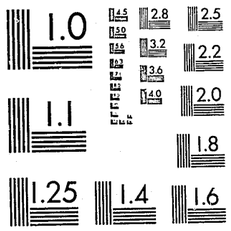


A COMPARISON OF DELINQUENCY IN COPENHAGEN AND PHILADELPHIA

By

Katherine Teilmann Van Dusen and

Sarnoff A. Mednick

Funded by U.S. Department of Justice
National Institute of Justice
Grant No. 79-NI-AX-0087

Chapter 1

INTRODUCTION

This report has two major purposes. The first is to do what birth cohort studies in this field do best. That is, to describe the nature and progress of delinquency and delinquent careers and the influences on them. With a true birth cohort, it is possible to determine the real prevalence of crime and delinquency (according to some definition, whether by arrests, self-reports, etc.), and, further, to specify the prevalence of certain types and degrees of crime. It is also, of course, possible to describe the cumulative criminal activity across time with its changes, constancies, patterns, and cessations. Another major advantage of cohort studies of crime is the possibility of identifying risk characteristics such as age, social class, IQ, and school success. All of these topics are uniquely researchable using large birth cohorts, and we have taken the opportunity to do so in this volume.

The second major purpose of the book is to exploit the fact that a similar study was conducted on a cohort born at about the same time in Philadelphia (Wolfgang, Figlio and Sellin, 1972). Norval Morris wrote, in the Foreword of the Wolfgang et al. volume, "Delinquency in a Birth Cohort is one of those turning points in criminological research in the United States--like the Shaw-McKay area studies of the 1930s . . . ." Erickson (1973), in a review of the book, responded, "Whether it will be a turning point is contingent on a number of important factors, not the least of which is the feasibility of doing similar studies in the

future in light of the present crisis in federal funding for social sciences," and later, "There are questions as to whether the findings derived from a single birth cohort are subject to generalization . . . . In the final analysis, the selection of a single birth cohort is nothing more than the purposive selection of a sample from the universe of all possible birth cohorts that might have been selected, in all cities for any year in the United States or elsewhere." Also in a review of the book, Farrington (1973) writes from England, "One would like to know how far the careers of English delinquents in the present day share the features of those of Philadelphia delinquents born in 1945." The need for replication and comparison is clear.

The value of an attempt to demonstrate generalization or to point to theoretically interesting contrasts in delinquent behavior in two cities (countries) is clear and the opportunity to do it, rare. We must, however, recognize the limits of what can be said on the basis of essentially two samples representing two cultures. Even after eliminating methodological difficulties such as the comparability of records, justice systems, data collections procedures, and so on, whatever differences are found could be attributed to any one of a multitude of factors that differ between the two countries. This would be a limitation even if all aspects of data collection were identical in the two projects and the phenomena to which the data refer were exactly the same. Of course, neither is the case. The projects were undertaken for very different purposes in different parts of the world by different investigators who did not know each other at the time. Also,

different types of data were more or less available in the two places. It is also true that we cannot necessarily assume equivalence in the functioning of the justice systems or in the laws defining crime and delinquency. The list of cultural features that may not be equivalent is infinite, but these will serve to illustrate the point that caution is necessary in making comparisons. Each of these points will be considered in some detail in the course of the data presentation and interpretation. They will not all be resolved to everyone's satisfaction. Nevertheless, certain similarities and differences emerge rather clearly from the data and stimulate thinking about why the differences (in particular) exist. The exercise is a valuable one, even if questions cannot be settled definitively in this report.

The organization of the volume is not dissimilar to that of the Wolfgang et al. book. The first chapters are methodological. The various measures are described and the differences between those used in Copenhagen and those in Philadelphia will be indicated and their consequences assessed. Some of the measures were taken only on a subsample of men; comparisons will be made of the subsample to the rest of the cohort to reassure ourselves that using a subsample did not affect the results of the analysis that were based on it. The crime seriousness measures are different and require analysis, as is the measure of social class. A description of the Danish justice system will also be provided so that the reader can make an assessment of this factor and its potential for impact on findings. We have also included a chapter analyzing the issues in doing cross-cultural research. The issues

are then applied to the specific comparison which is the subject of this volume.

The question of how to analyze the data from Copenhagen relative to the analyses carried out by Wolfgang et al. was a serious one for us. It was tempting to do analyses in a style coming out of our own experience. Everyone has his own method of approaching research questions and data, and one's own methods always contain some differences from what others would do. In addition, critiques of well-known, groundbreaking works such as the Philadelphia birth cohort study, abound. One can always think of improvements on what has been done, especially in the light of new statistical techniques that develop subsequent to the publication. Doubtless, Wolfgang and his colleagues would do things somewhat differently themselves, had they to do it over.

In spite of all these reasons to proceed differently, we have chosen to adhere rather closely, even slavishly to the methods of analysis used by Wolfgang et al. (with one exception, yet to be described). The rationale for this is that, after all, our major purpose in undertaking this study was to make comparisons between Philadelphia and Copenhagen with respect to delinquency and associated factors. As indicated earlier, there are already factors that one would wish to be identical in the two studies that, in fact, one cannot control. It seems to us foolish to add more factors to this list if we have the power to make them equivalent. Our goal has been to minimize differences of form and technique to every extent possible to maximize our ability to attribute substantive meaning to the differences and similarities that are

found. Thus, we have chosen to remain as close as possible to the methods used with the Philadelphia cohort.

The first five data chapters will be modelled rather closely on the Philadelphia book. The issues in these chapters will concern the description of the delinquent population and its characteristics. The first three of these chapters form a progression of analyses starting with a comparison of the general delinquent population with non-delinquents and proceeding to analysis of more delinquent groups and their differences from less delinquent groups. The last chapter in this series is (as was the case with the Wolfgang et al. book) an analysis of the chronic offender, followed by an analysis of the violent offender. The last two chapters describe the relationship between age and delinquency, also in much the same manner that the Philadelphia delinquents were described.

While most chapters are closely parallel to the Philadelphia study, the reader may note some differences. While Wolfgang et al. meticulously described each table and equally meticulously avoided interpretation, we will do less of both. That is, we will do less detailed descriptions of the numbers in the table and more interpretation. This difference is facilitated greatly by the fact that this is, quite specifically, a comparison while the Philadelphia book stood alone. Comparison inspires interpretation, perhaps even requires it.

The one chapter that does not closely parallel the Wolfgang et al. book concerns the issues of specialization in delinquency. While we address similar issues, we analyze the data differently.

We considered the Markov chain analysis too restrictive a test of specialization. For instance with the Markov method contiguous offenses have to be of the same type in order to be considered evidence of specialization. We take the position that there is an interesting degree of specialization even if several of the same type of offense are separated by one or two other types of offenses. This view, naturally, led to a different type of analysis. The one topic addressed by Wolfgang et al. that we do not address in this volume is the question of the effect of sanctions on subsequent delinquency. This will be addressed in a separate volume.

Finally, the concluding chapter will consist of a detailed consideration of the major findings from previous chapters. Here we will consider possible explanations for the findings and investigate the evidence that supports or detracts from them.

References Chapter 1

Erickson, M.L. Delinquency in a birth cohort: A new direction in criminological research? Journal of Criminal Law and Criminology, 1973, 64(3), 362-366.

Farrington, D. Review of delinquency in a birth cohort. British Journal of Criminology, 1973, 13(3), 297-299.

Wolfgang, M.E., Figlio, R., & Sellin, T. Delinquency in a birth cohort. Chicago: University of Chicago Press, 1972.

Chapter 2

METHODS

This population was originally identified to study the issue of whether men with sex chromosome anomalies, particularly the XYY configuration, were unusually prone to criminally violent acts. An important goal of the study was to identify all "XYY" males in a total birth cohort (Witkin, Mednick, Schulsinger, Bakkestrom, Christiansen, Goodenough, Hirschhorn, Lundsteem, Owen, Philip, Rubin and Stocking, 1977). The total cohort was defined as all males born to women residents of Copenhagen, during 1944, 1945, 1946, and 1947. All births in Denmark are recorded in local parish offices. A team of assistants visited each of 72 parishes in Copenhagen and recorded the names and birth dates of the population which totalled 31,436 men. By reference to the Folkeregister (the Danish national population register) we obtained all current addresses for the population and other identifying information.

Subjects excluded. We wished to exclude from the population men who had died or left the country before attaining an age which would have permitted them to initiate criminal activity. Of the 31,436 men, 1,791 had died by 1973; 58 could not be traced (probably because of death at birth, name changes, or address change at birth) and 703 had emigrated. Of the 703 emigrants 85.2% had left the country before the age of 18; very likely emigration was the decision of their parents. These exclusions left 28,884 men who lived to their 26th birthday and could be located in Copenhagen.

The tall group. All men in Denmark attend a draft board physical examination by the age of 26. From the draft board files we obtained information on the subjects' height, test intelligence and education. For the XYY study, blood samples were needed from each subject for the karyotyping. Since this process is expensive and time consuming, the number of subjects to be karyotyped had to be restricted. XYY men tend to be rather tall (Bartlett, Hurley, Brand and Pook, 1968; Crandall, Carrell and Sparkes, 1972; Owen, 1972).

In order to maximize chances of locating XYY men, it was decided to do chromosomal determinations of all men in the top 15 percent of the height distribution for the Danish male population. A cutoff point of 184 cm was used in identifying the tall group. The resulting group consisted of 4,578 tall men.

Tall subjects were seen in their homes for the blood sample (the team of medical and dental students who went out in the evening for these samples were dubbed "The Vampires.") The 4,139 men for whom sex chromosome determinations were made constituted 90.8 percent of the starting group of 4,578 living tall men. Of the 419 unexamined cases, 174 men declined the participate; 138 emigrated in the course of the study or were sailors at sea; 25 were destitute men without identifiable homes; and 82 men, after repeated visits, were not found at the addresses listed for them in the Folkeregister. The tall subjects are of interest to the

---

*This constitutes 20 more men than were reported in the original article (Witkin, et al. 1976). This resulted from the fact that additional subjects became available for blood samples subsequent to the first report of the data.

current investigation since at the time bio-samples were gathered, they completed a brief questionnaire inquiring as to their marital status, occupation, number of children, parent's occupation and martial status.

Data

Criminality Information. The source of data on conviction for criminal offenses was penal certificates obtained from penal registers (strafferegistrene) maintained in the offices of local police chiefs. These certificates are extracts of court trial records and cover all violations of the penal code that resulted in convictions. Offenses in the Danish penal code are very similar to our own. Where there are small deviations they are noted in the text. However, the issue is not serious since we generally deal with broad categories for analytic purposes (see Chapter 3 for fuller discussion). The one difficulty that required serious adjustment concerned status offenses. They are not defined as offenses in Denmark but they constitute a substantial portion of the Philadelphia cohort offenses. This issue is addressed in detail in Chapter 4.

The penal certificates contain highly reliable information concerning the section of the penal law violated and the penalty imposed. In order to identify a man positively among conviction records, his name, birthdate and birthplace had to be available.

Information on arrests was obtained from the National Police Register (Rigsregistratur). This register maintains a national record of poice contacts with the Danish population. For many minor types of criminality that do not lead to court convictions,

this register is the only possible source. Delinquent acts committed before the age of 15, traffic offenses, and a variety of minor offenses associated with alcohol can be ascertained only in this register. It also contains a record of the more serious crimes. It was established in 1930; for earlier years it includes a collection of local registers.

Karl O. Christiansen has written regarding the Danish law enforcement process concerning its statutory uniformity in the treatment of the offender by police and courts. "Police officers are legally required to report cases if they have a suspect. They are not permitted to make judgments in such matters. An elaborate court appeals system is aimed at achieving national uniformity of sentencing. The social status of a Danish police officer is comparatively high; they are regarded as being incorruptible." (Christiansen, 1977 page 93).

Wolfgang has noted that "the reliability and validity of the Danish record keeping system are almost beyond criticism. The criminal registry office in Denmark is probably the most thorough, comprehensive, and accurate in the Western world. (1977 p.v). These issues will be addressed in more detail in Chapter 3.

IQ/Achievement. The measure used for this aspect of the study is a screening test developed by Borge Prien for the Danish draft board. (Rasch,1980). It is called the Borge Priens Prover (BPP) test. As with American-based tests, the scores can be interpreted as measures of intelligence and/or achievement. The test includes fewer scales than the typical American IQ test, but

correlates .85 with WAIS scores.

Socioeconomic status (SES). The parents' SES was classified primarily according to the father's occupation at the time of the subject's birth. For those few cases with no information on father's occupation, mother's occupation was used. The system for classification was derived by a Danish sociologist, Svalastoga (1959). It rates social class according to prestige ranking of occupations. We utilized a seven-part scale adapted from Svalastoga's scaling procedures. However, in line with our policy of replicating Wolfgang et al's measures, we have dichotomized the population on the variable of social class, and all analyses in this report are dichotomized versions of the variable. This was done in a manner to yield as close to an even split as possible between higher and lower classes. The result is 55% categorized as lower and 44% as higher class.

School Completion. This information was obtained only on the tall men although it came from draft board records. The information relevant here is data on the type of schooling obtained, grades completed, nature of coursework, and year in which schooling ended. In Denmark there are eight years of compulsory schooling. The first six (primary school) are the same for everyone. The following two or three years constitute "middle School" and may be taken with or without a final exam. The last of the three-year middle school years may be taken as a part of a three-year preparation for the "real" exam oriented to commercial training. Finally, the middle school "exam" course may lead to the three-year gymnasium (analogous to our high school,

but a little more advanced) which is the route to university admission. The data set used here includes variables (1) making each of the distinctions indicated here (2) indicating the absolute number of years of schooling and (3) the highest exam passed. In this report, the major use of this information is as a measure of number of years of schooling completed. At the completion of gymnasium, the student will have completed the same number of years of schooling that an American student has completed upon graduating from high school. Thus, the number of years is a meaningful variable to use for comparison.

The Tall Subpopulation

The use of only the tall men in the analysis of a few of the variables (IQ/Achievement and school completion) raises the question of the representativeness of this group relative to the entire population. In this section we will make this comparison.

We have compared the tall men with the short men on three variables: social class (of parents), subjects' marital status and percent of the subpopulation that have been arrested. The data indicate that 65.5% of the short men fell into the lower class category (dichotomized) compared to 50.7% of the tall men. However, only a few more short men were married compared to tall men; 52.0% versus 49.4%. Short men (as we might expect, given their overrepresentation in the lower class category) were arrested more often: 10.8% versus 6.6% for the tall men. The tall men, then, were slightly less often married by age 26, were of higher class and less often arrested. How do these facts affect generalization from the analyses that use only the tall

men?

We must determine whether the results of the analyses we will complete on the tall subgroup on these two variables may be safely generalized to the remainder of the population. For example when we examine the relation between IQ and delinquency for the tall subgroup can we safely generalize these results to the shorter subjects?

One way of shedding light on this question is to analyze the relation between social class and delinquency separately for the tall and short subgroups. If delinquency varies with social class in the tall subgroup in the same manner as it does in the short subgroup this would encourage us to generalize the IQ/achievement and school completion findings.

Table 2.1 presents the arrest rates for the short and tall groups as a function of social class. As we noted earlier, the tall subgroup has a lower percent of arrests.

For the short subgroup the ratio of lower class/higher class is 2.69; for the tall subgroup this ratio is 2.70. With respect to social class it is clear that despite differences in arrest rate level the effect of social class on arrest rate seems quite comparable in the two subroups. This will encourge generalization of the IQ/achievement and school completion-delinquency relationships noted for the tall group.

References Chapter 2

Bartlett, D.J., Hurley, W.P., Brand, C.R., & Poole, E.W. Chromosomes of male patients in a security prison. Nature, 1968, 219, 351-354.

Christiansen, K.O. A preliminary study of criminality among twins. In Mednick, S.A., & Christiansen, K.O., (Eds.), Biosocial bases of criminal behavior. New York: Gardner Press, 1980.

Rasch, G. Probabilistic models for some intelligence and attainment tests. Chicago: The University of Chicago Press, 1980.

Svalastoga, K. Prestige, class and mobility. Copenhagen: Byldendal, 1959.

Witkin, H., Mednick, S.A., Schulsinger, F., Bakkestrom, E., Christiansen, K.O., Goodenough, D.R., Hirschhorn, K., Lundsteen, C., Owen, D.R., Philip, J., Rubin, D.B., & Stocking, M. Criminality, aggression and intelligence among XYY and XXY men. In Mednick, S.A. and Christiansen, K.O. (Eds.), Biosocial bases of criminal behavior. New York: Gardner Press, Inc., 1977.

Table 2.1

Percent arrested before age 18 for nontraffic offenses by SES and Height Subgroups

		Height	
		Short	Tall
SES	Low	13.7	8.9
	High	5.1	3.3
		ratio=2.69	ratio=2.70

Chapter 3

ISSUES IN CROSS-CULTURAL RESEARCH

It is quite common for comparative researchers to indicate that there is a great need for more cross-cultural research since it increases the generalizability of our theories (Bendix, 1963; David and Scott, 1973; DeFleur, 1967; Vaz, 1962; Levine, 1970). This advantage is, indeed, apparent; however, there are other advantages as well. On the other side of the coin of generalizability, for instance, is the fact that comparative research indicates the limits of applicability of our constructs and theories.

Warwick and Osherson (1973) propose three more benefits. First, comparative research forces researchers to clarify the meanings of concepts. Definitional sloppiness can pass unnoticed in familiar settings, but concepts must be cleaned up to be sure they are properly applied in another culture. Second, theories should cover the full range of the behavior they explain. No one culture contains the full range of any behavior, so going to another culture usually increases the range to be studied. Third, when the limits of generalizability are encountered, new hypotheses emerge as a part of this discovery.

Cross-cultural research does not present only advantages, however; there are dangers as well. Paradoxically, some of the very advantages of cross-cultural research also provide fertile ground for dangers and pitfalls. The reader will notice a certain overlap between the above stated advantages and the discussion of the risks offered below.

Levine (1970) has written a rather comprehensive review of comparative research in child development and the issues generated by this research. He concludes that three types of local information are needed in doing comparative research in this area, each implying inherent dangers to be guarded against. They all fall into three categories: 1) distributions on independent and dependent variables 2) confounding variables and 3) cultural constants.

Distributions on independent and dependent variables

Literature

It is important to determine that the distributions on the independent and dependent variables of one's research are adequate. Within this category we have identified three separate distribution problems worthy of attention.

Truncation. If the distribution of cases on a variable is severely truncated or restricted, the problems for testing hypotheses concerning this variable are clear. Equally obvious is the fact that we cannot assume that because a variable has a wide distribution in our culture that it will in other cultures as well. The example used by Levine to demonstrate this problem is that of Ainsworth's (1967) research in East Africa. In this area of Africa, ancient custom prescribes that infants be separated from their mothers at weaning--a practice believed to be common. In fact, however, very few families carried out this separation at weaning. Rather, almost all families adhered to the

newer practice of postponing the separation and doing it gradually. This "truncation" problem caused the research to be aborted.

Location on the Continuum. Another potential distribution problem relates to the fact that there may be variation on all variables of interest but the variation may occur at a point on the continuum that is different from the analogous point in this society. For instance it could be that in some third-world countries family size varies (on the average) between five children and ten, while in the U.S. variation centers between one and five. This could well have meaning for the relationships observed between family size and delinquency. It may be that the effect of five versus one child is much larger than the effect of ten versus five. In other words, we must think specifically about the applicability of any hypothesis we are testing to all points in the continua of its constituent variables.

Absence of Variables. Yet another issue that can be thought of as a distribution problem, and can easily impact the unwary comparative researcher, is the possibility that some variable critical to one's theory may simply be absent in the culture being studied. This problem was faced by DeFleur (1969) in trying to test Cohen's theory of the "reaction subculture" of delinquency in Argentina. Central to the notion of "reaction" in Cohen's sense, is the concept of individual status striving. The concept proved to be virtually absent in Argentina, making the entire theory irrelevant there. Something was still gained from the research but the value was considerably reduced compared to

what it could have been with adequate advance knowledge of the culture.

This Study

The variables used in the present study are quite limited in number. It is easy, therefore, to discuss them individually with respect to the issue of distribution. The central variables of this study are: IQ/Achievement, Number of school years completed, Social Class (SES), Age, and Delinquency.

IQ/Achievement. IQ was measured with a single instrument which is different from those used in Philadelphia (where different ones were used, depending on the school) but the were standardized in similar ways and tapped similar dimensions. It is impossible to use these specific tests to see if IQ is distributed somewhat differently in Denmark. Studies on Danish populations with other U.S.-derived IQ tests have clearly shown almost equivalent distributions of IQ scores in the two nations.

School. The range of school years to be completed before university entrance in Denmark is about the same as it is here. However, within this range there is a considerable difference in the distribution of cases across the range. This difference in distribution is tied up with the difference in the two school systems and the meanings associated with education. This will be discussed in some detail in a later section. However, to illustrate the difference, we can say here that, while about 75% of the U.S. population graduates from high school, only 47% graduate from its rough equivalent in Denmark. Only 14 percent of Danes graduate from the form of high school (Gymnasium) that leads to

university entrance while 33% graduate from a lower form of high school.

Social Class. The specific variable that we use for social class in this study is a dichotomy which is quite deliberately divided so as to yield approximately the same proportion in each category. The underlying distribution of social class in Denmark, however, is a different and more complex matter. This too, will be discussed in a later subsection that is concerned with the social meanings of the variables considered here.

Delinquency. The distribution of delinquency in the Copenhagen population is, to a very large degree, the subject of this volume. Its overall distribution, its joint distributions with the other variables, and how it is affected by other variables are described in some detail. It would not be feasible, therefore, to address this issue in any depth here. We can say, however, that there are some differences in distribution for some offense types and this fact allows us to consider the effects of the standard variables of age, school, class and IQ/achievement given a different prevalence and distribution on the dependent variable of delinquency and its various types.

Confounding Factors

Literature

A factor with powerful (negative) effects on testing hypotheses in another culture is that of confounding variables that are unique to the culture being studied. That is, we may

think we are testing the relationship between variable A and variable B when, in fact, variable C, which is a part of the foreign culture, is actually accounting for the relationship (or its absence). An example of such a problem is related by Bendix (1963) who discusses some problems with the concept of urbanization. It is generally thought that urbanization results in isolation, alienation, and freedom from constraints for individuals. This relationship, however, has been challenged by the situation in India where ties to family members living in the village remain strong even with residents of urban areas. This fact has far-reaching implications for the effects of urbanization as we have traditionally conceived of it (Shelley, 1981; Clinard, 1973). The strength of the family ties in India represents a confounding variable which, if unknown, would muddy the waters of any hypothesis testing concerning urbanization in India.

Another example that illustrates the point well, and gives the criminologist pause, is pointed out by the work of David and Scott (1973). They compare the rates of certain types of offenses in Argentina with those in the U.S. They point out that some offenses that are frequent here are not there, and vice versa. For instance, there is less shoplifting in Argentina than here. They point out that this is because there is less self service in Argentina stores, and, therefore, less opportunity for shoplifting. Similarly, their auto theft rate for juveniles is much lower than ours. This is directly attributable to the fact that there is less focus on youth culture in Argentina, and therefore, less use of automobiles by youth there. This leads to

less need or desire for such thefts. In both cases, then, there were variables (opportunity and need, respectively) associated with the culture that alter the nature of relationships to which we are accustomed. Any test of hypotheses relating to shoplifting or auto theft by juveniles in Argentina would have to take these confounding variables into account. Otherwise, the results of the study could be very misleading. Of course, these particular examples are simple and obvious ones, but the problems can be more subtle and complex.

Another example of this problem can be seen in Mauritius. For Indo-Mauritians the ideal Mauritius is the joint family. However, it is also true that this type of family is more practical for the more prosperous Hindu and Muslim families. As a result, family size is likely to be related to social class. If this weren't known the effects of family size and social class might well be confounded (Benedict, 1961).

This Study

The issue of confounding variables was considered constantly in the course of the present study. It is an everpresent danger. There is some limited reassurance from the fact that we are studying a western culture which has much in common with ours since our roots are in European culture. It is, therefore, not rife with strange (to us) perspectives, religions and customs that we might find in some undeveloped countries. Nevertheless, there are still differences. Informal observations and conversations reveal that there is less age segregation, more respect for authority and rules, less anonymity, and more homogeneity

(racially and culturally), to name a few that are potentially relevant in a study of delinquency. All of these factors and more are potential confounding factors in a study of crime and delinquency. When the variables under investigation relate to one another in familiar ways, our concern is less than when the relations seem odd to us, and the former is often the case. Still, the concern is there and always under consideration. We cannot ever be sure that we have eliminated the possibility that we have misinterpreted relations due to unknown confounding variables. We have some reason to expect that we have not gone too far afield, however, based on several visits to Denmark by the first author, several years of residence by the second, and, most of all, by the constant correspondence with a Danish criminologist, Preben Wolf, over the course of the study.

Cultural Constants

Literature

May actually represent a positive opportunity for research in other cultures, although if they are present but unknown by the researchers, they can be hazardous as well. In either case, knowlege of them is necessary. The term "cultural constant" refers to one of two situations: 1) a concept which varies in one's own society but does not in the society under study. Such a situation allows other variables of interest to be tested under constant conditions--a test not possible in the researchers' own society because the varying concept might constitute a confounding variable, and 2) a concept does not vary in either culture

but is constant in different categories across the two cultures. An example of this would be a study of the influence of peers on adolescents in a society where age segregation was minimal or absent compared to this country where it is a major feature of our culture. When we study the influence of peers here we may well get a very distorted picture of what is "natural" on this dimension simply because, as a society, we are far along the continuum of age segregation compared to other societies (even Western societies). Again, however, whether we choose to take advantage of cultural constants to improve our research or whether we seek to be on guard against the destructive effects of cultural constants,

we need to know enough about the culture we are studying to put our plans into effect.

This Study

When factors are troublesome, we are likely to call them confounding factors. When they are advantageous or useful we call them "cultural constants". There are two major examples of the use of "cultural constants" in this study. The first is race. Wolfgang, et al, were not able to untangle the effects of class and race. They could not address the association between the two variables. Because of the homogeneity of the Danish population, we are not able to attempt replication of some of the Philadelphia findings that concern race, but at the same time, the effects that we designate as "class" effects cannot be confused with race effects. Nor can we attribute to race what is actually class. To this extent, the constancy of race in Copen-

hagen is an advantage.

The second constant which is of use to us in this study is the Danish school system. This is a factor that is relatively constant and different between the two cultures. Naturally, the school system is not completely foreign to ours; there is just enough difference to make the comparison meaningful and interesting. The Danish system has already been described; here it is appropriate to indicate that the difference in the school systems is invoked to explain certain differences in the age distribution of delinquency.

The issues discussed so far have come from the psychological literature on comparative research. A reading of the sociological literature reveals very similar issues, but adds a few others.

Construct Universality

Literature

Bendix (1963) and Warwick and Osherson (1973) have observed rather articulately that sociological (or psychological) constructs should be universal--certainly we strive for that. However, they warn us, even though they may actually be universal as constructs, their manifestations may well differ in different cultures. For example, the construct of "strain" and its relation to deviant criminal behavior may well be universal on an abstract level, or even on a concrete level. However, the work of Wood (1963) points out the very real possibility that what

constitutes strain in the United States may well be different than it is in Ceylon. One important manifestation of strain in Ceylon is the inability to acquire land to cultivate. This is more salient to some castes than others since some castes are more tied to cultivation than others; it is also related to which areas (and therefore castes) were more affected by British expansion. Certain areas of Ceylon were taken over by the British to establish large tea, coconut and rubber estates. This was done at the expense of the small local farmers who not only earned their living at farming, but attained standing within their caste through this means. The resulting scarcity of land deprived many of this caste of the opportunity to achieve. Access to the means of legitimate achievement was thus very restricted. This condition was shown to be empirically related to crime rates, thus supporting the strain hypotheses. These hypotheses would never have received an adequate test in this culture in the absence of knowledge of what constitutes strain locally.

More disturbingly, different manifestations of a construct may also change the meaning of the construct. In this connection, Bendix (1963) gives the example of the construct of "ascribed status". This has been defined as status that is not achieved through individual efforts but rather is inherent in the status or characteristics to which one is born. The difference between ascribed and achieved status has been shown to be meaningful in many contexts. However, Bendix points out that the meaning of ascribed status varies a good deal depending on whether the status reflects a long aristocratic lineage, or sta-

tus acquired through purchasing titles, or being born beautiful by local standards. The meanings of such ascribed statuses are quite diverse and would have differential relevance to many theories of status. Certainly this problem leads to lower analytic utility of the construct, and should be discovered at the earliest point possible in the research. The latter type of problem could render the research useless while the former simply requires that the correct manifestations of the construct be discovered. (Of course, not discovering this would also render the research useless in the end.)

This Study

None of the constructs that are used in the present study seem to be characterized by the problems described by Bendix. The various manifestations and components of the construct of social class, for instance, are quite similar in Denmark and the U.S. We suspect that more abstract constructs are more subject to these problems. We have nothing that compares to such constructs as strain or ascribed status in level of abstraction. There are potentially different social meanings associated with certain concepts, but these will be discussed in the next section.

Meanings

Literature

Warwick and Osherson (1973) very cogently point out that the 'same' variables may have quite different social meanings

attached to them in another culture than they do in the culture of the researcher. This, in turn, can have devastating effects on the relations observed between them and other variables involved in an hypothesis. An example of this potential problem is encountered in the research of David and Scott (1973). In Argentina, these researchers make it clear that fighting (and therefore assault) has a quite different meaning than it does in the U.S. First, the people of Cordoba, Argentina, are in general, more physically expressive than we are. Second, fighting in Cordoba is an accepted way of settling disputes. From that fact we would infer that such behavior requires less "abnormality" in the individual than the same behavior would here. This fact would not bode well for a researcher testing hypotheses relating psychological or physiological abnormality to aggressive behavior defined by fighting.

Another extension of this issue is pointed out by Warwick and Osherson (1973) in indicating that a particular variable may simply have more or less salience in one culture compared to another. The definitions may not be different, but the issue is simply not accorded much importance. Of course, this too would have implications for the causes of such behavior.

Another, less serious, problem of definition is pointed out by Shelley (1981). She states that no two countries exhibit exactly the same definitions of criminal behavior. What is legal in one country often is not in another. If the researcher is interested in explaining a very specific type of criminal behavior s/he would be well advised to be sure that this type of

behavior is discriminated in the penal code of the country where the research is conducted. For the most part, however, such problems can be solved by grouping theoretically similar types of behavior into more general categories. This is usually necessary in any case in order to produce a reasonable distribution of crimes.

This Study

Social Class. On one hand, one would expect the concept of social class to be more entrenched, more salient, more important in a European culture such as that in Denmark. It is not meaningless that some Europeans will respond to open-ended questions asking for their social class with "peasant", while Americans would not (Rogoff, 1953). An area of the world whose history includes the feudal system, monarchies, nobility, etc., is not likely to have rid itself of strong class distinctions by the 20th century. Indeed, in our own study, and in official Danish publications Socialforskningsinstitutet, 1976) class is shown to have a very strong effect on amount and type of schooling, for instance.

On the other hand, Denmark is a social welfare state. From this we would (and did) expect a more even distribution of wealth and income in Denmark. We thought there would be less objective class distribution, but left open the possibility that subjective distinctions would still be powerful. We were wrong about the objective distinctions of income and wealth. Figure 3.1 presents Lorenz curves of income for the United States and for Denmark in 1971. To the extent that the cumulative distribution of income

deviates from the cumulative per cent of the population (as shown by the straight diagonal line), the distribution of income is uneven. In this figure, the United States is closer to having an even distribution than Denmark. Of c neither curve takes into account taxation. Both curves would be somewhat evened by this factor, the Danish, perhaps, a bit more. (But in any case, the distributions are not dissimilar.) Objective class distinctions,then, appear to be similar to our own. This does not, however, constitute reassurance that subjective attitudes are the same. Class attitudes are actually likely to be stronger in Denmark than here.

School. During the school years of our own Danish cohort the Danish school system was quite complex, certainly more so than the U.S. system. There were some fundamental differences. Perhaps the most general one was that the Danish system was more explicit about the practical, job-related goals of education. There were accordingly, multiple tracks that a student could take each leading to a different category of occupation. Specifically, higher level academic education (university and preparation for it) was reserved for the very few.

First, compulsory education ends at age 14. At this age, there were numerous apprenticeships and vocational training programs available to the student. Before, this, however, a significant choice was made by the student, his parents, and teachers. At the age of 12, a choice was made to 1) take two more years of primary school that would lead to an examination-oriented "middle school" (mellem-skole or 2) two more years of primary school in

anticipation of a shorter, less demanding course (no exam) in the subsequent middle school, or toward school-leaving at the age of 14. The examination-oriented "middle school" could lead either to 1) a commercially -oriented program (realskole) or lower secondary school or 2) the university-oriented gymnasium (upper secondary school). Examination-oriented middle school lasted four years, and gymnasium lasted three years. There are several refinements within each of the categories described, but this gives the general picture. The vocational and commercial tracks were tied closely to the relevant trade unions which had a major impact on curriculum. Of course apprenticeships were also tied both to the schools and trade unions. There were, in short, more choices and there was more apparent relevance of schooling to future occupations. Further, employment was more likely to follow schooling in a predictable way. And, as indicated earlier, social class was highly related to the choices that were made. Only 14% went to gymnasium (as of 1971) and almost all of these students were from the higher classes.

Delinquency. As one might expect of a western, industrialized culture, definitions of delinquent behavior are not grossly different from our own. Formal and informal definitions and meanings result from the penal code, the criminal justice system and custom. Naturally, there are some differences in each of these areas, some of which affected the progress of the study.

One fundamental similarity in the two systems is that both systems are basically adversarial. A fundamental difference between the two is that while in the U.S., there is a separate

juvenile justice system, in Denmark there is not. After attaining the age of 15, Danish youths are treated as adults, except that they will usually have a representative of the social welfare authority present at all stages, in addition to legal counsel.

Before the age of 15, children cannot be arrested, charged, tried, convicted or sentenced. They are under the jurisdiction of the social welfare authorities, whom the police must contact immediately upon picking up a child for any reason. This has implications for the accumulation of records. If a person is arrested, the arrest must be recorded in a central register (from which our data come). Therefore, since children (below 15) may not be arrested, the police are not required to record the contact they have with children. In practice, however, they often do, as indicated by the age distributions of this study (see Chapter 11). It is, of course, not uncommon for U.S. police to refrain from recording contacts made at an early age as well, it simply is not formalized. It is hard to document, but police and criminologists in Denmark agree that if there is a bias in the practice of recording contacts before the age of 15, it is in favor of recording the more serious crimes. This, also, is not unlike the U.S. case.

After 15, a youth (just as an adult) is subject to the tightly woven product of law and tradition that characterizes the Danish criminal justice system. There is clearly less discretion exercised in the Danish system, although it cannot be said to be devoid of discretion. When police make an arrest, they must

charge the individual and hand the charges over to the prosecutor. There is virtually no plea bargaining with police or with the prosecutor. The charge either goes forward to the courts, or it is dropped. It is rarely dropped. Dropping charges is almost always done in the case of youths charged with some sort of thievery, but the charge remains on the record, and there will be official conditions for the dropping. If the conditions are violated, the youth will be charged. In addition to the option of dropping charges (rarely done, as indicated earlier), the prosecutor may also level fines without recourse to the courts. The court, of course, has all options open to it. (Jensen, Mednick and Van Dusen, 1983).

In spite of the rather rigid procedures governed both by code and by tradition, the system has a more humane orientation than our own. This is evidenced in the prison system which is much more open (Lonberg, 1975) and by the general demeanor of the police on patrol (as observed while riding with them).

The prison system is used relatively infrequently and for short periods of time (Lonberg, 1975). During incarceration, there is more freedom within the confines of the prison, contact visits from outsiders are allowed, and home furloughs are allowed for those with sentences above five months (Jensen, Mednick and Van Dusen, 1983). Physical conditions within the prison are more pleasant. In addition, one of the sentencing options available to the court is "haefte", colloquially translated to "easy jail". This is frequently used, and allows more freedom yet, as well as shorter terms. Other sentencing options are very much like our

own: conditional sentences (like probation), fines, and prison. They are all used more lightly and humanely than our own.

Police are very polite; guns and clubs are less in evidence (although they are available). The underlying difference in demeanor between Danish and U.S. (urban) police is a vast difference in level of fear. On more than one occasion, we saw police turn their backs on unrestrained suspects. Much less care was taken approaching suspects and handling them. This is quite a difference from the behavior of U.S. urban police.

These differences would seem to reflect a difference in <u>informal</u> controls on behavior. Informally, there appears to be <u>less</u> tolerance for deviance. Some may argue that the humaneness of the system is a <u>cause</u> of a lower violence rate (described later in the volume), but it is surely <u>at least</u> in part an <u>effect</u> of the lower rate of violent behavior. Police in this country could not afford to be as careless or easygoing as their Danish counterparts are. One could say that a certain politeness pervades the system and its clients compared to our own. This fact is worth remembering in the course of reading (and writing) this volume.

One more fact about the Danish system that has had a direct impact upon this study flows from the fact that Danish youths are treated in the same system and by the same code as the adults. Status offenses are not treated in the criminal justice system. They are handled either informally or by the social welfare authorities. Since status offenses constitute a large portion of U.S. (Philadelphia) offenses during the relevant time period of

this study, several adjustments had to be made in some of the analyses. They will be described as they arise.

References Chapter 3

Ainsworth, M.D. Infancy in Uganda: Infant care and the growth of love. Baltimore: Johns Hopkins University, 1967.

Bendix, R. Concepts and generalizations in comparative sociological studies. American Sociological Review, 1963, 28, 532-539.

Benedict, B. Indians in a plural society. London: Her Majesty's Stationery Office, 1961.

Clinard, M.B. Crime in developing countries: A comparative perspective. New York: John Wiley and Sons, 1973.

David, P.R., & Scott, J.W. A cross-cultural comparison of juvenile offenders, offenses, due processes, and societies. American Society of Criminology, 1973, 11(2), 183-204.

DeFleur, L.B. A cross-cultural comparison of juvenile offenders and offenses: Cordoba, Argentina, and the United States. Social Problems, 1967, 14, 483.

DeFleur, L.B. Alternative strategies for the developmen. of delinquency theories applicable to other cultures. Social Problems, 1969, 17(1).

Jensen, K., Mednick, S.A., & Van Dusen, K. Children and youth and the Danish criminal justice system. In Klein, M. (Ed.), Western systems of juvenile justice. Beverly Hills: Sage Publications, 1983, in press.

LeVine, R.A. Cross cultural study in child psychology. In Mussen, P. (Ed.), Manual of child psychology, Vol. II, (3rd ed.) New York: John Wiley and Sons, 1970.

Lonberg, A. The penal system of Denmark. Copenhagen: Ministry of Justice, Department of Prison and Probation, 1975.

Rogoff, N. Social stratification in France and in the United States. In Bendix, R., & Lipset, S.M., (Eds.), Class, status and power. Glencoe, Illinois: The Free Press, 1953.

Shelley, L.I. Crime and modernization: the impact of industrialization and urbanization on crime. Carbondale: Southern Illinois University Press, 1981.

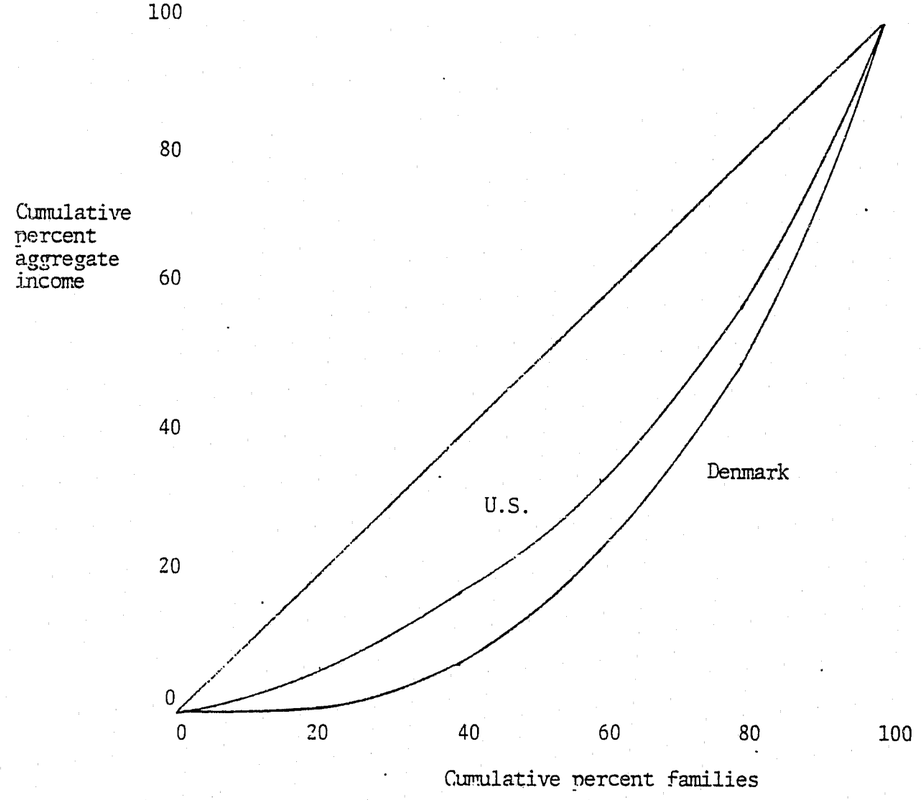
Socialforskningsinstitutet Levevilkar i Danmark, Statistisk oversigt 1976. Kobenhavn, 1976.

Vaz, E.W. Juvenile gang delinquency in Paris. Social Problems, 1962, 10, 23-31.

Warwick, D.P., & Osherson, S. Comparative analysis in the social sciences. In Comparative Research Methods. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Wood, A.L. A socio-structural analysis of murder, suicide, and economic crime in Ceylon. American Sociological Review, 1963, 26. 744-753.

Figure 3.1 Lorenz curves of income distribution in in Denmark and the United States--1971



Chapter 4

PREVALENCE AND NATURE OF DELINQUENCY

This chapter describes the overall characteristics of crime and delinquency in Copenhagen as well as the differences from crime and delinquency in Philadelphia. In addition, potential explanations for the differences are discussed including both substantive and methodological ones.

Table 4.1 indicates the simple prevalence rates of delinquency before the age of 18 in both Copenhagen and Philadelphia. The 10.3% rate for Copenhagen constitutes a substantial difference from the 34.9% rate reported for the Philadelphia cohort. This considerable difference immediately raises questions about the nature of the differences and the possible explanations for them. However, in order to help us consider explanations, we shall explore the nature of delinquency in the two cohorts.

Table 4.2 shows the distribution of crime types in the two cities based on independent categorization processes (the Philadelphia data were taken from table 5.3 in the Wolfgang et al book). The first column presents the percentage of the entire number of offenses that each category represents. The second column expresses the rate of offending for each category per 1000 cohort members. The percentage figure tells us how concentrated the cohort's crimes are in particular categories relative to others, while the rates per 1000 members express only how prevalent each type of crime is in the cohort compared to the other cohort, and is not dependent for its size on the presence or absence of other categories. It is clear from inspection of the table that

there are some categories of crime that are not comparable in the two cohorts. First, some traffic violations excluded from the Copenhagen cohort are included in the Philadelphia cohort. Second, burglary and larceny are separated in the Philadelphia cohort and combined in Copenhagen. Third, the very large category of "all other offenses" in the Philadelphia distribution strongly influences the percentages in the other categories since it constitutes over 40% of the cohort's offenses. This category (according to Wolfgang, et al) is mainly comprised of status offenses, a category foreign to the Danish justice system. This poses important difficulties in comparing delinquency in the two cohorts. In order to facilitate comparisons between the two cohorts, we shall recalculate Table 4.2 with certain modifications. First, the "all other offenses" category will be removed from the Philadelphia table since status offenses are not included in the Danish code. Second, traffic violations are removed from the Philadelphia list. Third, several other categories are removed from the Philadelphia side since they do not appear in the Copenhagen code.* Finally, the categories of burglary and larceny are combined in the Philadelphia list since they cannot be separated in the Copenhagen list. Table 4.2a presents the restructured Table. Looking first at the relative contributions of each crime category to the distribution (the per-

---

*Most of these categories are not really offense categories. They include "Hospital cases", "investigations", "minor distrurbances", "missing persons" and "reports affecting other city departments". They clutter comparisons between the two distributions unnecessarily and without benefit since they are not of any real interest in a study of delinquency.

cent column), we can see that both cohorts are dominated by the larceny/burglary category, but the dominance is much more lopsided for the Copenhagen cohort where these offenses constitute 57.7% of the distribution. The second largest category in Copenhagen is only 16.3% for vehicle theft, another property offense. This, compared to the very close second category in Philadelphia of 28.6% for disorderly conduct (versus 30.2% for burglary/larceny). The Copenhagen distribution is notable for the low frequency of violent offenses (homicide, rape, robbery, assaults). They are a very small proportion of the distribution compared to their number in the Philadelphia cohort. In fact, one could say that delinquency in Copenhagen is almost completely dominated by property offenses. Even public order offenses comprise only a very small portion of the total offenses, especially compared to Philadelphia.

The same ordering of offenses can be seen by looking at the rates per 1000 subjects; but we can learn something in addition from these figures. We can compare the absolute prevalence of the crimes in the two cohorts. It is interesting that the rates of property offending (especially burglary/larceny and vehicle theft) are really quite similar; Copenhagen shows 146.4 for larceny/burglary and 41.40 for vehicle theft while Philadelphia shows 184.2 for the former and 42.8 for the latter category. As we might expect from the percentage distributions, the prevalence of violent and public order offenses is strikingly different (and lower) in Copenhagen. A considerable part of the difference in overall delinquency prevalence seen in Table 4.1 is attributable

to differences in violence and public order offenses, then.

What other explanations are there for the large difference in overall prevalence (10.3% vs. 34.9%)? Perhaps the most obvious contributing factor to the difference is the presence of the status offenses in the Philadelphia figure. If we assume that all of the offenses in the "all other offenses" category are status offenses, then 40% of the Philadelphia arrests would be for status offenses. However, the estimate of the impact of this figure on the prevalence rate of 34.9% is complicated by the fact that some of the 40% status offenses will have been committed by youngsters who also appear in the distribution for criminal offenses. The correction factor must estimate the number of status offenders who commit no criminal law offenses. Such an estimate is not possible from the Philadelphia data. We have available, however, estimates from a Los Angeles County sample of first offenders (N=506) we studied (Van Dusen and Heim, 1981) In the Los Angeles County sample only 11.1% of the cohort of first offenders whose first offense was a status offense did not commit any criminal offenses. Almost all of these 11.1% were one-time status offenders. The entire group was followed for four years after first arrest. (Offenders over age 14 at first arrest were excluded since their exposure time as minors would have been too short).

In view of the lack of appropriate figures for Philadelphia we will use the Los Angeles County figures as estimates. Using the Los Angeles County figure of 11.1%as an estimate we can adjust the Philadelphia prevalence rate to 23.9%, a little over

twice the Copenhagen figure. (Naturally, this "adjustment" is not as precise as the figure "23.9%" seems to imply.)

It should be noted at this point, however, that this calculation probably represents an over-adjustment. In another study of eight counties in California, Van Dusen (1981) found that even in offenses which were charged purely as status offenses, an examination of the narrative descriptions of the acts often indicated criminal behaviors as well. These cases in Denmark would have been treated as criminal offenses since there is no provision for status offenses. The actual percentages of status offense arrests that also could have involved criminal charges ranged from 13% to 38%, with the median percent being 25 for the eight counties. Thus, not even all of the 11.1% "pure" status offenders cited above should actually be counted as only status offenders since any one of their charged status offenses may have also involved some chargeable criminal offenses (probably between 13 and 38%).

Another important possibility in the explanation of the different prevalence rates between the two cities is that citizens may be differentially willing to report crimes to the police or the police may be differentially able to make arrests or take action on reported crimes. Both of these potential differences could affect the statistics reported by the two countries. This issue is probably best addressed with victimization data; if the Philadelphia/Copenhagen victimization rate differentials agree with the arrest rate differentials, then we would be more confident that the arrest data reflect true differences in offending.

Toward this end, we have analyzed available victimization data in Denmark and in Pennsylvania.

While victimization data have been collected, the published reports for Philadelphia lack the detail that is reported for some other cities. One city on which data were collected and presented in detail was Pittsburgh (U.S. Department of Justice, 1977). Pittsburgh is, of course, a much smaller city than Philadelphia (about 1/2 million compared to almost 2 million), but the cities have the comparative advantage of being very close regionally as well as both being industrialized and urbanized. Other cities that are closer in size to Philadelphia that also have published victimization data (e.g. Houston) are very different geographically, culturally, etc. It is also reassuring that the victimization rates in Philadelphia and Pittsburgh are very close. For instance, the rate per 1000 population for violent offenses was 47 for Pittsburgh and 48.8 for Philadelphia. The rates for assault are 30 for Pittsburgh and 27 for Philadelphia. The rates for crimes of theft are 83 and 85 respectively. Interesting as well, is the fact that, of the assaults 16% resulted in injury in both cities. These figures were considerably closer than comparable figures for Houston, the city closest in size to Philadelphia on which detailed victimization data are published Consequently, we settled on Pittsburgh for the comparative analysis.

The victimization studies from which we drew data for comparison with Pittsburgh were reported by Wolf (1976) for four Scandinavian countries, including Denmark. Naturally, we

selected Denmark for the analysis.

As always, there are difficulties in comparing data from two studies, done independently, in different parts of the world, under different circumstances. The questions are never quite the same, the sampling is never exactly comparable, etc. Such is the case here. For instance, the sampling in Denmark includes rural areas to a greater extent that sampling in Pittsburgh. This would have the effect of attenuating the victimization rates in Denmark compared to what they would have been had they been based on Copenhagen only, and compared to the rates for urban Pittsburgh. We have no way to assess the extent of this problem.

A second problem is that the Wolf study reports <u>victim</u> rates while the Pittsburgh figures reflect <u>victimization</u> rates. That is, multiple victimization within the reporting period would be reflected in the Pittsburgh data but not the Danish data. We have made a correction for this problem and will describe it later. Other problems and solutions will be mentioned in the course of presentation.

The point of this analysis will be to determine whether the differences in crime rates noted in the two cities of Copenhagen and Philadelphia are real or can be explained by differences in citizen or police behavior. We will approach this question by making a ratio of victimization reports for Philadelphia vs. Copenhagen for specific types of crimes. We will then be able to compare this victimization ratio with the ratio of arrests for Philadelphia vs. Copenhagen. If these ratios are approximately equal then it will be clear that the arrest data do not simply

reflect differences in police behavior in the two cities. For example, if five times as many people report being assaulted in Pittsburgh as in Copenhagen then we have some reason to conclude that the arrest data differences between the cities reflect some aspect of offender behavior. There is one basic assumption that we must make. One ratio under analysis is based on all crimes of the birth cohorts over their lifetimes (up to age 18), while the other ratio is based on crimes of perpetrators of all ages during one slice of time (one year). Expectations of comparability are based on the assumption that cross-cultural <u>ratios</u> are constant: 1) for all age groups and 2) across age cohorts. Crime rates almost certainly change across cohorts and they most certainly change across ages, but the critical question is whether they change <u>differently</u> by culture. It seems to us not unreasonable to assume that the rates of change across ages and cohorts have not been grossly different between these two nations.

The first analysis will concern violent crime. We shall compare the ratio of victim reports in Denmark and Pittsburgh to the ratio of cohort arrests in Copenhagen and Philadelphia. To the extent that these ratios are different, we should suspect differential citizen reporting or police behavior. To the extent that they are the same, we should feel some reassurance that the arrest data are related to offender behavior. The Wolf study excludes rapes, robberies and murders, leaving only assaults. If we restrict ourselves to assaults that resulted in injuries requiring medical attention (to be sure that we are talking about roughly the same level of seriousness) the ratio of the two coun-

tries' rates is: 28.5 (5.70 Pittsburgh/120 Copenhagen).

If we make a correction for the fact that the Pittsburgh survey takes into account multiple victimizations within the reporting period, a slightly different figure is generated. Wolf found that those who were victimized were, on the average, victimized 1.3 times during the reporting period. It is appropriate then, to multiply the .2 per 1000 figure for Denmark, by 1.3. This yields a corrected ratio of: 21.9 (5.7 Pittsburgh/.26 Denmark).

The category of assaults resulting in arrest (police contact) does not make the distinction of requiring medical attention., But, the assaults in which police become involved tend to be the more serious assaults. This is the reason we restricted the assaults included in the victimization ratio to those requiring medical attention. The arrest ratio for assaults is: 22.2 (82.00 Philadelphia/3.7 Copenhagen). This figure is reassuringly close to the 21.9 figure from the victimization studies.

Theft figures can also be compared, but with a little more difficulty. Just as we controlled for the seriousness of the assault in the previous analysis, it would be desireable to control for the dollar amount of property loss in thefts. Unfortunately, this was not possible since the U..S. victimization figures do not indicate amount of property loss within the category of burglary. We will, therefore, have to consider all thefts; however, we can subtract attempts from actual thefts and we have done so. We have also used the same multiple victimization correction factor in this analysis although it was originally generated on the basis of assaults. It is doubtless, incorrect, but probably not grossly so. Using these corrections, the Pittsburgh to Denmark ratio is: 1.51 (225 per 1000, Pittsburgh/169 Copenhagen). the cohort-generated arrest ratio 1.12 (227 per 1000, Philadelphia/202 per 1000, Copenhagen).

In summary, while the analysis was necessarily gross, the similarity between the victimization and official data ratios is more reassuring than disturbing. We are left with more confidence that the property offense rates are quite similar between the two cities and the violence rates are extremely different across the two, and these comparisons are probably not grossly affected by citizen reporting behavior or police arresting and recording behavior.

Summary

The reported crime prevalence rate in Copenhagen, excluding traffic offenses, is less than one-third that of Philadelphia's; that is, the Copenhagen prevalence is a little over 10% while the Philadelphia rate is almost 35%. However, if we make adjustments for the fact that the Philadelphia rate includes status offenses while Copenhagen rate does not, the estimated Philadelphia rate is only about twice the Copenhagen rate. Nevertheless, the crime rate in Copenhagen is substantially less than in Philadelphia.

While the overall crime rates are quite different, the property crime rates are quite similar between the two cohorts. Violence and public order offenses account for the differences in overall rates. Finally, an analysis of victimization data was presented that indicates the differences in rates are probably

not due to different police or citizen reporting behavior.

References Chapter 4

United States Department of Justice. Criminal victimization surveys in Pittsburgh: A national crime survey report No. SD-NCS-C-16. LEAA, National Criminal Justice Information and Statistics Service, July, 1977.

Van Dusen, K. Changes in status offender handling. Implications of California's 1977 juvenile justice reform law. Vol. III of XI. Final Report to National Institute of Juvenile Justice and Delinquency Prevention, Van Dusen, K., and Klein, M., P.I.'s, 1981.

Van Dusen, K., & Heim, M. Delinquent careers of status offenders. Implications of California's 1977 juvenile justice reform law. Vol X of XI. Final Report to National Institute of Juvenile Justice and Delinquency Prevention, Van Dusen, K., & Klein, M., P.I's, 1981.

Wolf, P. On individual victims of certain crimes in four Scandinavian countries, 1970/74: A comparative study. Presentation to the Second International Symposium on Victimology, Boston, 1976.

Table 4.1

Delinquency Prevalence in the two cohorts

	Copenhagen	Philadelphia
Delinquent	10.3%	34.9%
Not Delinquent	89.7%	65.1%

Table 4.2

Distribution of offenses by offense types

Copenhagen

Offense	N	%	Rate
Homicide	1	0.01	0.0
Rape	9	0.09	0.30
Robbery	23	0.33	.80
Aggravated Assault	6	0.06	.20
Neg. Homicide	1	0.01	0.0
Theft/Burglary/Larceny	3903	40.45	146.40
Arson	18	0.18	.60
Auto, etc. Theft	1105	11.45	41.40
Other Assault	83	0.86	3.10
Forgery	38	0.39	1.40
Fraud	78	0.80	2.90
Stolen Property	256	2.65	9.60
Illegal Weapons	33	0.34	1.20
Prostitution	83	0.86	3.10
Sex Offenses	14	0.14	.50
Narcotics	0	0.0	0.0
Malicious Damage	209	2.16	7.80
Disorderly Conduct	366	3.79	13.70
Gambling	0	0.0	0.0
Road Violations	1018	10.55	38.10
Other Traffic	1862	19.29	69.80
Other	542	5.61	20.30

Table 4.2a

Type of Offense by Race of Delinquents

Philadephia

Offense	N	%	Rate per 1,000 Cohort Subjects
Homicide	14	.14	1.4
Rape	44	.43	4.4
Robbery	193	1.89	19.4
Aggravated assault	220	2.15	22.1
Burglary	642	6.29	64.6
Larceny	1189	11.64	119.6
Auto theft	426	4.17	42.8
Other assaults	537	5.26	54.0
Forgery and counterfeiting	5	.05	.5
Fraud and embezzlement	4	.04	.4
Stolen property	30	.29	3.0
Weapons	270	2.64	27.1
Prostitution	3	.03	.3
Sex offenses	147	1.44	14.8
Narcotics	1	.01	.1
Liquor la. iolations	273	2.67	27.5
Drunkeness	219	2.14	22.0
Disorderly conduct	1734	16.98	174.4
Vagrancy	21	.21	2.1
Gambling	89	.87	8.9
Road violations	4	.04	.4
Other traffic violations	37	.36	3.7
All other offenses	4097	40.11	412.0
Hospital cases	1	.01	.1
Investigations	9	.09	.9
Minor disturbance	1	.01	.1
Missing persons	3	.03	.3
Reports affecting other city departments	1	.01	.1

Table 4.3

Distribution of offenses by offense types

Copenhagen

Offense	N	%	Rate
Homicide	1	.01	0.0
Rape	9	.13	0.30
Robbery	23	.34	.80
Aggravated Assault	6	.09	.20
Neg. Homicide	1	.01	0.0
Theft/Burglary/Larceny	3903	57.67	146.40
Arson	18	.27	.60
Auto, etc. Theft	1105	16.33	41.40
Other Assault	83	1.23	3.10
Forgery	38	.56	1.40
Fraud	78	1.15	2.90
Stolen Property	256	3.78	9.60
Illegal Weapons	33	.49	1.20
Prostitution	83	1.23	3.10
Sex Offenses	14	.21	.50
Narcotics	0	0.0	0.0
Malicious Damate	209	3.09	7.80
Disorderly Conduct	366	5.41	13.70
Gambling	0	0.0	0.0
Other	542	8.01	20.30

Table 4.3a

Distribution of offenses by offense types

Philadephia

Offense	N	%	Rate per 1000 Subjects
Homicide	14	.23	1.4
Rape	44	.73	4.4
Robbery	193	3.18	19.4
Aggravated Assault	220	3.63	22.1
Larceny/Burglary	1831	30.19	184.2
Auto Theft	426	7.02	42.8
Other Assaults	537	8.85	54.0
Forgery & Counterfeiting	5	.08	.5
Fraud & Embezzlement	4	.07	.4
Stolen Property	30	.49	3.0
Weapons	270	4.45	27.1
Prostitution	3	.05	.3
Sex Offenses	147	2.42	14.8
Narcotics	1	.02	.1
Liquor Laws	273	4.50	27.5
Drunkeness	219	3.61	22.0
Disorderly Conduct	1734	28.59	174.4
Vagrancy	21	.35	2.1
Gambling	89	1.47	8.9
Minor Disturbance	1	.02	.9
Missing Persons	3	.05	.3

Chapter 5

COMPARING DELINQUENTS AND NON-DELINQUENTS

This chapter will be concerned with the differences between delinquents and non-delinquents in the Copenhagen birth cohort as well as how these differences compare to those seen in the Philadelphia cohort. The variables to be considered here are social class, years of school completed and IQ/ achievement as they relate to delinquency before the age of 18.

Table 5.1 shows the number and percent of cohort members who became delinquent before 18 years of age, by social class. In both cohorts, delinquency is concentrated in the lower class. However, the class effect appears to be larger in the Copenhagen cohort. If we make a ratio for Copenhagen of the lower class delinquency ~~to the~~ to the higher class rate (15/4), the ratio is 3.75. The analogous Philadelphia ratio is only 1.69. Clearly, given the fact that the class ratio is larger in Copenhagen and the fact that all rates (lower class,higher class, and overall delinquency rates) are lower in Copenhagen, the larger class difference is due to a exceptionally low rate of delinquency in the higher class. Figure 5.1 illustrates this fact.

A major theme in the Wolfgang, et al analysis is the dominance of race effects over class effects. It is possible that the race effects are at least in part a function of the cultural, economic, and educational disadvantage of Philadelphia blacks. As such, these race differences, would (at least in part) represent the more extreme social class effects which are not fully

tapped by the measure of social class used with the Philadelphia cohort (median income of census tract). It could be argued that in order to represent fully the range of class differences in Philadelphia, race must be considered.

In Copenhagen we have only Danes who are, of course, white. But inasmuch as we have identified a true birth cohort we have a full range of variation in social class in Copenhagen. In addition to comparisons between Philadelphia and Copenhagen in the effects of social status on delinquent behavior we will tentatively compare Copenhagen social status effects with Philadelphia race effects. Later in this volume these issues will be considered in some detail. In this case, we can see that the class difference in prevalence for Copenhagen is also stronger than the race difference in Philadelphia. The race ratio of delinquency rates in Philadelphia is 1.38, compared to the class ratio of 3.75 for Copenhagen.

The question of why there should be a larger class difference in delinquency in this welfare society than is the case in a very capitalistic United States city is an intriguing one, and will be analyzed and discussed throughout this volume. However, we must first consider some possibilities for methodological explanations of these findings.

One potential methodological explanation for the smaller class ratio in Philadelphia is the relatively large number of status offenders in the higher class, thus possibly inflating the Philadelphia higher class rate of delinquency. However, an analysis aimed at making an appropriate adjustment indicated that

this was not the explanation. While status offenses were a larger proportion of higher class offenses, the actual raw number of status offenses was about evenly divided between lower and higher status Philadelphia groups. Since there were more higher than lower class cohort members the adjustment affected their (higher class) prevalence figure less than it affected the smaller group of lower class cohort members. Thus, the difference in prevalence between higher and lower status actually narrowed after adjustment for status offenses.

A second, more potentially damaging methodological explanation for the different class ratios is based on a measurement problem. The Philadelphia cohort was categorized on social class based on the median family income of the census tract in which the subject lived. The Copenhagen measure was based on father's occupation. This is necessarily a measure involving less error if only because it is an individual-based measure, while the Philadelphia measure was census tract-based. There are other reasons as well that occupation is a better measure of class than census tracts, especially in Copenhagen, but its individual base is reason enough to take the issue seriously.

One option for making the cohorts more comparable on social class measures, was to develop a measure of class in Copenhagen based on census tracts (called sogne or parishes). We were advised against this by Danish consultants since there is extreme variation in class standing within most parishes. We subsequently confirmed this with analyses that compared social class classification based on occupations versus parish median income.

The two measures were virtually unrelated, thus discouraging further pursuit of this method of attaining equivalency between cohorts. Occupation of parents is not available for the Philadelphia cohort. How then, can we address this problem?

Our final approach is a conceptual one. We can think of the issue in terms of two competing hypotheses to explain the different class ratios in delinquency. One hypothesis is that the difference is merely a methodological artifact of different measures of social class. The second hypothesis is that there is a real difference in the two cultures in the salience and power of class in affecting life chances. If the latter hypothesis is true, we would expect that other variables that are correlates of social class or that are influenced by social class, would also be more strongly related to delinquency in Copenhagen. Two such variables are yet to be analyzed in this chapter and are measured equivalently in the two studies: IQ/achievement and years of school completed. Thus, if the larger class differences in Copenhagen are real, IQ/achievement and school completion should be more strongly related to delinquency in Copenhagen than in Philadelphia. If, on the other hand the methodological hypotheses is correct, IQ/achievement and school completion should be similarly related to delinquency in the two cohorts. Thus, we shall continue to pursue this issue over the course of the chapter.

School Completion and Delinquency

Table 5.2 gives the mean number of school years completed (for tall subjects only) broken down by social class and delinquency status in Copenhagen. The directions of the differences hold no surprises; lower class subjects completed fewer years of school than higher class subjects, and delinquents completed fewer years than non-delinquents. It is also interesting to note that, overall, the Philadelphia cohort stayed in school longer than did the Copenhagen group. In Copenhagen, the class distinction tends to be slightly larger than the delinquency distinction but the two distinctions are of very similar magnitude. The same patterns describe the Philadelphia data as well, except that the differences are, in general, smaller in Philadelphia. One factor that stands out in the Copenhagen data is the discrepancy between the higher-class non-delinquents and any other category; they are distinctive in their school completion. It is also interesting to recall in this context that in earlier analyses the higher class of Copenhagen is especially notable for its extremely low delinquency rate; we now discover that the higher class non-delinquents are especially notable for their tenaciousness in school completion. We will return to this observation.

To address the issue raised in an earlier section concerning the source of the apparent social class differences across the cohorts, we have produced Table 5.3. This table, for both Copenhagen and Philadelphia, expresses the means of years in school by delinquency status, collapsing across social class. Our interest is to determine whether the difference in school completion is greater between delinquents and non-delinquents in Copenhagen than it is in Philadelphia. If it is, we will take it as evidence that the greater class distinctions in Copenhagen are pro-

bably not simply reflections of measurement problems, but a real class difference between the two cities. If the delinquency distinction in years of schooling is the same or if it is smaller in Copenhagen, we would take it that the class distinctions in delinquency seen earlier were largely artifactual. It is clear from the table that for years of school completed there is a greater difference between delinquents and non-delinquents in Copenhagen (difference=2.4 years) than in Philadelphia (difference=1.0). We are, then, somewhat reassured that the social class effects observed earlier are real ones, but we will make another test of the data in the section concerning intelligence/achievement.

IQ/Achievement and Delinquency

For this variable data are available only on the tall men in the cohort. The intelligence test administered to the young men by the Danish draft board is described in Chapter 2, but it should be indicated here that the range, mean, and standard deviation are different on this test than the tests used by the Philadelphia school system. As is common for United States tests, tests used for the Philadelphia cohort had means of 100 and standard deviations of 15, This not true for the Danish IQ test. Therefore in order to be able to more easily and directly compare the data for the two cities we converted both to deviations from the population means expressed in standard deviation units (Table 5.4).

Patterns similar to those seen in the school completion data can be seen in these IQ data. First, for Copenhagen, the differences are all in predictable directions, with the lowest mean IQ

level appearing among the lower-SES delinquents, and the highest mean appearing in the higher-SES non-delinquents, with the other two categories falling between these extremes and rather close to each other.

Second, class differences in IQ are larger than differences by delinquency status. Third, the higher-SES non-delinquents' mean IQ is disproportionately high. This can be seen by comparing the difference between this cell mean and the means of the cells adjacent to it. These two differences are larger than their counterparts within the Philadelphia table.

In Philadelphia the ordering of the cell means is exactly the same as in Copenhagen, with the higher-SES delinquents scoring relatively higher than the lower-SES non-delinquents. Also, in Philadelphia, class differences in IQ are greater than delinquency status differences. Philadelphia differs from Copenhagen, however, in that the higher-SES non-delinquent category does not stand out disproportionately from the other three cells. This consistent feature is characteristic only of Copenhagen.

Another feature of the Copenhagen cohort is that the difference in IQ between delinquents and non-delinquents is greater than that found in Philadelphia, especially among the higher-SES youngsters. This is necessarily related to the fact that the higher-SES non-delinquenets in Copenhagen are disproportionately high in IQ/achievment. However, all differences among cells are larger in the Copenhagen data. This would seem to indicate that IQ as well as social class and school completion are more strongly associated with delinquent status in Copenhagen than in

Philadelphia.

One comparison that cannot be made adequately between Copenhagen and Philadelphia is that between absolute levels of IQ for equivalent table cells. The higher-SES category in Philadelphia contains a somewhat larger percentage of the cohort in this category than is true in the Copenhagen data set (exact equivalency was impossible). This would likely result in a lower mean IQ score for the higher-SES Philadelphia group compared to Copenhagen, and this distribution problem affects all four cells.

Once again, we take up the question of social class differences between the two cohorts, and whether their likely explanations are more substantive or methodological. In this case, as well as the school years completed, the difference between delinquents and non-delinquents on IQ/achievement is greater in Copenhagen than in Philadelphia. This is hardly a test that is independent of the school years completed test, yet it does add another increment of support for the substantive interpretation of the social class differences.

Summary

There were several observations of interest in this chapter. Social class, years of school completed and IQ/achievement are related to delinquency in similar ways in the two cohorts. However, all three are also more strongly related to delinquency in Copenhagen than in Philadelphia. With respect to social class differences we raised the possibility that the larger differences in Copenhagen might have simply reflected the fact that the Philadelphia measure of social class was a cruder, non-individual-

based measure compared to the Copenahgen measure. Given the cruder measure, we might expect weaker relationships with delinquency in Philadelphia. The differences were substantial, however, and seemed to merit further exploration. We hypothesized that since 1) level of schooling and IQ/achievement are variables related to social class and 2) since both were measured similarly (and by individual), the relations of school and achievement with delinquency should also be larger in Copenhagen if the social class differences were real and not artifactual. Conversely, if the school achievement variables were related to delinquency at the same (or weaker) level in Copenhagen compared to Philadelphia, we would take this as evidence that the apparent social class differences were artifactual. The former was the case, and we feel more confident of the social class findings as a result.

One further pattern was noted. The higher social class in the Copenhagen cohort is disproportionately low in delinquecy. In addition, the higher class non-delinquents are disproportionately high in school completion and IQ/achievement compared to the other groups in Copenhagen and compared to the analogous Philadelphia group. That group, then, seems to account for many of the differences noted.

Table 5.1

Number and Percentage of Delinquents and Non Delinquents by SES

Copenhagen

	Delinquents			Non Delinquents			Total	
	N	%	%	N	%	%	N	%
Low SES	2268	82.53	(15.40)	12,463	52.14	(84.60)	14,731	55.27
High SES	480	17.47	(4.03)	11,440	47.86	(95.97)	11,920	44.73
Philadelphia								
Low SES	2056	59.17	(44.85)	2,528	39.07	(55.15)	4,584	46.09
High SES	1419	40.83	(26.47)	3,942	60.93	(73.53)	5,361	53.91

Table 5.2

Mean number of School years completed for delinquents and non delinquents by social class

Copenhagen

	Delinquent		Non Delinquent	
	$\bar{X}$	N	$\bar{X}$	N
Low SES	8.0	178	9.3	1416
High SES	9.6	64	11.7	2183
Philadelphia				
Low SES	9.4	1752	10.7	2289
High SES	10.8	1277	11.6	3744

Table 5.3

Mean number of school years completed for delinquents and non delinquents collapsed across social class-Copenhagen and Philadelphia

	$\bar{X}$	N	$\bar{X}$	N
Copenhagen	8.4	242	10.8	3599
Philadelphia	10.3	3029	11.3	6033

Table 5.4

I Q in standard deviation units of difference by delinquency status and social class

Copenhagen

	Delinquents	Non-Delinquents
Low SES	-1.12	-.60
High SES	- .24	.42

Philadelphia

	Delinquents	Non-Delinquents
Low SES	-.20	.21
High SES	.42	.71

Chapter 6
RECIDIVISTS

Chapter 5 described how delinquent youth compared with non-delinquent youth in the Danish (as well as the Philadelphia) cohort. The variables of social class, IQ, and school completion were considered in this analysis. This chapter and the two following chapters will further develop these themes by applying similar analyses to more and more specific comparisons. That is, while we compared delinquents to non-delinquents in Chapter 5, here we will compare one-time delinquents with recidivists, Chapter 7 will compare chronic offenders (five or more offenses) with non-chronic recidivists, and Chapter 8 will consider violent offenders. Chapters 5 through 8, then, can be considered a progression or sequence of analyses.

Characteristics of One-time Offenders and Recidivists

Table 6.1 displays some of the same characteristics (IQ and school completion) discussed in Chapter 5 but shows them by delinquency status. Not surprisingly, similar patterns emerge, with the recidivists reflecting more extremes. They are lower in IQ and school completion than one-time offenders who are, in turn, lower than non-offenders, as seen in prior analyses. This pattern corresponds very well to that seen in the Philadelphia cohort as well.

Recidivist Rates

Table 6.2 displays, by social class, the number of one-time

delinquents and recidivists as well as the percentages and rates per thousand cohort subjects associated with each. That is, there are 1224 one-time, lower-SES delinquents in the Copenhagen cohort and they represent 54.0% of the cohort's delinquents as well as an offender rate of 83 per 1000 cohort subjects.

Less than one half of the cohort's offenders are recidivists; 46% of the lower class offenders and 30.8% of the higher class offenders are recidivists. An analysis by offender rates reveals a similar picture. The lower-class recidivist rate is 71, compared to the higher-class rate of 12, yielding a ratio of 5.9 between the two rates. The lower-class rate of one-time offenders is 83 compared to a higher-class rate of 28, giving us a class ratio of 3. From this we can see that social class distinguishes recidivist rates more than one-time offender rates.

In Philadelphia also, approximately one half of the offenders are recidivists, and the lower classes recidivate more. As we are, by now, accustomed to seeing, the Philadelphia rates and percentages are higher: in the lower class, 61% of the offenders recidivate while, in the higher class, 42.9% recidivate. Note that the Philadelphia higher class recidivism rate (42.9%) is about the same as the Copenhagen lower class rate (46.0%). Restated as rates, we find that the lower-class rate of recidivists is 274 per 1000 subjects and the higher-class is 113 (providing a ratio of 2.4). The lower class rate of one-time offenders, on the other hand, is 175 and the higher class yields a rate of 151 per 1000. The ratio between these two figures is 1.2. Similar to Copenhagen, class appears to be more important among recidivists

than among one-time offenders. Also in line with past observations, class appears to be less important in Philadelphia than in Copenhagen. Analysis by race in Philadelphia results in very similar patterns. It is instructive however, to take the analysis of rates a step further to compare the combined "effects" of class and race to the class "effect" in Copenhagen. We have done this by dividing the recidivist rate associated with lower-class, non-white subjects (the highest rates in the Table) by the recidivist rate of higher-class white subjects (the lowest recidivist rate). This ratio is 3.4. As indicated above, the lower-class to higher class recidivist rate ratio in Copenhagen is 5.9. Again, it appears that the class difference (ratio) in Copenhagen is larger than the class plus race differences (ratio) in Philadelphia.

Based on what we now know about the distribution of delinquents in the two cities, we should expect that the difference in the class differences is explained by the extremely low rates of delinquency (and recidivists) in the higher classes in Copenhagen. This is confirmed by a comparison of lower-class recidivist rates across the two cities as well as the analogous higher-class rates. The results of the division of the Philadelphia lower class rate by the Copenhagen rate is 3.9; the division of the Philadelphia higher class rate by the Copenhagen rate is 9.4. Clearly the major portion of the difference in recidivist rates between the two cities comes from the difference between the higher classes.

Finally, while it is important to explore the class differences in recidivism within the two cities and to compare the class differences across the cities, the most important and striking fact is the overall difference in delinquency and recidivist delinquency rates in Philadelphia compared to Copenhagen. It cannot be ignored that the highest rate in Copenhagen is lower than the lowest rate in Philadelphia. This is true whether we are looking at percentage delinquent, one-time offender rates or recidivist rates. It is always the overriding factor.

Predatory offenses

While we have established some class and delinquency rate patterns in the two cohorts they would be less important observations if they did not also characterize the more serious crimes--those crimes that most concern citizens and policymakers. Two approaches will be taken to determine how the seriousness of offenses affects the patterns established. First, we will examine specific predatory crimes: assaults, property offenses and robbery. Second, in the following section, the seriousness of offenses will be taken into account through the use of a seriousness scale (described in Appendix A).

Table 6.3 indicates the offense rates by social class and delinquency status (one-time versus recidivist), for each type of offense. The dominant feature of this table is the accumulation of cases in the property offense category (and the corresponding dearth of cases in the assault and robbery categories), especially compared to the analogous Philadelphia table.

The recidivist-to-one-time-offender ratio for the total of predatory offenses for lower class subjects is 3.6 and for higher

class subjects, 1.8. These are larger ratios than those based on all offenses. The difference in Philadelphia is more dramatic: a ratio of 11 for lower classes and 9 for higher classes. In Philadelphia a relatively high proportion of recidivistic crime involves predatory offenses. We may conclude, then, that the rate difference between one-time and recidivist offenders is a more important one for serious offenses than for less serious crimes.

The lower-class rate for predatory crimes in Copenhagen is 326.7 while the higher class rate is 57.8. The lower class predatory crime rate is 5.7 times that of the higher class. The class ratio for one-timers is 3.4, and for recidivists, 6.9. This is very close to the class differentials seen for all offenses, largely because offenses are so dominated by property offenses in this cohort (i.e., property crimes appear in both categories: total crime and predatory crime). The picture is different for Philadelphia: the overall lower-class rate for these serious offenses is 548.0, and the higher-class rate is 140.5, yielding a class ratio of 3.9. Within the one-time group, the class ratio is 1.8, and within the recidivist group, the ratio is 4.3. A similar pattern exists on the basis of race but a little stronger. Since offenses are more evenly distributed across categories in Philadelphia (i.e., it is not so dominated by property crimes), it is not surprising that elimination of less serious offenses results in strengthening class differences. The class ratios now approach the size of the Copenhagen ratios, but still do not match them.

Seriousness

The remaining analyses of this chapter involve the use of the seriousness scale developed for this study. The reader will recall that the scale was developed in a manner quite different from that used by Wolfgang et al. reducing the precision of certain comparisons since offenses with the same characteristics will not necessarily fall at precisely the same scale values.

Table 6.4 is comprised of weighted rates per 1000 cohort subjects and per 1000 cohort delinquents by social class. The weighted rates are computed to maximize comparability with Wolfgang's weighted rates. Weighted rates are computed by summing all offense seriousness scores across the delinquent's career, summing across delinquents within a category and dividing the sum by the number of subjects in the relevant category (e.g. lower class). Because of excessive numbers to the left of the decimal point, Wolfgang, et al, multiplied the sum just mentioned by only 10, while we multiplied it by 1000 to get the actual rate per 1000 subjects. The weighted rate, then, represents prevalence, incidence and seriousness of the cohort delinquency.

According to Table 6.4, the weighted rate for each 1000 cohort subjects is 15.9 and for each 1000 delinquents, 154.2. For the lower classes, the rates are 25.2 and 163.7 respectively. The higher class rates are 4.5 and 111.8. The class differences remain strongly in effect (ratios=5.6 for the cohort and 1.5 for delinquents), especially when using the entire cohort as a base rather than just delinquents. The larger base takes into account prevalence while the delinquent base does not since this rate

takes prevalence as given.

The comparable Philadelphia table uses race as a distinction in place of class. The race ratio based on cohort rates is 4.4 while that based on delinquents is 2.5. In view of the scale differences, the differences in these ratios across cohorts cannot be interpreted as important cohort differences. To the contrary, the cohorts are strikingly similar.

Table 6.5 displays mean seriousness (over all offenses), N, and weighted rates for one-time delinquents and recidivists by social class. This will allow analysis of average seriousness without the influence of prevalence and incidence for the various groups of subjects. From this table it can be seen that the mean seriousness of offenses is very similar across classes and delinquency status groups, indicating little or no escalation of seriousness with longer careers, and no difference in the seriousness of offenses across classes. Both of these facts are not surprising in light of the strong dominance of property offenses in the Copenhagen cohort. The reader may recall (from Chapter 4) that, in Copenhagen, the relative frequency of offense types was extremely similar across classes; in fact, the first three offense types by frequency were exactly the same for both class levels (this was not the case for Philadelphia). It is clear, then, that property offenses comprise most offenses for all subgroups studied so far in this cohort.

In spite of more variation in offense types and offense seriousness, Philadelphia, too, shows little in the way of seriousness escalation between one-time offenders and multiple offenders. Similarly, large differences are not seen between classes, although in both cases, the differences are larger than those seen in Copenhagen.

Weighted rates do differ by class, again, indicating class disparities in prevalence and incidence, although not in seriousness. Once again, the class differences are greater than those seen in Philadelphia both in the one-time category and the recidivist category. The Copenhagen lower-class one-time rate is 554.0 compared to the higher class rate of 169.3 (ratio=3.3). The comparable Philadelphia ratio is 1.8. The Copenhagen lower-class recidivist rate is 1960.7 compared to the higher-class rate of 281.3 (ratio=7.0). This compares to the analogous Philadelphia ratio of 3.9.

Summary

Several findings of interest emerge from the analyses in this chapter. First, in Copenhagen and Philadelphia, the social classes differ more sharply in recidivist rates than in rates of one-time offenders. Further, as in the previous chapter, the class ratios for Copenhagen are larger than the class plus race ratios of Philadelphia. That is, not only are the recidivist rates disproportionately higher among lower class(or lower among higher class) subjects than is true of one-time offender rates in Copenhagen, but this disproportionality is stronger in Copenhagen than in Philadelphia even when we take into account the joint effects of class and race.

The same social class patterns hold for the more serious, predatory offenses when comparing recidivists with one-time

Table 6.1

Delinquency Status by School Variables

Copenhagen	Non Delinquents	One-Time Delinquents	Recidivists
	(N=3599)	(N=154)	(N=88)
Mean IQ Score*	+.01	-.80	-.97
Mean Highest Grade Completed	10.7	8.7	8.0
Philadelphia			
	(N=6470)	(N=1613)	(N=1862)
Mean IQ Score*	+.53	+.28	-.13
Mean Highest Grade Complete	11.24	10.8	9.2

*IQ expressed in standard deviation units (mean of 0 unit variance)

Table 6.2

Delinquency Status by SES

	One-time delinquents			Recidivists		
	N	%	Rate per 1000Subj	N	%	Rate per 1000Subj
Copenhagen						
Low SES	1224	54.0	83	1044	46.0	71
High SES	332	69.2	28	148	30.8	12
Philadelphia						
Low SES	802	39.0	175.0	1254	61.0	273.6
High SES	811	57.2	151.3	608	42.9	113.4
Philadelphia-Race and Class						
Nonwhite						
Low SES	430	33.36	175.9	859	66.64	351.5
High SES	73	43.71	159.4	94	56.29	205.2
Total	503	34.55	173.3	953	65.45	328.4
White						
Low SES	372	48.50	173.8	395	51.50	184.5
High SES	738	58.95	150.5	514	41.05	104.8
Total	110	54.98	157.6	909	45.02	129.1

Table 6.3

Assault, Property and Robbery Offenses by SES and Delinquency Status

Copenhagen

Delinquency Status	Assaults N	Assaults %	Assaults Rate	Property N	Property %	Property Rate	Robbery N	Robbery %	Robbery Rate	Total N	Total %	Total Rate
Low SES												
One Time	19	1.83	1.3	1019	98.06	69.2	1	0.10	0.1	1039	100.00	70.5
Recidivist	71	1.88	4.8	3684	97.62	250.1	19	0.50	1.3	3774	100.00	256.2
All	90	1.87	6.1	4703	97.71	319.3	20	0.42	1.4	4813	100.00	326.7
High SES												
One Time	5	2.02	0.4	241	97.57	20.2	1	0.40	0.1	247	100.00	20.7
Recidivist	4	0.90	0.3	436	98.64	36.6	2	0.45	0.2	442	100.00	37.1
All	9	1.31	0.8	677	98.26	56.8	3	0.44	0.3	689	100.00	57.8
Both SES												
One Time	24	1.87	0.9	1260	97.98	47.3	2	0.16	0.1	1286	100.00	48.3
Recidivist	75	0.02	2.8	4120	97.72	154.6	21	0.50	0.8	4216	100.00	158.3
All	99	1.80	3.7	5380	97.78	201.9	23	0.42	0.9	5502	100.00	206.4

Table 6.3a

Assault, Property and Robbery Offenses by SES and Delinquency Status

Philadelphia

Delinquency Status	Assaults N	%	Rate	Property N	%	Rate	Robbery N	%	Rate	Total N	%	Rate
Low SES, both races:												
One Time	59	29.21	12.9	138	68.32	30.1	5	2.48	1.1	202	100.00	44.1
Recidivist	594	25.71	129.6	1559	67.49	340.1	157	6.80	34.2	2310	100.00	503.9
All	653	26.00	142.4	1697	67.56	370.2	162	6.45	35.3	2512	100.00	548.0
High SES, both races:												
One Time	30	23.44	5.6	93	72.66	17.3	5	3.91	0.9	128	100.00	23.9
Recidivsts	132	21.12	24.6	467	74.72	87.1	26	4.16	4.8	625	100.00	116.6
All	162	21.51	30.2	560	74.37	104.5	31	4.12	5.8	753	100.00	140.5
Both SES groups, both races:												
One Time	89	26.97	8.9	231	70.00	23.2	10	3.03	1.0	330	100.00	33.2
Recidivists	726	24.74	73.0	2026	69.03	203.7	183	6.24	18.4	2935	100.00	295.1
All	815	24.96	82.0	2257	69.13	226.9	193	5.91	19.4	3265	100.00	328.3

SES-Specific Rates of Delinquency Weighted by Seriousness of Offense

Copehangen

	Weighted Rate per 1000 Cohort Subjects		Weighted Rate per 1000 Delinquents	
Both SES Categories	15.9	(N=26,651)	154.2	(N=2,748)
Low SES	25.2	(N=14,731)	163.7	(N=2,268)
High SES	4.5	(N=11,920)	111.8	(N = 480)

Note: Seriousness of charges based on charges falling under the same definition that governs delinquent status.

Race-specific Rates of Delinquency Weighted by Seriousness of Offense

Philadelphia

Both races	1,172.4	3,355.2
Nonwhite	2,594.4	5,163.8
White	587.9	2,052.8

Table 6.5

SES and Delinquency Status: Mean Seriousness, Number and Weighted Rate

Copenhagen

SES Level	One Time Delinquents $\bar{X}$	N	WR	Recidivists $\bar{X}$	N	WR	Total $\bar{X}$	N	WR
Low	5.8	1224	554.0	6.4	1044	1960.7	6.3	2268	2514.7
High	5.6	332	169.3	6.4	148	281.3	6.1	480	450.6
Philadelphia									
Low	98.7	802	172.8	124.1	6329	1713.4	121.3	7131	1886.2
High	62.9	811	95.2	104.1	2272	441.3	93.3	3083	536.5

Chapter 7

CHRONIC OFFENDERS

The Philadelphia cohort study by Wolfgang et al. demonstrated to us how important the chronic offender (committing 5 or more offenses) is in accounting for the cohort's delinquencies. Those investigators also analyzed the factors that set the chronic offender apart from the rest of the cohort's offenders. Similarly, we will compare the chronic offender to other offenders in the Copenhagen cohort (and to the Philadelphia cohort) with respect to degree of offending, the nature of offenses committed, class distinctions and school-related variables. Do chronic offenders merely constitute the last point on a continuum delimited by non-offenders at the other end on the variables under analysis? Or do these offenders constitute a unique group, set far apart from other, more minor offenders? Do the same factors characterize the Copenhagen chronic offender that characterize his counterpart in Philadelphia? And to the same degree? These are questions that guide the analyses described in this chapter.

Offensivity

Table 7.1 indicates the number of offenses and offenders in each category of delinquent status: one-time offenders, non chronic recidivists and chronic offenders. At all levels, the Copenhagen offenders are less recividistic than the Philadelphia offenders. For example, 56.6% of the Copenhagen delinquents are

one-time offenders only, while only 46.4% of the Philadelphia offenders can be so categorized. Similarly, within the recidivists, 22% are chronic in Copenhagen compared to 34% in Philadelphia. Still, the Copenhagen chronic offenders account for a disproportionate share of the cohort offenses (Table 7.2): 9.6% of the offenders account for 40.3% of the offenses. In Philadelphia 18% of the offenders account for 52% of the offenses. Philadelphia has a higher proportion of offenders who are chronic but the average Copenhagen chronic offender accounts for a greater share of the cohort's offenses than does the average Philadelphia chronic offender.

Social Class

From Table 7.2 we can see that class differences in prevalence increase as delinquency increases so that while the ratio of the lower-class to higher-class percentages for all delinquents is 15.4:4.0 (or 3.9), the ratio for chronic offenders is 17.0:2.0, (or 8.5). The difference in the prevalence by class, then, is greater for chronic offenders than for delinquents in general. This class difference in prevalence of chronic offenders is also greater in Copenhagen than it is in Philadelphia where the ratio is 4.8 (comparing non-white to whites since this is the only comparison presented by Wolfgang et al.).

School and Achievement

The difference between one-time offenders and chronic offenders in IQ (as measured by a draft board test) is substantial at 0.9 s.d. for lower-SES subjects and 1.2 s.d. for higher-SES subjects (Table 7.3). This difference is larger than the difference

seen in Chapter 5 between delinquents and non-delinquents, implying that the distinction between one-timers and chronics is a more important one than that between delinquents and non-delinquents. Table 7.3 also shows the percent of each subgroup that register below average IQ. The vast majority of both types of delinquents (one-time and chronic) score below average, indicating a strong association of low IQ with delinquency generally. From these figures, we would suspect that the difference between non-delinquents and one-time delinquents would be greater than the difference between one-timers and chronics. An analysis of this issue reveals that, indeed, this is the case: 76.1% of lower-class non-delinquents (compared to 88.2% of lower class one-timers) score below average and 33.2% of higher-class non-delinquents (compared to 64.7% of higher class one-timers) do so. Within each class, than, the differences between non-delinquents and one-timers is greater than the difference between one-time offenders and chronic offenders. This, of course, contradicts the statement that the distinction between one-time and chronic offenders is more important than that between delinquents and non-delinquents. Unfortunately, the same test cannot be made on the Philadelphia data, but we can see that all delinquents are more likely to score above average in Philadelphia than they are in Copenhagen, leading us to conclude that the delinquent/non-delinquent distinction is less important for achievement than is true in Copenhagen.

It is also interesting, that in both approaches to the analysis of achievement (i.e. deviations from mean IQ and percent

CONTINUED

1 OF 3

below average IQ), achievement differentiates chronics and one-time delinquents more distinctively within the higher class than within the lower class. It will will be recalled that this same pattern was observed in Chapter 5 in examining differences between non-delinquents and delinquents. This same pattern tends to hold in the Philadelphia cohort data (with some exceptions). It may be conjectured that intellectual achievement is more decisive in the higher classes in helping to determine the likelihood of delinquent involvement.

Tables 7.4 and 7.5 deal with school completion; the former indicates the percent of each subgroup that graduates from high school (gymnasium) and the latter shows the mean grade completed by each subgroup. Two facts emerge rather strongly from inspection of Table 7.4. First, it is clear that delinquents of any subgroup are highly unlikely to graduate from high school (gymnasium), even the higher-SES, one-time offenders. Second, none of the higher or lower class chronic offenders are recorded as graduating from high school. It could be said that when one reaches the "chronic" stage, class makes little difference in life outcomes; one's deviant status dominates, although it should be said that chronic offenders did not deviate substantially from one-time, lower class offenders in IQ or achievement. It should be pointed out that in Table 7.4 the stability of statistics based on 19 subjects is questionable.

A pattern similar to the one seen in Copenhagen is also evident in the Philadelphia cohort, but less strongly so. Here, in general, delinquents are much more likely to graduate from high

school, and some chronics (7.5% of lower-class and 17.1 % of the higher-class chronics) also graduate. Also, the major distinction in graduation is between offenders and non-offenders.

Table 7.5 indicates the average grade completed for each of the four subgroups. Here we can see that, as usual, there is a substantial difference between one-time offenders and chronic offenders in mean highest grade completed for both cohorts. However, this fact takes on different meaning when viewed in the context of the difference between offenders and non-offenders. In Copenhagen, this difference (between offenders and non-offenders) is comparable in size to the one-time/chronic comparison, while in Philadelphia, by far the largest difference is between one-time and chronic offenders.

Let us now review the facts presented in this section:

1. The one-time vs. chronic offender distinction is roughly equivalent to or less than the non-offender vs. offender difference in Copenhagen, while the reverse is true in Philadelphia, i.e. the one-time vs. chronic offender difference is likely to be the more substantial one in Philadelphia, while the non-offender vs. offender distinction is often small.
2. Chronic offenders are substantially different from other offenders on each of the variables considered here (mean IQ/achievement, percent below average IQ/achievement, percent graduating from high school, and mean highest grade completed). This is true in both cohorts.
3. Differences in school and achievement variables are usu-

ally larger in the higher classes than within the lower classes when comparing the various delinquency categories. This is true of both cohorts, but more so in the Copenhagen cohort.

We suggest that the generic interpretation of all of these facts is that, when a phenomenon is more widespread, those who engage in it are a less distinctive group than would be the case where the phenomenon is unusual. More specifically, delinquency is a less common phenomenon in Copenhagen than in Philadelphia; in fact it is relatively infrequent in Copenhagen (prevalence is 11%). We would therefore, expect those in Copenhagen who do engage in delinquent behavior to be a more distinctive group than their counterparts in Philadelphia. Thus, the school/achievement variables have more predictive power in Copenhagen than in Philadelphia, especially when analyzing delinquent/non-delinquent groups. Likewise, it is not surprising to find the class distinction in Copenhagen to be more important than in Philadelphia (See Chapters 5 and 6).

It flows from this observation that the chronic offender takes on more importance in the analysis of Philadelphia data since, even there, chronic offending is unusual. Since it is unusual, we find stronger associations with a number of variables in this comparison than in the delinquent/non-delinquent comparison. Naturally, the one-time/chronic comparison is also important in Copenhagen since chronic offenders are also rare there, but it is not as important, relatively, as it is in Philadelphia.

Finally, delinquency is more rare in the higher classes than

in the lower classes. We would, therefore, by the reasoning exposed here, expect larger differences in school/achievement variables among the delinquency categories within the higher classes than within the lower classes. Indeed, this is the case in this analysis, giving support to our general interpretation.

Offense Seriousness

Tables 7.6 and 7.7 address the issue of chronic offenders and the seriousness of their offenses. Are the offenses they commit generally more serious, or do they simply commit more of them? Table 7.6 shows the mean seriousness score per offense for one-time offenders, non-chronic recidivists, and chronic recidivists. While the differences in seriousness are in the directions one would anticipate, the differences are not impressive in the Copenhagen cohort. In Philadelphia, the differences are larger, although the difference between recidivists and chronics is not extraordinary. The infrequency of violent offenses and public order offenses in Copenhagen reduces the range of seriousness considerably.

Table 7.7 displays non-index offenses as a proportion of all offenses by the same three delinquency categories. As the level of delinquent activity goes up, the non-index offenses take up a smaller proportion of offenses. This is true of both cohorts, but more so of Copenhagen. There are only very small class differences on this measure in both cohorts. We may conclude, then, that offense seriousness does increase slightly with recidivism in Copenhagen. The difference is more noticeable in Philadelphia when using the seriousness score, but not when using proportion

of index offenses as a measure of seriousness.

Offense Types

Tables 7.8 and 7.9 address the matter of the types of offenses that chronic offenders commit. That is, do they show unique patterns of offending or do they simply commit more of the same types of offenses that other offenders commit? Table 7.8 indicates that offenses of chronic offenders show basically the same distribution that we saw among the general delinquent population: about 88% of the offenses are property offenses (burglary, larceny, vehicle theft, and receiving stolen property) while less than 1% are violent offenses! There are a few public order offenses as well. None of these categories shows more than minimal differences in distribution across classes. In Philadelphia, too, chronic offenders show patterns similar to those for the delinquent population generally, although this pattern is quite different from the Copenhagen patterns. There are a large number of property offenses (about 43%), but 10% of the offenses involve violence and there is a higher frequency of public order offenses. There are also substantial class differences (the same ones seen in earlier chapter): the lower classes are higher in violence while the higher classes are higher in public order offenses. Property offenses have approximately the same frequency across SES.

Table 7.9 focusses on index offenses only. The fact that violence is concentrated exclusively in the lower classes in Copenhagen is shown clearly in this table. This is more remarkable since this table includes only the index offenses of chronic

offenders, and still, violent offenses are the exclusive domain of the lower classes. Not one higher class chronic offender has been arrested for a violent act. Wolfgang et al. compare race rather class here, and show that violent offenses are highly concentrated among the non-whites but not to the extent that they are concentrated among the lower classes in Copenhagen. Finally, 71.2% of all index offenses (for chronic offenders) are found in the non-white group; the lower class in the Copenhagen cohort evidences a higher concentration of index offending.

Age of Onset

The final analysis of this chapter concerns the relation between age of onset and mean number of offenses among chronic offenders. Table 7.10 shows a slight and inconsistent inverse relation, the earlier the age of onsent the greater the number of offenses. In Philadelphia, on the other hand, there is a very consistent inverse relation among the non-whites, and a strong, less consistent one among the whites.

Summary

This chapter has compared the chronic offender in Copenhagen to his counterpart in Philadelphia. Perhaps more importantly, the differences between chronic and less recidivistic offenders were compared across cohorts. We have found more concentration of offenses per chronic offender in Copenhagen than in Philadelphia, although there are fewer chronic offenders there.

We have found class differences to be greater as offender chronicity increases, and we have found greater differences in school and achievement variables with greater chronicity. How-

ever, there are important differences in the two cohorts in the relative magnitude of the one-time/chronic offender differences vs. the non-offender/offender differences. In Copenhagen, the offender/non-offender difference is at least as large and often larger than the one-time/chronic offender difference. This is not the case in Philadelphia where the one-time/chronic offender difference is quite dominant in importance. These facts, together with the fact that, especially in Copenhagen, school and achievement variables distinguish among delinquent categories more within the higher classes than within the lower classes support the interpretation that when delinquency is a rare event, delinquents are a more distinguishable group. They are, therefore, more different on other relevant variables such as social class, as well as school and achievement variables.

In both cohorts, there was some increase in the seriousness of offenses as a function of number of offenses committed. This is less true of Copenhagen. Perhaps because offenses in Copenhagen are dominated so heavily by property offenses, leaving less room for variability in seriousness.

The distribution of offense types for chronics is quite similar to the distribution for other offenders. This is true in both cohorts, although the patterns for the two cohorts are different. Copenhagen, as always, is characterized by the dominance of property offenses and virtually no violent offenses, with little variation by social class.

Finally, age of onset has much less relation to subsequent delinquency among chronic offenders in Copenhagen than among

other offenders or as compared to Philadelphia chronic offenders.

Table 7.1

Offenders and Offenses by Delinquent Subgroups

Copenhagen

	Offenders		Offenses (Arrests)	
	N	%	N	%
Delinquents:	2748	100.0	5892	100.0
One time Offenders	1556	56.6	1556	26.4
Chronic Recidivists	264	9.6	2376	40.3
Non-Chronic Recidivists	928	33.8	1960	33.3
Recidivists:	1192	100.0	4336	100.0
Chronic	264	22.1	2376	54.8
Non Chronic	928	77.9	1960	45.2

Philadelphia

Delinquents:	3475	100.0	10214	100.0
One time Offenders	1613	46.4	1613	15.8
Chronic Recidivists	627	18.0	5305	51.9
Non-Chronic Recidivists	1235	35.6	3296	32.3
Recidvists:	1862	100.0	8601	100.0
Chronic	627	33.7	5305	61.7
Non Chronic	1235	66.3	3296	38.3

Table 7.2

Number and Percentage (of Total Cohort) of Delinquents by Frequency Category and SES

Copenhagen

	Low SES		High SES		Total	
	N	%	N	%	N	%
Cohort	14,731		11,920		26,651	
Delinquents	2,268	15.4	480	4.0	2,748	10.3
One time Offenders	1,224	8.3	332	2.8	1,556	5.8
Recidivists	1,044	7.1	148	1.2	1,192	4.5
Chronic	244	1.7	20	.2	264	1.0
Non Chronic	800	5.4	128	1.1	928	3.5

Philadelphia

Number and Percentage (of Total Cohort) of Delinquents by Frequency Category and Race

Cohort	2,902		7,043		9,945	
Delinquents	1,458	50.2	2,017	28.6	3,475	34.9
One time Offenders	503	17.3	1,110	15.7	1,613	16.2
Recidivists	953	32.9	909	12.9	1,862	18.7
Chronic	417	14.4	210	3.0	627	6.3
Non Chronic	536	18.5	699	9.9	1,235	12.4

Table 7.3

School Potential Variables of One-Time and Chronic Offenders by SES

Copenhagen

	Social Class	
	Low	High
Achievement/IQ (expressed in standardized form)*		
One-Time Offenders	-1.3	-.05
Chronic Offenders	-2.2	-1.7
Percent Below Average Achievement		
Non Offenders	76.1	33.2
One-Time Offenders	88.2	64.7
Chronic Offenders	85.7	80.0
Philadelphia		
Achievement/IQ*		
One-Time Offenders	-.04	.54
Chronic Offenders	-.76	-.26
Percent Below Average Achievement		
One-Time Offenders	55.1	25.6
Chronic Offenders	83.3	54.0

*Standardized with mean of zero and unit variance

Table 7.4

Percentage Graduating from High School by SES: One-time and Chronic Offenders

Copenhagen

	Low SES	High SES
One-time Offenders	4.2	35.3
Chronic Offenders	0.0	0.0
Philadelphia		
One-time Offenders	46.7	70.2
Chronic Offenders	7.5	17.1

Table 7.5

Average Grade Completed by One-Time and Chronic Offenders by SES

Copenhagen	Low SES	High SES
One-time Offenders	8.1	10.2
Chronic Offenders	7.5	7.0
Philadelphia		
One-time Offenders	10.3	11.3
Chronic Offenders	7.8	9.1

Table 7.6

Mean of Mean Seriousness Scores by SES and Type of Offender

Copenhagen SES	One-Time Offender	Recidivists Minus Chronic	Chronic Offenders
Low	5.83	6.24	6.61
High	5.63	6.35	6.56
Philadelphia			
Race and SES			
Low SES:			
Nonwhite	106.0	123.1	136.4
White	90.4	96.4	115.3
High SES:			
Nonwhite	88.5	124.8	124.7
White	60.4	93.5	96.7

Table 7.7

Non Index Offenses as a Percentage of Total Offenses

Copenhagen SES	One-Time Offenders	Non Chronic Recidivists	Chronic Recidivists
Low	77.4	52.7	32.6
High	82.8	48.8	32.5
Philadelphia			
Race and SES			
Low SES:			
Nonwhite	64	62	55
White	70	69	59
High SES:			
Nonwhite	64	63	61
White	78	71	65

Table 7.8

Crime Code of Offenses by SES of Offender: Chronic Offenders

Copenhagen	Low SES		High SES		Total	
Crime Categories	N	%	N	%	N	%
Homicide	1	.05	0	0	1	.05
Rape	3	.2	0	0	3	.2
Robbery	6	.3	0	0	6	.3
Aggravated Assault	3	.2	0	0	3	.2
Negligent Homicide	1	.05	0	0	1	.05
Theft	1368	69.2	111	72.1	1479	69.4
Arson	6	.3	0	0	6	.3
Theft-Auto, Bike	293	14.8	24	15.6	317	14.9
Other Assaults	32	1.6	1	.6	33	1.5
Forgery	10	.5	1	.6	11	.5
Fraud	17	.9	1	.6	18	.8
Receiving Stolen Property	72	3.6	5	3.2	77	3.6
Illegal Weapons	10	.5	0	0	10	.5
Prostitution	23	1.2	0	0	23	1.1
Other Sex Offenses	4	.2	0	0	4	.2
Malicious Damage	63	3.2	7	4.5	70	3.3
Disorderly Conduct	64	3.2	4	2.6	68	3.2

Table 7.8a

Crime Code of Offenses by SES of Offender: Chronic Offenders (SES dichotomized and Burglary/Larceny Collapsed and Status Offenses and "others" removed)

Philadelphia

Crime Code Categories	Low SES		High SES	
	N	%	N	%
Homicide	9	.3	1	.2
Rape	28	1.1	4	.6
Robbery	117	4.4	18	2.8
Aggraveted Assault	135	5.1	17	2.7
Burglary/Larceny	992	37.6	188	29.7
Auto theft	143	5.4	74	11.7
Other Assault	245	9.3	41	6.5
Illegal Weapons	120	4.6	25	4.0
Other Index	51	1.9	16	2.5
Drunk, other liquor	177	6.7	62	9.8
Disorderly Conduct	619	23.5	186	29.4

Table 7.9

Index Offenses by SES for Chronic Offenders

Copenhagen

Offenses	Low SES		High SES	
	N	%	N	%
Homicide	1	100.0	0	0
Rape	3	100.0	0	0
Robbery	6	100.0	0	0
Aggravated Assault	3	100.0	0	0
Burglary/Larceny	1368	92.5	111	7.5
Auto, etc. theft	293	92.4	24	7.6

Philadelphia

Homicide	0	0	10	100.0
Rape	3	9.4	29	90.6
Robbery	10	7.4	125	92.6
Aggravated Assault	19	12.5	133	87.5
Burglary	135	31.9	288	68.1
Larceny	175	23.1	582	76.9
Auto theft	108	49.7	109	50.3

Table 7.10

Mean Number of Offenses by Age of Onset:
Chronic Offenders

Copenhagen

Age of Onset	Low SES	N	High SES	N	Total	N
7	7.4	14	-	0	7.6	14
8	13.9	16	8.5	2	13.3	18
9	9.8	14	8.3	3	9.5	17
10	8.4	24	7.8	5	8.3	29
11	9.6	13	9.0	1	9.6	14
12	7.9	35	7.7	3	7.9	38
13	8.5	39	5.0	1	8.4	40
14	8.3	30	9.0	1	8.3	31
15	7.4	32	9.0	1	7.4	33
16	6.6	23	5.5	2	6.5	25
17	5.3	4	10.0	1	6.2	5

Philadelphia

Age of Onset	Nonwhites	Whites	Total
7	15.6	7.0	13.5
8	12.7	9.3	11.7
9	11.5	8.8	10.6
10	9.5	8.0	9.0
11	8.3	7.2	8.0
12	8.8	7.9	8.6
13	8.4	6.4	7.8
14	7.3	6.8	7.2
15	7.7	6.2	7.1
16	6.5	5.2	6.0

Chapter 8

Violent Offenders

This volume is, essentially a comparison of delinquency in Copenhagen with delinquency in Philadelphia, as described by Wolfgang, et al. Those authors did not devote a chapter to violence in the Philadelphia birth cohort. This might be seen as a reason not to devote a chapter to the issue in this volume. A second reason not to give a chapter to the violent offender in Copenhagen is that violence is a relatively rare phenomenon in Denmark, as indicated in earlier chapters. However, it is specifically because of this rarity that we shall pursue it further. We are all the more interested in the characteristics of violent offenders because there are so few of them in Denmark. There is, of course, very little to compare the Copenhagen offenders to in the Philadelphia-based study since little was said about violent offenders in that study. This chapter will, therefore, largely stand on its own. As such it will be available for future comparisons if someone wished to do so. Our major points of comparison will be other categories of delinquents within the Copenhagen cohort.

One of the consequences of the rarity of violence in Copenhagen is that there are few cases of violence occurring before the age of 18. Our focus is, therefore, on violence at all ages through 25. For comparison's sake, however, figures based on behavior before 18 will also be presented.

Many of the questions we ask about the violent offenders are similar to those asked about our delinquents in general, and

After looking at prevalence rates and offensivity of the violent offenders, and the extent to which the group of violent offenders overlap with the group of chronic offenders, we attempt to determine if the delinquents who were violent offenders or later became violent offenders differ from the never-violent offenders in social class, intelligence, school achievement, offensivity, seriousness of general offending, and in age.

The first-time violent offenders in our cohort were arrested, on average, 3.91 times previously, with an average time lag of 4.45 years from the first arrest to the first arrest for violence. Because violence is not initially characteristic of the violent offender, it is important to see how the delinquents who become violent differ from the delinquents who never evidence violence. Although about 80% of the violent offenses committed by our cohort were committed after the subjects were adults, it is worth noting that almost no individuals who have not been delinquent as juveniles later commit a violent act. In our cohort, less than 1% of the ultimate violent offenders had not been arrested as juveniles.

Offensivity and Prevalence

A small percentage (6.7%) of the arrested individuals in the Copenhagen cohort (2.5% of the cohort) were charged with violations involving violence. Of these violent offenders (N=735), 76.5% (N=562) did not commit a second violent offense. Table 1 presents percents of the cohort who have committed zero, one, two, three or four or more violent offenses. As indicated in the

table, 43.4% of all violent offenses committed by the cohort were committed by the repeat violent offenders who comprise only 1.6% of the offenders in the cohort (23.5% of the violent offenders). They represent only 0.6% of all men in the cohort. The degree of concentration for violent crime is greater than for offending in general (45% of all the offenses were committed by 9% of the men in the cohort).

This degree of concentration of the cohort's violent offenses in the hands of a small proportion of the cohort suggests the hypothesis that the repeatedly violent individuals may specialize to some degree in violent criminal acts. This issue is addressed more specifically and completely in Chapter 9.

Chronic Violent Offenders

In chapter 7 we discussed the special characteristics of the chronic offenders in our cohort. At issue is the extent to which being violent is the same as being chronic, and the extent to which chronic offenders are likely to be violent offenders. More than half (52.52%) of the violent offenders in our cohort are also classified as chronic offenders; 85.42% of the recidivistically violent individuals are also chronic offenders. On the other hand, only about a third of the chronic offenders ever evidence violence. It is not surprising, in the light of the findings that violence usually only occurs after several non-violent offenses, that violent offenders tend to be chronic offenders. It is important to note, however, that most of the chronic offenders are not ever arrested for violence, suggesting that being chronic does not imply that someone will be violent. This point

Social Class

In Philadelphia, the lower social classes were responsible for higher rates of violence and recidivistic violence. In Copenhagen, this was also true. Table 8.2 presents the rate of violent offenses by social class in our group. Note that regardless of the number of offenses (arrested by age 18), those from the lower class were more likely than the higher class to be arrested for violence at some time in their lives. The pattern also holds for repeat violent offenders.

School Achievement and IQ

As we reported above (Chapter 5), the delinquents in the Copenhagen sample are generally lower in IQ, and do less well in school than do delinquents. This pattern is consistent with that found by Wolfgang et al. in Philadelphia. Those violent offenders in our cohort who are delinquent are even lower on these characteristics than the non-violent delinquents. Table 8.3 presents by violence status the mean number of school years completed, the percentage of the individuals who completed high school, (gymnasium) the IQ test score, a standardized IQ test score, and the percent of the individuals who are below average in IQ. As the numbers of the table suggest, those individuals who eventually become violent and those who are violent as delinquents are similar in that they completed less school, are less likely to graduate from high school, and had lower IQ scores. To

see if social class mediates the relationship between low IQ and violence and school completion and violence, we examined IQ levels and school performance separately by violence status under each of our two social class conditions. The results are reported in Table 8.4. IQ level and school completion are related to social class level, but the violent offenders, regardless of social class, were poorer intellectually and in school completion. It is not likely that social class mediates the relationship. These results are consistent with the observations made by Wolfgang et al. with regard to assaults and robbery offenses in the Philadelphia cohort.

Offense Seriousness

The violent offenders in our cohort are responsible for more serious crime in total than are the non-violent offenders. The mean seriousness of the violent offenders (presented separately by social class in Table 8.5) is higher than for the non-violent offenders. The mean seriousness of the offenses committed by age 18 is higher for the violent offenders, even though 80% of the violent crime was committed after the individuals were adults. It is worth noting, however, that the violent offenders are responsible for a smaller percentage of index offenses to total offenses than are the non-violent offenders.

Age Factors

In the Copenhagen Cohort, the rate of violence among offenders is 2.5% by ages 15 and 16. It then rises sharply to over 8% by age 18 and remains at that level until it reaches 9% at 25 years of age. The majority (70%) of the violent offenses in the

cohort occurred while the individuals were between the ages of 18 to 25 years. The peak age for violent offending is 20 years of age. This may be compared with the peak age of 17 years for all offenses.

Table 8.6 presents the mean number of crimes of violence expected at some time in a criminal career as a function of age at first offense. As age at first offense increases, the probability of violence decreases. Those individuals who were arrested before age 16 were much more likely to be arrested later for criminal violence than those who were arrested at a later age.

The interaction of the age of the individual and his prior arrest history in predicting future violence is suggested by the results presented in Figure 8.1, where the percentages of individuals committing a future violent offense are plotted by age of first arrest and previous history. The figure suggests that the earlier the age at which the subject has accumulated one, two or more arrests, the greater the probability of future violence. The differences are significant at all ages, but the greatest difference occurs at age 20 with a steady decline thereafter. It is worth noting that more than 20% of the individuals who were recidivists by the age of 18 later evidenced violent crime as adults.

Summary and Discussion

Violent offenders tend to have lower social class, complete less schooling, to have lower IQ and to begin offending earlier.

The violent offenders, although rare, are responsible for a

large amount of the crime in the cohort. Half of the violent offenders are chronic (responsible for more than four criminal law offenses). To be chronic, however, does not imply violence, as most chronic offenders never evidence violence. Our violent offenders not only committed more crime, but committed more serious crime as well as more non-index offenses.

Table 8.1

Distribution of Violent Offenders and Violent Crime

Frequency of Violent Offenses	Number of Individuals	Number of Violent Offenses	Percent of Cohort	Percent of Offenders	Percent of Violent Offenders	Percent of Violent Offenses
(non-offenders)	17961		62.19			
(non-violent offenders)	10183		35.26	93.27		
1	562	562	1.95	5.15	76.5	56.6
2	126	252	0.44	1.15	17.1	25.4
3	24	72	0.08	0.22	3.3	7.2
4 or more	23	107	0.08	0.21	3.1	10.8
Totals	28879	993	100.00	100.00	100.0	100.0

Table 8.2

Percent of Offenders Committing Violent Crime by SES and Delinquency Status

	Number of offenses[1]							
	One		Two		Three or More		All Offenders[2]	
Low SES	N	%	N	%	N	%	N	%
Ever Violent	119	9.72	60	13.07	184	31.45	594	8.42
Violent by 18	19	1.55	14	3.05	64	10.94	97	1.37
Recidivists	29	2.37	14	3.05	54	9.23	124	1.76
N of Offenders	(1224)		(459)		(585)		(7058)	
Higher SES								
Ever Violent	18	5.42	4	4.71	10	15.87	92	2.91
Violent by 18	6	1.81	4	4.71	2	3.17	12	0.38
Recidivists	1	0.30	1	1.18	3	4.76	8	0.25
N of Offenders	(332)		(85)		(63)		(3160)	
Both SES Groups								
Ever Violent	137	8.80	64	11.76	194	29.94	686	6.71
Violent by 18	25	1.61	18	3.31	66	10.19	109	1.07
Recidivists	30	1.93	15	2.76	57	8.80	132	1.29
N of Offenders	(1556)		(544)		(648)		(10218)	

[1] Non-traffic offenses by age 18.

[2] Includes those individuals who were not arrested as delinquents, but were first arrested as adults.

Table 8.3

School Completion and Intelligence/Achievement Scores by Violence Status

Violence Status	School Completion		Intelligence/Achievement		
	Score	% Completing High School	Score	Standarized Score	Percent Below Average
Never Violent	9.3 *	33% *	39.28 *	-0.37[b] *	62% *
Violent	8.6	15%	34.73	-0.77	73%
Not Violent by 18	8.5 *	32% *	39.06 *	-0.39 *	63%
Violent by 18[a]	8.2	8%	31.38	-1.06	92%
Only One-time Violent	8.6	15%	35.20	-0.72	72%
Repeat Violence	8.1	18%	31.18	-1.08	72%

[a]None of the violent offenders in our sample had recidivated in violence by age 18.

[b]This measure is based on the mean intelligence of the entire cohort. The mean of the scale is 0 with a standard deviation of 1.0.

*The difference is statistically significant ($p < .01$).

Note. All of the individuals represented by statistics in this table were responsible for at least one arrest sometime in their lives.

Table 8.4

School Completion and Intelligence/Achievement
by Violence Status and Social Status

	Low SES				Higher SES			
	Never Violent	Violent	Not Violent by Age 18	Violent by Age 18	Never Violent	Violent	Not Violent by Age 18	Violent by Age 18
School Completion								
Score	8.5	8.2	8.0	7.8	10.7	9.8	9.6	12.0
% Completing High School	13%	8%	13%	0%	60%	24%	59%	100%
Intelligence								
Score	34.47	33.16	34.41	30.73	45.93	36.39	45.60	40.00
Standard Score[a]	-0.79	-0.90	-0.79	0.18	0.21	0.62	-1.12	-0.31
% Below Average	80%	75%	80%	91%	39%	78%	40%	100%
N	673	61	723	11	487	18	504	1

Note. The sample for this investigation is all offenders in the cohort.

[a]This score is based on the cohort norms. The mean is 0 and the standard deviation is 1.0.

Table 8.5

Mean Seriousness and Percent Index of Offenses

by Violence Status and Social Status

	Low SES			Higher SES		
	Never Violent	Violent	Violent by 18	Never Violent	Violent	Violent by 18
Mean Seriousness	5.70 (4173)	7.18 (594)	7.26 (12)	5.31 (1452)	7.58 (92)	8.48 (97)
Mean Seriousness By Age 18	5.95 (1905)	6.63 (363)	7.71 (12)	5.79 (488)	6.91 (32)	8.93 (97)
Percent Index	50% (4173)	27% (594)	25% (12)	61% (1452)	28% (92)	14% (97)
Percent Index By Age 18	28% (1905)	18% (363)	15% (12)	32% (448)	25% (32)	7% (97)

Note. Numbers in parentheses represent the number of subjects under the condition.

Table 8.6

Mean number of violent crimes committed in a criminal career as a function of age at first arrest

Age at first arrest	Mean number of violent offenses in entire career
8-10	.25
11-13	.24
14-16	.22
17-19	.11
20-22	.04
23-25	.03

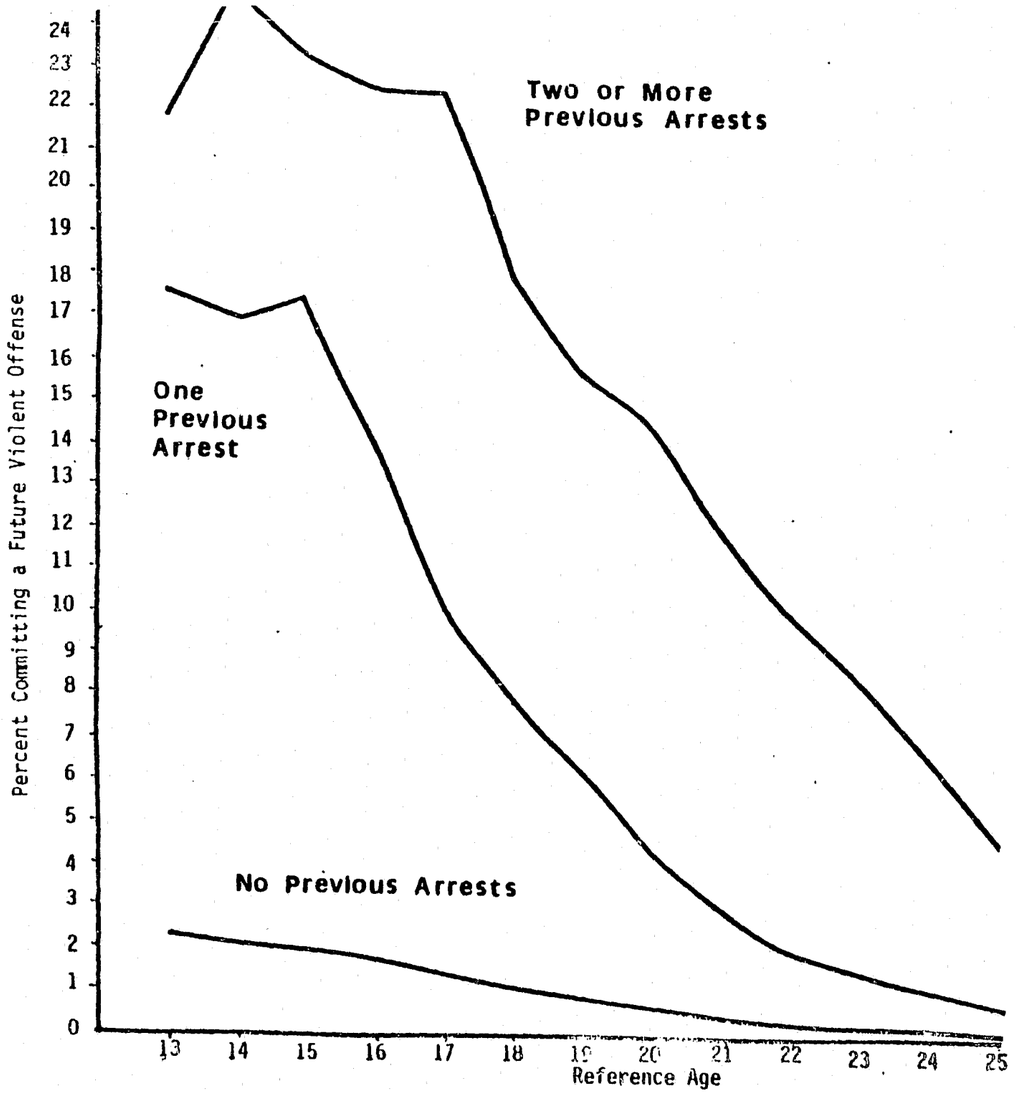

Percent Committing a Future Violent Offense
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
Two or More Previous Arrests
One Previous Arrest
No Previous Arrests
13
14
15
16
17
18
19
20
21
22
23
24
25
Reference Age

Figure 8.1

Chapter 9

OFFENSE SPECIALIZATION

Do offenders specialize in certain types of crime or could their offense histories as easily have been generated by a random process? Many investigators have addressed this question (Wolfgang, et al, 1972; Klein, 1982; Chaiken and Chaiken, 1982; Rojek and Erickson, 1982) and their conclusions have varied considerably. Unquestionably, the answers investigators produce are related to the criteria they use to judge whether or not an offender is a specialist. Some criteria are stircter than other others. Do we insist that an offender be a multiple offender to qualify as a candidate for specialization? Among multiple offenders, do we insist that every offense in his record, without exception be of the same type to constitute specialization? Clearly, the criteria used to make this judgement should depend on the reason for asking the question about specialization. For instance, if the question arises because legislation is contemplated that restricts sentencing options for a specific group of offenders then it should be demonstrable that there is a substantial segment of the offender population that fits rather purely into that category. A specific example of such a need is seen with the issue of how to treat status offenders. If expensive programs are developed and efforts to pass legislation in the various states concerning limiting sentencing options is undertaken, we should be save able to demonstrate that there is a substantial, identifiable group of offenders that engage only in status offenses.

should be able to demonstrate that there is a substantial, identifiable group of offenders that engage only in status offenses. If the vast majority of status offenders also engage in criminal law offenses then the special programs may have few clients.

Likewise, some theoretical formulations pertaining to explaining criminal acts may require purely-defined criminal careers. A very specific theory that purports to explain a particular type of crime might require the presence of offenders exhibiting only that type of criminal behavior. Perhaps some theories that explain violent sexual offenders in terms of their relationships with their mothers and resulting difficulties in sexual relationships with women would fall into this category. That is, such theories might be better tested by offenders with records containing only sexual offenses.

On the other hand, other approaches allow more flexibility in definition. For instance, a theory that focuses on economic need as a predictor would generate an interest in defining a population of property offenders. But such a perspective might admit to the possibility that, in the course of committing property offenses, the offender could, through situational factors, become involved in other types of offenses. For example, a "property offender" might be doing a burglary with a companion who is carrying a gun. If the companion were taken by surprise by the owner of the home they were burglarizing and killed him, our "property offender" would then be charged with

felony homicide. Nevertheless, he remains, primarily, a property offender.

Based on the above discussion, we have chosen not to follow the type of analysis carried out by Wolfgang et al. Those investigators completed a Markovian analysis which insisted that evidence of specialization could only be seen in contiguous offenses. That is, if an offender had three offenses, two were rape murders, and one petty theft, evidence of specialization would only accrue if the two rape murders were contiguous. If they were separated by the petty theft offense, this would constitute a case against specialization. While this method of defining specialization might be useful in certain specific situations, our own interest in the specialization question asks only that some concentration of an offense type in certain offenders beyond what would be expected by chance be demonstrated.

We have adopted two methods of analysis for examination of our data for signs of offense concentration or specialization. One method compares actual percent of violent or property offenses to theoretically expected (based on a Bernoulli distribution) percentages at each level of number of offenses. The second compares violent and non-violent offenders for their likelihood of later violent offending.

The Bernoulli Process Method

One way to approach the question of specialization is to ask whether any group of offenders commits more of a given type of offense than would be expected on the basis of chance. That is, given the number of arrests on the offender's record, and given the rate of a specific offense type in the offender population, does the offender commit a disproportionate number of offenses of that specific type? Specifically, if we are interested in determining whether an offender is a violence specialist, we will need to determine whether he has committed an unexpectedly large proportion of violent offenses given the number of arrests on his record, and given the rate of violence in the population.

Such a question is ideally suited to a Bernoulli process analysis. A Bernoulli process is one in which a series of independent "trials" occur, each of which will generate either a "success" or a "failure" (arbitrarily named). Further, each "trial" has a given probability of "success" (p) or "failure" (q). Within a set of Bernoulli trials, we can calculate the probability of generating any given sequence of successes or failures if we know the overall probabilities of p and q. This calculation is made by:

$$p^r q^{n-r}$$

where r is the number of successes and n is the number of trials. For any given number of trials, there is usually more than one sequence of successes and failures that would yield the same total number of successes. Let us take the example of five

trials and two successes. There are $\binom{5}{2}$ sequences that would produce two successes over five trials. So, if the probability of a specific sequence of two successes and three failures is $p^r q^{n-r}$, then the probability of getting two successes in any order or sequence would be $\binom{5}{2} p^r q^{n-r}$.

This discussion is rather easily translated into the context of offense specialization. Going back to our example of the violent offender, we can speak of determining the expected number of violent offenses (successes, or r) among five arrests (trials, or n) given the overall probability of violent offenses (p) in the population. Thus, if we consider each arrest to be an independent event, we can calculate the number of violent offenses (compared to other offenses) that we would expect by chance, given the number of arrests. Departures from this expectation can be interpreted as departures from random generation. The advantage of this method is that we do not have to depend on the offenses occurring in specific sequences in order to support the idea of offense patterning. In addition, this analysis automatically takes into account the total number of arrests that a subject has on his record.

The analysis conducted by Wolfgang et al. compared theft, injury, damage, combination and nonindex. Both the categories of "combination" and "nonindex" are difficult to conceptualize as areas of specialization. We have, therefore, not included them in our analysis. In addition, our data cannot distinguish "injury" offenses. Thus, all our categories cannot be made

exactly comparable to those used in Philadelphia. An additional problem in the Copenhagen data set is that offenses are so dominated by property offenses that few other categories can be constructed containing enough cases to make an adequate comparison. We have, then, restricted our analyses to comparisons of property offenses with all other offenses and violent offenses with all other offenses.

Before proceeding to the results of the Bernoulli analysis, one more fact should be mentioned. A very large proportion of all violent offenses that occurred in the cohort took place when the offenders were over the age of 17, making it difficult to restrict the analysis to the juvenile offenses, as we have done throughout most of this volume. Nevertheless, there is some reason to present an analysis of juveniles if only for the sake of comparison. The solution to this dilemma is to present analyses using all offenses and then to present the smaller figures generated by using juvenile offenses only. This we have done.

Table 9.1 presents the results of the analysis of specialization in violence for juveniles. The left column represents the total number of offenses of the subjects in the corresponding row. The rest of the column headings indicate the number of (actual and expected) violent offenses among the total offenses. As an example, we can see that, among those with four offenses, we would expect 7.1% of the offenders to have one violent offense, the actual percentage that have one violent

offense is 10.2, more than expected by chance. Quite consistently there is evidence that violent offenses are not distributed by chance processes in the population but instead concentrated in a few individuals. Table 9.2 presents the same data only for all ages.

First, we can look at the table by column, comparing the actual frequencies with expected frequencies to determine if they are significantly different. Inspecting the figures more closely reveals a pattern: those who have committed zero or one violent offense have committed fewer than expected by chance (given their respective total offense categories) while those who have committed two or more violent offenses have committed more than expected for their total offense categories. Table 9.2 shows that, in general, the same pattern holds when considering juvenile offenses only, but the figures are much smaller and a little less consistent. Nevertheless, it is clear from the two tables that actual violent offense frequencies differ in distribution from those expected by chance; at advanced levels of total number of offenses, the proportion of individuals who are multiple violent offenders is greater than expected by chance. We take this as evidence of some concentration of violent offenses among offenders.

Inspection of Table 9.3 indicates that property offenses are not randomly distributed across offenders (all ages). The pattern of this table is slightly more complex and can be characterized as follows: as the number of property offenses

begins to approach the total number of offenses for the subject, property offenses tend to constitute a disproportionate share of the subject's offenses. For example, let us examine the row for offenders who have committed a total of 10 offenses. There are many more who have actually committed zero property offenses (1.4%) than expected (.1%) This is likely due to specialization in other forms of crime. As we continue to proceed along the row for those who have committed 10 offenses we note that the percentage of these offenders who have committed a given number of property offenses exceeds the expected at the level of six or more property offenses (out of the total of 10 offenses). Of those who have committed 10 offenses, 57% (22.2% + 18.1 + 9.7% + 5.6% + 1.4%) committed six or more property offenses. The expected percentage was 33.4%. There is, then, some specialization in property offenses.

Table 9.4 concerns the same types of offenses (property) but includes only offenses committed by juveniles. It shows the same pattern but more clearly. The pattern seems to suggest that there is a group of offenders who commit almost entirely property offenses, and this pattern is not restricted to offenders of any particular level of recidivism. Again, this pattern is taken as evidence of a group of offenders who tend to specialize in property offenses. In any case, property offenses are not randomly distributed across offenders.

The Prediction Method

The second approach to the question of specialization or patterning is not based on a theoretical distribution. Here, we ask the question, "If a subject commits a violent offense at offense N, is he more likely to commit another violent offense at some point in his career than a subject who committed a non-violent offense at offense N?" At each offense level, violent and non-violent offenders are compared for the type of recidivism they have engaged in. Several restrictions apply to inclusion in each stage of analysis, however. First, an offender is included at offense level N only if he has at least one subsequent offense. Second, if he has appeared as a violent offender at offense N, he will be excluded from all further stages either as a violent or non-violent offender. Thus, at each stage (offense level), a comparison is made between a subject who has engaged in his first violent offense and a person who has the same number of prior offenses (none of them violent) and whose current offense (offense N) is non-violent. For example, in Table 9.5 we see that, considering offenders at all ages, there were 82 subjects who had a violent offense at offense 1 and 3500 whose first offense was non-violent. Each of them has at least one subsequent offense. Of the 82 violent offenders, 15.9% included at least one additional violent offense among their subsequent offenses, compared to 10.9% of the non-violent offenders at offense 1. At offense 2, there were 60 subjects who committed a violent offense as a second offense and who had at

least one subsequent offense, and who were not included as violent offenders at offense 1; there were 2182 subjects who committed a non-violent offense at offense 2, who had at least one subsequent offense and who did not have a violent offense at offense 1. Of the 60 violent offenders at offense 2, 26.7% showed at least one subsequent violent offense, compared to 14.0% of the non-violent offenders with the same number of prior (non-violent) offenses. These analyses were carried out for violent offenders versus non-violent offenders and for property offenders compared to non-property offenders. It should be noted here that this is a very conservative method for demonstrating specialization. That is, once an individual has appeared in this table as (for example) a violent offender, he is excluded from future analyses. In other words, we are precluded from taking into account multiple recidivistic violent offenders. Naturally, this reduces the apparent level of specialization.

Since the number of subjects available for each stage is necessarily restricted by our rules for inclusion, analyses were based on offenses at all ages, including adult as well as juvenile offenses. However, the analyses were replicated for juvenile offenses only, to see if the patterns observed for all offenders were substantially different when looking only at juvenile careers.

Taking first the question of violence specialization (Table 9.5) and comparing across columns for each row (offense number), it is consistently true that where a subject has a violent

offense on offense N, he is more likely to have a subsequent violent offense than his counterpart who had a non-violent offense at offense N. This is also true of juvenile offenders (Table 9.6), with the exception of the first offense. Of course, the numbers are very small for this table.

Tables 9.7 and 9.8 concern theft offenses. Again, looking at analyses restricted to juveniles and those including all offenders, those who committed theft offenses at offense N were more likely to commit subsequent theft offenses than their non-thief counterparts at offense N.

Other features of Tables 9.5 through 9.8 are also noteworthy. For instance, it is possible to make a ratio of the percentage of offenders with a violent offense at offense N who commit a future violent offense to the percent of offenders with a non-violent offense at offense N who commit a future violent offense. This can be done at each offense level. We have done so only for the tables including all offenders since those with juveniles only, have such small numbers that their stability is in doubt. These ratios can be interpreted rather directly. For instance, considering offense 1 (Table 9.5), we can see that those who committed a violent offense as their first offense are 1.46 times as likely to commit a second violent offense as offenders whose first offense was not a violent one. It is also possible to take a mean of these ratios over all offense types to get the average ratio. For violent offenders the average ratio is 1.94; on the average, then, offenders who commit their first

violent offense (at any offense N) are 1.94 times as likely to commit a subsequent violent offense in their career than are offenders who have the same number of (non-violent) priors but whose offense N is non-violent. It is useful to compare this mean ratio with its analog from the analysis of theft offenses (Table 9.7), which turned out to be 1.33. On the average, offenders who commit a theft offense at offense N are 1.33 times as likely to commit another theft offense in the future as are similar offenders who have committed a non-theft offense at offense N. This ratio is smaller than that calculated for violent offenders, indicating a stronger tendency toward specialization in violence than theft offenses.

Finally, it may be valuable to indicate how the ratios change over the careers of offenders. That is, is it more possible to predict the likelihood of a future violent offense at offense 5 than it was at offense 1: Of course, a similar question can be asked for property offenses.

Figure 9.1 is a plot of the ratios from Tables 9.5 and 9.7. It would appear that our ability to predict future offense types does depend, to some degree, on when in an offender's career he commits his first violent offense. Committing a violent offense on his first offense means less toward predicting the future than committing a violent offense on the third offense. The pattern is not a smooth one, but there is a tendency for the predictive advantage to go up with offense N, to go back down, and up once again, reaching a peak at offense 8. If an offender commits his

first violent offense at offense 8, he is much more likely to commit another one later, compared to a similar non-violent offender at offense 8 than is true at other offense Ns. Of more potential policy value is offense 3 since interventions are likely to be more meaningful (at least from an incapacitation perspective, and maybe others) early in the career than later (e.g., offense 8).

For theft offenses, our comparative ability to predict goes down with each offense number, and it is almost always lower than for violent offenses. That is, if an offender commits a theft as an early offense, he is a likely candidate for future theft offenses. If he does not commit theft in his first three or four offenses (an improbable offense pattern) he is unlikely to be a recidivistic thief. We must be careful at this point, however, for the total population it is always true that future theft offenses are more likely than violent offenses. This is the case because theft offenses are so much more prevalent than violent offenses. Perhaps some adaptation of this form of analysis could be useful in the important problem of predicting the recurrence of violence (Monahan & Klassen, 1982). Also, violent offenses are the more socially harmful therefore warranting more attention.

One further potential problem with the general method of predicting future offense types from a given point in the career (toward assessing specialization) should be mentioned. The method asks whether an individual who commits a violent offense

at this second offense (as an example) is more likely to commit a subsequent violent offense than one who commits a non-violent offense as a second offense. One problem with this method is that violent offenders tend to commit more offenses in general. Thus, an individual who commits a violent offense as his second offense is more likely to commit more additional offenses than an individual who commits a theft as his second offense. Thus, the violent offender will have more opportunities for committing future violent offenses. However, in view of the congruence of the results using this method with the results of the Bernoulli process method, and the fact that specialization is shown with thievery by this method as well, no further adjustments of the data were deemed necessary.

In summary, we have demonstrated that thieves and violent offenders exhibit a moderate level of specialization in type of crimes committed in their careers. This has been done using two quite different approaches to the problem. In addition, it appears that violent offenders are somewhat more likely to show specialization than property offenders. Our definition of specialization, however, is quite different from the methods used by Wolfgang et al. It is, therefore, pointless to compare our results with theirs.

References Chapter 9

Chaiken, J.M., & Chaiken, M.R. Varieties of criminal behavior: Summary and policy implications. Final Report to National Institute of Justice, 1982.

Klein, M.W. Cafeteria-style delinquency: Evidence and implications. Presented at 1980 meeting os the Society for the Study of Social Problems.

Monahan, J., & Klassen, D. Situational approaches to understanding and predicting individual violent behavior. In Wolfgang, K.E., & Werner, N.A. (Eds.), Criminal Violence. Beverly Hills: Sage Publications, 1982.

Rojek, D., & Erickson, M. Delinquent careers. Criminology, 1982, (May), 20(1).

Wolfgang, M., Figlio, R., & Sellin, T. Delinquency in a birth cohort. Chicago: University of Chicago Press, 1972.

Table 9.1

Expected and Actual Percent Zero-, One-, Two-, Three-, and Four-Time Violent Offenders by Number of Offenses-Juveniles Only

Total Number Of Offenses	Number of Violent Offenses									
	0		1		2		3		4	
	A	E	A	E	A	E	A	E	A	E
1	98.4	98.1	1.6	1.9	-	-	-	-	-	-
2	96.6	96.3	3.0	3.7	.3	.04	-	-	-	-
3	96.2	94.5	3.8	5.4	0	.1	0	0	-	-
4	89.8	92.7	10.2	7.1	0	.2	0	0	0	0
5	89.0	90.9	9.9	8.7	1.1	.3	0	0	0	0
6	85.1	89.2	13.8	10.3	1.1	.5	0	.01	0	0
7	90.6	87.5	6.3	11.8	3.1	.7	0	.02	0	0
8	90.6	85.9	6.3	13.2	3.1	.9	0	.03	0	0
9	81.3	84.2	12.5	14.5	6.3	1.1	0	.1	0	0
10	83.3	82.7	5.6	15.9	0	1.4	5.6	.1	5.6	.1

Note: A = Actual percentages
B = Expected percentages based on Bernoulli distribution

Table 9.2

Expected and Actual Percent Zero-, One-, Two-, Three-, and Four-Time Violent Offenders by Number of Arrests-All Ages

Total Number Of Offenses	Number of Violent Offenses									
	0		1		2		3		4	
	A	E	A	E	A	E	A	E	A	E
1	98.6	96.3	1.4	3.7	-	-				
2	96.8	92.8	3.0	7.1	0.2	0.1				
3	93.0	89.4	6.1	10.2	0.9	0.4	0.0	0.00		
4	90.9	86.1	7.7	13.1	1.1	0.7	0.3	0.02	0.0	0.00
5	88.2	83.0	9.9	15.8	1.7	1.2	0.2	0.05	0.0	0.00
6	83.7	79.9	12.0	18.2	4.0	1.7	0.4	0.09	0.0	0.00
7	79.6	77.0	14.9	20.5	4.7	2.3	0.9	0.14	0.0	0.01
8	76.5	74.2	18.7	22.6	3.7	3.0	0.5	0.23	0.5	0.01
9	66.7	71.5	25.0	24.5	5.8	3.7	1.7	0.32	0.8	0.02
10	73.1	68.9	17.9	26.2	5.2	4.5	3.7	0.45	0.0	0.03

Note: A = Actual percentages
B = Expected percentages based on Bernoulli distribution

Table 9.3

Expected and Actual Percent Zero-, One-, Two-, Three-, and Four-Time Property Offenders by Number of Offenses All Ages

Total Number of Offenses	Number of Property Offenses																			
	0		1		2		3		4		5		6		7		8		9		10	
	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E
1	59.4	51.8	40.6	48.2																		
2	38.6	26.8	36.3	49.9	25.0	23.3																
3	20.5	13.9	30.7	38.8	29.9	36.1	18.8	11.2														
4	12.6	7.2	18.9	26.8	27.7	37.4	26.6	23.2	14.2	5.4												
5	7.1	3.7	15.7	17.3	22.1	32.3	21.4	30.1	23.2	14.0	10.4	2.6										
6	3.1	1.9	10.5	10.8	16.2	25.1	24.0	31.1	17.9	21.8	17.9	8.1	10.5	1.3								
7	1.5	1.0	5.2	6.5	13.4	18.2	13.4	28.2	23.9	26.3	20.1	14.7	12.7	4.6	9.7	.6						
8	1.5	.5	7.4	3.8	8.1	12.5	10.4	23.4	18.5	27.2	21.5	20.3	16.3	9.5	10.4	2.5	5.9	.3				
9	0	.3	.9	2.2	4.7	8.3	8.4	18.1	16.8	25.3	19.6	23.6	12.1	14.7	19.6	5.9	15.0	1.4	2.8	.1		
10	1.4	.1	2.8	1.3	6.9	5.4	4.2	13.4	9.7	21.9	18.1	24.5	22.2	19.0	18.1	10.1	9.7	3.5	5.6	.7	1.4	.1

Note: A = Actual percentages
B = Expected percentages based on Bernoulli distribution

Table 9.4

Expected and Actual Percent Zero-, One-, Two-, Three-, and Four-Time Property Offenders by Number of Offenses-Juveniles Only

Total Number of Offenses	Number of Property Offenses																			
	0		1		2		3		4		5		6		7		8		9		10	
	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E	A	E
1	28.7	66.4	71.3	33.6																		
2	12.6	44.0	35.6	44.7	51.8	11.3																
3	5.8	29.2	17.1	44.4	33.2	22.5	43.8	3.8														
4	1.6	19.4	5.9	39.3	21.4	29.9	28.3	10.1	42.8	1.3												
5	0	12.9	2.2	32.6	11.0	33.1	19.8	16.8	33.0	4.3	34.1	.4										
6	3.4	8.5	1.1	26.0	4.6	33.0	16.1	22.3	23.0	8.5	26.4	1.7	25.3	.1								
7	0	5.7	0	20.1	1.6	30.6	6.3	25.8	18.8	13.1	15.6	4.0	26.6	.7	31.3	.0						
8	0	3.8	0	15.2	0	27.1	0	27.4	6.3	17.4	15.6	7.1	21.9	1.8	28.1	.3	28.1	.0				
9	0	2.5	0	11.4	0	23.1	0	27.3	3.1	20.8	9.4	10.5	15.6	3.6	18.8	.8	37.5	.1	15.6	.0		
10	0	1.7	0	8.4	0	19.1	0	25.9	11.1	23.0	11.1	14.0	0.0	5.9	5.6	1.7	16.7	.3	27.8	.0	27.8	.0

Note: A = Actual percentages
E = Expected percentages based on Bernoulli distribution

Table 9,5

Percent of Offenders (At Each Offense Number) With Future Offenses Who Have Violence Among Future Offenses: Comparing Offenders With Violence With Those Who Have Non-Violence Offenses On Offense N - All Ages

Offense N	A No. With Non-Viol. At Off. N	B No. With Future Violence	C % With Future Violence	D No. With Violence At Off. N	E No. With Future Violence	F % With Future Violence	Ratio of F/C
1	3500	381	10.9	82	13	15.9	1.46
2	2182	305	14.0	60	16	26.7	1.91
3	1469	236	16.1	41	16	39.0	2.42
4	1139	218	19.1	34	11	32.4	1.70
5	858	159	18.5	48	17	35.4	1.91
6	682	118	17.3	37	9	24.3	1.40
7	536	100	18.7	30	12	40.0	2.14
8	441	77	17.5	18	8	44.4	2.54
							15.48
							$\bar{X}$ = 1.94

Table 9.6

Percent of Offenders (At Each Offense Number) With Future Offenses Who Have Violence Among Future Offenses: Comparing Offenders With Violence With Those Who Have Non-Violence Offenses On Offense N - Juveniles Only

Offense N	No. With Non-Viol. At Off. N	No. With Future Violence	% With Future Violence	No. With Violence At Off. N	No. With Future Violence	% With Future Violence
1	1328	51	3.8	15	0	0
2	710	36	5.1	8	2	25.0
3	436	24	5.5	8	3	37.5
4	288	22	7.6	4	1	25.0
5	209	10	4.8	7	2	28.6

Table 9.7

Percent of Offenders (At Each Offense Number) With Future Offenses Who Have Theft Among Future Offenses: Comparing Offenders With Theft With Those Who Have Non-Theft Offenses On Offense N - All Ages

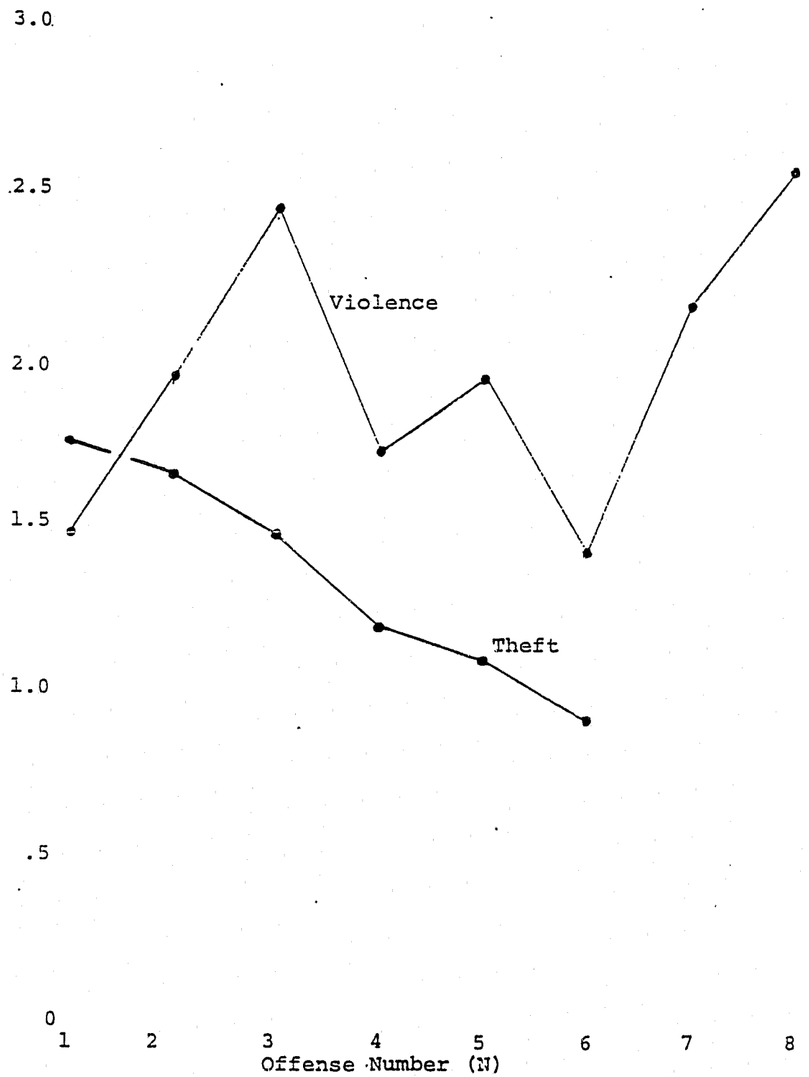
Offense N	A No. With Non-Theft At Off. N	B No. With Future Theft	C % With Future Theft	D No. With Theft At Offense N	E No. With Future Theft	F % With Future Theft	Ratio of F/C
1	1246	471	37.8	2336	1517	64.9	1.72
2	480	162	33.7	430	236	54.9	1.63
3	223	87	39.0	120	69	57.5	1.47
4	117	49	41.9	64	32	50.0	1.19
5	53	28	52.8	26	15	57.7	1.09
6	29	15	51.7	15	7	46.7	.90
							8.00
							$\bar{X}$ = 1.33

Table 9.8

Percent of Offenders (At Each Offense Number) With Future Offenses Who Have Theft Among Future Offenses: Comparing Offenders With Theft With Those Who Have Non-Theft Offenses On Offense N - Juveniles Only

Offense N	No. With Non-Theft At Off. N	No. With Future Theft	% With Future Theft	No. With Theft At Offense N	No, With Future Theft	% With Future Theft
1	241	166	68.9	1102	879	79.8
2	35	21	60.0	103	78	75.7
3	7	2	28.6	19	14	73,7
4	3	2	66.7	5	5	100.0

Figure 9.1. Ratios of % Committing Future Violence When Offense N Is Violent To % Committing Future Violence When Offense N Is Not Violent (Same For Theft)



Ratio Col F/Col C (Tables 9.5 & 9.7)

Note: We stopped at six theft offenses because there are too few offenders who did not commit a theft by their seventh offense.

Chapter 10

AGE OF ONSET

There is a substantial literature indicating that the age of onset of delinquent behavior predicts rather well to the nature of the subsequent delinquent career (Farrington, 1983; Glueck and Glueck, 1950; McCord, 1981; Robins and Wish, 1977: Wolfgang, Figlio and Sellin, 1972). For instance, the earlier the age of onset, the more arrests the delinquent will accumulate. From Wolfgang, et al, we know that there is a moderately high negative correlation between age of onset and subsequent seriousness of offenses, although this relationship varies by race and SES categories.

In this chapter, our overall purpose will be to determine the degree to which this Scandinavian cohort shows the same patterns seen in American studies, focussing, of course, on the Philadelphia cohort for comparison. More specifically, we will explore the distribution of age of onset and the class differences in this distribution. In addition, we will describe the career implications of different onset ages including subsequent offense density and seriousness. Of course, these issues will also be analyzed by social class.

Distribution of First Offenses

Figure 10.1 plots the probability of a first offense by age. The pattern of first offenses in Copenhagen is one of slow start-

ing with a steep ascent between ages 14 and 16. The Philadelphia curve (also plotted on Figure 10.1) is quite different. It shows a steep ascent from age 8 onward, peaking at age 16, with a sharp decline at age 17 to below the level seen at age 14. Of course, the previously noted difference in overall probability of offending between the two cohorts is also demonstrated in this figure. The Philadelphia curve attains a much higher peak than the Copenhagen curve does at any point. Interestingly, even if we follow the Copenhagen cohort to age 25, it does not reach the same levels as the Philadelphia cohort at any time after age 13. However, the rate of first offense probability does rise slightly after age 17, peaking at age 21, gradually declining to age 23 when the curve takes a noticeable turn downward to age 25. The major observation to be made from this graph, then, is that in addition to the lower overall level of first offense probability in the Copenhagen cohort, the Danish group is slower to start delinquency and slower to reach a peak in first offending.

We should remind the reader, here, that official record keeping of police contacts does not become automatic until the subject reaches 15 years of age. Naturally, this affects what we see as the age of onset, and causes us to take less seriously the observation that age of onset is later in Copenhagen. Two facts should be mentioned in response to this problem. First, a similar situation exists in the U.S. in that police are more reluctant to give a youth a record in his younger years. In Denmark there is merely an official cut-off point for the (selectively used) grace period, while this point is less clear in the United

States.

Second, the lag of the Copenhagen ages of onset continues throughout the ages--certaintly beyond the age at which record-keeping is systematic. We cannot, therefore, justify denying a later age of onset for Copenhagen youth.

Table 10.1 shows the offender rate for each age of onset category, and Figure 10.2 displays the same data as a plot. Naturally, we would expect these numbers to reveal essentially the same pattern seen in Figure 10.1, but there is a slight difference in the method of calculation. First, of course, the offender rate is based on a different metric than the probability shown in prior figures. Beyond that, however, the offender rate is calculated as the number of subjects per 1000 that fall into each age-of-onset category. As Wolfgang et al. did, however, we subtract from each category; the number of subjects who fall into earlier age-of-onset categories, yielding a true rate of onset at each age level. It is clear from the graph that the pattern is the same as that seen in Figure 10.1, but in this case the rates are shown by class. Focussing on the under-18 offenses only, we can see that the Copenhagen higher classes are slower to start delinquent activity than the lower classes. Likewise, the slope for the higher-SES group never is as steep as the one for the lower-SES group in Copenhagen. By comparison, while the Philadelphia higher classes are about three years slower to start than the lower classes, the slope ultimately ascends at about the same rate (but stopping below the lower class level) as the lower class slope. The slope for the two classes are, in short, close

to parallel, if at different levels. This pattern suggests again, a stronger class effect in Copenhagen than in Philadelphia. It should also be noted here that when the data for Philadelphia are analyzed by race they show precisely the same pattern as when analyzed by class.

Career Implications

Our interest in the career implications of onsest age has two main themes: the quantity and seriousness of offenses subsequent to the first. That is, we wish to know whether, as implied by earlier research, early onset indicates more delinquency and more serious delinquency compared to later onset. First, the issues of quantity will be addressed. Probably the most straightforward approach to the issue of offense quantity as predicted by age of onset is to calculate the mean number of subsequent offenses associated with each age category. These figures are shown in Table 10.1, and are graphed in Figure 10.3. As usual, the means are computed by social class as well. The relation between age of onset and number of subsequent offenses as portrayed by this type of analysis is clear from Figure 10.3; there is a strong inverse relation. That is, the earlier the onset of delinquency the more offensive the child will ultimately be. Certainly this corresponds rather well with prior literature in the area, including Wolfgang's et al analysis, also shown on the graph. The pattern is obviously the same for both classes in both cohorts. Both cohorts show wider discrepancies in offense quantity with early onset than with later onset; that is, in the lower classes, early onset means proportionately more offenses

than it means in the higher classes. This is less true for Copenhagen subjects than for Philadelphia subjects, however. The large class difference virtually ends at age 9, although it appears again to a lesser degree, at ages 12 and 13. In studying these results, the question arises as to whether the relation seen reflects only the fact that those who start earlier have a longer exposure time and therefore more opportunity to offend (not an insignificant fact in itself) or whether an earlier onset means a higher offense density per year of exposure (a separately interesting fact).

To address this question, a separate figure (Figure 10.4) was prepared based on offenses per year of exposure to age 25 (when our data end). In other words, subjects whose first offense was at age 7 were assumed to have 18 years of exposure; those who started at age 8 were assumed to have 17 years of exposure, etc. Therefore, the mean number of offenses for each age category was divided by the number of years of exposure to yield the mean number of offenses per year of exposure. Of course the analysis was done by social class. Exposure time through age 25 was used to avoid a "floor effect" problem that we would have encountered if exposure time had only included the juvenile years ending at age 17. Had we used the shorter time, those who had begun offending at age 17 would have a mean offenses per year of at least 1. The closer to 17 an offender was when beginning delinquency, the higher his "offense density" would be, artifactually. The use of a longer exposure beyond onset effectively eliminates this problem. Using this method we can see that there is

virtually no effect of onset age on offense density for either class. There is considerable fluctuation within the higher class, but there is no systematic pattern save at the very early age of 7 which, as an age of onset predicts a very low density, contrary to what we might have expected from previously cited literature. Based on these data, we can say that a juvenile is just about as likely to continue offending at a similar rate if he begins at 8 or at 16. This means more offenses total, but no more offenses per year for young starters.

Unfortunately, a similar analysis could not be done with the Philadelphia cohort since offenses beyond age 17 were not available.

The second theme of this section is offense seriousness as predicted by age of onset. Table 10.2 and Figure 10.5 address this issue by indicating the mean seriousness scores of all offenses committed by each age-of-onsetgroup (through age 17). We can see from Figure 10.5 that mean seriousness remains quite constant across age groups until the age of 15 when it goes down fairly steadily. The overall impression from the graph, however, is that seriousness stays essentially constant across onset ages. Because consideration of later years gives quite a different impression, we shall present data through age 25 as well. Figure 10.6 does this. Clearly, when taking a longer-term perspective, the relation between offense seriousness and age of onset appears significant. Specifically, the earlier the onset, the more serious the offenses eventually committed by the delinquents.

It is also clear from both graphs that class differences are

small. Without doubt, this reflects the fact that most offenses are property offenses for both classes. As seen in Chapter 4 it is the quantity not the type of offenses which varies by class.

The Philadelphia cohort (Figure 10.7) shows a pattern more similar to the under-18 data from Copenhagen than to the long-term Copenhagen analysis. That is, very little variation in seriousness is seen across age categories. The lower classes show a slight decrease in seriousness over onset age, while the higher classes show virtually no systematic change. Also, as expected from prior analyses, class differences in seriousness are larger in Philadelphia than in Copenhagen.

Summary

It is clear that, for the Copenhagen cohort, early onset predicts more offenses, especially in the lower classes. Offense seriousness also is higher among early starters, although offense density shows no pattern. Therefore, it can be said that early onset means more serious offenses if not higher density.

In Philadelphia, the number of offenses committed is also greater for the early starters, but a density analysis could not be adequately completed. Here the early starters do not show more seriousness in their offending.

References Chapter 10

Farrington, D. Delinquency from 10 to 25. In Van Dusen, K., & Mednick, S. (Eds.), Prospective studies of crime and delinquency. Hingham, Massachusetts: Kluwer-Nijoff, 1983.

Glueck, S., & Glueck, E. Unraveling Juvenile Delinquency. Cambridge, Massachusetts: Harvard University Press, 1950.

McCord, J. A longitudinal perspective on patterns of crime, Criminology, 1981, 19(2), 211-218.

Robins, L., & Wish, E. Childhood deviance as a developmental process: A study of 223 urban black men from birth to 18. Social Forces, 1977, 56(2), 448-473.

Wolfgang, M., Figlio, R., & Sellin, T. Delinquency in a birth cohort. Chicago: University of Chicago Press, 1972.

Table 10.1

Offenses and Offenders by Age of Onset and SES

Copenhagen

	Age of Onset	7	8	9	10	11	12	13	14	15	16	17
A.	All Offenders											
	Total Offenses	117	265	238	339	263	409	552	663	983	1107	918
	Total Offenders	25	51	62	84	78	103	173	241	476	697	747
	$\bar{X}$ Offenses	4.7	5.2	3.8	4.0	3.4	4.0	3.2	2.8	2.1	1.6	1.2
	Offender Rate	.9	1.9	2.3	3.2	3.0	3.9	6.6	9.2	18.4	27.5	30.3
	$\bar{X}$ Offenses per Yr. Exposure	.69	.80	.74	.78	.76	.87	.85	.85	.77	.77	.74
B.	Low Class:											
	Total Offenses	111	231	200	275	233	371	515	597	870	925	739
	Total Offenders	23	38	54	67	66	89	153	208	405	564	591
	$\bar{X}$ Offenses	4.8	6.1	3.7	4.1	3.5	4.2	3.4	2.9	2.1	1.6	1.3
	Offender Rate	1.6	2.6	3.7	4.6	4.5	6.1	10.6	14.6	28.9	41.4	45.3
	$\bar{X}$ Offenses per Yr. Exposure	.73	.89	.73	.85	.76	.90	.90	.88	.81	.81	.79
C.	High Class:											
	Total Offenses	6	34	38	64	30	38	37	66	113	182	179
	Total Offenders	2	13	8	17	12	14	20	33	71	133	156
	$\bar{X}$ Offenses	3.0	2.6	4.8	3.8	2.5	2.7	1.9	2.0	1.6	1.4	1.1
	Offender Rate	.2	1.1	.7	1.4	1.0	1.2	1.7	2.8	6.0	11.3	13.4
	$\bar{X}$ Offenses per Yr. Exposure	.22	.53	.71	.50	.81	.71	.51	.66	.54	.58	.56

Table 10.1a

Offenses and Offenders by Abe of Onset, SES

Philadelphia

Age of Onset	7	8	9	10	11	12	13	14	15	16	17
A. All Offenders											
Total Offenses	185	353	783	944	1081	1261	1406	1284	1374	1133	410
Total offenders	25	56	124	179	234	301	412	484	596	718	346
$\overline{X}$[a]	7.4	6.3	6.3	5.3	4.6	4.2	3.4	2.6	2.3	1.6	1.2
Offender Rate[b]	2.5	5.6	12.6	18.4	24.5	32.3	45.6	56.2	73.3	95.3	50.8
B. Low SES:											
Total Offenses	162	242	697	753	868	950	1016	827	815	605	196
Total Offenders	19	35	92	132	169	211	278	275	325	356	164
$\overline{X}$	8.5	6.9	7.6	5.7	5.1	4.5	3.6	3.0	2.5	1.7	1.2
Offender Rate	4.1	7.7	20.3	29.7	39.2	51.0	70.8	75.4	96.4	116.8	60.9
C. High SES:											
Total Offenses	23	111	86	191	213	311	390	457	559	528	214
Total Offenders	6	21	32	47	65	90	134	209	271	362	182
$\overline{X}$	3.8	5.3	2.7	4.1	3.3	3.4	2.9	2.2	2.1	1.4	1.2
Offender Rate	1.1	3.9	6.0	8.9	12.4	17.3	26.3	42.1	57.0	80.7	44.1

Table 10.?

Mean Offense Seriousness Scores and Weighted Offender Rate
for Specified Age-of-Onset Groups by SES

Copenhagen

	Age of Onset	7	8	9	10	11	12	13	14	15	16	17
A.	All Offenders											
	Mean Offense Score	6.2	6.9	6.8	6.7	6.7	6.6	6.7	6.6	6.1	5.7	5.6
	Weighted Offender Rate	6.2	13.7	16.8	22.2	20.9	28.1	46.6	64.8	113.7	152.2	161.5
B.	Low SES											
	Mean Offense Score	6.3	7.0	6.8	6.6	6.8	6.7	6.8	6.5	6.1	5.8	5.6
	Weighted Offender Rate	10.2	18.7	26.8	31.4	31.9	44.5	74.8	100.1	174.2	226.1	232.6
C.	High SES											
	Mean Offense Score	6.0	6.6	6.4	6.8	6.6	6.0	6.5	7.1	6.1	5.4	5.5
	Weighted Offender Rate	1.3	7.5	4.4	10.8	7.3	7.7	11.7	21.1	39.1	60.8	73.7

Table 10.2a

Mean Offense Seriousness Scores and Weighted Offender Rate
for Specified Age-of-Onset Groups

Philadelphia

Age of Onset	7	8	9	10	11	12	13	14	15	16	17
A. All Offenders											
Mean Offense Score	119.22	118.59	122.00	122.60	120.04	128.89	111.56	109.27	107.16	93.14	118.43
Weighted Offender Rate[a]	313.52	530.52	1397.61	1537.37	2343.27	3643.50	3788.83	5264.22	6991.88	7453.01	6150.67
B. Low SES											
Mean Offense Score	126.61	126.00	125.22	130.58	122.73	133.82	114.61	122.91	123.80	103.67	125.33
Weighted Offender Rate	606.02	649.50	2290.94	2691.08	3912.68	5996.13	6006.11	8177.35	10326.41	11180.11	7968.80
C. High SES											
Mean Offense Score	67.17	102.42	95.88	91.15	103.28	113.83	103.61	84.60	82.90	81.08	112.11
Weighted Offender Rate	63.42	431.56	638.92	571.67	1057.29	1729.67	2100.08	3152.17	4670.70	4969.38	5017.40

FIGURE 10.1 Yearly Probability of First Offense Commission

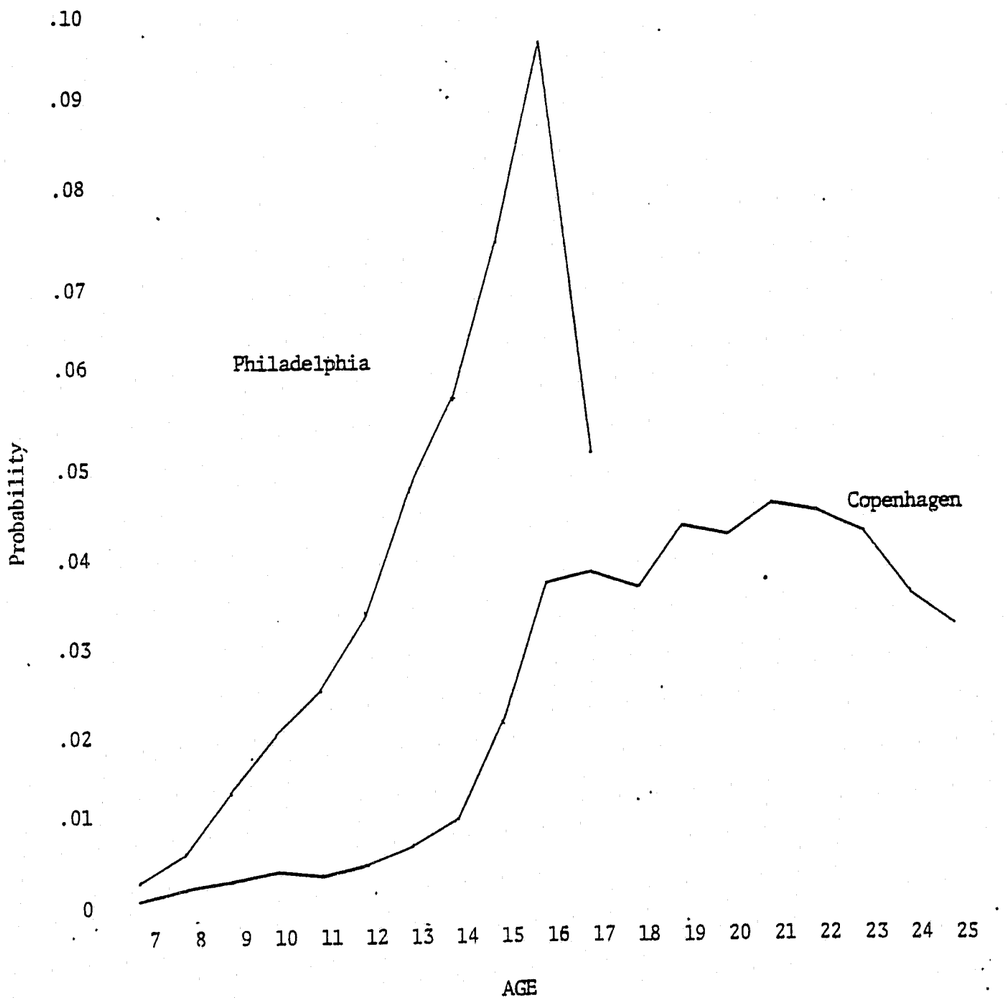


FIGURE 10.2 Offender Rate (in %) by Age of Onset by SES

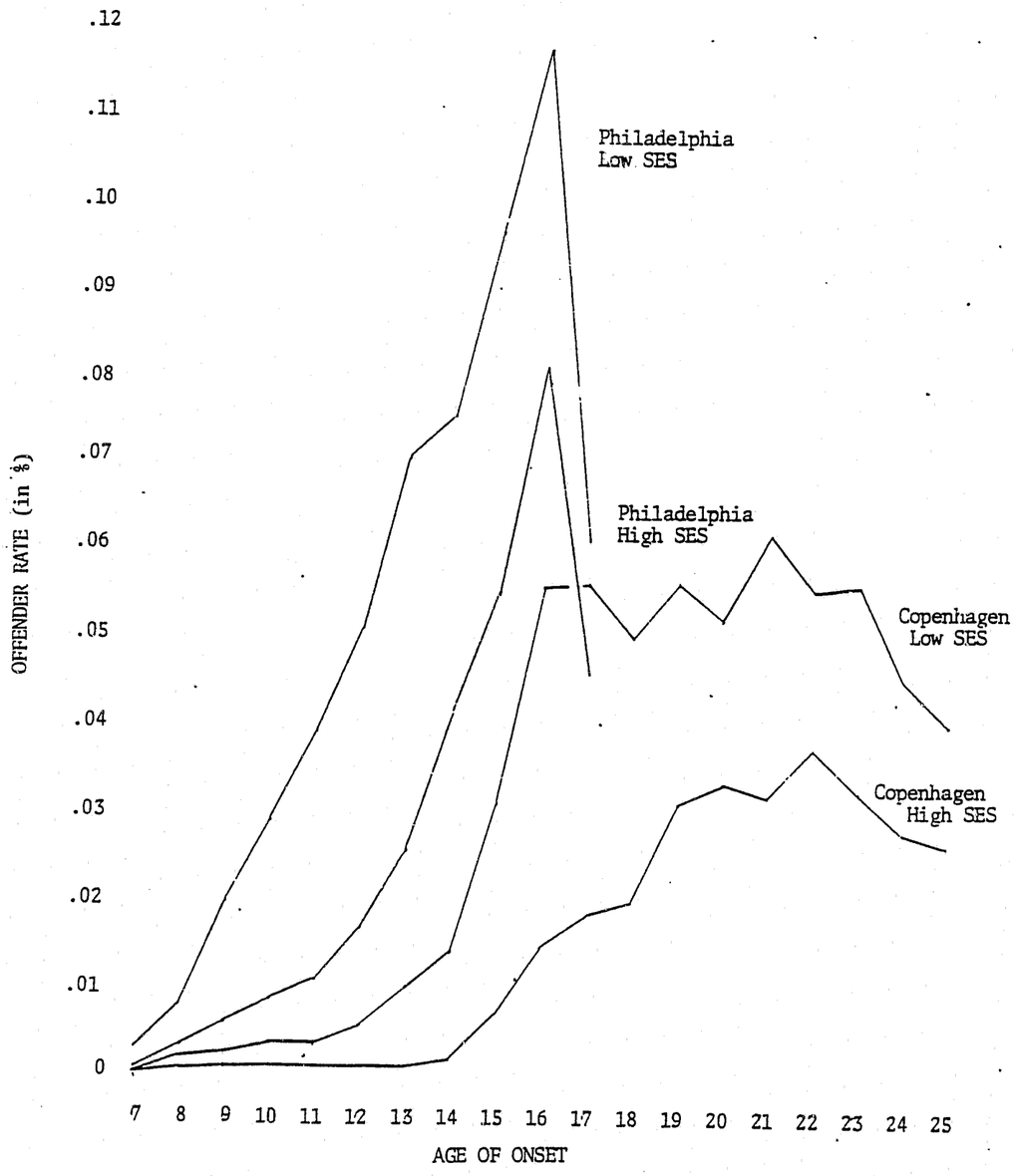


FIGURE 10.3 Mean offenses for each age-of-onset group by SES (race for Philadelphia)

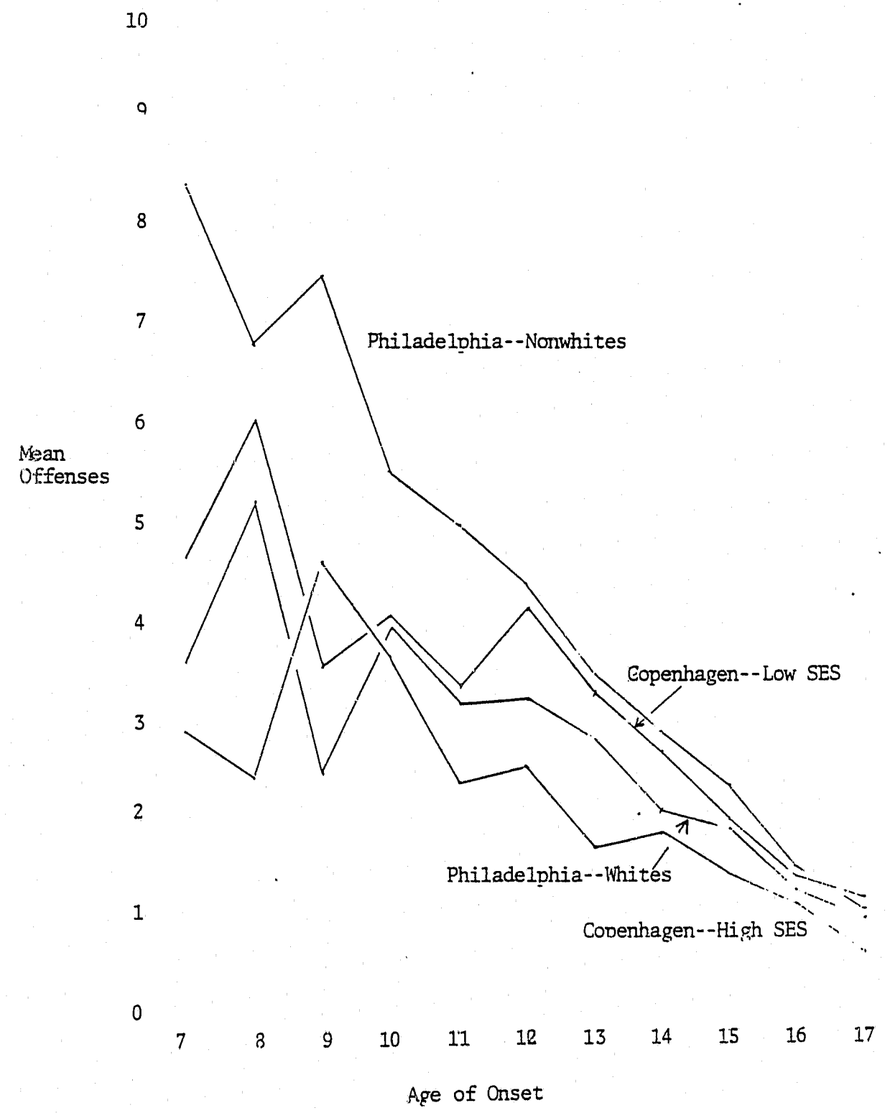


FIGURE 10.4 Mean Offenses Per Year of Exposure through Age 25 for Various Age-of-onset Categories

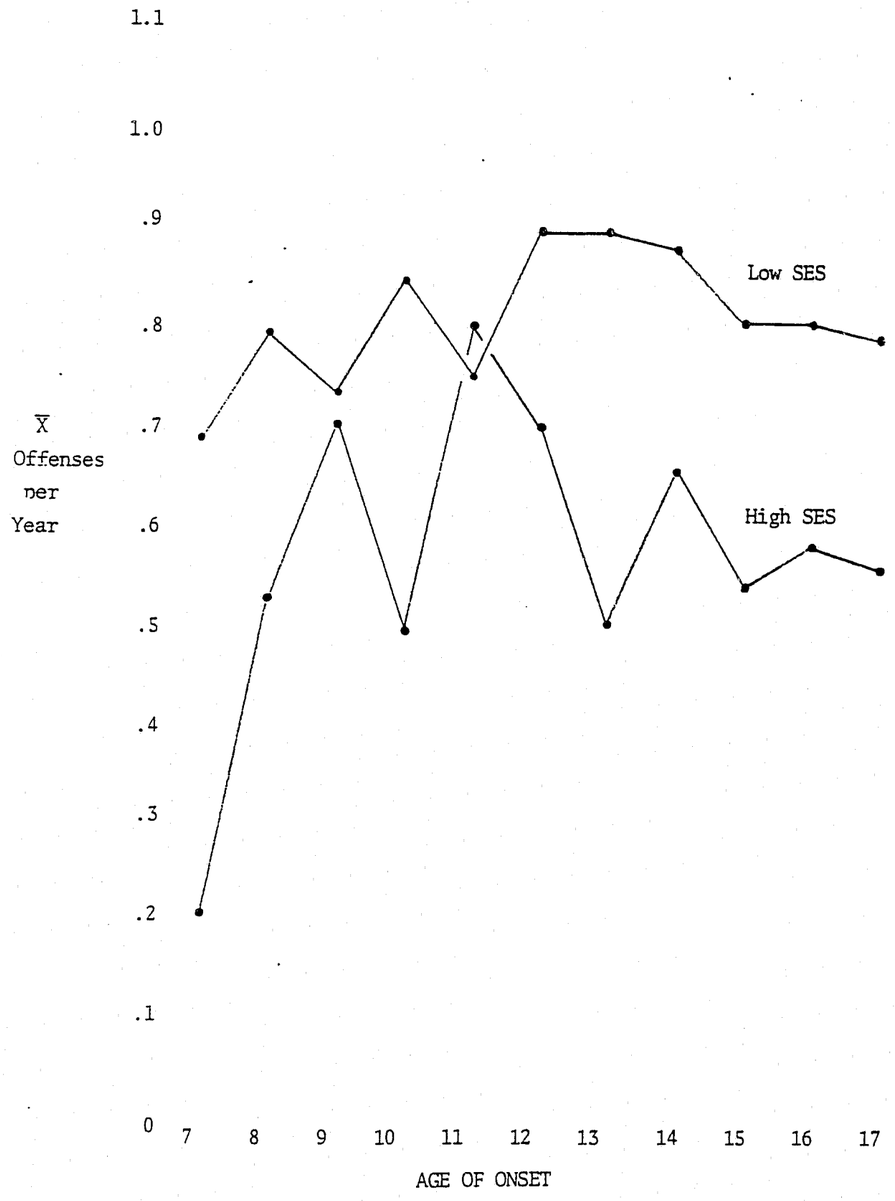
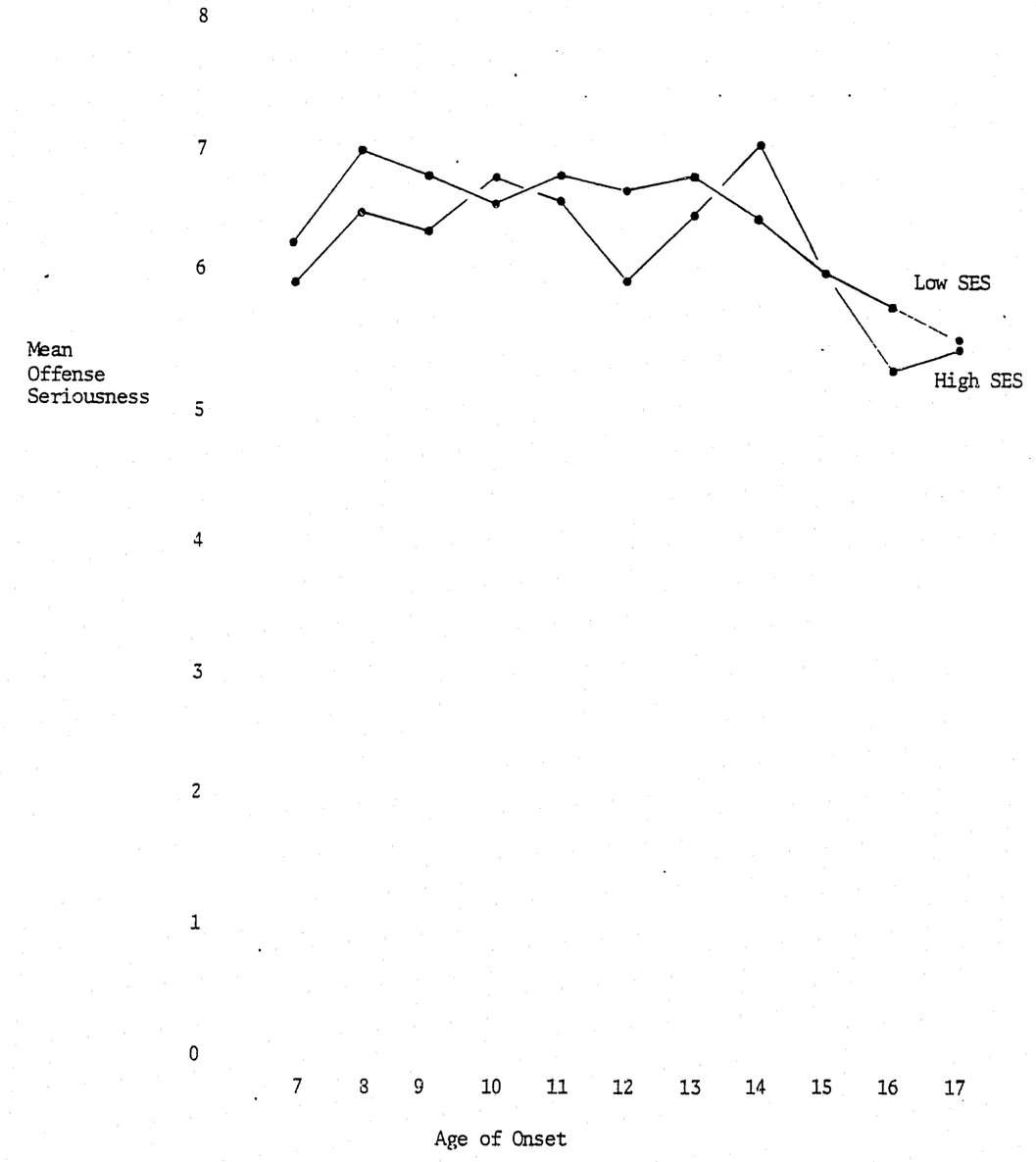


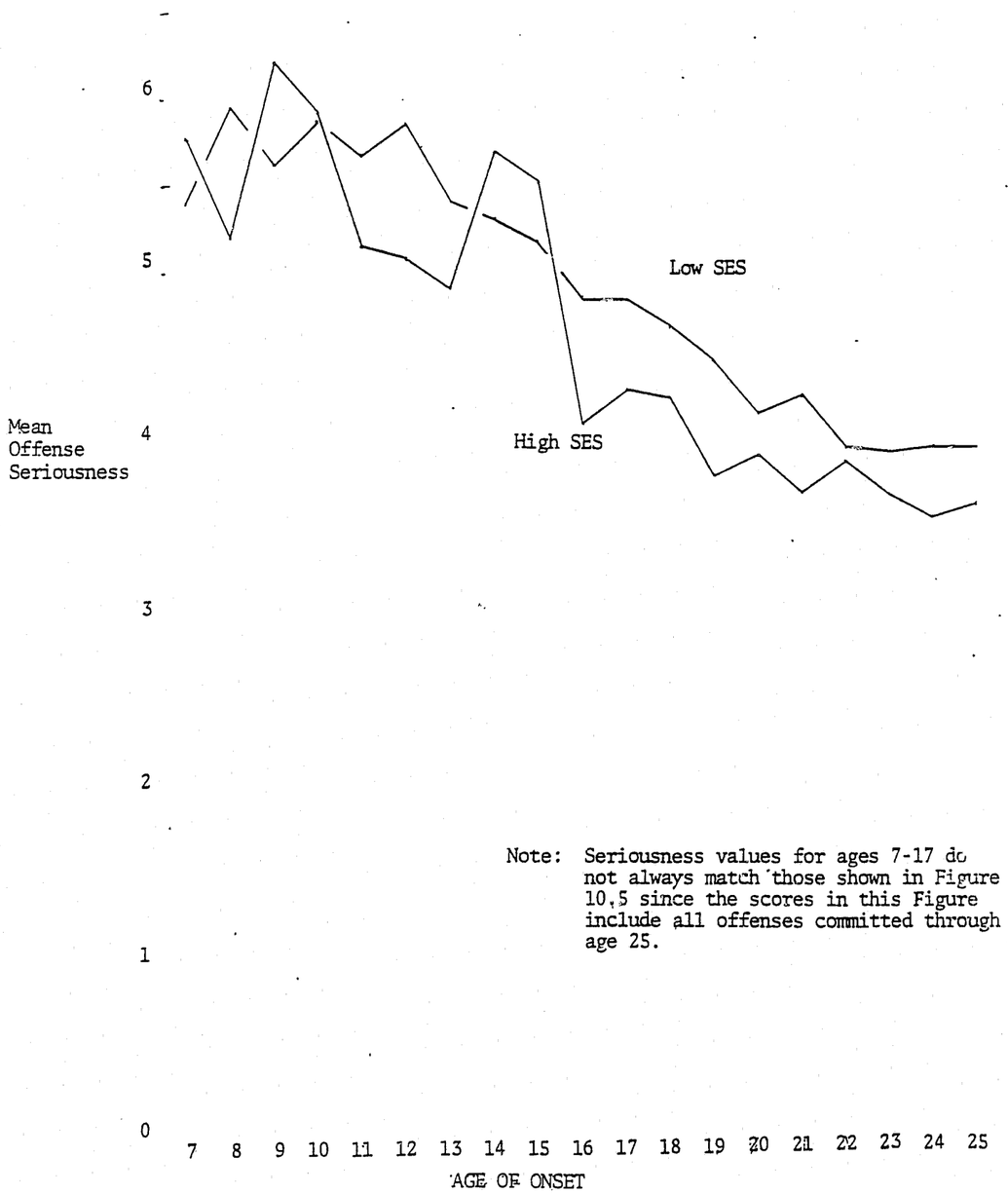
FIGURE 10.5 Mean Offense Seriousness Scores for Specified Age-of-onset Groups by SES - Copenhagen



CONTINUED

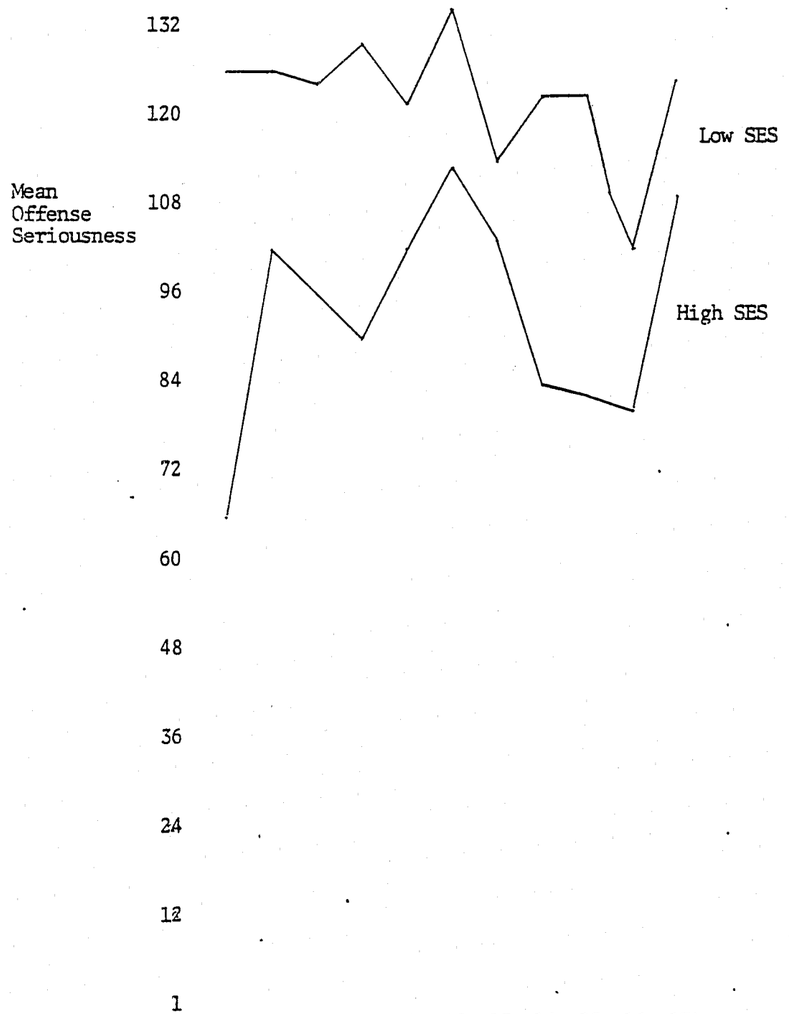
2 OF 3

FIGURE 10.6 Mean Offense Seriousness Scores for Specified Age-of-onset Groups by SES - Copenhagen



Note: Seriousness values for ages 7-17 do not always match those shown in Figure 10.5 since the scores in this Figure include all offenses committed through age 25.

FIGURE 10.7 Mean Offense Seriousness Scores for Specified Age-of-Onset Groups by SES--Philadelphia



Chapter 11

AGE AND DELINQUENCY

In the United States, it is, by now, a commonplace that the peak age of delinquent activity is 16. This is routinely reported by the FBI in the Uniform Crime Reports and by most cross-sectional studies of delinquency that are concerned with age. While it was not surprising, it was reassuring that Wolfgang et al. supported this finding in the context of their birth cohort study. This Philadelphia finding was quite dramatic in that the fall-off at age 17 was large and consistent across offense types and classes. There has been considerable theorizing and/or speculation about why this peak should occur exactly when it does. Explanations centered around school attendance and the effect this has on delinquency (Polk and Schafer, 1972; Wolfgang et al. 1972). The age of 16 is the typical age at which mandatory school attendance ends, a fact that is linked to the drop in delinquency. West and Farrington, however, undermined this idea; they reported a peak age that was not only later but did not correspond to the English school-leaving age. This issue is still clearly open for further empirical input. What would be the implications of different age distributions in different countries? How do other peak ages correspond with school attendance? Does the peak age vary with social class in other cultures?

This chapter will be concerned with the age distribution of delinquency from several perspectives: simple prevalence (by age), cumulative prevalence over ages, incidence, and seriousness, all by social class. In this chapter, (as in the previous chapter) we suspend our usual policy of presenting only data from ages below-18 by presenting the data described here for all ages available from the Copenhagen cohort (through age 25). This exception is made here because age is the central issue in this chapter; it seems foolish to restrict our statement of results arbitrarily at age 17 when more information can be used without affecting our ability to make direct comparisons to the Philadelphia data. That is, extending the age distribution beyond age 17 does not invalidate the below-18 comparison with Philadelphia. It is also necessary to extend the analysis beyond 17 if we are to identify the true delinquency peak in Copenhagen since, as we shall see later, in some cases the peak occurs after 17 in this cohort. For these reasons, most analyses in this chapter will include all available ages.

The reader should be reminded that juveniles in Denmark can not be officially arrested before the age of 15. This means that the police are not required to record their contacts with youths until that age. It is clear, however, that such contacts were recorded with considerable regularity, when one looks at the numbers of contacts that are present in our data file for this cohort. In addition, it is very likely true that the very young offenders in the Philadelphia cohort are also less likely to be arrested and recorded. It doesn't seem warranted, then, to focus too much on this feature of the Danish system.

Age and Delinquency Rates by Social Class

Table 11.1 presents the crude rates and weighted rates by

social class as well as the ratio of the lower-class to higher-class crude rates. The rate of delinquency peaks at age 17 for lower-class subjects and at age 18 for higher-class subjects, that is one year later than in Philadelphia for the lower-class group and two years later for the higher-class subjects. The weighted rate peaks even later: at age 19 for the lower class and age 22 for the higher class, indicating that the seriousness of crimes continues to increase even after frequency begins to decline. These figures compare, again, to the age of 16 for the weighted-rate peak in Philadelphia.

From Table 11.1 we can also see class differences in the distribution of delinquency by age, but these differences are not constant across time. The class difference increases from the very early years to the age of 14 when it begins to decrease. This pattern holds for both crude rates and weighted rates. As would be expected, the differences are all in the direction of higher rates for the lower classes. Inspection of the actual crude and weighted rates reveals that the pattern of ratios reflects two things: (1) both classes of subjects begin delinquent activity relatively late (compared to Philadelphia); that is, the first large jump in rates is between 13 and 14 indicating the effective beginning of delinquent behavior at age 14; (2) the higher classes begin delinquent activity even later than the lower classes. Thus, the difference between the classes is small in the very early years when neither has started significant activity and increases around the age of 14 when the lower classes begin but the higher classes have not. Then, as the

higher-class subjects pick up in activity level, the difference between the classes narrows.

In Philadelphia, by comparison, the relation is more simple. The difference between the classes is largest in the beginning and narrows over time. It is quite clear that lower classes are distinguished by earlier delinquent activity. In reality, however, the same can be said of Copenhagen; the pattern is simply made less straightforward in Copenhagen by the fact that both classes begin delinquency much later than do Philadelphia delinquents, resulting in a smaller difference between the classes until the lower classes begin significant levels of activity. We can say about both cohorts, then, that the lower classes are distinguished by earlier activity. In fact, as indicated by the sizes of the class ratios, lower classes are more strongly distinguished by early beginnings in Copenhagen than in Philadelphia.

Table 11.2 addresses the question of offense distribution across age in a slightly different manner. Here, we can see the concentration of offenses at each age by calculating the percent of all offenses that fall within each age category. For this table, we restrict the percentages to those offenses occurring before age 18 so that the percentages will be comparable to those in Philadelphia. It is clear that, in the lower classes, the highest concentration is in the ages 15, 16, and 17, with a peak at 17. The higher classes also peak at 17.

The Philadelphia distribution is a little more flat than the one for Copenhagen. As usual, the peak for both whites and non-

whites is 16, but the concentration is lower. In Copenhagen, just over 20% of the offenses occur through the age of 14 while about 40% occur during these ages for Philadelphia. This, of course, reflects the fact indicated earlier that subjects begin delinquency at earlier ages in Philadelphia.

Table 11.3 is analogous to Table 11.2 but the analysis is done with offenders rather than offenses. The pattern shown by the data is similar to that seen in Table 11.2: the percent of offenders at each age increases each year through age 17. Philadelphia, on the other hand, shows its usual decline at age 17. Also, as in Table 11.2, we see that about 20% of the offenders appear by the age of 14 compared to about 40% in Philadelphia. Offender crude rates show the same pattern of concentration. Similarly, when putting the crude rates into class ratios, the same curvilinear relation is seen, and for the same reasons: both classes are very late in starting (compared to Philadelphia) and the higher class is even later than the lower class.

Finally, Table 11.3 displays the mean number of offenses per offender for each age group. Within the lower SES, there is a small but consistent increase in the number of offenses per offender over age. This is not true, however, of the higher-SES offenders, where the rates evidence a more moderate increase. It is also true that there is very little difference between classes on this measure. Clearly, then, the difference between classes that we see consistently in the data must reflect number of offenders since each offender, on the average, commits about the same number of offenses regardless of class. In Philadelphia, on

the other hand, there is both a discernable difference between classes on mean number of offenses per offender and a slight increase with age that occurs. In Philadelphia, then, differences in class are reflected in more offenders as well as more offenses per offender.

Seriousness and age

Table 11.4 indicates the mean seriousness per offense per offender distributed by age. The seriousness scores are broken out by index offenses and non-index offenses (the relative frequency of index and non-index offenses will be studied later in the chapter). In other words, apart from the frequency at each age, we can see what the average seriousness of these offenses is at various ages of offenders. For both classes, it can be seen that there is a slight curvilinear relation between age and seriousness. The mean seriousness begins high at the early ages, decreases to about age 18 for index offenses (earlier for non-index offenses), and increases again to the end of the distribution. This may indicate that the younger children are more likely to be recorded at very young ages if they have committed quite serious offenses. Less serious offenses would be more likely to result in referral to the social welfare agencies. Seriousness, then, declines during the rest of the juvenile years when youths are more likely to get into more minor scrapes with the law, and increases again with age as those who will be exclusively juvenile offenders drop out of the picture, leaving only the more serious criminal offenders. We should not make too much of these differences, they are not large; still, they may have

some meaning in view of the fact that there is very little variation in seriousness in the cohort overall, owing to the fact that offending is so dominated by property offenses. This circumstance also undoubtedly accounts for the fact that there is very little difference in seriousness between the classes for index or non-index offenses.

For non-index offenses, approximately the same pattern obtains as described for the index offenses, i.e., a curvilinear one, although the curve bottoms out earlier for this less serious category of offenses. again class differences are virtually nonexistent.

Another way of looking at the seriousness of offending by age is simply to divide the offense distribution by index and non-index offenses, index being the more serious category of offenses, and calculate rates at each age. Table 11.5 does exactly this, including the percentage distribution of offenses through age 17 found in each age group. The interpretation of Table 11.4 and its curvilinear relation between seriousness and age seems to apply to the data in Table 11.5 too. Here we see the usual delay in the beginning of delinquency, with the concentration of offenses heavily in years 15 through 17, especially in the higher class. In addition, it is clear that the delay is longer for the non-index offenses than for the index. This is counterintuitive, since we would expect the younger children to commit less serious offenses, not more. This may reflect a practice of recording the more serious offenses more systematically. Thus, we see a larger proportion of index offenses (compared to

non-index offenses) at the earlier ages (before 15).

It should be pointed out again that the offense rate continues to climb after the Philadelphia rates begin to drop off. This is seen rather clearly in a graph of the index offense portion of Table 11.5 (Figure 11.17). This is just one more demonstration of the age delay in the Copenhagen cohort compared to the Philadelphia boys.

Age and Offense Types

From earlier analyses (where we have consistently seen a later beginning of delinquency in Copenhagen) we should not be surprised to see a very late start for violent and robbery offenses. Table 11.6 does not disappoint us; it indicates the age distribution of index offenses including violence, robbery and property. Violent and robbery offenses start very late and are highly concentrated at age 17 (for juvenile offenses). Property offenses, on the other hand, increase more gradually over the ages. In Philadelphia violent and robbery offenses start much earlier (and, of course, attain a much greater frequency overall).

Table 11.7 displays the same figures except that social class is used to divide the distribution. Again, there are no surprises. The higher-SES category is even later to start violent and robbery offenses than the lower-SES, and shows an even larger percentage of property offenses. There is virtually no violence in the higher-SES category of offender. Property offenses increase over the ages at about the same rate for both classes.

Summary

The most general statement that can be made about the age distribution of delinquency in Copenhagen compared to Philadelphia is that delinquency is later in Copenhagen. It begins later and peaks later. The overall rate of delinquency in Copenhagen peaks at age 17 for the lower classes and at 18 for the higher classes; this compares to age 16 for both classes in Philadelphia

Likewise, when considering offender rates, the peak comes at at 17 in Copenhagen, and 16 in Philadelphia. The number of offenses per offender shows a slight curve in both cities, peaking at age 18 in Copenhagen and 16 in Philadelphia. Mean seriousness of offenses presents a fairly complex picture but the weighted rates of delinquency (i.e., multiplying offense rates by the seriousness of the offenses) show peaks at 19 for lower classes and 22 for higher classes in Copenhagen, compared to the usual age 16 for Philadelphia. Violence and robbery offenses also begin and peak later in Copenhagen.

Class differences, in general, are larger in the early years and narrow over time. This is not true, however, when looking at the average number of offenses per offender where class differences remain stable. This indicates that the class differences that do exist are based on differences in offenders over ages and in the seriousness of the crimes they commit.

The age findings presented in this chapter are quite consistent. Almost regardless of how the data are approached or divided, delinquency peaks later in Copenhagen. This difference, and its interpretation is discussed in considerable detail in

Chapter 12.

References Chapter 11

Polk, K., & Schafer, W.E. Schools and delinquency. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1972.

West, D.J., & Farrington, D.P. The delinquent way of life. New York: Crane Russak and Co. Inc., 1977.

Wolfgang, M., Figlio, R., & Sellin, T. Delinquency in a birth cohort. Chicago: University of Chicago Press, 1972.

Table 11.1

Age-SES-Specific Crude and Weighted Rate of Delinquency

Copenhagen

	Low SES			High SES				
Age	Total Offenses	CR	WR	Total Offenses	CR	WR	Ratio of CR LC/HC	Ratio of WR LC/HC
10	110	7.47	49.20	29	2.43	17.24	3.07	2.85
11	133	9.03	62.84	19	1,59	11.72	5.68	5.36
12	173	11.74	84.45	27	2.27	14.84	5.17	5.69
13	287	19.48	137.38	35	2.94	21.12	6.63	6.50
14	502	34.08	241.72	58	4.87	35.79	7.00	6.75
15	957	64.97	474.41	129	10.82	82.83	6.00	5.73
16	1599	108.55	857.55	234	19.63	157.77	5.53	5.44
17	1934	131.29	992.57	323	27.10	221.22	4.84	4.99
18	1900	128.98	991.17	381	31.96	269.45	4.04	3.68
19	1834	124.50	1038.63	323	27.10	294.37	4.59	3.53
20	1525	103.52	927.66	322	27.01	337.74	3.83	2.74
21	1504	102.10	984.43	270	22.65	311.09	4.51	3.16
22	1326	90.01	997.16	290	24.33	348.05	3.70	2.86
23	1177	79.90	915.69	249	20.89	335.39	3.82	2.73
24	1119	75.96	861.61	205	17.20	284.82	4.42	3.03
25	972	65.98	745.24	196	16.44	250.99	4.01	3.97

Table 11.1a

Age-Race-Specific Crude and
Weighted Rates of Delinquency

Philadelphia

	Nonwhites		Whites		Difference in CR	Difference in WR
Age	CR	WR	CR	WR	NW/W	NW/W
10 and under[a]	32.39	83.32	7.33	7.33	4.5	11.4
11	97.86	112.80	22.15	17.82	4.4	6.3
12	152.31	170.30	31.95	37.93	4.8	4.5
13	213.65	241.66	48.13	43.34	4.5	5.6
14	284.63	345.68	80.79	72.24	3.5	4.8
15	385.25	445.01	124.66	120.79	3.1	3.6
16	437.28	633.49	180.18	143.65	2.4	4.4
17	282.91	503.34	115.58	122.50	2.4	4.1

[a]The rates for this category are expressed as the mean for each of the four ages from 7 to 10 years of age.

Table 11.2

Offenses by SES and Age

Copenhagen

	Low SES		High SES		Total	
Age	N	% to 17	N	% to 17	N	% to 17
10	110	1.93 (79.14)	29	3.40 (20.86)	139	2.12
11	133	2.34 (87.50)	19	2.22 (12.50)	152	2.32
12	173	3.04 (86.50)	27	3.16 (13.50)	200	3.05
13	287	5.04 (89.13)	35	4.10 (10.87)	322	4.92
14	502	8.81 (89.64)	58	6.79 (10.36)	560	8.55
15	957	16.80 (88.12)	129	15.11 (11.88)	1086	16.58
16	1599	28.08 (87.23)	234	27.40 (12.77)	1833	27.99
17	1934	33.96 (85.69)	323	37.82 (14.31)	2257	34.46
18	1900	(83.30)	381	(16.70)	2281	
19	1834	(85.03)	323	(14.97)	2157	
20	1525	(82.57)	322	(17.43)	1847	
21	1504	(84.78)	270	(15.22)	1774	
22	1326	(82.05)	290	(17.95)	1616	
23	1177	(82.54)	249	(17.46)	1426	
24	1119	(84.52)	205	(15.48)	1324	
25	972	(83.22)	196	(16.78)	1168	

Table 11.2a

Offenses by Race and Age

Philadelphia

	Nonwhites			Whites			Total		
Age	N	%		N	%		N	%	
10 and under	376	6.53	(64.4)	208	4.67	(35.6)	584	5.7	(100.0)
11	284	4.93	(64.5)	156	3.50	(35.5)	440	4.3	(100.0)
12	442	7.68	(66.3)	225	5.50	(33.7)	667	6.5	(100.0)
13	620	10.77	(64.7)	339	7.60	(35.3)	959	9.4	(100.0)
14	826	14.35	(59.2)	569	12.76	(40.8)	1395	13.7	(100.0)
15	1118	19.42	(56.0)	878	19.69	(44.0)	1996	19.5	(100.0)
16	1269	22.05	(50.0)	1269	28.47	(50.0)	2538	24.8	(100.0)
17	821	14.26	(50.2)	814	18.26	(49.8)	1635	16.0	(100.0)

Table 11.3

Offender Count by Age and SES

Copenhagen

Age	N	% to 17	%	$\bar{X}$*	CR	N	% to 17	%	$\bar{X}$*	CR	Ratio	N	% to 17	$\bar{X}$
10	86	2.45	(76.63)	1.27	5.84	22	3.49	(23.37)	1.32	1.85	3.16	108	2.61	1.29
11	96	2.73	(84.21)	1.39	6.52	18	2.85	(15.79)	1.06	1.51	4.32	114	2.75	1.33
12	128	3.64	(87.07)	1.35	8.69	19	3.01	(12.93)	1.42	1.59	5.47	147	3.55	1.36
13	211	6.01	(88.28)	1.36	14.33	28	4.44	(11.72)	1.25	2.35	6.10	239	5.77	1.35
14	335	9.54	(87.93)	1.50	22.74	46	7.29	(12.07)	1.26	3.86	5.89	381	9.17	1.47
15	621	17.67	(86.49)	1.54	42.16	97	15.37	(13.51)	1.33	8.14	5.18	718	17.33	1.51
16	926	26.36	(84.03)	1.73	62.86	176	27.89	(16.97)	1.33	14.77	4.26	1102	26.59	1.66
17	1110	31.60	(83.15)	1.74	75.35	225	35.66	(16.85)	1.44	18.88	3.99	1335	32.22	1.69
18	1087		(81.55)	1.75	73.79	246		(18.45)	1.55	20.64		1333		1.71
19	1068		(82.66)	1.72	72.50	224		(17.34)	1.44	18.79		1292		1.67
20	907		(78.80)	1.68	61.57	244		(21.20)	1.32	20.47		1151		1.60
21	915		(82.28)	1.64	62.11	197		(17.72)	1.37	16.53		1112		1.60
22	785		(78.82)	1.69	52.29	211		(21.18)	1.37	17.70		996		1.62
23	722		(79.25)	1.63	49.01	189		(20.75)	1.32	15.86		911		1.57
24	625		(80.13)	1.79	42.43	155		(19.87)	1.32	13.00		780		1.70
25	605		(80.24)	1.61	41.07	149		(19.76)	1.32	12.50		754		1.55

*Mean Number of offenses per offender

Table 11.3a

Offender Count by Age and Race

Philadelphia

	Whites				Nonwhites				Total		
Age	N	%		$\bar{X}$[a]	N	%		$\bar{X}$	N	%	$\bar{X}$
10 and under	186	5.60	(42.08)	1.12	256	7.67	(57.91)	1.47	442	6.64	1.32
11	135	4.07	(41.03)	1.12	194	5.81	(58.96)	1.46	329	4.94	1.34
12	178	5.36	(38.69)	1.26	282	8.45	(61.30)	1.57	460	6.91	1.45
13	278	8.38	(48.34)	1.22	297	8.90	(51.65)	2.09	575	8.64	1.68
14	423	12.75	(46.02)	1.34	496	14.86	(53.97)	1.67	919	13.81	1.52
15	627	18.90	(50.28)	1.40	620	18.57	(49.71)	1.80	1247	18.74	1.60
16	881	26.56	(55.97)	1.44	693	20.76	(44.02)	1.83	1574	23.65	1.61
17	608	18.33	(54.92)	1.34	499	14.95	(45.07)	1.64	1107	16.63	1.48

[a] $\bar{X}$ = The average number of offenses per offender at each age category

Table 11.4

Number and Mean Seriousness Scores of Index and Non-Index Offenses by Age and SES

Copenhagen

	Index				Non-Index			
	Low SES		High SES		Low SES		High SES	
Age	N	$\bar{X}$ Ser.	N	$\bar{X}$ Ser.	N	$\bar{X}$ Ser.	N	$\bar{X}$ Ser.
10	84	7.53	24	7.58	26	3.58	5	4.74
11	110	7.58	18	7.58	23	4.20	1	5.45
12	149	7.45	22	7.27	24	5.16	5	4.21
13	243	7.39	32	7.29	44	5.28	3	5.54
14	445	7.40	51	7.67	57	4.89	7	5.21
15	802	6.72	108	6.68	155	4.83	21	4.62
16	1200	6.55	159	6.42	399	4.37	75	3.84
17	1364	6.62	213	6.60	570	4.04	110	4.25
18	1325	6.57	235	6.57	575	4.27	146	4.39
19	1177	6.60	160	6.47	657	4.38	163	4.12
20	873	6.75	140	6.65	652	4.80	182	4.74
21	756	6.93	93	6.95	748	4.87	177	4.71
22	649	6.93	96	7.33	677	5.39	194	4.86
23	582	7.03	58	7.54	595	5.50	191	5.22
24	538	7.29	58	7.43	581	5.91	147	4.85
25	475	7.38	54	7.39	497	6.18	142	5.26

Table 11.4a

Number and Mean Seriousness Scores of Index and Non-Index Offenses by Age and Race

Philadelphia

	Index				Non-Index			
	Nonwhites		Whites		Nonwhites		Whites	
Age	N	$\bar{X}$ Ser.	N	$\bar{X}$ Ser.	N	$\bar{X}$ Ser.	N	$\bar{X}$ Ser.
10 and under	184	186.3	100	188.9	192	22.9	108	17.1
11	158	182.3	59	181.9	126	31.2	97	18.7
12	229	196.0	126	196.6	213	21.3	99	19.6
13	292	210.3	125	210.6	328	26.6	214	19.6
14	333	256.1	203	205.9	493	30.5	366	24.8
15	406	266.7	287	247.2	712	29.3	591	23.9
16	460	340.2	277	294.7	809	33.8	992	19.7
17	351	341.7	223	293.6	470	55.6	591	35.3

Table 11.5

Index and Non-Index Offenses by Age

Copenhagen

		Index		Non-Index	
Age	% to 17	N	Rate	% to 17	N	Rate
10	1.97	108	7.33	1.93	31	2.60
11	2.46	135	5.07	1.49	24	.90
12	3.37	185	6.94	2.05	33	1.24
13	5.30	291	10.92	3.11	50	1.88
14	10.80	593	22.25	4.16	67	2.51
15	18.27	1003	37.63	11.75	189	7.09
16	26.54	1457	54.67	31.45	506	18.99
17	31.28	1717	64.43	44.06	709	26.60
18		1675			778	
19		1436			885	
20		1090			923	
21		921			992	
22		798			956	
23		689			851	
24		643			792	
25		575			707	

Table 11.5a

Index and Nonindex Offenses by Age

Philadelphia

	Index				Non-Index				Total			
Age	N	%		Rate	N	%		Rate	N	%		
10 and under	284	7.44	(48.63)	28.56	300	4.68	(51.36)	30.17	584	5.71	(99.99)	
11	217	5.69	(49.31)	21.82	223	3.48	(50.68)	22.42	440	4.30	(99.99)	
12	355	9.31	(53.22)	35.70	312	4.87	(46.77)	31.37	667	6.53	(99.99)	
13	417	10.93	(43.48)	41.93	542	8.46	(56.51)	54.50	959	9.38	(99.99)	
14	536	14.05	(38.42)	53.90	859	13.41	(61.57)	86.38	1395	13.65	(99.99)	
15	693	18.17	(34.71)	69.68	1303	20.35	(65.28)	131.02	1996	19.54	(99.99)	
16	737	19.32	(29.03)	74.11	1801	28.13	(70.96)	181.10	2538	24.84	(99.99)	
17	574	15.05	(35.10)	57.72	1061	16.57	(64.89)	106.69	1635	16.00	(99.99)	

Table 11.6

Index Offenses by Type and Age

Copenhagen

	Violence			Robbery			Property		
Age	N	% to 17		N	% to 17		N	% to 17	
10	0	0.0	(0.0)	0	0.0	(0.0)	111	2.10	(100.0)
11	0	0.0	(0.0)	0	0.0	(0.0)	135	2.55	(100.0)
12	0	0.0	(0.0)	0	0.0	(0.0)	185	3.50	(100.0)
13	2	1.45	(.69)	0	0.0	(0.0)	289	5.46	(99.31)
14	5	3.70	(.93)	2	7.14	(.37)	533	10.08	(98.70)
15	27	20.00	(2.68)	5	17.86	(.50)	976	18.45	(96.83)
16	29	21.44	(1.98)	8	28.57	(.55)	1424	26.92	(97.47)
17	72	53.33	(4.18)	13	46.43	(.76)	1636	30.93	(95.06)
18	92		(5.48)	16		(.95)	1572		(93.57)
19	93		(6.44)	19		(1.31)	1333		(92.25)
20	101		(9.20)	17		(1.55)	980		(89.25)
21	101		(10.90)	14		(1.51)	812		(87.59)
22	62		(6.69)	4		(.43)	720		(77.67)
23	93		(13.38)	14		(2.01)	588		(84.60)
24	95		(14.89)	7		(1.10)	536		(84.01)
25	100		(17.33)	9		(1.56)	468		(81.11)

Table 11.6a

Index Offenses by Type and Age

Philadelphia

	Violence			Robbery			Property		
Age	N	%		N	%		N	%	
10 and under	29	3.56	(10.21)	10	5.18	(3.52)	154	6.82	(54.22)
11	31	3.81	(14.28)	10	5.18	(4.61)	131	5.80	(60.37)
12	34	4.18	(9.58)	14	7.25	(3.94)	250	11.07	(70.42)
13	63	7.74	(15.11)	38	19.69	(9.11)	248	10.98	(59.47)
14	111	13.64	(20.71)	34	17.62	(6.34)	315	13.94	(58.77)
15	160	19.66	(23.09)	23	11.92	(3.32)	426	18.86	(61.47)
16	202	24.82	(27.41)	38	19.69	(5.16)	425	18.81	(57.66)
17	184	22.60	(32.05)	26	13.47	(4.53)	310	13.72	(54.01)

Table 1.

Index Offenses by SES, Age and Offense Type

Copenhagen

	LOW SES						HIGH SES					
	Violence		Robbery		Property		Violence		Robbery		Property	
Age	N	%to 17	N	%to17	N	%to 17	N	%to 17	N	%to 17	N	% to 17
10	0	0.0 (0.00)	0	0.00 (0.0)	87	2.03 (100.00)	0	0.00 0.00	0	0.00 0.00	24	3.90 100.00
11	0	0.00 (0.00)	0	0.00 (0.00)	110	2.57 (100.00)	0	0.00 0.00	0	0.00 0.00	18	2.93 100.00
12	0	0.00 (0.00)	0	0.00 (0.00)	149	3.48 (100.00)	0	0.00 0.00	0	0.00 0.00	22	3.58 100.00
13	2	1.82 (.82)	0	0.00 (0.00)	241	5.64 (99.18)	0	0.00 0.00	0	0.00 0.00	32	5.20 100.00
14	3	2.75 (.67)	1	5.00 (.22)	441	10.31 (99.10)	1	8.33 2.00	0	0.00 0.00	50	8.13 98.00
15	23	20.91 (2.86)	3	15.00 (.37)	779	18.22 (96.77)	2	16.67 1.82	2	66.67 1.82	106	17.24 96.36
16	20	18.18 (1.67)	5	22.50 (.42)	1176	27.50 (97.92)	4	33.33 2.52	0	0.00 0.00	155	25.20 97.48
17	62	56.36 (4.54)	11	55.00 (.81)	1293	30.24 (94.66)	5	41.67 2.34	1	33.33 .47	208	33.82 97.20
18	70	(5.12)	9	(.66)	1246	(91.22)	13	5.46	4	1.68	221	92.86
19	71	(6.00)	14	(1.18)	1099	(92.82)	8	4.94	2	1.23	152	93.83
20	81	(9.20)	15	(1.70)	784	(89.09)	13	9.29	0	0.00	127	90.71
21	85	(11.18)	10	(1.32)	665	(87.50)	6	6.45	0	0.00	86	92.47
22	50	(7.79)	4	(.62)	588	(91.59)	9	9.38	0	0.00	84	87.50
23	78	(13.33)	10	(1.71)	497	(84.96)	8	13.56	1	1.69	49	83.05
24	81	(13.85)	6	(1.03)	446	(76.24)	10	16.95	1	1.69	47	79.66
25	80	(16.81)	8	(1.68)	388	(81.51)	14	25.93	0	0.00	40	74.07

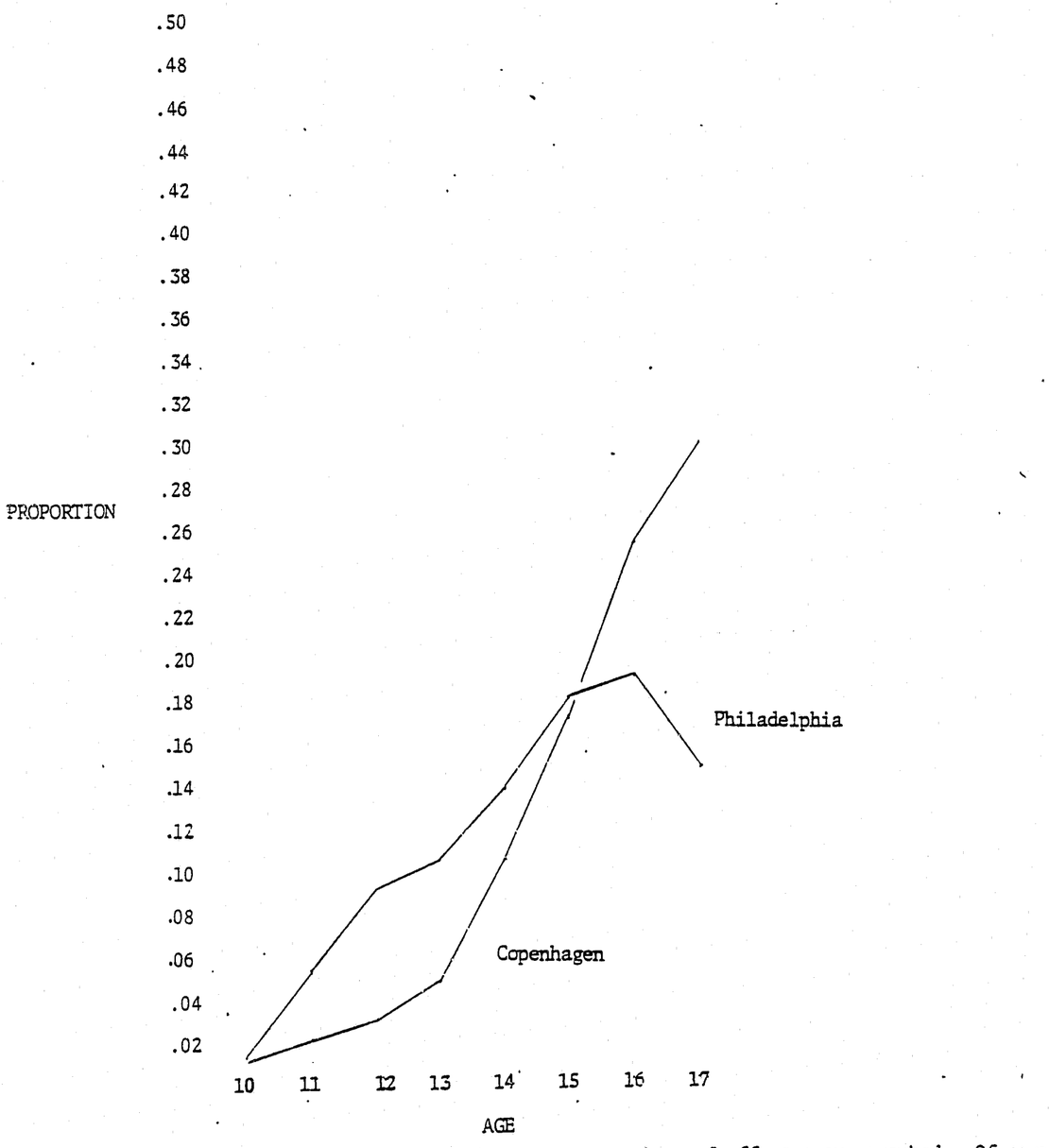
Table 11.7a

Index Offenses by SES, Age and Offense Type

Philadelphia

	LOW SES						HIGH SES					
	Violence		Robbery		Property		Violence		Robbery		Property	
Age	N	%	N	%	N	%	N	%	N	%	N	%
0 and under	25	3.82 (8.80)	9	5.55 (3.16)	134	7.89 (47.18)	4	2.48 (1.40)	1	3.22 (.35)	20	3.56 (7.04)
1	26	3.98 (11.98)	8	4.93 (3.68)	114	6.71 (52.53)	5	3.10 (2.30)	2	6.45 (.92)	17	3.03 (7.83)
2	26	3.98 (7.32)	11	6.79 (3.09)	199	11.71 (56.05)	8	4.96 (2.25)	3	9.67 (.84)	51	9.09 (14.36)
3	51	7.81 (12.23)	35	21.60 (8.39)	203	11.95 (48.68)	12	7.45 (2.87)	3	9.67 (.71)	45	8.02 (10.79)
4	92	14.08 (17.16)	25	15.43 (4.66)	229	13.48 (42.72)	19	11.80 (3.54)	9	29.03 (1.67)	86	15.32 (16.04)
5	124	18.98 (17.89)	21	12.96 (3.03)	301	17.72 (43.43)	36	22.36 (5.19)	2	6.45 (.28)	125	22.28 (18.03)
6	176	26.95 (23.88)	33	20.37 (4.47)	299	17.60 (40.56)	26	16.14 (3.52)	5	16.12 (.67)	126	22.45 (17.06)
7	133	20.36 (23.17)	20	12.34 (3.48)	219	12.89 (38.15)	51	31.67 (8.88)	6	19.35 (1.04)	91	16.22 (15.85)

FIGURE 11.1 Index Offenses (proportion of total index offenses committed at each age)



NOTE: The curves overlap because proportions of offenses are graphed. Of course if absolute number of offenses were plotted the Philadelphia curve would be considerably higher than the Copenhagen curve.

Chapter 12
SUMMARY AND DISCUSSION

The findings have been summarized at the end of each chapter. These summaries will not be repeated here. Instead we will address some major questions raised by the findings from the Danish cohort and the comparisons with the Philadelphia cohort.

In addressing these questions we will give some consideration to characteristics of the societies which may have caused the observed differences. It is clear that the societies (U.S. and Denmark) differ in a myriad of ways which could effectively produce the observed differences. It is an almost insurmountable task to trace out the critical societal differences. Despite this, the report would be incomplete without some consideration of possible explanations. Our approach will be to (1) identify similarities and differences; (2) suggest potential explanations and test them with available data; and (3) explanations which are not eliminated can be considered candidates for future research.

The remainder of this chapter is organized around four major sets of findings discussed throughout the volume: (1) differences and similarities in the types, prevalence, and incidence of crimes, (2) the distinctiveness of delinquents in Copenhagen, (3) specialization, and (4) different age distributions. Each will be briefly described and then discussed in terms of the meanings we attach to it.

Differences and Similarities in Crime Rates

The difference between the cohorts in overall prevalence of crimes committed before the age of 18 is substantial. The Philadelphia prevalence rate is 35% while the Copenhagen figure is 10%. Part of the difference is due to the inclusion of status offenses in Philadelphia but not Copenhagen. Still, the Philadelphia rate is over double that for Copenhagen even after this adjustment. It is significant, however, that the rate differences are not constant over crime categories. The differences come almost entirely from the violent and public order offense categories; the property offense rate is very close to equivalent in the two cohorts. This unevenness makes the problem of explanation more intriguing and it gives us an edge in provisionally eliminating certain categories of explanation for the overall rate difference. That is, for instance, explanations that do not distinguish between violent and property crimes would be given less credence.

What are some possible explanations for the pattern of differences and similarities seen in these rates? It has been fruitful to categorize the many theories of assaultive behavior into four basic categories (Ferracuti and Newman, 1974): frustration/barrier theories, inevitability (inherent aggression) theories, bad influence theories, and culture theories. This categorization can help us approach the problem of explaining the pattern of rates exhibited by these two cohorts.

Frustration/Barrier Theories. The frustration/barrier theories generally postulate that when individuals are unable to attain or achieve desired ends they will react with aggression. These theories range from Dollard's (1939) classic frustration/aggression theory to Merton's (1968) means-versus-ends-paradigm. This category of theory has the problem that aggression against persons and aggression against property are not distinguished. It does not, therefore, help explain the fact that the violence rates are different while the property rates are not. This category of theory does have the merit of dealing with the fact that Philadelphia has a substantial non-white population while Denmark does not. That is, there is ample reason to assume that Blacks (non-whites in general, in fact) have more reason to feel barriers and frustrations in confronting this white-dominated society. The presence of non-whites in the Philadelphia cohort, then, might help explain the difference in crime rates on the basis of frustration/barrier theories except for two problems: (1) the previously mentioned fact that these theories do not distinguish person and property crimes, and (2) the white rate of violent offenses (including murder, rape, robbery, and aggravated assault) is over eight times the Danish rate (based on virtually only whites). It is difficult, then, to accept these types of theories as important explanations for the pattern of rates we have observed.

Aggression can also be instrumental in nature. That is, violence may be used toward the end of gaining some concrete or material advantage. This type of theory has three problems as an

explanation of the observed patterns: (1) analyses of income distributions in the two countries give no basis for assuming different material deprivations or even relative deprivations; (2) if there were differences in deprivations between the two societies, we would expect such mechanisms to be reflected in property crimes as well as violent crimes--i.e., property and violent crimes are not distinguished by these theories, or if they are, the direction is opposite to our empirical evidence; (3) related to number 2, we should expect differences in robbery rates but not in assault rates, since there is less likelihood that assaults would be motivated by material gain. Such is not the case here, since assaults are very different in the two cohorts.

Inherent Aggression. Another set of theories takes aggression as inherent in the human condition. On the face of it, this set of theories would seem to offer a little toward distinguishing any type of crime from another (property versus violent) or any group of humans from any other in their rates of violence. However, a closer analysis, based on Megargee's (1981) "algebra of aggression" reveals a more promising picture. This paradigm is based on the assumption that humans are all capable of aggressive (even assaultive) impulses, but an internal algebra determines whether or not action will be taken. He sums it up with the following sentence: "When the sum of the motivating factors exceeds the sum of the inhibitory factors for a given aggressive or violent act, then that act is possible." Megargee identifies four factors that determine whether a violent action is possible.

The first element is called "instigation to aggression" and constitutes all of the internal motivations for an aggressive act. Various categories of frustration and deprivation would fit into this category, and might vary by culture. But, as we have seen in the above section on frustration/barrier theories, this category does little for us here.

The second element is called "habit strength," and is based on learning principles. To the extent that a person has been rewarded for violence in the past, he is more likely to continue the behavior in the future. This has clear cultural overtones as there are cultural differences in rewards for violence. This, however, will be discussed more directly in a later section.

A third element is called "stimulus factors," and these include factors in the situation that would act either to promote or inhibit violence. An obvious example of a stimulus factor that would promote violence is the presence of weapons. Since a large proportion of the violent acts recorded by the FBI in this country involve weapons (especially handguns) (Cook, 1981) this is a factor that cannot be ignored as a possible explanation for differences in violence (but would not necessarily predict anything about property offenses). It should also be mentioned, however, that at the time these cohorts were age-appropriate guns were not as available as they are today.

Finally, a fourth construct that enters the algebra of aggression is "inhibitions against aggression." These are internal states (as opposed to "stimulus factors" which might act as inhibitors but are external factors). Psychological processes

come to mind here. It would not be profitable, however, to consider these psychological states (guilt, etc.) in any detail, unless they can be shown to be patterned by culture. This would be a mammoth undertaking, but it must be acknowledged that child-rearing practices as they vary by culture must surely be relevant here. It is worth noting that, on the whole, Danish child-rearing practices differ from the typical American practices in some seemingly significant ways. In a study conducted during a period relevant to our cohort, Kandel and Lesser (1972) indicate that Danish children are rather strictly controlled in the very early years, but as they approach adolescence, they are given larger and larger roles in determining their own activities, leading to a high degree of control internalization. By contrast, American children were seen to be given much more latitude in the early years, requiring more external control in later years. It is not difficult to imagine that these differences in child-rearing would have some implications for the ability to inhibit assaultive impulses.

Related to these child-rearing factors are elements such as the stability of the family-rearing circumstances. In a prospective Danish study, B. Mednick and Baker (1983) and Mednick and Gabrielli (1983) have reported that family stability is a critical factor separating violent criminals from thieves.

It is conceivable that certain biological factors may also play a partial role in helping to understand the differences in levels of violence between the U.S. and Denmark. There is a considerable literature which has found that violent offenders evi-

dence signs of brain damage. (See review, Mednick, Pollock, Volavka and Gabrielli,1982).

From these cross-sectional studies it is difficult to determine whether the brain damage preceded (and perhps contributed to) or was the result of the violent behavior. Prospective studies in our laboratories have implicated early neurological damage as a factor which could separate violent offenders from other offenders. The neurological damage might result in a deficiency in ability to inhibit violent behavior in an emotionally charged situation. Our studies also suggest that perinatal difficulties are one likely source of the neurological damage which is linked to violence (Litt, 1971; Mednick and Gabrielli, 1983) In another prospective study based on a birth cohort we noted that perinatal difficulties were related to aggressive behavior in school (Mednick & Baker, in press).

What relevance might such perinatal factors have to the U.S.-Denmark differences in levels of violence? For one thing the United States has one of the poorest records in perinatal health among the developed nations. Our rates of infant mortality places us among the developing countries. Denmark is consistently among the three or four best nations in the world having low levels of infant or fetal mortality. If perinatal brain damage contributes significantly to future violence, these national perinatal care differences might be useful to consider with respect to the violence differences. This hypothesis becomes even more interesting when one realizes that the pregnancy and delivery conditions for American Blacks contributes substantially

to the poor U.S. statistics in perinatal health care. In addition, it can't be ignored that Philadelphia Blacks contributed disproportionately to the violence in that cohort. There are, however, two problems with this general argument that muddy the waters somewhat. First, infant mortality rates are not a perfect indicator of the incidence of neurological damage. Second, during the war years, and immediate post-war years (when our cohort was born), infant mortality rates were actually worse in Denmark than in the United States. Nevertheless, since (1) perinatal care systems are, in general, better in Denmark than in the U.S. and (2) several studies indicate that neurological damage separates violent from property offenderse, this would appear to be a fruitful area for further research. The "perinatal" explanation of the violence differences between the two nations is, of course, highly speculative, but it bears further study.

We can hardly ascribe all differences in violence rates to differences in perinatal care between the two countries, but in view of (1) the fact that a relation between brain damage and violence has been demonstated, (2) that this factor distinguishes violent from property offenses, and (3) medical systems that influence such factors are significantly different in the two societies, the importance of such a factor should not be discarded prematurely.

There are, then, some promising features of this category of theory (inherent aggression) toward explaining differences in violence and similarities in property offense rates. The more unique arguments (i.e., not discussed elsewhere in this section

on comparison of crime rates) are found in the area of internal inhibition. One argument concerned child-rearing practices and one concerned biological factors in inhibition. The latter has the advantage of distinguishing violent offenses from property offenses, a criterion established as important in the introductory section. The former does not. The more general problem is evident at the theoretical level. That is, inhibition from committing violent offenses was not distinguished theoretically from inhibition from committing any other kind of offense. This problem might be addressed by postulating that assaultive acts are more likely (but certainly not exclusively) more immediately impulsive acts, generated by emergent situations, and characterized by anger than is true, in general, of property offenses. We can further postulate that these situations and factors may be more demanding of our inhibitory abilities than are property offenses. Also, while we have not emphasized the difference in public order offense rates, it is not unreasonable to explain this difference in much the same way that we have approached violent offenses. That is, while this is a mixed category of offenses, these offenses might be considered closer to violent offenses than to property offenses on the dimension of impulsiveness. Therefore, explanations for violence that rely on the mechanism of inhibition and deficits in it, may well apply to public order offenses.

Bad Influence Theories. These theories include various forms of social learning theories (Bandura and Walters, 1959, 1963), differential association theory (Sutherland and Cressey,

1970), and subculture of violence theories (Wolfgang and Ferracuti, 1967). They all assert that violence is learned from violent individuals. Certainly there is evidence that membership in a violent subgroup of society fosters the learning of violence (Gold, 1958; Kohlberg, 1959; Leggett, 1963; Sears, 1943). Still, this theory does little for us in terms of basic explanation of the facts at our disposal. The theories do not distinguish property from violent offending. Second, they assume the existence of the violent subculture or influence rather than explain it, so there is little to help us explain why there are subcultures of violence in the U.S. but not in Denmark. This will be discussed in more detail in the next section.

Culture Theories. Culture theories encompass a large number of factors addressed by other theories described here. They should not be seen as unique. However, the issues are addressed on a societal level, a perspective particularly useful for this cross-national investigation. These theories focus on the fact that various cultures differ widely on the dimension of the acceptance and even valueing of violence under some circumstances. Where violence is accepted or even valued as a way of life, this behavior is likely to be perpetuated.

There are a number of studies that explore societies that place value on violence as ways of settling vendettas or resolving disputes. Some of the more extreme of these societies are Colombia, Mexico, and Italy (Alzaga, 1967; Caplow, 1963; Friedrich, 1964; Wolfgang and Ferracuti, 1967). That cultural and historical factors are important seems beyond dispute. If we

leave the analysis at this point, however, we have gained little in the explanation of the differences between Philadelphia and Copenhagen violence rates. It is not enough to state that the United States, as a culture, is more violent in its values than Denmark. But why is the U.S. more violent in its values? We can appeal to historical explanations or we can, at the risk of being reductionistic, look to individual factors for the basis or origins of violent culture.

Historically, the U.S. has considerable reason to have emerged as a relatively violent nation (it is far from the most violent--see Interpol, International Crime Statistics, 1965-66). Sellin (1938) points to the importance of the mixing of cultures in the generation of violence. Subcultures and violence can arise in opposition to other immigrant groups; or they can arise in opposition to the dominant cultures (Wolfgang and Ferracuti, 1967). Our history of slavery has almost certainly contributed to this process.

Interaction patterns developed from our importation of slaves may have contributed to the generation of violence in at least two ways. This situation contains elements of a syndrome typical of "white settlers" described by Fanon (1963), even though slaves were brought here in this case rather than whites settling among natives of another continent. Characteristics of this syndrome is an attitude toward the non-white group that defines them as evil or less than human, thus justifying violence. The second way that this facilitates violence, in this view, is by influencing the self-conceptions of the non-whites.

They may come to devalue themselves, or hate themselves and those around them who remind them of themselves (i.e., other non-whites). Thus, aggression is exhibited especially within the devalued group, more than externally. Thus, intragroup aggression becomes more frequent than intergroup aggression among the devalued group. This is obviously relevant to the non-whites of this country.

It is beyond the scope of this chapter to make an exhaustive listing of contributing historical factors to our culture of violence. It is only important to note their importance to avoid overemphasizing individualistic factors, a topic to which we will now turn, briefly.

In addition to historical events, current, individual-based factors can contribute to the maintenance and fueling of violence within cultures. In this connection we need only mention two potential sources described earlier. Violence-prone child-rearing practices could be implicated and perinatal care systems that influence the health of babies can be considered candidates for consideration as possible causes of violence. These factors can and are variable by culture. It hardly needs to be mentioned that we need not make mutually exclusive choices between historical factors and individual factors as explanations. Both are plausible, both are speculative, both differ between Denmark and the United States.

Distinctive Delinquents

A sequential reading of Chapters 5 through 8 reveals some interesting patterns. Chapters 5 through 7 can be seen as a ser-

ies of analyses beginning with the most general categorization of delinquency (delinquents vs. non-delinquents), followed by a more specific distinction (one-time offenders vs. recidivists), and finally a comparison of an even more special group of delinquents, the chronic offenders, with one-time offenders and non-chronic recidivists. Each chapter narrows the "funnel" a little more, and gives us a more exclusive category of youngsters. It was true of both cohorts that the more we progress through the funnel, the more distinctive the delinquents. That is, they are more sharply characterized by lower social class, lower achievement/IQ, and earlier school leaving. This is important information in itself, but its more interesting application is in setting a framework for the interpretation of some <u>differences</u> between the two cohorts.

There are several such differences. First, at each stage of definition or exclusion, Copenhagen delinquents were more extreme in their characteristics than were their counterparts in Philadelphia. That is, one-time delinquents in Copenhagen were lower in SES, IQ (in terms of standard scores) and school completion than one-time delinquents in Philadelphia. Recidivists in Copenhagen were more extreme than recidivists in Philadelphia. An so on for each definitional category. Second, the delinquent/non-delinquent distinction was more important than the one-time/chronic distinction in Copenhagen, but the opposite was true in Philadelphia. In other words, delinquents were more different from nondelinquents in SES, IQ and school than were one-timers from chronics in Copenhagen.

Third, it is relevant and therefore repeated here that delinquents are rarer in Copenhagen than in Philadelphia. Correspondingly, delinquents in Copenhagen are lower in the three variables used to characterize all groups: SES, IQ and school completion.

A general interpretation of this set of findings might be that, as a negatively defined characteristic becomes rarer, those exhibiting the characteristic will be more distinctive in other related characteristics. This is illustrated by the fact that, in Philadelphia, delinquency is not a very rare phenomenon (35% of the cohort were so defined), but, even in Philadelphia, chronic offending is rare. Thus, the difference between one-time delinquents and chronics is more important (yields larger differences in other characteristics) than the difference between non-delinquents and delinquents. In Copenhagen, where any delinquency is relatively rare, the distinction between delinquents and nondelinquents is important.

The more straightforward illustrations are the simple comparisons of each category of delinquents and their characteristics across cohorts. In each case, the same definitional category yields more distinctive youngsters in Copenhagen than its counterpart in Philadelphia--by our explanation, because they are, in each category, rarer in Copenhagen.

We might take this reasoning a step further and say that, where a negatively defined phenomenon is rare(r), it is more stigmatized so that it takes more "reasons" to produce the behavior in spite of the stigma. In other words, the stronger the

reasons not to become delinquent (stigma) the stronger the reasons of other types must be to overcome "resistance" to delinquency. We might go yet further and say that this interpretation could be used to justify the selection of low-delinquency areas (societies) to study the really "core" issues in the production of delinquency. Where the "causes" of delinquency must overcome strong resistance, they must be exceptionally dominant among those who do become delinquent and therefore, will be more identifiable.

Before settling too firmly on the above interpretations, we should consider an alternative explanation for the findings. It is possible that the Copenhagen delinquents are more distinctive than the Philadelphia delinquents simply because only the more severe or serious delinquents are reported (i.e., less serious delinquents might be tolerated rather than reported and arrested). This would predict that their characteristics would be more distinctive by virtue of their being more serious delinquents.

We are not inclined to accept this explanation. First, the analyses that we completed in Chapter 4 indicated no such trend. The reader will recall that victimization surveys were compared to police records in Denmark and the United States. The ratios that resulted were reassuring; there were not different levels of reporting and recording inthe two countries. A second reason that we are inclined to reject this explanation is that it would imply a heavier concentration of more serious offenses relative to more minor offenses--a pattern clearly not evident in the

Copenhagen data set. Finally, informal knowledge of the culture of Denmark argues against it. If anything, citizens are less tolerant of deviance, more respectful of rules and decorum than we are in this country. For all of these reasons, we favor the earlier explanation over the differential reporting and recording explanation.

Offense Specialization

Analyses described in Chapter 9 have led us to the conclusion that there is a moderate level of offense specialization identifiable in the Copenhagen cohort. OUr analyses differed substantially from those used by Wolfgang, et al to address the same issues. Our concern was to determine whether any offense type tended to cluster within a subset of offenderes. We were not looking for complete homogeneity of offense types, nor even contiguous offenses of the same type. Two basic methods were used to detect any concentration of offense types that might be present in the data. Only violent and theft offenses warranted analysis based on the number of offenses available to analyze.

The first method used was a Bernoulli process method that assigned expected frequencies for violent offenses within each category of total number of offenses committed by offenders. Actual frequencies were then compared to the expected. To the extent that actual frequencies of violent offenses differed from expected, specialization can be said to exist to some degree. This analysis was carried out both for violent offenses (compared to all other types) and theft offenses (compared to all other types). In both cases, actual frequencies differed from expected

in systematic ways, indicating some specialization.

The second method for discovering specialization consisted of predicting future violent offenses for those who had committed their first violent offense at Offense N compared to those who had committed no violent offenses at Offense N or before. To the extent that a first violent offense predicted future violent offenses more strongly than a nonviolent offense (with the same number of priors), specialization can be inferred. By making ratios of the percentage of each category who actually did commit future violent acts, it was possible to see how much more likely a violent offender was to commit future violence than was a nonviolent offender. The same, of course, could be done for the theft analysis. Comparing the ratios for the analysis of violence versus theft offenses, it was possible to see that violent offenses are more likely to be subject to specialization than are property offenses. In addition, our ability to predict future offense types by current offense type varies by the offense number from which we are predicting. For theft offenses, probability of future theft decreases as the number of nontheft priors increases. The pattern for violent offenses is more complex. If the first violent offense occurs on the third offense, future violence is more likely than if the first violent offense occured on the first or second offenses. Future violence probabilities then decrease again, only to rise again for the 7th and 8th offenses. We must keep in mind, however, that we are dealing only with first violent offenses; these patterns would not necessarily hold if all violent offenses were used regardless of the

existence of prior violent offenses. The same holds for theft offenses.

As we have repeatedly indicated, our method of analysis was different and much more liberal than that used by Wolfgang et al. It is, therefore, pointless to compare the results of their analysis with ours. It is, however, appropriate to indicate that these findings are not inconsistent with some others (e.g., Chaiken and Chaiken, 1982) who have found that offenders can be categorized in an offense hierarchy based on the seriousness of the offense. That is, each offender appears to have some limit on the seriousness of the offenses he is willing to commit. Those who commit very violent offenses are willing to (and do) commit many other offense types that fall below such violence in seriousness; those whose most serious offense is burglary (for instance) will have committed other offenses less serious as well, and so on. This pattern would predict that violent offenses are somewhat clustered at the top of the offender/offense hierarchy, but the specialization would not be complete because they willhave committed other offenses below the violent offenses in seriousness. This would also mean that property offenses would be more evenly distributed than violent offenses since they are committed by both violent and property offenders. Presumably, public order offenses would be even less clustered since they would be included at the bottom of the hierarchy and, therefore, in the careers of all types of offenders.

Age and Delinquency

The central finding that comes from the age and delinquency

analyses is that, whatever measures of delinquent activity are used, delinquency peaks later in Copenhagen than in Philadelphia. In general, the peak in Copenhagen comes at age 17. Taking seriousness into account, the peak is later, and for the higher classes, it is sometimes later as well. On the other hand, the peak for Philadelphia youngsters is always at age 16, regardless of the measure used. Why is the peak of delinquency later in Copenhagen?

One possibility that might explain the difference is the fact that in the early years, police contacts are not recorded as systematicallly as they are later. However, since 15 years is the age at which records begin to be systematically kept, if the peak age of delinquency in Copenhagen were 16, this could still be seen. Incomplete record keeping before the age of 15 therefore, could not be argued to mask a peak at 16. Another potential explanation is that there are fewer violent offenders and offenses in the Danish cohort. This would be significant since more serious offenders tend to start their delinquency earlier, and might, therefore, be expected to peak earlier. Philadelphia, having more violent offenders would, if this were true, have an earlier peak than Copenhagen with its very small number of violent offenders. To investigate this possibility, we produced separate age distributions for violent offenders and property offenders. These analyses, however, indicated that the age curves for both types of offenders peaked at exactly the same time (no data shown). The difference in violent offense rate, then, is not an adequate explanation of the later offense and

offender peak in Copenhagen.

A third explanation, not unrelated to the second, is the possibility that the later peak is explained by the presence of more one-time offenders in the Danish cohort (see chapter 6). That is, we know that early delinquents tend to have longer arrest records; therefore, one-time delinquents are likely to be later delinquents. Since there are more one-timers in Copenhagen these offenders might move the peak age back to 17 or 18 years of age. If this were the correct explanation, we would expect multiple offenders to show a curve similar to the Philadelphia curve, while the one-time-offender curve should peak considerably later. Further analyses were carried out that allowed us to inspect the age curves for one-time, two-time, three-time, and four- or more-time offenders (tables not shown here). This revealed that while one-time offenders do have a different shaped curve than the others, the other offender categories show exactly the same age curve that we have seen for the group as a whole. The one-time offenders have a flatter peak--one that extends from age 17 through age 21. The heavier concentration of one-time offenders, then, is still another inadequate explanation for the later peak. Yet another potential reason for the delayed peak is the onset of puberty (indeed, it may also relate to the delayed age of <u>onset</u> of delinquency observed in Chapter 10.) It is not unreasonable to think that delinquent activity is in some way related to the development of adolescence which is, in trun, closely related to the physiological changes associated with puberty. It is, then, of interest that the onset of puberty is

somewhat later in the Scandinavian countries than in the U.S. Tanner (1962, 1966, 1973) indicate that the median age for the onset of menarche in Copenhagen is about 13.5 while comparable age for American whites is 12.8 and for American blacks, 12.5. Thus, the difference is close to a year for girls. It is not unreasonable to assume that the difference would be similar for boys although the absolute ages would be different (it is more difficult to measure onset of puberty for boys so girls ages are commonly used).

To the extent that this is at least a partial plausible explanation for delay in the age of delinquency onset, it can also help explain the delay in delinquency peak. It can contribute to an explanation in two ways. First, on the assumption that it takes a certain amount of time to build up a delinquent career to a peak, we could expect that a later start would imply a later peak and a later end. Therefore, if the beginning of delinquent behavior is related to the beginning of puberty, then the beginning of delinquency will be delayed compared to Philadelphia delinquency, and, likewise, the peak may be delayed as well.

The second way that the age of puberty could conceivably contribute to the delay in peak delinquency is through the effects of the varying levels of testosterone in the male adolescent. Rubin (1983) in a review of the literature on this issue indicates that there is a relationship between levels of plasma testosterone and delinquency, as well as aggression in general. The relation is not a simple one, nor is it uncontested.

Nevertheless it is still a plausible factor in the precipitation of delinquency.

The final explanation that we will pursue is based on the fact that, in Philadelphia, delinquency peaks during the time that most youngsters are still in school, while in Copenhagen, delinquency peaks after the typical school-leaving age (compulsary education ends at age 14, and several educational options are possible at that time, leading to different school-leaving ages--these will be described shortly). Over 80% of lower-SES youngsters in this cohort left school by the age of 16.

Based on United States schools and delinquency data, compelling arguments have been made about the contribution of the school experience to delinquency (Polk and Shafer, 1972). Polk ans Schafer point out that the school constitutes the arena in which success or failure is determined for the child; it is here that his identity is formed to a very large extent. The school is central to his current existence as well as the experience that will largely determine the limits of his future. Yet, secondary education in the United States is not tightly directed to the child's occupational future in terms of educational content. For most students, the relevance of schoolwork to future work is not at all clear, yet their futures depend on it, and their present is largely determined by it.

Further, success in the U.S. secondary schooling is strongly related to cetain specific skills such as memorization and verbal arithmetic reasoning. These skills are far from universal and their importance is particularly biasing against the lower social

classes, so that a large number of students are likely to experience difficulty making a real success of school, especially lower class students. Beyond that, the structure of schools, (grades, tracking, pass/failing) assures that some will not succeed. Polk and Schafer argue that this structure for failure leads to frustration and alienation from the school generating a subculture comprised of those who are, essentially, "locked out" of success. This subculture results in considerable troublesome behavior, including delinquency.

If the Polk and Schafer argument describes a dominant force in the production of delinquency, then we should expect a decrease in delinquency when youngsters leave school, since at least the immediate level of frustration and failure would be lowered, and youths would be free to pursue other avenues. The Philadelphia data are consistent with the idea showing the peak of delinquency at age 16 and a drop at 17 when it is possible to obtain working papers and leave school, and when many of the worst students will drop out in any case. However, Elliott and Voss (1978) demonstrate this more specifically and compellingly as they study high school dropouts. They demonstrate that, although dropouts have a much higher rate of delinquency overall than nondropouts, their delinquency peaks just before leaving school and drops right after leaving, a testament to the frustration hypothesis.

The Danish system of education stands in stark contrast to the processes just described. One central fact is that, at the age of 12, the student his teachers and his family make a decision about what educational route to take. They can decide on an academic track or practical track. The truly academic track culminates in education at gymnsium between the ages of 16 and 19, allowing matriculation to a university. Only about 19% of our birth cohort took this option.* About 75% took various types of practical courses, that is, routes that lead to specific types of trades, vocations or businesses. There are a wide variety of schools, apprenticeships and training programs that are available to youngsters. Further, they are tightly connected to the various relevant trade unions so that training is geared to current practice in the field. In addition, the various routes are highly defined and regulated. The system has many of the elements of Polk's "alternative career routes" recommendations.

Based on the comparison between the two systems, we should expect the frustration and alienation hypothesis to be much less relevant to Danish delinquency. Absent this motivating force for delinquency, then, we might expect control theory concepts to become dominant. This would predict that whereas in the U.S. frustration and alienation promote delinquency during school years (and its relief, less delinquency after leaving school), in Denmark the surveillance and control exercised by schools would predict less delinquency during school attendence than after leaving. Of course we already know that the delinquency peak is

---

*In the kingdom as a whole, the percentage is much lower (10% in 1965).
This is likely to be because our cohort is largely urban and, therefore, more education oriented Social forskningstituttet, 1976)

at age 17, after the majority of Danish youth would have left school, and many of the lower class youngsters would have completed their apprenticeships and moved out of the home. However, a true test of the control perspective would be a comparison of delinquency rates before and after school-leaving in Copenhagen. Fortunately, our data set includes year at which the subject left school (for the tall men only). An analysis of the two years prior to school leaving and the two years after reveals that, indeed, the mean number of police contacts after leaving school is over twice as high as the mean before leaving (.11 vs. .24). Of course, it is possible that this result is just a coincidence of the typical school-leaving age with the indepedently caused peak in delinquent activity at 17. To test for this possibility, we can look at the same comparison for each age of school leaving separately. If the finding is robust, we should see the same pattern regardless of age at leaving school. Table 12.1 shows this distribution, again comparing the two years prior to and after leaving school for each age of leaving. The pattern holds at every age from 14 to 20 (the frequencies were too low to use at other ages.). It is also evident when the comparison is narrowed that between one year before and one year after school leaving (Table 12.2), although two of the ages do not show an increase (the numbers become very small at this point).

The next question that arises upon seeing the consistency of the school-leaving "effect" is whether the "effect" is merely one in addition to the independent peak of delinquency at 17, i.e., that this rise in delinquency after school does not explain the

age 17 peak at all, but merely exists in addition to it. We can see by Table 12.2 that this is not the case. Table 12.2 shows the mean delinquency for four years in each school-leaving age category: the year prior to leaving, the first year after leaving, the second year and the third year after. While it can be said that delinquency in the years after school leaving show a peak at 17 followed extremely closely by age 16), it peaks at 16, followed closely by 15 in the years before leaving school. The more general pattern that can be discerned from this table is that the highest delinquency rate is generally seen in the second year after school leaving (except for 14-year-old leavers who maintain their peak to the 3rd year). This can be seen as further confirmation of the control perspective taken here since delinquency appears to increase with more temporal distance from school, and probably more autonomy in general.

We can reasonably hypothesize from these data that the overall peak of delinquency at age 17 in the cohort can be atributed to 1) the fact that the modal age of school leaving is 15 2) these students come disproportionately from the lower-SES group of our cohort, 3) 15-year-old leavers are 17 two years after leaving school, the year of highest delinquent activity for most groups studied 4) 14-year-old leavers peak at both years 2 and 3 after leaving, thus boosting the figures for age 17 delinquency and 5) 14-year- and 15-year-old leavers have a much higher career delinquency rate than other age groups (see Table 12.3).

Summary

We have seen a difference in the peak age of delinquency

between the two cohorts studied, one American, one Danish. We have explored alternative explanations for this difference, including the later age of puberty among Danish youths. A stronger argument can be made, however, for the differential effects of very different school systems. Using United States data, it is clear that delinquency peaks before school leaving and drops after leaving. The opposite is true of the Danish youths. This probably reflects the greater relevance of frustration/alienation hypotheses for American students and the greater applicability of control concepts for Danish students in that system. This conceptualization is supported by the fact that delinquency increases uniformly after school leaving, regardless of leaving age. It is also of interest that delinquency is even higher the second year after leaving when youngsters, presumably, have gained more autonomy than they had during their first year out of school.

References Chapter 12

Alzaga, J.M.V. Epidemiology of homicide in Mexico, D.F. In Wolfgang, M.E., & Ferracuti, F. The subculture of violence. London: Methuen, 1967.

Bandura, A., & Walters, R.H. Adolescent aggression. New York: Ronald Press, 1959.

Bandura, A., & Walters, R.H. Social learning and personality development. New York: Holt, Rinehart & Winston, 1963.

Caplow, T. La violencia. Columbia University Forum (Winter), 1963, 45-46.

Chaiken, J.M., & Chaiken, M.R. Varieties of criminal behavior: summary and policy implications. Final Report to the National Institute of Justice, 1982.

Cook, P.J. The role of firearms in violent crime: An interpretive review of the literature. In Wolfgang, M.E., & Weiner, N.A. (Eds.), Criminal Violence. Beverly Hills: Sage Publications, 1982. Chapter 5.

Dollard, J., Doob, L.W., Miller, E., Mowrer, O.H., Sears, R.R., Ford, C.S., Hovland, C.I., & Sollenberger, R.T. Frustration and aggression. New Haven: Yale University Press, 1939.

Elliott, D.S., & Voss, H.L. Delinquency and dropout. Lexington, Mass.: Lexington Books, D.C. Heath and Co., 1974.

Fanon, F. The wretched of the earth. New York: Grove Press, 1963.

Ferracuti, F., & Newman, G. Assaultive offenses. In Glaser, D. (Ed.), Handbook of Criminology. Chicago: Rand McNally Publishing Co., 1974.

Friedrich, P. El homicidio politico en Acan. Revista de ceincias sociales, 1964, 8(1), 27-51.

Gold, M. Suicide, homicide and the socialization of aggression. American Journal of Sociology, 1958, 63(May), 651-661.

INTERPOL, International crime statistics, 1965-66.

Kandel, D., & Lesser, G.S. Parent-adolescent relationships and adolescent independence in the United States and Denmark. In Bronfenbrenner, V. (Ed.), Influences on human development. Hirsdale, Illinois: Dryden Press, 1972.

Kohlberg, L. Status as perspective on society: An interpretation of class differences in children's moral judgements. Paper presented at the Society for Research in Child Development Symposium on Moral Process, Bethesda, Maryland, 1959.

Leggett, J.C. Uprootedness and working-class consciousness. American Journal of Sociology, 1963, 68, 682-692.

Litt, S.M. Perinatal complicatons and criminality. (Doctoral dissertation, New School for Social Research) Ann Arbor, Mich.: University Microfilms, 1972. No.72-27,880.

Mednick, G., & Baker, R. Family environment correlates of young adult crime. Final Report, Part I, to U.S. Department of Justice, National Institute of Justice, Grant No. 81-IJ-CS-0009, 1983.

Mednick, S.A., Pollock, V., Volavka, J., & Gabrielli, W.F., Jr. Biology and violence. In Wolfgang, M.E., & Weiner, N.A. (Eds.), Criminal violence.. Beverly Hills: Sage Publications, Inc., 1982. Chapter 1.

Mednick, S.A., & Gabrielli, W.f., Jr. Biosocial, psychological and socio-familial factors in crime. Final Report, Part II, to U.S. Department of Justice, National Institute of Justice, Grant No. 81-IH-CS-0009, 1983.

Merton, R.K. Social theory and social structure. (3rd ed.) New York: Free Press, 1968.

Megargee, E.I. Psychological determinants and correlates of criminal violence. In Wolfgang, M.E., & Weiner, N.A. (Eds.), Criminal violence. Beverly Hills: Sage Publications, Inc., 1982. Chapter 2.

Polk, K., and Schafer, W.E. Schools and delinquency. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1972.

Rubin, T. The neuroendocrinology and neurochemistry of antisocial behavior. In Mednick, S.A., Moffitt, T., & Stack, S. (Eds.), Biology and antisocial behavior. Boston: Kluwer-Nijhoff, in press.

Sears, R.R. Survey of objective studies of psychoanalytic concepts. New York: Social Science Research Council Bulletin 51, 1943.

Sellin, T. Culture conflict and crime. New York: Social Science Research Council Bulletin 41, 1938.

Socialforskningsinstitutet. Living conditions in Denmark. Compendium of Statistics,1976. Copenhagen, 1976.

Sutherland, E., & Cressey, D.R. Criminology. (8th ed.) New York: Lippincott, 1970.

Tanner, J.M. Growth at adolescence. (2nd ed.) Oxford: Blackwell Scientific, 1962.

Tanner, J.M. The secular trend towards earlier physical maturation. Trans. Soc. Geneesk, 1966, 44, 524-538.

Tanner, J.M. Trend toward earlier menarche in London, Oslo, Copenhagen, the Netherlands and Hungary. Nature, 1973, 243, 95.

Wolfgang, M.E., and Ferracuti, F. The subculture of violence. London: Methuen, 1967.

Table 12.1

Mean Number of offenses for 2 Years Prior to and After School Leaving by Age of School Leaving

Copenhagen

Age on Leaving School	$\bar{X}$ Delinquency During last 2 Years of School	$\bar{X}$ Delinquency During first 2 Years after Leaving	N
14	.08	.29	224
15	.12	.33	243
16	.14	.23	216
17	.13	.16	201
18	.10	.18	84
19	.08	.12	74
20	.08	.18	45

Table 12.2

Mean number of offenses for Year Prior to School Leaving and for 1st, 2nd and 3rd Years After Leaving by Age at Leaving

Copenhagen

Age at School Leaving	$\bar{X}$ Delin. Before	$\bar{X}$ Delinquency 1Yr. After	2nd Year	3rd Year	N
14	.05	.09	.20	.21	224
15	.07	.11	.21	.17	243
16	.09	.13	.10	.08	216
17	.06	.05	.11	.07	201
18	.05	.10	.08	.10	84
19	.05	.04	.08	.07	74
20	.04	.07	.11	.09	45

Table 12.3

Mean Number of offenses over Career by School Leaving Age

Copennagen

School Leaving Age	$\bar{X}$ Career Delinquency	N
14	2.19	224
15	1.62	243
16	1.11	216
17	.80	201
18	.88	84
19	.54	74
20	.69	45

APPENDIX A

OFFENSE SERIOUSNESS SCALE

This report takes as its major purpose the replication of the findings published by Wolfgang, et al (1972). Some of the analyses presented in that work were based on a scale of seriousness developed by Sellin and Wolfgang (1963). Naturally, we wished to use the concept of seriousness as well so that the comparisons with the Philadelphia study would not be needlessly limited in scope.

The measure of seriousness developed by Wolfgang et al (1963) was based on the extent of injury, damage or theft involved in the delinquencies. Direct measures of these factors were obtained and were found to be highly correlated with global perceptions of offense seriousness by judges, police and students. That is, perceptions of offense seriousness seem to be based on amounts of injury, theft and damage caused by crimes.

The collection of cohort delinquency data in Denmark did not include direct measures of injury, theft or damage. It is, therefore, not possible to use these factors as seriousness indicators in this study. We have chosen, instead, to use sanctions applied to the boys by the court as indicants of offense seriousness. This can be justified on two bases.

First, one can think of a sanction or sentence as a reflection of a judge's global perception of the seriousness of the offense at hand (shown by Sellin and Wolfgang to be highly correlated with injury, theft and damage measures). Second, sentences prescribed for common law offenses by the penal code (in Denmark as elsewhere) are generally based on similar criteria. It is, of course, often charged that extra-legal factors can also influence sentencing decisions, thus reducing

the reliability of this measure of seriousness. Fortunately, however, the Danish system of justice is highly regularlized (Christiansen, 1977) so that reliability is at a maximum in this cohort study. Even in the United States disposition decisions have usually been demonstrated to be highly dependent on the nature of the offense and on the offender's prior record. When these factors are held constant little variance is explained by extra-legal factors. (see Thornberry, 1973). By reputation, the Danish system is even more standardized.

The foregoing justification touches only lightly on the matter of offender prior record as an influence on sentence. It must be acknowledged that the legitimate use of sanction as a seriousness measure is based on the assumption that prior record is uncorrelated (or minimally correlated) with the type of offense committed on any one occasion. This issue will be discussed later.

Scale Construction

There are two purposes for a seriousness scale in this study. Each uses the scale in a slightly different way. First, for some analyses, the most serious charge of a multiple-charge offense must be selected to represent the incident. The seriousness scale will be the basis for such a selection. Second, offenders' careers must be characterized by seriousness, both overall and at specified stages. This involves all charges of all arrests, and the summation of their seriousnesses.

While the scale will be used slightly differently for the two purposes, the basic construction is largely the same for both. Differences will be discussed later. The common features will be described here.

The major obstacle to be overcome when using sanctions or sentences for almost any purpose is that sentences are not undimensional. That

is, they consist of fines, various types of jails, various levels of prison, probation, parole, and a separate dimension of time that applies to all of the other dimensions except fines. Several of the dimensions can occur in combination, thus complicating the task further. If all sanctions were fines or all were time spent in one type of confinement, the measure could be an interval or ratio one. The only workable solution to the problem was simply to begin by ordering the dimensions according to some basic principles. Then elaborations were added to account for varying amounts of time and money associated with each gross category.

The basic dimensions of sentences in Denmark are very similar to those used in the U.S., but there are a few differences worth taking into account. First, the distinction between jail and prison is different in Denmark than in the U.S. Prison is used in similar ways in the two countries. However, post sentence incarceration in Danish equivalents to County Jails are not found in Denmark. Related to this is a second divergence from our own system. Denmark employes a method of sanction called, in Danish "Hæfte", colloquially translated as "easy jail". Easy jail time may be served in a variety of ways, perhaps suited to the offenders' needs. It is most frequently punishment for traffic offenses. It may be served on weekends, during vacations, or other periods that conflict minimally with the offenders' work. In addition, the environment in the hæfte is considerably less harsh than that found in prison. Danish criminologists commonly order hæfte below simple probation time in harshness of sanction (see Wolf, 1965). Finally, the Danes make liberal use of fines as sanctions for common law offenses; these will constitute a large category of cases.

The basic ordering of the various types of sanctions are:

1. fines
2. easy jail (hæfte)
3. probation
4. prison

This ordering embodies one of the principles used to produce the final scale: Any confinement or threat of confinement (probation) is considered more severe than a fine. Of course, probation is customarily placed below prison in seriousness. Hæfte is placed below probation in accordance with Danish criminologists' practice. Another principle used to construct the scale is that each dimension could be enhanced or diminished in seriousness by the addition of 1) another dimension of the sanction or 2) a longer or shorter period of time served (or larger fine paid). Thus, a probation term is made more serious by the addition of time to be served in hæfte. Hæfte is made a more serious sanction by the addition of a fine. A long period of probation is more serious than a short period.

Another principle applied is that where more than one dimension of sanction is included in the sentence, the one that is higher on the seriousness ordering is to be the primary categorization. Other dimensions will serve only as enhancements.

A preliminary ordering of sanction combinations was generated on the bases of these principles. However, when a frequency distribution was produced based on these categories, it became clear that finer distinctions should be made within some of the categories containing fines since fines are so frequent. Each category containing fines as a part of its definition was broken into three subcategories based on

the amount of the fine. There were three such original categories, so that there were ultimately nine categories containing fines. Since the new distinctions (based on smaller increments of fines) were less substantial than the distinctions of the preliminary version of the ordering, it seemed inappropriate to assign ranking numbers that were incremented in the same degree that the original grosser categories were, i.e. a whole number. The new distinctions, then, were characterized by decimal increments of .33 and .67. In other words, the original category that was defined as "below median fine, with no addition penalty" had a rank of "2". When finer distinctions were made within this category, the two new categories were given rankings of 2.33 and 2.67 rather than 3 and 4 respectively.

The application of these principles resulted in the final orderings:

1.	0	Juvenile offenses, charges dropped
2.	0	Charges dropped
3.	1	No sanction, but a warning has been given
4.	2	Fine of 50* or less, no additional penalty
5.	2.33	Fine of 90 or less, no additional penalty
6.	2.67	Fine of 140 or less, no additional penalty
7.	3	Fine of 200 or less, no additional penalty - or - 50 or less plus additional penalty
8.	3.33	Fine of 300 or less, no additional penalty - or - 90 or less plus additional penalty
9.	3.67	Fine of 9000 or less, no additional penalty - or - 140 or less plus additional penalty
10.	4	Fine of 200 or less, plus additional penalty
11.	4.33	Fine of 300 or less, plus additional penalty
12.	4.67	Fine of 9000 or less, plus additional penalty
13.	5	Below median days of easy jail
14.	6	Above median days of easy jail - or - below median days plus additional penalty

* Danish Kroner

15.	7	Above median days of easy jail plus additional penalty
16.	8	Zero months present sentence plus unspecified probation
17.	9	Zero months present sentence plus below median probation
18.	10	Zero months present sentence plus above median probation
19.	11	Below median present sentence plus zero months probation
20	12	Below median present sentence plus below median probation
21	13	Below median present sentence plus above median probation
22	14	Above median present sentence plus zero months probation
23	15	Above median present sentence plus below median probation
24	16	Above median present sentence plus above median probation
25	17	Below median months of prison
26	18	Above median months of prison - or - below median months of prison plus additional penalty
27	19	Above median months of prison plus additional penalty

Characterizing the Seriousness of a Delinquent Career

The first use of the scale is to characterize the seriousness of an offender's career overall, and at specified intervals. For this purpose, we have simply treated the ordinal scale as interval, using the rankings as scores, and have summed the sanction scores applied to the offender over the specified time period. This produces a total seriousness score which summarizes the seriousness of the delinquents' acts. A mean or median of the sanction scores can also be taken for the purpose of determining the average seriousness of the offenses a boy commits independent of the number of offenses he commits.

Choosing the Most Serious Charge

For some analyses it is necessary to categorize offenders by the types of offenses they have committed (e.g. burglary, assault, etc.) at, for instance, the first arrest level. Where a boy has been charged with multiple offenses, it is sometimes necessary to characterize him only on the most serious of his offenses. We must, therefore, have a way of selecting the most serious offenses with which he was charged. The first step toward this end was to apply a seriousness score to each possible charge. We have accomplished this by taking a mean of the sanction scores applied to each offense type (charge) across all offenders, where there was only one charge for the arrest. All arrests in offenders' histories were used to calculate the means. This was done to maximize the mumber of charge occurances on which to base means. Single charges only were selected because it would have been impossible to separate out the effect of each charge on the sanction. (This was tried in early attempts at constructing the seriousness score, using regression equations, but was not ultimately feasible). All arrests were used rather than only the first arrests so that the number of such charge types on which a mean sanction was based would be maximized. This can be justified only be noting that number of prior arrests is not significantly related to offense type. Therefore, while sanctions are, in general, higher with larger numbers of priors, this increasing the mean scores compared to what they would be if only first arrests were used, the effect is not biased by type of charge.

It is, of course, true that there is considerable variation in

level of sanction within any given offense type reflecting the fact that seriousness can vary within an offense type. This fact causes some unreliability in the measure of seriousness since a very serious burglary may actually be more serious than a very minor assault. This problem is reduced but not eliminated by the fact that all of these offenses were of sufficient seriousness to receive court sanctions and, therefore, the range of seriousness is reduced compared to what it would be if arrests were included that did not result in court sanctions.

The use of single charge arrests only to generate mean sanctions caused certain problems. The major problem is that some charges were not represented among single charge arrests and, therefore, could not be categorized. These gaps were filled by elicting ratings for the uncategorized charges from knowledgeable raters, i.e. criminologists at the Institute - both professionals and students. Certain common, representative charges that did have mean sanction scores were presented to the raters as anchor points. Then, the raters were asked to assign ratings to the uncategorized charges, taking into account the existing scores for the already categorized charges. The mean of the raters for each of the charges was used as the final seriousness score for the charge.

One final problem faced by both methods was that ties sometimes occurred. The primary method used to break ties was to use the third decimal place to break the tie. Sometimes, however, this did not distinguish between scores. In these cases, random numbers tables were used to break the ties.

The combination of all these methods and problem resolutions yielded the following scores for each type of charge.

Offense Description	Seriousness	Rank
Murder	18.000	1
Robbery	15.655	2
Rape	15.100	3
Severe theft (weapon, or great value)	14.000	4
Negligent homicide	13.932	5
Heterosexual immorality with children	13.600	6
Homosexual immorality with minor	12.810	7
Blackmail	12.002	8
Crime by officials	12.001	9
Offense against public decency	11.900	10
Arson	11.533	11
Embezzlement, fraud	10.549	12
Bodily injury	10.333	13
Forgery	10.236	14
Giving false evidence in court	9.000	15
Incest	8.832	16
False statement before a public authority	8.750	17
Offense against one's family	8.678	18
Violence or threat of violence	8.382	19
Military law (awol etc.)	7.854	20
Violence against authority	7.725	21
Theft, house-breaking	7.575	22
Imitation of money	7.058	23
Receiving stolen goods	6.866	24
Narcotics violations	6.218	25
False accusation before a court	6.167	26
Made incorrect statement before a public authority	6.083	27
Civilian camp violation	5.671	28
Driving under the influence of alcohol	5.655	29
Customs violations, smuggling	5.500	30
Pimping	5.401	31
Acquiring stolen goods	5.264	32
Miscellaneous category	5.208	33
Plants inconvenient for traffic	5.000	34
Driving with suspended licence	4.853	35

Driver ill or over-worked	4.667	36
Cruelty to animals	4.308	37
Larceny by finding	4.042	38
Irresponsible driving	4.000	39
Unlawful appropriation	3.923	40
Identifies person responsible for paying for an accident	3.900	41
Prostitution	3.674	42
Attached trailers	3.673	43
Limitations on vehicle loads	3.672	44
Special rules	3.671	45
Police rights in controlling vehicles	3.468	46
Stopping and parking	3.467	47
Shopkeeper's lisensing law	3.389	48
Gives false evidence intended to implicate another	3.372	49
Other violations	3.371	50
Size of vehicle (height, lenght)	3.338	51
Person who uses a car must have insurance	3.337	52
Food rationing violation (old law)	3.336	53
Lighting	3.335	54
Concerning vehicles and drivers of streetcar	3.334	55
Detrimental trade gambling	3.333	56
Race driving	3.332	57
Incorrect written statement on matters with which had no knowledge	3.331	58
Failure to register auto properly	3.290	59
Driver's licence	3.252	60
Clear passage for police, fire equipment ambulance	3.251	61
Regarding licence plates	3.212	62
Directions in traffic (signals, etc)	3.199	63
Not yet specified	3.162	64
Driving with trucks	3.153	65
Speed for motor vehicles	3.142	66
Regarding who the owner lets drive the car	3.141	67
Other vehicle regulations	3.115	68

Attached trailers - machines	3.077	69
Brakes, lights and licence	3.068	70
Fundamental rules (respect and attention)	3.067	71
Rules that apply to cars apply to motor bikes as well	3.061	72
Not specified	3.042	73
Malicious damage	3.041	74
Brake and stearing gear	3.011	75
Signals and signs	3.006	76
Driving around railroad tracks, off-road	3.005	77
Offense against personal freedom	3.004	78
Crime against the state	3.003	79
Law concerning vacations	3.002	80
Weapon law (no cerfificate)	3.001	81
Rules for motor cycles	2.997	82
Hunting law, licenses, etc.	2.879	83
Other rail vehicles	2.860	84
Traffic regulations and traffic reductions	2.845	85
Right of way to approaching traffic	2.833	86
Sailor's laws	2.832	87
Law concerning shops opening hour	2.831	88
Speeding	2.818	89
Weight laws	2.785	90
Meeting and overtaking	2.756	91
Practice driving violation	2.750	92
Vehicle's place under swing and turning	2.728	93
Regarding the driver's responsibility for the condition of the vehicle	2.717	94
Communication by commercial radio	2.673	95
Failure to report to Folkeregister	2.672	96
Other equipment violations	2.671	97
Placing things on streets	2.628	98
Vehicle's place on the roadway	2.607	99
Equipment violations for tractors	2.554	100
RR law	2.444	101
Excessive noise	2.434	102
Bicycle equipment	2.417	103
Rented cars	2.416	104

Causing a civil disturbance	2.401	105
Rules for cycles in traffic	2.332	106
Drivers age requirements	2.331	107
Obligations at traffic accidents	2.268	108
Restaurant law	2.267	109
Regarding use of foreign vehicles	2.125	110
Traffic rules for streetcars	2.003	111
Railway crossing	2.002	112
Use of traffic path	2.001	113
Rules for pedestrians	1.981	114
Equipment violations for horse-drawn vehicle	1.952	115
Begging	1.950	116
Hanging on windows or playing on streets	1.830	117

Appendix A References

Christiansen, K.O. A preliminary study of crimnality among twins. In Mednick, S.A., & Christiansen, K.O., (Eds.), Biosocial bases of criminal behavior. New York: Gardner Press, 1980.

Sellin, T. and Wolfgang, M.E. The measurement of delinquency. New York: John Wiley and Sons, 1964.

Thornberry, T.P. Race, socioeconomic status and sentencing in the juvenile justice system. The Journal of Criminal Law and Criminology, 1973, 64(1).

END