.01
T2	89	.52	.21			
4+ Years between T1 and T2:						
T1	52	.41	.17	2.55	51	.01
T2	52	.56	.21			

career span. If offenders were specializing, it might be feasible that they were specializing in more serious offenses; in that there is no evidence of specialization, it is not surprising that there is no evidence of an increase in the proportion of serious offenses, either.

To summarize the section on hypothesis testing, the results are generally parallel to those found in other career criminal research. First, while those involved in serious juvenile crime are those most likely to become serious adult offenders, that proportion is low (less than one-fourth). We know that those who are arrested early are more likely to become serious offenders, but the overall understanding of what relates to early onset is not great; nor do we know much about why most of these early offenders desist altogether or do not become serious offenders. Typically, most studies have found no evidence of increasing specialization or seriousness; this was the case here, as well.

What has been established thus far on this database is the following. First, most of the variables descriptive of the offender's personal situation at the time of the sample case show significant bivariate relationships to overall career type, as does age of first arrest. Second, those same variables also show significant bivariate relationships to age of first arrest. Hence, we know that:

a) Offenders who are "disadvantaged" are more likely to become serious careerists than are "non-disadvantaged" youth;

b) Offenders who are arrested earlier (12 years old or younger) are more likely to become serious careerists than are those arrested later;

c) Offenders who are "disadvantaged" are also those who are arrested earlier.

The importance of the finding of the interrelationship between age of first arrest, personal variables, and career type is two-fold. Establishing such relationships on this database corroborates the evidence regarding early onset, other predictor variables, and severity of career. Further, data items for use in the building of prediction models have been identified. However, the contribution to career type of age of first arrest in relation to the contribution of other descriptive variables has yet to be established, and is addressed in the section on prediction.

It is to this issue -- prediction -- that we now turn. Specifically, research is necessary to identify the offenders who are characterized by sustained high offense rates. As Blumstein (1983) has noted:

> ....since every statistical distribution has to have a right-hand tail, the group of 'chronic offenders' who comprise that right-hand tail will necessarily account for a disproportionately large number of offenses. The critical question is whether the members of that group are distinguishably different. Certainly they have different records in retrospect, but the same can be said of winners and losers in any chance process. The fundamental policy question, then, is whether the 'chronic offenders' are identifiable in prospect, that is, during the period in which they accumulate a record, can one predict which individuals will turn out to be the ones with the longest sequence. Unless such discrimination can be made, any identification of chronic offenders can only be made retrospectively, and so is of little policy or operational value. (page 9)

C. Prediction of the Criminal Career

The central tenet upon which the implementation of selective incapacitation as a crime control strategy rests is the ability to predict, prospectively, those offenders who will continue to commit crimes at a high rate (i.e., the "careerists"). For the incapacitative effect of imprisonment to be maximized, those offenders who are most likely to persist in their criminal activity must be identified before they have completed their period of high activity. Thus far, much of the current support for selective incapacitation has come from retrospective studies of offenders.

The difficulty in making assumptions based on retrospective analyses regarding the ability to predict high-rate offenders rests on what we know about the distribution of career activity. As has been demonstrated in numerous studies, the distribution of individual crime rates (often designated by the Greek letter lambda) has a long right-hand tail (i.e., there are a few individuals who commit a large number of offenses over the life of their career). For example, much has been made of the observation in the Philadelphia cohort study (Wolfgang et al., 1972) that 6 percent of the cohort (namely, those "chronic" offenders arrested five or more times) accounted for 52 percent of the recorded police contacts for the total cohort.* However, Blumstein and Moitra (1980) have shown that the same results can be explained by

* However, since only one-third of the cohort was ever arrested, these "chronics" represent 18% of those ever arrested.

a model in which all offenders with three or more arrests, indistinguishable in prospect, have the same probability of each subsequent arrest. Thus, unless the profiles of the individuals who will turn up in the right-hand tail can be specified in advance, simply the knowledge of the existence of that group is of little predictive or policy relevance.

Furthermore, the kind of identification that is least useful is that which simply establishes variables that correlate well with arrest rate or reported crime rate. While there may be differences among "chronics," and between chronics and those with fewer arrests, the fundamental research task is to identify those differences in ways that can be used prospectively by policy makers attempting the early identification of offenders in the application of treatment or punishment. There is a strong correlation among many variables related to criminality; in cases in which the information is to be used in deciding how the society treats individuals, however, we want to be sure that we are invoking relevant variables rather than merely spurious correlates.*

For this research, we sought to determine what factors characterizing the offender at age 14 or 15 would predict his subse-

* In attempting to identify these chronic or serious offenders, it is critical that we compare any improvement obtained with current practice. Currently, prosecutors and judges make attempts to identify the most serious offenders in the cases that come before them. Any test of an improved discrimination method must be applied not to the outcome of sentencing decisions (i.e., the number of prison terms), but to the decision-making process itself. If the current methods of predicting the high-rate offender will be, for example, wrong 20% of the time, a prediction model with a 30% false positive rate is unacceptable.

quent type of criminal career. For example, would knowing whether the offender was living with his mother only and in a household subsisting totally on welfare help us explain what his subsequent criminal career would be? If we combined information regarding his juvenile arrest record before age 14 with data at the time he was 14, would we be able to explain more about his subsequent criminal activity than we could otherwise? Could we identify factors which would not be excluded from policy consideration because of legal or moral concerns (things other than sex or race, for example)? These, then, are the issues addressed in this section.

1. Methods. In conceptualizing an approach to predicting the type of criminal career, there are two questions to be asked. These are:

-- When attempting to explain the type of criminal career, how much of the variation in careers can be determined by information we have regarding the time period preceding the career?

-- Given the information we have on the time preceding the criminal career, how well can we distinguish between those who will become high-rate offenders and those who will not?

A regression analysis is the most powerful way to identify those predictor variables that explain the overall type of criminal career. Here, we used a hierarchical multiple regression. For the more specific question stemming from the interest in selective incapacitation, a discriminant function analysis was performed. This allowed us to determine whether there could be

adequate discrimination between two groups, and which the important variables would be.

For the two different analyses, the dependent variable -- career type subsequent to the sample case* -- was defined in different ways. The first characterization of the dependent variable was the original five point scale variable, with the range being from 0 (no activity after the first year of arrests) to 4 (two consecutive years with two or more felony arrests in both years). The second construction of the dependent variable was dichotomous, and consisted of the high-rate offenders (the Career Type 4s) versus everyone else (Career Types 0s through the 3s).

The independent variables were chosen to meet several criteria. The variables available from the FCDS study, significant in bivariate relationships, were included because conceptually they reflect the status of the offender at the time of the sample case. For the prediction analysis, this period can be viewed as equivalent to a point in time at which a judge (or other decision maker) would be viewing that 14- or 15-year-old offender, and asking whether this person is likely to become an adult career offender. Thus, characteristics of the individual's situation at that juncture were included to assess their predictive value.

* When building predictive models, it is important to represent correctly the temporality of the events reflected in that model. Thus, the independent variables were constructed to reflect the time period preceding the dependent variable. Specifically, the independent variables include events from the time of first arrest through the FCDS sample case, and the dependent variable was the career type after the sample case. Only events occurring after the FCDS sample case can be considered to be explained <u>prospectively</u> by this research design.

Also included here, for statistical assessment, are demographic characteristics such as age and ethnicity. If and when a sentencing policy is operationalized, the question regarding appropriateness and legality of inclusion of certain variables (such as sex or ethnicity) will have to be addressed.

There were 17 independent variables that met these criteria.* These are:

-- sex
-- ethnicity (two dummy variables)
-- age at first arrest
-- severity of most severe prior arrest
-- number of previous felony arrests against persons
-- number of previous felony arrests against property
-- number of previous convictions
-- number of previous incarcerations
-- previous career type
-- previous career length
-- residence at the time of the sample case (three dummy variables)
-- household welfare status at the time of the sample case (two dummy variables)
-- grade in school at the time of the sample case.

The multiple regression performed was hierarchical, specifying the order as given above in the variable list. Thus, those variables which predated others temporally were entered earlier in the regression. Sex and ethnicity were entered first, and then those characteristics of the offender predating the sample case were entered (with arrest information being entered before conviction and incarceration information). Last in the equation were

* The initial variable list included additional information regarding the sample case itself, but these were highly intercorrelated with other independent variables and less correlated with the outcome variables than those variables used in the analysis.

those characteristics regarding the offender's status at the time of the sample case. A stepwise method was also used for the discriminant analysis (F-to-enter of 3.00 was stipulated to ensure that those variables that did not provide additional discriminating power were not entered into the function). Table 28 gives the multiple regression results; Table 29 contains the discriminant findings.

2. Results. When examining the data presented in Table 28, several things appear. First, the 17 variables available for analysis did not adequately explain much of the variance in subsequent career type: 22 percent was explained ($F(17,698) = 11.42$, $p < .01$). Furthermore, only six variables individually contributed more than 1 percent of the explained variance (sex, the race dummy variable for non-white, age at first arrest, severity level of the most severe prior arrest, number of prior felony arrests against property, and grade in school at the time of the sample case). Of these, only four that are within the control of the offender (i.e., information on his prior criminal behavior and school achievement) are of undisputed policy relevance. While it is of concern from a theoretical perspective to know the importance of demographic characteristics (such as ethnicity and sex) in explaining career type,* these factors are unlikely to be acceptable in a court of law as sentencing criteria. Thus, given

* This type of information can be of use in the development and implementation of delinquency prevention programs, however, and thus should not be seen as unimportant.

Table 28

HIERARCHICAL MULTIPLE REGRESSION SUMMARY TABLE
WITH CRITERION VARIABLE OF SUBSEQUENT CAREER TYPE

	Subsequent Career Type[a]					
Predictor Variable	Simple r	R^2	Increase in R^2	F	(df)	P
Sex	-.23	.052	.052	39.33	(1,714)	<.01
Race Dummy Variables:						
Black	.18	.090	.038	29.34	(1,713)	<.01
White	-.08	.093	.003	2.72	(1,712)	NS
Age First Arrest	-.26	.138	.045	36.72	(1,711)	<.01
Severity of Most Severe Previous Arrest	-.27	.161	.023	19.49	(1,710)	<.01
Number of Previous Felony Arrests Against Person	.23	.163	.002	2.10	(1,709)	NS
Number of Previous Felony Arrests Against Property	.29	.196	.033	28.40	(1,708)	<.01
Number of Previous Convictions	.20	.196	.000	.16	(1,707)	NS

continued.../

Table 28 (continued)

Predictor Variable	Subsequent Career Type[a]					
	Simple r	R^2	Increase in R^2	F	(df)	P
Number of Previous Incarcerations	.11	.196	.000	1.69	(1,706)	NS
Previous Career Type	.32	.198	.002	1.54	(1,705)	NS
Previous Career Length	.26	.198	.000	1.48	(1,704)	NS
Residence Dummy Variables						
Lives with both	-.09	.201	.003	1.45	(1,703)	NS
Lives with Mother only	.13	.202	.001	1.45	(1,702)	NS
Lives with others	-.03	.203	.001	1.45	(1,701)	NS
Welfare Dummy Variables:						
No Welfare	-.10	.204	.001	1.57	(1,700	NS
Total Welfare Support	.11	.204	.000	1.73	(1,699)	NS
Grade in School at Time of Sample	-.15	.218	.014	1.75	(1,698)	NS

[a] For R^2, $F(17,698) = 11.42$; $p < .01$.

only this set of predictor variables, relatively little can be said about what explains the variability in type of criminal career subsequent to a juvenile offender's arrest for a delinquency offense at age 14 or 15 in New York City.

Table 29 provides the results of the discriminant function analysis. With the F-to-enter set at 3.00, only three variables -- sex, the dummy variable for black, and number of previous felony arrests for property crimes -- were included in the discriminant function with an overall F of 9.025 (with 3/712 df, $p < .01$). Sex is the variable which provides the strongest amount of discrimination. Again, of the three variables identified by the analysis as adequate discriminators, only one (previous property arrests) is within the control of the offender. This is problematic when contemplating policy development.

Turning to the classification results in Table 30, while the proportion of high-rate offenders correctly classified using these three variables is fairly high (77%), the proportion of low-rate offenders also correctly classified is not adequate -- 53 percent, only slightly better than chance alone. This means there is an extremely high false positive rate -- i.e., low-rate offenders classified as high rate (47%). Using these variables, therefore, almost one of every two low-rate offenders would be inappropriately classified as a high-rate offender, and almost one of every four high-rate offenders would be classified as low-rate (false negative). Further, as is expected, because the number of those offenders who are low-rate is large, the overall percentage correctly classified is also not high (55%). When the proportion

Table 29

DISCRIMINANT FUNCTION COEFFICIENT OF CONTRIBUTING PREDICTOR VARIABLES

	Career Type[a]	
Predictor Variable	Non-High Rate	High Rate
Race (dummy variable for black)	2.02	3.03
Sex (Male)	1.26	.36
# Previous Felony Arrests for Property Crimes	.54	.84
Constant	-1.52	-2.48

[a] $F\ (3,712) = 9.025,\ p < .01$

Table 30

CLASSIFICATION RESULTS

Actual Classification	Predicted Classification					
	Low		High		Total	
Low	348	53%	307	47%	655	100% (False Positive)
High	14	23%	47	77%	61	100% (False Negative)
Total	362		354		716	

Overall Percent Correct: 55% (395)

of false positives is viewed in conjunction with the fact that, of the three variables found to be significant discriminators, only one is acceptable from a policy standpoint, the discriminant function also does not provide much useful information regarding the prediction of criminal careerists among this juvenile population.*

To conclude this section, then, neither the traditional multiple regression approach nor the discriminant function analysis provide much assurance that currently available court, probation, and criminal history data can provide a reasonable amount of predictability for this group of New York City juvenile offenders. If the variables used here are seen as representative of much, although not all, of the information typically available to a sentencing judge through a pre-sentence report, this analysis does not suggest a policy of selective incapacitation could adequately be implemented. One of the fundamental concerns which pervades the criminal justice system about such a sentencing strategy is that of false positives, that is, subjecting someone to loss of liberty based on prediction of future behavior that is not highly accurate. To the extent that high-rate offending pat-

* An additional discriminant function was performed with the outcome variable dichotomized differently. Here, Career Type 0s and 1s were grouped as low-rate, the 3s and 4s as high, and the middle group (the 2s) was deleted from the construction of the outcome variable. The effect of the different classifications was to increase the percent correctly classified as low-rate (to 77%) and decrease the correct classification of high-rate (to 65%). This was expected because this classification distilled the low-rate group into those truly low-rate and had the opposite effect on the high-rate group. The primary analysis, from a judge's viewpoint, however, is that which attempts to distinguish a potential high-rate person from all others.

terns are relatively rare, as we have shown, the prediction models have a low base-rate and, in this sample at least, the false positive rate becomes undesirably large. If we are to pursue the development of prediction models, we should do so with the inclusion of additional variables. However, it is not clear when these findings are put in conjunction with the high false positive rates found by other researchers (Blumstein, 1983) whether we will ever get a high enough level of discrimination to meet our moral concerns satisfactorily.

D. Issues Surrounding the Prosecution of Youthful Offenders

1. Methods. Given a focus on selective incapacitation, two specific issues within the overall realm of prosecution of criminal careerists as they cross the jurisdictional boundary between Family and adult court were pursued. The first looked at the juvenile records of those arrested as adults. This will help determine the proportion of offenders that would remain classified as first-time arrestees if juvenile records were made routinely available. This was done by examining the juvenile records for all those offenders ever arrested as an adult (i.e., those with one or more adult arrests). It should be remembered that, because of the way in which the sample was drawn (14- and 15-year-olds with cases brought to probation intake in Family Court), everyone arrested as an adult in this sample will have at least one juvenile arrest.

The second question considered different conviction and disposition patterns for each subsequent adult arrest viewed sequen-

tially for each of the various types of juvenile careerists. For each adult arrest (i.e., the first adult arrest, the second, the third), the proportion convicted was calculated. In addition, of those convicted, the proportion receiving a sentence to incarceration (either to a state or local facility) was calculated for each of the five juvenile career types (Career Types 0 through 4). This information is presented in tabular fashion in Table 31 and graphically in Figures 3 and 4. The same analysis was done for those arrested and convicted for felonies only (Table 32 and Figures 5 and 6). This provides information regarding the current conviction and disposition patterns for various types of juvenile offenders. We can then determine whether in adult criminal proceedings there are any differences in the way the adult courts dispose of cases of offenders with different severity levels of juvenile records, despite the lack of routinized information transfer mechanisms.

2. Results. When examining the distribution of the juvenile prior record information, based on arrests only (rather than convictions) among those sample members arrested as adults, we find the following:

-- Twenty-five percent have only one juvenile arrest;

-- Thirty-eight percent have two to four juvenile arrests;

-- Thirty-six percent have five or more juvenile arrests.

Thus, when an offender from this sample was first arrested as an adult, only one-quarter of this sample could be correctly

viewed as a relatively minor offender (as viewed by prior record alone). Conversely, slightly more than one-third could be more appropriately characterized as a "chronic" offender, using Wolfgang et al.'s notion of five or more arrests. This clearly demonstrates that the inclusion of juvenile record information significantly alters the "status" of offenders appearing in adult court.

However, the data in Tables 31 and 32 (and displayed in the accompanying figures) indicate that, although there currently are few adequate formal mechanisms whereby information regarding juvenile records are included in adult proceedings, more severe sanctions are levied against offenders who have the most severe juvenile records. As is clear from Table 31 and Figures 3 and 4, there is little difference in the proportions of low- and high-rate juvenile offenders who are convicted on their adult charges, there is a substantial difference between the proportions receiving sentences to incarceration (for the first adult arrest, only 19% of the low-rate juveniles receive an incarcerative sentence as compared to 33% of the high-rate offenders). This analysis alone does not control for differences in the severity of the adult arrest, but the pattern is ever more pronounced among those arrested and convicted as adults for felonies. In Table 32 (and displayed in Figures 5 and 6), for the first adult conviction for a felony, 55 percent of the low-rate juvenile offenders are sentenced to incarceration, in contrast to 91 percent of the high-rate offenders.

It is interesting to note that, for both sets of conviction and incarceration data (Tables 31 and 32), the differences between

Table 31

PROPORTIONS CONVICTED AND INCARCERATED BY ANY TYPE OF ADULT ARREST AND CONVICTION

Sequential # of Adult Arrest	% Convicted		% Incarcerated	
	Juvenile C.T. 0 (N = 687)	Juvenile C.T. 4 (N = 83)	Juvenile C.T. 0 (N = 687)	Juvenile C.T. 4 (N = 83)
1st	49	55	19	33
2nd	65	51	36	51
3rd	64	78	43	56
4th	68	61	50	65
5th	67	70	63	73
6th	66	68	61	71

Table 32

PROPORTION CONVICTED AND INCARCERATED BY FELONY ARREST AND FELONY CONVICTION

Sequential # of Adult Arrest	% Convicted		% Incarcerated	
	Juvenile C.T. 0 (N = 687)	Juvenile C.T. 4 (N = 83)	Juvenile C.T. 0 (N = 687)	Juvenile C.T. 4 (N = 83)
1st	22	30	55	91
2nd	36	24	76	86
3rd	26	44	74	79
4th	29	54	84	86
5th	36	41	95	100
6th	42	39	83	90

the offender types appears to lessen as the adult record accumulates. This is understandable; as an offender compiles an adult record, the meaningfulness of a juvenile record recedes. This then eliminates the differences between types of juvenile offenders after the fourth adult conviction. The findings also demonstrate what would be expected given the way in which the criminal justice decision-making system works -- in a specific case, guilt or innocence is presumed to be established on the merits of the case (rather than the offender's prior record). It is at the point of sentencing that the considerations of past behavior come into play.

Thus, these analyses clearly suggest that, although the formal inclusion of juvenile prior record data would change how the offender is characterized when first appearing before the adult court, there are, apparently, informal mechanisms by which juvenile prior record is currently being used in sentencing decisions. The question open to policy makers now is whether there should be greater formalization of this process, possibly to assume greater equity. It is quite possible that some offenders, known to the law enforcement community as juvenile troublemakers (they may be high-rate but petty offenders) are those whose records are included, while more severe but lower-rate juvenile offenders are not receiving the same examination in adult court. It would perhaps be more equitable by being open to monitoring, if

procedures were more formal and systematic for the inclusion of juvenile records.*

* Permitting young adults to start with "a clean slate" is precisely one of the objectives of juvenile court legislation. That objective is pursued through mitigating criminal responsibility and preventing dissemination of records. It is not surprising, therefore, that admitting juvenile information increases the number of young adult arrestees defined as chronic offenders. It is not clear, however, how that information can be made available without destroying the concept of "amnesty" for those reaching adult jurisdiction for the first time. In other words, the issue of access is not simply a technical matter, but goes to the heart of the jurisprudential basis for a separate system.

IV. CONCLUSIONS

What have we learned from this research about the criminal careers of New York City juveniles as they become adults?

-- The juveniles most likely to become high-rate offenders are minority, living at home with their mother only, in a household where no one is employed and financial support is through welfare. Additionally, they are not likely to be doing well in school.

-- Those who are first arrested at an early age, or have high-rate juvenile careers, are most likely to become high-rate adult careerists. However, even for this subgroup the chance of becoming a high-rate offender is low: less than one out of four.

-- The "folk wisdom" regarding increasing specialization and seriousness is not upheld here. Offenders do not appear to specialize in one type of offense over time, nor to escalate the seriousness of their criminal involvement.

-- The type of information typically available to criminal justice decision makers through the probation pre-sentence investigation does not help predict who will become a high-rate offender. Not only can we not explain much about career type generally, when we apply these factors to the identification of the high-rate offender, approximately half of the time we misclassify those who are actually low-rate offenders. We can do no better than chance with these variables.

-- Even though the inclusion of juvenile priors changed the characterization of offenders when they initially appeared in adult court for close to one-third of this sample, the adult court already appears to sentence those offenders who have high-rate juvenile histories more punitively than those who do not. Thus, there seem to be informal information transfer procedures in place when apparent public safety issues are concerned.

These findings have implications, both for the more specific issue of selective incapacitation and for criminological research generally.

Selective incapacitation rests on several notions not substantiated here. First, there is an assumption that the crime for which an offender is arrested is somehow representative of those offenses for which he will be arrested in the future. If the robber is selectively incapacitated, this is expected to reduce future robberies that would otherwise be committed. Given our results, such an assumption cannot be made. There is no reason to expect that the offender will commit robberies in the future, or that the severity of the crimes he will commit in the future will increase. Thus, the notion of behavior continuity central to selective incapacitation is not supported.

Second, to operationalize selective incapacitation, we must be able to predict adequately who will become the high-rate offenders. Although this had appeared possible based on previous research which used retrospective analyses, when we use only those variables typically presented to a sentencing judge prospectively, we can do no better than we would do by chance alone -- approximately half of the time we do not classify correctly. Even if this finding is influenced by the type of sample or the analytic methods used, it is unlikely that the level of prediction could rise to meet jurisprudential standards.

Finally, much of the fuel by which the proponents of selective incapacitation have kept the argument alive comes from the presumption that there are offenders with serious prior records who are being let off "scot free." This perception is exacerbated when the group being discussed is that appearing in adult court for the first time. Because of the statutory limitations regard-

ing the transfer of juvenile records, the public sense is that serious juvenile offenders are being given a "free ride" as apparent first-time adult offenders. Although we did find evidence that the inclusion of juvenile prior criminal history would redefine as "chronic" close to one-third of those first appearing in adult court, we also found that these offenders currently do, in fact, receive incarcerative sentences more frequently than those who had less severe juvenile records. Therefore, the courts currently are able to distinguish youthful offenders based on juvenile prior record, and appear to be sentencing accordingly.

The implication for the implementation of selective incapacitation, given this research, is not good. We do not presently have enough predictive capability to sacrifice the current job done by the judicial system in differentiating the serious from the non-serious offender and disposing accordingly. Given that the issues surrounding the alteration of juvenile justice legislation are not concerned solely with information transfer, but address the philosophical underpinnings of the juvenile court (specifically, the notion that children should not be seen as criminally responsible), we should perhaps turn our attention first to further testing of predictive models. If our capacity to predict can be improved substantially over current criminal justice practices, then the philosophical role of the juvenile court can be reassessed. At the present time, however, there do not appear to be data supporting either the public safety need or predictive utility of altering the fundamental notion of "giving kids a second chance."

With respect to the implications of this study for criminological research generally, the most salient finding concerns the high frequency of desistance from subsequent criminal activity. Even among those who are high-rate offenders, not many will continue their criminal activity. We simply do not know much about that phenomenon. We do know, from this as well as other studies, that the high-rate offender comes from the segment of our social structure least able to cope successfully with the complexities of society. However, we do not know why some of that group end up "making it." The development of more powerful theoretical models, delineating the causes of continued delinquency and crime, as well as the relationships among causal factors, is necessary for the development of intervention strategies focused on high-risk juveniles.

Crime and the fear of crime will continue to cause intolerable damage to life, to property and to the quality of life. Our efforts to reduce that damage drain public resources by paying for police, prosecution, public defenders, courts, probation, prisons and parole. This is made worse by the magnitude of crimes committed by youth, accounting for about half of all arrests for serious property and violent crimes. The importance of the problem of juvenile delinquency lies not only in its magnitude, but also in its presumed link to the adult crime problem. To the extent that our crime control strategy will continue to rely on post hoc interventions after criminal careers have begun in adolescence, our vulnerability to the crimes committed during the development of those careers increases.

Our experience of crime and of corrections calls out for a strategy of prevention. We know that post hoc correctional interventions -- whether applied to adjudicated juvenile delinquents or to convicted adult criminals -- have not been resounding successes. They are not applied to nearly enough of those committing crimes (particularly juveniles) to reduce substantially the incidence of crime committed by active delinquents and criminals, and they are applied too late to prevent the development of criminal careers. We need to build a knowledge base modeling the potential causes of juvenile crime and the development of prosocial and antisocial adolescent behavior, thereby facilitating the better design and better targetting of prevention efforts. An inclusive model that explains both the onset and the maintenance of criminality or delinquency, and specifies the sequential order of those explanatory factors, should be the focus of future research.

To serve its intended uses, such a model should be able to predict paths leading either to no onset of delinquency or to desistance from delinquency, as well as those leading to delinquent involvement and serious, sustained delinquent careers. Additionally, the model should be inclusive enough to be able to specify predispositional factors placing youths at risk of developing delinquent behavior. If we can begin to determine the important social context in which delinquency occurs, and to specify factors amenable to intervention within these contexts, we will be able to construct social programs that will "fight crime" in as efficient a manner as possible, for society as well as the offender.

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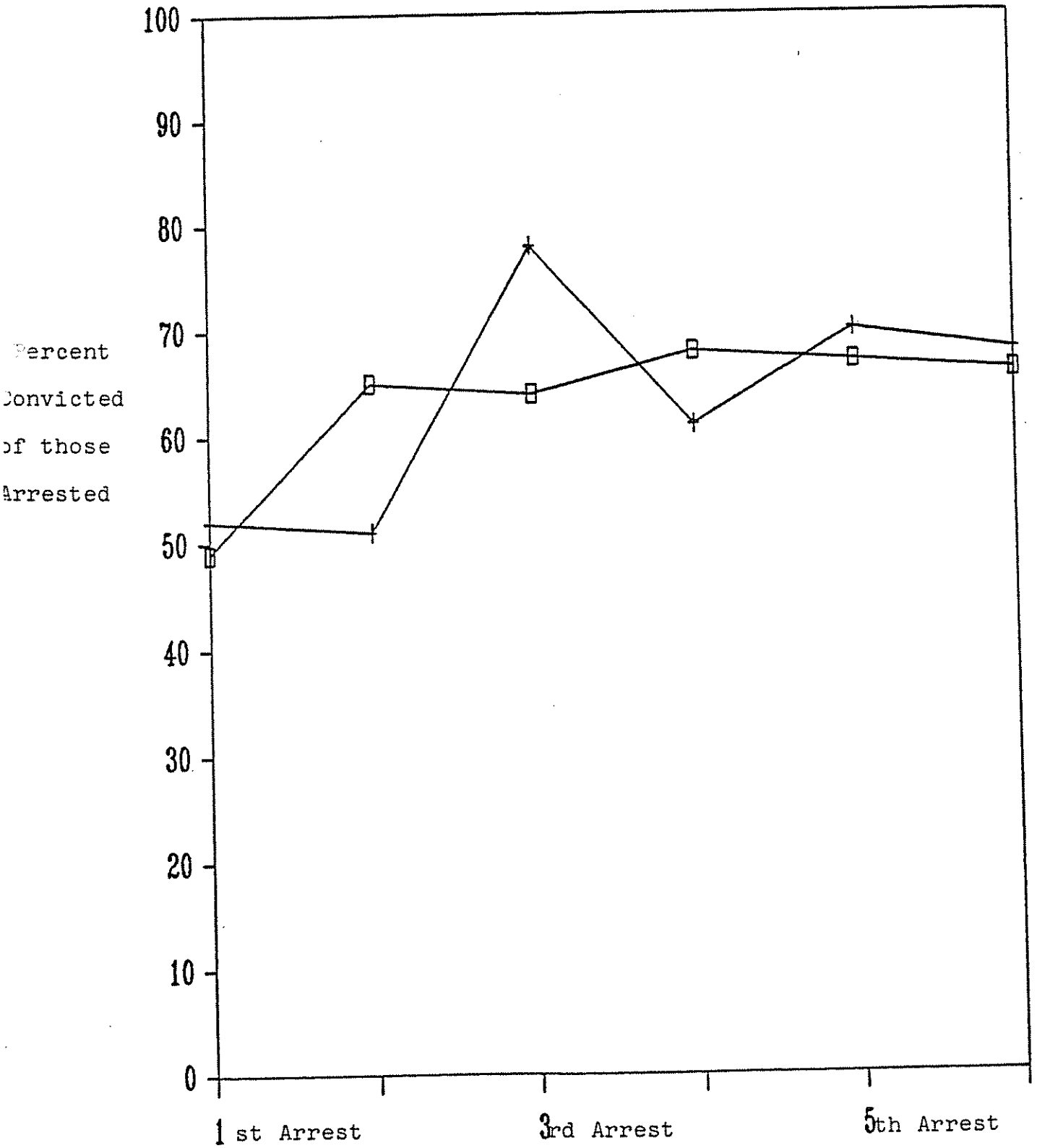
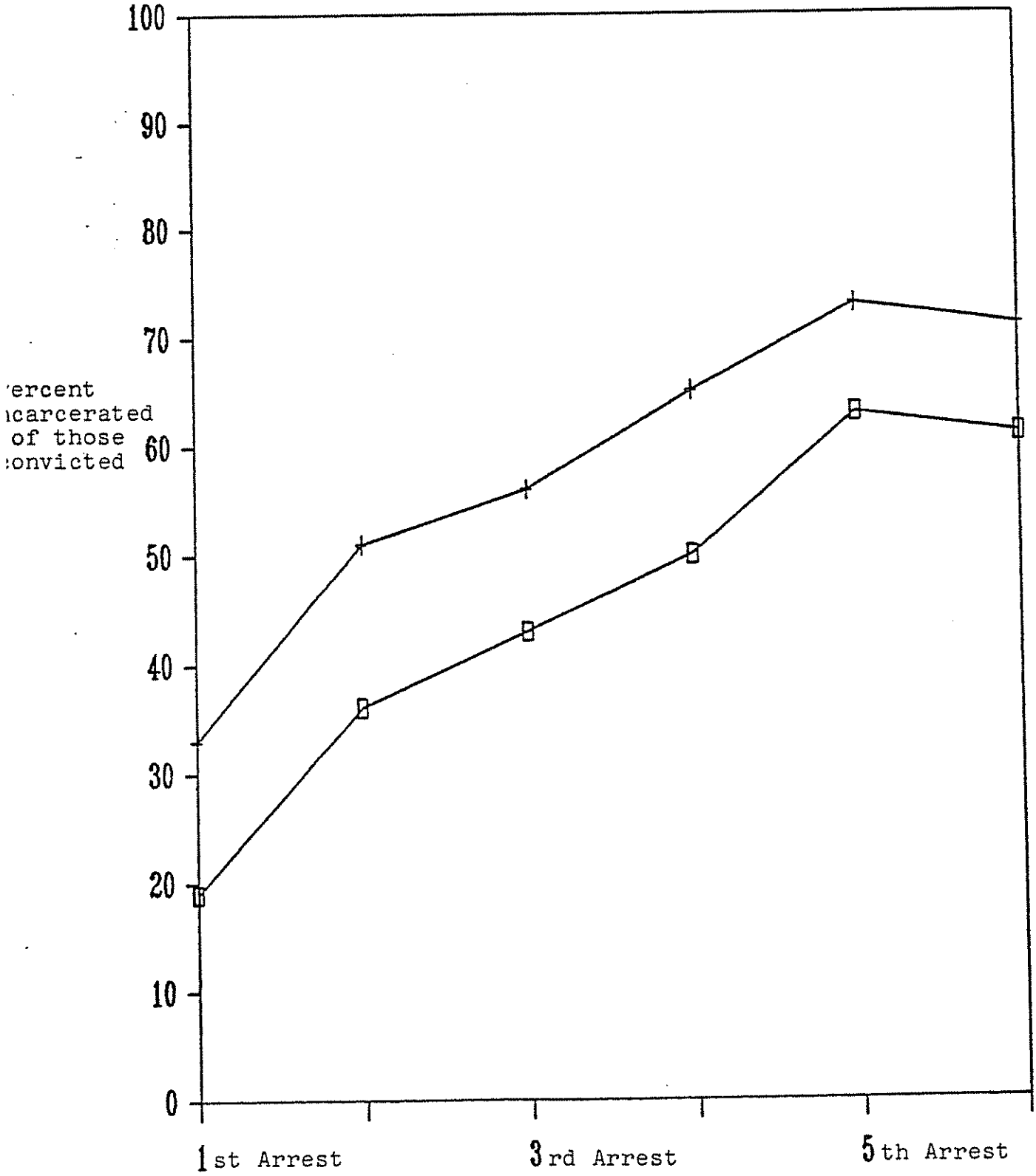
Graph 1

All adult arrests: convicted



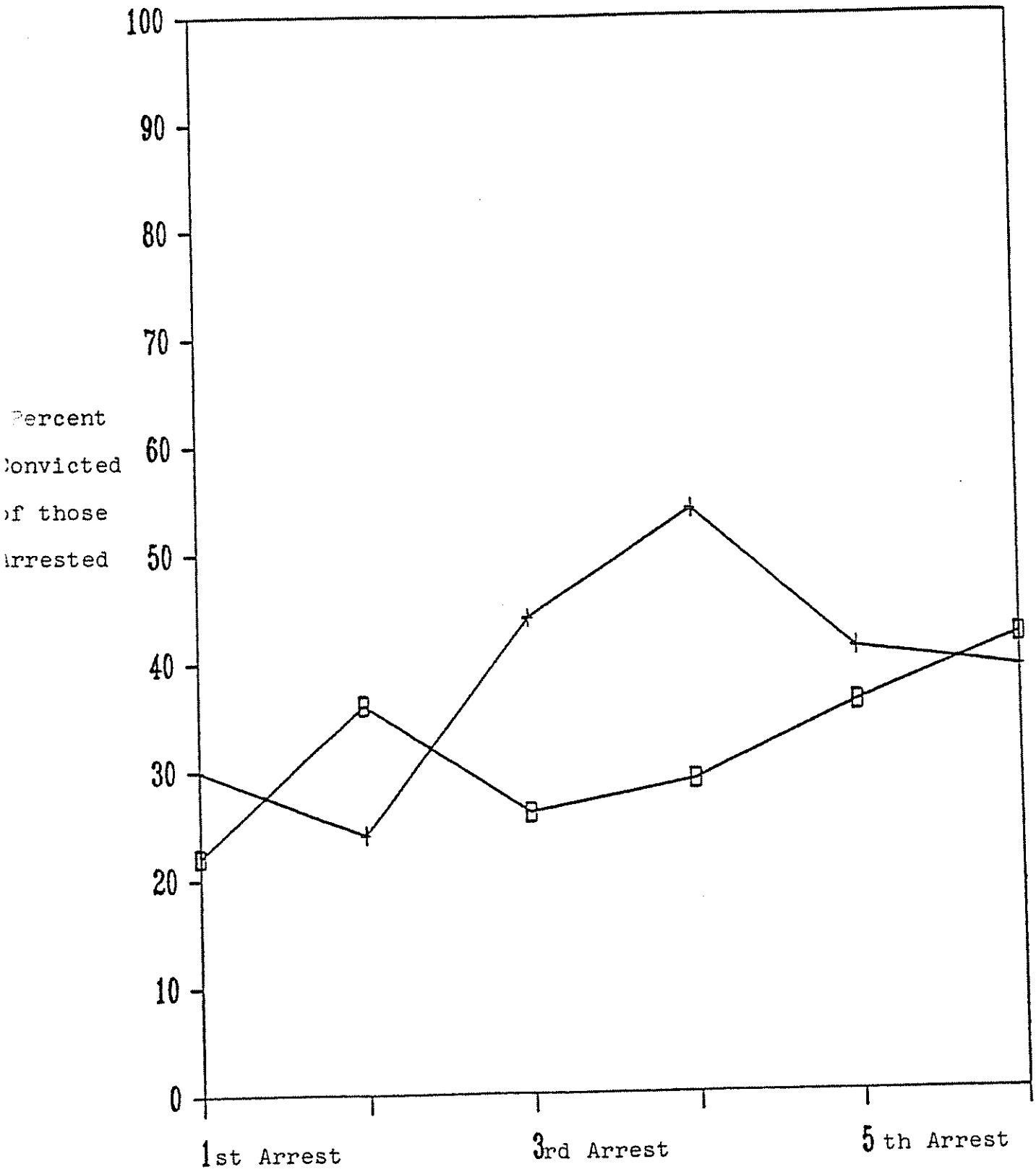
Graph 2

All adult arrests: incarcerated



Graph 3

Adult felony arrests: convicted



Graph 4

Adult felony arrests: incarcerated