SENTENCING IN THE FEDERAL DISTRICT COURTS

Richard M. Rau

Research Operations Division
National Institute of Law Enforcement
and Criminal Justice

Law Enforcement Assistance Administration

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Introduction*

   The Institute initiated this study of sentencing variations
in the Federal District Courts at the request of the United States
Senate Subcommittee on Criminal Law and Procedure. The Subcommittee
is presently considering the Final Report of the National Commission
on Reform of the Federal Criminal Laws, which recommends, among
other things, the inclusion of sentence review in a revised appellate
review process. The Commission feels that sentence review is a key
step toward reducing inequitable sentence variations.

   Sentence disparity has been a subject of discussion and
investigation by criminal justice professionals, both Federal and
state, for many years. Correctional officials, in particular,
have found that substantial differences in sentences for the same
crime, among offenders with similar backgrounds, is a hindrance to
rehabilitation.

   Among the many suggested causes of sentence disparity are
differences in the attitudes and behavior of judges and probation
officers. In its Final Report, the National Commission on Reform
of the Federal Criminal Laws recommends that the appellate review
process be revised to include the review of sentences. Such a
review could result in modified sentences, or in cases being set
aside for further proceedings (see the Commission's Final Report,
Section 1291). The Final Report states that the American Bar
Association has endorsed this recommendation.

   The Institute recognizes that some sentencing variations are
inevitable and not necessarily inappropriate. However, inequitable
and unreasonable disparities can only create bitterness and
complicate the rehabilitation process. The Institute also recognizes
that there are no easy solutions and that the evaluation of a
defendant's behavior and background will vary, to some extent among
the circuits. Nevertheless, it is generally agreed that there is a
need to take steps to eliminate extreme variations in the sentencing
process.

   This study does not attempt to determine the causes or to
suggest a cure for the extreme variations in the type and length of
sentences. The study examines the data only to find the extent of

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*N.B., it was impossible to determine from available data whether a prior
 conviction was for a felony or a misdemeanor, or was obtained in a state
 or Federal court. Further, it was not possible to assess whether
 discriminatory factors affected previous sentences in other courts..

the variation and to establish how certain defendant characteristics are related to it. The sentencing information presented in this report, hopefully, will assist current and future efforts to develop more equitable Federal sentencing practices.

Study Objectives

The Institute set three major objectives for the study. To provide basic information on sentencing variation among the Federal Courts:

1. To Congress, to assist in the conduct of hearings on the Commission's recommendations for reform of the Federal Criminal Laws.

2. To the Federal Courts, to increase their awareness of existing disparities.

3. To the Federal correctional institutions and the U. S. Parole Board, to assist them in their efforts to develop more equitable procedures and practices.

Discussion

The Institute requested and received from the Administrative Office of the United States Courts a computer tape containing sentencing data from the 93 Federal District Courts for the four years 1967 through 1970. The tape contained sentencing data for seventeen major crime categories in the Federal District Courts. From the seventeen available crime categories, ten of the largest categories* were chosen for analysis, as indicated in Table 1.

The study conducted separate analyses of variations in _type_ of sentence and variations in _length_ of sentence. Both analyses concentrated on prison and probation sentences, excluding fine only and mixed prison and probation sentences (which together account for only 6% of the cases, see Table 1.).

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*Income Tax Violation was chosen to provide more contrast among the crimes even though the number of sentences for this crime was slightly less than for Bank Embezzlement. The total number of sentences included for the ten crimes is 50,976, nearly half of the total of 112,348 sentences given by the Federal District Courts for 1967-1970. All suspended, time served, prison of four days or less, and immigration law violation sentences were excluded from the totals.

TABLE 1.

U. S. FEDERAL DISTRICT COURT
CONVICTED AND SENTENCED DEFENDANT DATA
FOR TEN CRIME CATEGORIES
FROM 1967 THROUGH 1970

Crime Category	Total Number* All DATA	Total Number by Sentence Type			
		Fine Only	Pro- bation Only	Prison Only a/o Fine	Prison & Probation a/o Fine
1. Auto Theft	16,570	29	5,374	10,499	668
2. Forgery	6,937	17	3,375	2,930	515
3. Marihuana Tax Act	5,190	19	2,881	2,057	233
4. Narcotic Drug Viol.	4,391	33	914	3,353	91
5. Selective Service	3,452	5	1,205	2,163	79
6. Bank Robbery	3,386	0	228	3,088	70
7. Transportation of Forged Securities	3,093	6	1,012	1,859	216
8. Interstate Theft	3,082	53	1,731	1,057	241
9. Postal Theft	2,952	8	1,491	1,269	184
10. Income Tax Violation	2,023	313	1,015	412	283
Total:	50,976	483	19,226	28,687	2,580

* All sentences for defendants convicted of these crimes
for these years are included in this data, except suspended,
time served, and prison four days or less sentences, and
any sentences for violation of immigration laws.

Thus, in this study, type of sentence is defined as the average percentage of defendants receiving prison sentences out of the total of all prison and probation only sentences, in Federal District Courts for the years studied. Length of sentence means the mean length of prison sentence or the mean length of probation sentence (in months) for the years studied.

The study found that ample data were available for the four years to analyze the relationship between sentence variations and defendants' prior record, sex, race, and age, and type of legal counsel. For purposes of the analysis, the available defendant characteristics data were separated into subsets, as indicated in Table 2. It should be noted that the study did not have available on this tape all the physical, social and psychological characteristics of defendants that might conceivably influence the sentencing process.

The Institute ran eight tests on the data. Three Automatic Interaction Detection (AID) tests compared defendant characteristics to determine which were most highly associated with sentencing variations. Two chi-square tests were run to determine whether the type of sentence (prison or probation) and the circuit of trial were independent or related. One of these tests analyzed the data by type of defendant prior record. Three one-way analysis of variance tests attempted to learn whether the mean sentence lengths among the 93 Federal District Courts were roughly the same and whether variations were only random. The second of these tests included the defendant prior record characteristic as a variable. Descriptions of these tests are given in the Appendix.

The test results were then analyzed to determine the extent of the variation in type and length of sentence among the districts and its relationship to defendant characteristics. The initial analysis of the test results found a dichotomy among the characteristics. Of all the defendant background characteristics, only prior record was found to have a significant effect on the variations. However, the district of trial was found to be more highly associated with variations in type and length of sentence than any of the defendant characteristics.

TABLE 3

NUMBER OF DEFENDANTS
IN THE PRIOR RECORD SUBSETS
BY CRIME CATEGORY

Crime Category	Total Number of Defendants in the Prior Record Group*				Total Number all Subsets
	None	Probation and Suspended	Juvenile	Prison	
1. Auto Theft	2694	2776	1660	7192	14322
2. Forgery	1491	1196	277	2892	5856
3. Marihuana Tax Act	2247	1041	181	776	4245
4. Narcotic Drug Viol.	843	582	143	1982	3550
5. Selective Service	2196	364	45	177	2782
6. Bank Robbery	502	454	238	1775	2969
7. Transportation of Forged Securities	441	453	107	1594	2595
8. Interstate Theft	896	600	102	975	2573
9. Postal Theft	745	515	200	1125	2585
10. Income Tax Violation	894	231	7	191	1323
Total:	12949	8212	2960	18679	42,800

* The data for these crimes in this table excludes all Fine only and Mixed prison and probation sentences, also all sentences with unreported prior records and ages.

TABLE 4a

TYPE OF SENTENCE
AVERAGE PRISON SENTENCE PERCENTAGES
BY PRIOR RECORD AND CIRCUIT

Crime Category	Average Prison Sentence Percentage for Defendants with No Prior Record for Circuits*											National Average
	DC	1	2	3	4	5	6	7	8	9	10	
1. Auto Theft	20%	16%	29%	11%	27%	41%	33%	15%	31%	22%	32%	30%
2. Forgery	12%	4%	19%	2%	12%	15%	10%	15%	10%	6%	7%	12%
3. Marihuana Tax Act	11%	28%	31%	12%	40%	22%	27%	16%	16%	33%	19%	28%
4. Narcotic Drug Viol.	34%	85%	74%	45%	(100%)	74%	(25%)	44%	(77%)	60%	68%	64%
5. Selective Service	(50%)	80%	57%	42%	78%	79%	53%	64%	65%	55%	56%	60%
6. Bank Robbery	(100%)	(100%)	76%	67%	88%	88%	80%	68%	86%	74%	100%	79%**
7. Transport. Forged Sec.	(22%)	(33%)	30%	16%	23%	38%	25%	8%	38%	24%	27%	26%
8. Interstate Theft	-	(28%)	15%	10%	8%	15%	2%	15%	12%	5%	0%	11%
9. Postal Theft	0%	8%	28%	2%	20%	9%	8%	9%	8%	8%	8%	11%**
10. Income Tax Violation	-	48%	22%	9%	27%	13%	20%	37%	28%	20%	14%	22%

* The percentages circled in the table were computed using ten or less sentences.
** These crime subgroups were not found to be dependent on the circuit of trial by the chi-square test at the 0.02 level of significance or had insufficient data.

TABLE 2.

LIST OF
DEFENDANT CHARACTERISTICS AND SUBSETS

Defendant Characteristics	Characteristic Subsets*
Prior Record	No Prior Record Prior Probation & Suspended Record Prior Prison Record Prior Juvenile Record
Sex	Male Female
Age	Under 21 Between 21 & 35 Over 35
Legal Counsel	None Appointed Private Unreported
Race	White Black Other

* For Prior Record, no known prior convictions are in None;
prior probation only, or suspended without probation and
prior fine only sentences are in Prior Probation & Suspended
Record; prior prison only and prior mixed with one or less
year prison and prior prison of more than one year sentences
are in Prior Prison Record; and prior commitment under juvenile
delinquency procedures are in Prior Juvenile Record. Unknown
or unreported prior records were not analyzed.
For Age, age was computed using the difference between birth
date and sentence year; sentences with unreported birth date
were not analyzed. Three age subsets allowed adequate sample sizes
For Legal Counsel, waived and none are in None; CJA appointed,
Public/Community defenders, and other appointments are in
Appointed; and private only in Private.
For Race, corporations and firms were not analyzed; chicanos
and Puerto Ricans are in the White subset; and American Indians,
Chinese and Japanese Americans, native Hawaians and unreported
are in the Other subset.

Thus, the analysis that follows emphasizes the prior record and district* of trial variables, providing less detailed analysis of the sex, age, legal counsel, and race variables.

Analysis

Type of Sentence. The first AID test compared the statistical effects of defendant characteristics and circuit of trial on variations in type of sentence. Prior record was found to have the most effect, followed by circuit of trial. The data used in the test are represented in Table 3 separated into the four prior record subsets.**

The study investigated the extent of the variation in type of sentence for each crime by using a chi-square test. Because the prior record characteristic had such a significant statistical effect, the test was run on each of the prior record subsets. The test found that, in general, the type of sentence was dependant on the circuit of trial, at the .02 level of significance or less. The magnitude of this result implies that, in general, there is a relationship between the type of sentence and the district of trial for these crimes. (See Table 4. for the results.***)

Individually, the test found that the type of sentence given defendants with no prior record is most significantly related to circuit, followed closely by defendants with prior prison record characteristics. Thus, the most significant variation among the circuits in type of sentence was found for defendants whose prior records might have been expected to show the least and the greatest relationship, respectively, to type of sentence.

*The districts were included in the same circuits as listed by the Administrative Office with the exception of the 10th circuit which included Virgin Islands, Guam, and Canal Zone.

**All sentences with unreported prior records or birth dates were excluded from the data. Age was calculated by taking the difference between the sentencing date and the birth date. The data for these tests represents 84% of all the data in the initial data source in Table 1.

***The subsets with double astericks on their overall averages in Table 4. were not found to be dependent at the 0.02 level of significance. However, the subsets Bank Robbery and Postal Theft for no prior record; Narcotic Drug Violation and Income Tax Violation for prior probation and suspended record; and Forgery for prior juvenile record were all found to have a borderline dependence at the 0.10 level of significance. The test was not run, because of insufficient data, on the subsets Bank Robbery for prior prison record, and Bank Robbery and Income Tax Violation for prior juvenile record.

TABLE 4b

Crime Category	Average Prison Sentence Percentage/for Circuits for Defendants with Prior Probation and Suspended Records*											National Average
	DC	1	2	3	4	5	6	7	8	9	10	
1. Auto Theft	51%	31%	36%	26%	48%	58%	65%	38%	47%	47%	49%	51%
2. Forgery	64%	11%	47%	14%	28%	33%	38%	23%	36%	22%	21%	31%
3. Marihuana Tax Act	44%	21%	56%	11%	27%	36%	36%	50%	31%	46%	34%	42%
4. Narcotic Drug Viol.	70%	69%	78%	58%	91%	80%	67%	70%	85%	63%	86%	72%**
5. Selective Service	-	83%	75%	75%	74%	76%	33%	69%	63%	60%	47%	63%
6. Bank Robbery	100%	100%	88%	92%	94%	94%	89%	88%	94%	85%	85%	89%**
7. Transportation of Forged Securities	0%	0%	47%	21%	30%	52%	47%	33%	23%	55%	47%	43%
8. Interstate Theft	-	22%	44%	13%	29%	33%	20%	23%	42%	12%	15%	26%
9. Postal Theft	0%	20%	50%	6%	34%	34%	29%	24%	24%	23%	28%	30%**
10. Income Tax Violation	0%	51%	22%	7%	38%	19%	8%	42%	27%	18%	22%	26%**

* See footnote on preceeding page.
** See footnote on preceeding page.

TABLE 4c

Crime Category	Average Prison Sentence Percentage for Defendants with Prior Juvenile Record for Circuits*											National Average
	DC	1	2	3	4	5	6	7	8	9	10	
1. Auto Theft	68%	42%	76%	54%	76%	86%	84%	80%	73%	70%	72%	76%
2. Forgery	52%	100%	38%	15%	41%	54%	67%	52%	58%	43%	33%	48%**
3. Marihuana Tax Act	60%	100%	80%	-	67%	60%	0%	50%	33%	47%	40%	50%**
4. Narcotic Drug Viol.	64%	83%	57%	25%	100%	83%	100%	67%	100%	72%	100%	72%**
5. Selective Service	0%	100%	-	75%	67%	87%	50%	50%	100%	47%	100%	64%**
6. Bank Robbery	100%	-	100%	85%	100%	100%	100%	80%	100%	97%	100%	97%**
7. Transportation of Forged Securities	100%	100%	100%	50%	50%	88%	76%	60%	90%	63%	61%	71%**
8. Interstate Theft	-	0%	-	0%	37%	47%	42%	44%	62%	41%	25%	41%**
9. Postal Theft	0%	0%	57%	16%	70%	61%	56%	61%	55%	52%	37%	56%**
10. Income Tax Violation	-	75%	-	-	0%	-	0%	-	-	0%	-	28%**

* See footnote preceeding page.
** See footnote preceeding page.

TABLE 4d

Crime Category	Average Prison Sentence Percentage for Defendants with Prior Prison Record for Circuits*											National Average
	DC	1	2	3	4	5	6	7	8	9	10	
1. Auto Theft	75%	72%	78%	61%	81%	90%	84%	74%	79%	79%	84%	82%
2. Forgery	75%	58%	65%	54%	63%	78%	69%	65%	67%	56%	65%	67%
3. Marihuana Tax Act	42%	63%	60%	72%	70%	73%	62%	57%	63%	57%	42%	60%
4. Narcotic Drug Viol.	84%	92%	85%	77%	90%	88%	87%	79%	98%	77%	94%	83%
5. Selective Service	-	(100%)	(62%)	(67%)	73%	51%	(76%)	(100%)	68%	68%	75%	69%**
6. Bank Robbery	100%	95%	96%	89%	100%	98%	98%	95%	98%	96%	98%	97%**
7. Transportation of Forged Securities	73%	78%	77%	63%	79%	88%	80%	70%	70%	73%	76%	78%
8. Interstate Theft	(100%)	76%	74%	33%	71%	76%	61%	61%	64%	52%	50%	64%
9. Postal Theft	72%	(85%)	88%	50%	69%	76%	77%	46%	62%	50%	87%	72%
10. Income Tax Violation	-	70%	63%	26%	23%	(33%)	24%	25%	47%	58%	(80%)	45%

* See footnote on preceeding page.
** See footnote on preceeding page.

The data for no prior record and prior prison record subsets account for three-fourths of all the sentences in the test. Further, the defendants in the prior record subsets and crime categories whose type of sentences were found dependent on the circuit accounted for 90% of all the defendants included in the study.

Patterns within circuits among the prior record subsets were analyzed for each crime category. The crime categories were subjected to rank-order correlation by the type of sentence, from the highest to lowest average prison percentage, for each subset and circuit. In general, the rank ordering of the crimes is; Bank Robbery, Narcotic Drug Violation, Auto Theft, Selective Service, Transportation of Forged Securities, Marihuana Tax Act, Postal Theft, Forgery, Interstate Theft, and Income Tax Violation.

The prior record analysis found a pattern within circuits for type of sentence for each crime category. Thus, for each crime, when a circuit usually gave defendants with one prior record characteristic fewer prison sentences than the national average, then the analysis found that the circuit consistently gave all defendants, regardless of their prior record subset, fewer prison sentences, than the average*. This consistency was also found when circuits gave more prison sentences than the national average.

In the test for consistency within circuits, 110 circuit and crime category comparisons were made among the four prior record characteristic subsets. The tests found the above relationship held for all four subsets in 97 of the 110 comparisons and for three out of the four subsets in 11 of the remaining 13.

Length of Sentence. Two AID tests were made to compare the statistical effects of defendant characteristics and the circuit of trial on variations in mean prison and mean probation sentence lengths. In each case, the test found that circuit had the most effect on the variation in length of sentence. Of the five defendant background characteristics, the tests found that prior record had more effect than the other four characteristics. The

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*The analysis did not include the circled average percentages in Table 4. which were computed using ten or fewer sentences. In several instances, average prison percentages were within four percentage points of the overall average, in which cases they were treated by the analysis as if they were equal to the national average.

effect of prior record on the variations in length of sentence is not as significant as its effect on the variation in type of sentence. The number of defendants and the mean prison and probation sentence lengths as well as the national means in months are listed in Table 5 for each crime.

The study next determined the magnitude of the variations in length of sentence among the 93 Federal District Courts by crime category, using a one way analysis of variance test. The test was run on the data in each prior record subset. Thus, a total of 80 mean prison and probation sentence length crime category prior record subset cases were available for testing. Test results were produced in 76 cases.

The analysis found in 58 of the 76 test results that the mean sentence lengths (prison and probation) among the 93 districts were not consistent at the 0.001 level of significance or less. Further, the analysis found lack of consistency between mean sentence lengths and the districts in seven of the other 18 test results at the 0.05 level of significance*.

An examination of the individual subsets found that the mean sentence lengths given defendants with prior prison and prior probation and suspended records lacked consistency among the districts for nine of the ten crimes. The mean sentence lengths given defendants with no prior record lacked consistency among the districts for eight of the ten crimes. More than half of the test results for defendants with prior juvenile records were found to lack consistency among the districts. The distribution of the prior juvenile record subset data (7% of the total) between prison and probation sentences and among the 93 districts must be considered a factor in the magnitude of these test results.

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*The 76 test results divide into 37 probation and 39 prison cases. The 58 test results found not consistent divide into 32 probation and 26 prison cases. The seven borderline test results are: Interstate Theft/prior juvenile record; Income Tax Violation/prior prison record in the probation case; and Forgery, Transportation of Forged Securities/no prior record; Bank Robbery/prior probation and suspended record; and Narcotic Drug Violation, Bank Robbery/prior juvenile record in the prison case. In Table 6 the cases with circled national means were not found to lack consistency at the 0.05 level of significance or less in the test.

TABLE 5a

LENGTH OF SENTENCE
SAMPLE SIZE AND MEAN SENTENCE LENGTHS
BY PRIOR RECORD SUBSETS

Crime Category	Mean Probation Sentence Lengths (Months) for Prior Record Subset*							
	None		Probation and Suspended		Juvenile		Prison	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	1871	34	1356	36	385	39	1223	37
2. Forgery	1302	30	820	33	142	35	939	35
3. Marihuana Tax Act	1617	41	602	42	90	(42)	306	41
4. Narcotic Drug Viol.	296	38	162	42	39	(39)	318	41
5. Selective Service	869	35	134	34	16	-	54	40
6. Bank Robbery	105	49	46	45	7	-	53	(46)
7. Transportation of Forged Securities	325	36	255	36	30	47	348	40
8. Interstate Theft	797	30	439	31	60	30	349	33
9. Postal Theft	662	31	359	32	88	30	314	34
10. Income Tax Violation	690	29	170	30	5	-	104	32
Total	8534	-	4343	-	862	-	4008	-	17,747

* The analysis of variance test results with circled means were not found significant at the .05 level

TABLE 5b

Crime Category	Mean Prison Sentence Lengths (Months) for Prior Record Subset*							
	None		Probation and Suspended		Juvenile		Prison	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	823	37	1420	35	1275	40	5969	38
2. Forgery	189	33	376	30	135	(41)	1953	39
3. Marihuana Tax Act	630	51	439	52	91	(55)	470	62
4. Narcotic Drug Viol.	547	69	420	67	104	66	1664	80
5. Selective Service	1327	36	230	34	29	(40)	123	37
6. Bank Robbery	397	109	408	125	231	134	1722	163
7. Transportation of Forged Securities	116	44	198	38	77	(45)	1246	47
8. Interstate Theft	99	(29)	161	33	42	(38)	626	30
9. Postal Theft	83	(29)	156	(26)	112	35	811	33
10. Income Tax Violation	204	10	61	9	2	-	87	17
Total	4415	-	3869	-	2098	-	14,671	-	25,053

* See Footnote on preceeding page.

Indicating the magnitude of the lack of consistency, the analysis found that number of defendants in the test results found not consistent represents 80% of all defendants included in the study*. It is not possible to reproduce in this report the test results by district for each of the prior record subsets. However, the data by circuits for prison and probation sentences are shown in Table 6.

The study next investigated patterns within circuits and between prison and probation sentence lengths. A rank ordering by length of sentence, from highest to lowest mean sentence lengths, was made, correlating the results from the prison and probation sentence lengths for each circuit. The rank ordering is: Bank Robbery, Marihuana Tax Act, Narcotic Drug Violation, Transportation of Forged Securities, Auto Theft, Selective Service, Forgery, Postal Theft, Interstate Theft, and Income Tax Violation. The rank ordering for length of sentence is not substantially different from the rank order for type of sentence, except for Marihuana Tax Act crimes.

The investigation found a pattern within circuits for length of sentence for each crime. Thus, for each crime, when a circuit gave defendants shorter prison sentences than the national mean, then the analysis found that the circuit consistently gave all defendants, sentenced to probation or prison, shorter mean sentences than the national mean**. This consistency also was found by the analysis when circuits gave longer mean sentences than the national mean.

For this analysis, 110 circuit and crime category comparisons were made between the mean prison and mean probation sentence lengths. The analysis found the above relationship in 100 of the 110 comparisons.

The investigation of pattern within districts, among the four prior record subsets, and between the prison and probation sentence lengths, was not possible for all crime categories for this study. However, as an example, the investigation was performed on the largest crime category, Auto Theft. The analysis found the above relationship in 69 districts among the eight prison and probation sentence length-prior record subset cases compared. This pattern

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*The number of defendants in the test results found not consistent is 41,906 and the total of the data source is 50,976, see Table 1.

**This analysis did not include the circled-mean sentences in Table 6, which were computed using ten or fewer sentences. In several instances, mean sentence lengths were within two months of the national mean, in which cases, the analysis treated them as if they were equal to the overall mean.

TABLE 6a

LENGTH OF SENTENCE
MEAN SENTENCE LENGTHS
BY CIRCUITS

Crime Category	Mean Probation Sentence Length (Months) for Circuits*											National Mean (Months)
	DC	1	2	3	4	5	6	7	8	9	10	
1. Auto Theft	37	24	31	39	41	39	30	31	31	38	35	36
2. Forgery	38	23	27	35	39	33	27	30	27	38	35	33
3. Marihuana Tax Act	37	31	31	39	38	48	31	39	32	39	34	41
4. Narcotic Drug Viol.	34	47	31	47	(40)	46	28	48	(40)	41	45	40
5. Selective Service	(32)	(30)	33	43	33	36	28	28	41	38	31	35
6. Bank Robbery	-	(60)	42	53	(47)	46	40	47	(43)	49	(53)	47
7. Transportation of Forged Securities	39	28	35	43	39	38	33	36	34	41	40	38
8. Interstate Theft	-	28	28	37	34	31	26	30	28	30	31	30
9. Postal Theft	38	19	27	36	39	33	26	29	28	34	33	32
10. Income Tax Violation	(36)	23	23	34	35	35	28	30	28	33	30	30

* The circled means were computed using ten or less sentences.

TABLE 6b

Crime Category	Mean Prison Sentence Length (Months) For Circuits*											National Mean (Months)
	DC	1	2	3	4	5	6	7	8	9	10	
1. Auto Theft	40	27	32	37	37	36	35	38	38	43	41	38
2. Forgery	58	27	30	30	34	36	37	36	34	40	63	37
3. Marihuana Tax Act	57	46	48	48	41	59	49	52	48	54	63	55
4. Narcotic Drug Viol.	76	68	70	52	75	81	73	80	78	71	122	75
5. Selective Service	(36)	30	31	40	36	39	46	29	43	32	38	36
6. Bank Robbery	163	160	126	129	174	150	158	136	144	136	142	147
7. Transportation of Forged Securities	65	31	42	37	41	45	45	41	42	52	57	46
8. Interstate Theft	(60)	22	24	36	32	27	36	53	38	27	35	31
9. Postal Theft	50	18	26	34	30	33	34	33	31	36	34	32
10. Income Tax Violation	-	3	11	13	9	21	22	13	12	13	(34)	13

* See footnote on preceeding page.

also was found in 18 of the other 24 districts, but among only seven of the eight cases compared.*

The following analysis examines, individually, the effects on the variations in type and length of sentence of sex, age, legal counsel and race characteristics for the Federal crimes only. The analysis concentrates on defendants nationwide regardless of circuit, and on the variations among the subsets of each characteristic for the crimes studied. Prior record characteristics are not included in the analysis.

Sex. Not surprisingly, sex was found to have a greater effect on the variations than all the characteristics except prior record. Men represented over 90% of all defendants. (See Table 7). Further, the average prison percentages for men, nationwide, are nearly twice those for women, (See Table 7.) Even in the cases of Narcotic Drug Violation and Bank Robbery, the male percentages are substantially higher than the female percentages.

On the other hand, the analysis found that although male mean sentence lengths, nationwide, are consistently higher than the female means, the variations in length of sentence between men and women are generally not significantly large (See Table 8). In fact, the differences in mean probation sentence lengths between men and women are not more than three months for eight crimes and five months for the other two crimes. The differences in mean prison sentence lengths, although larger than in the case of probation, vary from three to nine months for eight crimes, and 14 and 79 months, respectively, for Narcotic Drug Violation and Bank Robbery.

Age. The analysis found that age had no effect on the variation in type of sentence but had the greatest effect on variations in length of sentence after prior record was taken into account (See Tables 9 and 10). An examination of the results of the test comparisons reveals that, in general, defendants in the age subset Under 21 were given shorter sentences. The defendants in the other age subsets were found equally in the shorter and longer sentence groups.

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*Districts with ten or fewer sentences were not included in the analysis. Mean sentence lengths within two months of the national mean were treated in the analysis as if they were equal to the national mean.

TABLE 7.

TYPE OF SENTENCE
SAMPLE SIZE AND NATIONAL AVERAGE <u>PRISON</u> PERCENTAGE
BY SEX

Crime Category	Male		Female	
	No.	%	No.	%
1. Auto Theft	14,575	67%	328	36%
2. Forgery	4,475	52%	1577	26%
3. Marihuana Tax Act	4,079	41%	424	22%
4. Narcotic Drug Viol.	3,336	79%	421	60%
5. Selective Service	2,992	61%	5	-
6. Bank Robbery	2,985	94%	104	63%
7. Transportation of Forged Securities	2,293	68%	406	37%
8. Interstate Theft	2,660	37%	33	18%
9. Postal Theft	2,024	53%	646	21%
10. Income Tax Violation	1,270	28%	103	12%
Total	40,689	-	4047	-

TABLE 8a

LENGTH OF SENTENCE
SAMPLE SIZE AND NATIONAL MEAN SENTENCE LENGTHS
BY SEX

Crime Category	Number & Mean Probation Sentence Length (Months) By Sex			
	Male		Female	
	No.	Mean	No.	Mean
1. Auto Theft	4846	36	211	34
2. Forgery	2137	34	1170	31
3. Marihuana Tax Act	2426	42	332	39
4. Narcotic Drug Viol.	691	40	167	38
5. Selective Service	1164	35	5	32
6. Bank Robbery	183	48	38	43
7. Transportation of Forged Securities	733	39	254	34
8. Interstate Theft	1688	30	27	27
9. Postal Theft	956	32	510	30
10. Income Tax Violation	911	30	91	31
Total	15,735	-	2805	-	18,540

TABLE 8b

Crime Category	Number & Mean Prison Sentence Length (Months) By Sex			
	Male		Female	
	No.	Mean	No.	Mean
1. Auto Theft	9728	38	117	35
2. Forgery	2337	38	407	32
3. Marihuana Tax Act	1652	55	92	47
4. Narcotic Drug Viol.	2645	76	254	62
5. Selective Service	1828	36	-	-
6. Bank Robbery	2802	148	66	79
7. Transportation of Forged Securities	1560	46	152	37
8. Interstate Theft	970	31	6	22
9. Postal Theft	1068	32	136	29
10. Income Tax Violation	356	13	11	17
Total	24,946	-	1241	-	26,187

TABLE 9.

TYPE OF SENTENCE
SAMPLE SIZE AND NATIONAL AVERAGE <u>PRISON</u> PERCENTAGE
BY AGE

Crime Category	Under 21		Between 21 & 35		Over 35	
	No.	%	No.	%	No.	%
1. Auto Theft	5477	57%	7222	69%	2204	79%
2. Forgery	749	36%	3439	45%	1864	50%
3. Marihuana Tax Act	1104	31%	2985	39%	414	39%
4. Narcotic Drug Viol.	247	59%	2221	76%	1289	83%
5. Selective Service	608	67%	2368	60%	21	33%
6. Bank Robbery	415	91%	1980	91%	694	94%
7. Transportation of Forged Securities	188	48%	1560	60%	951	72%
8. Interstate Theft	266	30%	1540	38%	887	36%
9. Postal Theft	539	34%	1501	46%	630	53%
10. Income Tax Violation	-	-	116	27%	1257	27%
Total	9593	-	24,932	-	10,211	-

TABLE 10a

LENGTH OF SENTENCE
SAMPLE SIZE AND NATIONAL MEAN SENTENCE LENGTHS
BY AGE

| Crime Category | Number & Mean Probation Sentence Lengths (months) By Age | | | | | |
| | Under 21 | | Between 21 & 35 | | Over 35 | |
	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	2333	35	2267	36	457	37
2. Forgery	479	32	1895	33	933	32
3. Marihuana Tax Act	765	41	1822	41	171	42
4. Narcotic Drug Viol.	101	39	543	40	214	39
5. Selective Service	198	34	957	35	14	29
6. Bank Robbery	36	43	125	49	60	46
7. Transportation of Forged Securities	97	35	628	37	262	40
8. Interstate Theft	186	30	957	31	572	30
9. Postal Theft	355	31	817	32	294	30
10. Income Tax Violation	-	-	85	29	917	30
Total	4550	-	10,096	-	3894	-	18,540

TABLE 10b

Crime Category	Number & Mean Prison Sentence Lengths (Months) By Age					
	Under 21		Between 21 & 35		Over 35	
	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	3144	39	4954	36	1747	39
2. Forgery	270	35	1544	37	930	38
3. Marihuana Tax Act	339	50	1162	54	243	65
4. Narcotic Drug Viol.	146	56	1678	70	1075	86
5. Selective Service	410	38	1411	36	7	34
6. Bank Robbery	379	109	1855	150	634	158
7. Transportation of Forged Securities	91	46	932	43	689	49
8. Interstate Theft	79	33	582	32	315	30
9. Postal Theft	184	36	689	31	336	32
10. Income Tax Violation	-	-	31	14	336	13
Total	5042	-	14,833	-	6312	-	26,187

Further, there is no consistency nationwide in the variations in <u>length</u> of sentence among the age subsets, as was found for <u>type</u> of sentence. <u>The average prison percentages nationwide consistently increase from the Under 21 subset to the Over 35 subset,</u> except for Selective Service (see Table 9). The mean probation sentence lengths vary by only one or two months among the subsets for seven crimes, and by six months at most for the other three. The mean prison sentence lengths vary by one to four months among the subsets for six crimes, and from six to 49 months for the other four.

<u>Legal Counsel</u>. The analysis found that legal counsel has no effect on the variation in mean probation sentence length and had only minor effect on the variations in type of sentence and mean prison sentence lengths. For example, legal counsel was found to have the most effect on the variation in type of sentence for the crime of Transportation of Forged Securities among the defendants with prior prison and prior juvenile records in all but the 5th, 6th, and 10th circuits; and was found to have the most effect on the variation in mean prison sentence length for the crime of Bank Robbery among defendants in the Over 35 age subset in all but the 10th circuit.

An examination of the variation in type of sentence nationwide among the legal counsel subsets (see Table 11), found no consistency among all the subsets. However, <u>the average prison percentages nationwide for defendants in the appointed counsel subset were consistently higher than the percentages for defendants in the private counsel subset.</u> (The appointed and private counsel subsets account for over 91% of the defendants.)

This consistency was not found in the variations in length of sentence among or between any of the subsets. In fact, the differences in the variations in length of sentence between defendants in the appointed and private counsel subsets varied at most by four months, except for the differences in mean prison sentence length for Narcotic Drug Violations and Interstate Theft (see Table 12).

<u>Race</u>. An examination of the variations in type of sentences nationwide among the race characteristic subsets (see Table 13), does reveal that <u>the average prison percentages nationwide for black defendants are consistently higher than for white defendants.</u> Only the variations between the black and white subsets for Income Tax Violation and Transportation of Forged Securities were in the opposite direction.

TABLE 11.

TYPE OF SENTENCE
SAMPLE SIZE AND NATIONAL AVERAGE <u>PRISON</u> PERCENTAGE
BY LEGAL COUNSEL

Crime Category	None		Appointed		Private		Unreported	
	No.	%	No.	%	No.	%	No.	%
1. Auto Theft	1637	75%	11226	68%	1950	45%	90	60%
2. Forgery	620	41%	3947	48%	1440	40%	45	44%
3. Marihuana Tax Act	64	34%	1946	45%	2465	34%	28	36%
4. Narcotic Drug Viol.	56	59%	1926	77%	1738	78%	37	62%
5. Selective Service	471	70%	1533	62%	977	55%	16	81%
6. Bank Robbery	87	86%	2062	93%	919	93%	21	95%
7. Transportation of Forged Securities	239	70%	1562	68%	868	54%	30	57%
8. Interstate Theft	213	28%	1155	44%	1304	31%	21	24%
9. Postal Theft	268	44%	1773	48%	610	37%	19	58%
10. Income Tax Violation	77	25%	187	32%	1093	26%	16	19%
Total	3732	-	27,317	-	13,364	-	323	-

TABLE 12a

LENGTH OF SENTENCE
SAMPLE SIZE AND NATIONAL MEAN SENTENCE LENGTH
BY LEGAL COUNSEL

Crime Category	Number & Mean Probation Sentence Lengths (Months) By Legal Counsel							
	None		Appointed		Private		Unreported	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	403	37	3552	36	1066	34	36	37
2. Forgery	365	31	2054	33	863	33	25	28
3. Marihuana Tax Act	42	42	1066	40	1632	42	18	'44
4. Narcotic Drug Viol.	23	42	442	39	379	40	14	47
5. Selective Service	139	33	589	35	438	35	3	48
6. Bank Robbery	12	52	142	48	66	45	1	60
7. Transportation of Forged Securities	72	38	501	37	401	38	13	40
8. Interstate Theft	154	30	643	31	902	30	16	30
9. Postal Theft	149	31	925	32	384	32	8	31
10. Income Tax Violation	58	31	127	28	804	30	13	20
Total	1417	-	10,041	-	6935	-	147	-	18,540

TABLE 12b

| Crime Category | Number & Mean Prison Sentence Lengths (Months) By Legal Counsel | | | | | | | |
| | None | | Appointed | | Private | | Unreported | |
	No.	Mean	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	1234	36	7673	38	884	36	54	38
2. Forgery	255	34	1892	38	577	38	20	36
3. Marihuana Tax Act	22	53	880	54	832	56	10	50
4. Narcotic Drug Viol.	33	60	1484	71	1359	80	23	71
5. Selective Service	332	37	944	36	539	36	13	32
6. Bank Robbery	75	142	1920	148	853	144	20	112
7. Transportation of Forged Securities	167	41	1061	45	467	49	17	38
8. Interstate Theft	59	25	511	27	401	37	5	38
9. Postal Theft	119	32	848	32	226	31	11	27
10. Income Tax Violation	19	15	60	16	285	12	3	19
Total	2315	-	17,273	-	6423	-	176	-

26,187

TABLE 13.

TYPE OF SENTENCE
SAMPLE SIZE AND NATIONAL AVERAGE <u>PRISON</u> PERCENTAGE
BY RACE

Crime Category	White*		Black		Other	
	No.	%	No.	%	No.	%
1. Auto Theft	12,438	66%	2268	68%	197	60%
2. Forgery	3138	42%	2861	49%	53	36%
3. Marihuana Tax Act	3984	38%	479	41%	40	50%
4. Narcotic Drug Viol.	2191	74%	1503	82%	63	86%
5. Selective Service	2456	60%	524	66%	17	41%
6. Bank Robbery	1830	92%	1235	94%	24	83%
7. Transportation of Forged Securities	2061	64%	614	63%	24	63%
8. Interstate Theft	1749	28%	927	51%	17	59%
9. Postal Theft	1260	40%	1387	49%	23	43%
10. Income Tax Violation	1248	27%	111	22%	14	50%
Total	32,355	-	11,909	-	472	-

*In the Federal Court System, Puerto Rican and chicano defendants are designated as white.

The analysis of length of sentence among the race subsets found no inconsistency in length of sentence among or between any of the race subsets (see Table 14). In fact, the differences in mean sentence lengths between the black and white subsets varied at most by four months (in either direction), except for the differences in mean prison sentence lengths between the black and white subsets for Interstate Theft and Bank Robbery.

Summary

The Institute's study of sentencing in the Federal District Courts analyzed the data to determine the relationship of certain factors to sentencing variations among the circuits, within the circuits, and nationwide. These factors included defendant characteristics (prior record, sex, age, and race) and type of legal counsel. The study verified several assumptions, generally held by criminal justice professionals, about the sentencing process in the Federal District Courts.

The study found that variations in sentencing, both in type and length, among the districts are substantial. Specifically, the analysis found that the type of sentence (prison or probation) given defendants and the length of sentence are not consistent among districts for all the crimes analyzed.

Another assumption, verified by the study, is that for the Federal crimes, prior record has the most effect on variations in sentencing among the defendant characteristics available for study. In particular, the analysis found that the type of sentence given defendants with no prior record varies as significantly among the districts as that for defendants with prior prison records, while the variation among the districts was significantly less for defendants with prior probation and suspended records and prior juvenile records. The length of sentence given defendants with no prior record, prior prison record, and prior probation and suspended record is not consistent among the districts for nearly every crime analyzed. The length of sentence given defendants with prior juvenile records lacked consistency among the districts for half of the crimes analyzed.

When the effect of prior record was studied, the analysis found substantial consistency within circuits for all crimes analyzed. Thus, for each crime, defendants with similar prior records tend to be treated similarly with regard to type and length of sentence. This consistency holds whether circuits give more (or fewer) prison sentences, and longer (or shorter prison or probation sentences than the national average.

TABLE 14a

LENGTH OF SENTENCE
SAMPLE SIZE AND NATIONAL MEAN SENTENCE LENGTHS
BY RACE

| Crime Category | Number & Mean Probation Sentence Length (Months) By Race | | | | | |
| | White* | | Black | | Other | |
	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	4244	36	735	35	78	32
2. Forgery	1807	33	1466	33	34	33
3. Marihuana Tax Act	2457	41	281	40	20	44
4. Narcotic Drug Viol.	573	40	276	39	9	40
5. Selective Service	979	35	180	36	10	43
6. Bank Robbery	147	47	70	48	4	48
7. Transportation of Forged Securities	750	39	228	35	9	37
8. Interstate Theft	1253	31	455	30	7	22
9. Postal Theft	751	31	702	32	13	28
10. Income Tax Violation	908	30	87	30	7	32
Total	13,869	-	4480	-	191	-	18,540

*See footnote in Table 13.

TABLE 14b

| Crime Category | Number & Mean Prison Sentence Length (Months). By Race | | | | | |
| | White* | | Black | | Other | |
	No.	Mean	No.	Mean	No.	Mean
1. Auto Theft	8193	38	1533	36	119	37
2. Forgery	1330	39	1395	35	19	33
3. Marihuana Tax Act	1526	55	198	54	20	51
4. Narcotic Drug Viol.	1618	73	1227	77	54	72
5. Selective Service	1477	36	344	38	7	29
6. Bank Robbery	1683	144	1165	151	20	129
7. Transportation of Forged Securities	1311	46	386	43	15	51
8. Interstate Theft	494	35	472	27	10	36
9. Postal Theft	509	33	685	31	10	25
10. Income Tax Violation	336	13	24	12	7	14
Total	18,477	-	7429	-	281	-	26,187

*See footnote in Table 13.

N.B., it was impossible to determine from available data whether a prior conviction was for a felony or a misdemeanor, or was obtained in a state or Federal court. Further, it was not possible to assess whether discriminatory factors affected previous sentences in other courts.

The study found for the Federal crimes studied that nationwide, regardless of circuit, defendants with certain background characteristics were more likely to receive prison sentences than others, for nearly every crime analyzed. Thus,

°Men received prison sentences more often than women. In fact, the average prison percentages for men were nearly double those for women in eight of the ten crimes analyzed.

°The Over 35 age subset had higher prison percentages than the Between 21 and 35 subset, which in turn had higher prison percentages than the Under 21 subset. The differences between the Under 21 and Between 21 and 35 age subsets varied from 0 to 17 percentage points, for all but Selective Service (which decreases 7%). The differences between the Between 21 and 35 and the Over 35 age subsets varied from 0 to 12 percentage points for all but Interstate Theft (which decreases 2%) and Selective Service which decreases 27%.

°Defendants with appointed counsel had higher prison percentages than defendants with private counsel. The appointed and private counsel subsets varied from 0 to 23 percentage points for all but Narcotic Drug Violation where the difference was 1% in the other direction.

°Black defendants had higher prison percentages than white defendants (N.B., in the Federal Court data, Puerto Rican and chicano defendants are classified as whites). The black and white subsets varied from 2 to 23 percentage points for all but Transportation of Forged Securities and Income Tax Violation, where the differences were 1% and 5% in the other direction.

APPENDIX

Description of

The Automatic Interaction Detection (AID),

The Chi-Square, and Analysis of Variance

Tests

Automatic Interaction Detection (AID) Test*. The AID test, in general, addresses the problem of determining which of the available variables (defendant characteristics and circuits) are actually related to the phenomenon in question (sentencing process), and under what conditions (prison and probation sentences), and through which intervening processes (average prison sentence percentages and mean sentence lengths).

In operation, the analysis, regarding one of the variables as a dependent variable (average prison sentence percentages, mean prison sentence lengths, and mean probation sentence lengths), employs a nonsymetrical branching process, based on variance analysis techniques, to subdivide the sample into a series of subgroups which maximize one's ability to predict values of the dependent variable. Linearity and additivity assumptions inherent in conventional multiple regression techniques are not required.

The test divides the sample, through a series of binary splits, into mutually exclusive series of subgroups. Every observation is a member of exactly one of these subgroups. They are chosen so that at each step in the procedure, their means account for more of the total sum of squares (reduce the predictive error) than the means of any other equal number of subgroups.

The study made three AID tests on the sentencing data to determine the effect on the variations in type and length of sentence of the defendant characteristics and the circuits. The first AID test used the average prison sentence percentage as the dependent variable while the next two tests used the mean prison and probation sentence lengths as the dependent variables. The data for these tests excluded all fine only and mixed sentences and all sentences for defendants with unreported ages.**

The first AID test determined which characteristic had the greatest statistical effect on the variation in type of sentence.

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*Reference: J. A. Sonquist and J. N. Morgan, The Detection of Interaction Effects, Monograph No. 35, Survey Research Center, Institute for Social Research, The University of Michigan, 1964.

**The AID test data base is 44,736 sentences. The excluded data were: fine only (483), unreported age (3177), and mixed prison and probation sentences (2580).

For each crime, the test first calculated the national average and then the averages for each individual subset of each characteristic.

> Example. Average prison percentages were calculated for white, black, and other race subsets as well as all other characteristic subsets, for each crime.

The test next separated the subsets (for each characteristic) into high and low classes, according to whether the average for a subset was higher or lower (or equal) than the nationwide average for that crime. For each high and low class, the test then calculated averages.

> Example. For Auto Theft, the white and black defendant subset averages were higher than the nationwide average while the other defendant subset average was lower. For Auto Theft/race, the high class average was computed using the white and black defendant sentences while the low class average was computed using the other defendant sentences.

Finally, the test calculated the differences between the high and low class averages for all characteristics. These differences were then compared. That characteristic with the largest difference was chosen by the test as that having the most effect on the variation.

In the next phase of the test, the sentencing data were split into two subgroups (branches). The binary split was based on the high and low classes for that characteristic found to have the most effect. The first subgroup (branch) contained the low class defendant sentences.

> Example. For Auto Theft, suppose the test found that race had the most effect on the variation, then the test would split the sentences into one subgroup containing the white and black defendant sentences and into another subgroup containing the other defendant sentences.

The test now repeats the above comparison process on each of these subgroups or branches (starting with that subgroup having

the largest total sum of squares) in order to determine which characteristic had the most effect on the variation in the type of sentence in these subgroups.

The AID test continued in this manner to identify succeeding significant characteristics along the branches, until all the differences between average percentages in the characteristic subsets are either less than 0.6% of the nationwide average or the individual averages were computed on less than 30 defendant sentences.

The two other AID tests used the same procedure but the dependent variables were mean prison and mean probation sentence lengths.

Chi-Square. Two chi-square tests were run on the ten crime categories. The data base for these was the same as in the AID tests, i.e., excluding fine only, mixed prison and probation sentences and sentences with unreported ages. In addition, in the second test, unknown and unreported prior record cases (a total of 1936) were not analyzed.

The chi-square tests investigated whether the characteristics type of sentence (prison and probation) and circuit of trial were independent. The first test compared the characteristics using all defendant data while the second test made the comparisons using only the defendant data in the four types of prior record reported (none, prior probation and suspension, prior prison, and prior juvenile).

Each contingency table formed by the tests used the circuits (the 10 circuits plus D. C.) as the columns, and the number of probation only sentences and the number of prison sentences (prison only and prison plus fine) as the two rows. The test grouped neighboring circuits which had a scarcity of data.

Analysis of Variance. Three one way analysis of variance tests were run on the ten crime categories. Each test compared the mean sentence lengths, prison and probation for each of the 93 districts. The tests estimated whether the variation between the length of sentences was greater than would be expected if all the means were

obtained from the same population. Each test broke up the data by a defendant characteristic, either race, age or prior record.

Each test compared mean prison sentence lengths mean probation sentence lengths and mean fines. The means in each case were computed using either all the prison, all the probation, or all the fine sentences given in each of the 93 districts. For example, each district mean sentence length was computed using the prison sentence lengths given in that district in all prison only, prison plus fine, and mixed prison and probation sentences.

The test using prior record excluded sentences of defendants with unknown or unreported ages and prior records, and all mixed prison and probation sentences. Thus, there were no duplications of sentencing data in the prison and probation analysis of variance cases in this test.