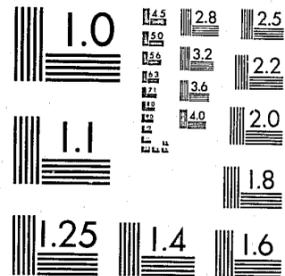


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Delinquency in a Sacramento Birth Cohort

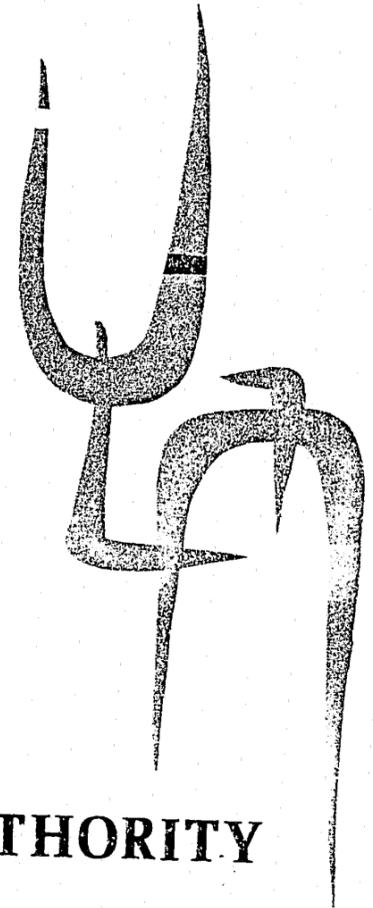
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YOUTH AUTHORITY



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HIGHLIGHTS

Findings

- The Sacramento Birth Cohort contained 8,483 youths, of whom 4,208 were males and 4,275 were females.
- Nearly 1 of every 4 males and over 1 of every 10 females were arrested at least once before reaching the age of eighteen. These 1,533 delinquents were arrested a total of 2,963 times.
- Nearly half of those arrested a first time were arrested 2 or more times (n = 721). Among males who were arrested twice, more than 2 out of every 3 committed further delinquent acts.
- The 721 delinquents arrested more than once were responsible for 2,151 arrests (72.6% of all arrests).
- Arrest rates were higher for those youths in lower socioeconomic classes.
- Arrest rates were higher for nonwhite youths.
- It was also found that delinquents were more often born elsewhere than in Sacramento County.
- Delinquents had changed residence more often than nondelinquents.
- Delinquents had a lower academic grade point average.
- Delinquency occurred more often among those youth not attending regular school (i.e., dropouts and those in special schools).
- Males recidivated (i.e., were arrested 2 or more times) more often than females, 55.9% vs. 31.5%.
- Nonwhites recidivated more often than whites, 55.4% vs. 41.1%.
- Few major differences were found in type and severity of offenses committed by whites and nonwhites; however, among males, whites committed more burglaries while nonwhites committed more thefts and larcenies; among both sexes, nonwhites ran away more often, while whites were more often arrested for other status offenses (incorrigible, truancy, etc.).
- Severity of offense was higher for recidivists than for one-time delinquents.

- A status offense was the first offense for 63.3% of the females, but only for 28.7% of the males. First offenses for males were more likely to be property offenses (54.6%).
- Average age at first arrest was 11.6 for males and 11.4 for females. Status offenses occurred at an earlier age: 10.8 for males, 9.3 for females.
- The data showed that first time status offenders were just as likely to recidivate as other types of first offenders. Among males, 56.1% of the status offenders recidivated, compared to 55.7% of those whose first offense was a crime against persons and 55.9% for property offenders.

Implications

- It is not a new recommendation that intervention services be emphasized among nonwhite populations or the lower SES classes. However, two additional recommendations can be made.
- First, some attempt should be made to provide services for transient families, since a higher rate of delinquency was found among those families that moved to Sacramento or had several residence changes while living in Sacramento. The transiency factor may be a symptom of family instability, which has been linked to delinquency in other studies.
- Second, emphasis should be given to programs associated with the schools, since a higher rate of delinquency was found among those youths failing to adjust to or complete regular school. The data are not conclusive as to whether school problems are a cause or symptom of delinquency, but it appears that those youths experiencing problems in school are more likely to become involved in delinquent acts.
- The finding that more than half of the youths arrested a first time desisted from further delinquency begs more understanding. We need to learn more about the distinctions between those youths whose delinquency ceases more or less naturally and those whose delinquency is likely to persist unless there is some form of intervention, whether it be services, treatment, or punishment.

Delinquency in a Sacramento Birth Cohort

Introduction

How prevalent is delinquent behavior among a group of adolescents? What characteristics distinguish delinquents from nondelinquents? Is it true that a large proportion of the recorded delinquent acts are committed by a relatively small proportion of delinquents? To answer these questions, the California Department of the Youth Authority commissioned a study of a large cohort of adolescent youths. In 1977, the research study was initiated, entitled "Delinquency in a Sacramento Birth Cohort."

The design of the Sacramento Cohort Study was patterned after the well known study of the 1950s, "Delinquency in a Birth Cohort."¹ This was a longitudinal study of a cohort of 9,945 male youths born in 1945 and who lived in Philadelphia at least between their tenth and eighteenth birthdays. The report contained a number of implications applicable to policies dealing with intervention and diversion prior to and after a delinquent youth's entry into the Juvenile Justice System. Wolfgang, et al. found that some 35% of the cohort of 9,945 youths were involved with the police at least once prior to age 18. Of those who committed a first offense, 54% went on to commit a second offense (or 19% of the total cohort). Of those who committed a second offense, 65% went on to commit a third offense (or 12% of the total cohort).

The authors attempted to answer the relevant question of what point in a delinquent career would intervention be most efficacious. Their

¹Wolfgang, M.E., Figlio, R.M., and Sellin, T. Delinquency in a Birth Cohort, U. of Chicago Press, Chicago, 1972.

data showed that nearly half of those who committed their first delinquent act desisted from further delinquency. Therefore, it was suggested that intervention with first offenders might be wasteful. An additional 35% of the delinquents desisted after the second offense. After the third offense, the proportion of delinquents who desisted leveled off. The authors concluded that intervention should be held in abeyance until the commission of a third offense. Such a policy would reduce the target population for intervention to 12% of the youth population, rather than the 35% figure represented by first time offenders. This group of third-time offenders would include those who would become chronic offenders. It was found that a small group of 627 chronic offenders had been responsible for over half of the 10,214 offenses committed during the study period.

The Philadelphia Study included an analysis of background and academic variables, and several important differences were found to exist between delinquents and nondelinquents. For example, delinquents were more often members of a lower socioeconomic group. This finding was corollary to, but overshadowed by, the finding that members of nonwhite ethnic groups more frequently became delinquent. Other variables were discovered to be related to delinquency, such as failure to graduate from high school, poor school achievement, weak performance on IQ tests, and repeated intra-city migration. However, in each case the relationship of these variables to delinquency was confounded by the ethnicity factor. Nonwhite ethnic status was highly related to each variable, thereby assuming more importance in explaining delinquency.

These findings seem to represent important clues in the approach to diversion and delinquency prevention. However, because the study took

place in Philadelphia during the late 1950s, the degree to which the findings can be generalized to other settings and current times is unknown. Therefore, there was a need to replicate the study.

The Present Study

The Sacramento Cohort Study took place between April 1977 and July 1978. The study staff was comprised of five student data collectors, supervised by Dr. Peter Venezia of the California State University at Sacramento. In its original design, the study was closely patterned after the Philadelphia Cohort Study, with plans for collection of similar data and attention to be paid to replicating the findings of the earlier study. However, during the course of the study some modifications took place which differed from the design of the Philadelphia Study. These differences will be described in later sections of this report.

A preliminary summary of the data was submitted to the Youth Authority in early 1979. A secondary analysis of the data set, which was contained on a computer tape, proved unworkable when a number of errors were detected in the tape file. Since the original raw data were no longer available, further data analysis was impossible and the data that could be presented were limited to those contained in the preliminary summary. Ultimately, the summary was put through an editorial process by staff of the Division of Research. During preparation of the final draft of the report, which took place several months after the end of the project, the editors omitted those data that were deemed unclear or unreliable.

Methodology

This section describes the development of the original procedures to carry out the study, including selection of the youth cohort and methods of data collection.

Selection of a Youth Cohort. The geographic area chosen for the selection of the youth cohort was the City and County of Sacramento, California. In 1975, the population of Sacramento County was 686,325. Although not considered a highly urbanized county, Sacramento County ranked seventh in population among the state's 58 counties. Beyond the obvious desirability of the proximity of the area to the research base of operations, Sacramento County (rather than the City of Sacramento) was chosen because: the four Sacramento School Districts included both city and county areas in their service jurisdictions; it simplified the cohort identification and data collection process; and, it was considered worthwhile to extend the study to include rural areas to increase generalizability.

The four districts contained 41 high schools, of which 15 were special schools (adult or continuing education, alternative schools, etc.). The task of searching individual school files was of such magnitude that it was not feasible to include private or parochial schools.

Approximately 50,000 current and closed files in the four school districts were searched to identify cohort individuals--those born in 1959 and who had resided in the county since 1970. The search of school files located almost 15,000 youths who had been born in 1959. Of this number, 8,483 met the criteria of residence in the county since 1970. The cohort included 4,208 males (49.6%) and 4,275 females (50.4%).

SELECTION CRITERIA

To be selected as a member of the cohort, the youth must have met two criteria:

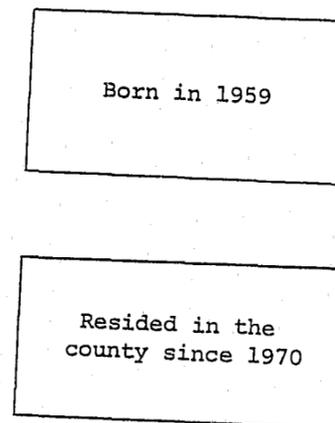


Figure 1

Criteria for Selection of Youths as Members of the Sacramento Cohort

Ethnicity was not available for a large proportion of cohort members. Due to privacy laws and civil rights concerns, schools had deleted from their records any reference to student ethnicity. However, an estimate of the ethnic composition of the cohort was obtained by using information from a special census taken in 1975. This census showed that the Sacramento County population was comprised of 23% nonwhites and 77% whites. Application of these percentages resulted in an estimate of 1,951 nonwhites and 6,532 whites.

School Data. Cohort identification and gathering of school data took place simultaneously. There were two primary sources of information used in each school: the cumulative record cards and the student history folders. Other records such as the attendance files, school rosters, and parent contact cards were checked when necessary. Generally, the school records were well maintained. However, three important data items were unavailable. As mentioned above, ethnicity was not recorded. Secondly, data on the number and type of school disciplinary actions were not uniformly recorded, other than occasionally in a counselor's file. Thirdly, academic achievement and IQ scores were missing for a sizable minority of cases. Furthermore, those test scores that were present had been obtained from a variety of instruments used through time and across schools, resulting in scores that were not comparable from one individual to another. This lack of testing consistency made inadvisable the use of achievement or IQ test data.

Socioeconomic Data. A socioeconomic classification was estimated for each cohort member in a manner similar to that followed in the Philadelphia Study. The Sacramento Regional Area Planning Commission provided the median income for each census tract in the area, as determined by the 1975 special census. The median income for greater Sacramento was \$11,900. The poverty level was established by the Commission as \$5,900 for a family of four. These two figures were used to set the limits for the lowest two categories. Initially, two higher categories were created by repeating the \$6,000 interval, and a fifth category was designated simply as \$24,000 or more. The third category (\$12,000 to \$17,900) presented a problem in that it included 51% of the cohort. Information from the Planning Commission

indicated that less than \$15,000 per year was considered an inadequate income to meet all ongoing expenses for a family of four. Since the midpoint of the third category was \$15,000, it was divided at this point. The income levels used to designate the various socioeconomic status (SES) categories were as follows:

- I. Below \$6,000 -- poverty level
- II. \$6,000 to 11,900 -- deprivation
- III. \$12,000 to 14,900 -- inadequate
- IV. \$15,000 to 17,900 -- adequate
- V. \$18,000 to 23,900 -- secure
- VI. \$24,000 and over -- comfort

The income level for each cohort member's family was then estimated by locating the family address on a census tract map, and by using the median income for that census tract as the family's annual income. Much precision was lacking in this procedure, but it was considered adequate for comparative purposes. For the analysis of the relationship of SES to delinquency, the project director grouped the subjects into a low SES group (\$14,900 and below) and a high SES group (\$15,000 and above).

Juvenile Justice Data. The Sacramento City Police Department and the Sacramento County Sheriff's Department were the collection points for information descriptive of the cohort's contacts with the justice system. Both agencies maintained alphabetical card files of juveniles contacted formally by its personnel. In addition, there was a central file in each department in which case folders were filed numerically (by case number). However, it would have taken several months to search these files for the over 8,000 names, and then read and code information from the delinquents' case files. Therefore, because of time constraints, the card files were used as the data sources for the juvenile justice information. The main

elements lacking from these files were the behavioral descriptions of the offenses and the circumstances surrounding them. Otherwise, the cards contained the necessary information: name, address, date of birth, ethnicity, date of offense, type of offense and penal code classification.

When a cohort member was located in the law enforcement cards, a complete record was made of the youth's delinquent history. Each offense was recorded and given a severity rating. In order to make the data comparable to other delinquency research being done in California, the severity scale used was one previously developed by the Youth Authority (Appendix A). The severity ratings, ranging from zero to nine, are based on broad offense types rather than behavioral manifestations of harmfulness or injury connected with the offense.

Comparability With the Philadelphia Study

As mentioned earlier, some differences in the nature of the data used in the Sacramento Study somewhat limit the comparisons that can be made with the Philadelphia Study. Three of the major differences are discussed below.

Ethnicity. Ethnicity was available for all members of the Philadelphia cohort but only for delinquents in the Sacramento cohort. Ethnicity of Sacramento nondelinquents was estimated using ethnicity proportions in the general population obtained in a special survey.

Socioeconomic Status. In both studies, family income was used as an indicator of socioeconomic status (SES). However, different cutting points were used to determine membership in high and low SES groups. In the Philadelphia Study, the distribution of family incomes was dichotomized in such a way that 46.1% of the subjects were in the low SES group (and 53.9%

in the high SES group). In the Sacramento Study, a different method was used to determine high and low SES status, resulting in 75.1% of the subjects falling in the low SES group (and 24.9% in the high SES group).

Definition of Delinquency. In the Philadelphia Study, a delinquent act was counted whenever there was a police contact with a juvenile, whether or not a formal arrest actually occurred. In the present study, delinquent acts were identified as those instances when a subject was formally taken into custody by law enforcement. The result is that more youths were identified as delinquents in the Philadelphia Study. In neither study was there an attempt to exclude the status offender from the group of identified delinquents. The result is that the groups of delinquents in both studies include youths whose only contact with law enforcement may have been run-away, truancy, or some other status offense. In future replications of longitudinal birth cohort studies, it is suggested that status offenders (who have committed no delinquent acts) be looked at apart from delinquent (criminal) offenders.

Delinquency in the Sacramento Cohort

This section will present the data on delinquency among the members of the Sacramento Cohort. Presentation of the data will be separated into two sections. First, figures will be presented on the number of cohort members involved in delinquent acts and the frequency of repeated delinquent behavior (i.e., one or more rearrests). Second, we will compare the characteristics of identified delinquents with those of nondelinquents. Where appropriate, the data are presented separately for males and females.

Frequency of Delinquent Behavior

Number of Arrests. Table 1 shows the number of cohort members who had no arrests by age 18, the number that were arrested once, and the number arrested two or more times. This latter group is referred to as recidivists.

Of the total cohort of 8,483 youths, 81.9% had not been arrested (i.e., were nondelinquent) prior to age 18. The figures were somewhat different for the sexes: 76.8% nondelinquent males and 87.0% nondelinquent females. There was 9.6% of the cohort that had been arrested once only (10.2% males, 8.9% females), and 8.5% that had been arrested two or more times (13.0% males and 4.1% females).

Of the males, 23.2% had at least one arrest before the age 18. Of those males who were arrested a first time, 55.9% were arrested a second time (or 13% of the total male cohort. Of those arrested a second time, 66.9% were arrested a third time (or 8.7% of the male cohort).

TABLE 1

Number of Arrests of Cohort Members
Prior to Age 18

Number of Arrests	Sacramento Cohort					
	Total		Males		Females	
	n	%	n	%	n	%
Nondelinquent (no arrests)	6,950	81.9	3,233	76.8	3,717	87.0
Delinquent (1 or more arrests)	1,533	18.1	975	23.2	558	13.0
One Time (1 arrest)	812	9.6	430	10.2	382	8.9
Recidivists (2 or more arrests)	721	8.5	545	13.0	176	4.1
Total Cohort	8,483	100.0	4,208	100.0	4,275	100.0

Table 2 presents comparative (but not comparable) delinquency data for the Philadelphia and Sacramento (male only) cohorts. It must be remembered that in Sacramento contacts were generally arrests and in Philadelphia contacts included informal nonarrest situations. The percentage of male youth with at least one contact was 23.2% in Sacramento and 34.9% in Philadelphia. The lower percentage in Sacramento is expected, since it is limited to arrests only. The percentages are consistently lower in Sacramento: two contacts, 13% vs. 18.7%; three contacts, 8.7% vs. 12.2%.

However, when one looks at the percentage of those with one contact who also had a second contact, Sacramento slightly exceeds Philadelphia, 55.9% vs. 53.6%. The same is true for a third contact: 66.9% vs. 65.1%. Although these differences are quite small, one interpretation of the figures is that, in the Sacramento cohort, those who had a first law enforcement contact were actually more likely to recidivate (since the

TABLE 2

Frequency of Law Enforcement Contacts,* Comparison of Sacramento and Philadelphia Cohorts

		Sacramento Males	Philadelphia Males
Total Sample	n	4,208	9,945
One Contact	n	975	3,475
	%	23.2	34.9
Two Contacts	n	545	1,862
	% of Sample	13.0	18.7
	% of Those With One Contact	55.9	53.6
Three Contacts	n	365	1,212
	% of Sample	8.7	12.2
	% of Those With Two Contacts	66.9	65.1

* For Sacramento, a contact was an official arrest; for Philadelphia, a contact was any law enforcement contact, even informal situations.

percentages would be higher if informal contacts had been included, or conversely, the Philadelphia percentages would be lower if informal contacts had been excluded).

The Philadelphia Study did contain some minimal information on the number of official arrests. It was stated that out of 10,214 contacts tallied for the cohort, 3,441 (or 33.7%) represented formal arrests. While the report did not provide the number of youths formally arrested, a rough approximation can be derived by applying that percentage (i.e., 33.7%) to the number of Philadelphia cohort delinquents (3,475). The result is an estimate of 1,182 formal arrests of individuals, or 11.9% of the total cohort. The comparison would then be: 11.9% of the Philadelphia cohort was arrested at least once, compared to 23.2% of the Sacramento

males. The arrest rate of boys, 14 years later in Sacramento, was nearly twice that found in Philadelphia. This coincides closely with the through-time increases in male juvenile arrests reported by the F.B.I. for the period 1960 to 1975. The FBI report shows 5,938,498 arrests nationwide in 1975, more than twice the 2,774,127 reported in 1960.²

Types of Offenses. The 1,533 Sacramento cohort members who had been arrested one or more times before their eighteenth birthday were responsible for a total of 2,963 arrests. Table 3 contains a list of offenses and the number of times each offense was included in arrest reports. In the case of arrests for multiple offenses, the most serious offense was recorded.

The most frequent arrests were for status offenses (runaway, curfew, etc.), 960 or 32.4% of the total. Petty theft was the next most frequent offense, 522 arrests or 17.6%, followed by burglary, 336 arrests or 11.3%. There were 129 of what are called serious crimes against persons (homicide, rape, robbery, assault), or 4.3% of the total offenses.

The 975 male arrestees (11.5% of the cohort) were responsible for 1,638 offenses (55.3% of the total offenses). Most frequent offenses by males were burglary--19.8%, status offenses--16.6%, and petty theft--16.2%. There were 558 females arrested for 1,325 offenses. Most frequent offenses for females were status offenses--51.9% and petty theft--19.3%. Females were not involved in any of the crimes against persons.

The data in Tables 1 and 3 indicate some important differences between males and females. Fewer females were arrested (13.0% vs. 23.2% of the males). Fewer females were rearrested (4.1% vs. 13.0% of the males). When

²Federal Bureau of Investigation, Uniform Crime Reports, 1960-1975, U.S. Government Printing Office, Washington, D.C.

females were arrested, the offense was more likely to be a status offense (51.9% vs. 16.6% for males).

TABLE 3
Arrest Offenses* for the 1,533 Delinquents

Arrest Offense	Total		Males		Females	
	n	%	n	%	n	%
Total Arrests	2,963	100.0	1,638	100.0	1,325	100.0
Murder/Manslaughter	12	0.4	12	0.7	0	0.0
Rape	4	0.1	4	0.2	0	0.0
Robbery	47	1.6	47	2.9	0	0.0
Assault	66	2.2	66	4.0	0	0.0
Burglary	336	11.3	325	19.8	11	0.8
Grand Theft	27	0.9	21	1.3	6	0.4
Grand Theft Auto	104	3.5	98	6.0	6	0.4
Narcotics/Drugs	34	1.2	16	1.0	18	1.4
Marijuana	113	3.8	58	3.5	55	4.2
Other Sex Offenses	32	1.1	29	1.8	3	0.2
Forgery	31	1.1	0	0.0	31	2.3
Receiving Stolen Property	70	2.4	67	4.1	3	0.2
Miscellaneous Felony	59	2.0	23	1.4	36	2.7
Petty Theft	522	17.6	266	16.2	256	19.3
Traffic Violations	164	5.5	96	5.9	68	5.1
Malicious Mischief	148	5.0	82	5.0	66	5.0
Miscellaneous Others	234	7.9	156	9.5	78	5.9
Total Status Offenses	960	32.4	272	16.6	688	51.9
Runaway	374	12.6	65	4.0	309	23.3
Curfew	164	5.5	97	5.9	67	5.1
Other Noncriminal Offenses	422	14.2	110	6.7	312	23.5
Number of Arrestees	1,533		975		558	

*When there were multiple offenses for an arrest, the most serious offense was counted.

Delinquents vs. Nondelinquents

In this section the characteristics of the Sacramento Cohort delinquents and nondelinquents will be compared. Delinquents are defined as those with one or more arrests, comprising 1,533 or 18.1% of the cohort. Of the defined delinquents, 975 or 63.6% were males, and 558 or 36.4% were females.

Socioeconomic Status. Categories of socioeconomic status (SES) were defined earlier. Table 4 shows the total number of youths in each SES category, and the number of delinquents and nondelinquents in each category. An inspection of the row percentages in Table 4 indicates a higher incidence of delinquency within the four lower SES categories. For example, in the lowest SES group 18.1% of the youths were delinquent, compared to 9.2% delinquents in the highest SES group.³ This comes as no surprise since historically low SES has been found to be related to delinquency. The relationship between SES and delinquency was examined separately for males and females. The patterns of relationship were quite similar for both sexes and therefore it was deemed unnecessary to display the SES/delinquency data by gender.

The relationship, however, was not as strong as that found in the Philadelphia Study, where a much larger proportion of youths in the lower SES group became delinquent. In Table 5, the Philadelphia and Sacramento (males) data are compared. The higher chi-square value for the Philadelphia group indicates that there was a stronger relationship (than found for Sacramento) between SES and delinquency. An inspection of the percentages in Table 5 shows that in Philadelphia 44.8% of the lower SES group and

³The data in Table 4 resulted in a Chi-square value of 81.4 (p < .01), indicating a statistically significant relationship between SES and delinquency.

TABLE 4

Delinquents and Nondelinquents, Grouped by Socioeconomic Status

SES Category	Total Cohort		Delinquents			Nondelinquents		
	n	%	n	%	(Row %)	n	%	(Row %)
I. Under \$6,000	421	5.2	76	5.2	(18.1)	345	5.2	(81.9)
II. \$6,000-\$11,999	2,856	35.4	553	37.9	(19.4)	2,303	34.8	(80.6)
III. \$12,000-14,999	2,781	34.5	524	35.9	(18.8)	2,257	34.1	(81.2)
IV. \$15,000-17,999	1,281	15.9	261	17.9	(20.3)	1,020	15.4	(79.6)
V. \$18,000-23,999	587	7.3	31	2.1	(5.3)	556	8.4	(94.7)
VI. \$24,000 & Over	142	1.8	13	0.9	(9.2)	129	2.0	(90.8)
Total	8,068	100.0	1,458 ^a	100.0	(18.1)	6,610 ^b	100.0	(81.9)

^aSES data N/A for 75 delinquents.

^bSES data N/A for 340 nondelinquents.

26.5% of the higher SES group were delinquent. In Sacramento, the corresponding figures were 24.8% and 21.9%. The fact that the Philadelphia percentage are higher must be discounted because of the broader definition of delinquency used in that study. However, the differences between the percentage delinquent in the low vs. high SES groups is meaningful. In Philadelphia the percentage of low SES subjects who became delinquent was 18.3 points higher than for high SES subjects. In Sacramento the difference was only 2.9 points. This indicates that while SES is related to delinquency in the Sacramento cohort, the relation is of less significance than it was several years ago in Philadelphia.

TABLE 5

Delinquents and Nondelinquents In Low and High SES Groups, Comparison of Sacramento and Philadelphia Cohorts

SES	Philadelphia Males					
	Delinquents		Nondelinquents		Total	
	n	%	n	%	n	%
Low SES	2,056	44.8	2,528	55.2	4,584	100.0
High SES	1,419	26.5	3,942	73.5	5,361	100.0
Total	3,475	34.9	6,470	65.1	9,945	100.0

$\chi^2 = 367.3, p < .001$

SES	Sacramento Males					
	Delinquents		Nondelinquents		Total	
	n	%	n	%	n	%
Low SES	405	24.8	1,231	75.2	1,636	100.0
High SES	527	21.9	1,875	78.1	2,402	100.0
Total	932	23.1	3,106	76.9	4,038	100.0

$\chi^2 = 4.35, p < .01.$

Ethnicity. As mentioned earlier, ethnicity was obtained for the delinquents from law enforcement records. School records did not contain ethnicity so it was not available for the nondelinquents. By using the ethnic population percentages from the special census, we were able to calculate the number of whites and nonwhites in the cohort. We knew the number of whites and nonwhites among delinquents, so the ethnicity of the nondelinquents was obtained by simple subtraction from the estimated numbers in the total cohort.

Table 6 shows the estimated number of whites and nonwhites in the cohort, and the number who were delinquents and nondelinquents. The ethnicity of the delinquents is factual; the ethnicity of the nondelinquents is estimated.

The results show that 15.7% of the whites in the cohort were classified as delinquents. Of the nonwhites, 32.6% were delinquents. The difference between the delinquency rate of whites and nonwhites is statistically significant.

TABLE 6

Number of Delinquents Among White and Nonwhite Ethnic Groups

Ethnicity	Sacramento Total Cohort					
	Delinquent		Nondelinquent		Total	
	n	%	n	%	n	%
Whites	897	15.7	5,635	86.3	6,532 ^a	100.0
Nonwhites	636	32.6	1,315	67.4	1,951 ^a	100.0

$\chi^2 = 359.83$ ($p < .001$)

^aEstimates based on a 1975 special census indicating 77% whites and 23% nonwhites in the county population.

Table 7 shows data on ethnicity and delinquency separately by gender. The data show that 9.4% of the white females were delinquents, compared to

25.2% of the nonwhite females ($p < .001$). For males, 18% of the whites and 39.9% of the nonwhites were delinquent ($p < .001$). The data on males supports the findings of the Philadelphia Study in which 28.6% of the white males were delinquent, compared to 50.2% of the nonwhite males.⁴

The data on the relationship of socioeconomic status and ethnicity to delinquency showed both variables to be significantly related. However, ethnicity was much more strongly related than was SES.⁵ Since ethnicity is correlated with SES (at the .001 level in this study), and since ethnicity is usually an easier variable to obtain, and certainly a more reliable one, it is recommended that ethnicity be used as a variable in lieu of SES whenever possible.

TABLE 7

Number of Delinquents Among Whites and Nonwhites, by Male and Female Groups

Gender and Ethnicity	Delinquent		Nondelinquent ^a		Sig.
	n	%	n	%	
Males: Whites	561	18.0	2,548	82.0	$p < .001$ ^b
Nonwhites	371	39.9	558	60.1	
Females: Whites	292	9.4	2,811	90.6	$p < .001$ ^c
Nonwhites	234	25.2	693	74.8	

Note. Sample does not include 75 delinquents and 340 nondelinquents. Data for Table 7 taken from table in original report which also included SES and in which the above number of subjects were excluded because of missing SES data.

^aEthnicity of nondelinquents estimated from a 1975 special census, showing 77% whites, 23% nonwhites.

^b $\chi^2 = 193.1$

^c $\chi^2 = 157.6$

⁴In the Philadelphia Study, 71% of the cohort was white and 29% nonwhite.

⁵The relationship of SES to delinquency was supported by a chi-square value of 4.35, whereas the relationship of ethnicity to delinquency was supported by a chi-square value of 359.83.

Place of Birth. A significant relationship was found between place of birth and the delinquency status of cohort members. Table 8 shows the cohort members grouped by place of birth, and the number and percentages of each group classified as delinquent. Of those youths born in Sacramento County, 13.7% were delinquents. Of those born in another California County, 15.4% were delinquents, and 18.8% of those born in another state or country were delinquents. The relationship between place of birth and delinquency is even more pronounced among males (but less clear for females).

TABLE 8

Delinquency Status by Place of Birth,
for Total Cohort and Gender

Place of Birth	Pct. of Cohort	Total Cohort			Males			Females		
		n	Del.	% Del.	n	Del.	% Del.	n	Del.	% Del.
Sacramento County	41.5	3,517	481	13.7	1,906	306	16.1	1,611	175	10.9
Other Calif. County	29.1	2,469	380	15.4	1,112	248	22.3	1,357	132	9.7
Other State or Country	23.0	1,947	367	18.8	837	228	27.2	1,110	139	12.5
Total		7,933	1,228	15.5	3,855	782	20.3	4,078	446	10.9
Not Known ^a	6.5	550	305	55.5	353	193	54.7	197	112	56.9

Significance p < .01 p < .01 p < .05
 $\chi^2 = 25.7$ $\chi^2 = 48.9$ $\chi^2 = 4.9$

^aPlace of birth unknown. These cases are not included in the total and were excluded from chi-square tests.

It is interesting to note that there were 550 cases (6.5% of the cohort) for whom birthplace was unknown, and of these, 55.5% were delinquent. It is unclear why birthplace was unavailable, but it seems probable that had they

been born in Sacramento County, such a record would exist. If the unknown cases were in fact born outside of Sacramento County, it would enhance the finding that delinquency occurred more frequently among those not born in the county.

Residence Changes. From the school records, a count was made of the number of times the cohort members changed residence while living in Sacramento County (between 1970 and 1977). The average number of residence changes was calculated for several subgroups of the cohort. These are shown in Table 9. The average for the total cohort was 1.65 residence changes. The averages for subgroups show that delinquents moved more often than nondelinquents, low SES members more often than High SES members, and non-white delinquents more often than white delinquents. There was little difference between the sexes, and little reason to expect a difference.

TABLE 9

Average Number of Residence Changes
For Various Cohort Subgroups

Subgroup	Avg. No. of Residence Changes	
	Avg.	n
Total Cohort	1.65	7,614*
Delinquents	2.61	1,213
Nondelinquents	1.47	6,401
Low SES	1.71	5,705
High SES	1.46	1,909
Males	1.62	3,781
Females	1.69	3,833
Whites	2.49	698
Nonwhites (Delinquents Only)	2.79	515

* Data not available on total cohort due to missing data.

(Statistical tests of the significance of the differences were not made in the original report, and data are not available to perform such tests.)

To examine the relationship between delinquency and residence changes with other variables, contingency tables were made, cross-tabulating the number of residence changes on delinquency status vs. SES and, for delinquents only, ethnicity vs. SES. The results are shown in Table 10. When residence changes are cross-tabulated by SES and delinquency status, the largest number of residence changes is shown for delinquents in the Low SES group (2.65). Among delinquents, the ethnicity vs. SES cross-tabulation shows the largest number of residence changes among nonwhites in the Low SES group. However, the second largest number was for white delinquents in the high SES group.

TABLE 10

Average Number of Residence Changes: Delinquency vs. SES and Ethnicity vs. SES

Delinquency Status	Total Cohort		Total
	Low SES	High SES	
Delinquents	2.65	2.45	2.61
Nondelinquents	1.52	1.30	1.47
Total	1.71	1.46	
Ethnicity	Delinquents Only		Total
	Low SES	High SES	
Whites	2.42	2.68	2.49
Nonwhites	2.96	1.82	2.79
Total	2.65	2.45	

In summary, there is a clear relationship between the number of residence changes and delinquency (delinquents moved 2.61 times, compared

to 1.47 times for nondelinquents). Low SES is also somewhat related to delinquency and Low SES delinquents moved more often than High SES delinquents or nondelinquents of either SES level. Among delinquents, nonwhites moved more often than whites. When the ethnicity of the delinquents was looked at, low SES nonwhites moved more frequently than high SES nonwhites, but the same pattern was not found for whites, among whom the high SES group moved more often than the low SES group.

Although a direct comparison with the Philadelphia Study results is not appropriate because of the different cutting point between low and high SES used in the Sacramento Study, one generalization can be made. Both studies showed that nonwhite low SES delinquents moved more often than any other group.

Grade Point Average. School grade point averages were obtained for 8,068 (95%) of the cohort members. The original report did not specify, but it is assumed that the grade point average (GPA) is the cumulative average following graduation (or other termination) from high school. Table 11 shows that the GPA for nondelinquents was higher than for delinquents, 2.57 vs. 2.23. Among delinquents the GPA for whites was only slightly higher than for nonwhites, 2.30 vs. 2.15.

The data were also examined for differences controlling for sex and SES level. Very few differences were found and the data have not been tabled. Nondelinquents of either sex or SES level had a higher GPA than the corresponding group of delinquents. Members of the high SES group tended to have a higher GPA than those in the low SES group. Females scored only a few hundredths of a grade point higher than males. When interactions were looked at, there were limited results: (1) among nondelinquents the high SES group was higher than the low SES group, but

among delinquents there was essentially no difference between SES groups; (2) SES had no differential relationship to the GPAs of either ethnic group among delinquents; and (3) the same pattern described above held true when the data were limited to males, but among females, high SES nondelinquent members had the highest GPA.

TABLE 11

Grade Point Average for Delinquents and Nondelinquents and by Ethnicity Within the Delinquent Group*

Ethnicity	Delinquents		Nondelinquents	
	Avg.	n	Avg.	n
Total Cohort	2.23	1,458	2.57	6,610
Whites	2.30	853	N/A	
Nonwhites	2.15	605	N/A	

* Ethnicity for nondelinquents not available from school records. GPA not available for 415 cohort members. GPA scale: D = 1, C = 2, B = 3, A = 4.

School Departure Status. One data element collected was each cohort members' school status; that is, whether each had graduated, dropped out, had been transferred to a special school, etc. The collection of these data began in April 1977, before the end of the annual school term. Records in most schools were not brought up to date for several months after the end of the term. Therefore, it was not always possible to determine the exact school departure status. As a result, anyone who was in the latter part of the twelfth grade as of April was coded as being in the twelfth grade. This meant that the majority of the cohort was listed as still in school.

The school departure status of the cohort is shown in Table 12. More nondelinquents than delinquents were in school (69.3% vs. 53.8%). This was true even though 10.4% of the nondelinquents, and none of the delinquents, had graduated midterm. The results for several categories show that delinquents more often were not in regular school. Delinquents more often dropped out (21.2% vs. 9.8%), were transferred to continuation school (13.5% vs. 6.0%), and left school after passing a proficiency examination (7.2% vs. 2.4%).

TABLE 12

School Departure Status of Nondelinquents and Delinquents

Status	Nondelinquents		Delinquents		% of Status Group That Were Delinquent %
	n	%	n	%	
Total Cohort	6,217	100.0	1,479	100.0	19.2
Still in School	4,310	69.3	796	53.8	15.6
Graduated Midterm	649	10.4	0	0.0	0.0
Passed Proficiency Exam	149	2.4	106	7.2	41.6
To Adult Education School	80	1.3	13	0.9	14.0
To Continuation School	371	6.0	200	13.5	35.0
To County School	38	0.6	38	2.6	50.0
Dropped Out	612	9.8	314	21.2	33.9

Note. School status unknown for 741 nondelinquents and 66 delinquents.

Overall chi-square = 449.4 (p < .001); (graduated midterm was combined with still in school).

The categories 1) continuation school, 2) county school, and 3) drop out were grouped and tested versus all other categories grouped: chi-square = 321.86 (p < .001).

Of the total group with an identified school status, 19.2% were delinquent. Delinquents appeared at a higher rate in some of the departure status groups: 35.0% of those transferred or placed in continuation schools, and 50.0% of those in county schools. Among those who dropped out of school, 33.9% became delinquents. An unusual finding is that delinquency occurred for 41.6% of those who left school after passing a proficiency exam. The original author interpreted this finding, in light of other evidence, as the delinquent youth's tendency to leave high school, and sometimes even complete it, by any means other than regular graduation.

The Characteristics of the Delinquents

The previous chapter presented the available data comparing the characteristics of nondelinquents and delinquents. This chapter will go into greater detail in the description of the characteristics of the portion of the cohort identified as delinquents. A delinquent was previously defined as a person who had at least one official contact with law enforcement. In this chapter, the delinquent group will be divided into two groups: those with only one arrest, and those with two or more arrests (recidivists). This variable will be referred to as "delinquency status." The number of cohort members in each delinquency status group is shown by gender in Table 13. These data show that 18.1% of the cohort were classified as delinquents. Of these, 53.0% were arrested once only, with 47.0% becoming recidivists. The data on gender show that a greater proportion of males than females were delinquent. Also a greater proportion of males persisted in delinquency (i.e., were recidivists), 55.9% vs. 31.5% for females. The proportion of male recidivists (55.9%) was similar to that found in the Philadelphia Study (53.6%).

Delinquency Status vs. Background Characteristics

The relationship of SES, ethnicity, and gender with delinquency status will be examined in this section. In an attempt to overcome the problem of complexity, each of the three above-mentioned variables will first be individually related to delinquency status. After these two-way relationships have been explicated, we will look at the inter-relationships.

TABLE 13

Delinquency Status: Number of Cohort Members With One Arrest and Two or More Arrests, by Gender

		Total	Males	Females
Total Cohort	n	8,483	4,208	4,275
Delinquents	n	1,533	975	558
	%	18.1	23.2	13.1
One Arrest	n	812	430	382
	% of Cohort	9.6	10.2	8.9
	% of Delinquents	53.0	44.1	68.5
Recidivists*	n	721	545	176
	% of Cohort	8.5	13.0	4.1
	% of Delinquents	47.0	55.9	31.5

* Those with 2 or more arrests.

Delinquency Status and Gender. Table 14 shows the number and percentage of recidivists, by gender. Among those who became delinquent, males more often became recidivists, 55.9% vs. 31.5% for females.

TABLE 14

Number and Percentage of Recidivists, by Gender

Gender	Total Delinquents		Recidivists	
	n	%	n	%
Males	975	55.9	545	55.9
Females	558	31.5	176	31.5

$\chi^2 = 89.171$ $p < .001$.

Delinquency Status and Ethnicity. Table 15 shows the number and percentage of recidivists, by ethnicity. Among those who became delinquent, nonwhites more often became recidivists, 55.4% vs. 41.1% for whites. The direction of these findings was consistent for males and females.

TABLE 15

Number and Percentage of Recidivists, by Ethnicity

Ethnicity	Total Delinquents		Recidivists	
	n	%	n	%
Whites	897	41.1	369	41.1
Nonwhites	636	55.4	352	55.4

$\chi^2 = 29.036$ $p < .001$.

Delinquency Status and SES. Table 16 shows the number and percentage of recidivists, by SES category. Among those who became delinquent, those in the high SES group more often became recidivists, 56.8% vs. 44.2% for the low SES group. [At this point this finding is inexplicable. In Table 4, we saw that delinquency occurred more frequently among the lower SES groups. The data in Table 16 seem to indicate that among those who commit one delinquent act, members of the high SES group are more likely to persist in committing delinquent acts.] The finding that high SES members recidivated more often was consistent for males and females.

Interaction Between SES and Ethnicity, by Gender. A more complex interaction analysis is presented in Table 17. The number of delinquents and recidivists in each subgroup are displayed in the table. Below the

TABLE 16

Number and Percentage of Recidivists,
by SES Category

SES Category	Total Delinquents	Recidivists	
	n	n	%
Low SES	1,155	511	44.2
High SES	303	172	56.8

$\chi^2 = 15,118$ $p < .001$

Sample limited to those subjects for whom SES category was determined. 75 subjects missing.

table are 2 x 2 contingency tables showing the percentage of recidivists in each subgroup defined by ethnicity and SES. The contingency table for the Total shows that among delinquents in the low SES group, nonwhites recidivate more frequently (57.1% vs. 33.9% for whites). Among the high SES, whites recidivated more frequently (61.9% vs. 44.3% for nonwhites). The relationship is similar among the percentages of recidivists for males. For females, however, there is no difference in the ethnic recidivism rate among delinquents in the high SES group.

How can we explain these findings? Table 16 showed a higher recidivism rate among the total high SES group. However, this was more prevalent among whites (61.9%) and more specifically, among white males (70.7%). White females of the high SES group recidivated more frequently than low SES white females, but not at any greater rate than nonwhite high SES females (43.3% vs. 42.9%). We hypothesized that these observed differences in recidivism rates might be due to a greater frequency of rearrest of high SES whites (especially males) for status offenses. However, the condition of the computerized data file did not allow this possibility to be verified.

TABLE 17

Number and Percentage of Recidivists: Interaction
Between SES and Ethnicity, By Gender

	Total			Males			Females		
	Total Delinquents	Recidivists		Total Delinquents	Recidivists		Total Delinquents	Recidivists	
	n	n	%	n	n	%	n	n	%
Whites:	853	349	40.9	561	283	50.4	292	66	22.6
Low SES	638	216	33.9	413	179	43.3	225	37	16.4
High SES	215	133	61.9	148	104	70.7	67	29	43.3
Nonwhites:	605	334	55.2	371	240	64.7	234	94	40.2
Low SES	517	295	57.1	325	219	67.4	192	76	39.6
High SES	88	39	44.3	46	21	45.6	42	18	42.9

Note. Data limited to subjects with SES scores.

Two-by-Two Contingency Tables, Each Cell
Containing the Percentage of Recidivists
Shown in Table 17

	Total		Males		Females	
	White	Nonwhite	White	Nonwhite	White	Nonwhite
Low SES	33.9	57.1	43.3	67.4	16.4	39.6
High SES	61.9	44.3	70.7	45.6	43.3	42.9

Comparison with Philadelphia Study. The finding that nonwhite males recidivated more often than white males (64.7% vs. 50.4%) was similar to the finding of the Philadelphia Study, where 65.4% of the nonwhites recidivated, compared to 45.0% of the whites.

The finding that, among low SES subjects, nonwhite males recidivated more frequently (67.4% vs. 43.3% for whites) was similar to the Philadelphia finding of a 66.6% recidivism rate for nonwhites and a 51.5% rate for whites.

Findings were not similar for the high SES group. In Sacramento, 70.7% of the whites and 45.6% of the nonwhites recidivated. In Philadelphia, in the high SES group, 41.0% of the whites and 56.3% of the nonwhites recidivated.

Ethnicity and Type of Offense

Offenses committed by the delinquents have been grouped into general categories. These are displayed in Table 18, where the number of offenses are shown by gender and ethnic group. The percentages represent the percentage of offenses in each category out of the total offenses committed by each ethnic gender. For example, of all offenses charged to white males, 48.1% were felonies. For nonwhite males the figure was 44.5%. Among females the percentage that were felonies was 11.6% for whites and 15.5% for nonwhites.

Only minor differences were registered in the types of offenses charged to white and nonwhite males. For whites, the percentage of felonies was slightly higher, but whites were also arrested more often for status offenses. Among females, nonwhites were arrested slightly more often for law offenses (felonies and misdemeanors), while white females were more often involved in status offenses.

TABLE 18

Number and Type of Offenses Committed by Delinquent Cohort, by Gender and Ethnicity

Offense	Males				Females			
	White n	%	Nonwhite n	%	White n	%	Nonwhite n	%
Total Felonies	497	48.1	269	44.5	109	11.6	60	15.5
Crimes Against Persons ^a	82	7.9	47	7.8	0	0.0	0	0.0
Major Property Felonies ^b	325	31.4	119	19.7	14	1.5	9	2.3
Narcotics/Drugs/Marijuana	46	4.4	28	4.6	48	5.1	25	6.5
Other Felonies	44	4.3	75	12.4	47	5.0	26	6.7
Total Misdemeanors	358	34.6	242	40.1	315	33.6	153	39.6
Petty Theft	155	15.0	111	18.4	175	18.6	81	21.0
Traffic Violations	62	6.0	34	5.6	42	4.5	26	6.7
Miscellaneous Others	141	13.6	97	16.1	98	10.4	46	11.9
Total Status Offenses	179	17.3	93	15.4	515	54.8	173	44.8
Total Offenses	1,034	100.0	604	100.0	939	100.0	396	100.0
No. in Delinquent Cohort	587		388		310		248	

^a Murder, Rape, Robbery, Assault.

^b Burglary, Grand Theft, Auto Theft.

However, some ethnic differences in offense behavior are masked in Table 18. The percentages of each type of offense committed by members of the two ethnic groups were individually inspected and some interesting differences were found for certain types of offenses. These offenses were regrouped in Table 19 (somewhat differently than in Table 18). The results indicate that burglary was an offense more likely to be committed by white

males (very few burglaries were committed by females). Yet other types of property offenses (mostly forms of larceny) were more likely to be committed by nonwhites. These offenses were grand theft, auto theft, petty theft, receiving stolen property, and strong-arm robbery.

Another difference was found within the category of status offenses. Runaway was committed more often by nonwhites (males and females). Yet whites were more often arrested for other types of status offenses, such as incorrigible, truancy, and curfew.

It is unclear what these differences in ethnic offense behavior portend. Perhaps programs for runaways need to be prepared to deal with the special problems of nonwhite ethnic groups. It is not known whether intervention or diversion should differ for those who commit burglary and those who commit acts of theft. But since the data show that whites more frequently burglarize and nonwhites more frequently steal, further study is warranted in order to unravel the implications.

TABLE 19

Number and Percentage of Offenses Committed by Ethnic Groups for Selected Offenses

Arrest Offense	Total				Males				Females			
	White		Nonwhite		White		Nonwhite		White		Nonwhite	
	n	%	n	%	n	%	n	%	n	%	n	%
Burglary	271	13.7	49	5.0	264	25.5	45	7.4	7	0.8	4	1.0
Other Property Offenses	438	22.2	345	34.8	256	24.8	259	42.9	182	19.4	86	22.3
Runaway	176	8.9	198	20.0	7	0.7	58	9.6	169	18.0	140	36.3
Other Status Offenses	518	26.3	68	6.9	172	16.6	35	5.8	346	36.8	33	8.6

Table 20 shows that nonwhites comprised an estimated 23% of the total cohort, but comprised 41.5% of the delinquents. On the other hand, 66.6% of all the offenses were committed by whites. This indicates that nonwhites were more likely to become delinquent, but once having become delinquent, whites committed more offenses.

TABLE 20

Distribution of Offenses by Ethnicity

	Whites	Nonwhites
Estimated Pct. of Subjects in Cohort	77.0	23.0
Pct. of Delinquents	58.5	41.5
Pct. of Total Offenses	66.6	33.4
Total Felonies	64.8	35.2
Total Misdemeanors	63.0	37.0
Total Status Offenses	72.3	27.7

The data in Table 20 may be compared to similar data in the Philadelphia Study. In Philadelphia, nonwhites comprised 29% of the cohort (Sacramento-23%), and nonwhites comprised 42% of the delinquents (Sacramento-41.5%). In Philadelphia, whites were charged with 44% of the total offenses (Sacramento-66.6%). The findings are similar except that in Sacramento whites committed a larger proportion of the offenses.

Yet another way of comparing the offense behavior of whites and nonwhites appears in Table 21. Here, the average number of arrests per delinquent has been tabulated. White delinquents committed a higher average number of offenses (2.20 vs. 1.56 for nonwhites). This difference is

primarily due to the higher average number of offenses for white females (3.03 vs. 1.56 for nonwhite females). And this difference stems from the higher average number of status offenses committed by white females (1.66 vs. 0.70 for nonwhite females). White females also committed a higher average number of misdemeanor offenses. Therefore, the high frequency of minor offenses of white females is primarily responsible for the overall ethnic differences.

TABLE 21

Average Number of Arrests, by Ethnicity, Gender and Type of Offense

Type of Arrest	Males		Females		Total Ethnic Group	
	White	Nonwhite	White	Nonwhite	White	Nonwhite
Total	1.76	1.56	3.03	1.56	2.20	1.56
Felonies	0.85	0.69	0.35	0.24	0.68	0.52
Misdemeanors	0.61	0.62	1.02	0.62	0.75	0.62
Status	0.30	0.24	1.66	0.70	0.77	0.42

Note. Average derived from data in Table 19.

The data on average number of arrests for male ethnic groups differ from that in the Philadelphia Study where nonwhites committed a higher number of offenses per delinquent (3.95 vs. 2.21 for white males). That the means are higher in Philadelphia can be discounted due to the different definition used for delinquent acts. The direction of the white-nonwhite difference cannot be discounted: there is a reversal in that in Sacramento, white males committed more offenses per subject than found in the Philadelphia Study.

Severity of Offense

The 2,963 arrest offenses were each given a severity rating, based on a severity scale developed by the California Youth Authority (Appendix A). Offenses are ranked on a scale of 0 to 9, with the lower scores being status offenses and minor misdemeanors, and the higher scores being the more serious felonies, such as armed robbery, assault with a deadly weapon, and homicide. The scale does not include a method of weighting for degree of personal injury or monetary loss.

Table 22 shows the number and percentage of offenses at each severity level, for whites and nonwhites. The modal severity score was 1 for both ethnic groups (status offenses receive a score of 1.)

TABLE 22

Severity of Offenses Committed by Delinquents, By Ethnic Group

Offense Severity Score	Total Delinquents					
	Total		White		Nonwhite	
	n	%	n	%	n	%
0	94	3.2	85	4.3	9	.9
1	815	27.5	566	28.7	249	25.2
2	280	9.4	172	8.7	108	10.9
3	164	5.5	108	5.5	56	5.7
4	702	23.7	459	23.3	243	24.6
5	163	5.5	71	3.6	92	9.3
6	149	5.0	89	4.5	60	6.1
7	510	17.2	363	18.4	147	14.8
8	74	2.5	53	2.7	21	2.1
9	12	.4	7	.4	5	.5
Total	2,963	100.0	1,973	100.0	990	100.0
Mean Severity		3.63		3.58		3.71

The second largest group fell at level 4. Level 4 includes petty theft (shown to be a high frequency offense in Table 3). The total mean severity score was slightly higher for nonwhites (3.71 vs. 3.58 for whites.) Note, however, that a slightly greater percentage of whites fell at the higher levels (7 and 8), but also at the lower levels (0 and 1).

The same data are shown for males in Table 23 and for females in Table 24. Among males, the mean severity score was higher for whites (4.64 vs. 3.75 for nonwhites). The modal score for whites fell at level 7 (offenses such as burglary and theft), while nonwhites were grouped at two levels, 4 and 7. Among females, the mean severity score was 2.60 for nonwhites and 2.33 for whites. The modal score for both groups was at level 1 (status offenses). The second largest group among both ethnicities was level 4 (primarily petty theft).

TABLE 23

Severity of Offense Committed by Male Delinquents,
By Ethnic Group

Offense Severity Score	Male Delinquents					
	Total		White		Nonwhite	
	n	%	n	%	n	%
0	24	1.5	20	1.9	4	.7
1	227	13.9	143	13.8	84	13.9
2	164	10.0	99	9.6	65	10.8
3	83	5.1	52	5.0	31	5.1
4	377	23.0	232	22.4	145	24.0
5	99	6.0	32	3.1	67	11.1
6	95	5.8	49	4.7	46	7.6
7	483	29.5	347	33.6	136	22.5
8	74	4.5	53	5.1	21	3.5
9	12	0.7	7	0.7	5	0.8
Total	1,638	100.0	1,034	100.0	604	100.0
Average Severity	4.55		4.64		3.75	

TABLE 24

Severity of Offenses Committed by Female Delinquents
By Ethnic Group

Offense Severity Score	Female Delinquents					
	Total		White		Nonwhite	
	n	%	n	%	n	%
0	70	5.3	65	6.9	5	1.3
1	588	44.4	423	45.0	165	42.8
2	116	8.8	73	7.8	43	11.1
3	81	6.1	56	6.0	25	6.5
4	325	24.5	227	24.2	98	25.4
5	64	4.8	39	4.2	25	6.5
6	54	4.1	40	4.3	14	3.6
7	27	2.0	16	1.7	11	2.9
8	0	0.0	0	0.0	0	0.0
9	0	0.0	0	0.0	0	0.0
Total	1,325	100.0	939	100.0	386	100.0
Average Severity	2.41		2.33		2.60	

Recidivism and Offense Severity. As was found in the Philadelphia Study, the repeat offenses tended to be more serious than the first offenses. The average severity scores for one-time delinquents and for recidivists are shown in Table 25, by ethnicity and gender. The average offense severity score was higher for recidivists, regardless of ethnicity or gender. Among males, average severity was higher for whites for both one-time delinquents and recidivists. Among females, the reverse is true: average severity was higher for nonwhites.

TABLE 25

Average Severity of Offenses Committed by
One-Time Delinquents and Recidivists
by Ethnicity and Gender

	One-Time Delinquents		Recidivists	
	White	Nonwhite	White	Nonwhites
Total Delinquents				
No. of Subjects	528	284	369	352
No. of Offenses	528	284	1,445	706
Mean Severity	3.36	3.59	3.66	3.76
Males				
No. of Subjects	292	138	295	250
No. of Offenses	292	138	742	466
Mean Severity	4.36	3.45	4.75	3.84
Females				
No. of Subjects	236	146	74	102
No. of Offenses	236	146	703	240
Mean Severity	2.12	2.50	2.40	2.66

Note. Mean Severity scores of recidivist offenses include first offenses committed by recidivists.

The First Offense

This section describes the type of offenses for which the delinquent youths were first arrested. Also discussed is the average age of the youths at the time of their first arrest. Finally, the number of recidivists is shown for youths grouped by type of first offense.

Type of First Offense. Does delinquency normally begin with the commission of a minor offense, such as a status offense? To answer this question, we looked at the first offenses of the 1,533 delinquents. For this analysis, offenses were categorized into five groups: status offenses,

property offenses, crimes against persons, robbery, and a combination group which may have consisted of a mixture of the other three nonstatus offense types.

The data are displayed in Table 26. Among males the most frequent first offense was a property offense (54.6%). Among females it was a status offense (63.3%). Only 28.7% of the male delinquents committed a status offense as their first offense.

Table 26

Type of First Offense Committed
by Delinquents, by Gender

Type of First Offense	Males		Females	
	n	%	n	%
No. of Delinquents	975	100.0	558	100.0
Status Offenses	280	28.7	353	63.3
Property Offenses	531	54.6	170	30.5
Crimes Against Persons	131	13.4	28	5.0
Robberies	28	2.9	0	0.0
Combination	5	0.5	7	1.3

Age at First Offense. At what age does a delinquent act first occur? The answer to this question appears in Table 27. Males committed their first offense at an average age of 11.61. For females, the average age at first offense was 11.43. However, the ages differ according to type of offense. For both sexes those arrested for status offenses were arrested at the youngest age: 10.77 for males and 9.30 for females. The latest offenders were males arrested for robbery, 16.40 years old. Taken together, the data in Tables 26 and 27 indicate that females tended to commit less serious offenses at first arrest, but on the average were first arrested at a younger age.

TABLE 27

Average Age at Time of First Offense,
By Offense Type and Gender

Type of First Offense	Males		Females	
	n	Avg. Age	n	Avg. Age
Total Delinquents	975	11.61*	558	11.43**
Status Offenses	280	10.77	353	9.30
Property Offenses	531	12.20	170	9.48
Crimes Against Persons	131	14.74	28	15.61
Robberies	28	16.40	0	--
Combination	5	13.07	7	12.83

* White Males - 11.50; Nonwhite Males - 11.77

** White Females - 11.15; Nonwhite Females - 12.26

Type of First Offense and Recidivism. The tendency to recidivate was not related to any type of initial offense, particularly among males. Among females, those whose first offense was a status offense slightly more often recidivated. Table 28 displays the delinquents by type of first offense and the number that desisted from further delinquent behavior and those who were rearrested. The proportion of total male delinquents who desisted after the first offense (44.1%) compared quite closely with the finding of the Philadelphia Study (46.4%).

TABLE 28

Number and Percentage of Delinquents that
Desisted or Recidivated, by Type of First
Offense and by Gender

Offense Type	Initial Offense		Desisted		Recidivated	
	n	%	n	%	n	%
Total Males	975	100.0	430	44.1	545	55.9
Status Offenses	280	100.0	123	43.9	157	56.1
Property Offenses	531	100.0	234	44.1	297	55.9
Crimes Against Persons	131	100.0	58	44.3	73	55.7
Robbery	28	100.0	13	46.4	15	53.6
Combination	5	100.0	2	40.0	3	60.0
Total Females	558	100.0	382	68.5	176	31.5
Status Offenses	353	100.0	224	63.5	129	36.4
Property Offenses	170	100.0	127	74.7	43	23.9
Crimes Against Persons	28	100.0	25	89.3	3	19.4
Robbery	0	-	-	-	-	-
Combination	7	100.0	6	85.7	1	14.3

Summary and Implications

The Sacramento Birth Cohort Study was an attempt to replicate the famous Philadelphia Birth Cohort Study of Wolfgang et al. However, due to problems encountered during and after the study, replication was not fully accomplished. Comparisons with the Philadelphia Study must therefore be somewhat limited.

The Sacramento Cohort Study included 8,483 youths born in 1959 and who had resided in the county since 1970. Whereas the Philadelphia Study included males only, the Sacramento Study included youths of both genders. Data were collected on a number of background and school variables, and law enforcement files were searched to obtain data on all contacts with law enforcement.

Project staff analyzed the data and prepared a draft of the report, which was submitted to the CYA at the end of the project. The project data were read onto a computer tape which was also given to CYA. Division of Research staff undertook an editorial revision of the report, which included secondary analysis of the computer tape data set. During this analysis it was discovered that errors had been made when the tape was created. Since the original data were not available, a careful evaluation of each type of data on the computer tape was undertaken and questionable data were eliminated from the report.

Frequency of Delinquent Behavior. Of the 8,483 youths, 1,533 or 18.1% had been arrested at least once by the time they were 18 years of age. Of the males, 23.2% had at least one arrest by age 18. Of those males arrested a first time, 55.9% were arrested a second time. Of those arrested twice, 66.9% were arrested a third time.

Comparison with the findings of the Philadelphia Study is hampered by the different definitions of delinquent acts used in the two studies. In Sacramento, a delinquent act was defined as an official arrest. The definition used in the Philadelphia Study included any and all contacts (even nonarrests) with law enforcement.

Even so, a similar pattern emerged. In Philadelphia 35% of the male cohort had at least one contact by age 18. Of those with one contact, 54% had a second contact. Of those with two contacts, 65% had a third contact. The proportions of repeat offenders were quite similar in the two studies.

Characteristics of the Delinquents. There was a significant positive relationship between delinquency and membership in low SES classes. However, this relationship was less significant than that found in Philadelphia. In addition, SES was less important than ethnicity in its relationship to delinquency. Of the low SES group members, 24.8% became delinquent, compared to 21.9% of the high SES group members. Among whites, 15.7% were delinquent, compared to 32.6% of the nonwhites.

Certain other factors were found to be more characteristic of delinquents. For instance, cohort members not born in Sacramento County were significantly more likely to be delinquent. Delinquents were more likely to be transient, i.e., have more residence changes while living in the county. Delinquents had a slightly lower academic grade point average and were significantly less likely to be attending regular school (a delinquent was more often a dropout or a student in a special school).

The findings on birthplace and residence changes seem to indicate a relationship between delinquency and social stability. Frequent residence changes may reflect family instability which is a precursor or correlate of delinquency. In addition, it can be hypothesized that many of those

youths born elsewhere experienced difficulties in making the transition from the communities of their birth to Sacramento County. Moving into a new community and a new school system requires a certain degree of social and emotional adjustment which may have led to problems for some youth. Residence change within the county represents a similar situation on a smaller scale. A "new kid on the block" is faced with the task of entering a new environment. If a youth has difficulty making new friends and developing a suitable role in his new milieu, a drift toward delinquency might not be too surprising. Perhaps local youth service bureaus should establish a component designed to assist new residents in becoming acquainted with and adjusting to their new situations.

Findings on the relationship between academic performance and delinquency were not unexpected. This further supports the hypothesis that delinquency can be a result of problems within the school setting. Such problems could be compounded for those youths who move from one school system to another, where environmental and social adjustment difficulties may lead to academic failure.

Characteristics of Recidivists. We found that 18.1% of the Sacramento cohort was arrested once. About half of these were never arrested again. What have we learned about those who were rearrested, those we called recidivists? Of the 1,533 youths arrested once, 721 were rearrested (47.0%).

Our analysis showed that males were more likely to be rearrested than females (55.9% to 31.5%), nonwhites than whites (55.4% to 41.1%) and high SES members than low SES members (56.8% to 44.2%). The finding related to SES was unexpected and, based on the data available, cannot be easily

explained. Moreover, the fact that high SES members more often recidivated was true only for whites, and in particular, for white males.

The percentage of nonwhites among the total delinquents (41.5%) was greater than the percentage of nonwhites in the cohort population (about 23%). White delinquents committed more offenses per person (2.20 vs. 1.56), but this difference is partly accounted for by the higher average offenses for white females (3.03 vs. 1.56). Of all offenses committed by white females, 54.8% were status offenses, compared to 44.8% for nonwhite females. Average number of status offenses per white female was 1.66, compared to 0.70 for nonwhite females. The average severity rating of offenses committed by white males was higher, 4.64 vs. 3.75 for nonwhite males (the difference is due to a higher percentage of burglaries committed by white males, 25.5% vs. 7.4% for nonwhites; there was no ethnic difference in percentage of violent crimes against persons). Among females, nonwhites had a slightly higher severity score (2.60 vs. 2.33 for white females). The average severity of offenses committed by recidivists was higher than those committed by one-time delinquents. This held true when controlled for ethnicity and gender.

Some differences were found in the frequency of certain offenses committed by whites and nonwhites. First, there were no differences between the frequency of crimes against persons or drug offenses. However, it was found that nonwhites more often ran away from home. In addition, whites more often committed burglary, while nonwhites somewhat more often committed acts of theft. Whether these differences might lead to different intervention strategies is unclear.

It was found that 63.3% of the first offenses committed by females were status offenses. Among males, only 28.7% of first offenses were status offenses; 54.6% were property offenses. For both genders, the average age at first offense was during the eleventh year. However, for those whose first offense was a status offense, females averaged 9.30 years, males 10.77.

What type of first offenders are most likely to desist from delinquency, and which type most likely to recidivate? Among males there was no practical difference in recidivism rate, whether the first offense was a status offense (56.1%), a crime against persons (55.7%), or any other type of offense. Among females, those whose first offense was a status offense were somewhat more likely to recidivate than other types of first-time offenders. One implication of these findings is that status offenders should be equally considered along with other types of delinquents as candidates for intervention services.

In general, the results of the Sacramento Study support those of the Philadelphia Study. Large numbers of youths come into contact with law enforcement at least once by age 18. However, at least half of these desist from further delinquency. Delinquency, which on the average begins at age 11, occurs more frequently among nonwhites and those in the lower SES classes.

As is the fate of many research studies, the Sacramento Study leaves many questions unanswered. For instance, problems with the computer tape caused the loss of all data identifying and describing the chronic offenders and serious offenders. Perhaps the study of such data would lead to a method of identifying potential chronic offenders early enough to eliminate

progressively delinquent behavior. Over half the first offenders desisted from further delinquency but we do not have the data to determine why. How many of these first offenders received deliberate attention from the justice system? How many desisted for other reasons, perhaps internal or environmental?

APPENDIX A

Offense Seriousness Scale

OFFENSE SERIOUSNESS CODES

Seriousness Code	Offenses
9	Murder (planned, premeditated homicide)
9	Murder (impulsive homicide or unspecified)
9	Manslaughter (negligent homicide)
8	Felony Assault (aggravated, w/deadly weapon, w/intent of bodily harm or assault on a police officer)
8	Armed Robbery (theft by threat or use of lethal force)
8	Bank Robbery
8	Forcible Rape
7	Robbery/Strong Arm (theft by threat or use of non-lethal force, includes "mugging" e.g., purse snatching)
7	Burglary (unauthorized entry with intent to commit theft)
7	Grand Theft (felony theft excluding automobiles)
7	Arson
7	Grand Auto Theft (steals car for personal use, resale, stripping)
6	Misdemeanor Assault
6	Other Crimes Against Persons
6	Auto Burglary (forceful entry of vehicle/theft or contents)
6	Resisting Officer, Refuse to Obey/Eluding, Obstruction/Threats to a Police Officer
5	Buying, Receiving or Possession of Stolen Property
5	Forgery (false check or use of credit card)
5	Other Felony Theft (theft by trick and device, bunco, fraud)
5	Other Misdemeanor Theft (theft by trick and device, bunco, fraud)

Seriousness Code	Offenses
5	Auto Joyriding, Unauthorized Use
5	Carrying Concealed Weapon or Illegal Possession of Weapon
5	Heroin, Cocaine, Morphine; (Manufacture/Sale)
5	LSD, other Hallucinogenics; (Manufacture/Sale)
5	Pills (speed and downers) or Unspecified Drugs; (Manuf./Sale)
5	Other Manufacture Sale Illegal Drugs
4	Petty Theft (misdemeanor theft)
4	Shoplifting (misdemeanor theft from a store)
4	Malicious Mischief (vandalism, destruct/deface property/auto tampering)
4	Lewd Acts on Child; Molesting
4	Homosexual Relations
4	Incest (perpetrator with related juvenile)
4	Prostitution, Soliciting
4	Other Sex Crimes (obscene conduct/phone calls, illicit heterosexual or indecent exposure, prowling, peeping tom, etc.)
3	Rape (without force by reason of age; commonly known as statutory rape)
3	Hit & Run
3	Drunk Driving (alcohol and unspecified intoxicant)
3	Marijuana, Hashish; (Manufacture/Sale)
3	Heroin, Cocaine, Morphine; (Possession/Use)
3	LSD, other Hallucinogenics; (Possession/Use)
3	Marijuana, Hashish; (Possession/Use)
3	Pills (speed and downers) or Unspecified Drugs; (Poss./Use)
3	Other Possession or Use of Illegal Drugs (Intoxication on Drugs)

Seriousness Code	Offenses
3	Driving Under the Influence (non-alcoholic drugs)
3	Other Miscellaneous Drug Violations (paraphernalia)
3	Escape from Juvenile Institution/Detention/Camp
2	Trespass (unauthorized entry of building or open-property without intent of theft, or lodging)
2	Traffic (except drunk driving, hit & run)
2	Loitering, Vagrancy
2	Disturbing the Peace, Disorderly Conduct
2	Gambling
2	Game and Sporting Violations
2	Minor Municipal & County Code Violations (peddling w/o a license, etc.)
2	Minor Public Safety Violations (litter, fireworks, etc.)
2	Contributing--Aiding and Abetting
2	Other Criminal Non-Status Delinquency not codeable elsewhere (false identification or information to police officer)
2	Drunkenness (public, in parked car, etc.)
2	Other Liquor Violations (presenting false ID, open container in auto, etc.) (If behavior description indicates possession, code 82).
2	Glue Sniffing, Other Legally Obtained Inhalants
2	Situational Violations (associating w/users, frequenting where used, etc.)
2	Minor in Possession of Alcohol (buy or illegal presence in place where alcoholic beverages are sold)
2	Violation of Juvenile Probation, Court Order (failure to attend camps)
2	Failure to Appear for Juvenile Hearing
2	Other Non-Specific Offense (Warrants without specific charge)

Seriousness
Code

Offenses

- 1 Other Auto and Vehicle Violations (i.e., driving without license, driving without registration, citation for no head lights, loud muffler, etc.)
- 1 Runaway
- 1 Missing Person Report
- 1 Truancy
- 1 Curfew
- 1 Ungovernable, Beyond Control, Incurable, Wayward, etc.
- 1 Other Status Offense (not codeable or not specified)
- 0 Held for Other Jurisdiction (no offense specified)
- 0 No Precipitating Offense--Family Dispute
Includes: (a) "Failure to Communicate", (b) Parental Disagreement Over Youth's Friends, and (c) Youth turns him/her self into police immediately after leaving and/or deserting home "no longer wanting to live at home"
- 0 No Precipitating Offense (review of placement, safe-keeping, protective custody, material witness, Quashed Warrant)
- 0 No Precipitating Offense--Missing or Lost Child
- 0 Neglected, Dependent, Abused (unfit home, sexually abused, abandoned)
- 0 Expelled from Home
- 0 Attempted Suicide

END