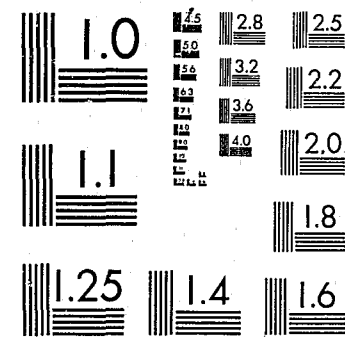




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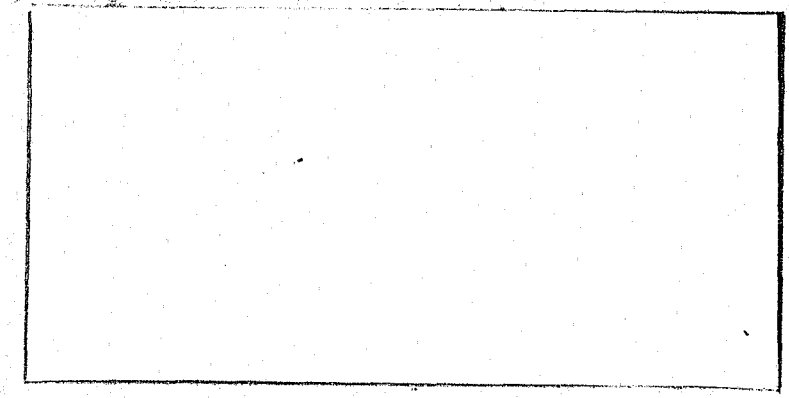
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**COST OF CRIMES AND STATUS OFFENSES
COMPARED WITH COST OF PROCESSING
SUSPECTS AND OFFENDERS IN THE
JUVENILE JUSTICE SYSTEM**

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SUBMITTED TO THE
U.S. OFFICE OF JUVENILE JUSTICE AND DELINQUENCY PREVENTION
JANUARY 1980

PREPARED BY THE
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FOREWORD

The National Institute for Juvenile Justice and Delinquency Prevention established an Assessment Center Program in 1976 to partially fulfill the mandate of the Juvenile Justice and Delinquency Prevention Act of 1974, as amended, to collect and synthesize knowledge and information from available literature on all aspects of juvenile delinquency.

This report provides insight into how the juvenile justice system spends relatively too little time processing serious offenses and too much time processing less-serious and status offenses. This assessment is done by developing and using an analytical cost-benefit model. Wide disparity is shown in crime cost (losses) compared with cost of processing for different types of offenses.

The assessment efforts are not designed to be complete statements in a particular area. Rather, they are intended to reflect the state-of-knowledge at a particular time, including gaps in available information or understanding. Each successive assessment report then may provide more general insight on a cumulative basis when compared to other reports.

Due to differences in definitions and the lack of a readily available body of information, the assessment efforts have been difficult. In spite of such complexity, the persons who participated in the preparation of this report are to be commended for their contribution to the body of knowledge.

James C. Howell, Director
National Institute for Juvenile Justice and Delinquency Prevention

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Administrative editing and production were done by Paula L. Emison with the assistance of Judith A. Herman and Andrea L. Marrs. Technical assistance was provided by T. Edwin Black, Teresa L. Rooney, and Ronald F. Tuttle. Special thanks is extended to Tom Yamane for the graphic artwork.

In addition to the above individuals, appreciation is extended to the many librarians, researchers, statisticians, operational personnel, and others who provided substantial assistance or materials in the preparation of this report.

PREFACE

As part of the Assessment Center Program of the National Institute for Juvenile Justice and Delinquency Prevention, topical centers were established to assess delinquency prevention (University of Washington), the juvenile justice system (American Justice Institute), and alternatives to the juvenile justice system (University of Chicago). In addition, a fourth assessment center was established at the National Council on Crime and Delinquency to integrate the work of the three topical centers.

This report, "Cost of Crimes and Status Offenses Compared With Cost of Processing in the Juvenile Justice System," has been developed by the American Justice Institute. It includes the findings and conclusions on the comparative cost of juvenile offenses (losses) with cost of processing.

Other work of the American Justice Institute as part of the National Juvenile Justice System Assessment Center includes reports on the status offender, child abuse and neglect, classification and disposition of juveniles, serious juvenile offenders, juvenile advocacy, the less-serious juvenile offender, 24-hour intake, job opportunities for delinquents, the characteristics of juvenile offenders, special problems of juveniles, and sexual abuse and exploitation of juveniles.

In spite of the limitations of these reports, each should be viewed as an appropriate beginning in the establishment of a better framework and baseline of information for understanding and action by policymakers, operational personnel, researchers, and the public on how the juvenile justice system can contribute to desired child development and control.

Charles P. Smith, Director
National Juvenile Justice System Assessment Center

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EXECUTIVE SUMMARY

This assessment develops an analytical cost-benefit model for studying the nation's juvenile justice system. The inefficiencies of the justice system have been discussed by many. The purpose of this report is to specifically identify and measure the nature of some of this inefficiency. The findings are focused at major decision points so that decision-makers can use the data as they plan future budgets and work priorities.

The report examines two main concerns:

- (1) That relatively too little time is spent by justice agencies processing serious offenses, compared with the great cost of these offenses to society. For example, the ratio of law enforcement processing cost to society losses by robbery is \$1 to \$62.
- (2) That relatively too much time is spent by juvenile justice system agencies processing less-serious offenses, compared with the low cost of such offense to society. For example, the ratio of law enforcement processing cost to society losses for loitering is \$1 to \$0.2.

The overall conservative findings show another aspect of this same inefficiency. Direct crime losses in 1977 by serious juvenile offenders was \$9.7 billion compared with \$1.0 billion for the less-serious and status offenders combined. Despite the great differences (\$8.7 billion) in crime losses by the two juvenile groups, the amount spent for law enforcement processing costs on them is the same (\$0.5 billion each). The inefficiency that applies to law enforcement also applies to judicial and custody processing.

Society's poor ability to screen "in" and adequately handle serious juvenile offenders is very costly. It is shown that a sample of 624 serious adult male offenders cost society \$41 million in crime during the three years prior to their imprisonment.

In order to show that these problems are solvable, two encouraging programs are described.

- (1) It is shown that some programs for serious offenders can save society much money. A study is described that rigorously demonstrates that one large State correctional treatment program for narcotic addicts saves society millions of dollars over what it costs society for the program.
- (2) Status offenders can be profitably diverted from the juvenile justice system. A county program is described that diverts status offenders from the juvenile justice system in a way that saves society money and is also more humane for young people in need.

The crime loss to processing costs findings were developed on a national basis for the United States. If local jurisdictions want to assess to what extent these

findings hold true for their area, they can do it by substituting local data. The procedures used are carefully detailed in the last part of the paper for those interested.

It is recognized that no cost-benefit study can include or document all costs (e.g., anguish and some indirect costs). Nevertheless, some of the important costs are obtainable and estimates can be developed that provide a sense of the magnitude of the problem. Such estimates can provide powerful guidance for future decision-making and resource allocation.

I. INTRODUCTION

This assessment compares the cost of juvenile* offenses (losses) with the cost of juvenile justice system processing of those juveniles alleged or adjudicated for involvement in these offenses. This assessment also compares costs and benefits for low cost offenses (e.g., runaways) and high cost offenses (e.g., robbery).

Some juvenile offenders** may pose little harm to themselves or society. However, established practices and the large number of such juveniles processed may require far too much staff time and resources to work with in comparison with the more serious offenders. The analysis is carried out at key decision points (e.g., arrest, court referral, and assignment to custody) so that the findings can be readily useable by decision-makers in the areas where they have authority.

It is hoped that the findings of the assessment will be helpful to decision-makers in the juvenile justice system as they labor in a dynamic world to meet society's conflicting needs. It is hoped to show how some of society's opposing desires (e.g., more law enforcement for the same money) might be met by a reallocation of resources.

There has been concern for a long time that the United States justice system is very inefficient. It is understandable why the juvenile justice system is inefficient. Its laws, policies, and procedures have developed on a piecemeal basis over a long period of time. In addition, it is so large it is difficult to grasp as an entity. In 1977, it cost nearly \$3 billion to operate and handled more than 2 million arrests.

*A juvenile is a person who is not yet 18; or, for the purposes of proceedings and dispositions for an act of juvenile delinquency committed prior to their eighteenth birthday, a person who is not yet 21.

**An offender is a juvenile who has been adjudicated by the juvenile court to have committed an act of juvenile delinquency.

II. ANALYTICAL MODEL

In order to assess any complex phenomena, it is crucial to have a suitable analytical model. The analytical model used in this assessment has two key aspects.

A. Cost-Benefit Aspect

A cost-benefit assessment provides a basis for examining a large system on an overall basis that would be almost impossible to do otherwise. This is possible because many things are convertible to dollars. As the basic unit of exchange, dollars provide a commonly understood base for comparing a great variety of subtle and complex factors.

B. Conceptual Framework

The key conceptual framework for the analytical model is to show the cost of crime to society in comparison with the justice system processing cost, by type of offense.

If the justice system expenditures are viewed in contrast to the cost of crime, the cost of operating the justice system is relatively small compared with the tremendous, but somewhat obscure cost of crime. In addition, if the cost of crime is compared with the processing cost by type of offense, sharp focus can be placed on the juvenile justice system inefficiency.

III. PROCEDURE FOR COMPARING LOSSES TO PROCESSING COST

PROCEDURE IN BRIEF

The basic procedure used in this assessment is to compare the crime losses to society with the cost of processing persons alleged or adjudicated for involvement in these activities. The comparisons are made within offense categories (e.g., murder, robbery, runaways).

Crime losses to society are calculated by determining the number of offenses within each category and then multiplying it by the estimated average loss per offense.

The processing cost is calculated by multiplying the average processing cost by the number of cases handled in each offense category.

The detailed procedures for developing the cost estimates are discussed in Appendixes C and D (pp. 49-103) in detail for those who may wish to use them for assessing aspects of their own juvenile justice system. Whenever making an estimate, such as the cost of crime, an estimator has to make judgments and become specific. What is the "correct" method is sometimes open to question. It is important, therefore, that the procedures be specified so that others can assess the work independently and build on it.

GUIDELINES FOR DEVELOPING COST COMPARISONS

Estimating the cost of crime and some of the processing costs for the juvenile justice system is essentially an approximation undertaking. This is true because some of the costs are difficult to measure or are only generally known. In spite of the inadequacy of the data base, it is crucial to make such estimates to put the problem in perspective.

Despite the roughness of some of the data, cost estimates should be developed as accurately as possible within the limits of the data. In order to achieve this goal, the following guidelines were developed:

- (1) Carefully identify the major problem areas so as not to lose sight of what is most important among the many problems that exist. Ask, based on current knowledge, what is thought to be the most inefficient area? Where do

the greatest losses and costs to society occur?

- (2) The analytical model needs to be continuously focused on the major problem selected for study. Stick to overall logic of the analytical model even if some areas for measurement have little or no data. Do not use data just because it is good. If a crucial area has poor data, this can be pointed out as an area in need of further study. The analytical model can illustrate how better data once developed can be used.
- (3) Develop the findings around key decision points--arrest, referral to courts, and assignment to corrections. This permits the decision-makers to use findings directly where they have the authority.
- (4) Show the findings in terms of major alternatives so that decision-makers can estimate for themselves the approximate costs of possibilities available to them. One possibility is to show current cost of inefficient operation or not doing anything.
- (5) The fewer the steps or computations that are necessary to assess the main question the better.
- (6) If the data are only marginal to the key point of the analysis and require many doubtful assumptions be made, it is better not to use them. Their possible relationship to the problem under study should be mentioned.
- (7) If the estimates are very rough, discuss the possible ranges.
- (8) When the data are rough, make estimates on the conservative side so as to provide the least cause to qualify the findings.
- (9) Show findings in the most understandable terms possible (i.e., numbers, percent, and ratios).
- (10) Since most planning and budgeting is done on an annual basis, calculate costs on a yearly basis. The assessment is made for 1977 since this is the year for which current data are most commonly available for the many sources of information used. In most respects, one year is fairly similar to another.

SELECTING OFFENSE CATEGORIES FOR STUDY

Since there is a wide variety of types of offenses, a sample was selected on which to make the cost comparisons. The reasons for selecting the offense categories are described below:

- (1) Offenses with varying degrees of severity and seriousness need to be represented. In order to accomplish this, the offenses were divided into three major groups:
 - (a) Serious offenses (seven index crimes reported in Uniform Crime Reports).

- (b) Less-serious (offenses between serious and status offenses).
 - (c) Status offenses (any offense committed by a juvenile that would not be a crime if committed by an adult).

- (2) Offense categories were selected with each major offense group:
 - (a) Among serious offenses, all seven index crimes were taken because of their generally agreed upon importance.
 - (b) Among less-serious offenses, offense categories were selected that had a fairly large number of cases and consistency in definition. Since the data to be used has to be taken from many different sources, offense categories were selected with fairly consistent understandings as to their meaning.
 - (c) Both status offenses reported regularly in the Uniform Crime Reports were used.

ESTIMATING COST OF CRIME BY OFFENSE CATEGORY

One of the most difficult parts of any cost-benefit assessment is estimating society's losses due to crime. For purposes of this assessment, the average cost (loss) per offense category was estimated by first using ratings of offense seriousness to rank offenses as to degree of seriousness. Then dollar values were assigned to the rated categories ranging from most serious (murder) to least serious (curfew and loitering law violations).

In a survey of seriousness scales (Smith, Alexander, and Thalheimer), two scales provided useful ways to categorize offenses as to their seriousness. The Sellin-Wolfgang index was developed on the basis of rankings by a thousand people from different backgrounds ranging from police officers to students. The other index, developed by Gray, Conover, and Hennessey, had 25 probation/parole officers and 23 staff members of a reception and diagnostic center rate a wide range of offenses. The two offense ratings were compared and found to be highly related ($R^2 = .906$) (Smith, Alexander, and Thalheimer, pp. 71, 271, and 272).

In order to assign dollar values to those ranked offense categories, bench mark figures from many studies were used. That is, some offense categories for which average cost estimates were available were used as bench marks or reference points on the scale. It was found that the relationship between these bench mark figures fitted a least squares regression. Using this relationship, dollar values for the intervening offense categories were calculated.

Crime loss estimates are difficult to obtain, and they can be useful to others in carrying out future cost-benefit studies. Therefore, the procedure for developing the cost of crime figures used here is described in considerable detail in Appendixes C and D (pp. 49-103).

IV. FINDINGS

GENERAL FINDINGS

The main observation to be made from this assessment is that the juvenile justice system needs to put much more effort into investigating and screening "in" the serious offenses and offenders. Most of the resources for this increased effort could be obtained if more of the less-serious and status offenders were diverted out of the juvenile justice system.

The findings that document the above assertions are shown in two sections. The first section examines the situation on a national basis. The second section amplifies the findings by assessing the problem on a local level using specific related cost-benefit studies.

Table 1 (p. 11) shows the losses due to crime compared with the law enforcement processing costs. It can be readily seen that the ratio of processing costs to crime losses varies enormously by type of offense. For example, for murder, the ratio is 1 to 712 while it is only 1 to .2 for runaways. This means that for murder, society's loss is about \$700 for each dollar spent on police processing, while for runaways, society's loss is only one-fifth of each dollar spent for law enforcement handling.

On an overall basis, the nation's direct crime losses by serious offenses is \$9.7 billion compared with half a billion dollars for police processing cost. Losses for the less-serious and status offenses is about \$1.0 billion compared with about half a billion dollars for processing cost. In other words, while processing costs are about the same (\$5 billion), crime losses by serious offenders is nearly \$9 billion greater than those offenses committed by less-serious offenders and status offenders.

Court* processing costs are compared with crime losses by type of offense in Table 2 (p. 13). Again, the same basic pattern emerges as it did for law enforcement. That is, there is a great disparity in the loss to processing cost ratio by type of offense. The disparity is not as great for courts as it is for law enforcement. The ratios range from 1 to 174 for murder compared with 1 to .2 for runaways.

*Court processing costs include judicial, prosecution, and defense.

TABLE 1
 COMPARISON OF LAW ENFORCEMENT PROCESSING COSTS WITH OFFENSE LOSSES
 FOR PERSONS UNDER 18 YEARS--SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)
 (IN MILLIONS)

OFFENSE CHARGED	DIRECT LOSSES DUE TO OFFENSES ¹	LAW ENFORCEMENT PROCESSING COSTS ²	RATIO OF PROCESSING COSTS TO LOSSES
TOTAL	\$10,710.8	\$1,100.8	1:10
SERIOUS OFFENSES (INDEX OFFENSES)	9,736.0	546.9	1:18
Murder and Manslaughter	427.1	0.6	1:712
Forcible Rape	200.6	2.1	1:96
Robbery	1,132.6	18.3	1:62
Aggravated Assault	3,974.0	9.6	1:414
Burglary	1,936.4	175.5	1:11
Larceny-Theft	1,390.0	298.0	1:5
Motor Vehicle Theft	675.4	42.7	1:16
LESS-SERIOUS OFFENSES	953.9	437.1	1:2
Forgery and Counterfeiting	24.1	5.7	1:4
Fraud	61.8	14.7	1:4
Stolen Property (e.g., buying, receiving, possessing)	26.8	24.5	1:1
Vandalism	73.5	25.5	1:3
Drug Abuse Violations	333.4	91.3	1:4
Driving Under the Influence	61.7	16.9	1:4
Liquor Laws	9.6	25.8	1:0.4
Drunkenness	4.0	15.0	1:0.3
Disorderly Conduct	9.7	36.4	1:0.3
All Other Less-Serious Offenses	349.4	181.4	1:2
STATUS OFFENSES	20.9	116.7	1:0.2
Curfew and Loitering Law Violations	2.6	18.5	1:0.1
Runaways	7.4	39.9	1:0.2
All Other Status Offenses	10.9	58.4	1:0.2

Sources:

¹See Appendix C, Table C-6, p. 67.

²See Appendix C, Table C-9, p. 73.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA:
 American Justice Institute, 1980).

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TABLE 2
 COMPARISON OF COURT PROCESSING COSTS WITH OFFENSE LOSSES FOR PERSONS
 UNDER 18 YEARS--SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

(IN MILLIONS)

OFFENSE CHARGED	DIRECT LOSSES DUE TO OFFENSES ¹	COURT PROCESSING COSTS ²	RATIO OF PROCESSING COSTS TO LOSSES
TOTAL	\$10,710.8	\$951.8	1:11
SERIOUS OFFENSES (INDEX OFFENSES)	9,736.0	544.7	1:18
Murder and Manslaughter	427.1	1.8	1:237
Forcible Rape	200.6	3.5	1:57
Robbery	1,132.6	28.8	1:39
Aggravated Assault	3,974.0	25.9	1:153
Burglary	1,936.4	173.2	1:11
Larceny-Theft	1,390.0	249.1	1:6
Motor Vehicle Theft	675.4	62.4	1:11
LESS-SERIOUS OFFENSES	953.9	295.3	1:3
Forgery and Counterfeiting	24.1	2.1	1:11
Fraud	61.8	5.4	1:11
Stolen Property (e.g., buying, receiving, possessing)	26.8	8.3	1:3
Vandalism	73.5	44.2	1:2
Drug Abuse Violations	333.4	61.1	1:5
Driving Under the Influence	61.7	5.9	1:10
Liquor Laws	9.6	28.9	1:0.3
Drunkenness	4.0	12.1	1:0.3
Disorderly Conduct	9.7	19.2	1:0.5
All Other Less-Serious Offenses	349.4	108.1	1:3
STATUS OFFENSES	20.9	111.8	1:0.2
Curfew and Loitering	2.6	9.3	1:0.3
Runaways	7.4	44.5	1:0.2
All Other Status Offenses	10.9	58.0	1:0.2

Sources:

¹See Appendix C, Table C-6, p. 67.

²See Appendix C, Table C-12, p. 79.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA:
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Custody* costs are compared with crime losses for two groups of offenders, delinquents or status offenders, in Table 3 (p.17). The same disparity in loss to processing cost appears as for law enforcement and judicial processing. In fact, more money is spent holding status offenders in custody than they cost society in losses due to their offending behavior.

GRAPHIC OVERVIEW

Figure 1 (p. 19,) summarizes the major findings. It brings into focus the great imbalance between crime loss and processing cost by seriousness of offense.

Society's losses due to serious offenses are six times greater than the justice system processing costs (\$9.7 billion versus \$1.7 billion). For the status offense, the opposite relationship holds. That is, processing costs are 19 times greater than society's losses (\$0.02 billion versus \$0.4 billion). Society is spending far more handling these minor offenses than they cost society in losses.

Figure 2 (p. 21) shows the number of cases at each major level of activity in the juvenile justice system. The number of cases are according to scale so that the relative volume of activity at each level can be easily seen. For example, the number of offenses known to the public is more than 10 times the number of arrests (\$27.1 million versus \$2.4 million).

COSTS ARE CONSERVATIVE

The findings in this assessment are on the conservative side since the losses due to crime shown in the cost comparisons are due only to direct costs** to victims and witnesses. Indirect costs*** (e.g., increases in price of goods due to crime,

*It was not possible with data available to differentiate the delinquency group between serious and less-serious offenders. It was not possible to include juveniles on probation and parole or aftercare in this comparison because of inadequate data.

**"Direct costs of serious juvenile crime are those which are imposed on victims and, to a lesser extent, witnesses of an individual crime. These direct costs include monetary or property loss, physical or mental injury, lost income, and the value of lost consumption opportunities, generated by the crime itself or by subsequent involvement in the juvenile justice system (i.e., police and court processing)" (Smith, Alexander, and Thalheimer, p. 4).

***"Indirect costs are defined as those costs arising out of serious crime in general (aggregate) which are incurred by the community on a household level in the form of increased expenditures (increases in prices attributable to business crime and private corporate compensation of employee victims, residential and personal security, and insurance); increased taxes (public victim compensation, such as unemployment compensation, welfare, and State and locally operated victim compensation programs, and costs of juvenile justice system processing); and a decrease in overall neighborhood quality of life as reflected in diminished property values" (Smith, Alexander, and Thalheimer, pp. 4-5).

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TABLE 3
COMPARISON OF CUSTODY COSTS WITH DIRECT LOSS DUE TO CRIME
BY PERSONS UNDER 18 YEARS, U.S. (1977)

REASON HELD	DIRECT LOSSES DUE TO OFFENSES ¹ (IN MILLIONS)	CUSTODY COST ² (IN BILLIONS)	RATIO CUSTODY COSTS TO LOSSES
TOTAL	\$10,710.8	\$869.4	1:12
Delinquency	10,699.9	700.4	1:15
Status Offense	20.9	169.0	1:0.1

Sources:

- ¹See Appendix C, Table C-6, p. 67.
- ²See Appendix C, Table C-14, p. 83.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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FIGURE 1
**CRIME LOSSES TO PROCESSING COSTS FOR
 SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES (1977)**
 (IN BILLIONS OF DOLLARS)

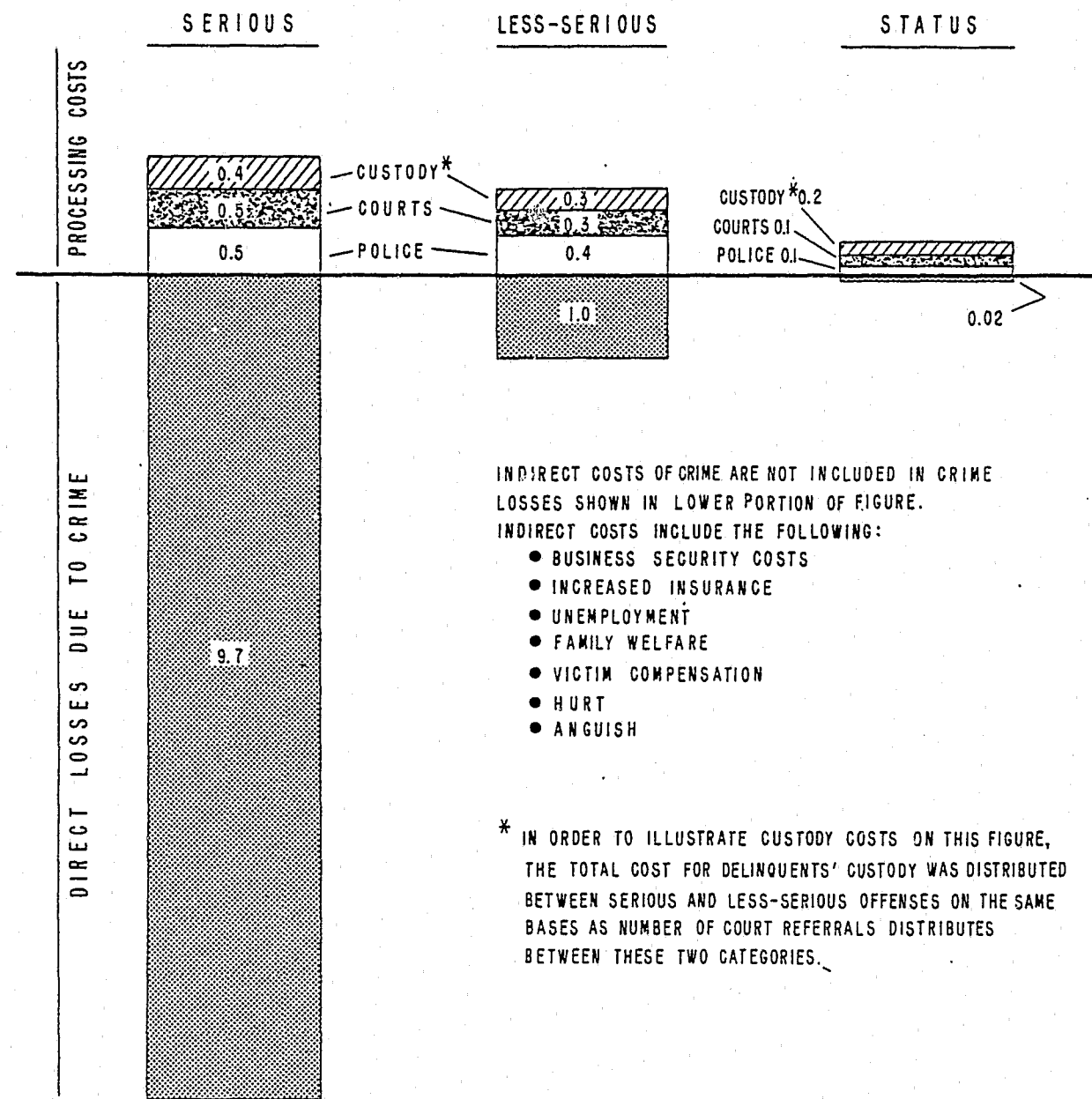
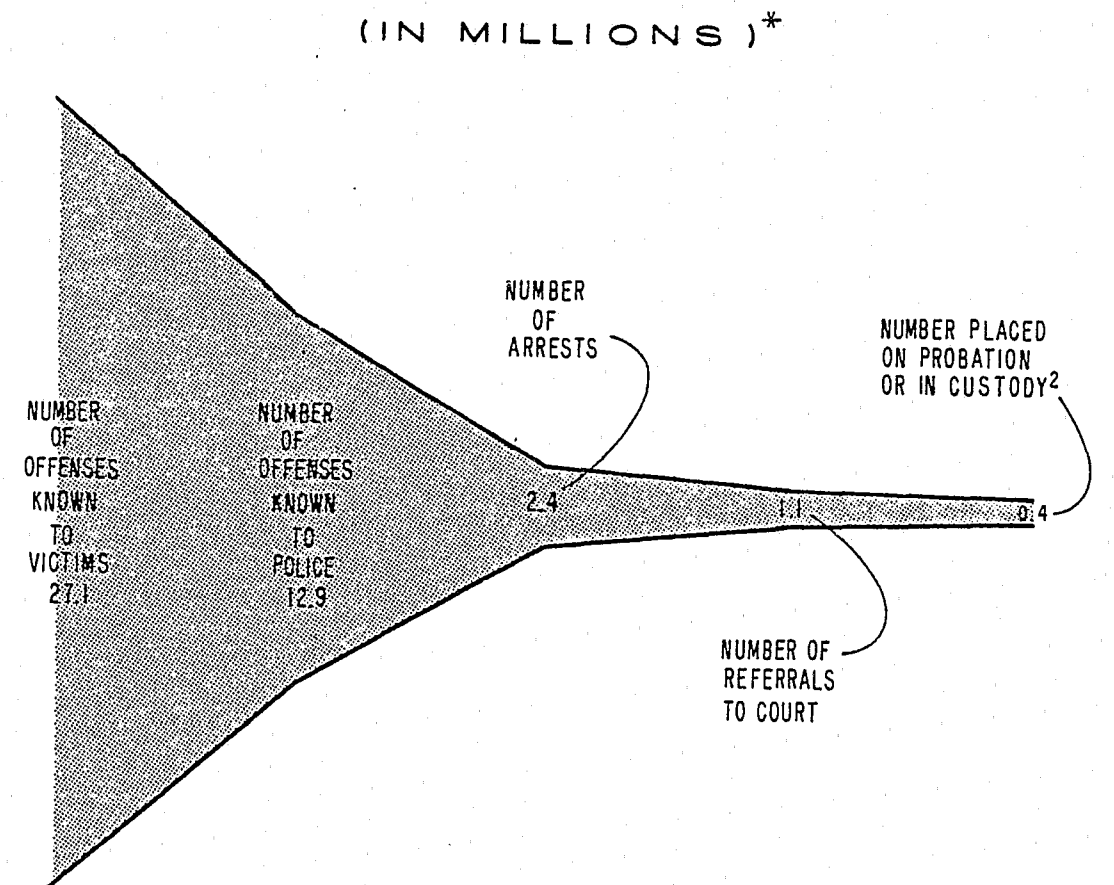


FIGURE CONSTRUCTED BY THE NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER
 (SACRAMENTO, CA: AMERICAN JUSTICE INSTITUTE, 1980).

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FIGURE 2
**NUMBER OF CASES AT EACH MAJOR LEVEL OF ACTIVITY
 IN THE U.S. JUVENILE JUSTICE SYSTEM (1977)**
 (IN MILLIONS)*



* NUMBERS REPRESENT CASES, NOT PERSONS (E.G., ONE PERSON COULD BE RESPONSIBLE FOR SEVERAL OFFENSES, ARRESTS OR REFERRALS DURING THE YEAR).

SOURCES:

¹ SEE APPENDIX C, TABLES C-6, C-8, AND C-12, PP 67, 71 AND 79.

² NATIONAL CENTER FOR JUVENILE JUSTICE. ADVANCE ESTIMATES OF 1977 NATIONAL COURT PROCESSING STATISTICS. (PITTSBURGH, PA: NATIONAL CENTER FOR JUVENILE JUSTICE, NOVEMBER 1979).

FIGURE CONSTRUCTED BY THE NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (SACRAMENTO, CA: AMERICAN JUSTICE INSTITUTE, 1980).

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increased cost of business security, insurance, unemployment, and welfare) are not included. In addition, the psychological cost to victims and witnesses are immeasurable. Finally, the cost estimates also do not include some difficult to measure social costs (e.g., broken homes).

The indirect costs of crime are not included in the analytical model because they are more difficult to measure and allocate among offense categories. If indirect costs were included in the assessment, the cost-ratio comparisons would be far more stark (e.g., it is reasonable to assume that greater sums are spent for security against robbers and burglars than against vandals and runaways).

In order to illustrate the magnitude of indirect losses it is useful to consider some of them. For example, in 1977, it is estimated that business security alone cost the nation more than \$7 billion (Smith, Alexander, and Thalheimer, p. 100). During the same year, crime losses increased insurance cost more than \$2 billion (Smith, Alexander, and Thalheimer, p. 101). Almost one-fourth of these increased security and insurance costs can likely be attributed to juveniles, since this is the proportion of arrests that are for persons under 18 years of age.

Increased insurance and security costs are only a few of the indirect losses due to crime. In the fuller context it can be seen that if all the indirect costs were included in the assessment the inefficiency of the juvenile justice system would be even greater than as now shown based only on direct costs.

REASONABLENESS OF ESTIMATES

Estimating the cost of crime and processing costs will always be a difficult task. Measuring any illegal activity, that many people want to keep hidden, is not easy. Another element that makes this task difficult is its size. What does a million arrests or a billion dollars in losses mean?

Because of the huge size and uncertainty of some of the estimates, it is important to examine the reasonableness of the figures derived. One way to assess the accuracy of the overall estimates is to compare data from several different sources and see how well they correspond.

Reasonableness of Processing Costs

In order to consider whether the various processing costs make sense, the findings of this assessment are compared with a national summary of expenditures for the criminal justice system. In Table 1 (p. 11) it can be seen that the total law enforcement processing cost is \$1.1 billion. Using a Federal report that summarizes

expenditures for the criminal justice system, by all levels of government, an estimate of \$1.4 billion is developed for juvenile law enforcement processing costs.* The two estimates are fairly close when it is considered how different are the data bases and assumptions underlining how each figure is achieved.

The reasonableness of court processing costs were assessed in a similar manner using the same sources as those for law enforcement. Criminal court expenditures in 1976 for judicial, legal services, and prosecution and public defense came to \$3.8. Allowing 6.5 percent for inflation, the total amount is \$4.0 billion in 1977. Since 24 percent of all arrests are juvenile, court expenditures were estimated as follows: \$4.0 billion X .24 = \$960 million. The total court processing cost shown in Table 2 (p. 13) is \$950 million. Again, the overall figures derived in two completely different manners are fairly similar.

It was not necessary to estimate juvenile custody costs as they were taken directly from U.S. Department of Justice reports on children in custody (U.S. Department of Justice, n.d. (a) and (b)).

Reasonableness of Cost of Crime Estimates

The cost of crime against business was estimated at \$20.0 billion in 1974 (U.S. Department of Commerce). Allowing for inflation, business crime was estimated at \$24.6 billion in 1977. This total covers the property crimes of robbery, burglary, shoplifting, vandalism, bad checks, and employee theft. Estimating crimes committed by those under 18 years at 24 percent, it was calculated that \$5.9 billion of the crimes against business are by juveniles. This estimate is probably a little high since it includes employee theft and few employees are under 18 years of age.

In this cost-benefit assessment, crimes against property by juveniles total \$5.7 billion. This figure is achieved by adding together the losses for crimes similar** to those listed in the Department of Commerce report.

*In the U.S. in 1976, the expenditure for police services by all levels of government was \$11.0 billion (U.S. Department of Justice, April 1978, p. 23). This includes all expenditures for operating costs and capital outlays. Allowing for an additional 6.5 percent inflation in 1977, the figure comes to \$11.7 billion. It is estimated that half of all police activity is related to traffic safety and personal matters (Goldstein, p. 24). Juvenile arrests in 1977 constituted 24 percent of all arrests. Using these figures, the total cost for juvenile law enforcement in 1977 was estimated at \$1.4 billion (\$11.7 billion X .50 X .24).

**The offenses used were robbery, burglary, larceny-theft, forgery and counterfeiting, fraud, stolen property (e.g., buying, receiving, possessing), and vandalism. See Appendix C, Table C-6, p. 67.

When comparing the two separate crime loss estimates, it can be seen that they are fairly similar, \$5.9 billion compared with \$5.7 billion. If crime against households were added to the \$5.9 billion in crime losses by business, the overall property crime figure would be considerably larger. The crime losses developed in this assessment are on the conservative side. Therefore, the disparity in crime losses to processing costs, especially for serious offenses and offenders, is even greater than shown.

The average cost of status offenses (\$3 and \$4 per offense) as developed in this cost-benefit assessment, are probably too low. Since no other estimates are available, the estimates developed here were used. At least, the estimates are based on the same rating scale and weighting logic used to develop the other crime loss estimates (Appendix D, pp. 87-103). The other crime loss estimates seem reasonable.

Even if the average cost of status offenses was estimated to be considerably higher, the great disparity between processing cost to offense loss would still remain. For example, if losses due to status offenses were estimated as 10 times greater than that shown, law enforcement and judicial processing expenditures combined would still be greater than the total losses due to these offenses.

V. NEED FOR BETTER SCREENING AND DISPOSITION OF SERIOUS OFFENDERS

Society's failure to screen "in" and deal with serious offenders as juveniles costs society a vast amount of money. In order to further illustrate this point, data from a study of 624 offenders (Peterson, Stambul, and Polich, p. 27) as well as data on cost of crimes (Appendix D, pp. 87-103) were used together to estimate the cost of inadequate screening and disposition. The study offenders were surveyed in depth as to their involvement in crime during the three-year period prior to their imprisonment. The responses were assessed for reasonableness. In Table 4 (p. 29), it can be seen these men cost society more than \$40 million in direct crime losses during the three-year period prior to their imprisonment. This is more than \$65,000 per man.

The average age of these offenders three years prior to their imprisonment is the early 20's. Since almost all of these people were arrested as juveniles, it is conceivable that if the juvenile justice system could more effectively screen "in" and properly handle these more serious offenders, it could reduce society's crime losses dramatically.

These 624 men were drawn as a fairly representative sample of men in California State prisons. If these crime losses were related to the total for the State or the nation, the magnitude of the cost could be seen.

TABLE 4

LOSS TO SOCIETY DUE TO CRIME COMMITTED BY 624 CALIFORNIA ADULT MALE OFFENDERS DURING A THREE-YEAR PERIOD PRIOR TO IMPRISONMENT (1977)

TYPE OF OFFENSE REPORTED DURING "36 MONTH WINDOW"	TOTAL NUMBER OF COMMISSIONS ¹	COST PER OFFENSE ²	TOTAL LOSS
Armed Robbery	1,214	\$ 3,780	\$ 4,588,920
Cons	5,501	276	1,518,276
Burglary	4,560	611	2,786,160
Forgery	1,325	276	365,700
Car Theft	837	1,302	1,089,774
Drug Sales	44,491	252	11,211,732
Assault			
Beating, Cut, Shot	1,154	12,703	14,659,262
Threat	1,026	211*	216,486
Rape	96	14,471	1,389,216
Attempted Murder	232	12,703**	2,947,096
TOTAL	60,436	\$ 675	\$40,772,622

*Cost of assault threatened estimated as lowest cost of serious offenses.
 **Cost of attempted murder estimated to be the same as the cost of assault.

Sources:

¹Peterson, M. A.; Stambul, H. B.; and Polish, S. M. Doing Crime: A Survey of California Prison Inmates (Draft). (Santa Monica, CA: RAND Corporation, May 1978).

²See Appendix C, Table C-6, p. 67.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

VI. SOMETHING CAN BE DONE TO IMPROVE EFFICIENCY

The first section of this assessment identifies major areas of inefficiency in the juvenile justice system. This second section shows how something can be done to improve the system's efficiency by describing two successful programs. One program relates to handling serious offenders and the other to handling status offenders.

A SUCCESSFUL CORRECTIONAL PROGRAM FOR SERIOUS OFFENDERS

The question is frequently raised as to the effectiveness of correctional programs in rehabilitation or crime prevention. An extensive survey of evaluative studies of correctional programs has been frequently cited to support the point of view that not much works (Lipton, Martinson, and Wilks). When viewed from a recidivism perspective, few programs seem to be of much help. When viewed from a cost-benefit perspective, however, a very different picture can emerge. It can be shown some fairly conventional programs can save society millions of dollars over and above the cost of the program.

A comprehensive assessment of a program can show where a program is profitable when a limited assessment may not. In order for a cost-benefit assessment of a correctional program to be comprehensive, it needs most or all of the following elements:

- Measuring the cost of crime losses in and out of the program.
- Measure increased income from employment.
- Take into consideration cost of correctional programs.
- Measure all components simultaneously over a standardized period of time before and after admission to the program.
- Have a comparison group who did not participate in the program, but for whom all of the above measures are made in the same standardized manner.

It is possible to carry out such a cost-benefit study with an adequate research base. One such research study was made by McGlothlin and his associates (Babst). Using the research base plus information on program costs, as well as information on employment income, a cost-benefit assessment was done (McGlothlin, Anglin, and Wilson). This assessment showed that the Civil Addict Program administered by the California Department of Corrections (CDC) saves society more than a million dollars a year.

The reason that the CDC program saves society so much money is that it greatly reduces theft among the treatment group compared with the comparison group. Institutional and field supervision costs were somewhat higher for the treatment group than for the comparison group because of the greater length of time spent in the programs. However, greater program costs were more than offset by the increased reduction in theft. The treatment group also became a greater benefit to society than the comparison group in that they earned more money from legitimate employment.

The CDC program emphasizes shorter institutional stays and increased parole supervision. Caseloads averaged about 33. Parole agents were required to make at least two personal contacts and one collateral contact per month for the first two years. At least three tests for drug abuse per month were required during the first 12 months after release. Such a program holds costs down because of its emphasis on community-based programs and its careful monitoring of parolees so that they can be quickly controlled if they start to slip back into drug abuse.

It cannot be assumed that all programs examined on a comprehensive cost-benefit basis will be shown to save society money. In fact, it is likely to show that some relatively inexpensive correctional programs may cost society a vast amount of money. For example, it is possible that probation or parole programs that have excessive caseloads and little or no systematic monitoring for drug abuse are more harmful than helpful. Such programs frequently do not clearly know who the drug abusers are in their caseload. Such programs give a false sense of security. Drug abusers under superficial control with insufficient supervision and monitoring may be able to engage in serious drug abuse (with a related criminal activity) with little probability of being detected. As a result, the cost of operating such a program may be small, but the loss through crime may be huge.

DIVERTING STATUS OFFENDERS FROM THE JUVENILE JUSTICE SYSTEM

Overview

The Juvenile Justice and Delinquency Prevention Act of 1974 (as amended) reflects a particular concern for status offenders (e.g., runaways and truants) and the need for diverting them out of the juvenile justice system. The findings of this assessment support the need for alternative methods of handling status offenders.

Neighborhood Alternative Center

It is much easier to point to a need than it is to show what can be done about it. In order to specifically show what can be done, a program identified by the Law Enforcement Assistance Administration (LEAA) as an exemplary model is described

here. The Neighborhood Alternative Center Program operated by the Sacramento County Probation Department handles many status offenders through a program of immediate short-term family crisis therapy rather than through the traditional procedures of the juvenile court (Criminal Justice Research Foundation, pp. 1-3).

The Sacramento County Probation Department's program started as a status offender diversion project in 1970. It was one of the first such programs in the nation. As a beginning project, they learned by doing. They learned that they could divert some youths, but the early program had some shortcomings and as such it was critiqued accordingly (Silberman, pp. 333-334). Four important changes were subsequently made in the process of setting up the Neighborhood Alternative Center. These changes were: (1) providing services in a neutral community setting, (2) extensive use of trained para-professionals, (3) 24-hour, 7-days-a-week crisis intervention services, and (4) back-up, short-term residential care (Criminal Justice Research Foundation, p. 3).

Since the program changes were put into effect, another evaluation of the Center's operation was made (Criminal Justice Research Foundation). The evaluation covered the period from October 1976 through September 1977. The following was found:

- Many potential status offenders were diverted out of the juvenile justice system.
 - (1) More than 1,000 self-referrals were made to the Center.
 - (2) About one-third of families were using the program for the second time.
 - (3) The police made a large number of informal referrals in addition to direct referrals to the Center.
 - (4) Admissions to juvenile hall were reduced 75 percent.
 - (5) Long-term institutional placements were decreased by 59 percent.
 - (6) Foster or group homes for status offenders were reduced 33 percent.
 - (7) Regular field supervision for status offenders was reduced 29 percent.
- More than 75 percent of the families surveyed felt they benefitted from the Center's services.
- A follow-up study of a sample of 348 cases handled during the first two months of the project showed that only 23 percent were re-referred to the Probation Department within 10 months.
- A cost-benefit comparison showed that the Center is able to demonstrate a savings of \$44 to the juvenile justice system for each case it handles. The total departmental savings resulting from the alternative handling of status offenders was \$82,531 (Criminal Justice Research Foundation, pp. i-iv).

The Neighborhood Alternative Center is located in a small, one-story shopping and office complex about eight miles east of downtown Sacramento. Cases referred to the Center are handled through immediate arrangement of a family counseling session to

discuss the emergent problem. Detention of youths as a method of solving problems is discouraged. Through the use of family crisis intervention counseling techniques, the counselors seek to develop the idea that the problem should be addressed by the family as a whole. If it is not possible or beneficial for a juvenile to return home, an effort is made to place the juvenile in a temporary alternative environment that is subject to mutual consent of parents and the juvenile (Criminal Justice Research Foundation, p. 9).

Other Programs for Juvenile Status Offenders

The movement away from court processing and institutionalization of status offenders has been growing. As a result of this growth, there is an increasing number of articles, books, and agency reports on the subject. An excellent annotated bibliography on this subject has been prepared by the National Council on Crime and Delinquency's abstracting service (Hickey). In this bibliography, a caution is sounded that "...several researchers have warned that diversion programs are not without some dangers. Research has shown that these programs can result in a widening-of-the-net effect, that is, an increase in the number of youths coming under some form of social control" (Hickey, p. 277).

VII. DOING SOMETHING

It is easier to point out areas in need of change than it is to do something about it. For example, in spite of the intent of the Juvenile Justice and Delinquency Prevention Act of 1974 to divert most status offenders out of the juvenile justice system, there still are many status offenders in the system some five years later.

One of the biggest problems in implementing change is the "feather pillow" effect. That is, efforts to introduce some constructive change are frequently blunted by the inertia of the system. For example, pressure to bring more due process or more deinstitutionalization into the system may result in relabeling of persons handled but not basic change in the number or characteristics of juveniles processed.

Cost-benefit assessments may provide those with authority more ammunition for propelling change. Hopefully, analytical models of this type may also help those in authority assess if real change is occurring.

Perhaps more real change can be brought about if those involved are made fully aware that the change need not jeopardize their job security, that there is more than enough work for all. What is required of them is a change in program emphasis. Openly sharing findings such as these with the staff and the public may also win their cooperation and support to bring about real change.

Since so much remains to be done, it is hoped that this cost-benefit assessment is only the beginning of a series of system-wide studies. One advantage of developing an overall analytical model for the study of a huge complex system is that it provides a conceptual framework for viewing the many parts in relationship to the whole. As such, it brings into perspective areas in need of improvement in the analytical model as well as areas in need of better data.

ANALYTICAL MODEL REFINEMENTS

Some suggested areas for improvement are:

- (a) Focus future findings on a series of strategic decision points in the juvenile justice system process rather than the juvenile justice system in general.
- (b) Develop better formulas for assigning dollar values to offense categories, especially for determining values at the ends of the offense ratings.

DATA GAPS

This assessment has brought out the tremendous need for better data. There are many areas that need better information, but only a few will be mentioned.

- (a) Studies are needed to determine current law enforcement, court, and correctional processing costs by type of offense.
- (b) Estimates are needed on the number, types, and costs of less-serious and status offenses known to the public. In the process of carrying out future victimization surveys, more questions could be asked about the public's knowledge of non-index crimes and status offenses.

If some of these data needs could be routinely collected in a cost-benefit framework as a by-product of on-going administrative data collection, a fairly inexpensive but very useful information base could be laid for future guidance (Glaser).

VIII. CONCLUSIONS

While some of the details of this cost-benefit assessment are only approximations, still the overall findings of the assessment are accurate. This is true, because disparities in crime loss costs to system processing costs by type of offense are so huge that even crude data are adequate to make the point.

The main point of the assessment is that the juvenile justice system is not utilizing its limited resources adequately. Inadequate time is allowed for handling serious offenders while too much time is required for handling minor offenders.

Status offenders are successfully being diverted out of the juvenile justice system by some programs, while other programs are successfully handling serious offenders.

In a case decision survey (Smith, Black, and Campbell), it was found that decision-makers when confronted with similar case materials sometimes made different classification decisions. This inconsistent labeling has important policy implications for how individuals are processed through the juvenile justice system.

Several studies have shown that most serious offenses are committed by relatively few offenders (Strasburg, pp. 44-45). In one study, it was observed that 6 percent of those charged with delinquency are responsible for as much as two-thirds of the serious offenses committed by persons under the age of 17 (Vachss and Bakal, p. xii). The above observations and the findings of this assessment forcefully indicate there is a need for better offender classification.

There is a need for more creative research to develop better offender classifications. Offender classifications are needed that can consistently differentiate between juveniles who are potentially dangerous, as well as those who are not. A better ability to classify offenders might mean stricter institutional and community-based controls for some. It also might mean less institutionalization for others.

APPENDIX A
NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER
STAFF, ADVISORY COMMITTEE,
AND PROGRAM MONITOR

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APPENDIX B
REFERENCES

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APPENDIX C
PROCEDURES AND WORK TABLES

PROCEDURAL DETAILS

The overall procedure for comparing the cost of each type of juvenile offense with the administrative cost of processing each is summarized in the text of the report. The procedural details are described here for those interested. The tables are arranged in the order in which they were developed. When estimates had to be made, they were made on the conservative side. That is, the estimates were made in a direction that de-emphasized the main point of the assessment.

Requests for cost-benefit studies in the criminal justice system are growing, but cost data are difficult to obtain. It is hoped, therefore, that some of the data and procedures developed in the following tables may be useful to others as they struggle to carry out studies for their own agencies.

TABLE C-1

Table C-1 (p. 57) shows the total number of arrests in the United States in 1977. It also gives the number and percent of the arrests who were under 18 years of age. Many subsequent estimates in this assessment are built from numbers in this table.

TABLE C-2

In order to estimate the total number of offenses by juveniles, data reported in the victimization surveys were used. The only data that estimate the total number of offenses is provided by the victimization surveys and this is reported only for the offenses shown in Table C-2 (p. 59). The percent of the offenses committed by persons under 18 years of age is estimated by taking the percent of offenders under 18 years.

The victim can only estimate the offender's age in those offenses where the offender is seen. Therefore, the percent of juvenile offenders for burglary and auto theft were estimated by using the relation between arrest rate and victimization rate using the larceny-theft category. For the larceny-theft category, the percent of juveniles arrested is higher than the victimization juvenile rate, 43 percent (Table C-1, p. 57) versus 25 percent (Table C-2, p. 59). The percent juvenile is estimated as halfway between the victimization rate for larceny-theft (Table C-2, p. 59) and arrest rate for burglary, 52 percent, and auto theft, 53 percent (Table C-1, p. 57). Since the number of motor vehicle offenses known to the police in 1977 was 508,701

(Table C-8, p. 71), the percent juvenile was rounded to 40 percent in order to provide a higher number of offenses known to victims than known to police. This estimating procedure provides a very conservative estimate of the number of motor vehicle offenses and therefore lower cost of crime for the category.

TABLE C-3

In order to estimate the number of offenses committed by juveniles in the less-serious and status offense categories, data in Table C-3 (p. 61) were developed. This table shows the ratio of offenses to arrests for the serious offenses. On an overall basis, the ratio is 13.3 to 1.0.

Because the victimization surveys do not provide data on murder, the number of murders committed by juveniles had to be estimated in a different fashion. First, the national homicide rate (10.8 per 100,000 in 1974) was applied to the nation's population (216.3 million in 1977) to obtain the total number of homicide offenses: 23,336 (U.S. Department of Commerce, p. 194; and U.S. Department of Health, Education, and Welfare, p. 141). Second, the ratio of homicide offenses to murder arrests in the total population in 1977 was calculated (23,336 to 20,096* = 1.2 to 1.0). Finally, this ratio was applied to the number of juvenile arrests for murder and manslaughter in 1977 to obtain an estimate of the number of juvenile offenses (1,997* X 1.2 = 2,396).

TABLE C-4

Using the overall ratio of offenses to arrests shown in Table C-3, the number of offenses for the less-serious and status offenses were estimated.

In order to provide a conservative estimate, a lesser ratio of 10 to 1 was used in Table C-4 (p. 63).

The number of status offenses in the "all other status offenses" category was estimated as equal to the number of youths arrested for curfew, loitering, and runaways. Uniform Crime Reports data do not include arrest data on truancy, ungovernability, and possession or drinking of alcohol. Information from seven jurisdictions, that do report such data, indicates that there are about as many other status offense arrests as there are for curfew/loitering and runaways (Smith, Berkman, Fraser, and Sutton, p. 91).

*Arrest frequencies are shown in Table C-1, p. 57.

TABLE C-5

Estimating the specific average cost (loss) for each type of offense is a hazardous venture. Despite this difficulty, estimating the relative magnitude of the cost of each type of offense is fairly easy, since most persons agree that some offenses are much more costly than others (e.g., murder versus runaways).

Table C-5 (p. 65) shows data from two different studies that ranked the relative seriousness of various types of offenses. The rankings are fairly similar, despite the fact that quite different groups did the ranking. The ranking for the Sellin-Wolfgang Index was developed on the basis of interviews with a thousand people from different backgrounds ranging from police officers to students. Each person was asked to judge the relative seriousness of different crime incidents (Sellin-Wolfgang).

The other score shown in Table C-5 is the Seriousness Scale developed in a Minnesota study where offenses were rated by 25 probation/parole officers and 23 staff members of Minnesota Reception and Diagnostic Center (Gray, Conover, and Hennessey, pp. 386-387). The relationship between the Sellin-Wolfgang Scores and the Seriousness Scale is shown in the third column by the ratio between them.

Once it was established that the seriousness ranking of the two scoring systems are fairly similar, then dollar figures were assigned to the offense categories. The procedure for assigning the dollar values shown is discussed in Appendix D (pp. 87-103). Many factors were taken into consideration in developing the dollar figures and the details may be of particular interest to those doing cost studies in the future.

TABLE C-6

Direct losses by crime shown in Table C-6 (p. 67) were estimated by multiplying the number of offenses in each category by average loss per category.

TABLE C-7

In order to estimate the cost of law enforcement processing, it was necessary to determine the number of offenses reported to the police. The number of offenses known to the police is reported in the Uniform Crime Reports for index offenses (U.S. Department of Justice, October 1978). Since these data are for adults and juveniles combined, the ratio between known offenses and arrests per category was calculated as shown in Table C-6 (p. 67). These ratios were used for estimating the number of known juvenile offenses in the next table.

The numbers shown in Table C-7 (p. 69) for murder are inconsistent in that there should be at least as many murders known to the police as there are arrests. Probably

this inconsistency is due to the somewhat different reporting basis used in the Uniform Crime Reports.

TABLE C-8

The number of juvenile offenses known to the police was estimated in two ways. In the first part of Table C-8 (p. 71), the number of index crimes known to the police was calculated by taking the ratio of arrests to known offenses from Table C-7 (p. 69). In the second part of Table C-8, the number of known offenses was estimated by taking five times the number of arrests per offense category. The average overall ratio for serious offenses is 5.9 to 1.0, therefore arbitrarily 5 to 1 was taken as the estimated ratio for the remainder of the offenses. A lower figure was chosen to be on the conservative side.

TABLE C-9

The law enforcement processing cost per offense is shown in Table C-9 (p. 73). It was estimated by taking the known number of offenses, from Table C-8 (p. 71), times the average processing cost per offense.

Law enforcement processing costs per offense category were developed from a comprehensive study made for Phoenix and Tucson, Arizona, police (Lawrence Leiter and Company). In a systematic national search for such studies, this was the only study found (Smith, Alexander, and Thalheimer, p. 131). How representative these costs are of other jurisdictions is not known. It is interesting to note that, when these processing costs are used as shown in Table C-9, they give a total processing cost of \$1.1 billion for the nation. This total is fairly similar to total processing costs estimated in an entirely different manner, as shown in the "Reasonableness of Estimates" section in the first part of this monograph (p. 23).

The police processing costs included administrative costs as well as police salary and fringe benefit costs. The study was made in 1975 and the figures were adjusted for inflation to 1977. The processing cost for each offense was averaged between the two jurisdictions reporting (Phoenix and Tucson).

TABLE C-10

The ratio of law enforcement processing cost to crime loss by type of offense is shown in Table C-10 (p. 75). The ratio is determined by dividing the law enforcement processing cost into losses due to offense. It can be readily seen that the processing cost to loss ratio varies greatly by type of offense.

TABLE C-11

In order to compare offense losses with court processing cost, it is necessary to obtain information on court processing cost by type of offense. In an extensive search of the literature (Smith, Alexander, and Thalheimer), only a few studies were found that provide such information. The President's Commission on Law Enforcement and Administration of Justice (February 1967, p. 265) provided information on the average processing cost per serious offense for the total criminal justice system (police, courts, and corrections).

In order to obtain court processing cost only, it was necessary to subtract out corrections and police processing costs. In a Seattle study, the cost of corrections per offense category was subtracted (Matthews, Steinburn, and Bennett, p. 225). The figures were updated to 1977 to allow for inflation. Then, in order to obtain court processing costs only, the police processing costs developed earlier (Table C-9, p. 73) were subtracted out for each serious offense category as shown in Table C-11 (p. 71).

Since no data were found on court processing costs for the offense categories in the less-serious and status offense groups, these costs had to be estimated. This was done by first obtaining an overall court processing cost for all offenses. The procedure is described later in this section (p. 56). Then the average court processing cost of the less-serious and status offenses was estimated using the following steps:

- (1) Total court processing cost was calculated by taking the 1,150,800 court referrals times \$827 per offense (top line of Table C-12, p. 79).
- (2) Court processing cost for serious offenders was calculated in Table C-12 (p. 79) at \$544,706,787.
- (3) The court processing costs of the less-serious and status offenders was derived by subtracting the amount derived in step 2 from the amount obtained in step 1.
- (4) The number of court referrals for less-serious and status offenders was then divided into the amount determined in step 3, to give the average court processing cost of \$700 per offense.

The overall police and court processing cost per offense mentioned earlier was derived from averaging two overall cost figures taken from studies done in Denver and California. Then an allowance was made for inflation to 1977 prices. Then the overall police processing cost of \$85 (Table C-9, p. 73) was subtracted to derive the overall figure of \$827 per offense.

TABLE C-12

The total court processing cost per offense shown in Table C-12 (p. 79) was obtained by taking the number of cases referred to the court times the average processing cost per case within each offense category.

The court processing costs were based on the number of referrals to the courts because the court workload is based on cases referred to it. This procedure differs from the procedures for estimating law enforcement processing costs which is based on offenses reported to the police, a much larger population.

TABLE C-13

The court processing cost to loss ratio shown in Table C-13 (p. 81) is determined by dividing court processing cost into losses due to the offense within each offense category. The loss to offense ratio varies greatly by type of offense.

TABLE C-14

Information on correctional cost is very limited. Data is available on juveniles held in public and private facilities. The procedure for calculating custody costs shown in Table C-14 (p. 83) was to develop costs separately for public and private facilities and then add them together, because the average cost per youth held differs between the two types of facilities.

The average number of youths in custody by "reason held" was estimated. This was done by calculating the percent of youths who were held for delinquency and status offenses at the end of the year (December 31, 1977) and using these percentages. The average daily number of residents was prorated accordingly. It was necessary to estimate in this manner since custody cost is based on the average daily population rather than on a day-only count.

TABLE C-15

In the custody data, the only relevant distinction made under "reason held" is between delinquency and status offenses. In order to calculate the custody cost to loss ratio, therefore, the offense losses were combined accordingly in Table C-15 (p. 85) into the same two categories.

TABLE C-1
ARRESTS OF PERSONS UNDER 18 YEARS FOR
SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

OFFENSE CHARGED	TOTAL NUMBER OF ARRESTS	NUMBER OF ARRESTS UNDER 18 YEARS	PERCENT ARRESTS UNDER 18 YEARS
TOTAL	9,029,335	2,170,193	24.0
SERIOUS OFFENSES (INDEX OFFENSES)	1,986,043	818,994	41.2
Murder and Manslaughter	20,096	1,997	9.9
Forcible Rape	25,800	4,257	16.5
Robbery	122,514	39,259	32.0
Aggravated Assault	221,529	36,182	16.3
Burglary	454,193	233,904	51.5
Larceny-Theft	1,006,915	431,747	42.9
Motor Vehicle Theft	135,196	71,648	53.0
LESS-SERIOUS OFFENSES	6,771,832	1,079,739	15.9
Forgery and Counterfeiting	67,984	8,722	12.8
Fraud	216,672	22,377	10.3
Stolen Property (e.g., buying, receiving, possessing)	104,401	34,307	32.9
Vandalism	196,724	118,563	60.3
Drug Abuse Violation	569,293	132,516	23.2
Driving Under the Influence	1,104,132	24,495	2.2
Liquor Laws	321,573	119,913	37.3
Drunkenness	1,208,525	49,844	4.1
Disorderly Conduct	624,736	121,272	19.4
All Other Less-Serious Offenses*	2,357,792	447,930	19.0
STATUS OFFENSES	271,460	271,460	100.0
Curfew and Loitering Law Violation	86,013	86,013	100.0
Runaways	185,447	185,447	100.0

*"All other less-serious offenses" includes: other assaults, arson, embezzlement, weapons (carrying, possessing), prostitution and commercialized vice, sex offenses (except forcible rape and prostitution), gambling, offenses against family and children, and vagrancy.

Source: U.S. Department of Justice. Federal Bureau of Investigation. Uniform Crime Reports for the United States--1977. (Washington, D.C.: U.S. Government Printing Office, 1978, p. 180).

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

TABLE C-2
ESTIMATED NUMBER OF SERIOUS OFFENSES
BY PERSONS UNDER 18 YEARS, U.S. (1977)

TYPE OF OFFENSE	TOTAL NUMBER OF OFFENSES IN 1977 ¹ (a)	PERCENT OF OFFENDERS UNDER 18 YEARS 1977 ² (b)	NUMBER OF JUVENILE OFFENSES IN 1977 (a) x (b)
Forcible Rape	154,000	9%	13,860
Robbery (Personal and Commercial)	1,362,000 ³	22%	299,640
Aggravated Assault	1,738,000 ³	18%	312,840
Burglary (Personal and Commercial)	8,339,900	38%*	3,169,162
Larceny-Theft (Personal and Household)	26,351,300	25%	6,587,825
Motor Vehicle Theft	1,296,800	40%*	518,720

See Appendix C narrative (pp. 51-52) for discussion of estimating procedure.

Sources:

- ¹U.S. Department of Justice. Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. "Criminal Victimization in the United States: Summary Findings--1977-78 Changes in Crime and of Trends Since 1973." (Washington, D.C.: U.S. Government Printing Office, October 1979).
- ²McDermott, M. Joan and Hindelang, Michael J. Analysis of National Crime Victimization Survey Data to Study Serious Delinquent Behavior--Research Monograph One: Juvenile Criminal Behavior in the United States: Its Trends and Patterns. U.S. Department of Justice. Law Enforcement Assistance Administration. National Institute for Juvenile Justice and Delinquency Prevention. (Albany, NY: Criminal Justice Research Center, 1979), p. 14.
- ³The number of burglary and robbery offenses in the commercial area were taken from 1976 survey data found in: U.S. Department of Justice. Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. Criminal Victimization in the United States: A Comparison of 1975 and 1976 Findings. (Washington, D.C.: U.S. Government Printing Office, November 1977), p. 48.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

TABLE C-3
RELATIONSHIP BETWEEN THE NUMBER OF OFFENSES REPORTED IN VICTIMIZATION SURVEY
AND NUMBER OF ARRESTS OF PERSONS UNDER 18 YEARS, U.S. (1977)

TYPE OF OFFENSE	TOTAL NUMBER OF JUVENILE OFFENSES IN 1977 ¹	TOTAL NUMBER OF JUVENILE ARRESTS IN 1977 ²	RATIO OF OFFENSES TO ARRESTS
TOTAL	10,904,443	818,994	13.3:1
Murder and Manslaughter	2,396*	1,997	1.2:1
Forcible Rape	13,860	4,257	3.3:1
Robbery	299,640	39,259	7.6:1
Aggravated Assault	312,840	36,182	8.6:1
Burglary	3,169,162	233,904	13.5:1
Larceny-Theft	6,587,825	431,747	15.3:1
Motor Vehicle Theft	518,720	71,648	7.2:1

*See text (p. 52) for estimation procedure.

Sources:

- ¹See Appendix C, Table C-2, p. 59.
- ²See Appendix C, Table C-1, p. 57.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

TABLE C-4
ESTIMATED NUMBER OF LESS-SERIOUS AND STATUS OFFENSES
BY PERSONS UNDER 18 YEARS, U.S. (1977)

OFFENSE CHARGED	NUMBER OF ARRESTS UNDER 18 YEARS IN 1977 ¹	RATIO OF OFFENSES TO ARRESTS ²	NUMBER OF JUVENILE OFFENSES* (10 x 1)
LESS-SERIOUS OFFENSES	1,079,739	10:1	10,797,390
Forgery and Counterfeiting	8,722	10:1	87,220
Fraud	22,377	10:1	223,770
Stolen Property (e.g., buying, receiving, possessing)	34,307	10:1	343,070
Vandalism	118,563	10:1	1,185,630
Drug Abuse Violation	132,316	10:1	1,323,160
Driving Under the Influence	24,495	10:1	244,950
Liquor Laws	119,913	10:1	1,199,130
Drunkenness	49,844	10:1	498,440
Disorderly Conduct	121,272	10:1	1,212,720
All Others	447,930	10:1	4,479,300
STATUS OFFENSES	542,920	10:1	5,429,200
Curfew and Loitering Law Violation	86,013	10:1	860,130
Runaways	185,447	10:1	1,854,470
All Other Status Offenses	271,460*	10:1	2,714,600

*See text (p. 52) for estimation procedure.

Sources:

¹See Appendix C, Table C-1, p. 57.

²Using the data shown in Appendix C, Table C-3 as a guideline, the ratio of offenses to arrests was conservatively estimated at 10:1 (see text, p. 52).

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

TABLE C-5
RELATIONSHIP BETWEEN SELLIN-WOLFGANG SCORE AND SERIOUSNESS SCALE AND
CRIME COST FOR SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

TYPE OF OFFENSE	SELLIN-WOLFGANG SCORE ¹	SERIOUSNESS SCALE ²	RATIO OF SELLIN-WOLFGANG TO SERIOUS SCALE	ESTIMATE OF DIRECT COST*
SERIOUS OFFENSES				
Murder and Manslaughter	26	94.1	1:4	\$178,246
Forcible Rape	10	79.4	1:8	14,471
Robbery	5:7	43.4	1:5	3,780
Aggravated Assault	8:11	65.8	1:7	12,703
Burglary	3	18.3	1:6	611
Larceny-Theft	2	16.0	1:8	211
Motor Vehicle Theft	4	19.3	1:5	1,302
LESS-SERIOUS OFFENSES				
Forgery and Counterfeiting	---	16.5	---	276
Fraud	---	16.5	---	276
Stolen Property (e.g., buy- ing, receiving, possessing)	---	10.8	---	78
Vandalism	---	10.0	---	62
Drug Abuse Violations	---	16.0	---	252
Driving Under the Influence	---	16.0	---	252
Liquor Laws	---	5.1	---	8
Drunkenness	---	5.1	---	8
Disorderly Conduct	---	5.1	---	8
All Others Less-Serious Offenses	---	10.8**	---	78
STATUS OFFENSES				
Curfew and Loitering	---	3.7	---	3
Runaways	---	4.1	---	4
All Other Status Offenses	---	3.9**	---	4

*See Appendix D (pp. 87-103) cost estimation procedure.

**Seriousness score estimated as halfway between upper and lower limit scores of offense group.

Sources:

¹Sellin, Thorsten; and Wolfgang, Marvin E. *The Measurement of Delinquency*. (New York, NY: John Wiley and Sons), pp. 249-252.

²Gray, Charles M.; Conover, C. Johnston; and Hennessey, Timothy M. "Cost Effectiveness of Residential Community Corrections: An Analytical Prototype." *Evaluation Quarterly* 2:5 (August 1978):586-587.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

TABLE C-6
DIRECT LOSS DUE TO CRIME BY PERSONS UNDER 18 YEARS FOR
SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

OFFENSE CHARGED	ESTIMATED NUMBER OF JUVENILE OFFENSES ¹	AVERAGE LOSS PER OFFENSE ²	DIRECT LOSS DUE TO CRIME
TOTAL	27,131,033	\$ 395	\$10,710,843,380
SERIOUS OFFENSES (INDEX OFFENSES)	10,904,443	893	9,736,053,510
Murder and Manslaughter	2,396	178,246	427,077,410
Forcible Rape	13,860	14,471	200,568,060
Robbery	299,640	3,780	1,132,639,200
Aggravated Assault	312,840	12,703	3,974,006,500
Burglary	3,169,162	611	1,936,357,900
Larceny-Theft	6,587,825	211	1,390,031,000
Motor Vehicle Theft	518,720	1,302	675,373,440
LESS-SERIOUS OFFENSES	10,797,390	88	953,933,200
Forgery and Counterfeiting	87,220	276	24,072,720
Fraud	223,770	276	61,760,520
Stolen Property (e.g., buying, receiving, possessing)	343,070	78	26,759,460
Vandalism	1,185,630	62	73,509,060
Drug Abuse Violations	1,323,160	252	333,436,320
Driving Under the Influence	244,950	252	61,727,400
Liquor Laws	1,199,130	8	9,593,040
Drunkenness	498,440	8	3,987,520
Disorderly Conduct	1,212,720	8	9,701,760
All Other Less-Serious Offenses	4,479,300	78	349,385,400
STATUS OFFENSES	5,429,200	4	20,856,670
Curfew and Loitering Law Violations	860,130	3	2,580,390
Runaways	1,854,470	4	7,417,880
All Other Status Offenses	2,714,600	4	10,858,400

Sources:

¹See Appendix C, Tables C-3 and C-4, pp. 61 and 63.

²See Appendix C, Table C-5, p. 65.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-7
RELATIONSHIP BETWEEN NUMBER OF OFFENSES KNOWN TO POLICE
AND NUMBER OF ARRESTS FOR SERIOUS OFFENSES--ALL AGES, U.S. (1977)

OFFENSE CHARGED	NUMBER OF OFFENSES KNOWN TO POLICE (ALL AGES)	TOTAL NUMBER OF ARRESTS (ALL AGES)	RATIO OF KNOWN OFFENSES TO ARRESTS
SERIOUS OFFENSES (INDEX OFFENSES)	10,935,800	1,986,043	5.5:1
Murder and Manslaughter	19,120*	20,096*	1.0:1
Forcible Rape	63,020	25,800	2.4:1
Robbery	404,850	122,514	3.3:1
Aggravated Assault	522,510	221,329	2.4:1
Burglary	3,052,200	454,193	6.7:1
Larceny-Theft	5,905,700	1,006,915	5.8:1
Motor Vehicle Theft	968,400	135,196	7.1:1

*See text (pp. 53-54) for discussion of inconsistency in number of offenses and arrests for murder.

Source: U.S. Department of Justice. Federal Bureau of Investigation. Uniform Crime Reports for the United States--1977. (Washington, D.C.: U.S. Government Printing Office, October 1978), pp. 35 and 180.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-8
ESTIMATED NUMBER OF OFFENSES KNOWN TO POLICE
COMMITTED BY PERSONS UNDER 18 YEARS, U.S. (1977)

OFFENSE CHARGED	NUMBER OF ARRESTS UNDER 18 YEARS ¹	RATIO OF KNOWN OFFENSES TO ARRESTS ²	NUMBER OF KNOWN OFFENSES UNDER 18 YEARS
TOTAL	2,441,653	5.3:1	12,921,892
SERIOUS OFFENSES (INDEX OFFENSES)	818,994	5.9:1	4,808,597
Murder and Manslaughter	1,997	1.0:1	1,997
Forcible Rape	4,257	2.4:1	10,217
Robbery	39,259	3.3:1	129,555
Aggravated Assault	36,182	2.4:1	86,857
Burglary	233,904	6.7:1	1,567,157
Larceny-Theft	431,747	5.8:1	2,504,133
Motor Vehicle Theft	71,648	7.1:1	508,701
LESS-SERIOUS OFFENSES	1,079,739	5.0:1	5,398,695
Forgery and Counterfeiting	8,722	5.0:1	43,610
Fraud	22,377	5.0:1	111,885
Stolen Property (e.g., buying, receiving, possessing)	34,307	5.0:1	171,535
Vandalism	118,563	5.0:1	592,815
Drug Abuse Violations	132,316	5.0:1	661,580
Driving Under the Influence	24,495	5.0:1	122,475
Liquor Laws	119,913	5.0:1	599,565
Drunkenness	49,844	5.0:1	249,220
Disorderly Conduct	121,272	5.0:1	606,360
All Other Less-Serious Offenses	447,930	5.0:1	2,239,650
STATUS OFFENSES	542,920	5.0:1	2,714,600
Curfew and Loitering Law Violations	86,013	5.0:1	430,065
Runaways	185,447	5.0:1	927,235
All Other Status Offenses	271,460	5.0:1	1,357,300

Sources:

¹See Appendix C, Tables C-3 and C-4, pp. 61 and 63.

²See Appendix C, Table C-7 (p. 69) for serious offenses. See text (p. 54) for estimating procedure for less-serious offenses.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-9
ESTIMATED LAW ENFORCEMENT PROCESSING COSTS FOR SERIOUS, LESS-SERIOUS,
AND STATUS OFFENSES FOR PERSONS UNDER 18 YEARS, U.S. (1977)

OFFENSE	NUMBER OF OFFENSES KNOWN TO POLICE UNDER 18 YEARS ¹	AVERAGE COST OF LAW ENFORCEMENT PROCESSING*	TOTAL COST FOR LAW ENFORCEMENT
TOTAL	12,921,892	\$ 85-	\$1,100,768,140
SERIOUS OFFENSES	4,808,597		
Murder	1,997	114	546,922,610
Forcible Rape	10,217	324	647,028
Robbery	129,555	208	2,125,136
Aggravated Assault	86,837	141	18,267,255
Burglary	1,567,157	111	9,638,907
Larceny-Theft	2,504,133	112	175,521,584
Motor Vehicle Theft	508,701	119	297,991,827
LESS-SERIOUS OFFENSES	5,398,695	84	42,730,884
Forgery and Counterfeiting	43,610	81	437,117,730
Fraud	111,885	131	5,712,910
Stolen Property (e.g., buying, receiving, possessing)	171,535	131	14,656,935
Vandalism	592,815	143	24,529,505
Drug Abuse Violation	661,580	43	25,491,045
Driving Under the Influence	122,475	158	91,298,040
Liquor Laws	599,565	158**	16,901,550
Drunkenness	249,220	43**	25,781,295
Disorderly Conduct	606,360	60**	14,953,200
All Other Less-Serious Offenses	2,239,650	81**	36,381,600
STATUS OFFENSES	2,714,600	81**	181,411,650
Curfew and Loitering	430,065	43***	116,727,800
Runaways	927,235	43***	18,492,795
All Other Status Offenses	1,357,300	43***	39,871,105

*See text (p. 54) for discussion.

**Average cost estimated from similar offense categories.

***Average cost for status offenses estimated as the least of the less-serious offenses (i.e., vandalism).

Source:

¹See Appendix C, Table C-8, p. 71.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-10

COMPARISON OF LAW ENFORCEMENT PROCESSING COSTS WITH OFFENSE LOSSES FOR PERSONS UNDER 18 YEARS--SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

OFFENSE CHARGED	DIRECT LOSSES DUE TO OFFENSES ¹	LAW ENFORCEMENT PROCESSING COSTS ²	RATIO OF PROCESSING COSTS TO LOSSES
TOTAL	\$10,710.8	\$1,100.8	1:10
SERIOUS OFFENSES (INDEX OFFENSES)	9,736.0	546.9	1:18
Murder and Manslaughter	427.1	.6	1:712
Forcible Rape	200.6	2.1	1:96
Robbery	1,132.6	18.3	1:82
Aggravated Assault	3,974.0	9.6	1:414
Burglary	1,936.4	175.5	1:11
Larceny-Theft	1,390.0	298.0	1:5
Motor Vehicle Theft	675.4	42.7	1:16
LESS-SERIOUS OFFENSES	953.9	437.1	1:2
Forgery and Counterfeiting	24.1	5.7	1:4
Fraud	61.8	14.7	1:4
Stolen Property (e.g., buying, receiving, possessing)	26.8	24.5	1:1
Vandalism	73.5	25.5	1:3
Drug Abuse Violation	333.4	91.3	1:4
Driving Under the Influence	61.7	16.9	1:4
Liquor Laws	9.6	25.8	1:4
Drunkenness	4.0	15.0	1:3
Disorderly Conduct	9.7	36.4	1:3
All Other Less Serious Offenses	349.4	181.4	1:2
STATUS OFFENSES	20.9	116.7	1:2
Curfew and Loitering	2.6	18.5	1:1
Runaways	7.4	39.9	1:2
All Other Status Offenses	10.9	58.4	1:2

Sources:

- ¹See Appendix C, Table C-6, p. 67.
²See Appendix C, Table C-9, p. 73.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-11

ESTIMATED AVERAGE COURT PROCESSING COSTS FOR PERSONS UNDER 18 YEARS--SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

REASON FOR REFERRAL	POLICE AND COURT PROCESSING COSTS ¹ (a)	POLICE PROCESSING COSTS ² (b)	COURT PROCESSING COSTS (AVERAGE) (a)-(b)
TOTAL	\$ 912	\$ 85	\$ 827
SERIOUS OFFENSES	1,071	114	957
Homicide	1,690	324	1,366
Forcible Rape	1,369	208	1,161
Robbery	1,263	141	1,122
Aggravated Assault	1,102	111	991
Burglary	1,067	112	955
Larceny-Theft	1,018	119	899
Motor Vehicle Theft	1,227	84	1,143
LESS-SERIOUS AND STATUS OFFENSES³	766	66	700

Sources:

- ¹See text (p. 55) for source.
²See Appendix C, Table C-9, p. 73.
³See text (p. 56) for source.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-12

ESTIMATED COURT PROCESSING COSTS FOR PERSONS UNDER 18 YEARS--
SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

REASONS FOR REFERRAL	NUMBER REFERRED TO COURT ¹	AVERAGE COST OF COURT PROCESSING ²	TOTAL COST FOR COURT PROCESSING
TOTAL	1,150,800	\$ 827	\$951,829,587
SERIOUS OFFENSES (INDEX OFFENSES)	569,195	957	544,706,787
Murder	1,323	1,366	1,807,218
Forcible Rape	2,982	1,161	3,462,102
Robbery	25,655	1,122	28,784,910
Aggravated Assault	26,170*	991	25,934,470
Burglary	181,407	955	173,243,685
Larceny-Theft	277,093	899	249,106,607
Motor Vehicle Theft	54,565	1,143	62,367,795
LESS-SERIOUS OFFENSES	421,869	700	295,507,600
Forgery and Counterfeiting	3,017*	700	2,111,900
Fraud	7,711*	700	5,397,700
Stolen Property (e.g., buying, receiving, possessing)	11,837*	700	8,285,900
Vandalism	63,097	700	44,167,900
Drug Abuse Violation	87,292	700	61,104,400
Driving Under the Influence	8,431*	700	5,901,700
Liquor Laws	41,342	700	28,939,400
Drunkenness	17,330	700	12,131,000
Disorderly Conduct	27,377	700	19,163,900
All Other Less-Serious Offenses	154,434*	700	108,103,800
STATUS OFFENSES	159,736	700	111,815,200
Curfew and Loitering Law Violation	13,224	700	9,256,800
Runaways	63,612	700	44,528,400
All Other Status Offenses	82,900	700	58,030,000

*Estimated number of court referrals in these categories based on proportion arrested in these categories (see Appendix C, Table C-1, p. 57).

Sources:

- ¹National Center for Juvenile Justice. Advance Estimates of 1977 National Court Processing Statistics (Pittsburgh, PA: National Center for Juvenile Justice, 1979).
²See Appendix C, Table C-11, p. 77.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE C-14
ESTIMATED COST OF RESIDENTIAL JUVENILE CUSTODY
BY REASON HELD AND BY TYPE OF FACILITY, U.S. (1977)

REASON HELD	JUVENILE IN CUSTODY*	AVERAGE COST PER YEAR	COST OF CUSTODY (IN MILLIONS)
PUBLIC CUSTODY¹	46,591	\$14,123	\$658.0
Delinquency (Serious and Less-Serious Offenses)	41,211	14,123	582.0
Status Offenses	5,380	14,123	76.0
PRIVATE CUSTODY²	17,234	\$12,269	\$211.4
Delinquency	9,653	12,269	118.4
Status Offenses	7,581	12,269	93.0
TOTAL PUBLIC AND PRIVATE CUSTODY	63,825	\$13,622	\$869.4
Delinquency	50,864	13,622	700.4
Status Offenses	12,961	13,622	169.0

*Average daily number of residents. See text (p. 56) for estimating procedure.

Sources:

- ¹U.S. Department of Justice. Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. "Children in Custody: Advance Report on the 1977 Census of Public Juvenile Facilities." No. SD-JD-5A. (Washington, D.C., n.d.).
²U.S. Department of Justice. Law Enforcement Assistance Administration. National Criminal Justice Information and Statistics Service. "Children in Custody: Advance Report on the 1977 Census of Private Juvenile Facilities." No. SD-JD-5B. (Washington, D.C., n.d.).

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TABLE C-15
 COMPARISON OF COURT PROCESSING COSTS WITH OFFENSE LOSSES FOR PERSONS
 UNDER 18 YEARS--SERIOUS, LESS-SERIOUS, AND STATUS OFFENSES, U.S. (1977)

(IN MILLIONS)

OFFENSE CHARGED	DIRECT LOSSES DUE TO OFFENSE ¹	COURT PROCESSING COSTS ²	RATIO OF PROCESSING COSTS TO LOSSES
TOTAL	\$10,710.8	\$951.8	1:11
SERIOUS OFFENSES (INDEX OFFENSES)	9,736.0	544.7	1:18
Murder and Manslaughter	427.1	1.8	1:237
Forcible Rape	200.6	3.5	1:57
Robbery	1,132.6	28.8	1:39
Aggravated Assault	3,974.0	25.9	1:153
Burglary	1,956.4	173.2	1:11
Larceny-Theft	1,390.0	249.1	1:6
Motor Vehicle Theft	675.4	62.4	1:11
LESS-SERIOUS OFFENSES	953.9	295.3	1:3
Forgery and Counterfeiting	24.1	2.1	1:11
Fraud	61.8	5.4	1:11
Stolen Property (e.g., buying, receiving, possessing)	26.8	8.3	1:3
Vandalism	73.5	44.2	1:2
Drug Abuse Violations	333.4	61.1	1:5
Driving Under the Influence	61.7	5.9	1:10
Liquor Laws	9.6	28.9	1:3
Drunkenness	4.0	12.1	1:3
Disorderly Conduct	9.7	19.2	1:5
All Other Less-Serious Offenses	349.4	108.1	1:3
STATUS OFFENSES	20.9	111.8	1:2
Curfew and Loitering	2.6	9.3	1:3
Runaways	7.4	44.5	1:2
All Other Status Offenses	10.9	58.0	1:2

Sources:

- ¹See Appendix C, Table C-6, p. 67.
²See Appendix C, Table C-12, p. 79.

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TABLE C-15

COMPARISON OF CUSTODY COSTS WITH DIRECT LOSS DUE TO CRIME
 BY PERSONS UNDER 18 YEARS, U.S. (1977)

REASON HELD	DIRECT LOSSES DUE TO OFFENSE ¹ (IN MILLIONS)	CUSTODY COST ² (IN MILLIONS)	RATIO CUSTODY COST TO LOSSES
TOTAL	\$10,710.8	\$869.4	1:12
Delinquency	10,699.9	700.4	1:15
Status Offense	20.9	169.0	1:0.1

Sources:

- ¹See Appendix C, Table C-6, p. 67.
²See Appendix C, Table C-14, p. 83.

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APPENDIX D
ESTIMATING THE COST OF
OFFENSES IN DOLLARS

ESTIMATING THE COST OF OFFENSES IN DOLLARS

INTRODUCTION

The most difficult part of any cost study of the juvenile justice system is calculating the cost of each type of offense. This appendix, therefore, spells out in detail how the cost estimates used here were developed. It is hoped that these materials may be helpful to others as they are called on to carry out cost comparison assessments of their own.

Cost offense figures were developed in two separate steps. This occurred because it was necessary to use two different but related scale scores.

The first step estimated the cost of serious (felony) offenses. The second step estimated the cost of the less-serious and status offenses.

ESTIMATING THE COST OF SERIOUS OFFENSES IN DOLLARS

The evaluation of the cost-effectiveness of alternative programs to reduce crime requires dollar values for various offenses. However, these figures are not currently available to the analyst, particularly for offenses such as aggravated assault and forcible rape. There is general agreement that these are serious felonies, but how serious, in terms of dollars, remains elusive. This is because there is no direct way to measure the loss in welfare suffered by the victims. There is, however, a way around this difficulty. Sellin and Wolfgang (pp. 249-252) devised a seriousness score for various criminal acts based on the response of a sample of people asked to judge relative seriousness. At the lower end of the scale is petty theft (under \$10) with a score of 1.0. At the upper end of the scale is homicide with a score of 26.0. In between are crimes like robbery and burglary.

These Sellin-Wolfgang (SW) scores can be converted to dollar values by assigning the net loss in dollars to larceny-theft, estimates of the value of life from other cost-benefit studies to homicide, and imputed dollar values from other criminological studies, to robbery and auto theft. These bench mark figures permit the scores to be converted into dollars. For example, the SW seriousness score of 10 assigned to forcible rape, translates into a dollar loss of \$14,471.

MEASURING WELFARE LOSSES

There have been attempts to assign dollar values to the losses due to crime. For example, the President's Commission on Law Enforcement and Administration of Justice report estimates dollar values for the nation in 1965 in Crime and Its Impact--An Assessment. Their approach is to value all loss in terms of the net loss to the victim. For example, the average net loss (gross minus recovery) for larceny-theft over \$50 was \$109 (President's Commission on Law Enforcement and Administration of Justice, 1967, p. 42). This dollar value is a lower limit to the loss in welfare, but for this relatively small amount, probably reasonably close. One should also include damages for any additional unhappiness to the victim exceeding these net costs. This is made clear by considering burglary.

The President's Commission calculated an average net loss for burglary of \$170 (President's Commission on Law Enforcement and Administration of Justice, 1967, p. 42). However, the Sellin-Wolfgang study indicates that the seriousness of burglary is affected by the occurrence of forcible entry to premises as well as by the amount of the net loss. There is a measurable loss in welfare if one's home has been burglarized even if the net loss was negligible. The value of the SW scores is that they measure seriousness beyond simple net loss.

The President's Commission assigned a dollar value to homicide based on the net loss of future earning potential at the time of death. This amounted on the average to \$76,142 in 1965 (President's Commission on Law Enforcement and Administration of Justice, 1967, p. 45). This does not take into account other costs such as funeral expenses nor does it estimate any other loss in welfare to the victim or the victim's family. Thus the President's Commission estimate is a lower limit.

Other cost-benefit studies of the value of saving a life have used other standards. Usher, as reported in M.W. Jones-Lee, The Value of Life, used a measure of hazard pay received by miners and test pilots, \$150,000 in 1975 (Jones-Lee, pp. 36-38). This quantity has the advantage of being a market-determined value of the payment workers are willing to accept to risk their lives. Another approach of interest, also reported in The Value of Life, was developed by Melinek (Jones-Lee). He imputed the value that pedestrians assign to life in assuming the risk of walking through traffic to save time rather than use a pedestrian subway. The amount was £87,000 or \$203,580 in 1974 (Jones-Lee, pp. 38-40). These figures converted to 1977 dollars are shown in Table D-2 (p. 97). Both of these approaches are proper in concept, measuring the value of life assigned by the individual at risk but are subject to imprecision in calculation. For example, it is difficult to determine exactly how much of a pay differential is due to risk rather than other job attributes.

Another approach to determining the value of offenses is to estimate the cost of reducing them. Cost effectiveness studies determine the effect that adding another patrolman would have in reducing crime. The cost of adding the patrolman can be calculated. If one assumes that the number of patrolmen in use is correct, i.e., the cost of the patrolman is justified in terms of the damages saved from crime reduction, the value of crime can be imputed. Mathieson and Passell have conducted such a cost effectiveness study of patrolmen in reducing robberies in New York City and impute a value of \$1,550 for robbery in 1972. Phillips and Votey have undertaken a similar cost effectiveness study of police expenditures in reducing auto thefts in the nation and impute a value of \$1,355 for 1965. The advantage of these imputed values is that they include the loss in welfare to the victim that goes beyond the simple net loss in dollars. However, given the state-of-the-art, they are subject to the impression associated with estimation.

CONVERSION OF THE SELLIN-WOLFGANG SCORES TO DOLLARS

These available dollar values are used to convert the SW seriousness scores to dollar values. To provide a common dollar value for a recent year, the available dollar values are all converted to 1977 dollars using the consumer price index. The SW scores were obtained from the list shown in Table D-1 (p. 95), as reported in Crimes of Violence, Vol. 11; A Staff Report Submitted to the National Commission on the Causes & Prevention of Violence (Mulvihill, Tumin, and Curtis, p. 27). The SW scores of crime and associated dollar values are reported in Table D-2 (p. 97). The SW scores were plotted against the associated dollar values and found to follow an approximate log-log relationship, as illustrated in Figure D-1 (p. 95). The relationship was fitted using least squares regression yielding:

$$\ln \$ (1977) = 3.5288 + 2.628 \ln \text{SELLIN-WOLFGANG SCORE}$$

or

$$\$ (1977) = 34.08 (\text{SELLIN-WOLFGANG SCORE})^{2.63}$$

The SW scores and estimated dollar values for the various crimes, as estimated using this relationship, are reported in Table D-3 (p. 99). These values were used to assign dollar values to the seriousness of various crimes. Note that there is a range of values for aggravated assault (\$8,050-\$18,589) because the seriousness of the offense varies. A median seriousness score of 9.5 and the associated dollar value of \$12,703 could be used for the average loss rate. There is a similar range of values for robbery with the median seriousness being 6 and the associated dollar loss \$3,780. The median seriousness values were used. (See Table C-5, p. 65.)

COMPARING OFFENSE SERIOUSNESS SCALES: AN EQUIVALENCE

The Gray, Conover, and Hennessey (GCH) seriousness weights were developed for a wide selection of offenses ranging in seriousness from homicide to curfew violation and loitering. For this reason, this scale is potentially quite valuable. It is interesting to see how consistent the GCH seriousness weights are with the SW seriousness scores. The two seriousness scales have a number of common offenses for which they have been scored, ranging from homicide to breaking and entering. The SW scores have been calibrated in dollars, hence a conversion from GCH scale to SW scale would permit the expression of the former weights in dollars as well.

The scores for the two scales are listed in the upper part of Table C-5 (p. 65). The GCH scores range from 94.1 for homicide to violations with a score as low as 3.7, hence for such offenses any conversion between the two scoring schemes will involve an extrapolation of implied SW scores.

The relationship between the two scoring regimes is approximately linear in the logarithms of the scores as indicated in Figure D-2 (p. 97) which plots the data in Table C-5 (p. 65). A least squares regression line was estimated to be:

$$\ln SW = -2.3936 + 1.1379 \ln GCH$$

with the goodness-of-fit indicated by a coefficient of determination of $R^2 = .906$. This implies the nonlinear relationship between the two scoring schemes of

$$SW = .0913 (GCH)^{1.14}$$

The fact that the two scoring schemes are so closely related implies a certain consistency between the two seriousness scales, at least over the range of scores examined. The scoring schemes fit least well at the extremes. In a future study a better equation should be developed to achieve a closer match at the extremes of the scale scores.

The relationship described earlier for converting SW scores to dollars and the relationship between the two seriousness scales implies the following dollar conversion for GCH seriousness scores:

$$\ln \$(1977) = -2.7616 + 2.9904 \ln GCH$$

or

$$\ln \$(1977) = .0632 (GCH)^{2.99}$$

Using the conversion formula for GCH scores to 1977 dollars, crime losses per offense were calculated, e.g., \$252 for drug abuse violations, \$62 for vandalism, and \$3 for curfew and loitering. The dollar losses for less-serious and status offenses with GCH scores are listed in Table C-5 (p. 65).

TABLE D-1
SELLIN-WOLFGANG INDEX OF CRIME

CRIME RESULTS	SERIOUSNESS VALUE
Minor injury to victim	1
Victim treated and discharged	4
Victim hospitalized	7
Victim killed	26
Victim of forcible sex intercourse	10
Intimidated by weapon, add	2
Intimidation of persons in connection with theft, etc. (other than in connection with forcible sex acts):	
Physical or verbal only	2
By weapon	4
Forcible entry of premises	1
Value of property stolen and/or damaged:	
Under \$10	1
\$10-\$250	2
\$251-\$2,000	3
\$2,001-\$9,000	4
\$9,001-\$30,000	5
\$30,001-\$80,000	6
Over \$80,000	7
Theft of motor vehicle (recovered, undamaged)	2

Source: Sellin, Thorsten; and Wolfgang, Marvin E. The Measurement of Delinquency. (New York, NY: John Wiley and Sons, 1964), p. 402.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE D-2
SELLIN-WOLFGANG SCORES AND BENCH MARK DOLLAR FIGURES

OFFENSE	SELLIN-WOLFGANG SCORES ¹	LOWER BENCH MARK NET LOSS ONLY 1965 ²	UPPER BENCH MARK 1977 DOLLARS ³
Larceny Over \$50	2	\$ 109	\$ 209
Burglary	2	\$ 170	---
(Forcible Entry)	$\frac{1}{3}$	---	---
Auto Theft	2	\$ 159	\$ 2,602
	$\frac{2}{4}$	---	---
Robbery	3	\$ 254	\$ 2,249
(Intimidation by Weapon)	$\frac{4}{7}$	---	---
Aggravated Assault (Intimidation by Weapon)	4	---	---
Aggravated Assault (Victim Hospitalized)	$\frac{7}{11}$	---	---
Rape	10	\$76,142	\$146,240
Homicide	26	\$76,142	\$146,240 ⁴

Sources:

¹Estimated based on Appendix D, Table D-1, p. 95.

²President's Commission on Law Enforcement and Administration of Justice. Task Force Report: Crime and Its Impact--An Assessment. (Washington, D.C.: U.S. Government Printing Office, February 1967), pp. 42 and 45.

³Phillips, Llad; and Votey, Harold L. "Economics of Crime Control." Unpublished manuscript. (University of California, Santa Barbara).

⁴Higher estimates for homicide have been developed by Usher (\$204,545 in 1977 dollars) and Melinek (\$250,168 in 1977 dollars) as cited in Jones-Lee, M. W. The Value of Life: An Economic Analysis. (Chicago, IL: University of Chicago Press, 1975), pp. 36-40.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (Sacramento, CA: American Justice Institute, 1980).

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TABLE D-3
 ESTIMATED RELATIONSHIP BETWEEN SELLIN-WOLFGANG
 SCORES AND 1977 DOLLAR LOSSES

SELLIN-WOLFGANG SCORES*	TYPE OF OFFENSE	1977 DOLLAR VALUE LOSS**
1		\$ 34
2	Larceny	211
3	Burglary	611
4	Auto Theft	1,302
5		2,341
6	Robbery	3,780
7		5,668
8	Aggravated Assault	8,050
9	Aggravated Assault	10,971
10	Rape	14,471
11	Aggravated Assault	18,590
--		
--		
26	Homicide	178,246

*Estimated based on Appendix D, Table D-1, p. 95.

**See text (pp. 82 - 93) for a discussion of estimating procedures.

Table constructed by the NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT
 CENTER (Sacramento, CA: American Justice Institute, 1980).



FIGURE D-1

RELATIONSHIP BETWEEN SELLIN-WOLFGANG SCORES AND ESTIMATED DOLLAR VALUES BY TYPE OF OFFENSE (1977)

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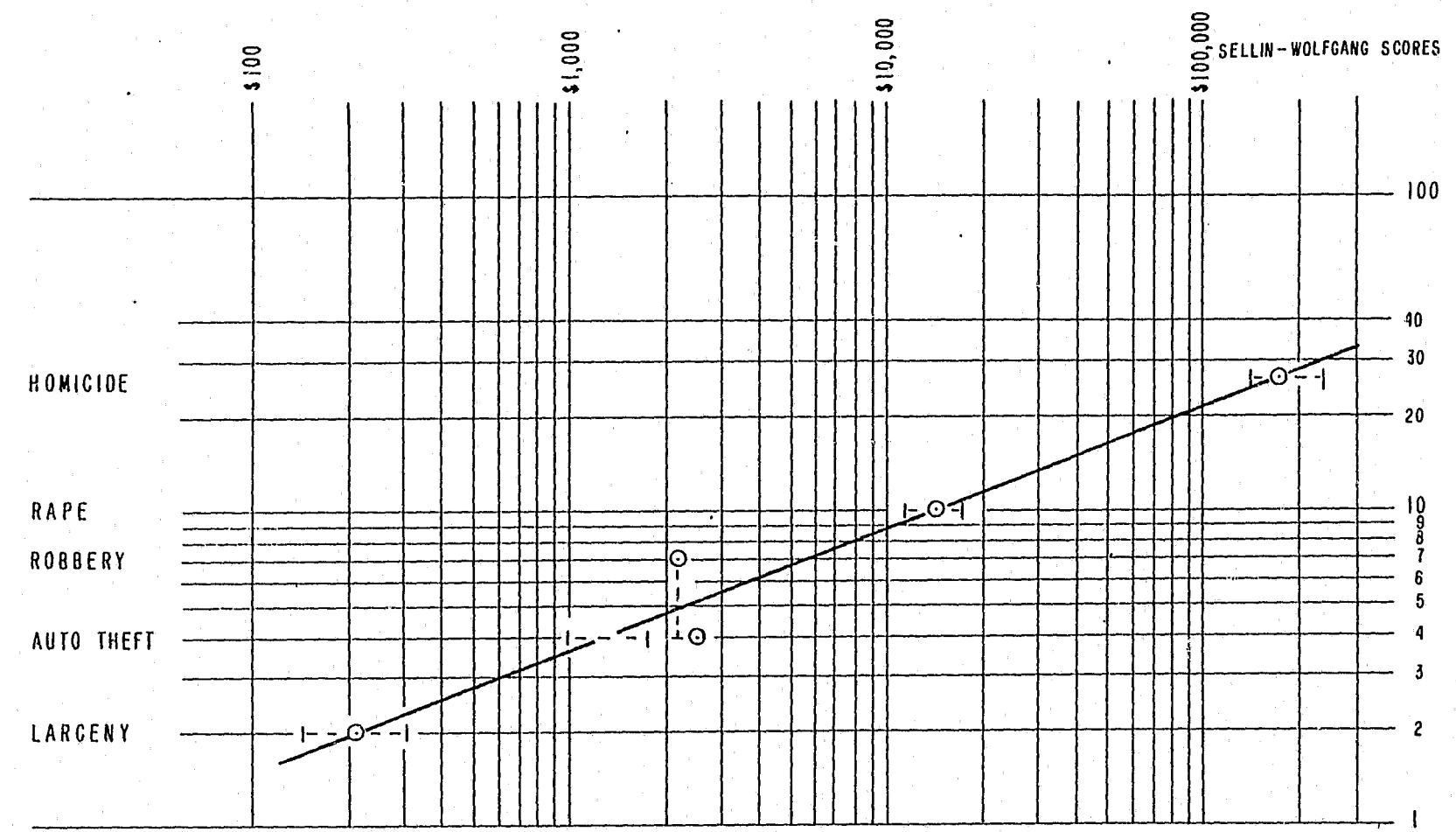


FIGURE CONSTRUCTED BY THE NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (SACRAMENTO, CA: AMERICAN JUSTICE INSTITUTE, 1980).

FIGURE D-2
 RELATIONSHIP BETWEEN SELLIN-WOLFGANG SCORES AND
 GRAY-CONOVER-HENNESSEY SCORES BY TYPE OF OFFENSE (1977)

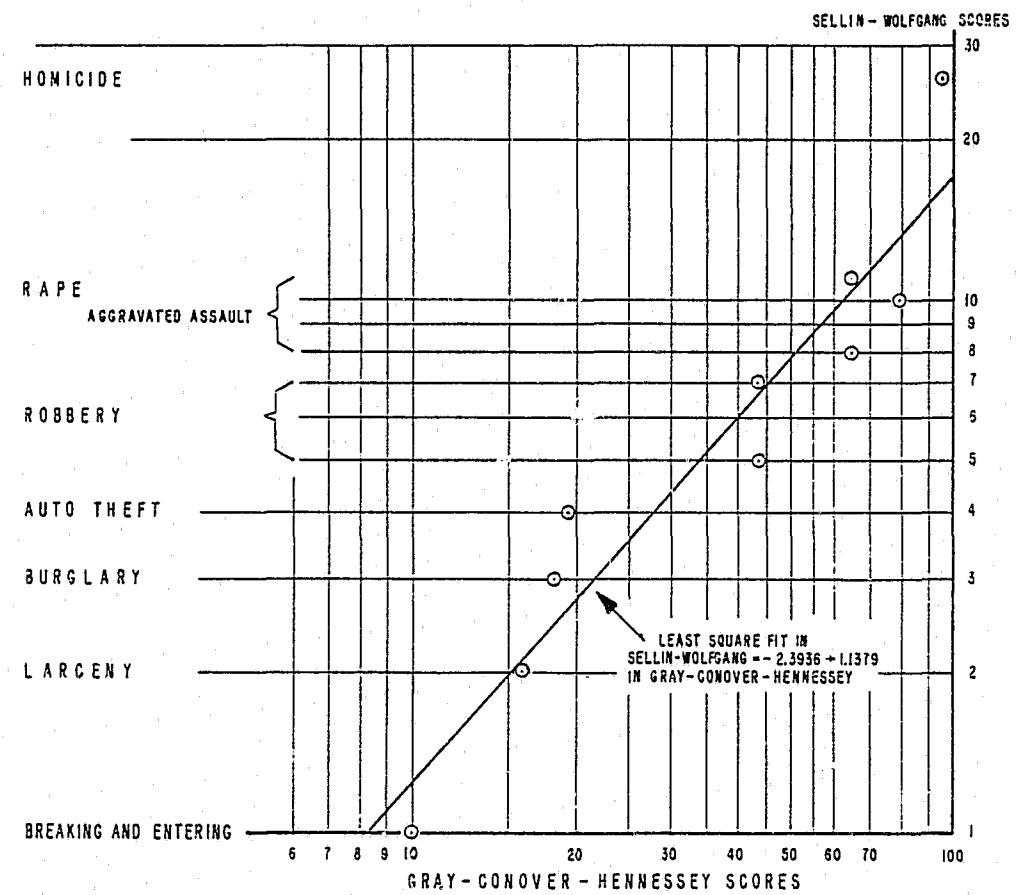


FIGURE CONSTRUCTED BY THE NATIONAL JUVENILE JUSTICE SYSTEM ASSESSMENT CENTER (SACRAMENTO, CA: AMERICAN JUSTICE INSTITUTE, 1980).

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