Interactions of Juveniles with the Law

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ALTHOUGH juvenile delinquency can be considered as including all acts of juveniles which are contrary to law, recorded delinquency represents an interaction of juveniles and law enforcement agencies.

This study, undertaken in 1964, was designed to examine the juvenile side of this interaction from an epidemiologic viewpoint and to compare the population of juvenile delinquents in the City of San Francisco with its total juvenile population. For study purposes all juveniles involved in an interaction with the police or juvenile court can be considered delinquent if they were charged with misconduct.

A subsidiary aim of the study was to isolate the factor of ethnic group to see whether its statistical effect on the interaction rates was independent of other variables such as age, sex, family income, place of residence, and living arrangement.

The spectrum of the juvenile delinquency interaction may conveniently be divided into three types. A policeman and a juvenile may have:

1. An unrecorded contact.
2. A recorded contact which results in the juvenile's being released, usually with a warning.
3. A contact which results in the juvenile's being cited to juvenile court. (To this group may be added the small number of juveniles who are referred to the juvenile court by parents, schools, self, or other agencies.) This third type of interaction is divided administratively into those in which no formal petition is filed, or "unofficial" cases, and "official" cases, where one is.

In San Francisco, police department policy discourages the first type of interaction. Its extent cannot be determined but is believed to be low. Data on the second and third types are accessible for study. Therefore we shall consider all juvenile-police interactions of the second and third types. Factors determining which type interaction will result from a contact have been studied by Piliavin and Briar (*1*) in Oakland, Calif., and include, besides the severity of the suspected law violation, the manner and appearance of the juvenile and the previous experience of the policeman.

We have located only two previous studies with an epidemiologic approach to delinquency (*2*, *3*). Neither of these studies attempted to determine whether ethnic group was an independent factor influencing delinquency rates or whether its apparent effect was because certain ethnic groups live under conditions conducive to delinquency. Various authors (*2*, *4*) have found Negro delinquency rates to be higher than white and have suggested the social and economic conditions under which Negroes generally live as an explanation of this.

The first of the two previous studies taking an epidemiologic approach to delinquency was by Eaton and Polk (*2*) and appeared in 1961. These authors found that delinquency rates in Los Angeles were about four times as high for males as females and three times as high for Mexican-Americans and Negroes as for Anglo-

whites (and half as high for Japanese as Anglo-whites). They found rates two to three times as high for adolescents 15–19 years as for preadolescents aged 10–14.

The second study, published by Hathaway and Monachesi (*3*) in 1963, reported results of a prospective study of a sample of Minnesota ninth-grade school children who were followed for 3 to 4 years. A portion of the study concerned the rates at which the subjects became delinquent. These rates followed a pattern similar to the rates in the Los Angeles study, although the Minnesota subjects were ethnically homogeneous, and no ethnic comparisons could be made. Delinquency rates were three times as high for boys as for girls and one and a half to two times as high for children of divorced and separated parents as for children of parents who lived together. Delinquency rates varied with the occupation of the father and were significantly higher for children of day laborers than for children of professional and semiprofessional workers. By 19 years of age, delinquency rates were dropping for boys and girls.

Materials and Methods

Information on delinquents was based on data collected in 1961 and 1962 by the research and statistics subcommittee of the San Francisco Committee on Youth. These data concerned all juveniles who had been seen in the San Francisco Juvenile Court in 1960 or who had been "warned but not cited" by the San Francisco Police Department during that year. In 1964, when we sought to compare these data with the original juvenile court and police records, we found that many of the juvenile court records for 1960 had been removed from file and destroyed. Thus, inappropriate categories could not be reclassified.

As only 14 persons less than 8 years of age were recorded as delinquent in San Francisco during the study year, we arbitrarily chose 8 years as the minimum age limit for the study. Juveniles of more than 17 years may be seen in juvenile court. Since these older juveniles, however, are more frequently handled administratively as adults, an upper age limit of 17 years was selected.

Our working definition of a juvenile delinquent thus became: any person 8–17 years of age who lived in San Francisco in 1960 and whose name was recorded by San Francisco police or juvenile court one or more times during that year for a nontraffic offense.

Duplication of individuals was determined by comparing name, age, ethnic group, and census tract of residence. When we found duplications, the juvenile was counted in the most administratively serious category of delinquency in which his name appeared. No ambiguities resulted from this procedure since the recorded type of offense either did not change, changed from an offense which applied only to juveniles ("delinquent tendencies and curfew violations") to an offense which applied to adults, or changed from an offense in a general category ("Other offenses") to a named offense.

Information on the total juvenile population of the city from the 1960 U.S. Census (*5*), supplemented by San Francisco Health Department data on birth registrations, served as the basis for calculating the number per 1,000 at risk.

Three census tracts in the city consisting of parks and an off-shore naval base were excluded from the study. In addition, 99 juveniles were excluded because of missing basic data. Of the 5,412 juveniles remaining for analysis, 3,089 were white (2,692 male, 397 female); 595 were white-Spanish (525 male, 70 female); 1,441 were Negro (1,190 male, 251 female); 89 were Chinese (81 male, 8 female); and 198 were of other nonwhite groups, mainly Filipino, Japanese, and American Indian (162 male, 36 female).

Geographic variation in delinquency was examined by census area rather than census tract, as individual tracts are too small to allow detailed breakdowns. A census area consists of a group of contiguous census tracts which, in San Francisco, are designated alphabetically.

In the subsidiary study, a different geographic breakdown was made to control for the effect of geographic area on recorded delinquency rates of the city's larger racial-ethnic groups. Two "comparison areas" were selected so that they would have mixed racial composition and a nonwhite population predominantly of one

race. The two areas included all census tracts in the city in which the total population was 20 to 80 percent white and the nonwhite population was at least 80 percent Negro in one area and at least 80 percent Chinese in the other. (For this portion of the study we included whites with Spanish surname in the white category, since the first phase of our study, on the effect of various factors on delinquency rates, revealed little if any difference in recorded delinquency rates between juveniles in our white category and those in the category, white-Spanish, when they lived in the same areas.) The Negro-white comparison area comprised 17 noncontiguous census tracts; the Chinese-white area included 7 contiguous tracts. The estimated male juvenile population of the comparison areas is shown in table 1.

Age and sex were controlled in the study of the comparison areas by considering only males and calculating age-adjusted rates. Family income and number of parents in the home were not controlled directly, as these data were not available for type 2 interactions.

The category of the juvenile's alleged offense was determined in both phases of the study from police and juvenile court coding. Most of the offense categories are self-explanatory, but four points need amplification.

1. "Theft" excludes auto theft (which was coded separately) but includes "auto tampering or boosting."

2. "Delinquent tendencies and curfew violations" consists mainly of curfew violations but includes all offenses that apply only to juveniles, such as "truancy" and "runaway."

3. "Other offenses" includes offenses which apply to adults as well as juveniles, such as "disturbing the peace," "possession of weapons," "malicious mischief and gambling," "receiving or selling stolen property," and "arson." To these we added homicide (three homicides were recorded), forgery, and narcotics violations, since there were not enough cases in these three categories to consider separately.

4. "Suspicion" was not coded separately. Each offense category includes juveniles charged with the suspicion of that offense. No data were available to us regarding the guilt or innocence of the juvenile.

The following assumptions were made:

Income. Cards from the juvenile court unofficial case file did not include family income for juveniles who came before the court during the first half of 1960. It was assumed that distribution of incomes for the first 6 months was similar to the distribution for the last 6 months, and unofficial cases of juveniles with unknown income were assigned proportionately into income categories. It was further assumed that the number of children in the study area from families with a given income was proportional to the number of families in the area with that income. (The bias introduced by the latter assumption will be discussed later.)

Ethnic group. The ethnic group of a juvenile was determined from juvenile court and police coding, supplemented in respect to whites, Mexicans, and Chinese by examination of surnames. The court and police data included four categories: white, Mexican, Negro, and other. Census tract tabulations included three categories, not mutually exclusive: white, white with Spanish surname, and nonwhite. Categories chosen for this study were: white, white-Spanish (equivalent to the census white with Spanish surname), Negro, Chinese, and other. The "other" category included all nonwhites who had not been coded as Negro and who did not have Chinese surnames.

Delinquents were recategorized by using the original court and police categories in which they had been placed and their surnames. Population categories were derived by partitioning the census nonwhite category in proportion to

Table 1. Male juvenile population of Negro-white and Chinese-white comparison areas, San Francisco, 1960

Age (years)	Area 1 [1]		Area 2 [2]	
	Negro	White	Chinese	White
8–10	1,825	1,494	473	136
11–13	1,483	1,376	430	155
14–16	1,058	1,140	270	148
17	280	342	64	48
Total	4,646	4,352	1,237	487

[1] Area 1 consists of census tracts J3, 4, 7, 8, 10, 12, 13, 16; K4; L1, 4; 5A, 5B; M10; 08A, 8B, 9.
[2] Area 2 consists of census tracts A3, 4, 5, 7, 9, 10, 11.

the numbers of Negro, Chinese, and other non-white births recorded in 1960 and by subtracting census white-with-Spanish-surname data from white. To check this procedure, the proportion of Negroes to all nonwhites in each census area was compared. We consider it unlikely that the methods we used to categorize juveniles by ethnic group introduced bias of any consequence into the study.

Living arrangement. "Living arrangement" means the number of parents (including stepparents and adoptive parents) with whom a child lived. It was assumed that the percent of children 8–17 years with a certain living arrangement was proportional to the percent of children 0–17 years with that living arrangement. We believe that no important bias was introduced by this assumption.

Results

Data on the study group's sex, age, living arrangement, family income, ethnic group, and area of the city are provided in table 2. Delinquency rates varied by all these parameters.

Table 2. Number of juveniles recorded as delinquent in San Francisco, 1960, by variable factors studied

Variable factors	Total	Males						Females					
		White	White-Spanish	Negro	Chinese	Other	Total	White	White-Spanish	Negro	Chinese	Other	Total
All delinquents	5,412	2,692	525	1,190	81	162	4,650	397	70	251	8	36	762
Type interaction:													
Police department only	2,169	1,266	310	385	23	46	2,030	97	17	24	1	0	139
All juvenile court	3,243	1,426	215	805	58	116	2,620	300	53	227	7	36	623
Official	1,212	567	81	294	21	46	1,009	106	17	65	2	13	203
Unofficial	2,031	859	134	511	37	70	1,611	194	36	162	5	23	420
Age:													
8–10	222	88	22	81	9	2	202	6	2	12	0	0	20
11–13	1,024	430	81	292	25	42	870	55	11	77	1	10	154
14–16	2,854	1,443	282	559	35	83	2,402	248	45	132	7	20	452
17	1,312	731	140	258	12	35	1,176	88	12	30	0	6	136
Parents in home:[1]													
2	1,883	920	128	396	46	77	1,567	154	32	100	5	25	316
1	1,105	412	70	345	9	28	864	109	16	107	2	7	241
0	242	85	17	63	3	10	178	37	4	19	0	4	64
Unknown	13	9	0	1	0	1	11	0	1	1	0	0	2
Family income:[1]													
$0–$2,500	307	72	15	124	2	4	217	28	7	50	0	5	90
$2,500–$5,000	1,038	437	72	290	9	44	852	103	17	55	1	10	186
$5,000–$10,000	633	391	32	90	18	31	562	35	7	24	1	4	71
Over $10,000	46	36	2	3	2	0	43	3	0	0	0	0	3
Unknown[2]	1,219	490	94	298	27	37	946	131	22	98	5	17	273
Census areas:[1]													
J–O	2,523	941	191	775	7	84	1,998	224	49	220	0	32	525
A–E, G, H, P–R	720	485	24	30	51	32	622	76	4	7	7	4	98
Offense:													
Robbery	64	19	6	34	1	4	64	0	0	0	0	0	0
Assault	188	52	10	95	3	8	168	4	1	14	0	1	20
Burglary	312	172	24	90	6	16	308	0	0	4	0	0	4
Theft except auto	694	245	48	220	25	27	565	38	11	70	5	5	129
Auto theft	352	227	27	67	11	10	342	3	2	4	0	1	10
Sex offenses	130	41	6	18	2	6	73	26	5	23	0	3	57
Delinquent tendencies and curfew violations	3,030	1,592	347	508	28	65	2,540	297	47	119	2	25	490
All other	642	344	57	158	5	26	590	29	4	17	1	1	52

[1] Recorded for juvenile court cases only.
[2] See text for explanation of category.

Sex. Male juvenile delinquency rates were consistently higher than female. For the entire study area, they were 5.9 times as high. For individual census tracts they were 3.5 to 9 times as high.

Age. Delinquency rates increased with age from 8 to 16 years (table 3). Male delinquency rates were higher at 17 years than at 14–16 years, while female rates were lower. The same pattern was seen when only type 3 interactions (juvenile court cases) were considered. When rates were calculated separately for each ethnic group, however, there were two exceptions to the pattern. Seventeen-year-old white girls showed approximately the same total delinquency rate as white girls 14–16 years, and 17-year-old white boys showed approximately

the same type 3 interaction rates as white boys 14–16 years old. These exceptions may be due to shifts in the partition of cases between the two types of delinquency interaction.

Living arrangement. The parameter of living arrangements was not recorded for type 2 interactions (juveniles "warned but not cited" by the police department). Findings are therefore based on type 3 interactions only. The highest delinquency rates in the type 3 group were found among children living with one parent and the lowest among children living with two. When living arrangement is examined by sex and ethnic group (table 4), the finding remains true for all groups except Chinese and "other." Eighty-five percent of the children not living with either parent lived

Table 3. Effect of age on juvenile delinquency rates per 1,000 at risk in 5 ethnic groups, San Francisco, 1960

Ethnic group	Male rates by age in years				Female rates by age in years			
	8–10	11–13	14–16	17	8–10	11–13	14–16	17
All interactions:								
White	10	47	167	210	1	6	28	27
White-Spanish	18	62	251	444	1	9	36	33
Negro	35	146	381	575	5	39	86	60
Chinese	8	26	54	72	0	1	10	0
Other	3	82	189	310	0	20	54	46
Juvenile court cases:								
White	8	33	84	86	0	6	22	10
White-Spanish	13	36	99	173	2	9	31	13
Negro	29	118	252	295	5	37	78	36
Chinese	5	20	40	46	0	1	10	3
Other	2	67	124	184	0	18	49	22

NOTE: Since the juveniles included in this table come from different geographic areas, this table cannot be used to make a direct comparison of ethnic groups. Numbers of delinquents used in calculating rates in this and subsequent tables except 7 are summarized in table 2.

Table 4. Effect of living arrangement on juvenile court delinquency rates per 1,000 at risk in 5 ethnic groups, San Francisco, 1960

Ethnic group	Male rates by number of parents			Female rates by number of parents		
	2	1	0	2	1	0
White	20	65	23	3	18	10
White-Spanish	19	64	28	5	15	6
Negro	44	100	47	11	31	14
Chinese	9	15	22	1	3	0
Other	27	34	35	10	9	14

NOTE: Since the juveniles included in this table come from different geographic areas, this table cannot be used to make a direct comparison of ethnic groups.

with other relatives and with non-relatives; 15 percent comprised older youths, living independently. The group living away from either parent showed intermediate rates.

Family income. Family income was not recorded for type 2 interactions. The income findings are based on type 3 interactions only. The lowest rates were among children with family incomes of more than $10,000 and the highest, among those with incomes in the $2,500–$5,000 range. This overall pattern did not hold when the rates were examined by race and sex (table 5), but in no group except Negro females were rates maximal in the under $2,500 group. The highest delinquency rates for type 3 inter-

actions were generally found in middle-income groups.

Ethnic group. The population of San Francisco was not ethnically homogeneous; certain ethnic groups were restricted to neighborhoods apparently offering environments conducive to delinquency. To make a direct comparison between ethnic groups, we selected a portion of the city (the six census areas J through O) in which there are large populations of each of three groups—white, white-Spanish, and Negro. A further equalization of environmental effects was made by calculating census area-adjusted rates (in a manner similar to the calculation of age-adjusted rates). Since income

Table 5. Effect of family income on juvenile court delinquency rates per 1,000 at risk in 5 ethnic groups, San Francisco, 1960

Ethnic group	Male rates				Female rates			
	0–$2,500	$2,500–$5,000	$5,000–$10,000	More than $10,000	0–$2,500	$2,500–$5,000	$5,000–$10,000	More than $10,000
White	20	70	20	3	8	19	3	0
White-Spanish	18	62	11	2	9	13	3	0
Negro	81	104	121	3	30	22	9	0
Chinese	3	11	14	2	0	2	2	0
Other	6	63	21	0	12	18	4	0

NOTE: Since the juveniles included in this table come from different geographic areas, this table cannot be used to make a direct comparison of ethnic groups.

Table 6. Census area-adjusted juvenile court delinquency rates per 1,000 at risk in 3 ethnic groups in census areas J–O, by age, family income, and living arrangement of delinquent, San Francisco, 1960

Variable factors	Male rates			Female rates		
	White	White-Spanish	Negro	White	White-Spanish	Negro
Age (years):						
8–10	13	11	38	2	2	5
11–13	45	27	111	8	10	30
14–16	91	80	267	28	31	78
17	108	165	315	20	25	36
Income:						
0–$2,500	27	22	77	7	7	27
$2,500–$5,000	80	50	111	25	13	20
$5,000–$10,000	15	8	35	2	3	9
More than $10,000	3	3	4	0	0	0
Lived with:						
2 parents	21	15	47	4	4	9
1 parent	74	55	110	26	18	29
0 parents	25	27	46	10	6	14

and living arrangements were not recorded for juveniles with type 2 interactions, area-adjusted rates were calculated for juvenile court cases only (table 6).

White and white-Spanish rates were generally of the same order of magnitude, but Negro rates were roughly one and a half to three times as high as those of the other two groups. The only exception was among Negro girls whose family incomes were $2,500–$5,000. The pattern of rates with age, family income, and living arrangement followed the patterns already described for each of these parameters. Delinquency rates were maximal at 17 years for boys, 14–16 years for girls; at incomes of $2,500–$5,000 (except for Negro girls); and among children living with one parent.

Age-adjusted delinquency rates for both type 2 and type 3 interactions in the Negro-white and Chinese-white comparison areas are shown in table 7, which also shows rates for various alleged offenses. Negro delinquency rates in the comparison area were consistently higher than white rates for all offenses except auto theft and sex offenses. The differences were highly significant (significant at the 1 percent level or less) and of large magnitude. Chinese total delinquency rates were significantly lower than white rates (statistically significant at the 5 percent level). A significant Chinese-white difference for specific offenses could only be demonstrated for delinquent tendencies and curfew violations. The Chinese-white comparison area was small, and it is possible that other differences exist which could be demonstrated with a larger sample.

Geographic variation. A wide variation in delinquency rates was found in different areas of the city. Table 8 shows delinquency rates per 1,000, specific for sex, ethnic group, and age, by census area. These rates ranged from 0 to 744. Rates for Negro 17-year-old boys in three census areas and for 17-year-old white-Spanish boys in one census area exceeded 500; in one census area, white boys 14–16 years old also showed rates of more than 500.

Alleged offenses. A comparison of delinquency rates of various groups that is based on total recorded delinquency does not allow for consideration of the alleged offense which caused the individual to be classed as delinquent. Table 9 shows specific rates for each offense by sex and age. By far the commonest offenses were curfew violations and delinquent tendencies, which are not considered offenses for adults. For the serious offenses of robbery, assault, burglary, and theft, male rates, like the female, drop off at 17 years of age. Auto theft and sex offenses predictably rise at 17 years of age. The greatest increases at this age were for curfew violations and delinquent tendencies (unfortunately coded together, but consisting mainly of curfew violations) and "other offenses." A detailed breakdown of all offenses would be necessary to determine whether serious delinquency tends to lessen with maturity. The data suggest this conclusion, but its validity would depend on the type of "other offenses."

Table 7. Age-adjusted male juvenile delinquency rates for type 2 and 3 interactions per 1,000 male juveniles at risk in Negro-white and Chinese-white comparison areas, San Francisco, 1960 [1]

Alleged offense	Area 1 rates		Area 2 rates	
	Negro	White	Chinese	White
Assault and robbery___	20	[2] 4	1	4
Burglary and theft except auto_____	50	[2] 20	10	8
Auto theft_____	9	9	7	4
Sex offenses_____	2	1	2	1
Delinquent tendencies and curfew violations_____	75	[2] 47	16	[3] 32
All others_____	25	[3] 15	3	10
Total_____	182	[2] 93	39	[3] 61

[1] Rates adjusted to total juvenile population of each area.
[2] Difference was statistically significant at the 1 percent level or less.
[3] Difference was statistically significant at the 5 percent level.

NOTE: For number in population at risk and census tracts included in comparison areas, see table 1. The number of delinquents in area 1 was Negro—797, white—441; in area 2, Chinese—44, white—37.

Discussion

The bias in our study data on family income of the juvenile can be estimated from published census reports which relate family size to income. One such report *(6)* for the San Francisco-Oakland Standard Metropolitan Statis-

tical Area allows a comparison of the number of persons of all ages in families of two or more at each income level with the number of families at that level. The other report (7) compares the percent of persons less than 18 years old for each income level with the percent of families at that level. From these comparisons we believe that our method resulted in a 15–20 percent overestimate of the juvenile population in the 0–$2,500 income group (despite the prevailing impression that these families have more than the average number of children). A possible bias also exists in the other direction. We were unable to ascertain whether all investigators recording family income of juveniles recorded as family income the income of all family members or only that of the head of the family. The size of the difference in delinquency rates between the 0–$2,500 category and higher categories leads us to believe that our results are essentially correct and not due to bias. Our observation that delinquency rates for the third type of interaction (with the exception of the rate for Negro girls) are not maximal at the lowest income level has not, to our knowledge, been recorded elsewhere.

Income levels are not independent of family composition. We have no data which enable

Table 8. Delinquency rates for type 2 and 3 interactions per 1,000 at risk, specific for sex, ethnic group, and age, for juveniles of 3 ethnic groups, by census area, San Francisco, 1960

Ethnic group and age (years)	Census areas															
	A	B	C	D	E	G	H	J	K	L	M	N	O	P	Q	R
Male rates																
White:																
8–10	20	2	0	0	13	3	8	31	44	20	8	11	1	9	3	0
11–13	33	22	0	52	36	48	24	97	250	66	52	67	27	26	36	0
14–16	195	87	20	140	186	167	171	145	574	207	216	228	98	127	177	0
17	246	185	14	315	245	390	395	249	429	340	296	337	212	207	300	0
White-Spanish:																
8–10	----	----	----	----	----	----	----	0	39	11	11	82	7	----	----	----
11–13	----	----	----	----	----	----	----	31	123	55	61	92	7	----	----	----
14–16	----	----	----	----	----	----	----	153	300	272	204	319	79	----	----	----
17	----	----	----	----	----	----	----	360	300	333	377	607	188	----	----	----
Negro:																
8–10	----	----	----	----	----	----	----	37	12	31	35	121	28	----	----	----
11–13	----	----	----	----	----	----	----	172	149	131	69	214	142	----	----	----
14–16	----	----	----	----	----	----	----	458	300	272	384	500	421	----	----	----
17	----	----	----	----	----	----	----	711	217	409	639	500	744	----	----	----
Female rates																
White:																
8–10	0	0	0	0	0	0	0	4	0	3	0	1	1	0	0	0
11–13	3	0	0	0	4	0	13	7	0	15	8	9	5	4	1	0
14–16	29	11	14	7	18	18	29	42	206	40	33	51	16	22	11	0
17	34	6	0	48	15	32	0	24	103	38	28	58	25	14	6	0
White-Spanish:																
8–10	----	----	----	----	----	----	----	0	0	0	3	3	0	----	----	----
11–13	----	----	----	----	----	----	----	19	0	12	11	4	0	----	----	----
14–16	----	----	----	----	----	----	----	52	38	25	31	35	51	----	----	----
17	----	----	----	----	----	----	----	49	0	38	21	49	75	----	----	----
Negro:																
8–10	----	----	----	----	----	----	----	6	13	3	7	0	8	----	----	----
11–13	----	----	----	----	----	----	----	44	77	35	16	0	42	----	----	----
14–16	----	----	----	----	----	----	----	99	130	71	95	120	79	----	----	----
17	----	----	----	----	----	----	----	69	0	51	0	0	66	----	----	----

NOTE: 0—less than 0.5 per 1,000; (----) less than 100 juveniles in category.

Table 9. Delinquency rates for type 2 and 3 interactions, for specific offenses, per 1,000 juveniles at risk, by sex and age, San Francisco, 1960

Offense	Male rates by age in years				Female rates by age in years			
	8–10	11–13	14–16	17	8–10	11–13	14–16	17
Robbery	(¹)	1	3	2	0	0	0	0
Assault	(¹)	3	7	7	0	1	1	(¹)
Burglary	1	7	12	10	(¹)	(¹)	0	0
Theft except auto	4	12	20	16	1	3	5	3
Auto theft	0	2	18	19	0	(¹)	1	0
Sex offenses	(¹)	1	3	5	(¹)	1	3	2
Delinquent tendencies and curfew violations	4	25	109	166	1	5	24	21
All others	3	9	21	30	0	(¹)	2	4

¹ Rate less than 0.5 per 1,000.

NOTE: Rates for narcotics violations, homicide, and forgery were too low to warrant inclusion.

us to consider these two factors simultaneously. Such a study would be profitable as it might be possible to separate effects of these two variables. There is one consideration, however, which emphasizes the importance of living arrangement in any theoretical formulation. Unlike ethnic group, sex, age, and even income, the juvenile's living arrangement is a factor not apparent to a policeman during his contact with a juvenile. Information about it is customarily recorded only after the delinquent reaches juvenile court. This factor is thus unique in that it influences the juvenile-police interaction without depending on the police side of the interaction. Our finding that membership in a one-parent family increases the rate of recorded juvenile delinquency confirms the observation of Hathaway and Monachesi (*3*) concerning the effects of parental divorce and separation. This effect is not independent of the age of the delinquent, however. Further studies are necessary in this area.

Our results regarding ethnic group only partially confirm the study of Eaton and Polk (*2*). These authors also found high delinquency rates among Negroes, but their observation of high rates among Mexicans was not confirmed by our finding of moderate rates among white-Spanish juveniles. Our white-Spanish group, however, was heterogeneous and included many ethnic groups besides Mexican.

Our method of comparison of Negro, Chinese, and white delinquents in two selected geographic areas of San Francisco controlled for effects on delinquency rates of sex, age, and geographic area of residence. Two important variables, however, remained uncontrolled, namely, number of parents with whom the juvenile lived and family income.

In the comparison of Negro delinquents with white, both of these factors operated in the same direction. Only 65 percent of nonwhite children less than 18 years of age in the Negro-white comparison area lived with two parents, compared with 78 percent of the white children. Only 8 percent of the nonwhite families had incomes of more than $10,000 per year, compared with 15 percent of the white families; 19 percent of the nonwhite families had incomes of less than $2,500 per year, compared to 13 percent of the white families. An estimate of the effect of these factors can be made from the specific delinquency rates mentioned earlier. Each of these factors might account for a 20 percent increase in Negro rates over white. The observed differences were, however, 40 percent or greater. We believe therefore that factors associated specifically with the juvenile's ethnic group have a statistically independent influence on delinquency rates.

In the Chinese-white comparison area, rates calculated from income distributions in the same way as for the Negro-white comparison area led to an expectation that delinquency rates for white juveniles would be lower than for Chinese. Thirty-three percent of the white families were in the income group of $10,000 and more, in which delinquency rates are very low, while

only 10 percent of the Chinese families were in this group. (The proportion of each group in the $2,500-and-less category was 9 percent for the white group and 10 percent for the Chinese.) On the other hand, 94 percent of the Chinese juveniles lived with two parents, compared to 83 percent of the white. In balance, the combination of factors led us to expect higher Chinese juvenile delinquency rates than white. That they were significantly lower strengthens the conclusion that ethnic group is an independent factor.

Since ethnic group is usually obvious to a policeman at time of initial contact with a juvenile, the finding of high delinquency rates among Negroes is open to a variety of interpretations. High rates in an ethnic group do not necessarily mean that the group commits more offenses than another group, although this explanation seems probable. The interaction model of recorded delinquency we have described leads to several other possible explanations. One of these may be police activity. We have no evidence which bears on the question of differential handling of juveniles of different ethnic groups by the police. This cannot be studied adequately from records. Another possible explanation may be differences in the probability of detecting an offense and recording it once the offense has been committed, that is, the juvenile's ability to escape detection. Still another may be differences in the partition of juveniles between the three types of interaction. Thus, this study only demonstrates that differences between ethnic groups are present and does not provide data to account for them.

It should be pointed out, however, that Negroes are at a disadvantage compared to whites in every demographic factor which we measured with the exception of age distribution. The Negro population 8–17 years old contains a lower percentage of persons 14–17 years than does the white, but fewer Negroes than whites are in the low-delinquency, high-income-family category or in the two-parent-family category; almost none live in the low-delinquency areas of San Francisco. The independent effect of ethnic group is not the only reason for high delinquency rates among Negroes.

Comparison of Negro and white juvenile delinquency shows that Negro boys are charged with the serious offenses of assault, robbery, burglary, and theft nearly three time as often as white boys. Negro boys are charged with offenses dependent on their juvenile status (curfew violations and delinquent tendencies) only one and a half times as often. We were unable to demonstrate a difference between Negroes and whites for auto theft, which in San Francisco is generally regarded as a typically middle-class white offense (8). Similar rates for the two races when they live in a similar environment suggest that the citywide observed differences exist because most Negroes do not live in areas where auto theft is common.

The Chinese-white comparison serves mainly to confirm the finding that ethnic group is an independent factor in determining type 2 and 3 delinquency interaction rates. The sample size was too small to permit detailed conclusions about the types of offense which are typically charged to Chinese boys.

The distribution of recorded delinquency by age in the present study appears to confirm Hathaway and Monachesi's finding (3) that delinquency rates drop in late adolescence. Our data suggest that a drop in delinquency begins at an earlier age for girls than for boys, although the finding depends to some extent on the specific offense with which the juvenile is charged. As the maximum age included in our study was 17 years, we are unable to demonstrate this finding for all offense categories. A complete interpretation of the change in patterns of recorded delinquency with age would require more detailed information about specific offenses and older age groups. It also should include information on factors which influence the police and courts at the time the offense is specified, as well as information about the frequency of delinquent acts by juveniles.

Our data on delinquency are not comparable with national data derived from the Federal Bureau of Investigation Uniform Reporting System (9) or the Children's Bureau Summary of Juvenile Court Cases (10). These statistics are collected by number of offenses rather than by number of individuals. Moreover, in the FBI statistics offenses applicable only to juveniles are not separated from total offenses. The Children's Bureau statistics do not include juve-

niles who have interactions with the police without being referred to court.

The total extent of delinquency interactions in certain subgroups of the juvenile population has not, to our knowledge, been previously examined. Restriction of studies to interactions in which the juvenile is brought to court will conceal those interactions in which juveniles are subjected to some other form of disciplinary action by the police. In two census areas in San Francisco, three out of every four 17-year-old Negro boys had had one or more type 2 or 3 interactions with the police during 1960. Rates of this magnitude probably do not deter boys from delinquent acts, and hostility of juveniles toward the police has become an important consideration in programs to prevent delinquency. The effects of rates of this magnitude on the juveniles subjected to them has been studied by Werthman (11). This investigator points out that a large proportion of interactions in which the recorded offense is minor occur as part of standard police practices designed to prevent serious offenses. Nevertheless, they often result in increased antagonism of juveniles toward the police, and sometimes in a denial by juveniles of the legitimacy of police authority.

Summary and Conclusions

Epidemiologic methods were used to examine data on persons recorded as juvenile delinquents in San Francisco in 1960. As part of this examination, recorded offenses of juveniles in two selected areas of mixed population (Negro-white and Chinese-white) were compared.

Our findings confirmed results of previous studies: that recorded delinquency is commoner among boys than girls, among Negroes than members of other population groups, and among children living with one parent than among those living with two. A previously unrecorded finding was that delinquency rates were not maximal at the lowest income level except for Negro girls.

A subsidiary finding was that differences in delinquency rates between ethnic groups were statistically independent of sex, age, income,

family composition, and geographic area of the city. Since recorded delinquency represents interactions between juveniles and law enforcement agencies rather than simply reflecting actions of juveniles, a study of recorded delinquency rates cannot be used to show reasons for ethnic differences in juvenile delinquency.

Delinquency rates vary widely among different population groups. The highest rates recorded were more than 700 per 1,000 per year. Such high rates probably contribute to antagonistic juvenile attitudes toward police.

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