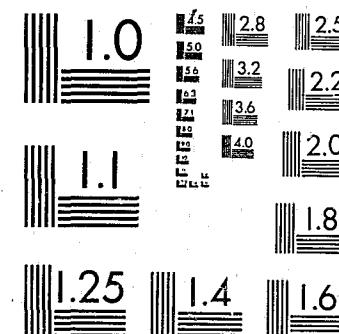


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Association of State Statistical Analysis Center Directors

CRIMINAL JUSTICE STATISTICS ASSOCIATION, INC.

## ANALYTIC PLAN

# FOR THE REPRESENTATION AND USE OF OFFENDER PROCESSING STATISTICS

July, 1981

Analytic Plan  
for the Representation and Use  
of Offender Processing Statistics

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NCJRS

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ACQUISITION

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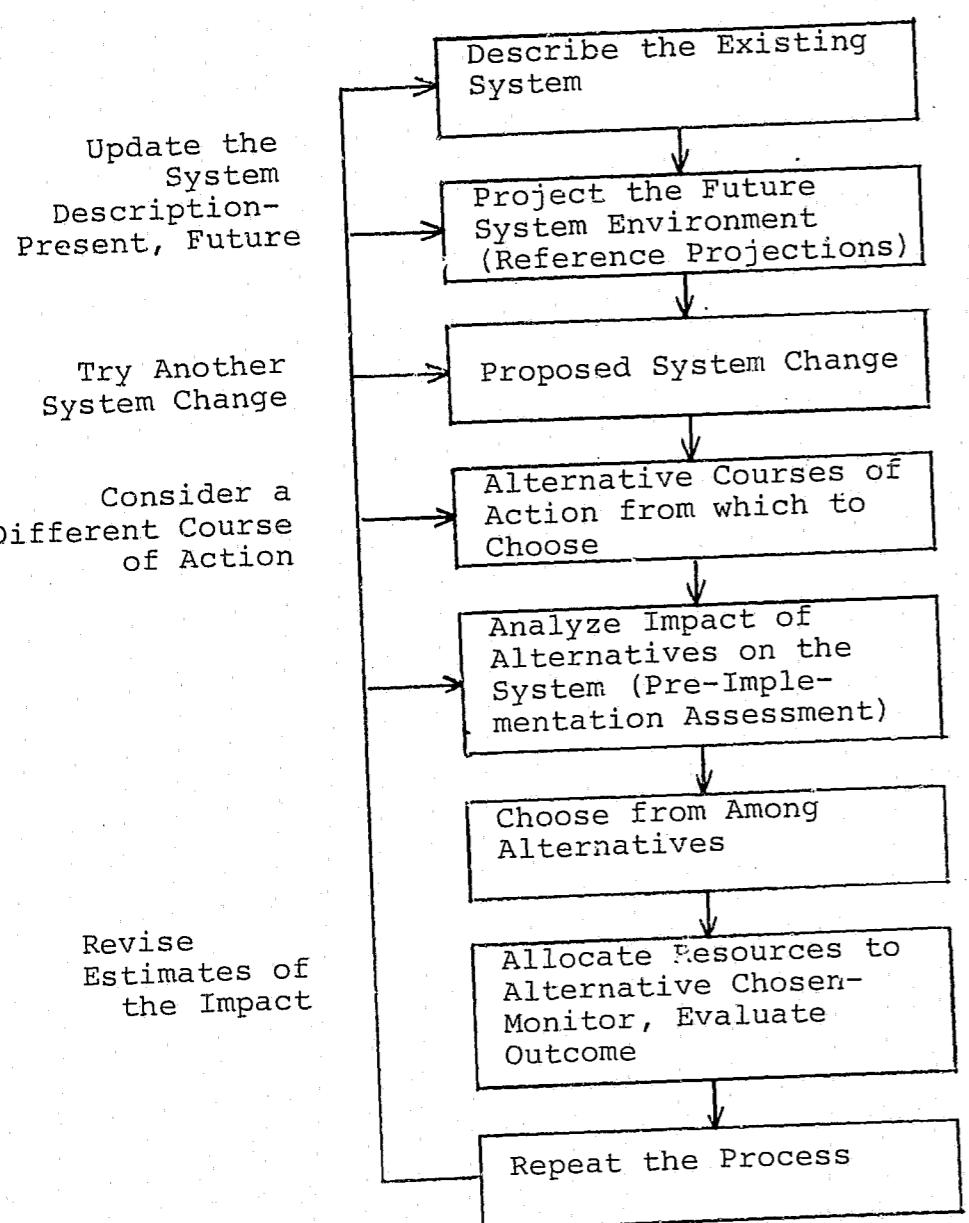
## INTRODUCTION

### A. Overview of an Approach to Analyzing Issues in Criminal Justice Processing

A statistical description of what happens to offenders as they move through the components of criminal justice (i.e., police, prosecution, courts, corrections) is fundamental to the development of an understanding of the criminal justice system and in making subsequent decisions concerning system change. Inherent in the role of change and planning and coordinating for change is the ability to describe the existing system. A system processing description as represented, for example, by statistics on the volume and manner of "offender" processing from arrest through court disposition, sentencing, and corrections is a meaningful way by which the existing system can be described. The consideration of this existing system description along with some projections of the future environment can provide a reference or benchmark for the consideration of alternative actions (strategies, programs, policies) to bring about some desired or planned future state for the criminal justice system. This concept of analyzing the existing system and planning for change is illustrated in Figure 1.

Statistics on the manner and volume of criminal offender processing provide a framework for describing the individual system components (e.g., law enforcement, prosecution, courts, corrections) in terms of a total system perspective. The impact of one component's decisions on another system component (e.g., the court's bail and trial setting decisions on the size of the jail's pre-trial detention population) illustrates the interdependent nature of justice processing. This interdependence among the system components is often hidden from direct view by the statistics maintained by any single, autonomous criminal justice agency. The fragmentation in operations inherent in criminal justice due to the separation of powers (e.g., executive and judicial functions of criminal justice) and the division of responsibility by level of government (e.g., state, county, municipal) is in part overcome through the use of such system flow

FIGURE 1 - Planning, Coordination and Analysis in Support of System Change (Making More Rational Choices for the Future)



statistics. The result is a description of criminal justice which is potentially more understandable to the outside world e.g., Governor's Office, Legislature, criminal justice planners and coordinators, private citizens. At the same time, such a system description affords an opportunity for the system practitioners (e.g., in law enforcement, prosecution, the courts, and corrections) to become more sensitive to the impact of their decisions, not only on their component of the system, but on other system components.

Without some form of system flow description it is difficult to conceptualize the making of more rational choices between alternative actions (programmatic, policy, budgeting) desired to bring about change in criminal justice processing. The system perspective may also contribute to the development of a greater consensus about some specific system change which would otherwise be inhibited when simply looking at the impact of a change from an individual agency's perspective.

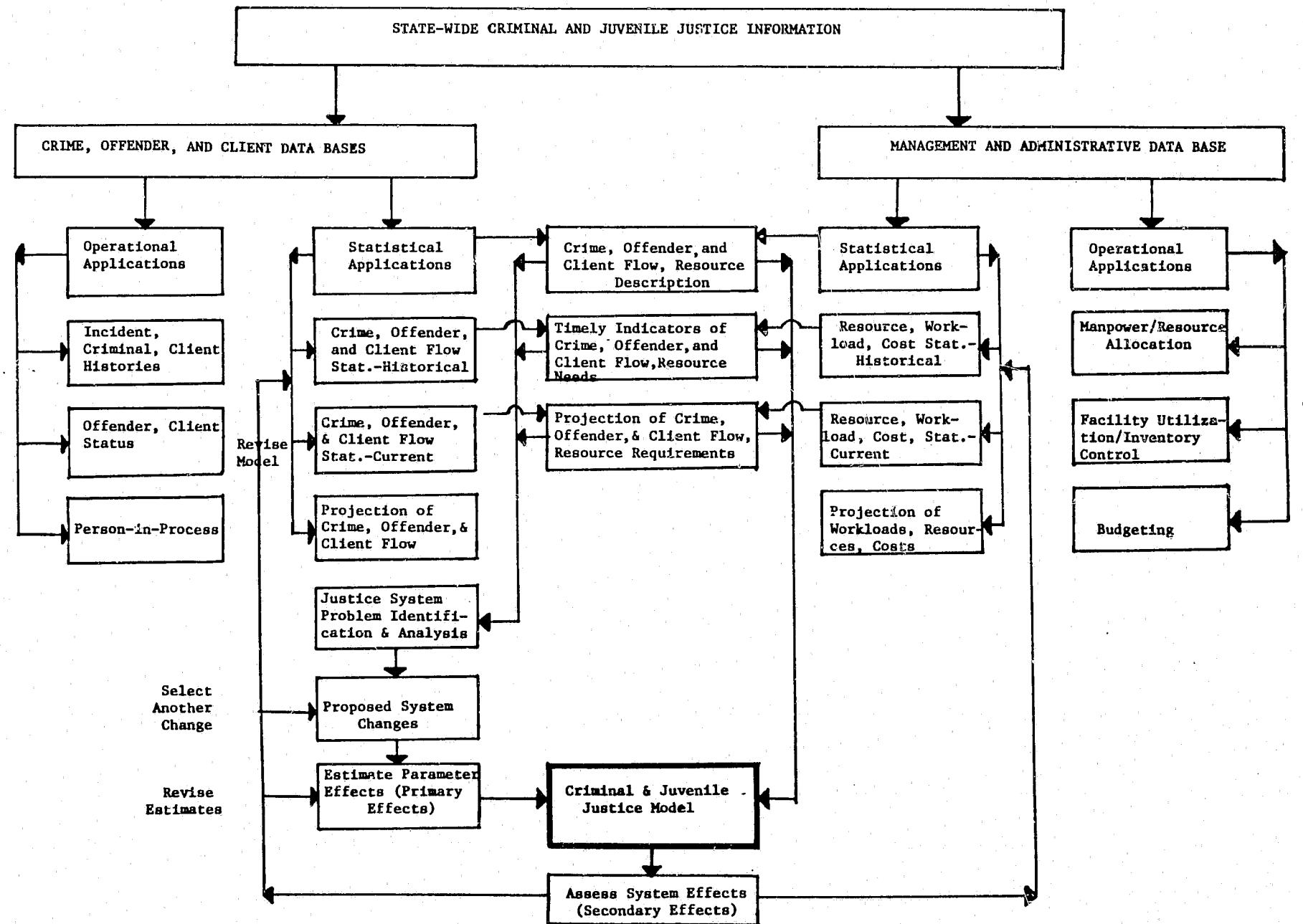
System flow or offender processing statistics can be useful in providing the quantitative linkage between a known or anticipated event (e.g., increase in adult arrests for violent crime) and a resultant event (e.g., increased commitments to prison). Such an event (e.g., increased arrests) may be due to factors beyond the direct control of the criminal justice system (e.g., demographic trends in a jurisdiction's population). Alternatively, the system may be altered by procedural or statutory changes (e.g., institution of a new criminal code with mandatory sentencing requirements) for which some control may be exercised by the system practitioners (e.g., influencing procedural and statutory change by showing the anticipated consequences of implementing such change on the volume and manner of offender processing). Finally, the system may be altered through interventions (e.g., increased use of community corrections to alleviate jail and prison overcrowding) by the system practitioners.

While change is inevitable, the maintenance of offender processing flow information can be useful in anticipating the consequences of change and planning so that the system can accommodate the anticipated change in a more meaningful and constructive way. The alternative to planning for change is simply to let the system adapt to the pressures for change (both externally and internally generated) in a more haphazard way with consequences which may not be desired and/or intended.

In analyzing the criminal justice system and in assessing the impact of change, information on the volume and manner of offender processing must be coupled with information on the cost of processing. Typically, cost information involves the determination of the relationship between the performance of some activity (e.g., conducting jury trials) and the costs of performing that activity. In the business environment, process costing is the accounting approach used to determine the actual cost of a product or service over a given period of time. Using this approach, a unit cost for a service (e.g., jury trials) can be calculated by dividing for a given time period the total cost of providing the service by the number of units served (e.g., number of jury trials occurring within that time period). Alternatively, the unit cost of providing a service may be determined based on the workload (or expected time) it takes to conduct the service (e.g., judicial, prosecutor, and defense costs per hour). The costs of a service may be further broken down, for example, into direct costs (e.g., judge costs), semi-direct costs (e.g., courtroom and associated personnel costs), and indirect costs (e.g., overall court administration costs). By identifying cost centers and the cost per client processed through each of the various decision-making points of the criminal justice system the information on system resource and cost requirements exists to compliment the information on the manner and volume of offender processing.

Figure 2 extends the Figure 1 concept of coordinating and planning for system change. Figure 2 illustrates a framework for the organization and representation of quantifiable information on the criminal (and juvenile) justice system. As shown in the exhibit, information is divided into that portion which relates to the volume and manner of processing (i.e., crime, offender and client data) and that portion which relates to resources and facilities (and associated workloads and costs) necessary to manage and administer justice processing. Within each of the information groups two principal uses of the data can be made, those which are operationally oriented and those which are statistically or analytically oriented. The operational applications are illustrated here to demonstrate that in many instances the principal impetus for the collection and maintenance of data about the criminal justice system is the operational purposes served by the

FIGURE 2



data bases. The statistical applications, while they may have been envisioned and planned for in the establishment of the data base, are largely derived as a by-product of systems serving operational purposes.

As shown in Figure 2, the statistical applications include the ability to provide an historical description of criminal justice processing (e.g., by describing for some prior year(s) the number of crimes and volume and manner by which offenders (clients) are processed including the resources, workloads, and costs associated with processing). Also depicted is the need to provide timely or more current indicators of system activity (e.g., providing quarterly updates on intake, departures, and active offender populations at major criminal justice processing points), as well as the ability to project future levels of system activity or need (e.g., reference projections of future volumes of arrests, offender processing, and active offender populations). This descriptive base of information (historical, current, and projected) can then be incorporated in meaningful models or frameworks for describing the system. The analytical frameworks represent quantitative tools to be used in efforts to assess the impact of system change (due to external factors - such as demographic and economic conditions and trends as well as internal factors - such as statutory, programmatic, procedural change which impact on the future manner of criminal and juvenile justice system processing).

The bringing together of information on the volume and manner of offender processing with information on the costs and resources associated with offender processing provides the information base that is fundamental to the analysis of the criminal justice system. There is hardly a question or issue about the criminal justice system and the administration of justice for which statistics on offender processing and the associated costs and resources are not needed in the analysis of the problem and the identification and selection from among alternatives the course of action or strategies to bring about a planned for change. Typically, when an issue about system processing arises there is a need to analyze that issue and to come to some conclusion with findings and recommendations for action (as well as the identification of some new questions which need to be answered). The analyst needs to manage the available information (e.g., on process and

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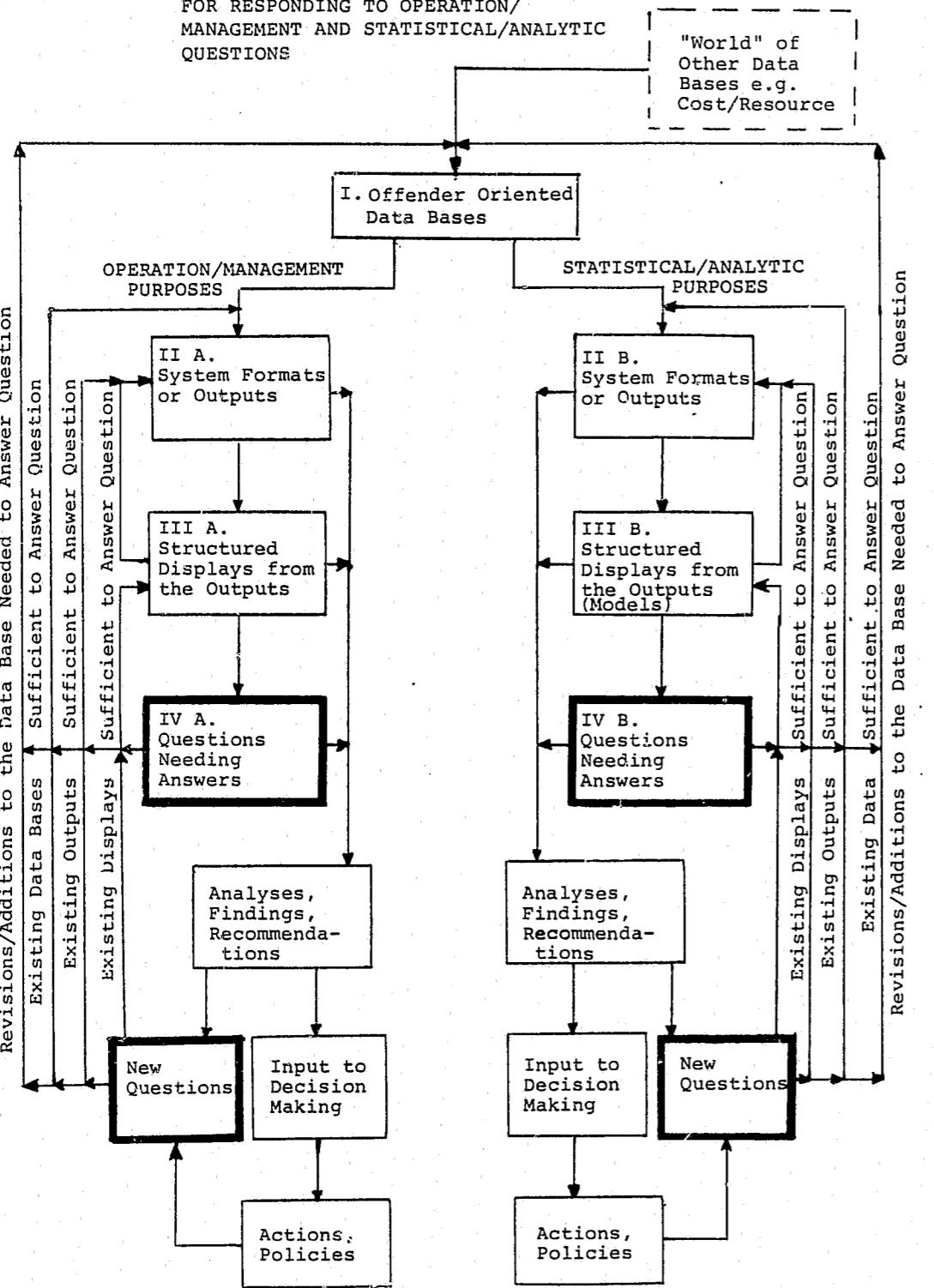
cost) so that useful outputs are generated that then feed into analytic frameworks or models which lead to better or wiser choices from among alternative courses of action intended to bring about a desired change.

Figure 3 illustrates both from an operational viewpoint and an analytic viewpoint the overall relationship between offender oriented information, the outputs that can be generated from this information, the types of meaningful analytic displays (i.e., frameworks or models) that these outputs can support, and the questions concerning offender processing that can and need to be addressed. The figure also shows the relationship between posing a question that needs to be answered and the use of the available outputs and displays to perform an analysis resulting in certain findings and recommendations. The resulting findings and recommendations contribute to the decision making process leading to new actions or policies. In addition, the findings and recommendations as well as the policies and actions may lead to new questions which need to be answered, thus reinitiating the process.

The supporting table which follows Figure 3 illustrates in more detail the variety of offender processing information systems (Table 1, Section I) that exist. The supporting table also shows examples (both for operation/management purposes and statistical/analytic purposes) of the outputs that can be derived from offender oriented data bases (Table 1, Section II). Table 1, Section III then shows some of the structured displays (i.e., frameworks or models) for representing offender processing information for operation/management purposes and statistical/analytic purposes respectively. Table 1, Section IV is illustrative of the types of questions that the offender processing outputs and structured displays or frameworks can assist in answering.

The approach described above for the representation of information about criminal justice processing is intended to provide an overall quantitative framework for problem identification as well as for seeking solutions to already recognized problems. The process of analyzing problems about criminal justice processing and identifying strategies for bringing about a desired change (and subsequently evaluating the success of the implementation of those strategies) requires the availability of good information sources (data bases) and good techniques for representing the information (good decision making).

FIGURE 3: INTEGRATED APPROACH TO OFFENDER PROCESSING INFORMATION FOR RESPONDING TO OPERATION/ MANAGEMENT AND STATISTICAL/ANALYTIC QUESTIONS



Note: Table 1 which follows is designed to provide a further explanation of this Figure. Each of the Sections of the Table (Section I, Section II, Section III, and Section IV) correspond to the respective roman numeraled boxes in the above Figure.

TABLE 1 - RELATIONSHIP BETWEEN DATA BASES, OUTPUT REPORTS, AND STRUCTURED DISPLAYS IN SUPPORT OF CRIMINAL JUSTICE OPERATION/MANAGEMENT AND STATISTICAL/ANALYTIC QUESTIONS

**SECTION I. Data Bases in the States in Support of Managing Offender Processing and Generating Offender Processing Statistics**

- A. Examples of State Level Automated Information Systems
    - 1. UCR-Uniform Crime Reports
    - 2. CCH/OBTS - Computerized Criminal History (Offender Based Transaction Statistics)
    - 3. Automated Name Identification Index
    - 4. OBSCIS - Offender Based State Corrections Information System (or equivalent)
      - a. State Custody
      - b. State Supervision
    - 5. SJIS - State Judicial Information System (or equivalent)
      - a. Lower Court
      - b. Upper Court
      - c. Combined/Unified Court
    - 6. PROMIS - Prosecutor Management Information System (or equivalent)
    - 7. Public Defenders Information System
  - B. Examples of Agency (Local) Management Information Systems (MIS)
    - 1. Law Enforcement Arrest and Booking
    - 2. PROMIS (or equivalent)
    - 3. Court Scheduling and Case Tracking MIS
    - 4. Jail Inmate Accounting MIS
    - 5. Local Supervision MIS
    - 6. Public Defender MIS
  - C. Examples of Agency/Geographic (Local/Regional) Information Systems
    - 1. Exchange between Agency MISs of computer printouts for updating and keeping track of offender status
    - 2. Computer-to-computer link between Agency MISs for updating and keeping track of offender status
    - 3. Common/Integrated MIS serving the offender tracking information needs of agencies from arrest through disposition, sentencing, and any local corrections
  - D. Examples of Manually Generated Data Bases
    - 1. Creation of OBTS record by extracting transaction information on a sample or universe of offenders using a number of agency files
    - 2. Creation of offender processing records by extracting transaction information from a single agency's files (e.g., the Court)
    - 3. Use of various agency published or internal reports and working papers to put together an aggregate description of offender processing for some activity (e.g. number of offenders receiving pre-sentence investigations)

**SECTION II. Principal Formats of Outputs For Managing Offender Processing and Generating Offender Processing Statistics**

- A. Examples for Operation/Management Purposes

  1. On-Line Inquiry and Response
    - a. Unique Person Inquiry
    - b. List of People with Common Characteristics
  2. Computer Program Listing of Persons
    - a. List of Persons Scheduled or Need to be Scheduled for an Event
    - b. Exception Reporting-Persons Exceeding Some Criteria
    - c. Generation of Notices, Summons, Charging Documents
  3. Management Reports Summarizing Aggregate Processing (daily, weekly, monthly, quarterly, annually) - e.g. number of inmates in jail by status - pre-trial, pre-sentence, local sentence, awaiting transfer to state facilities

TABLE 1 (continued)

B. Examples for Statistical/Analytic Purposes

1. Computer Tapes where each Record represents a Unique "Person", "Case", "Charge"
  - a. State, County or City Tape showing Manner of Processing and Disposition for Persons Arrested
  - b. Agency or System Component Tape (e.g. all offenders disposed of by the lower court for a jurisdiction or all jurisdictions in the State for a year)
2. Generation of Aggregate Statistical Output Reports describing some aspect of The Volume and Manner of Offender Processing
  - a. State Level Report--showing offense at arrest vs. type of disposition for defendants disposed in the State; similarly for a County or a City
  - b. Agency or System Component Level Report--showing offense at arrest vs. type of disposition for defendants disposed in the lower court, ~~upper court~~
3. Summary Statistical Displays derived from the Aggregate Statistical Output Reports
  - a. Forms of Data Representation - tables, figures, charts, graphs, flow diagrams--displaying volumes, percentages, rates, amount of change
  - b. Frequency of Production - monthly, quarterly, semi-annually, annually
  - c. Method of Display - bulletins, quarterly reports, issue oriented reports, reference type reports

SECTION III. Types of Structured Displays in Support of Managing Offender Processing and Generating Offender Processing Statistics

A. Examples for Operation/Management Purposes

1. Individual's Criminal History
2. Final Disposition Report for a Defendant's Arrest
3. Status of an Offender in the System (point-in-process)
4. Physical Location of the Offender
5. Future Scheduled Event and Notification of Persons Related to the Event
6. Assignment of "Offenders" e.g. to Court Room, Treatment Program, Supervising Agent, Facility
7. Allocation of Resources (Judges, Prosecutors) to Processing Volume (Cases, Defendants)

B. Examples for Statistical/Analytic Purposes

1. Aggregate Description of Manner of Offender Processing through the System Components (e.g. breakdowns by type of crime, geographic area) and resulting System Processing Volumes and Rates:
  - a. Activity Flows - processing volume "flow" and "stocks" at various decision making points
  - b. Activity Rates - ratio of "flows" to "flows", "stocks" to "stocks" and "stocks" to "flows"
    - (1) System Penetration Indicators - e.g. % of those arrested convicted; ratio of a flow to a flow
    - (2) System Retention Indicators - e.g. ratio of inmates actively in custody for robbery to the # of defendants disposed for robbery during the year; ratio of a stock to a flow
2. Measures of Elapsed Time Between Events in Processing and its relationship to backlogs, bottlenecks
3. Relationship between Intake (e.g. inmate commitments), Duration of Stay (length of time served), Size of the Active Population (# of prison inmates)

TABLE 1 (continued)

4. Rates of Offender Return to the System (e.g. as measured by point of release, point of return and subsequent system penetration, elapsed time between release and return, and characteristics of the offender and treatment)
5. Relationship Between Processing Volume (defendants, offenders) and System Cost and Resources (manpower, facilities)
6. Trends in System Processing and Forecasts of Future Processing (Reference Projections, Planned Projections)

SECTION IV. Types of Questions Which the Outputs and Structured Displays May Assist in Answering

A. Examples for Operation/Management Purposes

1. How many times has John Jones been convicted? for what offenses? and for what offenses did he serve time?
2. What was the final court disposition on the arrest charges entered against Mary Jane by the Clearwater P.D. on Oct. 1, 1979?
3. Has Joe Brown posted bond and been released or is he still in detention?
4. Has Jack Johnson's trial date been set and does he have an assigned attorney?
5. Who are the list of jail defendants scheduled to make court appearances tomorrow?
6. Who are the defendants who are awaiting trial and 180 days has elapsed from the date of their arrest and what are the reasons for the delay?
7. Who are the inmates that are eligible for parole in the next 90 days? For each offender how long was his/her original sentence, how much time has he/she served to date?
8. What is the list of probationers currently assigned to Probation Agent Paul Smith?
9. How many open slots are there in the prison's high school equivalency program and how many eligible inmates are on the waiting list? For each inmate on the list what is their projected date of release or parole?

B. Examples for Statistical/Analytic Purposes

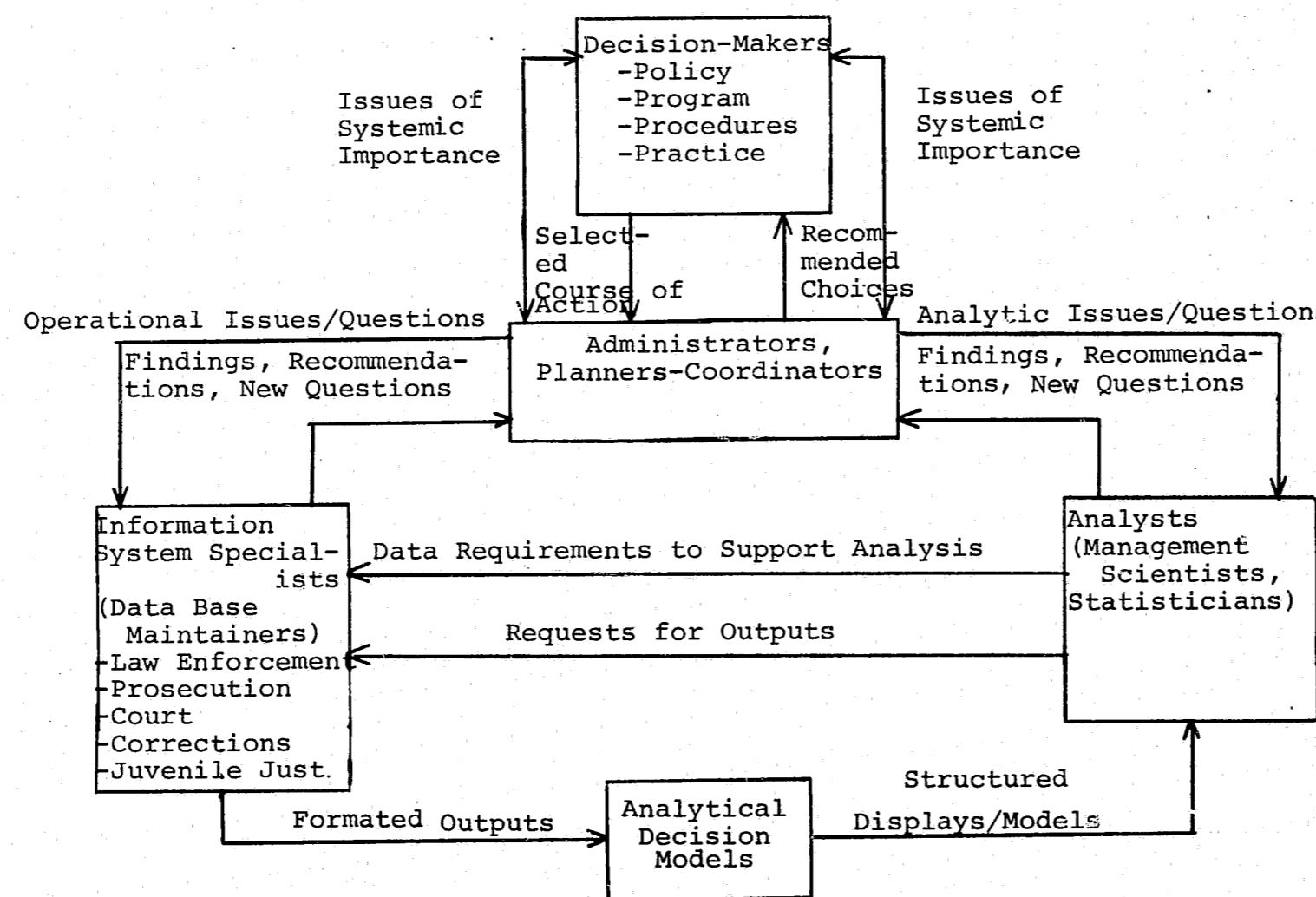
1. How many persons in a state have a criminal record?
2. How many unique persons are arrested in a year in a state, in a county?
3. What percentage of total arrests are caused by what percentage of the arrestees in a state, in a county?
4. How many people are active at various stages in the criminal justice system in a state, in a county?
5. How many people are processed through various components of the system in a state, in a county?
6. How many people released from various points in the system return (e.g. are subsequently arrested again) and how far do they penetrate the system upon return (e.g. acquitted, convicted and sentenced to imprisonment)?
7. How does sentencing vary from jurisdiction to jurisdiction (controlling for defendant characteristics)?
8. How many offenders should state corrections plan for in future years? State probation? Local jails? Given the available bed space are the right people being incarcerated and released?
9. How has the processing of offenders (women, youthful, serious) changed over time by state and county?
10. Where should the criminal justice system allocate existing and new resources (e.g. jails, judgeships, prosecutors)?
11. What offenders are better risks for certain types of corrections programs (e.g. community corrections, work release, probation)?

TABLE 1 (continued)

12. How many rearrests occur while persons are active in the criminal justice system? At what stage are they active when rearrested?
13. What is the time between arrest and trial? What is the impact of delay in processing on court backlog, on court disposition?
14. What does it cost to process a person through the criminal justice system? For various offenses? For various dispositional alternatives?
15. Are the decisions regarding bail and bail release reflective of offender risk (e.g. likelihood of commission of new criminal acts, failure to appear)?

models). The interaction between the decision or policy makers (solution selectors); the administrators, planners, and coordinators (makers of recommendations to decision makers); the information maintainers (information system specialists); and the data analyzers (management scientists, statisticians) is essential to establishing a capacity for problem identification and the ability to make choices between alternative courses of action from a systemic criminal justice perspective. These "people" relationships are illustrated in the Figure 4 diagram.

FIGURE 4: STATE/LOCAL DECISION-MAKING FROM A SYSTEMIC CRIMINAL JUSTICE PERSPECTIVE



B. Questions or Issues in Criminal Justice Processing that the States Have an Interest in Addressing

In September, 1980 the Criminal Justice Statistics Association surveyed the status of Offender Based Transaction Statistics (OBTS) systems in the states.\* As part of this effort, the states were asked to identify questions related to criminal offender processing which are issues of concern in their state. Generally speaking, the questions that most states felt should be addressed or were of concern are the elapsed time between arrest and trial and the impact of delay in processing on court disposition, the number of offenders processed through the various components of the system, how many people released from the system return/how far they will penetrate upon return and the cost of processing an offender through the criminal justice system. Additionally, the states were interested in knowing how many offenders their corrections departments should plan for in the future and how many people are active in the various stages of the criminal justice system at any given point in time to name a few. Table 2 summarizes the state interest in addressing questions on offender processing as well as identifies information systems important to addressing the questions. The data listed in Table 2 is based on the 47 state responses to the survey.

These questions or issues of concern related to the processing of offenders in the states can be grouped into six major classes of analysis or structural frameworks for consideration. The analytic frameworks or structures under which most centralized analytic activity related to offender processing would fall can be expressed as follows:

1. Offender Processing Flows and Stocks - e.g., manner and outcome of process, offender characteristics, number of offenders active in the system at given points in time or waiting to be processed
2. Elapsed Time Between Events in Processing and Impact on Processing Stocks - e.g., number of days between events, analysis of pending population, effect of court backlog on pre-trial detainee and corrections

\*The results of the survey are published in a report entitled "Status of State Offender Based Transaction Systems"; Criminal Justice Statistics Assoc.; May, 1981.

TABLE 2: Summary of State Responses Concerning the Questions They Felt Their State Would Have an Interest in Addressing, the Importance of OBTS in Addressing the Question and Other Data Bases that are Important to Addressing the Question

QUESTION	# of Respondents who Felt Their State Would Have an Interest in Addressing the Question	Importance of OBTS in Addressing the Question (# of States)			Other Data Bases Important to Addressing the Question								
		Important	Somewhat Important	Not Important	UCR	CCH	PROSECUTOR/PRONIS	COURT/SJIS	CORRECTIONS/OSECITS	PAROLE/PROBATION SUBJECT-IN PROCESS/CJS	INDIVIDUAL AGENCY FILES	BUDGET FILES	CENSUS/POPULATION
1. How many criminals are there in your state?	31	26	7	3	(7)	(7)	(2)	(3)	(4)	(2)	(2)		
2. How many unique persons are arrested in your state in a year?	35	24	12	2	(7)	(8)	(2)	(2)		(2)			(1)
3. What percentage of total arrests are caused by what percentage of the arrestees?	38	28	7	5	(3)	(6)	(2)	(2)	(3)	(2)			
4. How many people are active at various stages in the criminal justice system?	39	33	7	1	(1)	(4)	(5)	(3)	(6)	(2)	(2)	(2)	
5. How many people are processed through various components of the system?	(42)	36	5	3	(1)	(3)	(5)	(4)	(5)	(2)	(1)		
6. How many people released from various points in the system return (e.g., are subsequently arrested again) and how far do they penetrate the system upon return (e.g., acquitted, convicted and sentenced to imprisonment)?	(41)	35	7	1		(6)	(2)	(6)	(8)	(1)	(2)	(1)	
7. How does sentencing vary from jurisdiction to jurisdiction (controlling for defendant characteristics)?	33	22	14	1		(5)	(4)	(9)	(5)	(1)	(2)		
8. How many offenders should state corrections plan for in future years? State probation? Local jails?	(40)	28	12	6	(6)	(3)	(2)	(7)	(19)	(1)	(2)		(3)
9. How has the processing of offenders (women, youthful, serious) changed over time?	35	23	14	1	(2)	(1)	(2)	(6)	(8)	(1)	(1)	(2)	
10. Where should the criminal justice system allocate new resources (e.g., jails, judgeships, prosecutors)?	(42)	27	16	2	(3)	(2)	(5)	(7)	(10)	(2)	(2)	(3)	(4)
11. What offenders are better risks for certain types of corrections programs (e.g., community corrections, work release, probation)?	38	25	10	6		(3)	(2)	(4)	(17)	(2)	(1)	(2)	
12. How many rearrests occur while persons are active in the criminal justice system? At what stage are they active when re-arrested?	(40)	31	10	2	(1)	(10)	(3)	(3)	(5)	(2)	(2)		
13. What is the time between arrest and trial? What is the impact of delay in processing on court disposition?	(44)	30	11	5		(4)	(6)	(9)	(2)	(1)	(2)	(1)	
14. What does it cost to process a person through the criminal justice system? For various offenses? For various dispositional alternatives?	(41)	18	20	5	(2)		(3)	(7)	(9)	(1)	(2)	(3)	(6)
15. What comparisons can be made between offender volumes through the system and the corresponding costs of processing?	34	12	21	3	(1)	(2)	(5)	(7)	(1)	(2)	(3)	(3)	

( ) = Questions that at least 85% of the respondents felt their state would have an interest in addressing

( ) = At least 85% of the respondents felt OBTS would be important or somewhat important to addressing the question

( ) = # of respondents who felt the data base referenced was important to addressing the question

populations

3. Corrections Intake, Length of Sentence and Length of Stay and its Impact on Corrections Population - e.g., impact of sentencing decisions on size of corrections population
4. Rates of Return of the Offender to the Justice System (Recidivism) - e.g., from state custody, state supervision, rearrest
5. Projections of Future Volume and Manner of Criminal Justice Processing - e.g., arrest projections, projections of number of offenders active at various processing points
6. Justice System Resources and Costs - e.g., cost of processing offenders, level of government services

The relationship between the questions and these structures is described in Table 3.

As part of the survey the states were also asked to identify the extent to which they are developing the capacity to perform these classes of analysis or activities related to each structural framework. Generally speaking, the survey results indicated that the states have been involved in providing system offender processing descriptions and system rates of processing (Structure 1) as well as in providing trends in system processing and forecasts/projections of future processing (Structure 5) and to a lesser extent in providing a system resource, workload, and cost description as it relates to offender processing (Structure 6), analysis of elapsed time between events in processing and the effect on backlogs (Structure 2), analysis of length of offender stay in various sentencing alternatives (Structure 3), and analysis of offender return to the system (Structure 4).

While the extent to which the states have performed some analysis in each of these structural areas varies, they did generally express an interest in building their capacity to perform analytic activities within each of the structural areas.

Finally, the states were asked to identify the types of information systems which could be of assistance in addressing questions related to criminal offender processing and which would thus support the types of analytic activities mentioned above (i.e., which would support the major structural frameworks for offender processing in-

TABLE 3: Frameworks for the Organization and Representation of Offender Processing Statistics that can Assist in Addressing the Question

QUESTION	Frameworks for the Organization and Representation of Offender Processing Statistics in Support of Analysis					
	Offender Processing Flows and Stocks	Elapsed Time Between Events in Processing & Impact on Processing Stocks	Length of Sentence, Duration of Stay, & Impact on Corrections Stocks	System Resources & Costs Associated with Offender Processing	Rates of System Return	Projections of Future Processing
1. How many criminals are there in your state?	x		x		x	
2. How many unique persons are arrested in your state in a year?	x				x	
3. What percentage of total arrests are caused by what percentage of the arrestees?	x				x	
4. How many people are active at various stages in the criminal justice system?	x	x	x			
5. How many people are processed through various components of the system?	x					
6. How many people released from various points in the system return (e.g., are subsequently arrested again) and how far do they penetrate the system upon return (e.g., acquitted, convicted and sentenced to imprisonment)?	x				x	
7. How does sentencing vary from jurisdiction to jurisdiction (controlling for defendant characteristics)?	x		x			
8. How many offenders should state corrections plan for in future years? State probation? Local jails?	x		x			x
9. How has the processing of offenders (women, youthful, serious) changed over time?	x		x			
10. Where should the criminal justice system allocate new resources (e.g., jails, judgeships, prosecutors)?	x	x	x	x		x
11. What offenders are better risks for certain types of corrections programs (e.g., community corrections, work release, probation)?	x	x	x	x	x	
12. How many rearrests occur while persons are active in the criminal justice system? At what stage are they active when re-arrested?	x				x	
13. What is the time between arrest and trial? What is the impact of delay in processing on court disposition?	x	x				
14. What does it cost to process a person through the criminal justice system? For various offenses? For various dispositional alternatives?	x		x	x		
15. What comparisons can be made between offender volumes through the system and the corresponding costs of processing?	x			x		

SOURCE: "Status of State Offender Based Transaction Statistics Systems"; Criminal Justice Statistics Assoc.; May, 1981.

formation). While the majority of respondents felt that an OBTS file would be useful in addressing questions on offender processing in their states, they also mentioned other types of data bases which would be critical to or of assistance in addressing the questions (e.g., court system, corrections, population/demographic). As stated previously, Table 2 summarizes the survey results.

In an effort to respond to the states interest in addressing questions related to offender processing and based on the relationship between the questions and the major structures outlined above (e.g., questions can be categorized under one or more structures or alternatively one or more structures are supportive of analysis to address the question) this report attempts to define each of the major structures, illustrate the use and display of these structures or frameworks, and describe data bases or information which support the structures. In this way, it is hoped that the information contained in this report can contribute to the states building of a capacity for systemic justice analysis. The survey results as well as examples of work done at the state level were used as a base of information in writing this report.

### C. Outline of Report

This report consists of six chapters corresponding to the major structures for representation and use of offender processing statistics specified in Section B above. The chapters are:

- I. Offender Processing Flows and Stocks
- II. Elapsed Time Between Events in Processing and Impact on Processing Stocks
- III. Corrections Intake, Length of Sentence and Length of Stay and its Impact on Corrections Population
- IV. Rates of Return of the Offender to the Justice System (Recidivism)
- V. Projections of Future Volume and Manner of Criminal Justice Processing
- VI. Justice System Resources and Costs \*

Each chapter contains a conceptual definition of the framework (e.g., rates of return), an illustration of the use and display of the framework based primarily on individual state work in the area, identifies issues in data collection, extraction, and aggregation related to the framework (e.g., unit of count for analysis, offender vs charge), and displays data files and output reports as well as identifies alternative sources of data to support the framework. More specifically, each chapter is outlined in the following manner:

- A. Conceptual Definition of the Framework
- B. Illustration of the Use and Display of the Framework
- C. Issues in Data Collection, Extraction and Aggregation
- D. Alternative Sources of Data to Support the Framework
- E. Data Files and Output Reports in Support of the Framework

Figures and Tables are in general included where they are referenced in the narrative; Exhibits are included at the back of the Chapter Section where they are referenced.

\* This chapter will be completed and disseminated at a later date as an addendum to this report.

### Chapter I: Offender Processing Flows and Stocks

#### A. Conceptual Definition of Offender Processing Flows and Stocks

The criminal justice system (CJS) is composed of a group of distinct agencies each with distinct functional roles - detection and apprehension, detention, adjudication, corrections - related to crime and offender processing. In its simplest form, an offender after entering the criminal justice system (e.g., upon police apprehension) proceeds from one agency to another and may exit the system at various points along the way (e.g., an acquittal of all charges at the trial stage; expiration of sentence and release from a correctional facility). Therefore, the processing of offenders by the system can be represented by a flow diagram with various stages (represented by connecting paths between the blocks or exiting paths from a block). The stages typically represent the offender processing points within the system (e.g., arrest, trial, sentence) and the flow paths describe the manner by which offenders flow through or exit the stages.

Figure I.1. provides a simplified description of offender processing using the flow diagram approach. In this description the Circuit Court portion of offender processing flow is illustrated. Charged defendants are shown in the figure as receiving from the courts one of the following dispositions:

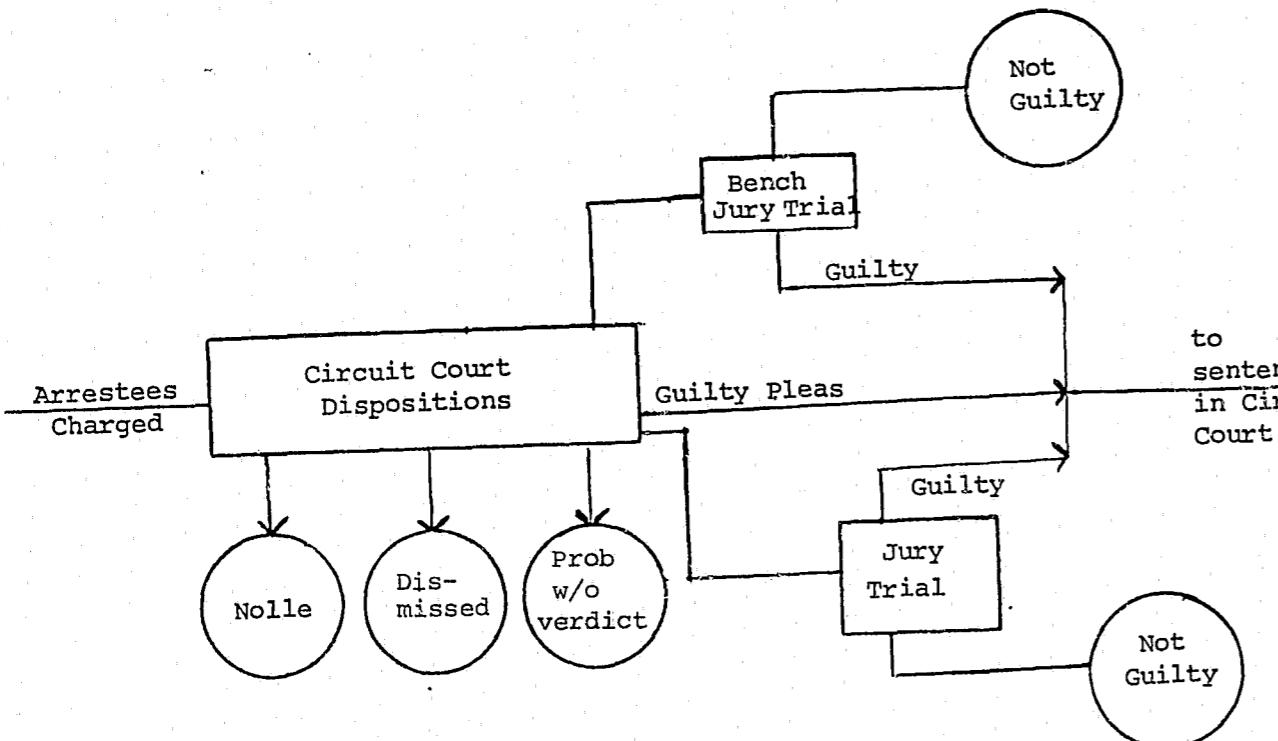
- 1) nolle prossed
- 2) dismissed
- 3) probation without verdict
- 4) a guilty plea
- 5) a jury trial and finding of
  - a) guilty
  - b) not guilty
- 6) a bench trial and finding of
  - a) guilty
  - b) not guilty

"Drop-outs" from the system (i.e., those who are processed no further) consist in this simplified flow diagram of those:

- 1) nolle prossed
- 2) dismissed
- 3) receiving probation without verdict
- 4) not guilty

Individuals leaving the Circuit Court for further penetration into the system consist of:

FIGURE I.1.  
FLOW THROUGH A CIRCUIT COURT SYSTEM



- 1) those pleading guilty
- 2) those found guilty in a bench trial
- 3) those found guilty in a jury trial

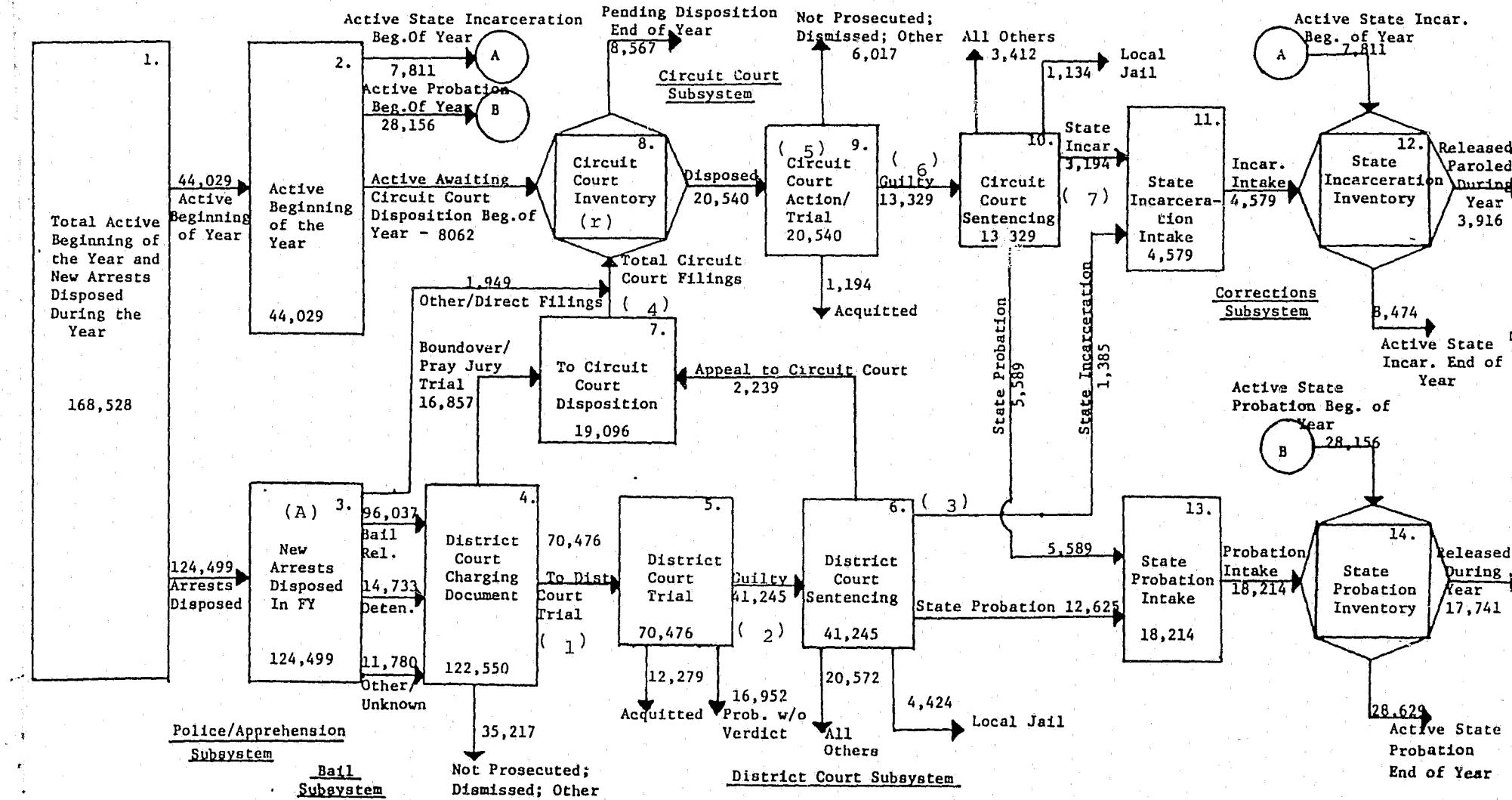
Figure I.2. illustrates the processing of offenders through all the principal components of the CJS. Shown are both new arrests entering the system as well as offenders active at some point in the criminal justice system as of the beginning of the period. The number in each stage represents the total aggregate offender flow through the system (e.g., may represent a County, City, State), for all or some offenders (e.g., a year). The system as represented in the Figure I.2. flow diagram is composed of five major subsystems: the Police/Apprehension Subsystem, the Bail Subsystem, and the Corrections Subsystem. As illustrated by the flow diagram, an individual may either enter the criminal justice system as a new arrest (Stage 3) (i.e., Police/Apprehension Subsystem) or may already be active (e.g., awaiting disposition, in a correction facility, or under corrections supervision) as of the beginning of the year (Stage 2). Individuals arrested may be released on some type of bond or detained until bond is posted or until the case is disposed of by the courts (i.e., Bail Subsystem). Those defendants charged with misdemeanors (or where initial charges have been reduced to a misdemeanor) are disposed of at the District Court (i.e., District Court Subsystem). Those defendants charged with a felony, requesting a jury trial, or appealing a District Court conviction are disposed of at the Circuit Court (i.e., Circuit Court Subsystem). Upon conviction, an offender may be sentenced to the Division of Correction (State Incarceration, Stage 11), the Division of Parole and Probation (State Probation, Stage 13), or the local jail (i.e. Corrections Subsystem), or the offender may receive some lesser sentence (e.g., fine, unsupervised probation).

The flow of offenders through the decision making points can be thought of as the product of several intermediate flow probabilities. Referring to Figure I.2., the following are among the flow volumes and flow probabilities that can be defined:

- $\alpha_1$  = number of adult apprehensions
- $\alpha_1$  = probability of an adult apprehension proceeding to District Court trial
- $\alpha_2$  = probability of a defendant at District Court trial being convicted
- $\alpha_3$  = probability of an offender convicted at the District Court being sentenced to State incarceration
- $\alpha_4$  = probability of a defendant being bound over to the Supreme Bench for disposition, given apprehension

FIGURE I.2.

## Flow Diagram Description of a Criminal Justice System



- $r$  = ratio of Circuit Court dispositions to Circuit Court filings  
 $\alpha_5$  = probability of a defendant before the Circuit Court going to trial  
 $\alpha_6$  = probability of a defendant at Circuit Court trial being convicted  
 $\alpha_7$  = probability of an offender convicted at the Circuit Court being sentenced to State incarceration

Using these flow and flow probabilities one can define, for example, the total probability of being incarcerated as the sum of the probability of being incarcerated by the District Court and the probability of being incarcerated by the Circuit Court levels:

$$\alpha_I = \prod_{j=1}^3 \alpha_j + r \left( \prod_{j=4}^7 \alpha_j \right) \quad (1.1)$$

Where  $\alpha_I$  is the probability given arrest of being incarcerated in a State institution.

Court commitments (C) to incarceration can then be derived as follows:

$$C = A\alpha_I \quad (1.2)$$

Using this type of flow diagram framework the aggregate processing of offenders through the criminal justice system can be described. Rectangular shaped stages and line flow paths can be used to describe the manner of offender processing and the outcome of offender processing at various decision making points, i.e., processing flows. The diamond shaped boxes can be used to represent those stages where delay in processing cause offender queues to build up (e.g., at the court stages) as well as those stages where court commitments and sentences result in the formation of active populations (e.g., at the custody and supervision stages). The resulting queues of active offenders can be thought of as system stocks.

Given this simple framework, offender processing can be described in a multitude of ways depending on those attributes of the criminal justice system and the offender one wishes to highlight. The only real constraint imposed on the type and detail of the description is the ability to obtain actual data on prior offender processing which can support the flow diagram description of interest. Given the data constraint, the principal consideration in determining the type of

offender flow description to develop is the set of anticipated uses or issues the flow description is to assist in illuminating. Among the questions about the system and the offender which must be addressed when considering alternative ways to flow diagram offender processing are:

1. Which components or combination of components of the system are to be represented in the flow diagram? For example:
  - a. Police/Apprehension
  - b. Bail/Detention
  - c. Prosecution Screening
  - d. Lower (District) Court
  - e. Upper (Circuit) Court
  - f. Appeal Court(s)
  - g. Corrections - Custody
  - h. Corrections - Supervision
2. For which jurisdictions are flow diagrams to be prepared? For example:
  - a. Statewide only
  - b. Each county or selected counties
  - c. Selected cities
3. For which attributes of aggregate offender processing should separate flow diagrams be prepared? For example:
  - a. Type of offense (e.g., most serious) of the offenders at arrest
  - b. Type of offense (e.g., most serious) of the offenders at final court disposition
  - c. For a selected type of crime, separate flow diagrams for groupings of the arrestees by age, race, and sex
4. Which attributes of aggregate offender processing might (alternatively or additionally) be described by flow paths within a given flow diagram description? For example:
  - a. Bail status of the offender population at the initial appearance, court disposition, conviction, and sentencing stages of processing
  - b. Type of Defense Attorney at the initial appearance, court disposition, conviction and sentencing stages of processing
  - c. Type of crime (most serious) for the offender population at the arrest, court disposition, conviction, sentencing, commitment to custody, and commitment to supervision stages of processing

5. What time period of offender processing is to be represented by the flow diagram? For example, aggregate description of offender processing for:
  - a. A Year - fiscal or calendar
  - b. A Calendar Quarter
6. How often should the flow description be updated? For example:
  - a. Bi-annually
  - b. Annually
  - c. Quarterly

B. Illustration of the Use and Display of Statistics on Offender Processing Flows and Stocks

The flow diagram format for representing data on offender processing flows and stocks can be used to:

1. Provide a uniform structure for representing statistical data on offender processing derived from any one or number of information systems and/or sources of data.
  - a. Enable a description of the existing system to be presented.
  - b. Enable the interaction between system components (e.g., law enforcement, courts, corrections) to be visually illustrated.
  - c. Enable data inconsistencies or discrepancies in the statistical description of system components to be more easily recognized and steps taken to highlight and even reconcile these differences.
  - d. Enable large amounts of data (e.g., from a state OBTS) to be displayed in a way that is potentially more meaningful than simply preparing aggregate statistical tables or charts.
  - e. Allow for the representation of a statistical description of offender processing that is tailored to or in response to a particular question or issue of concern.
2. Provide base line data from which indicators of system processing can be derived.
  - a. Enable the volume of activity flows and stocks through various decision making points to be compared. For example, comparison of the crime mix of the offender population at the arrest stage, versus court stage, versus conviction stage. Alternatively, comparison of the geographic distribution of offenders by county at the arrest stage, versus court stage, versus correction stage.
  - b. Enable the generation of system "flow rates" which describe the percent of offenders at one point in process who "penetrate" into the system to another point in process or who "dropout" or exit the system at a point in process (system penetration and dropout rates). These rates can, for example, be compared for various attributes or combinations of attributes of the offender population such as type of offense, jurisdiction of arrest, type of counsel, age, race, sex, and prior criminal record.
  - c. Enable the generation of system "stock rates" which describe the population of the offenders active in the system. For example, the number of persons detained awaiting trial compared to the total number of persons awaiting trial or the number of persons in state institutions compared to the number of

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- persons active in all forms of sentence (e.g., local jails, probation, psychiatric care, state institutions, residential treatment facilities).
- d. Enable the generation of system "retention rates" which describe the relationship between a processing stock and a processing flow. For example, the number of persons active in the system (e.g., awaiting court disposition and serving a sentence) as of a given point in time compared to the number of persons processed through the system over a given period of time (e.g., number of persons arrested or receiving a final disposition during the year). Like the other system rates, the system retention rates take on additional meaning when they can be generated for characteristics of the offender population like type of offense.
  - e. Enable, where the flow description is updated periodically (e.g., annually), the monitoring of changes in the volume and manner of processing over time.
3. Provide a base of information and a framework for representing data that can be used to consider and assess the impact of change on the system.
- a. Enable identification of potential problem areas where a more detailed description and understanding and analysis may be required.
  - b. Enable the impact of change from external factors (e.g., demographic shifts in the population's structure - age, sex, race; economic conditions) to be considered.
  - c. Enable the impact of change from internal factors (e.g., policy, program, procedures, practices) to be considered.
  - d. Enable alternative strategies for achieving the same objective to be considered and their potential impact analyzed.

The display and use of offender processing flows and stocks can best be illustrated by the efforts on the part of the states in this regard. The state efforts also illustrate the variety of data bases which are used to support statistical descriptions of offender processing.

1. Examples of the use of flow diagrams to provide a statistical description of offender processing derived from one or several information systems and/or sources of data:

Exhibit I.1. - is a flow diagram description for the State of California of the volume and manner of processing of felony defendants disposed in 1979. The defendant population shown are those defendants disposed in 1979 who were arrested on a felony charge. Felony defendant processing is shown starting with the arrest stage and proceeding through the prosecutor, lower court, and superior court stages of processing. The data base which supports this processing flow description is the California Bureau of Criminal Justice Statistics (BCS) Offender Based Transaction Statistics (OBTS) system. Similar diagrams can be prepared for any county arresting agency; judicial district; arrest offense; convicted offense; and age, race, and sex of the offender.

Exhibit I.2. - is a flow diagram for the state of Arkansas of felony processing for FY 1974. The defendant population shown is the disposition outcomes for defendants arrested in 1974 for a felony. The processing flow is shown starting at arrest and proceeding through court disposition and sentencing.

The data base which supports this processing flow description is the manually collected Offender Based Transaction Statistics System (OBTS) of the Statistical Analysis Center of the Arkansas Criminal Justice and Highway Safety Information Center.

Exhibit I.3. - is a flow diagram description for the state of New York of the dispositional outcomes of felony indictments disposed of for the period October 1 through December 31, 1974. Unlike the previous flow descriptions, this description does not start with arrest. Instead, only felony processing through the adjudication process beginning with indictment and ending with final disposition is shown. In addition, the unit of count is the indicted defendant i.e., an individual who is indicted in two separate indictments is counted as two indicted defendants. The data gathering and reporting system developed in response to the

New York Dangerous Drug Control Law and maintained by the New York State Division of Criminal Justice Services was used in preparing this statistical description.

Exhibit I.4. - is a flow diagram description for the Commonwealth of Pennsylvania of the dispositional outcomes of defendants processed in the Pennsylvania Courts of Common Pleas during 1976. The unit of count used for tabulation is the defendant with the disposition reported at either the time of disposition where there is no conviction or, if convicted, after the sentence has been imposed. The data base supporting this description is the Criminal Court Reporting Program of the Administrative Office of Pennsylvania Courts.

Exhibit I.5. - is a flow diagram description of offender processing flows and stocks for the Pennsylvania Criminal Justice System for 1976.

The composite description is drawn from data obtained from several sources. The flow diagram provides a general overview of criminal justice activity at different points in the system from arrest through court disposition, and corrections. The flow diagram also identifies areas of data uncertainty and inconsistency that might not be apparent had data from the various sources been shown in isolation.

Exhibit I.6. - provides comparative flow descriptions of processing for the offense of robbery for Ada County, Idaho for 1974 and 1978. The processing volumes shown represent adult robbery arrests and the resulting dispositional outcomes. The data in support of this description was manually collected from agency files by the Statistical Analysis Center staff of the Idaho Law Enforcement Planning Commission.

Exhibit I.7. - is a flow diagram description of juvenile client processing through the Nebraska Juvenile Courts for 1979. Reporting is done via a Juvenile Court Statistical reporting form which is completed by the courts and submitted to the Nebraska Commission on Law Enforcement and Criminal Justice. There the data is entered into a machine readable form and a magnetic tape is created. Analysis of the data is currently done remotely via the Michigan Terminal System (MTS) at Wayne State University, Detroit, Michigan.

2. Examples of the use of processing flow and stock statistics as indicators of system processing volumes and rates.

a. Exhibits illustrating the volume of activity flows and stocks for various offender characteristics:

Exhibits I.8. and 9. - show by type of felony offense at arrest the length of pre-trial confinement (exhibit I.8.) and final amount of bail set (Exhibit I.9.) respectively for defendants arrested in Arkansas for 1974. This information is derived from Arkansas' OBTS data base.

Exhibit I.10. - shows for Multnomah County, Oregon, by the charge at arrest, an overview of justice processing, court dispositions, and sentences. This information is compiled from a sample of 1976 CCH arrest records with subsequent court disposition followup. The unit of analysis is the offender.

Exhibits I.11.-13. - show for felony arrests in California disposed in 1979: (1) the type of disposition by arrest offense (Exhibit I.11.), (2) the court of conviction and sentence by convicted offense (Exhibit I.12.), and the type of disposition by county (Exhibit I.13.). This information is derived from California's OBTS data base.

Exhibit I.14. - shows for the state of Maryland for FY 1977 processing flows by jurisdictional groupings through the major components of the justice system (Law Enforcement, District Court, Circuit Court, and Corrections). The data to support this description is derived from computerized statistical output reports generated from the various agency management information systems.

b. Exhibits illustrating system rates of processing:

Exhibit I.15. - shows for Iowa for the period of April, 1977 - September, 1978 the pre-trial release screening decision outcomes for various offense categories. This data is derived from Iowa's Bureau of Correctional Evaluation data base.

Exhibit I.16. - shows for Oregon the rate of offender dropout from arrest through conviction and prison sentencing for Part I violent felony arrests in CY 1977. The unit of count is the offender with the most serious crime at arrest and the crime with the most serious judicial outcome selected to describe offender processing. The data base used to generate the statistical description of offender processing is the Computerized Criminal History (CCH) file maintained by the Oregon State Police.

Exhibit I.17. - shows for Iowa the rate of offender dropout from the courts through the conviction and sentencing stages of processing for felonies disposed in the period 1974-1977. The data to support this description was taken principally from the Iowa Department of Social Services computerized offender case files.

Exhibits I.18-21. - show for felony arrests in California disposed in 1979: (1) the rates of system dropout by type of arrest offense (Exhibit I.18.), (2) the rates of system dropout by race of the arrestees (Exhibit I.19.), (3) the rates of system dropout by age groupings of the arrestees (Exhibit I.20.), and (4) the rates of system dropout for groupings of the counties based on size of the population (Exhibit I.21.). The data base to support this description is California's OBTS.

Exhibit I.22. - shows the dispositional outcomes for defendants disposed in FY 1974 by the Supreme Bench (Upper Court) of Baltimore City. The unit of count is the defendant and the charge shown is the most serious at court filing. The Supreme Bench Court Scheduling and Information System data base was used to support this description of processing rates.

Exhibits I.23.-24. - show the relationship as a function of the type of offense at filing (most serious) between adults active in the system as of a given point in time (a system stock) and adults disposed of by the court over time (system flow). The unit of count is the defendant and the data displayed is from the Supreme Bench (Upper Court) of Baltimore City Court Scheduling and Information System. These exhibits illustrate the concept of a system retention rate (i.e., how many defendants are active in the system for a given volume of defendant throughput).

c. Exhibits illustrating the volume and manner of offender processing over time:

Exhibit I.25. - shows in table form the volume of defendant/case processing through the principal components of the Pennsylvania criminal justice system for the years 1971-1976. The statistics displayed in this table are drawn from various agency data bases.

Exhibits I.26. and 27. - show in table and graph form respectively the volume and manner of disposition in the Iowa District Court for the period FY 1958-FY1976. The unit of count is the charge against the offender as opposed to the offender. The data is from statistical summaries created from reports of District Court dispositions submitted by the Clerks of Court to the Iowa Department of Social Services.

Exhibits I.28. and 29. - show comparative processing flow for selected types of crime through the prosecutor and court stages of processing in the District of Columbia Superior Court for the years 1977 and 1978. The unit of count is the defendant case. The data presented on felony case flow is from the case management reports of the Prosecutor's Management Information System (PROMIS) maintained by the U.S. Attorney's Office for the District of Columbia.

Exhibit I.30. - shows the volume of inmates stocks and flows through the State of New York Correctional System for the years 1969-1978. The accounting unit is the offender. The data is from the New York State Department of Correctional Services manual records.

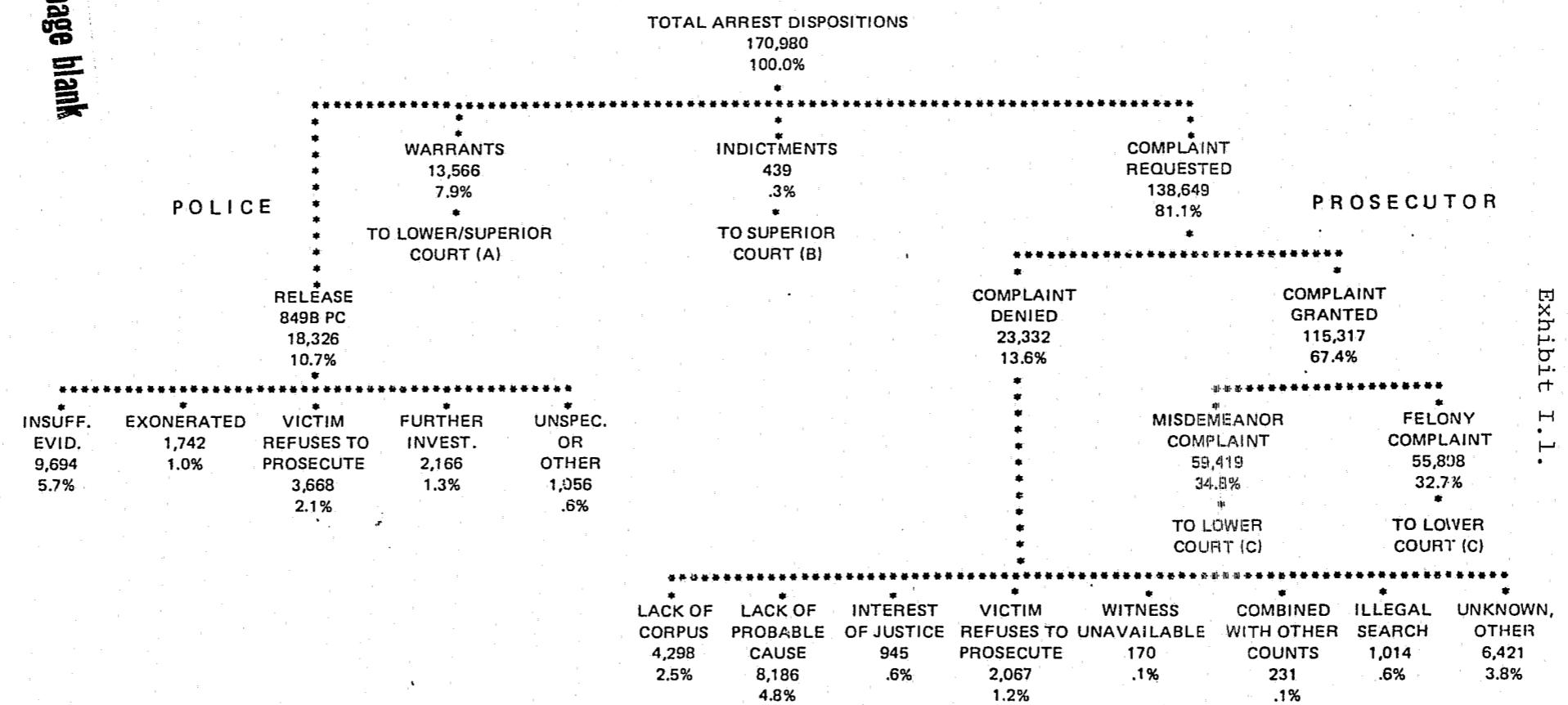
Exhibit I.31. - shows the status of adults under state and local supervision for the State of California for the years 1974-1979. The accounting unit is the offender. The data is derived from the various correctional services agencies of the state.

3. Examples of the use of processing flow and stock statistics to consider and assess the impact of change on the system:
  - a. System changes aimed at increased utilization of existing flow paths between decision making points or creating new flow paths between existing decision making points.
    - (1) Changes in bail setting procedures and use of pre-trial resources to impact on defendant bail processing - release on own recognizance, court operated moneyed bail, privately operated bail, pre-trial detention.
    - (2) Changes in judicial sentencing resulting in more or less use of state prisons versus local jails, probation, and community residential facilities.
    - (3) Changes in manner of release of state inmates - commutation, court order, parole, expiration of sentence and its impact on prison population.
    - (4) Changes in sentences as a result of new criminal code, introduction of mandatory sentencing or revision of penalties for selected offenses (e.g., commission of offense with a firearm, repeat offender).
    - (5) Changes in court jurisdiction for different offense categories.
    - (6) Changes in minimum sentence for inmates to be housed in state institutions.
    - (7) Changes in manner of court processing aimed at reducing delay from arrest to disposition.
  - b. System changes aimed at creation of an entirely new way of processing individuals through the criminal justice system.
    - (1) Introduction of intensive supervision program for parolees and probationers.
    - (2) Introduction of community and residential based corrections.
    - (3) Introduction of probation before or without judgement.
    - (4) Introduction of rape crisis centers.
    - (5) Creation in the prosecutor's office of a career criminal program including the dedication of judicial, prosecutor, and defense services to manage this caseload.

- (6) Initiation of a statewide public defender system.
  - (7) Creation of coordinated effort to control arson involving police, fire, prosecutor, insurance industry.
  - (8) Deinstitutionalization of status offender.
  - (9) Sight and sound separation of juveniles and adults.
- c. System changes aimed at diverting individuals out of the criminal justice system.
  - (1) Decriminalization of certain crimes (e.g., public drunkenness, victimless offenses).
  - (2) Removal of status offenders from the jurisdiction of the juvenile justice system.
  - (3) Diversion of drug dependent persons to drug rehabilitation program.
  - (4) Creation of community arbitration centers to handle minor criminal disputes.

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**CHART K**  
**1979 DISPOSITIONS OF ADULTS ARRESTED FOR FELONY OFFENSES**  
**Felony Arrest Disposition Summary**  
**Police and Prosecutor Processing**



(A) WARRANTS CONTINUED ON PAGE 38.

(B) GRAND JURY INDICTMENTS CONTINUED ON PAGE 39.

(C) LOWER COURT PROCESSING CONTINUED ON PAGE 38.

**CHART M**  
**1979 DISPOSITIONS OF ADULTS ARRESTED FOR FELONY OFFENSES**  
Felony Arrest Disposition Summary  
Superior Court Processing

(A) INCLUDES 38,902 DEFENDANTS RECEIVED FROM LOWER COURT (PAGE 38) AND 439 GRAND JURY INDICTMENTS FROM PAGE 27.

Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Justice Statistics and Special Services, Department of Justice, California, September 1980, pp. 37-39.

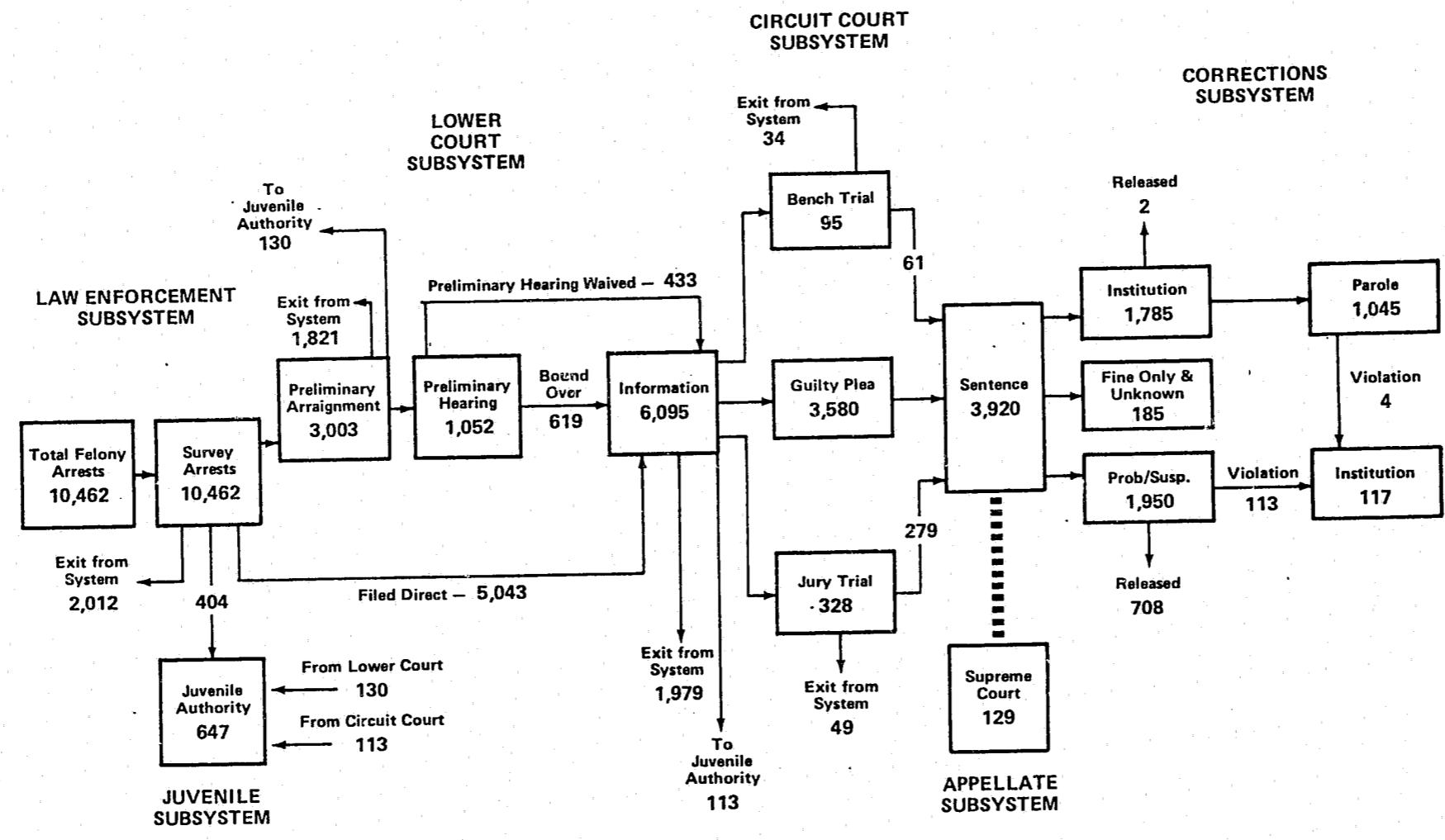


CHART 1

FELONY PROCESSING – STATE OF ARKANSAS  
1974

Source: Felony Processing Arkansas, A Statistical Analysis Center Special Report, Criminal Justice and Highway Information Center, December, 1977, p. 31.

## FELONY DEFENDANT PROCESSING FLOW

NEW YORK STATE  
10-01-74 THRU 12-31-74

TOTAL DEFENDANTS  
DISPOSED  
6170 100%

DISMISSED	ACQUITTED	PLEA TO ANOTHER INDICTMENT, CONSOLIDATION OR OTHER COURT ACTION
721 11.7%	243 3.9%	440 7.1%

JURY  
186 3.0%  
NON-JURY  
57 0.9%

CONVICTED	--YOUTHFUL OFFENDER* 647 13.6%
4766 77.2%	--PREDICATE FELONY* 218 4.6% OFFENDER
	--PERSISTENT FELONY* 0 0.0% OFFENDER

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Exhibit I.3.

	GUILTY PLEA	JURY TRIAL	NON-JURY TRIAL	TOTAL
	4445 72.0%	278 4.5%	43 0.7%	
UNCONDITIONAL DISCHARGE	49 0.8%	0 0.0%	1 0.0%	50 0.8%
CONDITIONAL DISCHARGE	209 3.4%	3 0.0%	0 0.0%	212 3.4%
DACC COMMITMENT	52 0.8%	0 0.0%	2 0.0%	54 0.9%
PROBATION	2043 33.1%	38 0.6%	13 0.2%	2094 33.9%
INCARCERATION - LOCAL	639 10.4%	24 0.4%	11 0.2%	674 10.9%
INCARCERATION - STATE	1387 22.5%	211 3.4%	15 0.2%	1613 26.1%
OTHER	66 1.1%	2 0.0%	1 0.0%	69 1.1%

\* NOTE: PERCENT OF CONVICTED

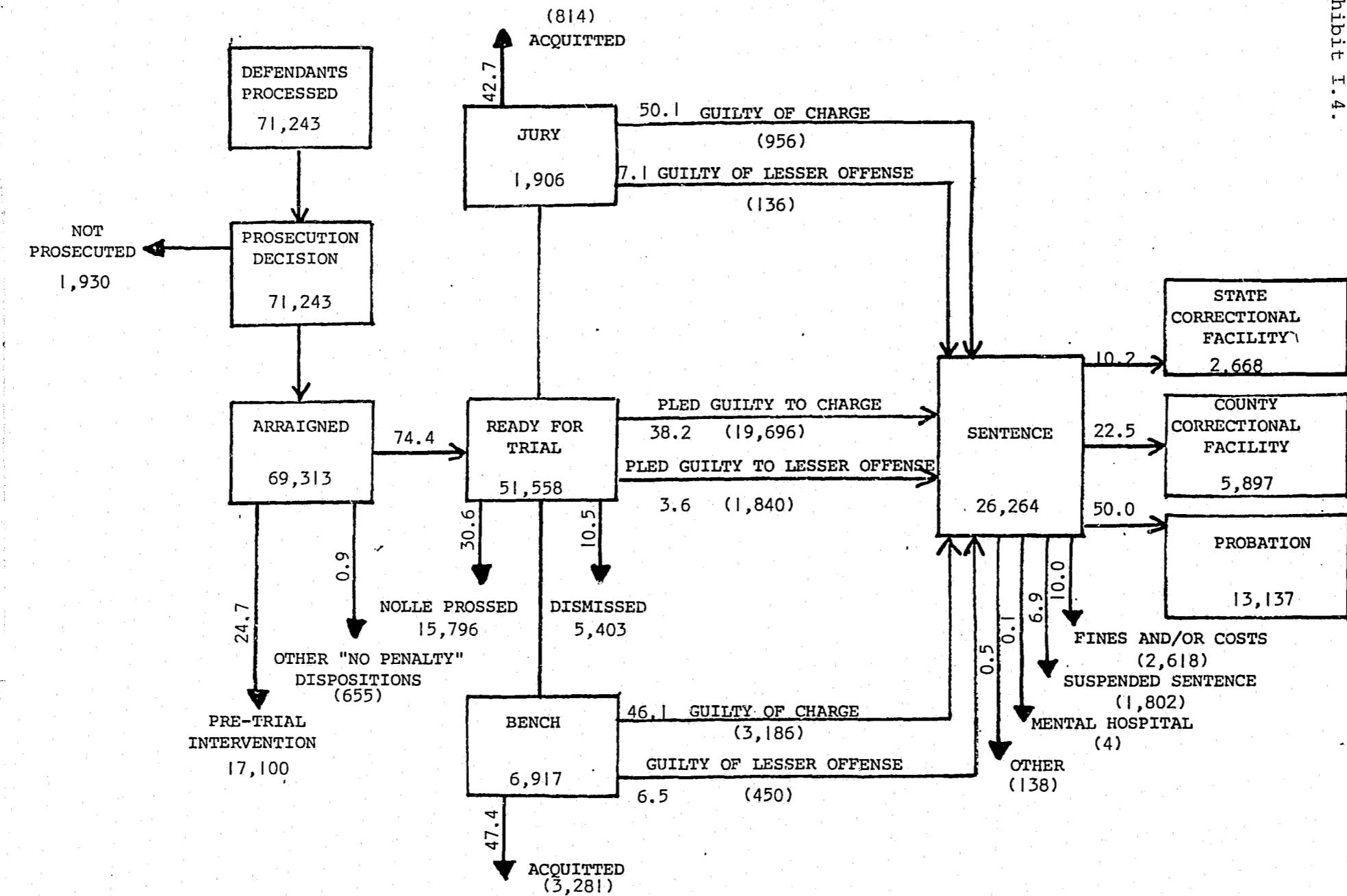
DCJS -- DIVISION OF CRIMINAL JUSTICE SERVICES

Source: New York State Felony Processing, Quarterly Report: Indictment Through Disposition, October-December 1974, New York State Division of Criminal Justice Services, January, 1975, p. 4-1.

Exhibit I-4.

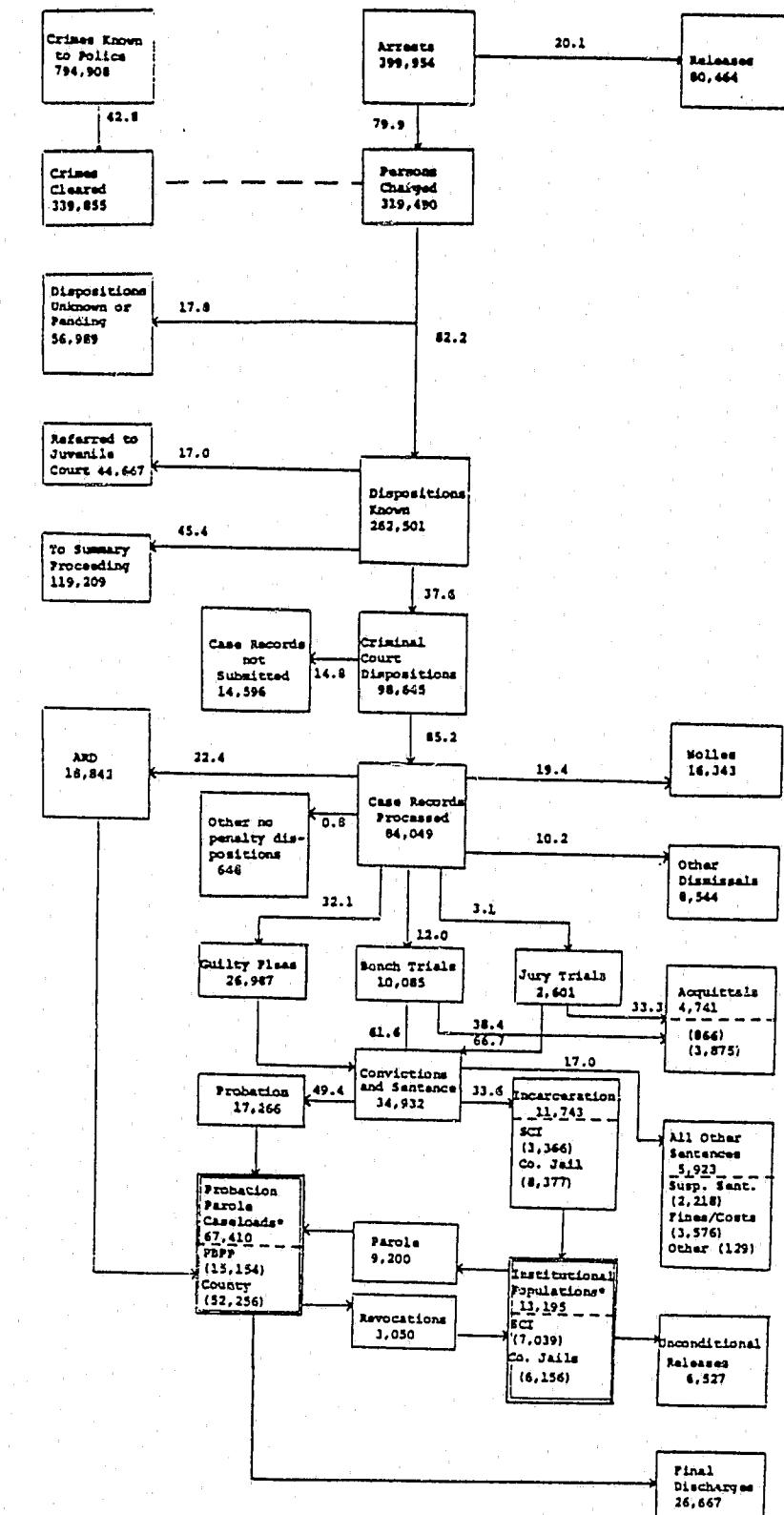
PENNSYLVANIA JUDICIAL SUB-SYSTEM

Court of Common Pleas



Source: Pennsylvania Criminal Courts Dispositions, Criminal Justice Statistics Division, Pennsylvania Commission on Crime and Delinquency, 1979, p. 4.

CASEFLOWS IN THE CRIMINAL JUSTICE SYSTEM, 1976



\*As of December 31, 1976

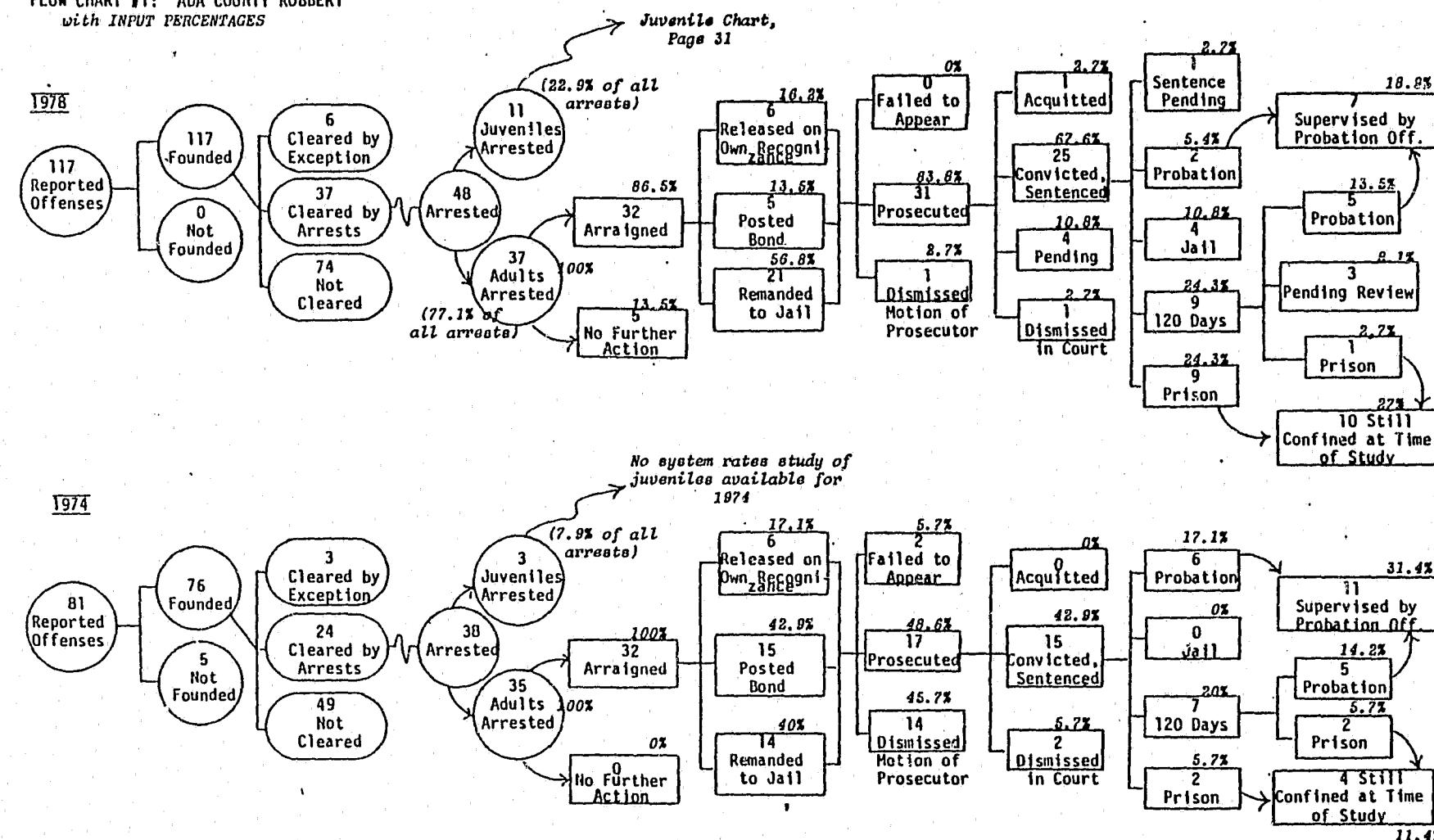
Key:

Events

Stocks

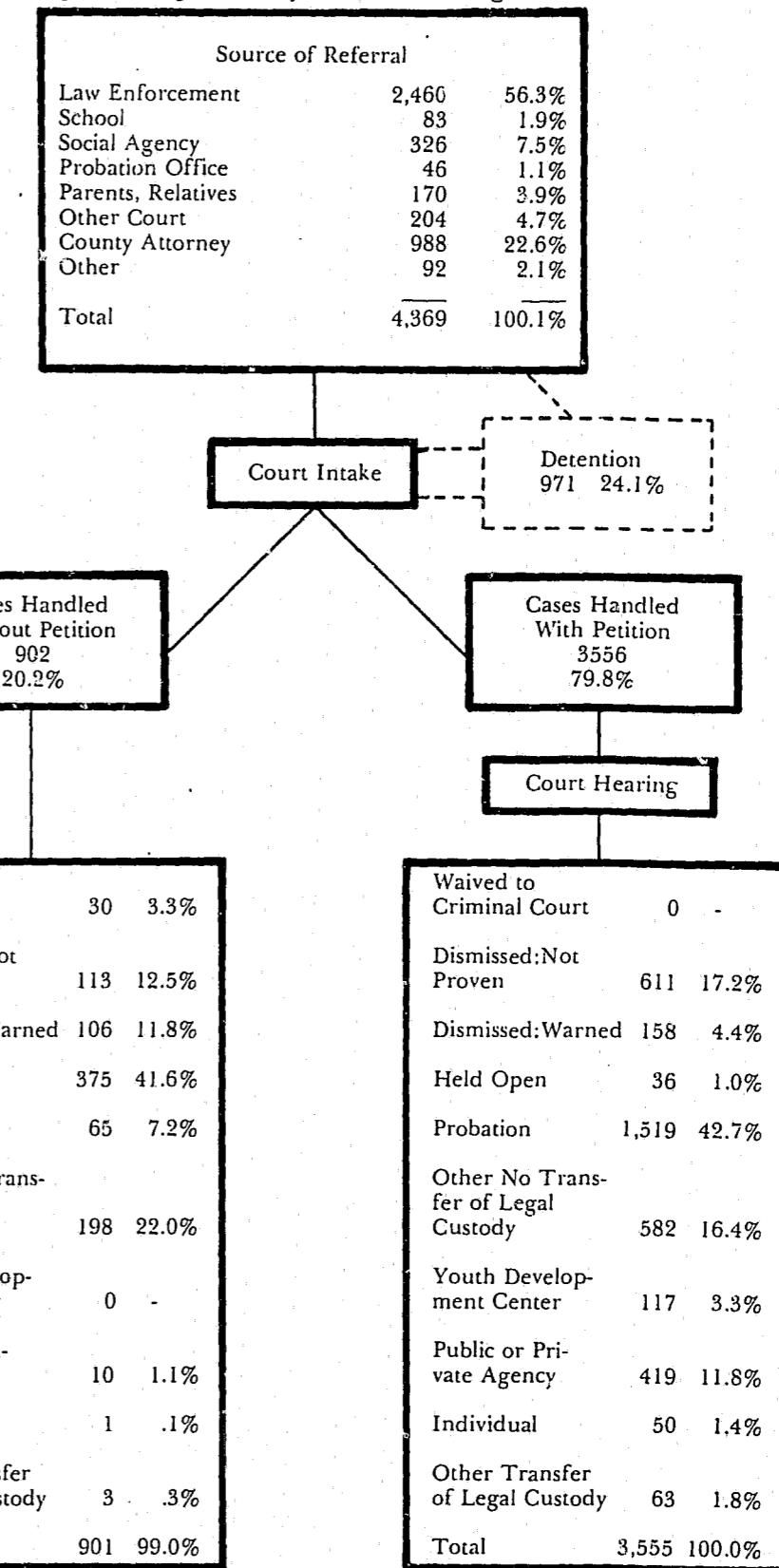
Numbers within event boxes represent the number of events which occurred. Numbers along arrows are branching ratios, (in percent).

FLOW CHART #1: ADA COUNTY ROBBERY  
with INPUT PERCENTAGES



Source: "Comparative Study of Robbery in Ada County 1974/1978", Statistical Analysis Center, Idaho Law Enforcement Planning Commission, July, 1979, p. 20.

FIGURE 1  
Juvenile Justice System Flow Diagram\*



\*Does not include unknown cases for respective categories.

TABLE 5 - LENGTH OF PRE-TRIAL CONFINEMENT BY FELONY OFFENSE

LENGTH OF PRE-TRIAL CONFINEMENT	FELONY OFFENSE											TOTALS
	MURDER	MURDER/ASSAULT	RAPE	ROBBERY	ASSAULT	BURGLARY	LARCENY/MVT	POSS. OF STOLEN PROPERTY	FORGERY/UTTERING	GAMING	NARCOTICS	
Less than 1 day	25	26	72	73	404	303	91	86	1	190	365	1,636
1 - 5 days	34	56	88	139	671	437	170	119	5	399	381	2,499
6 - 10 days	13	13	34	26	200	96	27	45	1	50	75	580
11 - 15 days	5	5	16	17	106	52	15	13	0	22	30	281
16 - 20 days	8	5	15	10	65	36	16	11	0	18	20	204
21 - 25 days	6	8	12	9	51	23	6	13	0	13	18	159
26 - 30 days	6	1	6	10	39	15	0	10	0	12	12	116
31 - 40 days	5	6	13	8	55	34	8	13	0	13	23	178
41 - 50 days	6	7	22	6	42	19	4	12	0	13	13	144
51 - 75 days	8	7	14	10	55	26	11	17	0	15	22	185
76 - 100 days	10	1	19	2	33	15	2	5	0	7	10	104
101 and over days	26	14	36	10	71	29	8	20	1	18	17	250
Undetermined	95	88	263	223	1,055	687	273	244	15	437	746	4,126
TOTAL	247	237	610	543	2,847	1,772	636	608	23	1,207	1,732	10,462

TABLE 6 - FINAL AMOUNT OF BAIL BY FELONY OFFENSE

FINAL AMOUNT OF BAIL	FELONY OFFENSE											TOTALS
	MURDER	MURDER/ASSAULT	RAPE	ROBBERY	ASSAULT	BURGLARY	LARCENY/MVT	POSS. OF STOLEN PROPERTY	FORGERY/UTTERING	GAMING	NARCOTICS	
\$1 - 499	0	2	3	10	31	52	15	.22	1	11	87	234
\$500 - 999	0	2	8	29	89	90	43	24	3	38	85	411
\$1,000 - 1,499	10	11	34	48	211	130	71	62	0	77	124	778
\$1,500 - 2,499	1	8	24	47	142	73	22	37	7	47	60	468
\$2,500 - 4,999	10	18	33	50	227	112	63	51	0	83	106	753
\$5,000 - 7,499	8	17	32	23	133	58	15	19	0	122	24	451
\$7,500 - 9,999	4	1	3	3	8	3	0	1	0	23	6	52
\$10,000 - 19,999	20	21	39	22	44	19	1	4	0	36	14	220
\$20,000 - 24,999	1	2	5	2	1	2	1	0	0	17	0	31
\$25,000 - 49,999	11	7	23	0	6	1	0	1	0	4	3	56
\$50,000 & above	13	1	13	1	3	1	0	0	0	5	3	40
None Set	19	9	5	2	8	2	0	0	0	2	3	50
Not Applicable	26	13	59	32	368	234	80	49	0	43	213	1,117
Undetermined	124	125	329	274	1,576	995	325	338	12	699	1,004	5,801
TOTAL	247	237	610	543	2,847	1,772	636	608	23	1,207	1,732	10,462

Source: Felony Processing in Arkansas, Statistical Analysis Center Special Report, Criminal Justice Highway Safety & Information Center, December, 1979, pp. 12,13.

District 2 - MULTNOMAH COUNTY

Disposition	Charge At Arrest												
	Homicide		Agg. Assault		Forcible Rape		Robbery		Burglary		Larceny		M.V. Theft
					N	%	N	%	N	%	N	%	
<u>System Overview</u>					62	100	129	100	71	100	120	100	64
Arrests					55	89	77	60	56	79	79	66	37
Circuit Court Filings					42	68	57	44	46	65	53	44	29
Circuit Court Convictions													35
<u>Circuit Court Disposition<sup>1</sup></u>													23
Guilty Plea					25	45	43	57	33	59	48	64	25
Convicted by Trial					17	31	14	18	13	23	5	7	32
Acquitted					4	7	2	3	3	5	2	3	19
Dismissed					5	9	16	21	6	11	19	25	7
Not Guilty- Insanity					4	7	1	1	1	2	1	3	2
Pending/Not Known					-	-	1	NA	-	-	4	NA	1
<u>Sentences<sup>2</sup></u>													NA
Incar./Probat.					30	71	18	32	24	52	30	57	7
Incar. only					5	12	17	30	13	28	2	4	5
Incar. plus Probat.					7	17	21	37	8	17	20	38	17
Probat. only					-	-	1	2	1	2	1	2	-
Neither					25	60	15	26	20	43	27	51	6
Incar. over 1 year											21	21	2
Fines and Restitution											22	22	6
Both											66	66	10
Fines only											28	28	7
Restit. only											13	13	33
Neither					37	88	33	58	38	83	47	89	19
<u>Filing vs Arrest Charge</u>													67
Same					35	64	46	60	42	75	52	66	39
Different					20	36	31	40	14	25	27	34	20
<u>Conv. vs Filing Charge</u>													17
Same					19	45	23	40	29	63	36	68	2

TABLE 9  
DISPOSITION OF ADULT FELONY ARRESTS, 1979  
Type of Disposition by Arrest Offense

Type of disposition	Total	Homicide	Arrest offense							Drug law violations	All other
			Forcible rape	Robbery	Assault	Burglary	Theft	Motor vehicle theft			
Disposition of felony arrests . . . . .	170,980	1,813	2,501	12,539	27,122	30,053	22,467	10,567	36,039	27,879	
Law enforcement releases . . . . .	18,326	186	434	2,325	2,974	3,054	2,457	2,412	2,780	1,704	
Complaints denied . . . . .	23,332	163	418	1,655	4,190	2,317	2,620	1,810	6,940	3,219	
Complaints filed . . . . .	129,322	1,464	1,649	8,559	19,958	24,682	17,390	6,345	26,319	22,956	
Misdemeanor . . . . .	62,752	27	201	1,307	12,684	10,536	9,215	3,366	13,687	11,729	
Felony . . . . .	66,570	1,437	1,448	7,252	7,274	14,146	8,175	2,979	12,632	11,227	
Lower court dispositions . . . . .	89,981	221	557	3,104	16,200	15,631	13,533	4,802	19,292	16,641	
Dismissed . . . . .	26,588	194	297	1,746	4,470	3,517	3,669	1,238	7,943	3,514	
Acquitted . . . . .	619	2	2	17	238	71	95	25	78	91	
Convicted . . . . .	62,774	25	258	1,341	11,492	12,043	9,769	3,539	11,271	13,036	
Guilty plea . . . . .	61,710	25	253	1,317	11,097	11,868	9,625	3,486	11,167	12,872	
Jury trial . . . . .	686	0	5	18	294	109	99	35	51	75	
Court trial . . . . .	378	0	0	6	101	66	45	18	53	89	
Sentence . . . . .	62,774	25	258	1,341	11,492	12,043	9,769	3,539	11,271	13,036	
Youth Authority . . . . .	36	0	1	0	4	14	7	4	3	3	
Probation . . . . .	20,509	11	64	289	4,120	3,155	2,949	706	3,839	5,376	
Probation with jail . . . . .	26,508	10	136	707	4,961	6,201	4,545	1,816	3,518	4,614	
Jail . . . . .	10,195	3	52	299	1,647	2,273	1,833	881	1,514	1,693	
Fine . . . . .	5,312	0	5	44	729	385	417	120	2,301	1,311	
Other . . . . .	214	1	0	2	31	15	18	12	96	39	
Superior court dispositions . . . . .	39,341	1,243	1,092	5,455	3,758	9,051	3,857	1,543	7,027	6,315	
Dismissed . . . . .	3,702	110	117	472	434	534	411	97	1,067	460	
Acquitted . . . . .	740	58	51	137	145	78	53	23	96	99	
Convicted . . . . .	34,899	1,075	924	4,846	3,179	8,439	3,393	1,423	5,864	5,756	
Original plea of guilty . . . . .	11,986	201	238	1,181	1,063	2,898	1,526	536	1,707	2,636	
Change plea to guilty . . . . .	19,350	543	454	3,061	1,652	5,017	1,655	798	3,520	2,650	
Jury trial . . . . .	2,483	270	197	454	333	377	149	61	319	323	
Court trial . . . . .	802	51	29	121	110	115	45	20	207	104	
Trial by transcript . . . . .	278	10	6	29	21	32	18	8	111	43	
Sentence . . . . .	34,899	1,075	924	4,846	3,179	8,439	3,393	1,423	5,864	5,756	
Death . . . . .	20	20	0	0	0	0	0	0	0	0	
Prison . . . . .	8,838	765	403	2,060	757	1,963	500	273	866	1,251	
Youth Authority . . . . .	1,490	55	41	509	146	429	77	83	47	103	
Probation . . . . .	4,325	35	68	209	410	712	747	122	1,058	964	
Probation with jail . . . . .	18,150	187	309	1,894	1,677	4,808	1,880	854	3,560	2,981	
Jail . . . . .	1,146	11	28	116	163	302	131	86	116	193	
Fine . . . . .	90	0	1	4	11	5	7	0	43	19	
California Rehabilitation Center . . . . .	568	1	1	52	9	210	50	5	169	71	
State hospital — MDSO <sup>a</sup> . . . . .	259	1	73	2	6	7	0	0	2	168	
Other . . . . .	13	0	0	0	0	3	1	0	3	6	

<sup>a</sup>Confined to state hospital as a mentally disordered sex offender.

Note: It is estimated that statewide data are 35 percent underreported. Individual counties may vary.

Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Statistics and Special Services, September, 1980, p. 40.

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Exhibit I.11.

TABLE 10  
ADULT FELONY ARRESTEES CONVICTED AND SENTENCED, 1979  
Court of Conviction and Sentence by Convicted Offense

Court of conviction	Convicted offense									
	Total	Homicide	Forcible rape	Robbery	Assault	Burglary	Theft	Motor vehicle theft	Drug law violations	All other
Total convictions . . . . .	97,673	950	582	3,617	12,267	11,566	19,366	4,256	14,257	30,812
Lower court . . . . .	62,774	0	0	0	8,943	4,362	13,645	2,818	8,486	24,520
Guilty plea . . . . .	61,710	0	0	0	8,563	4,277	13,441	2,777	8,420	24,232
Jury trial . . . . .	686	0	0	0	286	59	132	29	30	150
Court trial . . . . .	378	0	0	0	94	26	72	12	36	138
Sentence . . . . .	62,774	0	0	0	8,943	4,362	13,645	2,818	8,486	24,520
Youth Authority . . . . .	36	0	0	0	5	11	5	6	3	6
Probation . . . . .	20,509	0	0	0	2,800	762	3,934	481	2,377	10,155
Probation with jail . . . . .	26,508	0	0	0	4,377	2,665	6,692	1,566	2,965	8,243
Jail . . . . .	10,195	0	0	0	1,385	880	2,541	725	1,377	3,287
Fine . . . . .	5,312	0	0	0	361	41	456	38	1,693	2,723
Other . . . . .	214	0	0	0	15	3	17	2	71	106
Superior court . . . . .	34,899	950	582	3,617	3,324	7,204	5,721	1,438	5,771	6,292
Original plea of guilty . . . . .	11,986	154	113	803	1,083	2,396	2,349	604	1,658	2,826
Change plea to guilty . . . . .	19,350	468	275	2,288	1,742	4,318	3,071	763	3,461	2,964
Jury trial . . . . .	2,483	268	169	408	352	363	209	48	319	347
Court trial . . . . .	802	49	22	98	123	101	66	15	210	118
Trial by transcript . . . . .	278	11	3	20	24	26	26	8	123	37
Sentence . . . . .	34,899	950	582	3,617	3,324	7,204	5,721	1,438	5,771	6,292
Death . . . . .	20	20	0	0	0	0	0	0	0	0
Prison . . . . .	8,838	736	360	1,960	703	1,810	831	286	829	1,323
Youth Authority . . . . .	1,490	49	39	455	151	400	161	88	42	105
Probation . . . . .	4,325	22	19	72	455	515	1,077	106	1,056	1,003
Probation with jail . . . . .	18,150	122	108	1,074	1,776	4,087	3,293	868	3,516	3,306
Jail . . . . .	1,146	0	2	14	211	199	261	84	113	262
Fine . . . . .	90	0	0	0	12	2	8	0	45	23
California Rehabilitation Center . . . . .	568	1	1	41	6	181	88	6	167	77
State hospital — MDSO <sup>a</sup> . . . . .	259	0	53	1	10	8	1	0	1	185
Other . . . . .	13	0	0	0	0	2	1	0	2	8

<sup>a</sup>Confined to state hospital as a mentally disordered sex offender.

Notes: It is estimated that statewide data are 35 percent underreported. Individual counties may vary.

These convicted offense data include both misdemeanors and felonies.

TABLE 16 – Continued  
DISPOSITION OF ADULT FELONY ARRESTS, 1979  
Type of Disposition by County

Type of disposition	Lassen	Los Angeles	Madera	Marin	Mariposa	Mendocino	Merced	Modoc	Mono
Disposition of felony arrests . . . . .	131	70,811	272	1,110	27	381	781	47	77
Law enforcement releases . . . . .	3	12,187	4	2	0	19	19	0	1
Complaints denied . . . . .	33	11,092	2	525	0	16	34	0	3
Complaints filed . . . . .	95	47,532	266	583	27	346	728	47	73
Misdemeanor . . . . .	36	29,450	28	404	12	116	201	13	15
Felony . . . . .	59	18,082	238	179	15	230	527	34	58
Lower court dispositions . . . . .	59	31,817	121	547	21	248	478	23	60
Dismissed . . . . .	13	6,821	44	139	5	66	214	2	17
Acquitted . . . . .	1	278	0	5	0	8	1	0	0
Convicted . . . . .	45	24,718	77	403	16	174	263	21	43
Guilty plea . . . . .	43	24,295	76	400	16	163	259	21	43
Jury trial . . . . .	2	261	1	1	0	4	3	0	0
Court trial . . . . .	0	162	0	2	0	7	1	0	0
Sentence . . . . .	45	24,718	77	403	16	174	263	21	43
Youth Authority . . . . .	0	10	0	0	0	0	0	0	0
Probation . . . . .	6	8,746	12	195	0	36	68	5	13
Probation with jail . . . . .	9	9,689	30	163	5	90	106	10	27
Jail . . . . .	14	4,285	25	31	7	41	59	6	2
Fine . . . . .	16	1,940	9	13	4	7	30	0	1
Other . . . . .	0	48	1	1	0	0	0	0	0
Superior court dispositions . . . . .	36	15,715	145	36	6	98	250	24	13
Dismissed . . . . .	3	1,489	36	4	0	9	17	0	0
Acquitted . . . . .	3	455	12	0	0	4	1	0	0
Convicted . . . . .	30	13,771	97	32	6	85	232	24	13
Original plea of guilty . . . . .	19	3,239	23	8	2	33	152	9	9
Change plea to guilty . . . . .	4	8,863	49	19	3	30	41	11	3
Jury trial . . . . .	6	854	23	3	0	16	31	1	1
Court trial . . . . .	1	579	2	2	1	6	8	2	0
Trial by transcript . . . . .	0	236	0	0	0	0	0	1	0
Sentence . . . . .	30	13,771	97	32	6	85	232	24	13
Death . . . . .	0	4	0	0	0	0	1	0	0
Prison . . . . .	22	3,280	34	1	0	30	55	5	1
Youth Authority . . . . .	0	734	11	1	0	7	5	0	1
Probation . . . . .	1	2,170	4	6	3	4	3	3	3
Probation with jail . . . . .	4	6,781	33	23	3	30	157	12	7
Jail . . . . .	3	494	13	0	0	11	2	3	1
Fine . . . . .	0	39	0	0	0	2	1	0	0
California Rehabilitation Center . . . . .	0	180	1	1	0	0	6	0	0
State hospital – MDSO <sup>b</sup> . . . . .	0	86	1	0	0	1	2	1	0
Other . . . . .	0	3	0	0	0	0	0	0	0

Exhibit I.13.

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Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Statistics and Special Services, September, 1980, p. 49.

TABLE I II. ADULT PROCESSING COMPONENT ACTIVITY FLOWS (FY 1977)

## I. LAW ENFORCEMENT COMPONENT ACTIVITY FLOWS (FY 1977)

JURISDICTIONAL GROUPINGS	B. Apprehension Subsystem Activity Flows				
	1. Total Law Enforcement Arrests	2. Total Arrests County Police	3. Total Arrests Municipal Police	4. Total Arrests Sheriff	5. Total Arrests State Police
1. Baltimore City	68,990 (39.3%)	0	68,073 (78.6%)	526 (4.0%)	111 (0.9%)
2. Dor., Somer., Wic., Worcester	6,599 (3.8%)	0	3,845 (4.4%)	1,584 (12.0%)	1,064 (8.4%)
3. Calvert, Cecil, Kent, Q. Anne's, Talbot	5,161 (2.9%)	0	1,699 (2.0%)	1,908 (14.5%)	1,554 (12.3%)
4. Calvert, Charles, St. Mary's	5,097 (2.9%)	0	108 (0.1%)	3,211 (24.6%)	1,777 (14.1%)
5. Prince George's	24,979 (14.2%)	18,128 (29.5%)	2,864 (3.3%)	1,997 (15.2%)	1,012 (8.0%)
6. Montgomery	15,344 (8.7%)	14,142 (23.0%)	620 (0.7%)	184 (1.4%)	132 (1.0%)
7. Anne Arundel	13,297 (7.6%)	9,044 (14.7%)	2,713 (3.1%)	97 (0.7%)	1,352 (10.7%)
8. Baltimore Co.	18,031 (10.3%)	17,164 (27.9%)	19 (0.02%)	46 (0.3%)	769 (6.1%)
9. Harford	4,901 (2.8%)	0	1,451 (1.7%)	2,489 (18.9%)	961 (7.6%)
10. Carroll, Howard	5,614 (3.2%)	3,074 (5.0%)	570 (0.7%)	88 (0.7%)	1,682 (14.9%)
11. Frederick, Wash.	5,550 (3.2%)	0	3,541 (4.1%)	618 (4.7%)	1,391 (11.0%)
12. Allegany, Garrett	2,186 (1.2%)	0	1,095 (1.3%)	399 (3.0%)	600 (4.8%)
State-wide	175,749	61,552	86,598	13,147	12,605

( ) = % of Column Total

JURISDICTIONAL GROUPINGS	A. District Court Subsystem and Bail Subsystem Activity Flows				
	1. Total District Court Disposed for the Year	2. Defendants Detained at or Near District Court Disposition	3. Defendants to Circuit Court (Indictable, Pray Jury Trial, Appeals)	4. Pray Jury to Circuit Court	5. Defendants Disposed at District Court
1. Baltimore City	49,948 (40.8%)	7,786 (52.8%)	8,737 (45.8%)	4,489 (65.7%)	42,089 (40.0%)
2. Dor., Somer., Wic., Worcester	5,911 (4.8%)	685 (4.6%)	1,126 (5.9%)	284 (4.2%)	4,889 (4.6%)
3. Calvert, Cecil, Kent, Q. Anne's, Talbot	3,554 (2.9%)	432 (2.9%)	586 (3.1%)	122 (1.8%)	3,018 (2.9%)
4. Calvert, Charles, St. Mary's	3,778 (3.1%)	1,265 (1.8%)	412 (2.2%)	83 (1.2%)	3,419 (3.2%)
5. Prince George's	16,158 (13.2%)	1,784 (12.1%)	1,954 (10.2%)	336 (4.9%)	14,307 (13.6%)
6. Montgomery	8,679 (7.1%)	1,168 (7.9%)	957 (5.0%)	269 (3.9%)	7,823 (7.4%)
7. Anne Arundel	9,472 (7.7%)	582 (4.0%)	1,090 (5.7%)	222 (3.3%)	8,550 (8.1%)
8. Baltimore Co.	11,513 (9.4%)	826 (5.6%)	2,665 (10.8%)	464 (6.8%)	9,473 (9.0%)
9. Harford	2,836 (2.3%)	259 (1.8%)	450 (2.4%)	179 (2.6%)	2,424 (2.3%)
10. Carroll, Howard	3,743 (3.1%)	197 (1.3%)	793 (4.2%)	151 (2.2%)	3,119 (3.0%)
11. Frederick, Wash.	4,612 (3.8%)	552 (3.7%)	597 (3.1%)	200 (2.9%)	4,067 (3.9%)
12. Allegany, Garrett	2,346 (1.9%)	197 (1.3%)	329 (1.7%)	36 (0.5%)	2,085 (2.0%)
State-wide	122,550	14,733	19,096	6,835	105,263

( ) = % of Column Total

TABLE I (Continued)

## II. ADULT PROCESSING COMPONENT ACTIVITY FLOWS (FY 1977)

JURISDICTIONAL GROUPINGS	B. Circuit Court Subsystem Activity Flows*	
	1. Total Circuit Court Defendants Disposed for the Year	2. Circuit Court Defendants Pending Disposition End of Year
1. Baltimore City	8,528 (41.5%)	3,344 (39.0%)
2. Dor., Somer., Wic., Worcester	1,101 (5.62%)	643 (7.5%)
3. Calvert, Cecil, Kent, Q. Anne's, Talbot	762 (3.7%)	236 (2.8%)
4. Calvert, Charles, St. Mary's	439 (2.1%)	176 (2.1%)
5. Prince George's	2,158 (10.5%)	1,080 (12.6%)
6. Montgomery	1,287 (6.3%)	770 (9.0%)
7. Anne Arundel	1,420 (6.92%)	458 (5.3%)
8. Baltimore Co.	2,386 (11.62%)	593 (6.9%)
9. Harford	506 (2.5%)	267 (3.1%)
10. Carroll, Howard	830 (4.0%)	700 (8.22%)
11. Frederick, Wash.	809 (3.9%)	154 (1.8%)
12. Allegany, Garrett	314 (1.5%)	146 (1.7%)
State-wide	20,540	8,567

## II. ADULT PROCESSING COMPONENT ACTIVITY FLOWS (FY 1977)

JURISDICTIONAL GROUPINGS	C. Corrections Subsystem Activity Flows			
	1. New Court Commitments to State Corrections	2. State Probation Intake to the Division of Parole and Probation	3. Sentenced to Local Jail and Local Correctional Facilities*	4. State Parole Intake to the Division of Parole and Probation
1. Baltimore City	2,774 (69.6%)	7,641 (42.0%)	1,305 (23.5%)	1,512 (59.6%)
2. Dor., Somer., Wic., Worcester	156 (3.4%)	769 (4.2%)	359 (6.5%)	126 (5.0%)
3. Calvert, Cecil, Kent, Q. Anne's, Talbot	121 (2.6%)	914 (5.0%)	293 (5.3%)	74 (2.9%)
4. Calvert, Charles, St. Mary's	95 (2.1%)	410 (2.3%)	139 (2.5%)	58 (2.3%)
5. Prince George's	596 (13.0%)	1,880 (10.3%)	1,188 (21.4%)	182 (7.2%)
6. Montgomery	137 (3.0%)	1,537 (8.4%)	345 (6.2%)	114 (4.5%)
7. Anne Arundel	120 (2.6%)	913 (5.0%)	430 (7.7%)	96 (3.8%)
8. Baltimore Co.	347 (7.6%)	1,918 (10.5%)	324 (5.8%)	187 (7.4%)
9. Harford	24 (0.5%)	350 (1.9%)	220 (4.0%)	38 (1.5%)
10. Carroll, Howard	90 (2.0%)	966 (5.3%)	192 (3.5%)	51 (2.0%)
11. Frederick, Wash.	84 (1.8%)	710 (3.9%)	579 (10.4%)	71 (2.8%)
12. Allegany, Garrett	35 (0.8%)	206 (1.1%)	184 (3.3%)	26 (1.0%)
State-wide	4,579	18,214	5,558	2,535

( ) = % of Column Total

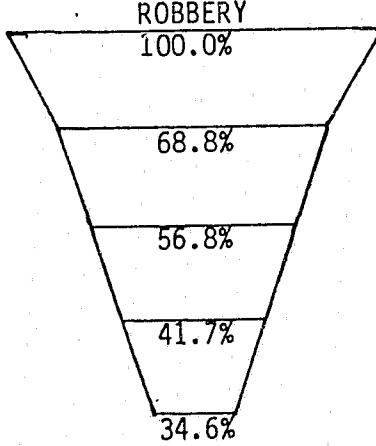
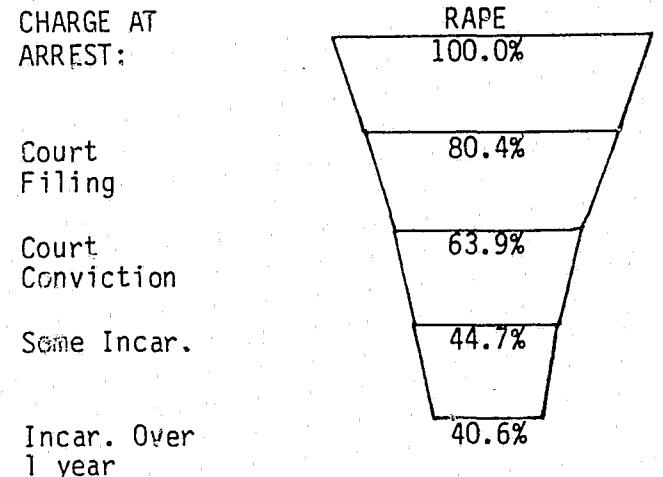
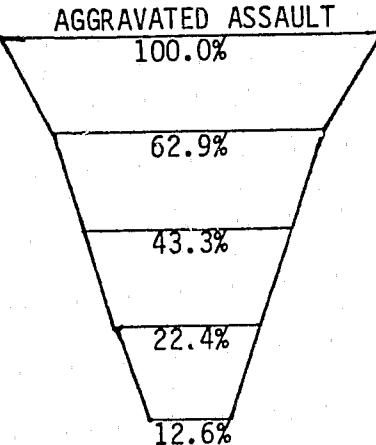
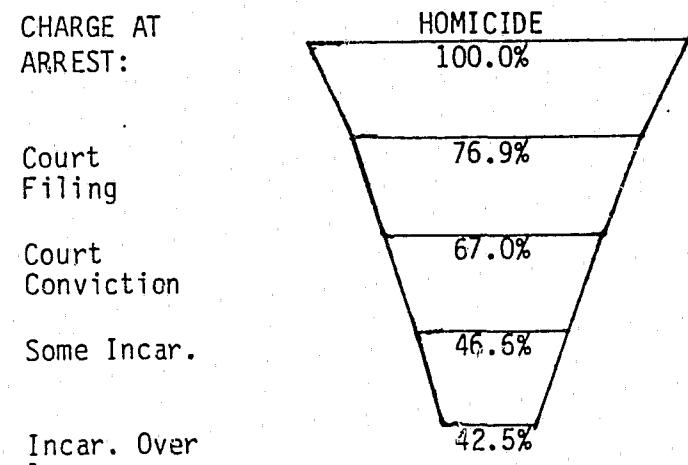
Source: A Jurisdiction-Based Description of the Maryland Criminal and Juvenile Justice System, Statistical Analysis Section, Maryland Governor's Commission on Law Enforcement and the Administration of Justice, August, 1978, pp. 42-46

### CRIMINAL JUSTICE FUNNELING EFFECTS

#### VIOLENT CRIMES

Over 40 percent of the individuals charged by the police with homicide or rape receive an incarceration sentence of over one year. Of all the Part I offenses, these offenses result in the most severe implications in terms of judicial system response.

In sharp contrast is aggravated assault, which of all the Part I offenses has the fewest court filings and the least severe consequences on an overall statistical basis. An apparent reason for this is that many of the aggravated assaults involve "family beefs", in which the victim ultimately does not prosecute.



Source: What Happens After Arrest in Oregon, Planning and Data Analysis Unit, Oregon Law Enforcement Council, June, 1979, pp. 14-15.

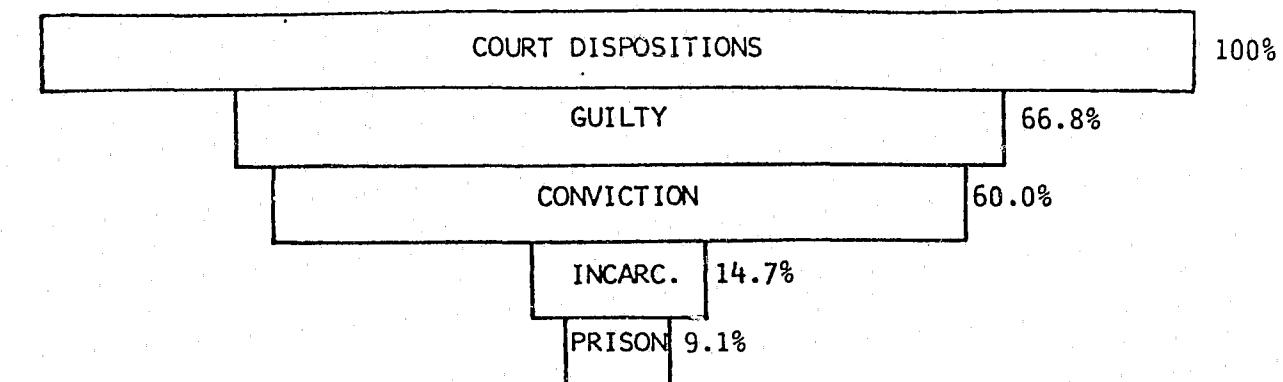
### CRIMINAL JUSTICE FLOW IN IOWA

1974-1977

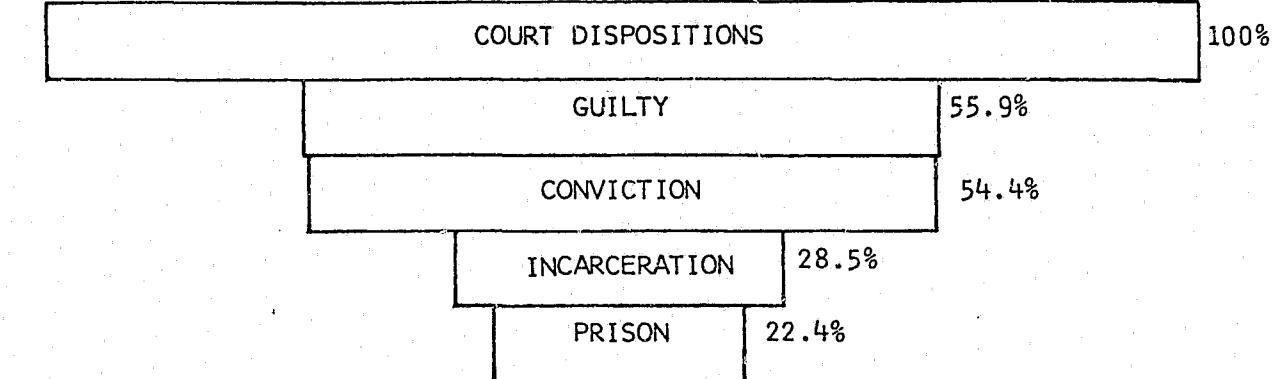
#### COURTS SEQUENCE - THE "FUNNELING" EFFECT

ADULT FELONIES - ALL FELONIES, VIOLENT FELONIES, NON-VIOLENT FELONIES

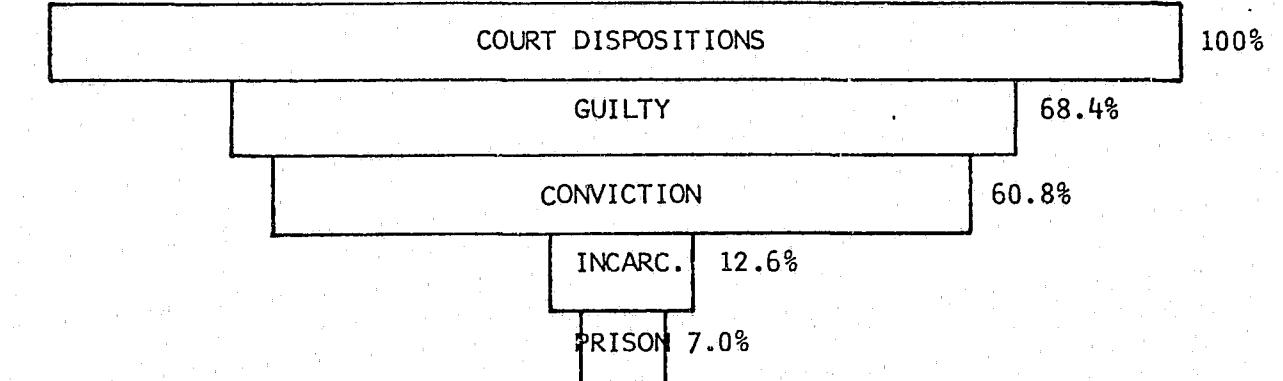
ALL FELONIES (24,414)



VIOLENT FELONIES (3203)



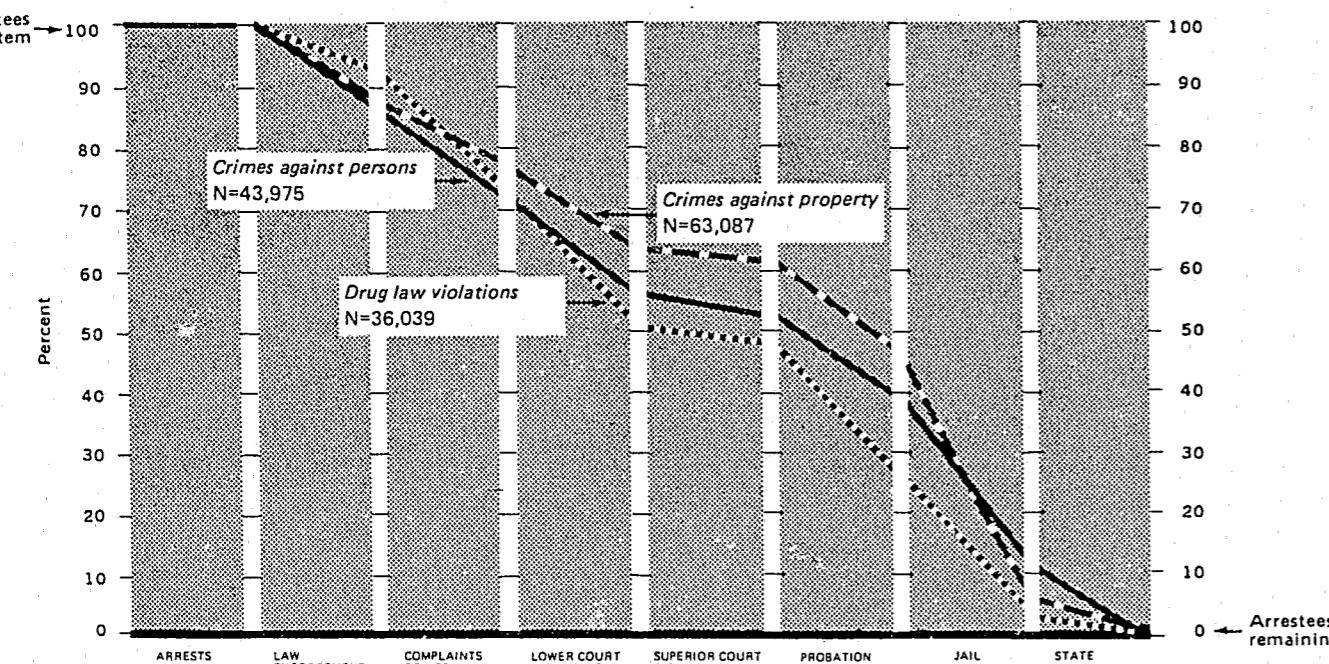
NON-VIOLENT FELONIES (21,211)



Source: Crime and Criminal Justice in Iowa, Volume VIII: Criminal Justice Flow, Statistical Analysis Center, Iowa Office for Planning and Programming, June, 1979, p. 38.

b

**DISPOSITIONS OF ADULT FELONY ARRESTS, 1979**  
Disposition by Type of Arrest Offense



	NONCONVICTION	CONVICTION
Crimes against persons	47.4%	52.6%
Crimes against property	38.8%	61.2%
Drug law violations	52.4%	47.6%

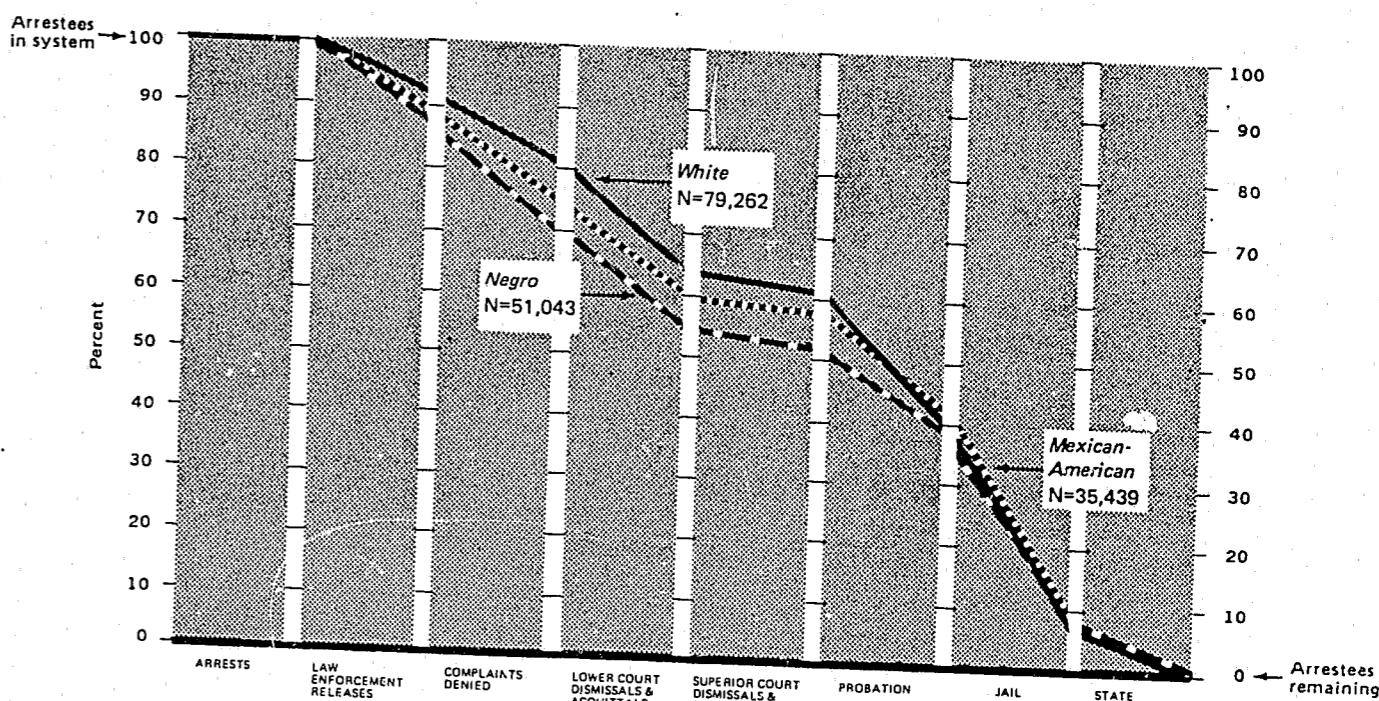
	NONCONVICTION	CONVICTION
Crimes against persons	47.4%	52.6%
Crimes against property	38.8%	61.2%
Drug law violations	52.4%	47.6%

Notes:  
Crimes against persons are comprised of homicide, forcible rape, robbery, and assault.  
Crimes against property are comprised of burglary, theft, and motor vehicle theft.  
Probation includes "fine" and "other (no sentence given and sentence suspended)." "Jail includes "probation with jail."  
State institutions are comprised of prison, Youth Authority, California Rehabilitation Center, and state hospitals (mentally disordered sex offenders).  
Prison includes 20 death penalty sentences.

Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Justice Statistics and Special Services, Department of Justice, California, September, 1980, p. 13.

f

**DISPOSITIONS OF ADULT FELONY ARRESTS, 1979**  
Disposition by Race



	NONCONVICTION	CONVICTION
White	39.0%	61.0%
Mexican-American	42.7%	57.3%
Negro	49.0%	51.0%

Notes:  
Probation includes "fine" and "other (no sentence given and sentence suspended)." "Jail includes "probation with jail."  
State institutions are comprised of prison, Youth Authority, California Rehabilitation Center, and state hospitals (mentally disordered sex offenders).  
Prison includes 20 death penalty sentences.  
Excludes 2,526 arrestees of "other" races and 2,710 arrestees whose race was unknown.

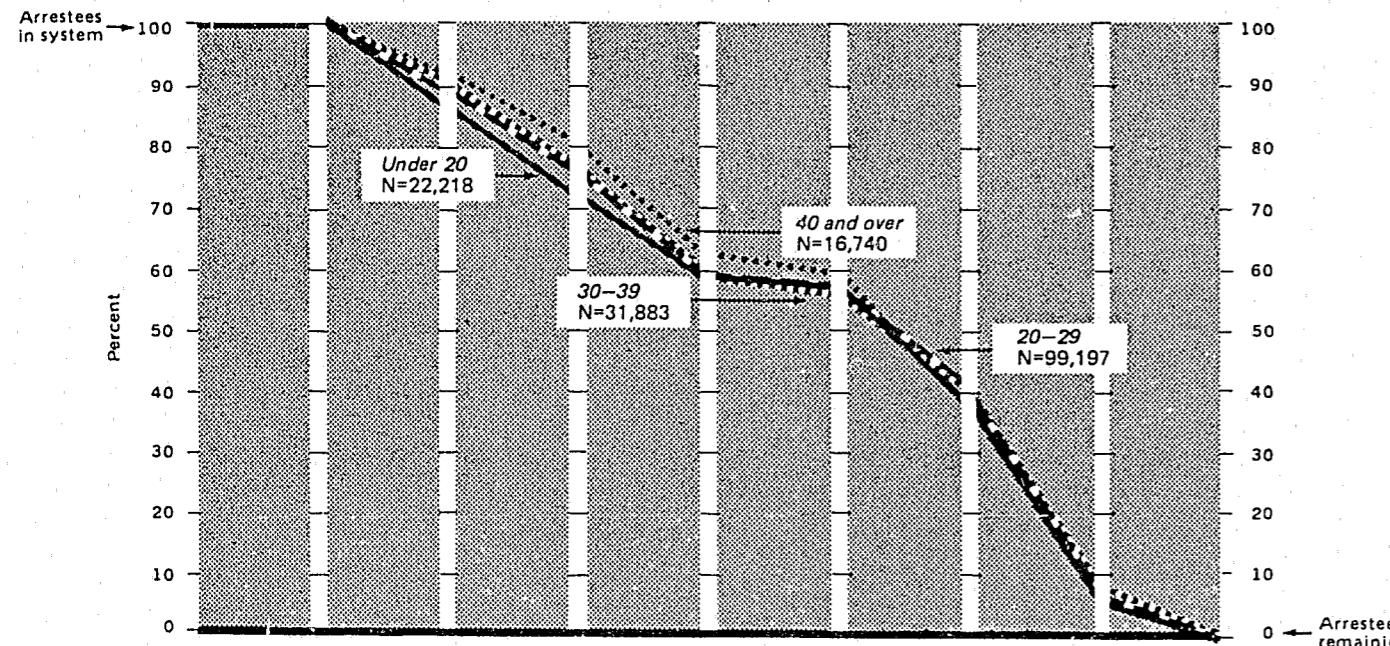
Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Justice Statistics and Special Services, Department of Justice, California, September, 1980, p. 23.

Exhibit I.20.



DISPOSITIONS OF ADULT FELONY ARRESTS, 1979

Disposition by Age



	ARRESTS	LAW ENFORCEMENT RELEASES	COMPLAINTS DENIED	LOWER COURT DISMISSEALS & ACQUITTALS	SUPERIOR COURT DISMISSEALS & ACQUITTALS	PROBATION	JAIL	STATE INSTITUTIONS
Under 20	100.0%	13.9%	14.6%	12.6%	1.4%	19.2%	33.1%	5.2%
20-29	100.0%	10.8%	13.8%	16.0%	2.4%	16.8%	33.8%	6.4%
30-39	100.0%	9.6%	13.7%	17.4%	3.4%	17.7%	30.5%	7.7%
40 and over	100.0%	8.1%	11.7%	17.5%	3.3%	22.7%	30.4%	6.3%

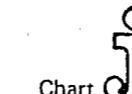
NONCONVICTION

Under 20	42.5%	57.5%
20-29	43.0%	57.0%
30-39	44.1%	55.9%
40 and over	40.6%	59.4%

Notes:  
Probation includes "fine" and "other (no sentence given and sentence suspended)." Jails include "probation with jail." State institutions are comprised of prison, Youth Authority, California Rehabilitation Center, and state hospitals (mentally disordered sex offenders). Prison includes 20 death penalty sentences. Excludes 942 arrestees whose age was unknown.

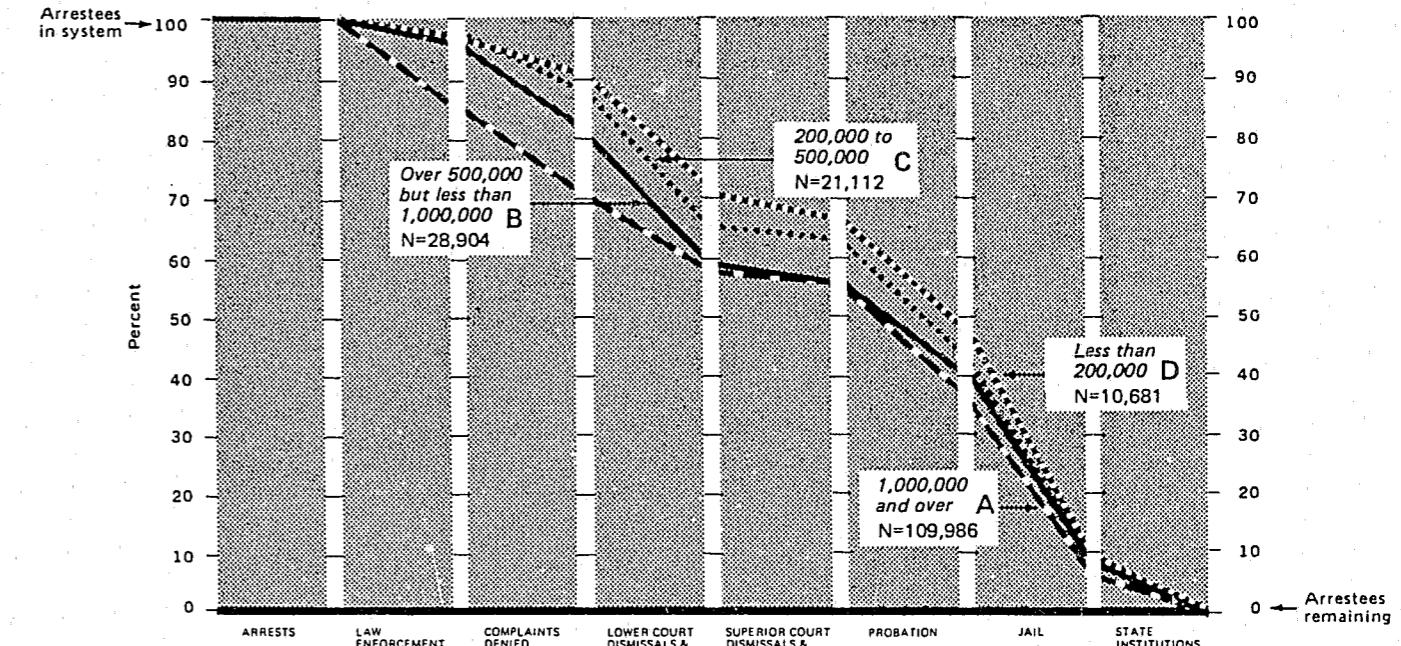
Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Justice Statistics and Special Services, Department of Justice, California, September, 1980, p. 25.

Exhibit I.21.



DISPOSITIONS OF ADULT FELONY ARRESTS, 1979

Disposition by Size of County Population



	ARRESTS	LAW ENFORCEMENT RELEASES	COMPLAINTS DENIED	LOWER COURT DISMISSEALS & ACQUITTALS	SUPERIOR COURT DISMISSEALS & ACQUITTALS	PROBATION	JAIL	STATE INSTITUTIONS
Group A	100.0%	14.9%	14.7%	12.3%	2.4%	18.1%	31.7%	5.9%
Group B	100.0%	4.1%	14.4%	23.3%	3.1%	14.4%	33.1%	7.6%
Group C	100.0%	2.3%	9.6%	22.9%	2.0%	20.3%	35.4%	7.5%
Group D	100.0%	2.5%	6.7%	19.7%	4.3%	19.4%	38.5%	8.9%

NONCONVICTION CONVICTION

Group A	44.3%	55.7%
Group B	44.9%	55.1%
Group C	36.8%	63.2%
Group D	33.2%	66.8%

Notes: Probation includes "fine" and "other (no sentence given and sentence suspended)." Jails include "probation with jail." State institutions are comprised of prison, Youth Authority, California Rehabilitation Center, and state hospitals (mentally disordered sex offenders). Prison includes 20 death penalty sentences.

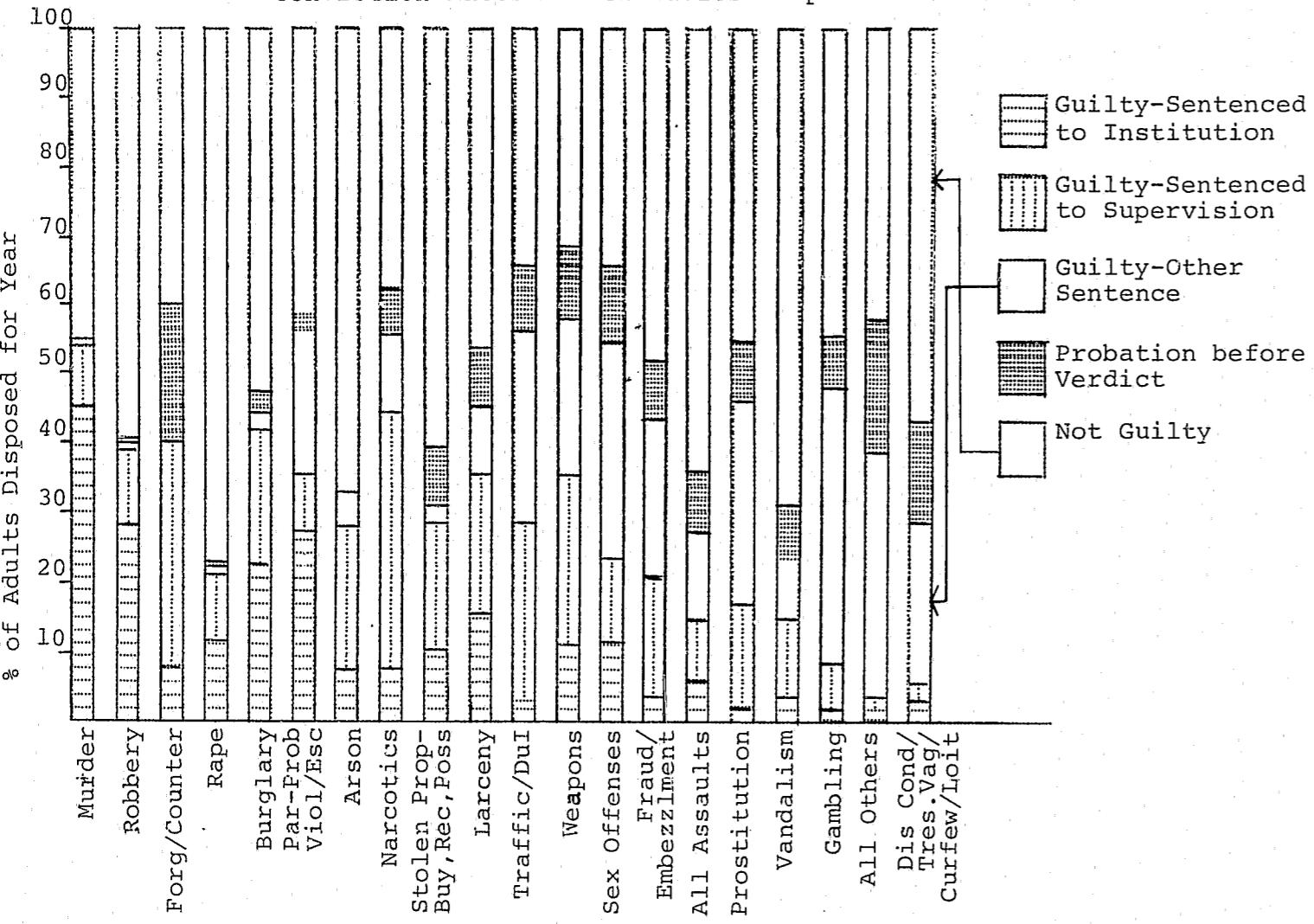
A—Counties of over one million population (Alameda, Los Angeles, Orange, San Diego, and Santa Clara).  
B—Counties of over 500,000 but less than one million population (Contra Costa, Riverside, Sacramento, San Bernardino, San Francisco, and San Mateo).  
C—Counties of 200,000 to 500,000 population (Fresno, Kern, Marin, Monterey, San Joaquin, Santa Barbara, Solano, Sonoma, Stanislaus, Tulare, and Ventura).  
D—36 other counties of under 200,000 population.

Source: Adult Felony Arrest Dispositions in California, Bureau of Criminal Justice Statistics and Special Services, Department of Justice, California, September, 1980, p. 26.

Exhibit I.22.

Baltimore City Supreme Bench

Conviction Rates - % of Adults Disposed for Year



Source: Baltimore City Supreme Bench Court Scheduling and Information System data base

Adults Active at End of Year vs. Adults Disposed of for the Year

	Adults Active At End of Year	Adults Disposed For the Year
Murder	1027	288
Robbery	3037	1503
Forgery/Counterfeiting	164	97
Rape	598	390
Burglary	2112	1435
Parole-Prob Viol/Escapes	586	388
Arson	106	78
Narcotics	3554	3082
Stolen Prop-Buy, Rec, Poss	251	238
Larceny	2491	3270
Traffic/DUI	3338	4617
Weapons	1174	1733
Sex Offenses	142	232
Fraud/Embezzlement	537	1061
All Assaults	2686	7708
Prostitution	62	210
Vandalism	168	727
Gambling	173	1055
All Others	321	4007
Dis Cond/Tres/Vag/Curfew/Loit	397	8027

Shown are the total number of adults active in the system at the end of the year and the number of adults disposed of for the year. Adults active in the system includes adults in institutions (state and local) under supervision and awaiting trial. The Chart gives an indication of the "severity" of the offense and the demand placed on the criminal justice system by arrests for the different crime types. For example, while 288 adults were processed through the system for murder, 1027 were active in the system at the end of the year (e.g., serving time, awaiting trial) indicating a high retention rate for murder arrests.

Source: Baltimore City Supreme Bench Court Scheduling and Information System data base - FY 1974

Ratio of Adults Active at End of Year to Adults Disposed for Year

	<u>ACTIVE</u>	<u>DISPOSED</u>
Murder	3.6	1
Robbery	2.0	1
Forgery/Counterfeiting	1.7	1
Rape	1.5	1
Burglary	1.5	1
Par-Prob Viol/Escapes	1.5	1
Arson	1.4	1
Narcotics	1.2	1
Stolen Prop-Buy, Rec, Poss	1.1	1
Larceny	1	1.3
Traffic/DUI	1	1.4
Weapons	1	1.5
Sex Offenses	1	1.6
Fraud/Embezzlement	1	2.0
All Assaults	1	2.9
Prostitution	1	3.4
Vandalism	1	4.3
Gambling	1	6.1
All Others	1	12.5
Dis Cond/Tres/Vag/Cur/Loit	1	20.2
	5	2
	1	4
	7	10
	13	16
	19	22
	25	

Shown are the ratio of adults active at the end of the year to adults disposed for the year. This is another way of displaying the data in the previous exhibit. It gives an indication of the severity of the offense, the system retention rate, or the demand placed on the criminal justice system by arrests made for the different crime types and as such could prove useful in anticipating current or future resource needs. For example, for every adult disposed of for murder in a year, 3.6 adults will be active in the system, either serving time, under supervision or awaiting trial at the end of the year. Alternatively, for every 4.3 offenders disposed of for vandalism, on the average only 1 adult will be active in the system at the end of the year.

Source: Baltimore City Supreme Bench Court Scheduling and Information System data base - FY 1974

Table III: Basic Criminal Justice System Data

	1971	1972	1973	1974	1975	1976
New Cases.....	79,910	85,649	85,301	89,314	102,648	100,197
Dispositions.....	67,472	83,023	84,342	93,805	97,213	98,645
Cases Pending on 12/31.....	37,718	39,698	35,460	31,389	31,496	26,731
Criminal Case Processing.....	56,458	72,138	76,102	83,049	85,409	84,049
Non-adjudicated Cases.....	13,548	24,369	29,804	40,644	43,476	44,376
Guilty Plea Accepted.....	24,065	26,247	24,254	26,357	27,404	26,987
Bench Trials.....	16,763	19,050	19,621	13,662	11,647	10,085
Jury Trials.....	2,082	2,472	2,423	2,386	2,882	2,601
Cases Processed	Total.....	56,458	72,138	76,102	83,049	85,409
	Part I.....	14,590	18,612	20,098	22,671	24,577
	Part II.....	41,868	53,526	56,004	60,378	60,832
Sentenced	Total.....	34,071	38,964	36,472	35,616	36,525
	Part I.....	8,857	9,758	10,514	10,485	11,370
	Part II.....	25,214	29,206	25,958	25,131	25,155
Type of Sentence	Total.....	34,071	38,964	36,472	35,616	36,525
	State Correctional Institution.....	1,910	2,779	2,973	2,879	3,652
	County Jail.....	7,147	7,790	7,848	7,200	8,438
	Probation.....	12,963	16,733	16,464	16,865	15,972
	Fines and Other.....	12,051	11,662	9,187	8,672	8,463
Incarcerated	Total.....	9,057	10,569	10,821	10,079	12,090
	Part I.....	4,009	4,641	5,239	4,753	5,763
	Part II.....	5,048	5,928	5,582	5,326	6,327
Admissions to County Prisons and Jails	Total.....	77,140	74,222	70,786	71,697	76,720
	Court Commitments.....	6,802	6,163	6,186	6,916	7,646
	Minor Judiciary Commitment.....	6,946	5,807	4,830	3,704	3,822
	Detentioners.....	63,392	62,252	59,770	61,077	65,252
Major Types of Admissions to the Bureau of Correction	Parole Violators Returned.....	488	620	678	651	634
	Court Commitment.....	3,287	3,547	3,695	3,518	3,828
	Detentioners.....	1,422	1,538	964	446	377
Releases from County Prisons and Jails	Total.....	26,593	73,511	70,332	70,287	76,181
	Unconditional.....	9,689	7,758	6,779	5,806	6,092
	Conditional.....	4,063	4,031	3,955	4,119	4,891
	Detentioners.....	62,841	61,722	59,598	60,362	65,198
Prison Population as of 12/31	Bureau of Correction.....	5,294	5,355	5,659	6,094	6,853
	County Prisons and Jails.....	5,579	5,527	5,209	5,799	6,093
Probation and Parole Cases	Total Cases Received.....	25,069	28,696	28,765	33,145	32,689
	PBPP.....	4,283	4,723	4,464	4,813	5,267
	County Probation.....	15,442	19,135	19,802	23,060	22,028
	County Parole.....	5,344	4,838	4,499	5,272	5,394
Probation and Parole Terminations	Total.....	14,401	16,026	21,856	28,410	24,615
	PBPP Final Discharges.....	2,099	1,820	2,359	2,867	3,611
	PBPP Revocations and Recommitments..	571	581	730	678	1,115
	County Final Discharges.....	10,645	12,678	17,279	23,325	17,927
	County Revocations and Recommitments	1,086	947	1,488	1,540	1,962
Probation and Parole Caseload on 12/31.....		49,442	50,606	54,010	57,040	60,236
	Cases from Other States.....	915	1,067	1,207	1,275	1,476
Probation:	County.....	30,587	32,417	35,032	36,866	39,697
	PBPP.....	2,276	3,258	3,695	4,100	4,347
Parole:	County.....	10,681	8,106	7,963	8,197	7,843
	PBPP.....	4,983	5,758	6,113	6,602	6,873
Pre-Sentence Investigations	Total.....	5,994	7,579	8,027	8,685	10,391
	County.....	5,260	6,499	6,485	7,219	8,879
	State.....	734	1,080	1,542	1,466	1,512

Source: The Criminal Justice System in Pennsylvania, Statistics Division, Pennsylvania Governor's Justice Commission, December, 1978, p. A-3.

Table 20  
IOWA DISTRICT COURT DISPOSITIONS  
FY1958 - FY1976  
ALL CHARGES

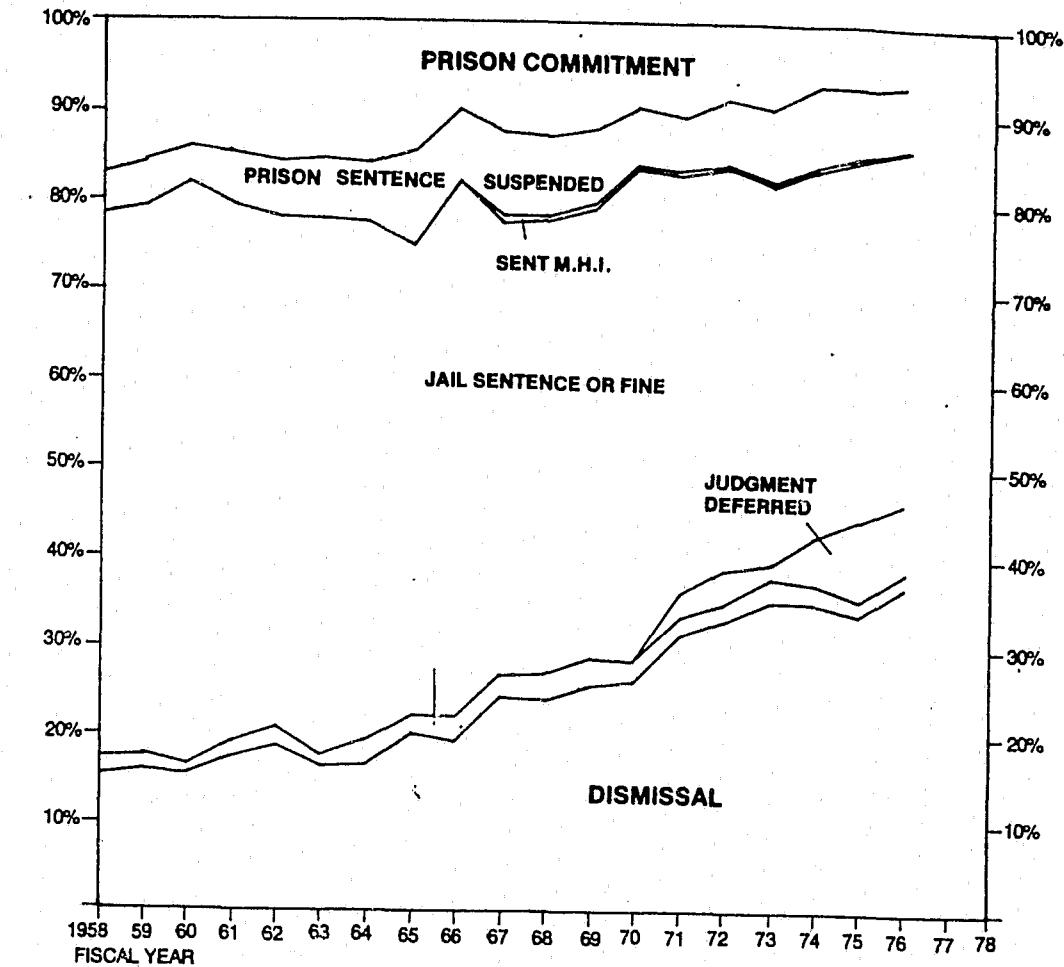
FISCAL YEAR	TOTAL DISPOSITIONS	DISMISSED	ACQUITTED	JUDGMENT DEFERRED	JAIL SENTENCE OR FINE	PRISON SENTENCE		
						TOTAL	COMMITMENT	PROBATION <sup>2</sup>
1958	5510	837 15.2%	119 2.2%	0 0.0%	3377 61.3%	1177 21.4%	938 79.7%	239 20.3%
1959	5513	876 15.9%	98 1.8%	0 0.0%	3394 61.6%	1145 20.8%	861 75.2%	284 24.8%
1960	5823	884 15.2%	76 1.3%	0 0.0%	3816 65.5%	1047 18.0%	808 77.2%	239 22.8%
1961	7115	1239 17.4%	119 1.7%	0 0.0%	4327 60.8%	1430 20.1%	1035 72.4%	395 27.6%
1962	6168	1152 18.7%	133 2.2%	0 0.0%	3551 57.6%	1332 21.6%	951 71.4%	381 28.6%
1963	6318	1032 16.3%	90 1.4%	0 0.0%	3821 60.5%	1375 21.8%	951 69.2%	424 30.8%
1964	6256	1047 16.7%	154 2.5%	0 0.0%	3672 58.7%	1383 22.1%	976 70.6%	407 29.4%
1965	6075	1257 20.1%	123 2.0%	0 0.0%	3328 53.2%	1367 22.5%	850 62.2%	517 37.8%
1966	6524	1254 19.2%	181 2.8%	0 0.0%	3934 60.3%	1155 17.7%	616 53.3%	539 46.7%
1967	5515	1332 24.2%	147 2.7%	0 0.0%	2815 51.0%	1173 21.3%	663 56.5%	510 43.5%
1968	5772	1388 24.0%	171 3.0%	0 0.0%	2947 51.1%	1236 21.4%	712 57.6%	524 42.4%
1969	6379	1638 25.7%	195 3.1%	0 0.0%	3230 50.6%	1275 20.0%	748 58.7%	527 41.3%
1970	6944	1814 26.1%	162 2.3%	0 0.0%	3868 55.7%	1071 15.4%	626 58.5%	445 41.5%
1971	8101	2542 31.4%	188 2.3%	187 2.3%	3827 47.2%	1314 16.2%	821 62.5%	493 37.5%
1972	8991	2980 33.1%	184 2.0%	341 3.8%	4081 45.4%	1367 15.2%	728 53.3%	639 46.7%
1973	8785	3093 35.2%	233 2.7%	142 1.6%	3745 42.6%	1537 17.5%	790 51.4%	747 48.6%
1974	11,982	4196 35.0%	266 2.2%	675 5.6%	4946 41.3%	1873 15.6%	752 40.1%	1121 59.9%
1975	12,539	4251 33.9%	179 1.4%	1151 9.2%	5143 41.0%	1815 14.5%	836 46.1%	979 53.9%
1976	14,856	5496 37.0%	250 1.7%	1133 7.6%	5965 40.2%	2033 13.7%	900 44.3%	1133 55.7%
1958-1976	145,266	38,308 26.4%	3068 2.1%	3629 2.5%	73,787 50.8%	26,105 18.0%	15,562 59.6%	10,543 40.4%
1960-1969	62,045	12,233 19.7%	1389 2.2%	0 0.0%	35,441 57.1%	12,773 20.6%	8310 65.1%	4463 34.9%
1970-1976	72,198	24,372 33.8%	1462 2.0%	3629 5.0%	31,575 43.7%	11,010 15.2%	5453 49.5%	5557 50.5%

<sup>1</sup>Including suspended jail sentences.

<sup>2</sup>Suspended prison sentence; formerly referred to as bench parole.

Source: Crime and Criminal Justice in Iowa, Volume I: Statistical Overview, Statistical Analysis Center, Iowa Office for Planning and Programming, April, 1979, p. 51.

FIGURE 5  
IOWA DISTRICT COURT DISPOSITIONS  
PERCENTAGE BREAKDOWN BY TYPE  
OF DISPOSITION  
FY1958-FY1976



Source: Crime and Criminal Justice in Iowa, Volume I: Statistical Overview, Statistical Analysis Center, Iowa Office for Planning and Programming, April, 1979, p. 52.

Table 2.3

Comparative Flow of Violent Crime and Property Crime Cases  
in District of Columbia Superior Court, Calendar Years 1977 and 1978

Process	1977				1978				Change, 1977-1978		
	Violent Crime		Property Crime		Violent Crime		Property Crime		Violent Crime	Property Crime	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Percent	Percent	Percent
Cases Referred	3,852	100.0	2,130	100.0	3,487	100.0	2,390	100.0	-9.5	+12.2	
Accepted	3,037	78.8	1,794	84.2	2,862	82.1	2,029	84.9	-5.8	+13.1	
Declined	815	21.2	336	15.8	625	17.9	361	15.1	-23.3	+7.4	
Pre-Grand Jury Action	2,021	100.0	1,183	100.0	1,980	100.0	1,335	100.0	-2.0	+12.8	
Probable Cause	1,805	89.3	1,055	89.2	1,830	92.4	1,231	92.2	+1.4	+16.7	
No Probable Cause	94	4.7	41	3.5	102	5.2	50	3.7	+8.5	+22.0	
Dismissed/Nolle	103	5.1	51	4.3	34	1.7	21	1.6	-67.0	-58.8	
Reduced to misdemeanor for Trial	13	0.6	31	2.6	2	0.1	17	1.3	-84.6	-45.2	
Misdemeanor Pleas	0	0.0	2	0.2	1	0.1	2	0.1	0.0	0.0	
Felony Pleas	6	0.3	3	0.3	11	0.6	14	1.0	+83.3	+366.7	
Other	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	
Grand Jury Disposition	2,110	100.0	1,253	100.0	2,045	100.0	1,472	100.0	-3.1	+17.5	
Indicted	1,194	56.6	655	52.3	1,109	54.2	707	48.0	-7.1	+7.9	
Ignored	30	1.4	11	0.9	40	2.0	25	1.7	+33.3	+127.3	
Dismissed by Prosecutor	542	25.7	227	18.1	536	26.2	278	18.9	-1.1	+22.5	
Felony Pleas	104	4.9	90	7.2	149	7.3	114	7.7	+43.3	+26.7	
Misdemeanor Pleas	84	4.0	142	11.3	119	5.8	260	17.7	+41.7	+83.1	
Other	156	7.4	128	10.2	92	4.5	88	6.0	-41.0	-31.3	
Disposition	1,316	100.0	715	100.0	704	100.0	478	100.0	-46.5	-33.1	
Guilty Plea	1,078	81.9	630	88.1	583	82.8	414	86.6	-45.9	-34.3	
Verdict	(774)	(71.8)	(570)	(90.5)	(472)	(81.0)	(377)	(91.1)	(-39.0)	(-33.9)	
Not Guilty	(304)	(28.2)	(60)	(9.5)	(111)	(19.0)	(37)	(8.9)	(-63.5)	(-38.3)	
Dismissed	113	8.6	41	5.7	49	7.0	18	3.8	-56.6	-56.1	
Other	125	9.5	44	6.2	71	10.1	45	9.4	+43.2	+2.3	
	-	-	-	-	1	0.1	1	0.2	+100.0	+100.0	

SOURCE: U.S. Attorney's Office, District of Columbia. PROMIS Management Report Package.

PREPARED BY: Office of Criminal Justice Plans and Analysis

Source: Crime and Justice Profile: The Nation's Capitol, District of Columbia Office of Criminal Justice Plans and Analysis, October, 1979, p. 101.

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Exhibit I.28.

Table 2.4

Comparative Flow of Robbery, Burglary, and Larceny-Theft  
in District of Columbia Superior Court, Calendar Years 1977 and 1978

Process	1977						1978						Change, 1977-1978		
	Robbery		Burglary		Larceny-Theft		Robbery		Burglary		Larceny-Theft		Robbery	Burglary	Larceny-Theft
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	Percent	Percent	Percent
Cases Referred	1,708	100.0	1,005	100.0	598	100.0	1,514	100.0	1,079	100.0	661	100.0	-11.4	+7.4	+10.5
Accepted	1,478	86.5	913	90.8	529	88.5	1,327	87.6	984	91.2	580	87.7	-10.2	+7.8	+9.6
Declined	230	13.5	92	9.2	69	11.5	187	12.4	95	8.8	81	12.3	-18.7	+3.3	+17.4
Pre-Grand Jury Action	1,196	100.0	668	100.0	202	100.0	1,096	100.0	689	100.0	268	100.0	-8.4	+3.1	+32.7
Probable Cause	1,071	89.5	612	91.6	174	86.1	999	91.1	642	93.2	242	90.3	-6.7	+4.9	+39.1
No. Probable Cause	48	4.0	20	3.0	8	4.0	70	6.4	21	3.0	12	4.5	+45.8	+5.0	+50.0
Dismissed/Nolle	66	5.5	20	3.0	14	6.9	19	1.7	9	1.3	7	2.6	-71.2	-55.0	-50.0
Reduced to Misdemeanor for Trial	6	0.5	14	2.1	3	1.5	0	0.0	10	1.5	2	0.7	-100.0	-28.6	-33.3
Misdemeanor Pleas	0	0.0	0	0.0	2	1.0	0	0.0	0	0.0	2	0.7	0.0	0.0	0.0
Felony Pleas	5	0.4	2	0.3	1	0.5	8	0.7	7	1.0	3	1.1	+60.0	+250.0	+200.0
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0
Grand Jury Disposition	1,252	100.0	725	100.0	204	100.0	1,110	100.0	766	100.0	264	100.0	-11.3	+5.7	+29.4
Indicted	744	59.4	402	55.4	81	39.7	627	56.5	378	49.3	122	46.2	-15.7	-6.0	+50.6
Ignored	15	1.2	5	0.7	1	0.5	19	1.7	10	1.3	4	1.5	+26.7	+100.0	+300.0
Dismissed by Prosecutor	308	24.6	128	17.7	37	18.1	281	25.3	145	18.9	46	17.4	-8.8	+13.3	+24.3
Felony Pleas Misdemeanor	70	5.6	54	7.4	7	3.4	91	8.2	51	6.7	21	8.0	+30.0	-5.6	+200.0
Pleas	38	3.0	72	9.9	36	17.6	51	4.6	131	17.1	55	20.8	+34.2	+81.9	+52.8
Other	77	6.2	64	8.8	42	20.6	41	3.7	51	6.7	16	6.1	-46.8	-20.3	-61.9
Disposition	832	100.0	445	100.0	233	100.0	428	100.0	287	100.0	169	100.0	-48.6	-35.5	-27.5
Guilty	695	83.5	382	85.8	213	91.4	368	86.0	254	88.5	139	82.2	-47.1	-33.5	-34.7
Plea	(499)	(71.8)	(330)	(86.4)	(200)	(93.9)	(295)	(80.2)	(229)	(90.2)	(127)	(75.1)	(-40.9)	(-30.6)	(-36.5)
Verdict	(196)	(28.2)	(52)	(13.6)	(13)	6.1	(73)	(19.8)	(25)	(9.8)	(12)	(7.1)	(-62.8)	(-51.9)	(-7.7)
Not Guilty	54	6.5	35	7.9	9	3.9	16	3.7	14	4.9	7	4.1	-70.4	-60.0	-22.2
Dismissed	.83	10.0	28	6.3	11	4.7	43	10.0	19	6.6	23	13.6	-48.2	-32.1	+109.1
Other	-	-	-	-	-	-	1	0.2	-	-	-	-	+100.0	-	-

SOURCE: U.S. Attorney's Office, District of Columbia. PROMIS Management Report Package, unpublished.

PREPARED BY: Office of Criminal Justice Plans and Analysis

Source: Crime and Justice Profile: The Nation's Capitol, District of Columbia Office of Criminal Justice Plans and Analysis, October, 1979, p. 103.

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Exhibit I.29.

ADMISSIONS AND RELEASES FROM FACILITIES OF THE DEPARTMENT OF CORRECTIONAL SERVICES  
FOR THE CALENDAR YEARS 1969 - 1978

TYPE OF ADMISSION OR RELEASE	1969	1970	1971	1972	1973	1974	1975	1976b/	1977b/	1978b/
<u>Under Custody on January 1</u> .....	13,381	12,998	12,579	12,525	12,444	13,437	14,386	16,074	17,724	19,380
<u>Admissions</u> .....	6,875	6,762	7,242	7,358	7,973	8,356	9,093	9,765	10,318	8,871
Court Commitment .....	4,498	4,250	5,130	5,709	6,477	6,691	7,424	8,058	8,437	7,260
Transfers from Outside Dept. 1/.....	53	68	80	38	81	21	26	14	61	220
Affirmation of Sentence .....	12	44	27	19	37	17	32	38	38	52
Parole Violator.....	1,772	1,761	1,409	1,141	997	1,010	890	842	1,116	1,169
Conditional Release Violator .....	509	610	572	437	283	313	359	362	268	c/
Statutory Release Violator .....	20	20	10	3	2	—	—	—	—	—
Returned from Escape or Absconding .....	11	9	14	11	96	304	362	451	398	170
<u>Under Custody All or Part of Year</u> .....	20,256	19,760	19,821	19,883	20,417	21,793	23,479	25,839	28,042	28,251
<u>Releases</u> .....	7,258	7,181	7,296	7,439	6,979	7,407	7,405	8,115	8,662	8,050
Parole .....	4,086	3,860	4,071	4,462	4,351	3,985	4,237	4,980	5,482	5,008
Conditional Release .....	1,450	1,580	1,653	1,366	1,312	1,679	1,901	1,913	1,852	1,981
Statutory Release .....	183	215	149	76	31	28	13	4	—	—
Maximum Expiration of Sentence .....	1,017	1,039	919	1,008	577	481	461	379	410	480
Death .....	47	48	75	42	40	34	37	30	28	30
Court Order 2/.....	222	193	142	194	151	444	217	183	191	182
Escaped or Absconded .....	13	10	16	23	168	461	468	616	531	86
Transfers Outside Department .....	76	81	112	139	221	216	57	7	167	276
Mentally Handicapped (to other custody). ....	164	155	159	129	128	79	14	3	1	7
<u>Under Custody on December 31</u> .....	12,998	12,579	12,525	12,444	13,437a/	14,386	16,074	17,724	19,380	20,201

1/ Includes 9 persons returned in 1973 from Drug Addiction Control Centers, one person returned from a Drug Addiction Control Center in 1974 and 55 returns in 1977 and 220 in 1978 from Mental Hygiene.

2/ Includes persons discharged because of improper or illegal commitments as follows: 8 in 1969, 6 in 1970, and 4 in 1973.

a/ One case removed from punch card file in 1973 having been carried in error.

b/ Preliminary figures.

c/ Conditional Release Violators included under Parole Violators for 1978 only.

Source: Annual Report '78 Crime and Justice, New York State Division of Criminal Justice Services,  
p. 267

Exhibit I-30.

TABLE 7  
STATUS OF ADULTS UNDER STATE AND LOCAL SUPERVISION, 1974-1979  
Type of Supervision

Type of supervision	1974	1975	1976	1977	1978	1979	Percent change	
							1974-1979	1978-1979
<b>TOTAL . . . . .</b>	<b>232,711</b>	<b>224,372</b>	<b>225,843</b>	<b>220,266</b>	<b>221,014</b>	<b>218,943</b>	<b>-5.9</b>	<b>-.9</b>
State supervision <sup>a</sup> . . . . .	48,607	46,240	45,400	44,133	40,963	41,392	-14.8	1.0
Institutions . . . . .	27,479	22,723	23,641	22,127	24,068	25,527	-7.1	6.1
Prison . . . . .	22,711	17,890	18,617	17,810	19,994	21,692	-4.5	8.5
Youth Authority . . . . .	2,059	1,943	1,844	1,744	1,963	2,093	1.7	6.6
California Rehabilitation Center . . . . .	2,030	2,138	2,445	1,803	1,331	940	-53.7	-29.4
State hospital (mentally disordered sex offender) . . . . .	679	752	735	770	780	802	18.1	2.8
Parole caseload . . . . .	21,128	23,517	21,759	22,006	16,895	15,865	-24.9	-6.1
Prison . . . . .	11,549	14,556	13,049	13,258	9,343	9,382	-18.8	.4
Youth Authority . . . . .	4,054	3,660	3,771	3,792	3,050	2,897	-28.5	-5.0
California Rehabilitation Center (outpatient) . . . . .	5,525	5,301	4,939	4,956	4,502	3,586	-35.1	-20.3
Local supervision . . . . .	184,104	178,132	180,443	176,133	180,051	177,551	-3.6	-1.4
County and city jails and camps <sup>b</sup> . . . . .	25,217	24,992	28,201	26,546	26,938	26,985	7.0	.2
Sentenced . . . . .	12,787	12,226	14,279	13,742	13,415	12,989	1.6	-3.2
Not sentenced . . . . .	12,430	12,766	13,922	12,804	13,523	13,996	12.6	3.5
County jails . . . . .	18,853	19,233	21,941	20,761	21,355	20,503	8.8	-4.0
Sentenced . . . . .	8,269	8,071	9,376	9,267	9,102	7,835	-5.2	-13.9
Not sentenced . . . . .	10,584	11,162	12,565	11,494	12,253	12,668	19.7	3.4
City jails . . . . .	1,815	1,672	1,265	1,196	1,181	1,270	-30.0	7.5
Sentenced . . . . .	147	261	130	103	132	112	-23.8	-15.2
Not sentenced . . . . .	1,668	1,411	1,135	1,093	1,049	1,158	-30.6	10.4
County and city camps . . . . .	4,549	4,087	4,995	4,589	4,402	5,212	14.6	18.4
Sentenced . . . . .	4,371	3,894	4,773	4,372	4,181	5,042	15.4	20.6
Not sentenced . . . . .	178	193	222	217	221	170	-4.5	-23.1
Active probation caseload <sup>a</sup> . . . . .	158,887	153,140	152,242	149,587	153,113	150,566	-5.2	-1.7
Superior court . . . . .	71,599	63,753	63,458	61,303	61,371	59,207	-17.3	-3.5
Lower court . . . . .	87,288	89,387	88,784	88,284	91,742	91,359	4.7	-.4
Index of adults under supervision (base year 1974 = 100)								
Total . . . . .	100.0	96.4	97.0	94.7	95.0	94.1		

<sup>a</sup>One-day count taken December 31 of each year.

<sup>b</sup>One-day count taken each year on the fourth Thursday in September.

Note: As a result of additional information, 1978 jail and 1976 and 1978 camp data have been revised from previously published data.

Source: Prison, parole, and California Rehabilitation Center data are provided by the Department of Corrections, mentally disordered sex offender data by the Department of Mental Health, and Youth Authority data by the Department of the Youth Authority.

Source: Crime and Delinquency in California, 1979, Bureau of Criminal Statistics and Special Services, California Department of Justice, 1979, p. 51.

C. Data Collection, Extraction, and Aggregation Issues for Statistics in Support of Offender Processing Flow and Stock

Data bases in support of statistical descriptions of offender processing flows and stocks are typically derived as a by-product of automated information systems or are constructed from various agency manual files. In either case, certain questions with respect to data extraction and/or collection are likely to be encountered. Among the questions which need to be addressed are the following:

1. Offense Classification - What offense classification structure is to be used/should be used to describe the types of crime(s) for which the offender is being processed? How do the crime type codes vary from one agency's information system to another's and how can they be reconciled?
2. Data Base Accounting Unit - What does each specific record on the data base represent? -- all charges resulting from an arrest (offender accounting), only those charges associated with a specific criminal incident for which the offender is accused as a result of an arrest (offense accounting), a single charge against an offender at arrest (charge accounting). For statistical purposes what accounting unit do you want to use?
3. Charge, Disposition, and Sentence - How do you want to describe offender processing e.g., by the most serious charge at arrest and the resulting disposition (and where convicted, the sentence) associated with this charge; the most serious charge disposed of by the court and at its disposition (and where convicted, the sentence); or the most serious charge with the most serious disposition (and sentence where convicted).
4. Population of "Offenders" to be Analyzed - What is the population to be analyzed? -- all "offenders" charged over some period of time (e.g., all filings for year) and the resulting disposition of those charges; all "offenders" disposed of over a period of time (e.g., all terminations for a year) regardless of when the charges were originally filed.

The answers given to the above questions (and the resulting translation of these answers to algorithms which can be used in extracting or constructing a data base and generating output reports for statistical purposes) are critical in determining what it is that will be aggregated and tabulated for display. For example, assume one had a data base described as follows:

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1. System Scope: Circuit Court Case Filings and Terminations.
2. Method of Reporting: At the time of the filing of charges before the court a "header" record is completed and sent to data processing which identifies the case and individual being charged, the date of filing, and the filing charge(s). Upon final disposition of the case a "master" record is submitted to data processing and linked to the "header" record to report the final disposition, disposition date, and sentence associated with each charge at filing.
3. Offense Classification: Each offense is coded by article and section number of the state's criminal code.
4. Data Base Accounting Unit: Each record on the automated data base represents a court docket number for a unique individual. More than one charge may appear on a given "docket" record. However, more than one docket number may be filed against the same individual at filing (e.g., each docket represents the charges associated with a particular crime incident the individual is charged with at arrest).
5. Charge, Disposition, and Sentence - for each charge reported on a court docket at filing, the resulting disposition (and sentence, where convicted) is reported for the respective charge at court disposition.

Given this data base, the statistical analysis of the processing of Circuit Court dockets could be done in different ways with different results. Taking the original four questions and the above data base, several alternative answers to the questions can be provided:

1. What Offense Classification is to be Used?

- Alternative Answers:
- a. Actual Article and Section Numbers
  - b. Assign Article and Section Numbers a NCIC classification and group the offenses accordingly
  - c. Assign Article and Section Numbers a UCR offense type classification and group the offenses accordingly

2. What Data Base Accounting Unit is to be Used?

- Alternative Answers:
- a. Charge (each charge on a docket to be analyzed separately)

- b. Docket (each docket regardless of number of charges on the docket to be analyzed as a single unit)
  - c. Defendant (all dockets associated with the same person to be combined together and analyzed as a single unit)
3. What Charge, Disposition, and Sentence is to be Analyzed for a given Accounting Unit? (Note: not applicable for charge accounting)

- Alternative Answers:
- a. Most serious charge at filing and its disposition (and sentence if convicted)
  - b. Most serious charge with the most serious disposition (and sentence if convicted)

4. What is the Population to be Analyzed?

- Alternative Answers:
- a. All filings for a CY
  - b. All terminations for a CY regardless of when filed

If asked the general question "Describe by type of crime the criminal dispositions in the Circuit Court?" and given the alternative answers to the four questions, twenty-four different responses could conceivably be provided. Without knowing something more about why the question is being asked and for what purpose, it would not be clear which of the twenty-four alternatives should be chosen to answer the question. If, alternatively, asked to describe how disposed offenders for a calendar year are processed through the Circuit Courts in such a way that each offender is characterized by the most serious NCIC charged offense at disposition and, furthermore, is described in terms of the disposition which results in the deepest and most severe penetration into the criminal justice system, then the answers to the four questions are reasonably clear and the data base can be analyzed with little ambiguity.

It is this latter definition of processing through the Circuit Courts which best typifies the offender processing concept as represented by offender based transaction statistics. Given this construct for representing offender processing, one logical way of reorganizing and supplementing the Circuit Court data base described previously would be as follows:

1. Crime Type Classification - in addition to retaining the specific article and section number include on the data base the NCIC code which most consistently describes the State Article and Section (requires an external judgment and the creation of a lookup table which references each article and section to a single NCIC code).
2. Data Base Accounting Unit - consider as a defendant record the "bundle" of all docket records filed against the same person on or near (e.g., within 10 days) the same filing date (the resulting "defendant docket bundle" is assumed to approximate all charges filed against a person as a result of a single arrest and booking).
3. Charge, Disposition, and Sentence - supplement or summarize this information within the "defendant docket bundle" by selecting from among all the charges, dispositions, and sentences the following minimal elements for purposes of statistical analysis.
  - (1) Most Serious Charge at Filing (MSC-F) - based on a seriousness ranking of all charges (charge ranking may be determined, for example, by the potential severity of sentence for each type of crime) select the most serious at the time of filing.
  - (2) Disposition of the Most Serious Charge at Filing (D-MSC-F) - record the final disposition associated with the MSC-F (if there is more than one MSC-F with the same article and section number, record the most serious of the dispositions).
  - (3) Most Serious Disposition (MSD) - This is the most severe disposition (i.e., resulting in the deepest penetration into the system). If two or more charges result in a conviction, then the most severe sentence code associated with the convicted charges should be used to determine the most serious disposition and its associated sentence. (Note: a disposition ranking scheme is needed in order to be able to select that disposition/sentence which results in the deepest system penetration.)
  - (4) Most Serious Charge at Disposition - this is the most serious charge with the most serious disposition (MSC-MSD); where two or more charges result in a conviction, the resulting sentence would be considered in determining the most serious among the charges disposed; alternatively, where two or more charges have the same most serious disposition, the most serious among the charges is selected.

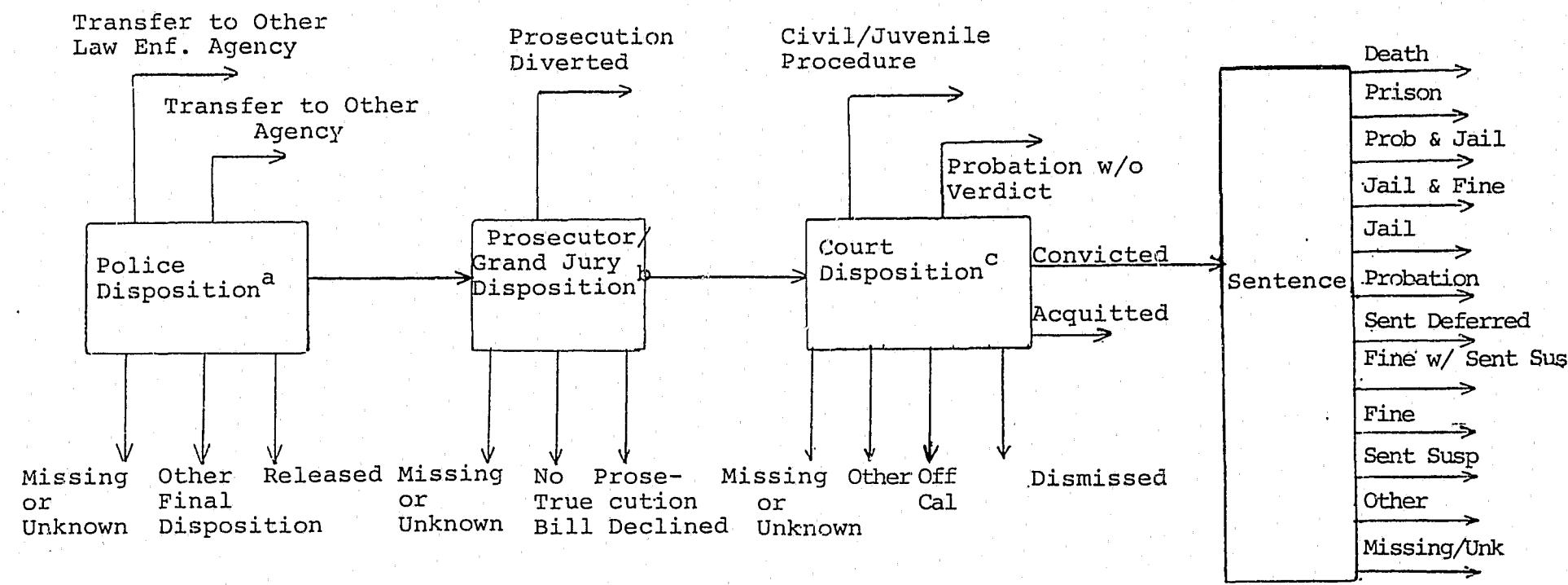
- (5) Defendant Population to be Analyzed - as filing (header records) and disposition (master records) are reported, create two data bases ("open" records and "closed" records). "Open" records would consist of filings without a disposition and "closed" records would be filings where dispositions are reported. Develop a statistical data base generation program that would be able to be run against both the "open" and "closed" files and would bundle docket records associated with the same defendant together to create a defendant record; assign NCIC codes to charges, and select, in the case of open records, the most serious filing charge (MSC-F) and, in the case of closed records, the most serious filing charge (MSC-F) and its disposition (D-MSC-F) and the most serious disposition (MSD) and the accompanying most serious charge with the most serious disposition (MSC-MSD). The resulting statistical data bases would support the ability to analyze both "open" defendant records and "closed" defendant records. Furthermore, the "closed" defendant records could be analyzed for either all records where the disposition date is within a specified period of time or all records where the filing date is within a specified period of time.

The concepts illustrated above can be extended to analyze offender processing data from other system components as well as a statewide offender based transaction system data base (OBTS). Figure I.3. shows by means of a flow diagram a way of structuring an OBTS data base such that the accounting unit is the offender and the charges and dispositions selected are the most serious at each stage in processing and result in the furthest penetration into the system. (Given the Figure I.3. description, the disposition ranking order would follow the sentences in descending order from top to bottom and then court, prosecutor, and law enforcement dispositions in descending order from right to left). Figure I.4A. is an extension of this generalized description of offender processing from arrest through court disposition and incorporates the concept of system stocks (inventories) at the police, prosecutor, and court processing stages. In order to support the inventory concept one must maintain a data base of the type shown in Figure I.4B. where files on both "open" and "closed" offender records are maintained at the police, prosecutor, and court levels of disposition reporting.

Where a state does not have a single data base which tracks offender processing from arrest to disposition, it is possible to obtain most,

FIGURE I.3.: Offender Processing Flow in the Context of National OBTS Reporting

(Offender Population = All offenders receiving final disposition in a given calendar year regardless of year of arrest)



CONDENSED (OFFENDER) RECORD

<sup>a</sup> Arrested Offense - where there are two or more arrest charges, report the most serious charge at arrest

<sup>b</sup> Charged/Filed Offense - where there are two or more charges filed, report the most serious filed charge

<sup>c</sup> Disposed Offense - where there are two or more charges disposed by the court and no convictions, report the (most serious) charge corresponding to the most serious disposition; where there are two or more charges resulting in conviction, report the (most serious) charge corresponding to the most serious sentence

FIGURE I.4a: Offender Processing Flows and Stocks from Arrest through Court Disposition

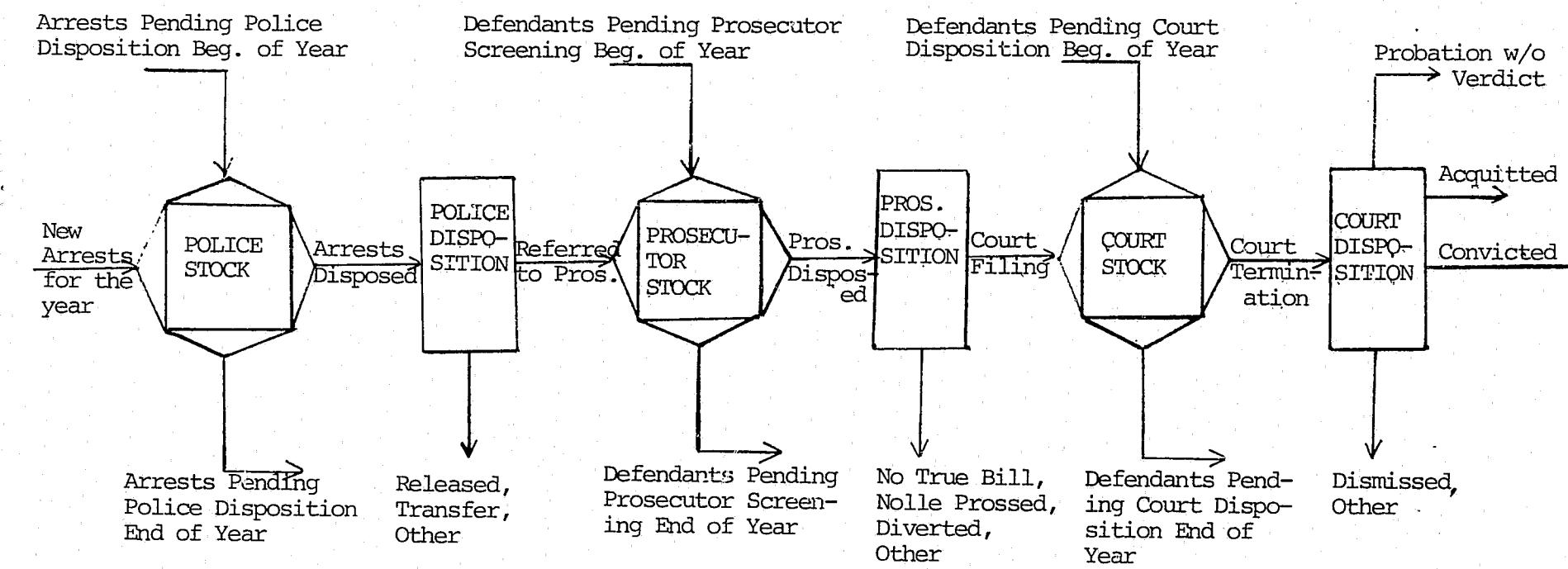
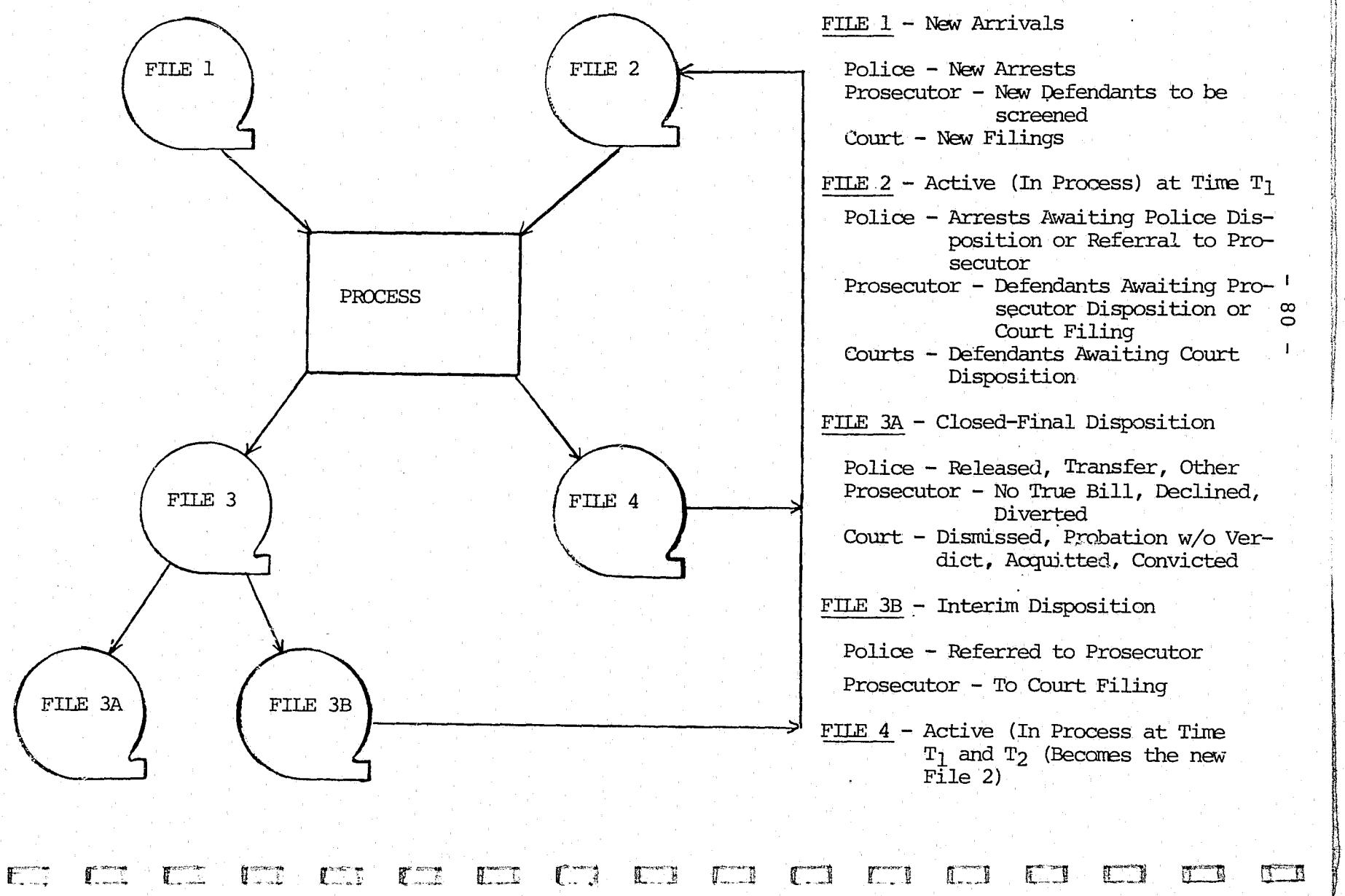


FIGURE I.4b.: Data Base Concept to Support Offender Processing Flows and Stocks from Arrest through Court Disposition



if not all, of the advantages of such a data base if agency data bases exist which cover the various system components and if these data bases are sufficiently rich in detail to support offender processing descriptions of the type illustrated previously for a hypothetical circuit court system. While it may not be possible or practical to link or merge together records on the same individual from one agency system to another (e.g., lower court data base to upper court data base; court data bases to corrections data bases), the application of a consistent approach to the development of statistical data bases and output reports using these separate data bases can provide reasonably comparable aggregate statistics which will facilitate "offender" tracking at an aggregate statistical, if not individual, level. Even where agency data bases may not include all the data elements necessary to be fully supportive of the more detailed description typically associated with offender processing (e.g., circuit court system which does not record specific charges, but only type of filing document or class of charge - felony by level, misdemeanor), these data bases can be used to provide a partial description of the manner of processing through that component of the CJS.

The flow diagram framework with the concept of offender processing flows and stocks, thus, provides a useful conceptual basis upon which to actually restructure existing data bases (or collect data) in order to provide a meaningful and reasonably consistent description of processing across the functional components of the CJS.

D. Alternative Sources of Data in Support of Offender Processing Flows and Stocks

The Section B description on the use and display of statistics on offender processing flows and stocks demonstrates that a number of alternative sources of data are used to statistically describe offender processing. Listed below are examples of automated systems at the state and local levels as well as manual procedures and sources that are and can be used to generate offender processing statistics on flows and stocks:

1. Examples of State Level Automated Information Systems

- a. Uniform Crime Reports - Arrests
- b. Automated Name Identification Index
- c. Computerized Criminal History System/Offender Based Transaction Statistics
- d. Prosecutor Management Information System (possibly a PROMIS)
- e. State Judicial Information System (SJIS or equivalent)
  - (1) Lower Court
  - (2) Upper Court
  - (3) Combined/Unified Court
- f. Public Defenders Information System
- g. Offender Based State Corrections Information System (OBSCIS or equivalent)
  - (1) State Custody
  - (2) State Supervision

2. Examples of Agency (Local) Management Information Systems

- a. Law Enforcement Arrest and Booking
- b. Pre-Trial Release MIS
- c. Prosecutor MIS (PROMIS or equivalent)
- d. Court Scheduling and Case Tracking MIS
- e. Jail Inmate Accounting MIS
- f. Local Supervision MIS
- g. Public Defender MIS
- h. Common/Integrated MIS serving several agencies and maintaining person-in-process information from arrest through court disposition and sentencing

3. Examples of Manually Generated Data Bases

- a. Extracting processing information on a sample or universe of offenders using one or more agency files

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- b. Use of various agency published or internal reports and working papers to put together an aggregate description of offender processing for some activity (e.g., number of offenders by type of crime receiving pre-sentence investigations)

The selection of data bases for the generation of processing statistics is dependent on (1) the types of questions or issues being asked where processing statistics are of assistance in addressing the question or issue, (2) the data needed to address the question in whole or in part, (3) the availability of one or more data bases with reasonably complete records to choose from, (4) the ability to get access to the data base for statistical purposes, and (5) the degree of difficulty (including cost) in creating and maintaining the record structure and output programs that support the statistical description of offender processing.

Clearly an ideal offender data base might be the one that includes: (1) all offenders processed by the justice system; (2) can be analyzed on any or all accounting units - charge, case, offender; (3) includes the full set of processing events and dates and corresponding outcomes from arrest through prosecution and court disposition, sentencing, and corrections intake, movement, and release; and (4) includes the full set of desired offender attributes such as age, sex, race, prior criminal record, employment, education, and family history. Such a single data base does not exist. The concept of an Offender Based Transaction Statistics (OBTS) data base includes some of the attributes of the above description: (1) inclusion (at a minimum) of all felonies processed; (2) the ability to count on an offender basis; (3) the recording of major events and dates; (4) the recording of event outcomes from arrest through prosecution and court disposition (and possibly corrections); and (5) the inclusion of offender attributes like age, race, and sex. The success of implementing such a data base has been varied. Even where such a data base exists, the description of offender processing it provides, while significant and providing a macro view of justice processing, may not be sufficient to meet the statistical requirements for answering certain questions.

Some of the other data bases listed above, while they may not provide a complete system description, can provide a meaningful descrip-

tion of some component of justice processing. These component data bases also include data elements not available in an OBTS that may be useful for addressing certain issues or questions. In addition, where agency data bases are available for all or most system components and where these data bases have been developed with statistics in mind (if only as a by-product), then these agency data bases can serve as a very good substitute for an OBTS data base. Alternatively, where statewide (e.g., CCH) and agency data bases are (have been) developed in a coordinated way with operational and statistical purposes in mind, then the opportunity exists to analyze processing data at the statewide or macro (i.e., OBTS) level as well as at the agency or micro level.

E. Data Files and Output Reports in Support of Offender Processing Flows and Stocks

The previous sections described the overall framework for representing information on offender processing (Section A), provided a description of how offender processing flow and stock statistics can be used and displayed (Section B), described issues or concerns to be addressed in the collection, extraction, and aggregation of offender processing statistics (Section C), and provided examples of information systems which can be used to support the generation of statistics describing offender processing (Section D). In this section, the generation of statistics on offender processing is illustrated using as the example an operational statewide circuit court information system. The approach described below can be applied to one degree or another to all of the types of automated systems described in Section D. By developing for each of the components of the criminal justice system statistical data bases and output reports of the type described in this section using a circuit court information system, a rather complete and rich description of offender processing can be derived.

The circuit court data base can be described as follows:

1. System Name

Circuit Court Criminal Justice Information System  
(CJIS) Criminal Reporting System

2. Maintainer of System

Administrative Office of the Courts - State of Maryland

3. Implementation Date

January, 1978

4. System Coverage

All Circuit Courts of the State excluding Baltimore City

5. System Purpose

Provide the Administrative Office of the Courts with management and statistical information on Circuit Court criminal filings, terminations, and pending caseload. Provide a mechanism for reporting to the State's Central Repository court disposition information in support of a statewide criminal history record information file.

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6. Method of Reporting

Multi-part form (Exhibit I.32.) completed for each charging document filed against a defendant in the Circuit Court. Information on the status of the charging document is reported to the Administrative Office of the Court at the conclusion of the following stages in Circuit Court processing: filing, trial (if applicable), final disposition. Exhibits I.33. - I.35. illustrate the resulting input records created by the AOC upon receipt of the input form for a docket filing, trial, and disposition respectively.

7. Data Base Record

The Administrative Office of the Courts maintains an "open" file of all charging documents for which a filing and trial (where applicable) has been reported and the disposition has yet to be reported. Upon the receipt of the final disposition on a given docket it is linked to the corresponding filing and trial records for that docket to form the "closed" record.

Each "open" and "closed" record represents the charges against a unique defendant associated with a given Circuit Court case number or docket. A single docket record is used to record all (one or more) charges associated with that docket. More than one docket may be used to describe the full set of charges against an offender as a result, for example, of a single physical arrest and booking. Thus each "open" and "closed" record represents a "piece of paper" resulting from the charging of a defendant, e.g., by indictment, criminal information, appeal of lower court disposition, request for jury trial. Only by combining or bundling together (where appropriate) those documents resulting from the same charging or filing process (used as a surrogate for the same arrest and booking) can an estimate be derived of the number of defendants (as opposed to pieces of paper) processed by the court.

8. Statistical Extraction Program

Exhibit I.36A. describes the process by which the input records received by the AOC are converted into a statistical file consisting of closed and open records. The closed statistical records (A70E.MF.COMP 250 (+1)) represent closed cases or dockets (i.e., receiving final disposition) and the open statistical records (A70E.MF.MAST 250(+1)) represent dockets for which a filing and trial (where appropriate) has been reported but no final court disposition has been reported.

These statistical records differ from the original input records in several respects. For example, the input docket records include information on each

criminal charge and the corresponding sentence and disposition information for that charge. The statistical record includes only summary information on charges (i.e., the most serious charge at filing, the total number of charges at filing, the most serious charge with the most serious disposition and sentence, the disposition and sentence associated with this charge, the total number of charges disposed, and the number of guilty charges). The resulting statistical record field layout and description is shown in Exhibit I.37.

Each closed statistical record represents the most serious outcome (as described by charge, disposition, and sentence) for that docket. As noted previously, there may be one or more dockets associated with a given defendant filing (a surrogate for arrest and booking). By combining or bundling together those dockets filed and disposed against the same defendant, a record can be created that describes the most serious defendant or offender processing outcome. Exhibit I.36B. describes the program which reads the closed statistical "docket" records (A70E.MF.COMP 250(+0)) and generates a closed statistical "defendant" record (A70E.MF.BUND 251(+1)). The resulting "defendant" record is determined by selecting among the "docket" records (for the same defendant) the one docket record which represents the most serious outcome (as described by charge, disposition, and sentence). Some summary information is then added to the selected "docket" record (now the "defendant" record) (see Exhibit I.37., fields 20-22, 32, 33) which describes the most serious charge at filing (which may have occurred on a different docket record from the one selected), the total number of filing charges combined or bundled together.

9. Statistical Output Report

Exhibit I.36C. describes the process by which summary aggregate statistical reports describing Circuit Court processing can be generated using the statistical input record described in Exhibit I.37. The records on the statistical input record can be analyzed on either a "docket" or a "defendant" basis, thus, enabling the generating of descriptions of Circuit Court processing on either a "document" or "person" basis.

Exhibit I.38. describes the type of statistical output reports that can be generated using the statistical input record data base. The output

reports in Exhibits I.38A. and 38B. show by type of crime the most serious sentence and/or disposition received. The same sentence/disposition outcomes are displayed on a "docket" basis (Exhibit I.38A.) and on a "defendant" basis (Exhibit I.38B.). Using the various reporting options available with the statistical output program, reports can be generated for a specific jurisdiction (county) or grouping of jurisdictions, for any dispositional time frame in intervals of a month (e.g., all dispositions for the first six months of the fiscal year), for either the most serious charge at filing or at disposition (disposition charge shown), and for other selection criteria such as type of charging document, type of defense counsel, and type of trial (see Exhibit I.38. for a description of the report selection criteria available).

## CJIS CRIMINAL REPORTING FORM

COURT CODE

District Court Case Number

Circuit Court Case Number

Date Filed (Month/Day/Year)

CHARGING DOCUMENT

- 1. Nonsupport
- 2. Indictment
- 3. Motor Appeals
- 4. Other Appeals
- 5. Post Conviction
- 6. Criminal Information
- 7. Jury Trial District Court

Defendant Last Name

Defendant First Name

M.I.

Title

Sentence Start Date

Infamous Crime

Type of Defense Counsel

- 1. Private
- 2. Public Defender
- 3. Proper Person

Event

Date

Judge

Event

Date

Judge

Sentence Literal

CHARGE

Article

Section

GOC

PLEA

VERDICT

PLEA      VERDICT

\*Applies to all

Sentence

INCARCERATION

D-DOC

L-Local

Years

Months

Days

PROBATION

P-Probation

S-Supervised

U-Unsupervised

Years

Months

Days

SENTENCE SUSPENDED

P-Partially Susp.

S-Sentence Susp.

FINE

F-Fine

P-Part. Sup.

S-Suspended

Years

Months

Days

EXHIBIT I.32.

EXHIBIT I.33.

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION						AGENCY:	DPD-DIV-SYS-102 (8/71)	
							PAGE:	OF:
						1	2	
DSNAME A70E.TE.CMC331						SYSTEM ANALYST:	DATE:	
DATA SET DESCRIPTION: CMC Input Record						PROGRAMMING MANAGER:	DATE:	
RECORD-ID:						DS ORGANIZATION:		
RECORD DESCRIPTION: Criminal Filing Record						RECORD SIZE:	KEY SIZE:	KEY-ID:
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME	
1	1	1	N	UZ	Type of Case 1 = Criminal	9		
2	2	1	N	UZ	Type of Record 1 = Filing	9		
3-6	3	4	N	UZ	Court Code	9(4)		
7-15	4	9	N	UZ	District Court Case Number	9(9)		
16-23	5	8	AN		Circuit Court Case Number	x(8)		
24-29	6	6	N	UZ	Date Filed	9(6)		
30	7	1	N	UZ	Charging Document 1 = Nonsupport 2 = Indictment 3 = Motor Appeals 4 = Other Appeals 5 = Post Conviction 6 = Criminal Information 7 = Jury Trial Prayed Dis- trict Court	x(15)		
31-45	8	15	AN		Defendant Last Name	x(15)		
46-57	9	12	AN		Defendant First Name	x(12)		
58	10	1	AN		Defendant Middle Initial	x		
59-61	11	3	AN		Defendant Title	x(3)		

EXHIBIT I.33. (continued)

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION						AGENCY:	DPD-DIV-SYS-102 (8/71)	
							PAGE:	OF:
						2	2	
DSNAME A70E.TE.CMC331						SYSTEM ANALYST:	DATE:	
DATA SET DESCRIPTION: CMC Input Record						PROGRAMMING MANAGER:	DATE:	
RECORD-ID:						DS ORGANIZATION:		
RECORD DESCRIPTION: Criminal Filing Record						RECORD SIZE:	KEY SIZE:	KEY-ID:
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME	
62-204	12	143	AN		Charge Table occurs 11 times			
					Each charge is 13 bytes as follows:			
					Charge x(5) Article 9(2) Section x(5) GOC x			
205-660	13	456	AN		Filler	x(456)		

EXHIBIT I.34.

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION						AGENCY:	DDP-DIV-SYS-102 (8/71)	
							PAGE:	OFF:
							1	1
DSNAME <b>A70E.TE.CMC331</b>						SYSTEM ANALYST:	DATE:	
DATA SET DESCRIPTION: <b>CMC Input Record</b>						PROGRAMMING MANAGER:	DATE:	
RECORD-ID:						DS ORGANIZATION:		
RECORD DESCRIPTION: <b>Criminal Trial Record</b>						RECORD SIZE:	KEY SIZE:	KEY-ID:
						660		
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR-FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME	
1	1	1	N	UZ	Type of Case 1 = Criminal	9		
2	2	1	N	UZ	Type of Record 3 = Trial	9		
3-6	3	4	N	UZ	Court Code	9(4)		
7-15	4	9	N	UZ	District Court Case Number	9(9)		
16-23	5	8	AN		Circuit Court Case Number	x(8)		
24-29	6	6	N	UZ	Date Filed	9(6)		
30-44	7	15	AN		Defendant Last Name	x(15)		
45-56	8	12	AN		Defendant First Name	x(12)		
57	9	1	AN		Defendant Middle Initial	x		
58-60	10	3	AN		Defendant Title	x(3)		
61	11	1	N		Defense Counsel 1 = Private 2 = Public Defender 3 = Proper Person	9		
62-139	12	78			Event Chronology occurs 6 times			
					Each event is 13 bytes as follows:			
					Event x(4) Date 9(6) Judge 9(3)			
140-660	13	521			Filler	x(521)		

EXHIBIT I.35.

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION						AGENCY:	DDP-DIV-SYS-102 (8/71)	
							PAGE:	OFF:
							1	3
DSNAME <b>A70E.TE.CMC331</b>						SYSTEM ANALYST:	DATE:	
DATA SET DESCRIPTION: <b>CMC Input Record</b>						PROGRAMMING MANAGER:	DATE:	
RECORD-ID:						DS ORGANIZATION:		
RECORD DESCRIPTION: <b>Criminal Disposition Record</b>						RECORD SIZE:	KEY SIZE:	KEY-ID:
						660		
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR-FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME	
1	1	1	N	UZ	Type of Case 1 = Criminal	9		
2	2	1	N	UZ	Type of Record 5 = Disposition	9		
3-6	3	4	N	UZ	Court Code	9(4)		
7-15	4	9	N	UZ	District Court Case Number	9(9)		
16-23	5	8	AN		Circuit Court Case Number	x(8)		
24-29	6	6	N	UZ	Date Filed	9(6)		
30	7	1	AN		Infamous Crime	x		
31-36	8	6	N		Sentence Start Date	9(6)		
37	9	1	N		Defense Counsel 1 = Private 2 = Public Defender 3 = Proper Person	9		
38-89	10	52			Event Chronology occurs 4 times			
					Each event is 13 bytes as follows:			
					Event x(4) Date 9(6) Judge 9(3)			
90-139	11	50	AN		Sentence Literal	x(50)		

EXHIBIT I.35. (continued)

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION					AGENCY:	PPD-DIV-SYS-102 (4/73)	
					PAGE:	DF:	
					2	3	
DSNAME <b>A70E.TE.CMC331</b>					SYSTEM ANALYST:	DATE:	
DATA SET DESCRIPTION: <b>CMC Input Record</b>					PROGRAMMING MANAGER:	DATE:	
RECORD-ID:					DS ORGANIZATION:		
RECORD DESCRIPTION: <b>Criminal Disposition Record</b>					RECORD SIZE:	KEY SIZE:	KEY-ID:
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME
140	12	1	AN		Plea - applies to all	x	
141	13	1	AN		Verdict - applies to all	x	
142	14	1	AN		Sentence - applies to all	x	
143-285	15	143			Charge occurs 11 times		
					Each charge is 13 bytes as follows:		
					Charge x(5)		
					Article 9(2)		
					Section x(5)		
					GOC x		
286-307	16	22	AN		Plea occurs 11 times x(2)		
308-329	17	22	AN		Verdict occurs 11 times x(2)		
330-637	18	308			Sentencing occurs 11 times		
					Each sentencing is as follows:		
					Sequence nbr 9(2)		
					Incarceration x		
					Incarceration time 9(7)		
					Sentence susp. x		
					Suspension time 9(7)		
					Probation x		
					Probation time 9(7)		
					Fine x		
					Concurrent or consecutive x		

EXHIBIT I.35. (continued)

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION					AGENCY:	PPD-DIV-SYS-102 (4/73)	
					PAGE:	DF:	
					3	3	
DSNAME <b>A70E.TE.CMC331</b>					SYSTEM ANALYST:	DATE:	
DATA SET DESCRIPTION: <b>CMC Input Record</b>					PROGRAMMING MANAGER:	DATE:	
RECORD-ID:					DS ORGANIZATION:		
RECORD DESCRIPTION: <b>Criminal Disposition Record</b>					RECORD SIZE:	KEY SIZE:	KEY-ID:
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME
638-660	19	23			Filler	x(23)	

EXHIBIT I .36 .

STATE OF MARYLAND  
COMPTROLLER OF THE TREASURY  
JOB NARRATIVE

JOB TITLE: CJIS CONVERSION AND REPORT

DPD-DIV-JOB-204

DATE: 4/1/79

This job consists of three programs which will read the output of the CJIS conversion program (A70250) and produce a statistical report.

Input records (A70E.MF.COMP250) will be read by the sort and bundle program (A70251) which will check records for the same person and when found it will bundle all records for that person and produce one record that will have the most serious charge and disposition information on it. It will then assign type bundle codes for all records that are released to the sort. When the sort is finished it will write all sorted records to output (A70E.MF.BUND251) which will be read by the next step.

This program (A70252) will read the data file that was produced by the previous step. It will read a control card and release records from the input based on the information from the control card. When sort is finished it will then write the sorted records to a temp data file (A70E.MF.REPORT 1) to be used by the next step.

The last step (program A70253) will read the temp data file, check break codes and produce a report as shown by the layout for the report in the documentation for program A70253.

STATE OF MARYLAND

COMPTROLLER OF THE TREASURY

SYSTEM FLOW



A70250

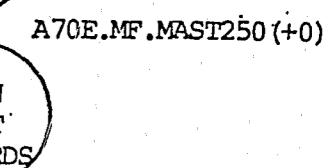
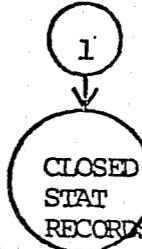
PROGRAMMER:

SYSTEM ANALYST:

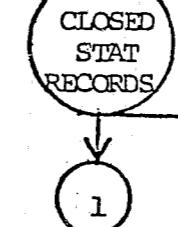
DATE:  
4/1/79

CJIS/STAT SYSTEM FLOW

A70E.MFCOMP250 (+0)



A70E.MF.COMP250 (+1)



A70E.MF.MAST250 (+1)

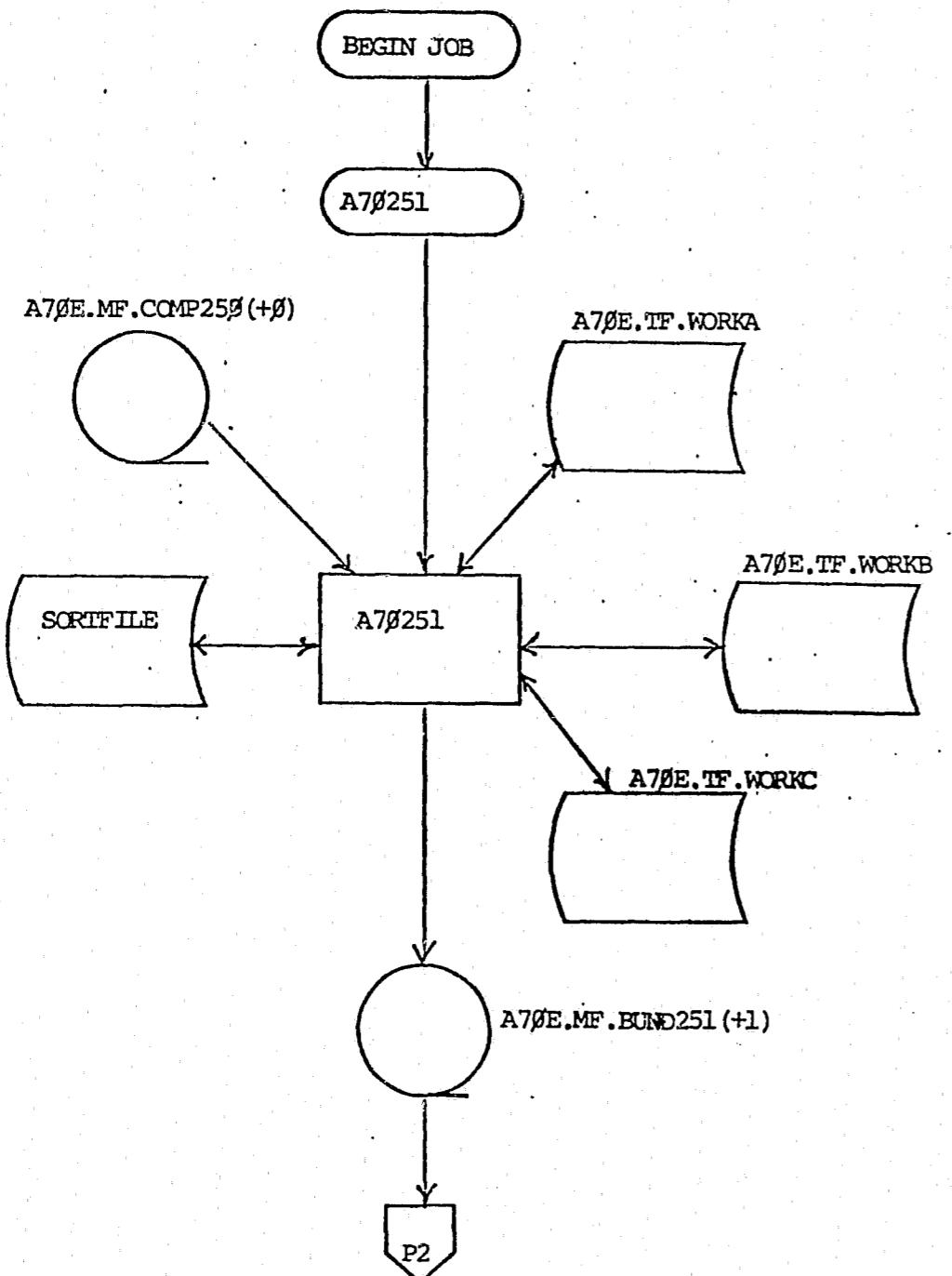


CJIS/STAT CONVERSION  
A70250



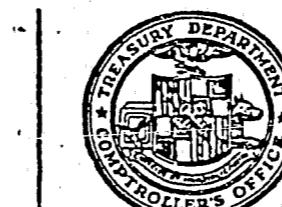
- 100 -  
EXHIBIT I.36B.  
STATE OF MARYLAND  
COMPTROLLER OF THE TREASURY

JOB NAME		PRD-DIV-JOB-204	
CA70251			
SYSTEM ID	APPLICATION FROC.		
A70251			
SYSTEM ANALYST:			
JOB TITLE:		DATE:	
JOB I/O FLOW DIAGRAM		PAGE 1	4/1/79



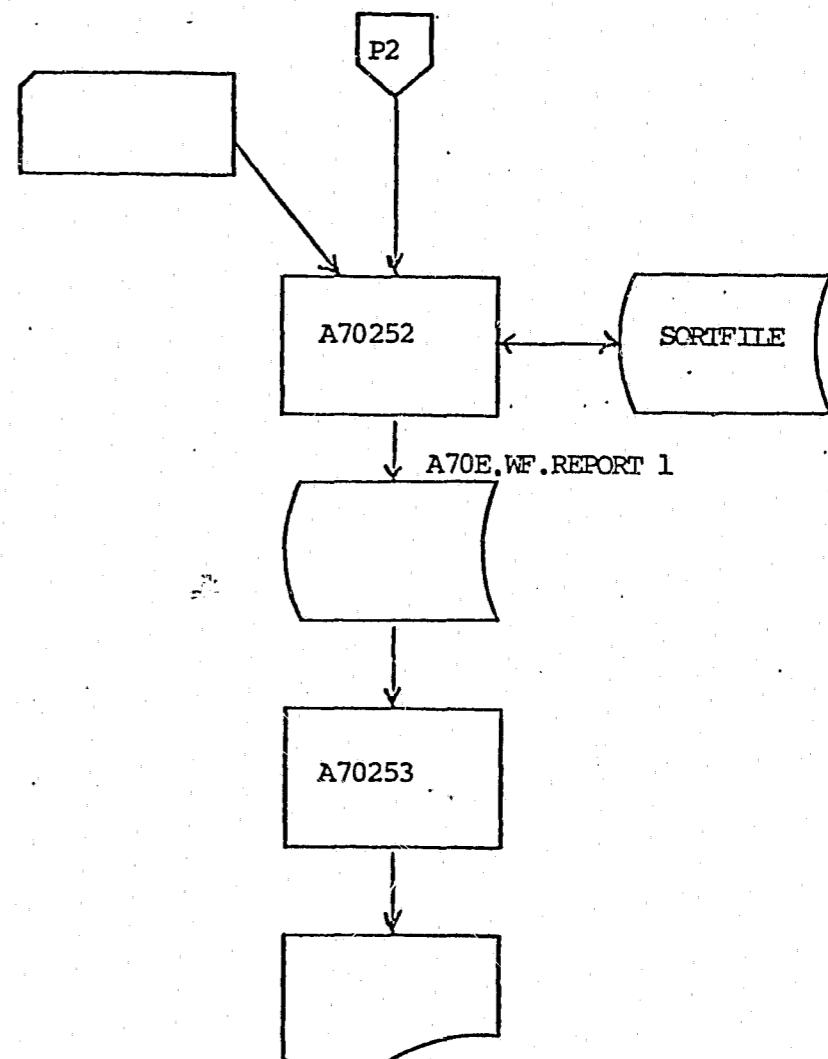
- 101 -

EXHIBIT I.36C.  
STATE OF MARYLAND  
COMPTROLLER OF THE TREASURY



JOB TITLE:

JOB TITLE:		DATE:	
		Page 2	4/1/79



DATA SET NAME: IN-STAT-MASTER

RECORD DESCRIPTION:  
INPUT STATISTICAL RECORD

RECORD ID:  
OT-STAT-MAST-RECORD

RECORD SIZE:  
325

POS.	FLD. NO.	SIZE	CHAR TYPE	CHAR FMT.	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME
1-2	1	2	N	UZ	RECORD 1 REPORT MONTH		
3	2	1	N	UZ	TYPE CASE		
4	3	1	N	UZ	TYPE RECORD		
5-8	4	4	N	UZ	COURT CODE		
9-17	5	9	N	UZ	DISTRICT COURT CASE NUMBER		
18-25	6	8	N	UZ	CIRCUIT COURT CASE NUMBER		
26-31	7	6	N	UZ	DATED FILED		
-	-	-	-	-	FILING RECORD INFORMATION		
32	8	1	N	UZ	CHARGING DOCUMENT		
33-4	9	15	A/N		DEFENDANT LAST NAME		
48-59	10	12	A/N		DEFENDANT FIRST NAME		
60	11	1	A/N		DEFENDANT MIDDLE INITIAL		
61-63	12	3	A/N		DEFENDANT TITLE		
64-68	13	5	A/N		MOST SERIOUS FILING CHARGE		
69-70	14	2	N	UZ	MOST SERIOUS FILING ARTICLE		
71-75	15	5	A/N		MOST SERIOUS FILING SECTION		
76	16	1	A/N		MOST SERIOUS FILING GOC		
77-79	17	3	N	UZ	MOST SERIOUS FILING CHARGE RANKING NUMBER		
80-81	18	2	N	UZ	MOST SERIOUS FILING CHARGE GROUPING NUMBER		
82-83	19	2	N	UZ	TOTAL NUMBER OF FILING CHARGES		
-	-	-	-	-	BUNDLE INFORMATION		
84-87	20	3	N	UZ	BUNDLE MOST SERIOUS FILING CHARGE RANKING NUMBER		
87-89	21	3	N	UZ	BUNDLE MOST SERIOUS FILING CHARGE GROUPING NUMBER		
90-92	22	3	N	UZ	BUNDLE TOTAL NUMBER OF FILING CHARGES		
-	-	-	-	-	TRIAL RECORD INFORMATION		

POS.	FLD. NO.	SIZE	CHAR TYPE	CHAR FMT.	FIELD DESCRIPTION	EDIT PICTURE	DATA-N
93-94	23	2	N	UZ	RECORD 3 REPORT MONTH		
95	24	1	N	UZ	TYPE RECORD		
96	25	1	N	UZ	DEFENSE COUNSEL TYPE 1=PRIVATE 2=PUBLIC DEFENDER 3=PROPER PERSON		
97-174	26	78	A/N		TRIAL EVENT CHRONOLOGY OCCURS 6 TIMES 13 BYTES EACH: EVENT X(4) DATE 9(6) JUDGE 9(3)		
175-178	27	4	A/N		ARRAIGNMENT EVENT		
179-184	28	6	N		ARRAIGNMENT DATE		
185-188	29	4	A/N		TRIAL EVENT		
189-194	30	6	N		TRIAL DATE		
195	31	1	N		TYPE OF TRIAL 1=CT, CCT 2=JT, CUT 3=GPNN, PAA		
196-198	32	3	N	UZ	BUNDLE INFORMATION		
199-200	33	2	N	UZ	BUNDLE TYPE CODE		
-	-	-	-	-	BUNDLE TOTAL NUMBER OF GUILTY CHARGES		
201-202	34	2	N	UZ	BAIL/BOND RECORD INFORMATION		
203	35	1	N	UZ	RECORD 4 REPORT MONTH		
204-209	36	6	N	UZ	TYPE RECORD		
210	37	1	N	UZ	HEARING DATE		
-	-	-	-	-	BAIL-BOND-DISPOSITION 1=ROR 2=BAIL 3=COMMITTED IN DEFAULT 4=COMMITTED WITHOUT BAIL 5=HELD FOR SENTENCING 6=APPEAL BOND SET		

DATA SET NAME: IN-STAT-MASTER

RECORD DESCRIPTION: INPUT STATISTICAL RECORD					RECORD ID: OT-STAT-MAST-RECORD	RECORD SIZE: 325	
POS.	FLD. NO.	SIZE	CHAR TYPE	CHAR FMT.	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME
		-	-	-	DISPOSITION RECORD INFORMATION		
211-212	38	2	N	UZ	RECORD 5 REPORT MONTH		
213	39	L	N	UZ	TYPE RECORD		
214	40	L	A/N	X	INFAMOUS CRIME		
215-220	41	6	N	UZ	SENTENCE START DATE		
221	42	L	A/N	X	BLANK		
222-273	43	52			EVENT		
					CHRONOLOGY OCCURS 4 TIMES 13 BYTES EACH		
					EVENT X(4)		
					DATE 9(6)		
					JUDGE 9(3)		
274-277	44	4	A/N	X	DISP. EVENT		
278-	45	6	N	UZ	DISP. DATE		
284	46	L	A/N	X	PLEA-APPLIES TO ALL		
285	47	L	N		DISPOSITION		
286-298	48	13			MOST SERIOUS CHARGE/DISPOSITION		
					CHARGE X(5)		
					ARTICLE 9(2)		
					SECTION X(5)		
					GOC X		
299-300	49	2	A/N		MOST SERIOUS VERDICT		
301-303	50	3	N		MOST SERIOUS CHARGE MSD-RANKING NO		
304-305	51	2	N		MOST SERIOUS CHARGE MSD-GROUPING NO		
306-307	52	2	N		MOST SERIOUS VERDICT RANKING NO		
308-309	53	2	N		MOST SERIOUS VERDICT/SENTENCE RANKING ORDER		
310-311	54	2	N		TOTAL NUMBER OF CHARGES		
312-317	55	2	N		TOTAL NUMBER OF GUILTY CHARGES		
314-317	56	4	N		CUMULATIVE SENTENCE IN MONTHS		
318-325	57	8	A/N		BLANK		

Illustrative Statistical Output Report Using the Input Statistical Record (Exhibit IV .0-2)

Exhibit IV .1-.2 and IV .3-.4 which follow provide aggregate statistical descriptions of Circuit Court terminations on a "document" and "defendant" basis respectively. The statistics shown in the docket report represent documents or pieces of paper (e.g. indictments, criminal informations, appeals) disposed by the court while the statistics shown in the defendant report represent people (i.e., where the dockets related to the same individual and filing are bundled together). The reports show the number of Circuit Court terminations for a designated period of time (e.g., month, quarter, year) and for a specific jurisdiction (i.e. county) or grouping of jurisdictions. Each report describes by major crime type classifications (called charge groupings) the resulting disposition of the Circuit Court terminations.

The first page of each of the reports shows the total guilty dispositions (right most column) and the resulting sentence for those found guilty (e.g., DOC - commitment to the Division of Correction, Local Jail, Probation, Fine, Other) in the columns preceding the right most column. The second page of each report shows the total probation before judgment and not guilty terminations (right most column) with the specific dispositions preceding the right most column. The charges displayed across the rows can be selected to show either the most serious charge at court filing or the most serious charge at court disposition.

Given these variable report specifications, the output reports can be generated in one of two levels of detail. Report detail I displays all records terminated and report detail II, in addition to displaying all records terminated, also generates the same report for subsets of the terminations based on type of charging document, type of defense counsel, and type of trial:

I. All Records

II. A. All Records  
B. Charging Document - Field 8

1. Non-support
2. Indictment
3. Motor Appeals
4. Other Appeals
5. Post Conviction
6. Criminal Information
7. Jury Trial Prayed
8. Sentence Review/VIOP
9. 2+4+6+7
10. 2+6

C. Defense Counsel - Field 19

1. Private
2. Public Defender
3. Proper Person
4. Blank/Other

D. Type of Trial - Field 23

1. CT, CCT (Bench)
2. JT, CJT (Jury)
3. PPNW, PAA (Plea)
4. All Others/Blank

PROGRAM: A70253  
DATE-PREPARED: 03/17/80

JURISDICTIONAL GROUPING: 2  
REPORT OF ALL RECORDS

JURISDICTION: STATE WIDE

ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL DISPOSITIONS BY TYPE OF CHARGE

TERMINATIONS DURING 07/79 - 12/79

PAGE 1

DOCUMENTS

DISPOSITION CHARGE GROUPING	DOC	DOC-PS	LOCAL JAIL	LOCAL JAILPS	PROB -S	PROB -U	FINE -PS	FINE -S	OTHER INC-S	OTHER- GUILTY	OTHER- NONSP	OTHER- MERGED	TOTAL		
HURDER	35	0	0	0	0	1	0	0	0	3	0	0	39		
MANSLAUGHTER	21	0	0	1	5	6	0	1	0	0	3	0	37		
FORCIBLE RAPE	51	1	0	0	8	0	0	0	0	0	6	0	66		
ROBBERY	285	3	3	2	30	18	0	0	0	2	16	0	359		
AGGR. ASSAULT	24	0	2	0	12	3	0	0	0	2	0	0	43		
BURGLARY	352	14	55	4	242	79	0	2	0	9	48	1	807		
LARCENY	141	7	113	8	145	53	0	4	0	11	55	0	538		
STOLEN VEH.	68	1	14	1	33	6	0	0	0	1	11	0	136		
*** 1. TOTALS	977	26	187	16	475	166	0	7	0	23	144	1	2025		
OTHER ASSAULT	95	2	77	2	111	26	0	8	0	1	61	0	390		
ARSON	10	3	1	0	13	3	0	0	0	0	5	0	35		
FORGERY/COUNTERFEIT	84	2	28	2	65	14	0	0	0	4	9	0	208		
FRAUD	55	3	35	1	55	6	0	0	0	3	19	0	177		
EMBEZZLEMENT	2	0	1	1	7	0	0	0	0	0	0	0	11		
STOLEN PROP.	60	4	25	0	57	21	0	1	0	0	3	18	0	189	
VANDALISM	15	32	24	5	23	2	0	2	0	0	14	0	118		
WEAPONS	35	3	9	0	19	6	0	0	0	7	0	0	79		
COMP. VICE	1	0	3	0	1	2	0	1	0	0	4	0	12		
SEX OFFENSES	55	4	14	2	39	4	0	0	0	3	1	9	0	131	
NARCOTICS	160	8	53	3	190	42	0	16	0	0	9	68	0	550	
GAMBLING	1	0	0	0	2	0	0	0	0	0	6	0	9		
FAMILY OFF.	9	3	5	0	17	1	0	0	0	2	0	6	0	44	
OTHER TYPE I	23	12	29	11	33	7	0	1	0	0	2	26	0	144	
LIQUOR LAWS	0	0	0	0	0	0	0	0	0	0	5	0	5		
KIDNAPPING	6	0	0	0	1	1	0	0	0	0	0	0	0		
DIS. CONDUCT	4	2	15	2	5	0	0	7	0	0	2	11	0	48	
INV. PRIVACY	1	0	1	0	3	0	0	2	0	0	10	0	0	17	
BRIE. EXTORT	0	0	0	1	2	0	0	0	0	0	0	0	0	3	
CONTEMPT PER.	5	0	0	0	1	0	0	0	0	0	2	0	0	8	
OBSTRUCTING	6	2	9	1	5	1	0	1	0	0	6	0	1	32	
ENVIRON. LAWS	0	0	2	0	1	2	0	0	0	0	5	0	0	10	
OBSCENITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OTHER TYPE II	26	9	91	20	87	18	0	38	1	4	6	995	211	4	1510
ESCAPE	224	0	19	0	6	1	0	0	0	0	14	0	2	266	
ALL OTHERS	1	1	4	0	8	1	0	0	0	1	4	0	0	20	
*** 2. TOTALS	878	90	445	51	751	158	0	77	1	10	37	1304	211	11	4024
TOTAL	1855	116	632	67	1226	324	0	84	1	11	60	1448	212	13	6049

EXHIBIT I.38A.

PROGRAM: A70253  
DATE-PREPARED: 03/17/80

ADMINISTRATIVE OFFICE OF THE COURTS

PAGE 2

JURISDICTIONAL GROUPING: 2  
REPORT OF ALL RECORDS

CRIMINAL DISPOSITIONS BY TYPE OF CHARGE

TERMINATIONS DURING 07/79 - 12/79

JURISDICTION: STATE WIDE

DOCUMENTS

DISPOSITION CHARGE GROUP	A27/ S641-S	A27/ S292-S	A27/ S641	A27/ S292	A10/ S37	APP BY DEF	WD TO DC	REMAND TO JC	REMAND TO JC	NOT GUILTY	NOT GUILTY	G- TY INS	DISM	APPEAL DISM	RE- MOVED	NOLLE STET	PROSSE	OTHER UNKWN	TOTAL
MURDER	0	0	1	0	0	0	0	0	7	2	5	0	2	1	12	0	0	30	
MANSLAUGHTER	0	0	1	0	0	0	0	0	4	0	2	0	14	0	4	1	0	26	
FORCIBLE RAPE	0	0	4	0	0	0	0	0	4	15	1	2	0	2	12	54	0	94	
ROBBERY	0	0	11	0	0	0	0	25	41	2	13	0	3	21	180	2	298		
AGGR. ASSAULT	0	0	1	0	0	0	0	0	10	3	2	0	3	5	42	1	67		
BURGLARY	1	0	45	0	0	0	0	0	48	3	6	0	6	70	304	5	488		
LARCENY	0	0	98	1	0	4	0	0	60	2	7	0	1	102	214	17	506		
STOLEN VEH.	0	0	9	0	0	0	0	0	11	0	1	0	1	19	75	0	116		
*** 1. TOTALS	1	0	170	1	0	4	0	29	196	13	38	0	32	230	885	26	1625		
OTHER ASSAULT	0	0	104	2	9	10	1	0	94	2	14	0	0	73	193	7	509		
ARSON	0	0	1	0	0	0	0	0	10	6	0	0	1	7	28	0	53		
FORGERY/COUNTERFEIT	0	0	15	0	0	0	0	0	5	0	1	0	5	10	124	1	161		
FRAUD	0	0	19	0	0	0	0	0	12	0	13	0	2	34	76	0	156		
EMBEZZLEMENT	0	0	0	0	0	0	0	0	3	0	0	0	0	1	6	0	10		
STOLEN PROP.	0	0	12	0	0	1	0	0	16	0	1	0	0	7	70	2	109		
VANDALISM	0	0	17	1	0	0	0	0	12	0	2	0	0	14	37	0	83		
WEAPONS	0	0	12	0	0	1	0	0	10	0	0	0	0	10	21	0	54		
COMM. VICE	0	0	2	0	0	0	0	0	0	0	0	0	0	2	6	2	12		
SEX OFFENSES	0	0	15	1	0	1	0	0	14	1	3	0	0	8	43	2	88		
NARCOTICS	0	0	21	60	0	2	0	1	17	2	26	0	2	42	256	4	433		
GAMBLING	0	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	6		
FAMILY OFF.	0	0	5	0	0	0	0	0	9	0	1	0	0	16	52	0	83		
OTHER TYPE I	0	0	23	0	0	3	11	0	22	0	7	0	0	12	44	2	124		
LIQUOR LAWS	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	3		
KIDNAPPING	0	0	2	0	0	0	0	0	2	1	0	0	0	1	5	0	11		
DIS. CONDUCT	0	0	8	0	0	0	0	0	10	0	0	0	0	8	21	4	51		
INV. PRIVACY	0	0	4	0	0	1	4	0	3	2	1	0	0	5	8	0	28		
BRIB. EXTORT	0	0	0	0	0	0	0	0	6	0	0	0	0	0	7	0	13		
CONTEMPT PER.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	5		
OBSTRUCTING	0	0	6	0	0	0	0	0	3	0	1	0	1	6	14	1	32		
ENVIRON. LAWS	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	5		
OBSENITY	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2		
OTHER TYPE II	0	0	230	7	0	29	4	1	103	0	128	0	1	49	262	412	1226		
ESCAPE	0	0	2	0	0	0	0	0	7	0	6	0	0	23	24	0	62		
ALL OTHERS	0	0	4	0	0	0	0	0	1	0	0	0	0	5	10	0	20		
*** 2. TOTALS	0	0	506	71	9	48	20	2	363	14	205	0	12	337	1315	437	3339		
TOTAL	1	0	676	72	9	52	20	31	559	27	243	0	44	567	2200	463	4964		

EXHIBIT I.38A. (continued)

PROGRAM: A70253  
DATE-PREPARED: 03/18/80

JURISDICTIONAL GROUPING: 2  
REPORT OF ALL RECORDS

JURISDICTION: STATE WIDE

ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL DISPOSITIONS BY TYPE OF CHARGE

TERMINATIONS DURING 07/79 - 12/79  
DEFENDANTS

PAGE 1

DISPOSITION CHARGE GROUPING	DOC	DOC-PS	LOCAL JAIL	LOCAL JAILPS	PROB -S	PROB	PROB -U	FINE -PS	FINE -S	OTHER INC-S	OTHER GUILTY	OTHER NONSP	OTHER MERGED	TOTAL GUILTY	
MURDER	34	0	0	0	0	1	0	0	0	0	3	0	0	38	
HANSLAUGHTER	13	0	0	1	5	5	0	1	0	0	2	0	0	27	
FORCIBLE RAPE	43	1	0	0	7	0	0	0	0	0	5	0	0	56	
ROBBERY	254	3	3	2	27	17	0	0	0	0	15	0	0	321	
AGGR. ASSAULT	23	0	2	0	12	3	0	0	0	0	2	0	0	42	
BURGLARY	288	13	53	3	192	59	0	2	0	9	43	0	1	663	
LARCENY	117	6	93	6	127	49	0	3	0	1	11	46	0	459	
STOLEN VEH.	54	1	12	1	29	5	0	0	0	0	1	9	0	113	
*** 1. TOTALS	826	24	163	13	399	139	0	6	0	1	21	125	0	1719	
OTHER ASSAULT	83	2	68	2	91	21	0	6	0	1	5	54	0	1	334
ARSON	9	3	1	0	13	3	0	0	0	0	5	0	0	0	34
FORGERY/COUNTERFEIT	63	2	21	1	53	13	0	0	0	0	1	7	0	0	161
FRAUD	38	3	29	1	41	6	0	0	0	0	2	16	0	0	136
EMBEZZLEMENT	2	0	1	1	6	0	0	0	0	0	0	0	0	0	10
STOLEN PROP.	50	3	23	0	46	18	0	1	0	0	2	14	0	0	157
VANDALISM	11	18	21	4	17	2	0	2	0	0	0	11	0	1	87
WEAPONS	30	3	9	0	15	5	0	0	0	0	0	7	0	0	80
COHM. VICE	1	0	2	0	1	2	0	1	0	0	0	3	0	0	10
SEX OFFENSES	40	3	13	1	32	4	0	0	0	3	1	7	0	0	104
NARCOTICS	130	7	48	2	158	32	0	13	0	0	7	52	0	1	450
GAMBLING	1	0	0	0	2	0	0	0	0	0	0	4	0	0	7
FAMILY OFF.	5	2	5	0	17	1	0	0	0	2	0	6	0	1	39
OTHER TYPE I	20	10	25	7	31	6	0	1	0	0	2	17	0	0	119
LIQUOR LAWS	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
KIDNAPPING	4	0	0	0	1	1	0	0	0	0	0	0	0	0	6
DIS. CONDUCT	2	2	11	1	4	0	0	5	0	0	1	10	0	0	36
INV. PRIVACY	1	0	1	0	2	0	0	1	0	0	0	8	0	0	13
BRIB. EXFT	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
CONTEMPT PER.	5	0	0	0	1	0	0	0	0	0	0	2	0	0	8
OBSTRUCTING	5	2	8	1	4	1	0	1	0	0	0	6	0	1	29
ENVIRON. LAWS	0	0	2	0	1	2	0	0	0	0	0	4	0	0	9
OBSCENITY	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
OTHER TYPE II	21	8	36	20	84	17	0	35	1	3	6	896	210	1	1388
ESCAPE	200	0	18	0	6	1	0	0	0	0	0	14	0	2	241
ALL OTHERS	1	1	4	0	8	1	0	0	0	0	1	3	0	0	19
*** 2. TOTALS	722	69	396	42	636	136	0	66	1	9	28	1150	210	8	3473
TOTAL	1548	93	559	55	1035	275	0	72	1	10	49	1275	210	10	5192

EXHIBIT I.38B.

PROGRAM: A70253  
DATE-PREPARED: 03/18/80

## ADMINISTRATIVE OFFICE OF THE COURTS

JURISDICTIONAL GROUPING: 2  
REPORT OF ALL RECORDS

## CRIMINAL DISPOSITIONS BY TYPE OF CHARGE

TERMINATIONS DURING 07/79 - 12/79  
DEFENDANTS

PAGE 2

JURISDICTION: STATE WIDE

DISPOSITION CHARGE GROUP	A27/ S641-S	A27/ S292-S	A27/ S641	A27/ S292	A10/ S37	APP BY DEF	WD TO DC	REMAND TO JC	REMAND TO INS	NOT GUILTY	NOT INS	APPEAL DISM	RE- MOVED DISM	NOLLE STET	OTHER PROSSE	UNKNWN	TOTAL PBJ+NG
MURDER	0	0	1	0	0	0	0	0	7	1	4	0	1	1	10	0	25
MANSLAUGHTER	0	0	1	0	0	0	0	3	4	0	2	0	3	0	3	0	13
FORCIBLE RAPE	0	0	3	0	0	0	0	4	13	1	1	0	2	11	38	0	73
ROBBERY	0	0	10	0	0	0	0	24	38	1	11	0	3	14	118	1	220
AGGR. ASSAULT	0	0	1	0	0	0	0	0	9	2	1	0	1	5	36	1	56
BURGLARY	1	0	42	0	0	0	0	0	43	2	5	0	5	50	183	4	335
LARCENY	0	0	89	1	0	3	0	0	48	1	5	0	0	86	139	12	384
STOLEN VEH.	0	0	8	0	0	0	0	0	10	0	1	0	1	9	49	0	78
*** 1. TOTALS	1	0	155	1	0	3	0	28	172	8	30	0	16	176	576	18	1184
OTHER ASSAULT	0	0	90	1	8	8	1	0	77	1	11	0	0	64	155	6	422
ARSON	0	0	1	0	0	0	0	0	9	6	0	0	1	5	28	0	50
FORGERY/COUNTERFEIT	0	0	10	0	0	0	0	0	4	0	1	0	3	9	42	1	70
FRAUD	0	0	16	0	0	0	0	0	9	0	8	0	1	24	53	0	111
EMBEZZLEMENT	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3	0	6
STOLEN PROP.	0	0	10	0	0	1	0	0	9	0	1	0	0	4	37	1	63
VANDALISM	0	0	12	1	0	0	0	0	7	0	2	0	0	13	25	0	60
WEAPONS	0	0	12	0	0	1	0	0	7	0	0	0	0	8	15	0	43
COMM. VICE	0	0	1	0	0	0	0	0	0	0	0	0	0	2	5	1	9
SEX OFFENSES	0	0	10	1	0	1	0	0	12	1	2	0	0	6	35	1	69
NARCOTICS	0	0	20	55	0	2	0	1	14	1	23	0	2	34	151	3	306
GAMBLING	0	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	6
FAMILY OFF.	0	0	5	0	0	0	0	0	9	0	0	0	0	15	50	0	80
OTHER TYPE I	0	0	19	0	0	3	10	0	16	0	7	0	0	8	29	2	94
LIQUOR LAWS	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	3
KIDNAPPING	0	0	2	0	0	0	0	0	2	1	0	0	0	1	4	0	10
DIS. CONDUCT	0	0	8	0	0	0	0	0	8	0	0	0	0	8	16	2	42
INV. PRIVACY	0	0	4	0	0	1	4	0	1	1	1	0	0	4	5	0	21
BRIE. EXTORT	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	0	12
CONTempt PER.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	5
OBSSTRUCTING	0	0	5	0	0	0	0	0	3	0	0	0	0	1	5	1	25
ENVIRON. LAWS	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	4
OBSSENITY	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
OTHER TYPE II	0	0	216	6	0	27	3	1	96	0	112	0	1	44	236	313	1055
ESCAPE	0	0	2	0	0	0	0	0	6	0	5	0	0	23	20	0	56
ALL OTHERS	0	0	4	0	0	0	0	0	1	0	0	0	0	5	6	0	16
*** 2. TOTALS	0	0	451	64	8	44	18	2	301	11	175	0	9	287	939	331	2640
TOTAL	1	0	606	65	8	47	18	30	473	19	205	0	25	463	1515	349	3824

EXHIBIT I.38B. (continued)

CHAPTER II Elapsed time Between Events in Processing and the Impact  
on Processing Stocks

A. Conceptual Definition of Elapsed Time Between Events in Processing

Chapter I describes a framework for representing statistics on the volume and manner of processing of offenders through the components of the criminal justice system. The concept of "flows" and "stocks" is introduced to distinguish between the volume of defendants or offenders proceeding through a decision making point over a period of time, a system "flow" (e.g., the number of defendants indicted in a year), and the number of defendants or offenders actively awaiting or in process as of a given point in time, a system "stock" (e.g., the number of defendants awaiting disposition as of the end of the month).

System stocks are generated at every point in process where some time elapses between initial entry into a stage and subsequent exit from a stage (e.g., elapsed time between filing of charges against a defendant and disposition of those charges by the court). The size of the queue or "stock" of defendants or offenders in process (e.g., number of pre-trial defendants in jail awaiting disposition) depends on the number of persons entering the decision making stage (e.g., bail release decision), the number who proceed down a particular decision or flow path (e.g., number of defendants detained and fail to post bond prior to trial), and the length of time it takes before a subsequent decision is made affecting the defendants' status (e.g., elapsed time from entering jail as a pre-trial detainee and court disposition).

In order to develop a more complete understanding of criminal justice processing, information on the volume and manner of processing ("flow") must be combined with information on the number of defendants/offenders active in the process ("stocks"). This chapter looks at measures of criminal justice processing related to the time that elapses between arrest, court trial and final disposition. Statistics are discussed which measure the elapsed time between the events in processing. The volume of defendant case processing and the elapsed time in processing is used to derive estimates of the "stock" of pending defendants. The estimates of the pending volume

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are then compared to the actual reported balance of pending defendant cases.

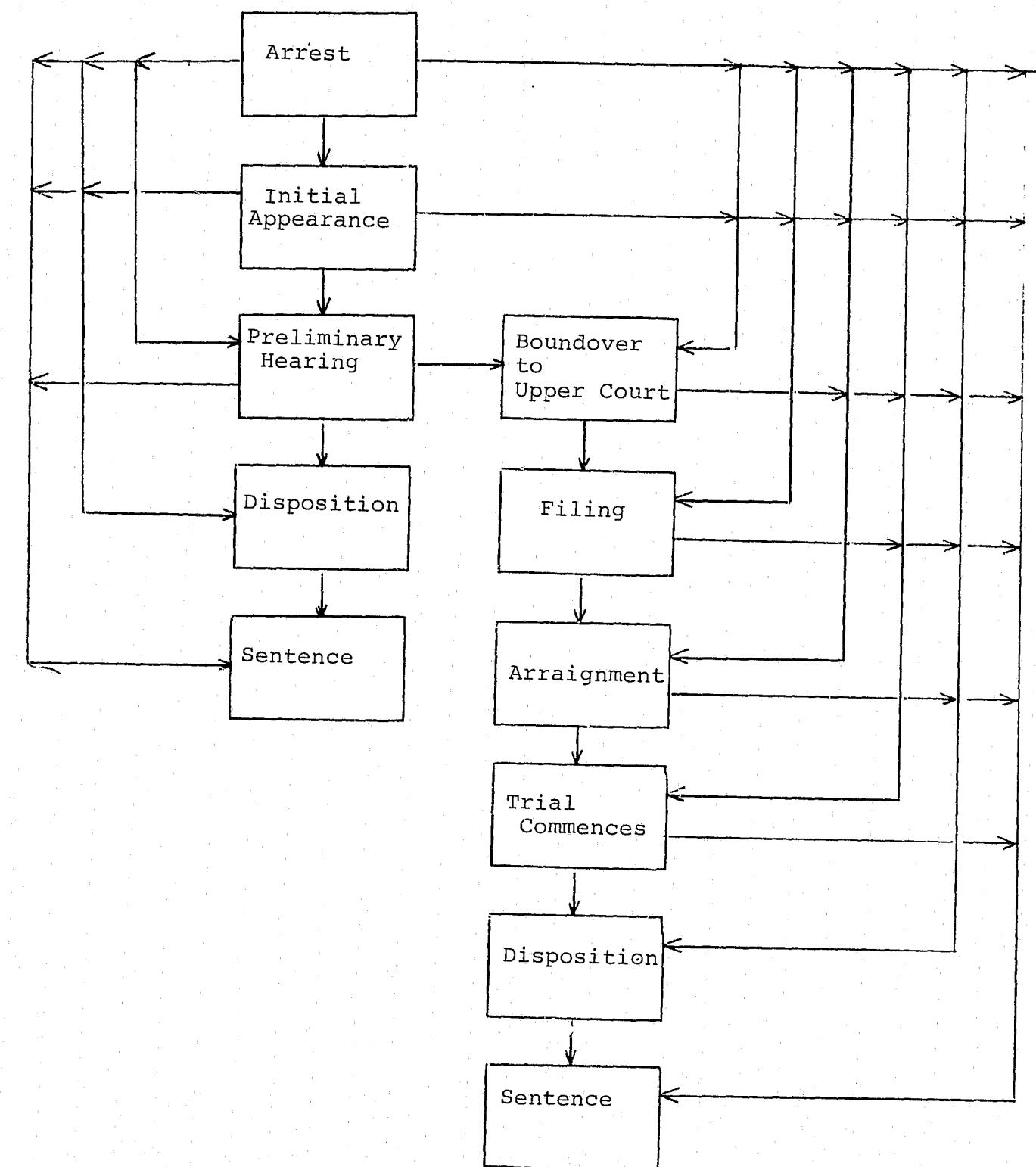
#### Processing Events and Elapsed Time Statistics

The principal events in processing between arrest and disposition and sentencing for which data is desirable are:

- \*Date of Arrest
  - \*Date of Initial Appearance
  - Date of Preliminary Hearing
  - t\*Date of Lower Court Disposition (If applicable)
  - t\*Date of Lower Court Sentence (if applicable)
  - Date Boundover to Upper Court
  - t\*Date of Filing - indictment, information, other charging document
  - \*Date of Arraignment
  - \*Date of Trial Commencement
  - t\*Date of Disposition (includes trial end or non-trial disposition)
  - t\*Date of Sentence
- \*Date fields specified in SEARCH Technical Report No. 4,  
Implementing Statewide Criminal Justice Statistics Systems  
The Model and Implementation Environment, January, 1972.
- t Date fields specified in draft Bureau of Justice Statistics,  
"Offender Based Transaction Statistics Reporting Standards,  
Draft 5, July 1980.

The above dates (either all or some) correspond to events in system processing which might well be represented in the type of flow processing description described in the previous chapter. Given (1) an "offender" oriented data base which describes defendant processing through all or some of the above decision making points and (2) the corresponding dates for when these processing events occur, a statistical description can be derived of the elapsed time between any consecutive stages or between any cumulative stages in process. This concept is shown in the Figure II.1. diagram. The arrows between two adjacent processing stages (e.g., arrest to initial appearance) represent the elapsed time between consecutive events and the arrows which span more than one processing stage (e.g., arrest to disposition) represent the elapsed time between cumulative stages in processing. For each defendant disposed, the elapsed time (e.g., in days) can be calculated for the consecutive and cumulative processing events for which dates are recorded. By analyzing all the defendants disposed over the same period of time (e.g., quarter, year) statistics of the

FIGURE II.1: Criminal Justice - Elapsed Time Between Both Consecutive and Cumulative Events in Process



following type can be derived to summarize the elapsed time information between any consecutive or cumulative processing events:

1. Mean Elapsed Time - the average elapsed time (e.g., in days) for all defendants processed between any two processing stages - either consecutive or cumulative.
2. Median Elapsed Time - the elapsed time (e.g., in days) between any two processing stages - either consecutive or cumulative - represented by that defendant record for which there are equal numbers of defendant records whose elapsed time is lower and higher respectively.
3. Elapsed Time Intervals - for any two processing stages - either consecutive or cumulative
  - a. Number Disposed - number disposed in each of a series of consecutive elapsed time intervals (e.g., number of defendants disposed from arrest to disposition in 0-30 days; 31-60 days; 61-90 days;...)
  - b. Percent (%) Disposed - % of total disposed in each of the series of consecutive elapsed time intervals (e.g., % of total disposed in 0-30 days; % of total disposed in 31-60 days; % of total disposed in 61-90 days;...)
  - c. Cumulative Percent (%) Disposed - % of total defendants disposed on an "additive" basis over the elapsed time intervals (e.g., % of total disposed in 0-30 days; % of total disposed in 0-60 days; % of total disposed in 0-90 days; ...)
  - d. Mean Elapsed Time Within an Elapsed Time Interval - the average elapsed time for all defendants disposed in a given elapsed time interval (e.g., mean elapsed time for defendants disposed in 0-30 days; 31-60 days; 61-90 days; ...respectively)

With an offender oriented data base, descriptive statistics on elapsed time between events in system processing can be generated for any one or combination of defendant attributes. Among the descriptive attributes of the offender for which elapsed time statistics might be displayed are:

1. The jurisdiction of arrest of the defendant (e.g., county)
2. The court at which the defendant's final disposition occurred (e.g., lower or upper court)
3. The most serious type of offense for which the defendant was arrested or was disposed (e.g., murder, rape, robbery, burglary, larceny)

4. The bail status of the defendant at the time of disposition (e.g., own recognizance, money bail, detained)
5. The final court disposition of the defendant (e.g., dismissed, acquitted, convicted)
6. The type of defendant charging document (e.g., indictment, criminal information)
7. Type of attorney representation at final disposition (e.g., private attorney, public defender)
8. Type of final disposition (e.g., guilty plea, bench trial, jury trial)

The choice of which attributes or combination of attributes of the defendant are important in characterizing the description of elapsed time between events in processing depends largely on the issue or question which the information is to assist in addressing. For example, take the question "What is the impact of court processing delay on the size of the pre-trial detention population in XYZ county?" For this question, the following attributes of the defendant population are important:

1. The bail status of the defendant at the time of court disposition (e.g., own recognizance, moneyed bond, detained)
2. The court at which the final disposition occurred (e.g., lower or upper court)
3. The major type of crime for which the defendant was charged at arrest (e.g., index violent, index property, drug/narcotics, weapon, other Part II)
4. The disposition outcome (e.g., acquitted, dismissed, guilty)

Using these attributes of offender processing, it is necessary to select from among the possible elapsed time processing events and statistics those which are to be analyzed. For this example, the elapsed time processing events might include:

1. Elapsed time from arrest to trial (or disposition),
2. Elapsed time from filing to trial (or disposition), and
3. Elapsed time from disposition (guilty) to sentence.

The processing statistics selected might be the number, percent (%), and mean elapsed time for pre-defined elapsed time intervals (e.g., 0-30 days, 31-60 days,...) selected for each of the three (3) elapsed time processing events.

With this formulation of the output requirements needed to address the question, output reports can be generated from the data base which describe the differences in processing volume and the elapsed time for detained versus released defendants. These output reports provide the information to assist in answering the following questions?

1. Do detained defendants look different from own recognizance and money bond defendants in terms of type of offense at arrest, disposition outcome, delay in processing?
2. Which of the detained defendants appear to be using most of the pre-trial bed space (e.g., detainees charged with a violent offense, detainees disposed in the upper court)?
3. Does the data suggest that changes in existing bail setting procedure could impact substantially on the size of the pre-trial population (e.g., large number of detained defendants ultimately dismissed or acquitted may suggest need for review of bail procedures)?
4. What impact would speedier court processing of detained defendants have on the size of the jail's pre-trial population (and subsequently on the size of the jail's sentenced or state prison's inmate population)?
5. What impact might speedier court processing of detained defendants have on those defendants awaiting disposition and not detained (e.g., released on their own recognition or on money bond)?

Answers to these questions should be of assistance in addressing the original question of "what impact court processing delay has on the size of the pre-trial detention population?"

#### Elapsed Time Measures and Estimates of the Pending Balance

Information on the elapsed time between events in processing can be combined with information on the volume of defendant processing to develop some measures of the expected queue or stock of defendants awaiting processing. For example, estimates of the size of the pending balance of cases awaiting court disposition can be derived from

the following formula:

$$P = D \times (365/\text{Mean ET})^{-1} \quad (2.1)$$

Where:

P = the expected average pending balance for the year

D = the number of defendants disposed in the year\*

Mean ET = the mean elapsed time (in days) from filing to disposition for defendants disposed, D

365/Mean ET = the rate of defendant turnover per year or the inverse of the average time from filing to disposition expressed in years

The expected number of defendants pending court disposition is simply the product of the number of defendants disposed of in a year times the inverse of the rate of defendant turnover. For example, if 10,000 defendants are disposed of per year and it takes 167 days on the average for a defendant to be disposed of, then the rate of defendant turnover is 2.19 (365/167) and the expected average balance of defendants pending disposition as of any point in time is 4,575 (10,000 x 1/2.19).

Using this same concept, the portion of the pending backlog attributable to any group of defendants disposed within a given elapsed time interval i (e.g., 0-90 days, 91-180 days, 181-270 days, 270+ days) can be estimated as follows:

$$P_i = D_i \times (365/\text{Mean ET}_i)^{-1} \quad (2.2)$$

Where:

P<sub>i</sub> = the expected average pending balance for year attributable to the ith elapsed time interval

D<sub>i</sub> = the number of defendants disposed in the year for the ith elapsed time interval

Mean ET<sub>i</sub> = the mean elapsed time (in days) from filing to disposition for defendants disposed in the ith time interval, D<sub>i</sub>

365/Mean ET<sub>i</sub> = the rate of defendant turnover for the year in the ith elapsed time interval

This can be illustrated with the following sample data:

\* Alternatively, one might substitute for disposed defendants the number of defendant filings for the year or some combination of filings and dispositions (e.g., an average of the two).

Elapsed Time Interval i (in days)	$D_i$	X	$(365 / \text{Mean ET})^{-1}$	=	$P_i$
0-90	2773 (27.7)	X	$(365 / 64)^{-1}$	=	486 (10.6)
91-180	4296 (43.0)	X	$(365 / 132)^{-1}$	=	1554 (34.0)
181-270	1841 (18.4)	X	$(365 / 216)^{-1}$	=	1089 (23.8)
271-360	573 (5.7)	X	$(365 / 312)^{-1}$	=	490 (10.7)
361+	517 (5.2)	X	$(365 / 675)^{-1}$	=	956 (20.9)
TOTAL	10000	X	$(365 / 167)^{-1}$	=	4575

( ) = % of Column Total

It is interesting to note, for example, that while only 5.2% or 517 of the 10000 defendants took over 365 days to be disposed of, these defendants are expected to contribute to 20.9% or 956 of the 4575 defendants expected to be pending disposition. This is because these 517 defendants take on the average 675 days to be processed from filing to disposition as compared to an average of 139 days for filing to disposition for the remaining 9483 (10000-517) defendants disposed.\*

Another way of using this information would be to ask what the reduction in the overall mean elapsed time would have to be to reduce the court's expected pending balance by some desired percentage. The way to represent equation 2.1 to derive this estimate is:

$$P(1-\%R) = D \times (365/\text{New Mean ET})^{-1} \quad (2.3)$$

where:

%R = the decimal equivalent of the desired percentage reduction in the size of the pending balance

Assuming a desire to reduce the pending balance by 25% and using the same sample data, the new mean elapsed time would be:

$$4575(1-.25) = 10000 \times (365/\text{New Mean ET})^{-1}$$

125 = New Mean ET (in days)

\*The defendant cases may well have been delayed in processing by some competing risk (e.g., bench warrant) which seriously delayed the more timely disposition of these cases.

#### Defendant Processing Inventory

Having looked at ways to represent elapsed time information on defendants that have exited a processing stage (e.g., defendants receiving final court disposition), it is appropriate to look at the overall dynamics of defendant processing. The components of processing flow and stock through the adjudicatory decision making points can be represented in terms of the following fundamental equation:

$$P_t = P_0 + F - D + I - O + e \quad (2.4)$$

where  $P_t$  is the population of defendants pending processing (i.e., active in process or awaiting processing) at the end of a period,  $P_0$  is the population of defendants pending processing at the beginning of the period,  $F$  is new filings or arrivals,  $D$  is dispositions or terminations,  $I$  is inactive defendants being reactivated,  $O$  is active defendants who become inactive, and  $e$  is an error factor (i.e., "error of closure"). This equation represents the inventory relationship of processing through an adjudicatory decision making process.

$P_t$  and  $P_0$  are the processing stocks at two different points in time (where  $t > 0$ ). The  $F$  (filings) and  $D$  (dispositions) represent processing flows i.e., new arrivals and departures respectively. In the earlier discussion on elapsed time measures, disposed defendants ( $D$ ) were analyzed in terms of the length of time from entry at a decision making point (e.g., filing) and departure from the same or subsequent decision making point (e.g., disposition). The  $I$  ("in" or inactive defendants that are reactivated) and  $O$  ("out" or active defendants who become inactive) represent changes in the pending balance  $P$  due to what is often statistically called "competing risk". In a judicial processing setting competing risks would include, for example, defendants who fail to appear and for whom bench warrants have been issued. The  $e$  or error factor represents measurement error resulting from the accuracy with which the other terms in the equation are recorded ( $e=zero$  where  $P_t - P_0 = F - D + I - O$ ). It should also be noted that  $P_t$  and  $P_0$  may also reflect defendant cases which are "lost to followup" (i.e., defendants whose cases have in-

actually been filed, disposed, inactivated, or reactivated, but this information has not been reported and/or recorded and is therefore not properly reflected in the values for  $P_t$  and  $P_0$ .

Where the data base which supports the statistical description of defendant processing is maintained on an inventory basis, then not only can disposed defendants be statistically analyzed, but also the pending defendant cases. At a minimum, such a data base requires the timely reporting of new entries into the system (e.g., new filings into the Circuit Court) and the subsequent timely reporting at the conclusion of the one or more processing events (e.g., hearings, trial and disposition) of the event which leads to termination (e.g., final disposition at the Circuit Court level). In addition, if the information system also provides for the reporting and entry of information on when an actively pending defendant case is inactivated (0 or "out") or conversely an inactive case is reactivated (I or "in") then information on case processing can be described in terms of the inventory formula previously described. Such a data base supports the generation of elapsed time statistics on the disposed cases as well as statistics on the age of the pending cases. Pending defendant caseload statistics would include the number, percent of total, cumulative percent of total, and mean elapsed time for cases 0-30 days old, 31-60 days old, 61-90 days old,...361+ days old.

The statistics on the age of the pending defendant caseload can be compared to the statistics on the expected age of the pending caseload (equation 2.2). This is particularly useful given a data base that only includes information on when a defendant case is opened (e.g., at court filing) and when the case is closed (e.g., at court disposition). In such a simplified reporting system the pending caseload (i.e., open records for which there has been a filing but no disposition reported) may well include in addition to those cases that are truly open and awaiting disposition (1) those cases which cannot be disposed due to a competing risk (e.g., where the defendant fails to appear and a bench warrant is issued) and (2) those cases which are lost to followup (i.e. have in actuality been terminated but the termination is not reported or properly recorded on the data base).

Given such a data base, the open balance at time  $t$  can be represented as follows:

$$B_t = P_t + CR_t + LTF_t \quad (2.5)$$

where  $B$  is the open balance,  $P$  is the actual active pending balance,  $CR$  is that portion of the open balance that is inactive due to competing risk and  $LT$  is that portion of the pending balance which is actually terminated but is not recorded that way because of loss to followup. The age of the open balance,  $B_t$ , of defendant cases can be determined based on the date of opening (or filing) and the end date of the month for which the open balance of cases are examined. For example, at the conclusion of each month the balance of open defendant cases is determined for each of the elapsed time intervals  $i$  where  $i$  is in 30 day intervals e.g., 0-30 days old, 31-60 days old, 61-90 days,...360+ days old. Over the course of the year the average number of defendant cases open for a given age interval  $i$  is:

$$\text{Mean } B_i = \frac{1}{12} \sum_{t=1}^{12} B_{ti} \text{ where } i = \begin{array}{l} \text{number of cases 0-30 days old,} \\ \text{31-60 days old, etc.} \end{array}$$

$$\text{Mean } B = \sum_{i=1}^n \text{Mean } B_i \text{ where } n = \text{number of age intervals}$$

Alternatively, the expected number of actual active defendant cases pending for a given age interval  $i$  can be approximated using equation 2.2:

$$\text{Expected } P_i = D_i \times (\text{Mean ET}_i / 365) \text{ where } i = \begin{array}{l} \text{number of cases} \\ \text{0-30 days old,} \\ \text{31-60 days old, etc.} \end{array}$$

$$\text{and Expected } P = \sum_{i=1}^n P_i \text{ where } n = \text{number of age intervals.}$$

Using equation 2.5:

$$B_t = P_t + CR_t + LTF_t$$

and substituting Mean  $B$  for  $B_t$  and Expected  $P$  for  $P_t$ , then the mean number of cases in the open balance that may be attributable to  $CR$  (competing risk) and  $LT$  (loss to followup) can be estimated as

follows:

$$\text{Mean B} = \text{Expected P} + \text{Mean CR} + \text{Mean LTF}$$

or

$$\text{Mean B} - \text{Expected P} = \text{Mean (CR + LTF)}$$

B. Illustration of the Use and Display of Statistics on the Elapsed Time Between Events in Processing

Elapsed Time Statistics in Managing Court Delay

One of the principal ways in which statistics on processing time between criminal justice decision making points from arrest through disposition and sentencing can be used is in managing court delay. The work done by Ernest Friesen (and the Whittier Justice Institute) on developing a prescription to control delay in justice processing identifies the following steps in a management program for the design and implementation of court delay reduction:<sup>2.1</sup>

- I. Identify and describe the content and sequence of necessary court events.
  1. Identify the due process events.
  2. Identify the control events (decision and monitoring points).
  3. Identify the preparations and the times necessary for the preparations to make the event successful.
- II. Measure the normal time interval between events.
- III. Determine the age of the inventory of cases in appropriate time spans.
- IV. Identify the relationships of the actors with respect to the significant events and their preparations.
- V. Convene the principal actors and present the above perspective on the system.
- VI. Organize task groups to work on identifiable problems.
- VII. Provide staff assistance to the task groups.
- VIII. Develop and present to the principal actors standards and goals which can be reached within available or obtainable resources.
- IX. Reinforce with information the accomplishment of the goals."

This management program for reducing court delay represents, in large part, a specific application of the more general requirements for problem identification, choosing among alternative courses of action, and implementing and monitoring the selected action(s) that is described in the introductory chapter of this report. Of the nine prescriptive tasks, the first four involve describing the exist-

<sup>2.1</sup>Whittier College School of Law, Ross McCollum Law Center Justice Institute, Justice in Felony Courts a Prescription to Control Delay, 1979, p.11.

ting system and steps two and three involve the specific collection and representation of data related to the elapsed time between events in processing.

The Whittier College report specifically states "...that the presence of reliable, understandable information is the beginning point of delay reduction... The enforcement of standards and the analysis of problems are dependent on adequate information systems..."<sup>2.2</sup>

As stated in the report, the following kinds of statistical information are needed for understanding, managing, and controlling court delay:<sup>2.3</sup>

1. Information about the Inventory
  - a. Total cases charged in intake court
  - b. Total felony cases disposed in intake court by (1) no probable cause found; (2) guilty plea to a lesser cause; (3) dismissals or not proceeded against
  - c. Total cases advanced to felony court
  - d. Total cases filed in felony court
  - e. Total cases disposed in felony court
  - f. Age of pending cases in 30 day intervals
  - g. Breakdown of cases by significant characteristics pending more than 60 days
  - h. Separate listing of fugitives in the inventory
2. Information about the Process (Weekly, Monthly, Quarterly)
  - a. Cases disposed by jury verdict
  - b. Cases disposed by dismissal
  - c. Cases disposed by plea of guilty
  - d. Cases disposed by judge trial to a judgment
  - e. Cases plead after trial commenced
  - f. Cases continued at trial date
  - g. Reasons cases continued at trial date
  - h. Cases continued for conference
  - i. Reasons cases continued for conference
3. Age of Cases from Arrest
  - a. Median time to jury trial
  - b. Median time by judge trial
  - c. Median time to information/indictment
  - d. Median time to arraignment
  - e. Median time to conference
4. Percentage of Dispositions
  - a. By jury verdict
  - b. By judge trial
  - c. By plea of guilty
  - d. By dismissal"

<sup>2.2</sup> Ibid, p. 25-27

<sup>2.3</sup> Ibid, p. 25

The information listed above, with few exceptions, is included within the processing and elapsed time information frameworks that have been described in Section A of Chapters 1 and 2 respectively.

While managing court delay requires more than a good information base for analyzing the problem and monitoring progress in addressing the problem, such information is a necessary ingredient to an overall prescriptive program to addressing court delay. Interestingly enough, the Whittier College report states that their experience has been that the basic information to control case flow is not typically generated by available automated court systems. This may be due to a failure to collect the required information or alternatively to a failure to analyze and display collected information in the required format for addressing delay or some combination of the two. The report states, however, that "...an integrated information system at both the state and trial court level is needed..." to aid in court delay reduction and recommends that "...the data gathering effort for the state level court system (would) originate as a spinoff from the trial court information system."<sup>2.4</sup>

#### Illustration of the Use of Elapsed Time Statistics in Court Delay Reduction

In order to show how elapsed time statistics may be used to assist in a court delay reduction program some illustrative data is provided from a report prepared by the Statistical Analysis Section of the Maryland Governor's Commission on Law Enforcement and the Administration of Justice.<sup>2.5</sup> The report was prepared as part of an initial effort to identify the magnitude of change which would have to occur in the Baltimore City felony court (the Supreme Bench) to bring about a reduction in the elapsed time from filing to disposition.

Data was obtained from available automated statistical reports (see Section E of this Chapter for examples of these reports) on (1) the number of filings, terminations, and pending balance of active defendant cases by month and (2) the distribution by elapsed time intervals of the number of defendant cases terminated over the year. Table II.1 is a listing by month of the filings, termination,

<sup>2.4</sup> Ibid, p. 82-84

<sup>2.5</sup> Statistical Analysis Section, Maryland Governor's Commission on Law Enforcement and the Administration of Justice, "The Court Delay Simulation Model (Code-SIM) and its Application to the Baltimore City Supreme Bench Court Delay Reduction Project", December, 1979.

TABLE III.1: Number of Defendant Filings, Terminations, and Active Pending Balance  
 for the Supreme Bench of Baltimore City - July, 1977 - October, 1979  
 (includes only Defendants Charged Via Indictment or Criminal Information)

MONTH OF YEAR	FY 1978			FY 1979			FY 1980		
	FILINGS*	TERMINATIONS*	PENDING BALANCE END OF MONTH	FILINGS*	TERMINATIONS*	PENDING BALANCE END OF MONTH	FILINGS*	TERMINATIONS*	PENDING BALANCE END OF MONTH
July	197 (7.06)	222 (7.39)	1402	233 (6.71)	252 (8.32)	1263	290	291	2006
August	209 (7.49)	170 (5.66)	1453	285 (8.21)	220 (7.26)	1624	270	288	1980
September	227 (8.13)	237 (7.89)	1517	234 (6.74)	255 (8.42)	1496	201	378	1791
October	266 (9.53)	220 (7.32)	1580	252 (7.26)	267 (8.81)	1608	284	368	1687
November	254 (9.10)	254 (8.46)	1632	259 (7.46)	284 (9.38)	1625			
December	207 (7.41)	226 (7.52)	1420	283 (8.15)	248 (8.19)	1645			
January	195 (6.98)	214 (7.12)	1446	336 (9.68)	250 (8.25)	1740			
February	204 (7.31)	185 (6.16)	1559	269 (7.75)	184 (6.07)	1827			
March	282 (10.10)	275 (9.15)	1447	424 (12.22)	243 (9.67)	1946			
April	260 (9.31)	290 (9.65)	1435	352 (10.14)	223 (7.36)	2075			
May	235 (8.42)	353 (11.75)	1243	274 (7.89)	293 (9.67)	2047			
June	256 (9.17)	358 (11.92)	1160	270 (7.78)	260 (8.58)	2030			
Total	2792	3004	N/A	3471	3029	N/A			N/A

SOURCE: Supreme Bench of Baltimore City - Monthly Caseload Inventory Report.

NOTE: ( ) = % of Column Totals

\*Does not include miscellaneous filings and terminations due for example to bench warrants. These miscellaneous filings and terminations, however, may affect the pending balance slightly.

and pending balance information. Figure II.2. displays the data on the percent of cases disposed by elapsed time interval. As shown in Figure II.2. approximately 6.4% of the defendant cases took longer than 360 days to be disposed. The actual breakdown for FY 1979 can be shown as follows:

<u>Category</u>	<u># of Defendants</u>	<u>% of Total</u>	<u>Filing to Disposition</u>
Defendant Cases Disposed in Over 360 Days or less	2836	93.6%	174.5 Days
Defendant Cases Disposed in Over 360 Days from Filing	193	6.4%	691.9 Days
Total Defendant Cases Disposed	3029	100%	201.4 Days

For purposes of this illustration it is assumed that the defendant cases which exceed 360 days from filing to termination cannot be disposed of in a timely manner and that any program to control delay would have little affect on these cases. Given this assumption, the expected balance of pending cases generated by the terminations can be calculated using equation 2.2 (Section A):

<u>Elapsed Time Interval i</u>	<u>D<sub>i</sub></u>	<u>X</u>	<u>(365 Days/Mean ET<sub>i</sub>)<sup>-1</sup></u>	<u>=</u>	<u>P<sub>i</sub></u>
Defendant Cases Disposed in 360 Days	2836	X	(365/ 174.5)	=	1356
Defendant Cases Disposed in Over 360 Days	193	X	(365/ 691.9)	=	365
Total Defendant Cases Disposed	3029	X	(365/ 207.4)	=	1721

It should be noted that the expected pending balance of 1721 compares favorably to the mean of the actual pending balances for FY 1979, 1744 cases (calculated by summing the Table II.1 pending balances for FY 1979 and dividing by 12). Since for purposes of this illustration the cases over 360 days old are ignored, the balance of pending cases which are anticipated to be affected by a court delay reduction program is the 1356 cases (1721-365).

The successful implementation of a court delay reduction program would result in the more timely disposition of cases. Figure II.3. shows the actual distribution by elapsed time intervals of defendant cases (excluding cases over 360 days old) as well as three hypotheti-

FIGURE II.2a - Frequency Distribution of % of Cases Disposed in Intervals from Filing to Disposition (Indictments and Criminal Information only) - Supreme Bench of Baltimore - FY 1979

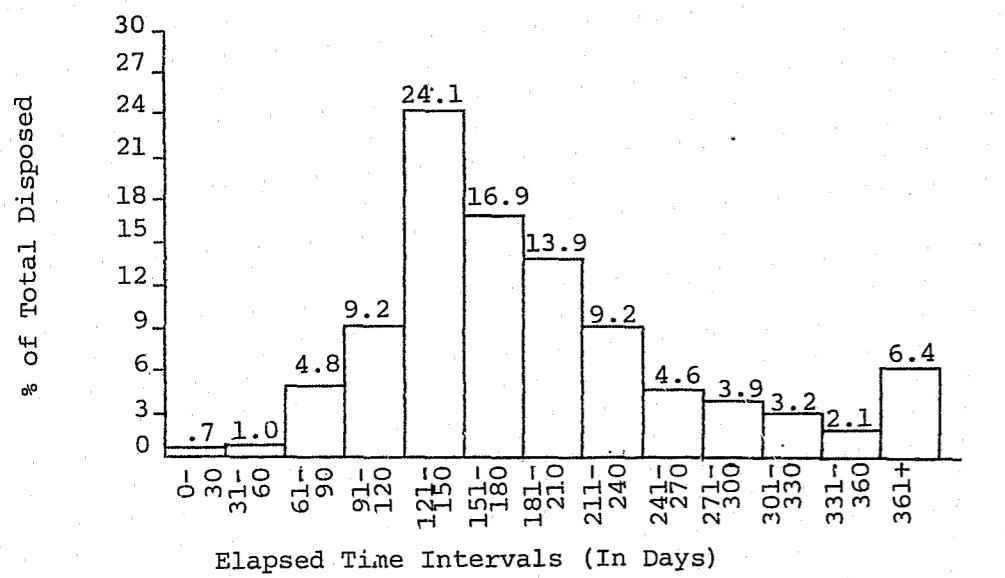
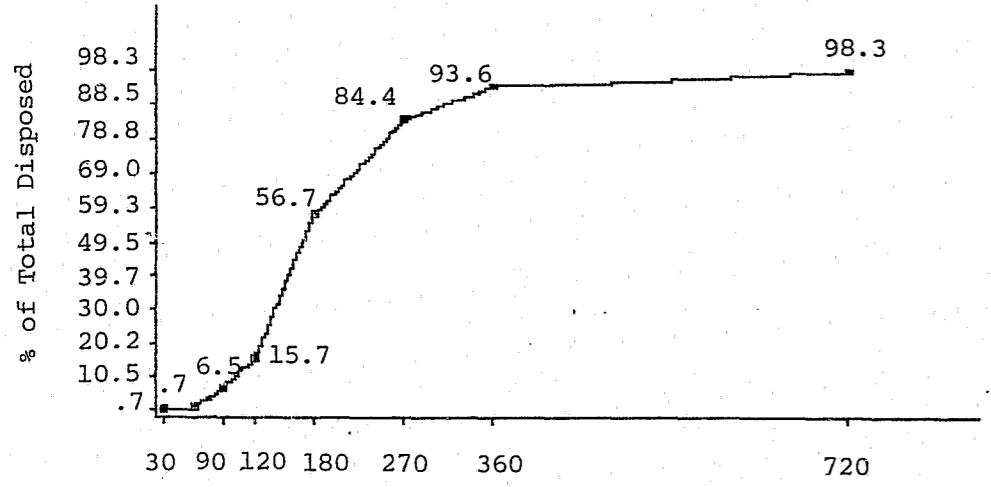
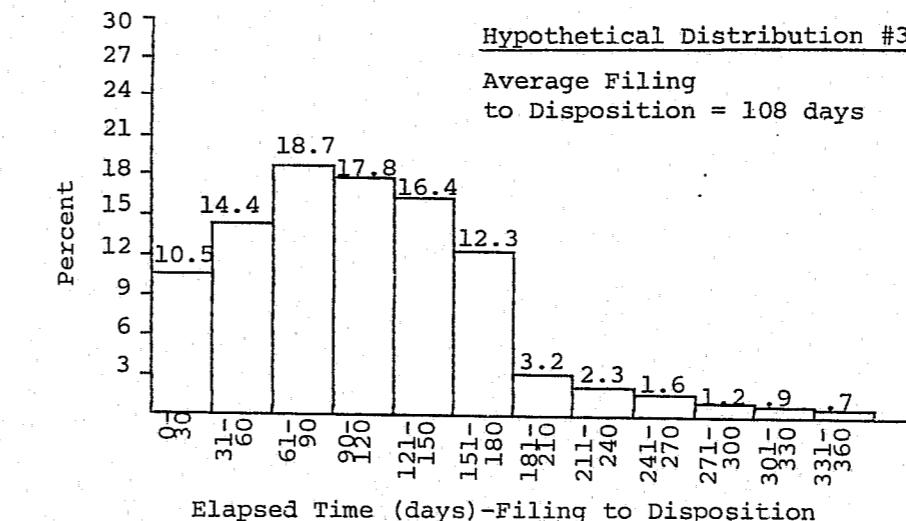
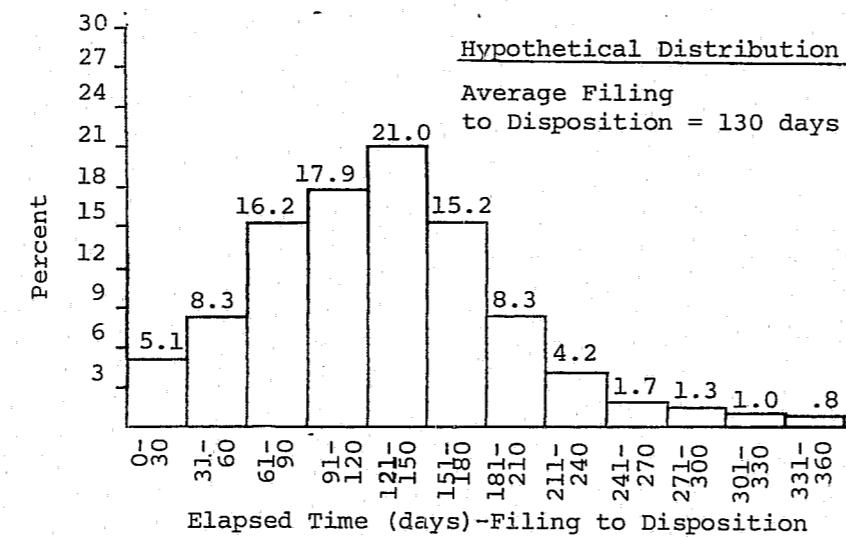
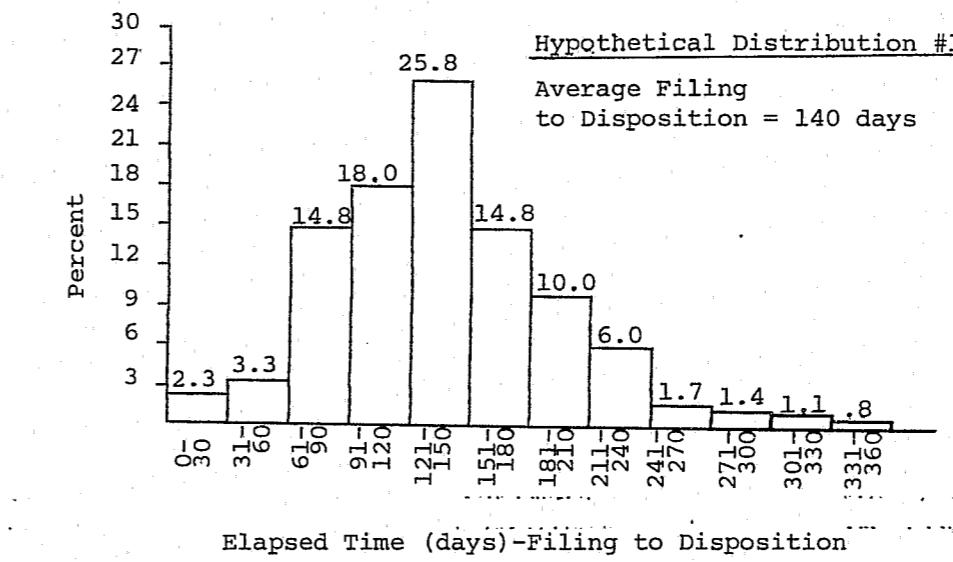
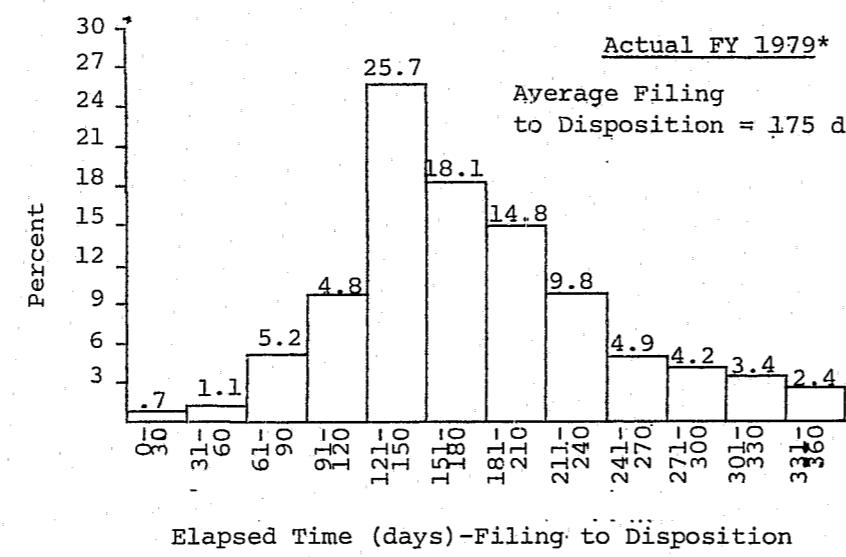


FIGURE II.2b - Cumulative Distribution Showing the % of Cases Disposed Within so Many Days from the Date of Filing (Indictments and Criminal Information only) - Supreme Bench of Baltimore - FY 1979



SOURCE: Administrative Office of the Courts - Elapsed Time Report by Type of Case

FIGURE II.3. - Actual FY 1979 and Three Hypothetical Elapsed Time Distributions  
for the Supreme Bench of Baltimore City (Indictments and Criminal  
Information only)



\*Based on FY 1979 data; 6.4% of cases terminated exceeded 360 days from the date of filing (these cases are not shown)

cal distributions each of which represent successive increases in the timeliness with which the cases might be disposed. Assuming the successful implementation of procedures to reduce delay, the resulting impact on the pending balance of cases is illustrated in Figure II.4. Shown in Figure II.4. is what would happen to the pending balance if court delay remained the same as well as what would happen with implementation of each of the three successively more timely distributions of dispositions as shown in Figure II.3. The result of the successful implementation of reduced court delay is the lowering of the pending balance to a new stable level (assuming the number of filings and dispositions remain at or near the current levels). Finally, Figure II.5. shows monthly plots of the number of defendant cases required to be terminated over the time period shown in Figure II.4. As can be seen in Figure II.5., during the period of transition from the current delay in processing to each of the three successively reduced delays in processing, the number of terminations would increase. This is because it is during this time period that the pending balance is being reduced (Figure II.4.). Thus, terminations are the sum of "normal" cases being terminated plus that portion of the pending balance of cases which is being reduced to the new level\* shown in Figure II.4.

This illustration of the use of elapsed time statistics demonstrates how this information can be of use (1) in identifying in the pre-program implementation phase the magnitude of change required to reduce court delay and (2) in monitoring during the program implementation phase whether or not the desired timeliness of processing is in fact achieved. In addition, more detailed statistical information of the type listed in the Whittier College report may be of assistance in identifying where processing delay is occurring and whether or not this delay is more or less severe for certain subgroups of the defendant population. Thus, the use of elapsed time statistics is a necessary, if not sufficient, component of an overall program to implement court delay reduction.

\* For a more detailed explanation of how Figures II.4. and II.5. were generated see the report referenced in footnote 2.4.

Figure II.4: Plot of the Monthly Pending Balance of Defendants Awaiting Disposition for the Base Case and the Test Cases - January, 1979-June, 1981

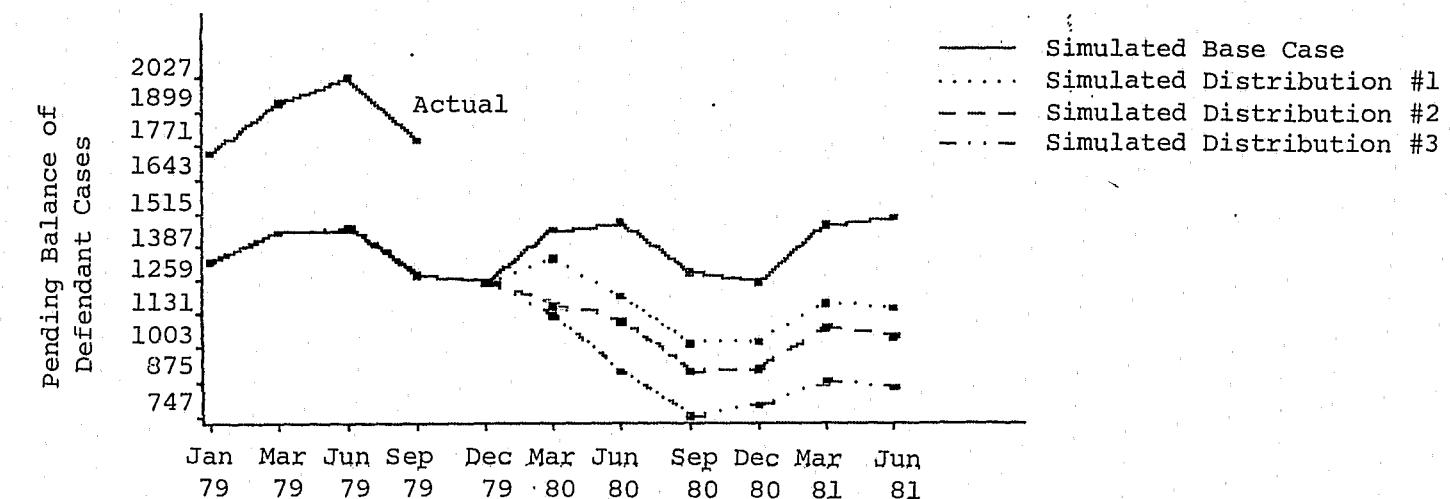
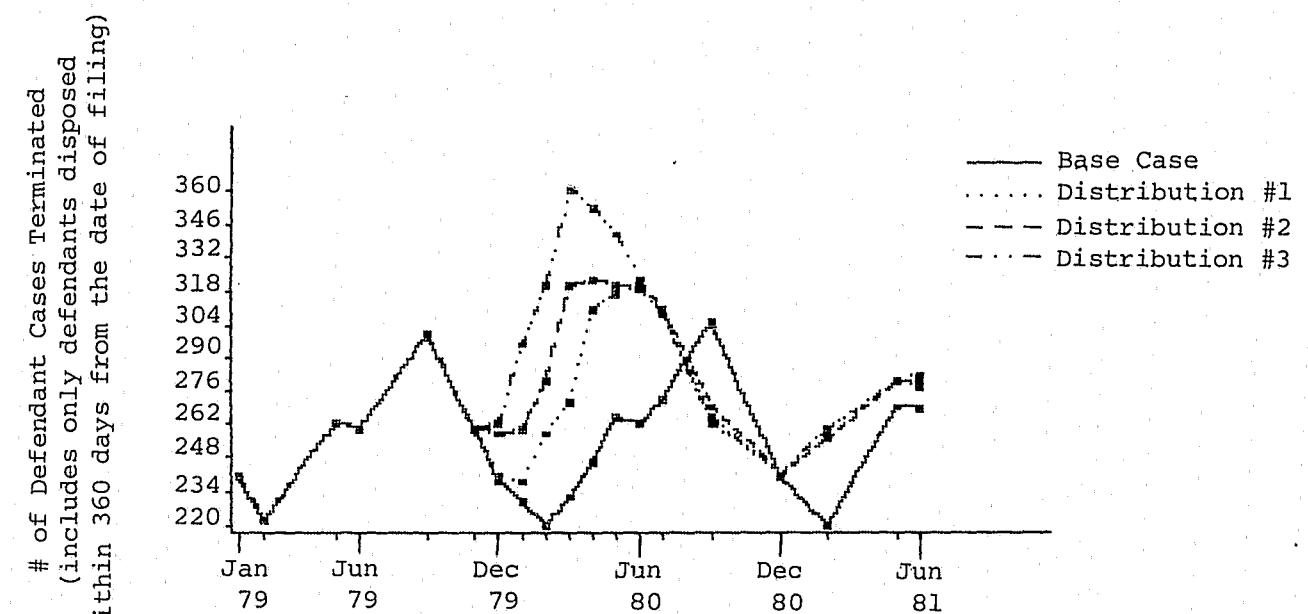


Figure II.5: Monthly Plot of the Expected Number of Defendant Case Terminations for the Base Case and the Test Cases - January, 1979-June, 1981



C. Data Collection, Extraction, and Aggregation Issues for Elapsed Time Statistics

Data bases in support of statistical descriptions of the elapsed time between events in process are typically derived as a by-product of automated information systems or are constructed from various agency manual files. In developing a statistical data base to support elapsed time analysis, there are certain questions with respect to data extraction and/or collection that are likely to be encountered.

Before looking at these questions, it should be recognized that elapsed time information is integrally related to process information of the type described in Chapter I. To calculate elapsed time between events you need to know what the various processing events are and their corresponding dates. Where events and the disposition outcomes of these events are recorded or maintained, the date of the event is also typically recorded or maintained. Therefore, any data base which is designed to provide statistics on process should also be able to provide statistics on the elapsed time between the events in processing. Elapsed time statistics are thus generated from the same data bases that support processing statistics. The only difference is in the specification of the output reports.

Since offender processing and elapsed time statistics go hand-in-hand, the same basic issues or questions need to be addressed before data collection, extraction, and aggregation takes place. Among these questions are:

1. Should elapsed time statistics be generated as a function of the type of offense? If so, what types of offense codes or groupings should be used? At what stage in processing -- offense at arrest, offense at disposition?
2. What should be the accounting unit for displaying the elapsed time statistics -- charge, case, offender?
3. What other characteristics of processing are meaningful or useful in describing elapsed time statistics?
  - a. The type of charging document (e.g., indictment, criminal information, appeal)

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- b. The dispositional outcome (e.g., nolle prossed, dismissed, acquitted, convicted)
  - c. The bail status at disposition (e.g., own recognizance, moneyed bail, detained)
  - d. The type of trial (e.g., bench, jury, guilty plea)
  - e. The level of court at which disposition occurs (e.g., lower court, upper court)
4. What kinds of "jurisdictional" breakdowns are desired (e.g., county, judicial districts, or circuits)?
5. For what population and period of time are the elapsed time statistics to be generated (e.g., all the population of disposed cases for the year, the population of active cases)?

Two additional questions which need to be addressed when dealing with elapsed time statistics are:

1. What are the elapsed time intervals to be analyzed for both concurrent stages in processing (e.g., trial to disposition, disposition to sentence) and for cumulative stages in processing (e.g., arrest to disposition, filing to disposition)?
2. What types of elapsed time statistics are to be generated -- mean/median elapsed time, number/% falling into various elapsed time intervals?

The answers given to the above questions (and the resulting translation of these answers to algorithms which can be used in extracting or constructing a data base and generating output reports on elapsed time statistics) are critical in determining what it is that will be generated and aggregated for display. In general, where the same data base is used to generate both process and elapsed time statistics, the same conventions should be used in answering questions about offense classification, accounting unit, record characteristics, and jurisdictional disaggregations. In this way the set of statistical descriptions about process and elapsed time complement one another.

#### D. Alternative Sources of Data in Support of Elapsed Time Statistics

Section D of Chapter I provided a list of information systems and sources that can support the generation of statistics describing the manner and volume of offender processing. These same data bases are listed below with an asterik (\*) next to those data bases that are most likely to include all or some of the event and corresponding date fields necessary to support the generation of elapsed time statistics for arrest through filing, court disposition and sentencing:

1. Examples of State Level Automated Information Systems
  - a. Uniform Crime Reports - Arrests
  - b. Automated Name Identification Index
  - \*c. Computerized Criminal History System/Offender Based Transaction Statistics
  - \*d. Prosecutor Management Information System (possibly a PROMIS)
  - \*e. State Judicial Information System (or equivalent)
    - (1) Lower Court
    - (2) Upper Court
    - (3) Combined/Unified Court
  - \*f. Public Defenders Information System
  - g. Offender Based State Corrections Information System (or equivalent)
    - (1) State Custody
    - (2) State Supervision
2. Examples of Agency (Local) Management Information Systems
  - a. Law Enforcement Arrest and Booking
  - \*b. Pre-Trial Release MIS
  - \*c. Prosecutor MIS (PROMIS or equivalent)
  - \*d. Court Scheduling and Case Tracking MIS
  - \*e. Jail Inmate Accounting MIS
  - f. Local Supervision MIS
  - \*g. Public Defender MIS
  - \*h. Common/Integrated MIS serving several agencies and maintaining person in-process information from arrest through court disposition and sentencing

3. Examples of Manually Generated Data Bases

\*a. Extracting processing information on a sample or universe of offenders using one or more agency files

\*b. Use of various agency published or internal reports and working papers to put together an aggregate description of offender processing for some activity (e.g., number of offenders by type of crime receiving pre-sentence investigations)

Depending on the information system, only a portion of the full set of events from arrest through court disposition and sentencing may be maintained on the data base. For example, an upper court judicial information system would typically not include information on the date of arrest or the dates associated with lower court processing. Instead, such a data base may include only the dates of filing, arraignment, hearings (e.g., all or only some such as first and last), trial commencement, disposition, and sentencing. Alternatively, a state CCH and/or OBTS data base might not contain information on intermediate processing dates (e.g., arraignment, hearings) even though those date fields available would span the time from arrest through court disposition and sentencing.

The date fields available as well as the other defendant or case information maintained on each record in a given data base act as constraints or limits on the types of output reports that can be generated and the elapsed time processing events (for either consecutive or cumulative events in processing) that can be analyzed. Depending on the nature of the question or issue that needs to be addressed, one or more of the available data bases may be more responsive to the output requirements necessary to address the question.

It is incumbent on the analyst to be aware of the potential of available data bases to generate elapsed time statistics. Certain data bases which appear rich in detail (e.g., a court scheduling information system) may, because of the complexity of the file and data base structure, require extensive data reformatting to create a statistical record from which elapsed time reports can be generated. Alternatively, there may be a data base which is not as rich in processing detail (e.g., statewide judicial information system or CCH system) but which can more easily lend itself to statistical analysis. The latter data base might be better suited to providing a more macro picture of processing delay. Such a macro description would be use-

ful in generating, for example, certain indicators that could be measured repeatedly over time (e.g., monthly, quarterly) and could be used to signal potential problem areas. Alternatively, the former data base might be useful where a problem appears to exist and a more detailed analysis is necessary to aid in pinpointing where the problem is occurring and determining what steps are needed to affect a change in processing delay.

As with offender processing statistics, the choice of which data base or bases to be used to generate elapsed time statistics depends on (1) the types of questions being asked or anticipated to be asked, (2) the data needed to address the question(s) in whole or in part, (3) the availability of one or more data bases to choose from, (4) the ability to get access to the data bases for statistical purposes, and (5) the degree of difficulty (including the cost) associated with creating and maintaining the record structure and output programs which support the elapsed time statistics.

E. Data Files and Output Reports in Support of Elapsed Time Statistics

The previous sections of this Chapter describe an overall framework for representing information on elapsed time between events in criminal justice processing (Section A), provide a description of how elapsed time statistics can be used and displayed (Section B), describe issues and concerns addressed in the collection, extraction, and aggregation of elapsed time statistics (Section C), and provide examples of available information systems in support of the generation of elapsed time statistics (Section D). In this section, the generation of statistics on elapsed time between events in processing is illustrated using an operational information system. For purposes of this illustration, a simplified version of the statewide Circuit Court data base described in Chapter I is used.

One of the reasons for selecting a statewide Circuit Court data base to illustrate the generation of elapsed time statistics is that such data bases currently exist in a number of states and with greater frequency than, for example, data bases in support of Offender Based Transaction Statistics (OBTS). In addition, such court data bases typically include caseload information in areas in addition to criminal e.g., law, equity, juvenile justice. Therefore, when output reports are created which describe the elapsed time between events in criminal justice processing, similar reports may be generated for the other types of cases -- law, equity, and juvenile. Comparisons between similar statistics by type of case are of potentially greater interest (particularly to the courts) than criminal elapsed time statistics alone. Finally, since the courts are the most likely user of elapsed time statistics (e.g., programs directed at reducing court delay), the generation of these statistics using a court developed and maintained data base may contribute to greater confidence and reliance on the statistics.

The Circuit Court data base to be used for the purpose of illustrating the generation of elapsed time statistics can be described as follows:

1. System Name  
Maryland Judicial Information System

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2. Maintainer of the System

Administrative Office of the Courts-State of Maryland

3. Implementation Date

January, 1976

4. System Coverage

All Circuit Courts of the State

5. System Purpose

Provide the Administrative Office of the Courts with management and statistical information on Circuit Court criminal, law, equity, and juvenile case filings, terminations, and the pending case-load.

6. Method of Reporting

A two-part form is completed for each case filing (criminal law, equity, and juvenile) in the Circuit Court. At the time of a filing, a "header" record is completed and sent to the Administrative Office of the Courts to report a case opening. When the case is disposed a "master" record is submitted which reports the filed disposition and the court events and corresponding dates from filing through disposition. Similar "header" and "master" records exist for each type of case filing -- criminal, law, equity, and juvenile. Exhibit II.1 and II.2 illustrate the input records created by the Administrative Office of the Courts upon receipt of the "header" and "master" reporting forms respectively.

7. Data Base Record

The Administrative Office of the Courts maintains an "open" file of all cases for which a filing has been reported and the disposition has not yet been reported. Upon the receipt of the final disposition on a given docket it is linked to the corresponding filing record and is transferred to the "closed" record file. Each criminal case record represents the charges against a unique defendant associated with a charging document (e.g., indictment, criminal information, appeal). More than one charging document may be filed against the same defendant for a given arrest and charging (i.e., accounting unit is the charging document, not the defendant). The resulting "open" and "closed" files form the statistical data base from which summary information on the number of filings, terminations, and the pending balance can be generated as well as the elapsed time statistics.

8. Elapsed Time Statistical Output Reports

Using the data base described above, three elapsed time reports have been developed for each of the four types of cases -- criminal, law, equity, and juvenile. The three types of reports are listed below with the exhibits which follow illustrating each type of report for criminal cases:

Report Type 1 - provides aggregate statistics for disposed cases on the elapsed time (in days) between case filing and final disposition with breakdowns by major elapsed time intervals (column headings) and the type of charging document (row headings). The report format is shown in Exhibit II.3.

Report Type 2 - provides aggregate statistics on the elapsed time between various events in court processing (e.g., filing, arraignment, trial, disposition). Reporting options include the ability to select for inclusion on the report only those cases with a specific type of charging document (e.g., indictment) and/or final disposition (e.g., guilty). The report format is shown in Exhibit II.4. A summary of the elapsed time statistics from the Exhibit II.4 report is shown in the Exhibit II.5. diagram.

Report Type 3 - provides aggregate statistics on the age (in days) of the open pending balance of cases with breakdowns by major elapsed time intervals (column headings) and the type of charging document (row headings). The report is shown in Exhibit II.6.

Each of the above reports can be generated for any selected time period and for a number of various groupings of the jurisdictions of the state (e.g., statewide only, each county, the counties grouped by the Circuit Court circuits).

A fourth report developed for criminal cases only, is shown in Exhibit II.7. This report summarizes for each of the verdict and trial types the number of cases disposed and the mean elapsed time from filing to disposition as a function of the type of charging document. As with the other reports, this report may be generated for any selected time period and various groupings of the jurisdictions of the state. The elapsed time statistics displayed in these output reports are consistent with the concepts described in Section A of this chapter and the use of elapsed time statistics illustrated in Section B of this chapter.

Had the Exhibit II.3.-II.7. output reports on elapsed time statistics been generated from a different data base e.g., computerized criminal history (CCH), the report formats would be altered somewhat. A state CCH would allow for certain changes to report types 1 and 2 based, for example, on the availability of information on offense and the date of arrest. Information on the type of offense (e.g., at arrest or at court disposition) would become a key offender characteristic used in the display of the elapsed time statistics (e.g., substitute in Report Type 1 the type of offense for the type of charging document). Using a CCH data base the processing events displayed in Report Type 2 would be changed to include the elapsed time from arrest to the various processing events including final disposition. Alternatively, Report Type 3 may be more difficult to generate using a CCH data base where the method and timeliness of reporting does not support the easy identification of the open defendant cases actually awaiting court disposition. Finally, it should be stated that the statistics as shown in Exhibit II.3. through Exhibit II.6. are based on a case (charging document) as opposed to an offender accounting unit of analysis. The use of a state CCH would enable the elapsed time statistics to be generated and displayed on an offender accounting basis.

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION							DPD-DIV-SYS-102 (8/71)	
DSNAME							AGENCY: Administrative Office of the Courts	PAGE: OF: 1 1
DATA SET DESCRIPTION:							SYSTEM ANALYST: F. Meushaw	DATE: 01/30/76
RECORD-ID:							PROGRAMMING MANAGER:	DATE:
RECORD DESCRIPTION: Criminal Header Record							DS ORGANIZATION: Sequential	
							RECORD SIZE: 180	KEY SIZE: KEY-ID:
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME	
1-2	1	2	N	UZ	MONTH OF REPORT	9(2)		
	3	2	1	N	Type of Case	9		
	4	3	1	N	Type of Record	9		
	5-8	4	4	N	Court Code	9(4)		
	9-16	5	8	AN	Docket Number	X(8)		
	17-22	6	6	N	Date Filed	9(6)		
	23	7	1	N	Charging Document	9		
					1 = Nonsupport			
					2 = Indictment			
					3 = Motor Appeals			
					4 = Other Appeals			
					5 = Post Con- viction			
					6 = Criminal Information			
					7 = Jury Trial Prayed Dis- trict Court			
24-180	6	157	AN		Filler	X(157)		

Exhibit II.2.

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION							
DPD-DIV-SYS-102 (8/71)							
AGENCY: Administrative Office of the Courts PAGE: OF: 1 2							
DSNAME		SYSTEM ANALYST: F. Meushaw DATE: 01/30/76					
DATA SET DESCRIPTION:		PROGRAMMING MANAGER: DATE:					
RECORD-ID:		DS ORGANIZATION: Sequential					
RECORD DESCRIPTION: Criminal Master Record		RECORD SIZE:	KEY SIZE:	KEY-ID:			
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME
1-2	1	2	N	UZ	MONTH OF REPORT	9(2)	
3	2	1	N	UZ	Type of case 1 = Criminal	9	
4	3	1	N	UZ	Type of record 2 = Master	9	
5-8	4	4	N	UZ	Court Code	9(4)	
9-16	5	8	AN		Docket Number	X(8)	
17-22	6	6	N	UZ	Date filed	9(6)	
23	7	1	N	UZ	Charging document	9	
					1 = Nonsupport		
					2 = Indictment		
					3 = Motor Appeals		
					4 = Other Appeals		
					5 = Post Conviction		
					6 = Criminal Information		
					7 = Jury Trial Prayed District Court		
24	8	1	N	UZ	Pleas	9	
					1 = Guilty		
					2 = Not Guilty		

Exhibit II.2. (continued)

STATE OF MARYLAND COMPTROLLER OF THE TREASURY RECORD DESCRIPTION							
DPD-DIV-SYS-102 (8/71)							
AGENCY: Administrative Office of the Courts PAGE: OF: 2 2							
DSNAME							
SYSTEM ANALYST: F. Meushaw DATE: 01/30/76							
DATA SET DESCRIPTION:							
PROGRAMMING MANAGER: DATE:							
RECORD-ID:							
DS ORGANIZATION: Sequential							
RECORD DESCRIPTION: Criminal Master Record							
POSITIONS	FIELD NO.	SIZE	CHAR. TYPE	CHAR. FORMAT	FIELD DESCRIPTION	EDIT PICTURE	DATA-NAME
25	9	1	N	UZ	Disposition 1=Stet 2=Nolle Prossse 3=Not Guilty 4=Guilty 5=Probation 6=Dismissed	9	
26-153	10	128			Event Chronology Occurs 8 times Each event is 16 bytes as follows:		
					Event X(4) Date 9(6) Time 9(3) Judge 9(3)		
154-180	11	27	AN		Filler	X(27)	

PROGRAM A70270  
DATE-PREPARED 07/13/79

ADMINISTRATIVE OFFICE OF THE COURTS

\*\*\* AUDIT DATA INCLUDED \*\*\*

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CHARGING DOCUMENT

JURISDICTIONAL GROUPING 1

JURISDICTION ANNE ARUNDEL

TERMINATIONS DURING 07/76 - 06/79

ELAPSED TIME DAYS

	0- 30	31- 60	61- 90	91- 120	121- 180	181- 270	271- 360	361- 720	721- 1080	1081+ 1080	TOTAL
<b>INDICTMENT</b>											
NUMBER	6	114	183	261	274	128	56	71	7	0	1100
PER ROW ( )	0.5	10.4	16.6	23.7	26.9	11.6	5.1	6.5	0.6	0.0	100.0
CUM ROW ( )	0.5	10.9	27.5	51.3	76.2	87.8	92.9	99.4	100.0	100.0	0.0
Avg Day	15	52	76	105	144	215	312	490	918	0	157
PER COLUMN	2.8	40.4	53.5	64.4	60.1	57.1	56.0	48.6	35.0	0.0	50.3
<b>CRIMINAL INFORMATION</b>											
NUMBER	10	10	10	25	17	10	4	20	0	0	106
PER ROW ( )	9.4	9.4	9.4	23.6	16.0	9.4	3.8	18.9	0.0	0.0	100.0
CUM ROW ( )	9.4	18.9	28.3	51.9	67.5	77.4	81.1	100.0	100.0	100.0	0.0
Avg Day	10	54	77	111	147	207	303	520	0	0	192
PER COLUMN	4.7	3.5	2.9	6.2	3.7	4.5	4.0	13.7	0.0	0.0	4.8
<b>JURY TRIAL PAV</b>											
NUMBER	4	19	40	45	78	32	19	28	6	0	271
PER ROW ( )	1.5	7.0	14.8	16.6	28.8	11.8	7.0	10.3	2.2	0.0	100.0
CUM ROW ( )	1.5	8.5	23.2	39.9	68.6	80.4	87.5	97.8	100.0	100.0	0.0
Avg Day	18	49	31	104	147	218	318	681	614	0	191
PER COLUMN	1.9	6.7	11.7	11.1	17.1	14.3	19.0	19.2	30.0	0.0	12.4
<b>APPEALS-OT</b>											
NUMBER	10	17	29	23	32	21	3	5	1	0	141
PER ROW ( )	7.1	12.1	20.6	16.3	22.7	14.9	2.1	3.5	0.7	0.0	100.0
CUM ROW ( )	7.1	19.1	39.7	56.0	78.7	93.6	95.7	99.3	100.0	100.0	0.0
Avg Day	22	48	76	100	149	214	296	523	734	0	135
PER COLUMN	4.7	6.0	8.5	5.7	7.0	9.4	3.0	3.4	5.0	0.0	6.4
<b>APPEALS-HO</b>											
NUMBER	1	17	47	35	23	2	5	4	0	0	134
PER ROW ( )	0.7	12.7	35.1	26.1	17.2	1.5	3.7	3.0	0.0	0.0	100.0
CUM ROW ( )	0.7	13.4	48.5	74.6	91.8	93.3	97.0	100.0	100.0	100.0	0.0
Avg Day	14	48	73	102	142	243	299	493	0	0	112
PER COLUMN	0.5	6.0	13.7	8.6	5.0	0.9	5.0	2.7	0.0	0.0	6.1

Exhibit II.3.  
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**CONTINUED**

**2 OF 5**

PROGRAM A70273  
DATE-PREPARED 07/13/79

ADMINISTRATIVE OFFICE OF THE COURTS

PAGE 2

\*\*\* AUDIT DATA INCLUDED \*\*\*

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CHARGING DOCUMENT

JURISDICTIONAL GROUPING I

JURISDICTION ALLEGANY

TERMINATIONS DURING 07/78 - 06/79

		VERDICT (HJISI)						TRIAL				
		NOT GUILTY	NOT GUILTY	PROB	DISM	STET	NOLLE PROSSE	TOTAL	BENCH TRIAL	BENCH GUILTY	JURY TRIAL	JURY GUILTY
NCNSUPPORT												
NUMBER		2	0	0	0	1	1	4	4	2	0	0
PER ROW ( )	50.0	0.0	0.0	0.0	25.0	25.0	100.0	100.0	50.0	0.0	0.0	0.0
Avg Day		56	0	0	0	4	554	168	168	56	0	0
PER COLUMN		1.3	0.0	0.0	0.0	12.5	3.8	1.6	2.3	2.4	0.0	0.0
POST CONVICTION												
NUMBER		1	0	0	0	0	1	2	1	0	0	0
PER ROW ( )	50.0	0.0	0.0	0.0	0.0	50.0	100.0	50.0	50.0	0.0	0.0	0.0
Avg Day		18	0	0	0	0	958	487	0	0	0	0
PER COLUMN		0.7	0.0	0.0	0.0	0.0	3.8	0.8	0.6	0.0	0.0	0.0
TOTAL LESS APPEALS												
NUMBER		108	52	1	5	6	20	192	125	47	50	7
PER ROW ( )	56.3	27.1	0.5	2.6	3.1	10.4	100.0	65.1	24.5	26.0	3.6	
Avg Day		122	58	173	117	164	169	111	62	113	60	192
PER COLUMN		72.0	91.2	33.3	41.7	75.0	76.9	75.0	71.8	57.3	96.2	77.8
TOTAL LESS NS/POST CONV/APPEALS												
NUMBER		105	52	1	5	5	18	186	118	45	50	7
PER ROW ( )	56.5	28.0	0.5	2.7	2.7	9.7	100.0	63.4	24.2	26.9	3.8	
Avg Day		124	56	173	117	196	104	106	60	115	60	192
PER COLUMN		70.0	91.2	33.3	41.7	62.5	69.2	72.7	67.8	54.9	96.2	77.8
TOTAL												
NUMBER		150	57	3	12	8	26	256	174	82	52	9
PER ROW ( )	58.6	22.3	1.2	4.7	3.1	10.2	100.0	68.0	32.0	20.3	3.5	
Avg Day		105	57	115	116	153	218	108	58	86	61	166
PER COLUMN		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Exhibit III.3. (cont'd)

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PROGRAM A70272  
DATE-PREPARED 07/13/79  
\*\*\* AUDIT DATA INCLUDED \*\*\*

## ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CASE

JURISDICTIONAL GROUPING 1

TERMINATIONS DURING 07/78 - 06/79

DISPOSITION ALL DISPOSITIONS  
CHARGING DOCUMENT ALL CHARGING DOCUMENTS

JURISDICTION ANNE ARUNDEL

## ELAPSED TIME DAYS

1e TRIAL-CT-JT

A. FILING TO ARR AIGNMENT  
1. ALL TRIALS

	0-	6-	11-	16-	21-	26-	31-	41-	51-	61+	TOTAL
	9	10	15	20	25	30	40	50	60		
A. NUMBER	0	1	1	0	0	2	0	0	0	1	5
B. PER ROW ( )	0.0	20.0	20.0	0.0	0.0	40.0	0.0	0.0	0.0	20.0	100.0
C. AVG. DAY	0	15	12	0	0	26	0	0	0	291	74

B. ARR AIGNMENT TO TRIAL  
1. BENCH TRIAL

	0-	31-	61-	91-	121-	151-	181-	241-	361-	721+	TOTAL
	30	60	90	120	150	180	240	360	720		
A. NUMBER	0	0	0	0	0	0	0	2	1	0	3
B. PER ROW ( )	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	33.3	0.0	100.0
C. AVG. DAY	0	0	0	0	0	0	0	276	560	0	371

## 2. JURY TRIAL

A. NUMBER	0	1	0	0	0	0	0	1	0	0	2
B. PER ROW ( )	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	100.0
C. AVG. DAY	0	60	0	0	0	0	0	302	0	0	181

C. TRIAL TO CISP W/ARRAIGNMENT  
1. ALL TRIALS

	0-	6-	11-	16-	21-	26-	31-	41-	51-	61+	TOTAL
	5	10	15	20	25	30	40	50	60		
A. NUMBER	3	0	0	0	0	0	0	0	0	2	5
B. PER ROW ( )	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	100.0
C. AVG. DAY	3	0	0	0	0	0	0	0	0	71	29

Exhibit III.4

PROGRAM A70272  
DATE-PREPARED 07/13/79  
\*\*\* AUDIT DATA INCLUDED \*\*\*

## ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CASE

JURISDICTIONAL GROUPING 1

TERMINATIONS DURING 07/78 - 06/79

DISPOSITION ALL DISPOSITIONS  
CHARGING DOCUMENT ALL CHARGING DOCUMENTS

JURISDICTION ANNE ARUNDEL

## ELAPSED TIME DAYS

## I. TRIAL-CT-JT

D. FILING TO DISP W/ARRAIGNMENT  
1. BENCH TRIAL

	0-	31-	61-	91-	121-	151-	181-	241-	361-	721+	TOTAL
A. NUMBER	0	0	0	0	0	0	0	0	3	0	3
B. PER ROW ( )	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0
C. AVG. DAY	0	0	0	0	0	0	0	0	440	0	440

## 2. JURY TRIAL

A. NUMBER	0	0	0	0	0	0	0	2	0	0	2
B. PER ROW ( )	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0
C. AVG. DAY	0	0	0	0	0	0	0	334	0	0	334

## E. FILING TO TRIAL W/O ARRAIGN

## 1. BENCH TRIAL

A. NUMBER	43	131	173	126	54	29	34	25	8	0	623
B. PER ROW ( )	6.9	21.0	27.8	20.2	8.7	4.7	5.5	4.0	1.3	0.0	100.0
C. AVG. DAY	19	48	74	103	134	165	207	277	455	0	101

## 2. JURY TRIAL

A. NUMBER	0	4	15	15	25	17	9	14	4	2	105
B. PER ROW ( )	0.0	3.8	14.3	14.3	23.8	16.2	8.6	13.3	3.8	1.9	100.0
C. AVG. DAY	0	51	74	106	136	169	205	288	411	987	178

## F. TRIAL TO DISP W/O ARRAIGN

## 1. ALL TRIALS

	0-	6-	11-	16-	21-	26-	31-	41-	51-	61+	TOTAL
A. NUMBER	392	2	24	21	6	3	7	14	1	40	510
B. PER ROW ( )	76.9	0.4	4.7	4.1	1.2	0.6	1.4	2.7	0.2	7.8	100.0
C. AVG. DAY	0	7	13	15	22	27	35	44	59	157	16

Exhibit II.4 - 149 - (cont'd.)

PROGRAM A70272  
DATE-PREPARED 07/13/79  
\*\*\* AUCIT DATA INCLUDED \*\*\*

## ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CASE

JURISDICTIONAL GROUPING 1

TERMINATIONS DURING 07/78 - 06/79

DISPOSITION ALL DISPOSITIONS  
CHARGING DOCUMENT ALL CHARGING DOCUMENTS

JURISDICTION ANNE ARUNDEL

## ELAPSED TIME DAYS

1. TRIAL-CT-JT

G. FILING TO CISP W/O ARRAIGN  
1. BENCH TRIAL

	0-	31-	61-	91-	121-	151-	181-	241-	361-	721+	TOTAL
A. NUMBER	7	95	121	102	37	28	29	23	11	0	451
B. PER ROW ( )	1.9	21.0	26.7	22.5	8.2	6.2	6.4	5.1	2.4	0.0	100.0
C. AVG. DAY	13	50	75	103	135	165	211	285	483	0	115

## 2. JURY TRIAL

A. NUMBER	0	1	9	8	11	4	9	9	4	2	57
B. PER ROW ( )	0.0	1.8	15.8	14.0	19.3	7.0	15.8	15.6	7.0	3.5	100.0
C. AVG. DAY	0	41	75	108	133	163	207	275	433	1030	207

H. FILING TO DISP ALL W/TRIAL  
1. BENCH TRIAL

A. NUMBER	7	95	121	102	37	28	29	23	14	0	456
B. PER ROW ( )	1.9	20.8	26.5	22.4	8.1	6.1	6.4	5.0	3.1	0.0	100.0
C. AVG. DAY	13	50	75	103	135	165	211	285	474	0	117

## 2. JURY TRIAL

A. NUMBER	0	1	9	8	11	4	9	11	4	2	59
B. PER ROW ( )	0.0	1.7	15.3	13.6	18.6	6.8	15.3	18.6	6.8	3.4	100.0
C. AVG. DAY	0	41	75	108	133	163	207	285	433	1030	212

Exhibit II-4 (cont'd.)

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PROGRAM A70212  
DATE-PREPARED 07/13/79  
\*\*\* AUDIT DATA INCLUDED \*\*\*

## ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CASE

JURISDICTIONAL GROUPING 1

TERMINATIONS DURING 07/78 - 06/79

DISPOSITION ALL DISPOSITIONS  
CHARGING DOCUMENT ALL CHARGING DOCUMENTS

JURISDICTION ANNE ARUNDEL

## ELAPSED TIME DAYS

## IIe. WITHOUT TRIAL

## Ae. FILING TO ARR AIGNMENT

	0-	6-	11-	16-	21-	26-	31-	41-	51-	61+	TOTAL
	5	10	15	20	25	30	40	50	60		
A. NUMBER	0	1	0	0	0	2	1	0	0	0	4
B. PER ROW ( )	0.0	25.0	0.0	0.0	0.0	50.0	25.0	0.0	0.0	0.0	100.0
C. AVG. DAY	0	10	0	0	0	30	36	0	0	0	27

## B. ARR AIGNMENT TO DISP

	0-	31-	61-	91-	121-	151-	181-	241-	361-	721+	TOTAL
	30	60	90	120	150	180	240	360	720		
A. NUMBER	0	0	0	0	0	0	2	0	2	0	4
B. PER ROW ( )	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	100.0
C. AVG. DAY	0	0	0	0	0	0	223	0	473	0	348

## C. FILING TO DISP W/ARRAIGN

A. NUMBER	0	0	0	0	0	0	0	2	2	0	4
B. PER ROW ( )	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	100.0
C. AVG. DAY	0	0	0	0	0	0	0	253	496	0	375

## D. FILING TO DISP W/O ARRAIGN

A. NUMBER	204	186	212	294	242	131	143	106	126	21	1665
B. PER ROW ( )	12.3	11.2	12.7	17.7	14.5	7.9	8.6	6.4	7.6	1.3	100.0
C. AVG. DAY	16	47	76	105	133	166	207	296	493	1943	166

## E. FILING TO DISP ALL W/O TRIAL

A. NUMBER	204	186	212	294	242	131	143	106	128	21	1669
B. PER ROW ( )	12.2	11.1	12.7	17.6	14.5	7.8	8.6	6.5	7.7	1.3	100.0
C. AVG. DAY	16	47	76	105	133	166	207	296	493	1943	167

Exhibit II.4. (cont'd.)

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PROGRAM A70272  
DATE-PREPARED 07/13/79  
\*\*\* AUDIT DATA INCLUDED \*\*\*

ADMINISTRATIVE OFFICE OF THE COURTS

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CASE

JURISDICTIONAL GROUPING 1

TERMINATIONS DURING 07/78 - 06/79

DISPOSITION ALL DISPOSITIONS

CHARGING DOCUMENT ALL CHARGING DOCUMENTS

JURISDICTION ANNE ARUNDEL

ELAPSED TIME DAYS

III. ALL TERMINATIONS

A. FILING TO DISPOSITION

	0-	31-	61-	91-	121-	151-	181-	241-	361-	721+	TOTAL
	30	60	90	120	150	180	240	360	720		
A. NUMBER	211	202	342	404	290	163	181	142	146	23	2184
B. PER RDW (%)	9.7	12.9	15.7	18.5	13.3	7.5	8.3	6.5	6.7	1.1	100.0
C. AVG. DAY	16	48	76	105	134	166	208	293	490	1863	158

Exhibit II-4. (cont'd.) - 152 -

ANNE ARUNDEL - FY 1979

WITH COURT OR JURY TRIAL

# DOCKETS AVG. F-A % W/30d % W/60d			
5	74 days	80.0%	80.0%

ARRAIGNMENT

# DOCKETS AVG A-T % W/120d % W/360d

COURT TRIAL	3	371 days	0.0%	66.7%
JURY TRIAL	2	181 days	50.0%	100.0%
ALL	5	295 days	20.0%	80.0%

TRIAL

# DOCKETS AVG T-D % W/30d % W/60d

5	29 days	60.0%	60.0%

DISPOSITION

CRIMINAL - ALL VERDICTS

FILING

WITHOUT COURT OR JURY TRIAL

# DOCKETS AVG F-A % W/30d % W/60d			
4	27	75.0%	100.0%

ARRAIGNMENT

# DOCKETS AVG F-T % W/120d % W/360d

COURT TRIAL	623	101 days	75.9%	98.7%
JURY TRIAL	105	178 days	32.4%	98.1%
ALL	728	112 days	69.6%	98.6%

TRIAL

# DOCKETS AVG T-D % W/30d % W/60d

510	16	87.8%	92.2%

DISPOSITION

DISPOSITION

Avg F-D  
(exclude

# DOCKETS AVG F-D > 360) % W/120d % W/360d

COURT TRIAL	456	117 days	107 days	71.3%	96.9%
JURY TRIAL	59	212 days	164 days	30.5%	89.8%
W/O CT. OR JURY TRIAL	1669	167 days	115 days	53.7%	91.1%
ALL CASES	2184	158 days	114 days	56.7%	92.3%

Exhibit II.5.

PROGRAM: AYJ 71  
DATE-PREPARED: 09/02/79

ADMINISTRATIVE OFFICE OF THE COURTS

\*\*\* AUDIT DATA INCLUDED \*\*\*

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CHARGING DOCUMENT

JURISDICTIONAL GROUPING: 1

JURISDICTION: ANNE ARUNDEL

ACTIVE PENDING END OF 06/79

ELAPSED TIME DAYS

	0-	31-	61-	91-	121-	181-	271-	361-	721-	1081+	TOTAL
	30	60	90	120	180	270	360	720	1080	1080	
<b>INDICTMENT</b>											
NUMBER	156	78	52	37	91	54	26	27	14	1	536
PER ROW (%)	29.1	14.6	9.7	6.9	17.0	10.1	4.9	5.0	2.5	0.2	100.0
CUM ROW (%)	29.1	43.7	53.4	60.3	77.2	87.3	92.2	97.2	99.8	100.0	0.0
AVG DAY	17	50	79	97	141	217	312	513	927	1115	140
PER COLUMN	74.6	67.8	39.7	39.8	57.6	94.5	52.0	34.6	33.3	5.6	54.0
<b>CRIMINAL INFORMATION</b>											
NUMBER	10	7	0	2	7	6	3	0	1	0	36
PER ROW (%)	27.8	19.4	0.0	5.6	19.4	16.7	8.3	6.0	2.8	0.0	100.0
CUM ROW (%)	27.8	47.2	47.2	52.8	72.2	88.9	97.2	97.2	100.0	100.0	0.0
AVG DAY	10	54	0	115	155	204	307	0	758	0	130
PER COLUMN	4.8	6.1	0.0	2.2	4.4	6.1	6.0	0.0	2.4	0.0	3.6
<b>JURY TRIAL P.R.</b>											
NUMBER	24	13	36	33	23	18	4	5	1	0	157
PER ROW (%)	15.3	8.3	22.9	21.0	14.6	11.5	2.5	3.2	0.6	0.0	100.0
CUM ROW (%)	15.3	23.6	46.5	67.5	82.2	93.6	96.2	99.4	100.0	100.0	0.0
AVG DAY	10	47	74	105	151	219	306	473	744	0	119
PER COLUMN	11.5	11.3	27.5	35.5	14.6	18.2	8.0	6.4	2.4	0.0	15.8
<b>APPEALS-DT</b>											
NUMBER	2	3	10	8	1	2	2	3	0	0	31
PER ROW (%)	6.5	9.7	32.3	25.8	3.2	6.5	6.5	9.7	0.0	0.0	100.0
CUM ROW (%)	6.5	16.1	48.4	74.2	77.4	83.9	90.3	100.0	100.0	100.0	0.0
AVG DAY	5	62	74	112	169	228	293	437	0	0	138
PER COLUMN	1.0	2.6	7.6	8.6	0.6	2.0	4.0	3.8	0.0	0.0	3.1
<b>APPEALS-MD</b>											
NUMBER	10	9	13	5	0	0	1	0	0	0	38
PER ROW (%)	26.3	23.7	34.2	13.2	0.0	0.0	2.6	0.0	0.0	0.0	100.0
CUM ROW (%)	26.3	50.0	84.2	97.4	97.4	97.4	100.0	100.0	100.0	100.0	0.0
AVG DAY	11	48	72	109	0	0	323	0	0	0	62
PER COLUMN	4.8	7.8	9.9	5.4	0.0	0.0	2.0	0.0	0.0	0.0	3.8

Exhibit III.6  
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PROGRAM: A70271  
DATE-PREPARED: 09/02/79

ADMINISTRATIVE OFFICE OF THE COURTS

\*\*\* AUDIT DATA INCLUDED \*\*\*

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CHARGING DOCUMENT

JURISDICTIONAL GROUPING: 1

JURISDICTION: ANNE ARUNDEL

ACTIVE PENDING END OF 06/79

ELAPSED TIME DAYS

	0-	31-	61-	91-	121-	161-	271-	361-	721-	1081+	TOTAL
	30	60	90	120	180	270	360	720	1080		
<b>NON SUPPORT</b>											
NUMBER	7	5	20	8	32	18	12	35	25	17	179
PER ROW (%)	3.9	2.8	11.2	4.5	17.9	10.1	6.7	19.6	14.0	9.5	100.0
CUM ROW (%)	3.9	6.7	17.9	22.3	40.2	50.3	57.0	76.5	90.5	100.0	0.0
Avg Day	13	51	68	108	145	223	312	505	668	1294	426
PER COLUMN	3.3	4.3	15.3	8.6	20.3	18.2	24.0	44.9	59.5	94.4	16.0
<b>POST CONVICTION</b>											
NUMBER	0	0	0	0	4	1	2	8	1	0	16
PER ROW (%)	0.0	0.0	0.0	0.0	25.0	6.3	12.5	50.0	6.3	0.0	100.0
CUM ROW (%)	0.0	0.0	0.0	0.0	25.0	31.3	43.8	93.8	100.0	100.0	0.0
Avg Day	0	0	0	0	144	212	319	495	730	0	382
PER COLUMN	0.0	0.0	0.0	0.0	2.5	1.0	4.0	10.3	2.4	0.0	1.6
<b>TOTAL LESS APPEALS</b>											
NUMBER	197	103	108	80	157	97	47	75	42	18	924
PER ROW (%)	21.3	11.1	11.7	8.7	17.0	10.5	5.1	8.1	4.5	1.9	100.0
CUM ROW (%)	21.3	32.5	44.2	52.8	69.8	80.3	85.4	93.5	98.1	100.0	0.0
Avg Day	15	50	75	102	144	217	311	505	879	1284	196
PER COLUMN	94.3	89.6	82.4	86.0	99.4	98.0	94.0	96.2	100.0	100.0	93.1
<b>TOTAL LESS NS/POST CONV/APPEALS</b>											
NUMBER	190	98	88	72	121	78	33	32	16	1	729
PER ROW (%)	26.1	13.4	12.1	9.9	16.5	10.7	4.5	4.4	2.2	0.1	100.0
CUM ROW (%)	26.1	39.5	51.6	61.5	78.1	88.8	93.3	97.7	99.9	100.0	0.0
Avg Day	16	50	77	101	144	216	311	507	905	1115	135
PER COLUMN	90.9	85.2	67.2	77.4	76.6	78.8	66.0	41.0	38.1	5.6	73.4
<b>TOTAL</b>											
NUMBER	209	115	131	93	158	99	50	78	42	18	933
PER ROW (%)	21.0	11.6	13.2	9.4	15.9	10.0	5.0	7.9	4.2	1.8	100.0
CUM ROW (%)	21.0	32.6	45.8	55.2	71.1	81.1	86.1	94.0	98.2	100.0	0.0
Avg Day	15	50	75	103	144	218	311	502	879	1284	189
PER COLUMN	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Exhibit II.6. (cont'd.)

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PROGRAM A70273  
DATE-PREPARED 07/13/79

ADMINISTRATIVE OFFICE OF THE COURTS

PAGE 1

\*\*\* AUDIT DATA INCLUDED \*\*\*

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CHARGING DOCUMENT

JURISDICTIONAL GROUPING 1

JURISDICTION ALLEGANY

TERMINATIONS DURING 07/78 - 06/79

VERDICT (MJIS)												TRIAL			
	NOT GUILTY	GUILTY	PROB	DISM	ST&T	NOLLE PROSSE	TOTAL	BENCH TRAIL	BENCH GUILTY	JURY TRAIL	JURY GUILTY				
<b>INDICTMENT</b>															
NUMBER	26	36	0	1	1	7	71	26	11	39	4				
PER ROW ( )	36.6	50.7	0.0	1.4	1.4	9.9	100.0	36.6	15.5	54.9	5.6				
AVG DAY	170	46	0	50	128	77	96	84	194	61	223				
PER COLUMN	176.3	63.2	0.0	8.3	12.5	26.9	27.7	14.9	13.4	75.0	44.4				
<b>CRIMINAL INFORMATION</b>															
NUMBER	60	3	0	0	0	1	64	57	21	6	1				
PER ROW ( )	93.8	4.7	0.0	0.0	0.0	1.6	100.0	89.1	32.8	9.4	1.6				
AVG DAY	104	99	0	0	0	61	103	33	81	35	61				
PER COLUMN	40.0	5.3	0.0	0.0	0.0	3.8	25.0	32.8	25.6	11.5	11.1				
<b>JURY TRIAL PRAY</b>															
NUMBER	19	13	1	4	4	10	51	35	13	5	2				
PER ROW ( )	37.3	25.5	2.0	7.8	7.8	19.6	100.0	68.6	25.3	9.8	3.9				
AVG DAY	126	83	173	134	213	127	123	86	103	87	196				
PER COLUMN	12.7	22.8	33.3	33.3	50.0	38.5	19.9	20.1	15.9	9.6	22.2				
<b>APPEALS-OT</b>															
NUMBER	27	5	1	2	2	1	38	33	23	2	2				
PER ROW ( )	71.1	13.2	2.6	5.3	5.3	2.6	100.0	86.8	60.5	5.3	5.3				
AVG DAY	58	49	28	43	123	199	62	48	54	78	78				
PER COLUMN	18.0	8.8	33.3	16.7	25.0	3.8	14.8	19.0	28.0	3.8	22.2				
<b>APPEALS-MO</b>															
NUMBER	15	0	1	5	0	5	26	17	12	0	0				
PER ROW ( )	57.7	0.0	3.8	19.2	0.0	19.2	100.0	65.4	46.2	0.0	0.0				
AVG DAY	64	0	145	143	0	418	150	46	44	0	0				
PER COLUMN	10.0	0.0	33.3	41.7	0.0	19.2	10.2	9.8	14.6	0.0	0.0				

Exhibit III .7  
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PROGRAM A70270  
DATE-PREPARED 01/13/79

ADMINISTRATIVE OFFICE OF THE COURTS

\*\*\* AUDIT DATA INCLUDED \*\*\*

CRIMINAL  
ELAPSED TIME REPORT BY  
TYPE OF CHARGING DOCUMENT

JURISDICTIONAL GROUPING 1

TERMINATIONS DURING 07/78 - 06/79

JURISDICTION ANNE ARUNDEL

ELAPSED TIME DAYS

	0-	31-	61-	91-	121-	181-	271-	361-	721-	1081+	TOTAL
	30	60	90	120	180	270	360	720	1080		
<b>NONSUPPORT</b>											
NUMBER	179	105	32	14	32	27	11	17	6	3	426
PER ROW ( )	42.0	24.6	7.5	3.3	7.5	6.3	2.6	4.0	1.4	0.7	100.0
CUM ROW ( )	42.0	66.7	74.2	77.5	85.0	91.3	93.9	97.9	99.3	100.0	0.0
Avg Day	16	92	73	107	152	220	313	465	899	8472	150
PER COLUMN	84.8	37.2	9.4	3.5	7.0	12.1	11.0	11.6	30.0	100.0	19.5
<b>POST CONVICTION</b>											
NUMBER	1	0	1	2	0	4	2	1	0	0	11
PER ROW ( )	9.1	0.0	9.1	18.2	0.0	36.4	18.2	9.1	0.0	0.0	100.0
CUM ROW ( )	9.1	9.1	18.2	36.4	36.4	72.7	90.9	100.0	100.0	100.0	0.0
Avg Day	21	0	85	106	0	241	284	386	0	0	203
PER COLUMN	0.3	0.0	0.3	0.5	0.0	1.8	2.0	0.7	0.0	0.0	0.5
<b>TOTAL LESS APPEALS</b>											
NUMBER	200	248	266	347	401	201	92	137	19	3	1914
PER ROW ( )	10.4	13.0	13.9	18.1	21.0	10.5	4.8	7.2	1.0	0.2	100.0
CUM ROW ( )	10.4	23.4	37.3	55.4	70.4	86.9	91.7	98.9	99.8	100.0	0.0
Avg Day	15	48	76	105	145	218	312	489	879	8472	163
PER COLUMN	54.8	87.9	77.8	85.7	67.9	85.7	92.0	93.8	95.0	100.0	87.4
<b>TOTAL LESS NS/POST CONV/APPEALS</b>											
NUMBER	20	143	233	331	369	170	79	119	13	0	1477
PER ROW ( )	1.4	9.7	15.3	22.4	25.0	11.5	5.3	8.1	0.9	0.0	100.0
CUM ROW ( )	1.4	11.0	26.3	49.2	74.2	85.7	91.1	99.1	100.0	100.0	0.0
Avg Day	13	52	76	105	145	215	313	493	870	0	166
PER COLUMN	9.5	50.7	63.1	81.7	85.9	75.9	79.0	81.5	65.0	0.0	67.5
<b>TOTAL</b>											
NUMBER	211	282	342	405	456	224	100	146	20	3	2189
PER ROW ( )	5.6	12.9	15.6	19.5	20.8	10.2	4.6	6.7	0.9	0.1	100.0
CUM ROW ( )	5.6	22.5	38.1	56.6	77.5	87.7	92.3	98.9	99.9	100.0	0.0
Avg Day	16	48	76	105	145	216	311	490	872	8472	158
PER COLUMN	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Exhibit II.7. (cont'd.)

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CHAPTER III - Corrections Intake, Length of Sentence and Length of Stay and its Impact on Corrections Populations

A. Conceptual Definition of Relationship Between Corrections Intake, Length of Sentence, and Length of Stay and its Impact on Corrections Populations

In Chapter II a framework was described for representing information on court processing delay and its impact on the size of the pending balance of defendants awaiting court disposition. The corrections components of criminal justice processing can be characterized in a manner similar to the delay in judicial processing.

Corrections Processing Inventory

Figure III.1 provides an illustrative description of the flow of convicted offenders through state prison, parole, local jail, and probation components of corrections. In the case of each of the corrections components, offender processing can be characterized by flows and stocks. These flows and stocks can be represented by a simplified version of the equation used to represent court processing flows and stocks (see Section A of Chapter II, equation 2.4):

$$P_t = P_o + I - D \quad (3.1)$$

Where:

$P_t$  = Active offender population (e.g., inmates, parolees, probationers) as of the end of the period

$P_o$  = Active offender population as of the beginning of the period

$I$  = Offender intake over the period

$D$  = Offender departures over the period

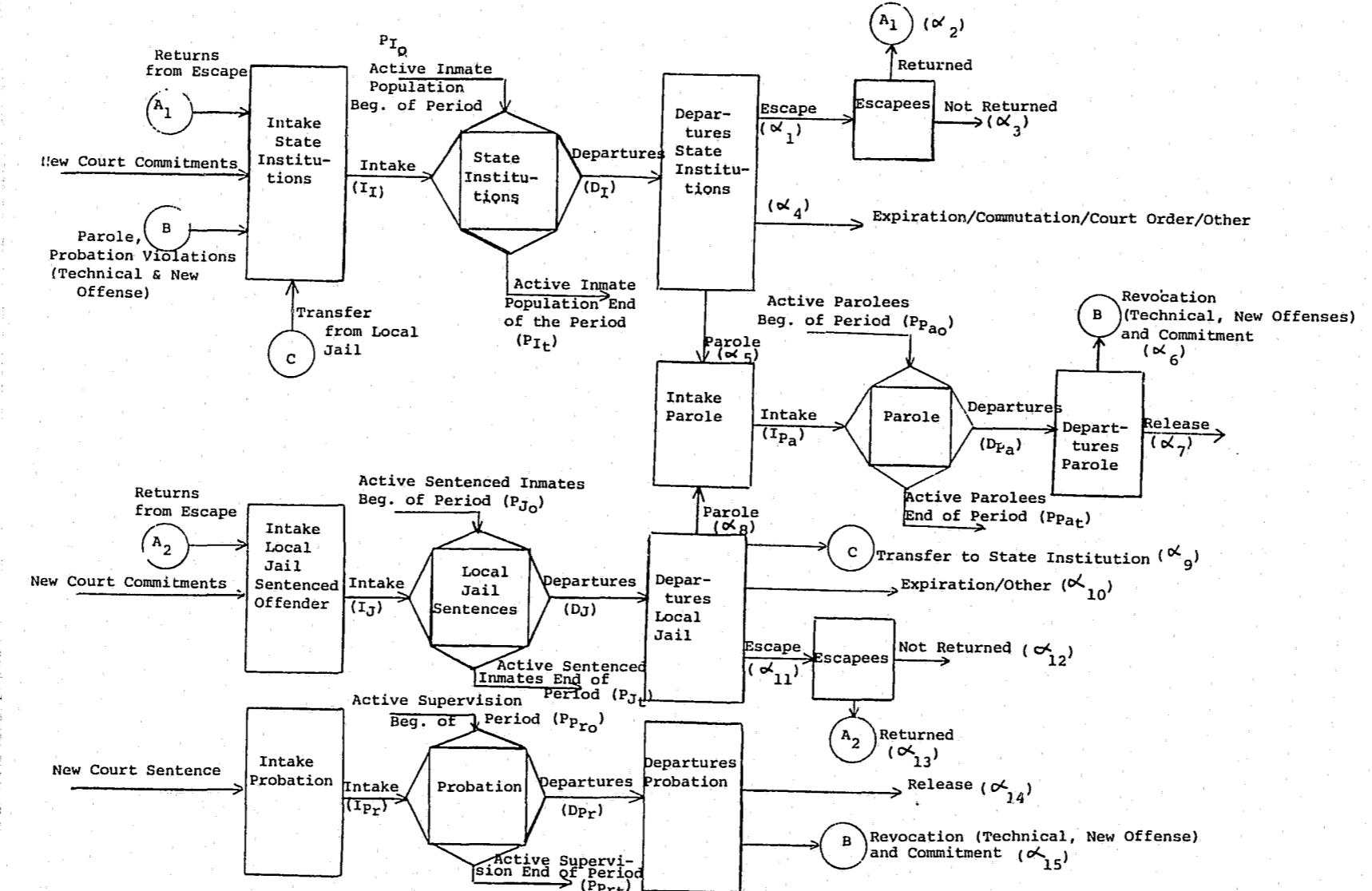
In the Figure III.1 flow diagram,  $P_t$ ,  $P_o$ ,  $I$ , and  $D$  are identified using subscripts to distinguish between these respective variables for state prison offenders ( $I$ ), parole offenders ( $Pa$ ), local jail offenders ( $J$ ), and probation offenders ( $Pr$ ).

For purposes of illustration, equation 3.1 can be used to show the inventory of state institution population:

$$P_{I_t} = P_{I_o} + I_I - D_I \quad (3.2)$$

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FIGURE III.1. - Illustrative Processing of Offenders Through the Corrections Components of the Criminal Justice System



$D_I$  can be estimated by the following equation:

$$D_I = P_I T_I^{-1} \quad (3.3)*$$

Where:

$P_I$  = the average inmate population over the period 0 to  $t$

$T_I$  = the average length of stay (time served) in state prison

Total inmate intake,  $I_I$ , can be represented as follows (see Figure III.1):

$$I_I = C_I + E_I + V_I + L_I \quad (3.4)$$

Where:

$C_I$  = new court commitments to state institutions

$E_I$  = return of escapees to state institutions

$V_I$  = parole and probation violators returning to state institutions

$L_I$  = transfers from local jail to state institutions (e.g., state inmates housed in local jails awaiting transfer to the state)

The equation 3.4 components of institution intake ( $I_I$ ) can then be approximated as shown below.

New Court Commitments:

$$C_I = A (\alpha_I) \quad (3.5a)$$

Where:

$A$  = the number of persons arrested

$\alpha_I$  = the probability given arrest of conviction and sentencing to a state institution (see Section A, Chapter I, equation 1.1 for an illustration of how to calculate  $\alpha_I$ )

Returns of Escapees:

$$E_I = (\alpha_1 D_I) \alpha_2 \text{ where } D_I \text{ are estimated by} \\ P_I T_I^{-1} \quad (3.5b)$$

\*The estimate for inmate departures,  $D_I = P_I T_I^{-1}$ , is an application of the same concept described in Chapter II, Section A, equation 2.1 where the expected average pending balance of defendants awaiting disposition is expressed as  $P = D \cdot (365/\text{Mean ET})^{-1}$  or  $D = P \cdot (\text{Mean ET}/365)^{-1}$ . Mean ET/365 is the average duration of time from filing to disposition expressed in years and is similar to  $T$ , the mean length of stay in years.

Where:

$T_I$  = the average length of stay (time served) in state prison

$P_I$  = the average inmate population over the period o to t

$D_I$  = the number of departures from state institutions

$\alpha_1$  = the probability that departure is via an escape

$\alpha_2$  = the probability given escape of being returned to a state institution

Parole and Probation Revocations:

$V_I = \alpha_6 D_{Pa} + \alpha_{15} D_{Pr}$  where  $D_{Pa}$  and  $D_{Pr}$  are estimated by  $P_{Pa} T_{Pa}^{-1}$  and  $P_{Pr} T_{Pr}^{-1}$  (3.5c)

Where:

$T_{Pa}$  = the average length of stay on parole supervision

$P_{Pa}$  = the average parole population over the period o to t

$D_{Pa}$  = the number of departures from parole

$\alpha_6$  = the probability that a departure from parole is because of recommitment for a violation or new offense

$T_{Pr}$  = the average length of stay on probation supervision

$P_{Pr}$  = the average probation population over the period o to t

$D_{Pr}$  = the number of departures from probation

$\alpha_{15}$  = the probability that departure from probation is because of commitment for a violation or new offense

Transfers from Local Jails:

$L_I = \alpha_9 D_J$  where  $D_J$  can be estimated by  $P_J T_J^{-1}$  (3.5d)

Where:

$T_J$  = the average length of stay for jail sentence offenders

$P_J$  = the average jail sentenced offender population for the period o to t

$D_J$  = the number of departures from jail

$\alpha_9$  = the probability that departure from jail is because of a transfer to a state institution

Substituting in equation 3.2 the estimates for  $D_I$  and  $I_I$  from equations 3.3, 3.4 and 3.5a.-d. respectively provides the following estimate for  $P_{I_t}$ :

$$P_{I_t} = P_{I_o} + A(\alpha_I) + \alpha_1 P_I T_I^{-1} \alpha_2 + \alpha_6 P_{Pa} T_{Pa}^{-1} + \alpha_{15} P_{Pr} T_{Pr}^{-1} + \alpha_9 P_J T_J^{-1} - P_I T_I^{-1} \quad (3.6)$$

or alternatively the change in state prison population over the period o to t is:

$$\Delta P_I = P_{I_t} - P_{I_o} = A(\alpha_I) + P_I T_I^{-1} (\alpha_1 \alpha_2 - 1) + \alpha_6 P_{Pa} T_{Pa}^{-1} + \alpha_{15} P_{Pr} T_{Pr}^{-1} + \alpha_9 P_J T_J^{-1} \quad (3.7)$$

Where:

$A(\alpha_I)$  = the number of intake as a result of new court commitments

$P_I T_I^{-1} (\alpha_1 \alpha_2 - 1)$  = the estimate of the number of departures from state institutions during the year that do not return

$\alpha_6 P_{Pa} T_{Pa}^{-1}$  = the estimate of the number of returns to state institutions from parole

$\alpha_{15} P_{Pr} T_{Pr}^{-1}$  = the estimate of the number of returns to state institutions from probation

$\alpha_9 P_J T_J^{-1}$  = the estimate of the number of transfers of state inmates from local jails to state institutions

Thus, the change in institution population is the sum of new court commitments, departures, and returns and transfers from other correctional institutions. Each of these change components can be expressed in terms of flow probabilities and the respective flow, stock, and duration of stay variables. Similar formulations can be derived to approximate the active population at time t for parole (Pa), probation (Pr), and jail sentenced (J).

#### Estimating the Size of Corrections Populations

The size of the active corrections population of offenders can also be described using a deterministic model based on the logistic

curve. The adaptation of this model to individuals incarcerated in a facility was performed by Stollmack.<sup>3.1</sup> The deterministic model is illustrated below for the state institution population but may alternatively be applied to any of the corrections populations.

In the deterministic model, the flow of intake into corrections is transformed into the stock of inmates incarcerated based on inmate length of stay prior to departure. Changes in the prison population over the course of a year is due to the reduction during the year in the initial prison population and the accumulation during the year of new inmates due to intake. Assuming that the length of stay in prison is exponential, then the reduction of the initial population,  $P_0$ , over the course of a year can be expressed as follows:

$$P_0 e^{-T_I} \quad (3.8)$$

Where:

$P_0$  = the initial prison population at the beginning of the year

$T_I$  = the average length of stay in prison prior to release

Given that new intake to prison arrives according to a Poisson distribution with the length of stay exponentially distributed, then the number of inmate arrivals during the year and still active in prison at the end of the year can be expressed as follows:

$$I_I t \cdot T_I (1-e^{-T_I}) \quad (3.9)$$

Where:

$I_I t$  = number of intakes to prison during the year  $t$

$T_I$  = average time served in prison

By combining equations 3.8 and 3.9 the total prison population at the end of year  $t$  can be expressed as follows:

<sup>3.1</sup> Stollmack, Stephen, "Predicting Inmate Population from Arrest, Court Disposition, and Recidivism Rates," Journal of Research in Crime and Delinquency, Volume 10, Number 2, July 1973, pp. 141-162.

$$P_{I_t} = I_I t \cdot T_I (1-e^{-T_I}) + P_0 e^{-T_I} \quad (3.10)$$

Now  $I_I t \cdot T_I$  can be defined as the stable inmate population  $P_{I_s}$  (i.e., the constant inmate population that would be achieved if in each year the intake,  $I_I t$ , and the average length of stay,  $T_I$ , does not change). Substituting  $P_{I_s}$  in equation 3.8 and then rearranging the equation gives the following:<sup>3.2</sup>

$$P_{I_t} = P_{I_s} (1-e^{-T_I}) + P_0 e^{-T_I}$$

or:

$$P_{I_t} = P_{I_s} + (P_0 - P_{I_s}) e^{-T_I} \quad (3.11)$$

Where:

$P_{I_s}$  = the stable population,  $I_I t \cdot T_I$

In the more general sense, the estimated corrections population at the end of year  $t$  is a function of corrections population as of the beginning of the year,  $P_0$ , the intake over the year,  $I$ , and the average length of stay (incarceration or supervision) prior to departure,  $T$ :

$$P_t = P_s + (P_0 - P_s) e^{-T} \quad (3.12)*$$

3.2 Ibid. pp. 142-144

\* Equation 3.12 can also be used to estimate the pending balance of defendant cases awaiting adjudication as described in Chapter II, Section A. The following formulation would be used:

$$P_t = P_s + (P_0 - P_s) e^{-ET}$$

Where:

$P_t$  = the population of defendants pending processing at the end of year  $t$

$P_0$  = the population of defendants pending processing at the beginning of year  $t$

$ET$  = the average elapsed time filing to disposition expressed in years (or fraction of a year)

$P_s$  = the stable population of defendants pending processing; derived by multiplying the filings in year  $t$ ,  $F_t$ , times the average elapsed time in years,  $ET$ .

B. Illustration of the Use and Display of Statistics on Corrections Intake, Length of Sentence, Length of Stay, and Its Impact on Corrections Populations

The principal use of the analytic framework for the representation of information on corrections processing is in the prediction of incarceration and supervision populations. Traditionally, procedures for estimating the size of corrections population have been based on historical corrections population trends. By fitting a linear or quadratic regression line (i.e., to the historical population figures on inmates, parolees, or probationers) and extrapolating this line to some future point, an estimate of future population is derived. This kind of projection procedure does not take into account directly those parameters which most affect corrections population, i.e., offender intake and length of stay. Furthermore, such techniques are an admission that nothing is known about the process which creates a given incarceration or supervision population.

Alternatively, the inventory equation and the deterministic model shown in Section A describe the size of the active correction population in terms of phenomena which can be observed and predicted. As noted in Section A, the deterministic model requires only information on the active population as of a beginning point in time,  $P_0$ , the intake ( $I$ ) over the successive time intervals, and the length of stay ( $T$ ) for the successive time intervals in order to provide estimates of the active population for the beginning of the next time interval ( $P_t$ ).

The Illinois Department of Corrections recently published a report which provides the data needed to develop estimates of  $P_t$  for successive time intervals based on  $P_0$ ,  $I$ , and  $T$ .<sup>3.3</sup>

In this section the actual figures and tables from this report are used to estimate  $P_t$  for the period 1974-1975 using the deterministic model of Section A. The resulting estimates of  $P_t$  ( $\hat{P}_t$ ) are then compared to the actual historical values for  $P_t$  for 1974-1975 to validate how well the deterministic model predicts the

<sup>3.3</sup> Statistical Presentation 1979, Illinois Department of Corrections, Policy Development Division, August, 1980

actual inmate population. The Illinois report exhibits are described briefly below and are included on the pages that follow:

Exhibit III.1. - this figure shows the average monthly felon/misdemeanor admissions (intake) to the Illinois Department of Corrections for the years 1965-1979.

Exhibit III.2. - this table shows the average length of stay (in years) for felons/misdemeanors released from prison for 1974-1979. As noted in the Illinois' report narrative, length of stay data was calculated using the Division's Corrections Information System (CIS) by computing the difference between the custody date and the "status" code date which indicates release from prison. Because of the way the "status" code date is entered and updated on the computer system, length of stay data could not be calculated for all inmates' releases. The result is a variance of up to 48% between the manual and computerized count of inmate releases for 1974-1979. Therefore, while the average duration of stay figures shown in Exhibit III.2. may be reasonably representative, the number of cases on which the average is based is not the number of actual departures or releases from prison for the respective years.<sup>3.4</sup>

Exhibit III.3. - lists the average number of offenders under Illinois Department of Corrections care and the average population under community supervision for the years 1969-1979 (the average number of offenders in institutions is column 1 less column 2). The last column of the Exhibit shows the percentage that community supervision comprises of the total offenders under care (column 2 divided by column 1).

In order to use the deterministic model to estimate  $P_t$  ( $\hat{P}_t$ ) it is necessary to know  $I$ ,  $T$ , and  $P_o$ . Using the data in the three exhibits from the Illinois report, estimates of these parameters can be derived for the required years 1974-1979 for  $I$  and  $T$  and 1974 for  $P$ .

Estimating Corrections Intake

The data in Exhibit III.1. can be used to estimate intake for the Illinois Department of Corrections for the years 1974-1979:

Year	Approximate Average Felony Intake/Month	X	12 Month/Year	=	Approximate Felony Intake/Year
1974	270	X	12	=	3240
1975	375	X	12	=	4500
1976	400	X	12	=	4800
1977	415	X	12	=	4980
1978	445	X	12	=	5340
1979	500	X	12	=	6000

Year	Approximate Average Misdemeanor Intake/Month	X	12 Month/Year	=	Approximate Misdemeanor Intake/Year
1974	75	X	12	=	900
1975	70	X	12	=	840
1976	80	X	12	=	960
1977	60	X	12	=	720
1978	55	X	12	=	660
1979	50	X	12	=	600

Year	Approximate Felony Intake/Year	+	Approximate Misdemeanor Intake/Year	=	Approximate Intake/Year (I)
1974	3240	+	900	=	4140
1975	4500	+	840	=	5340
1976	4800	+	960	=	5760
1977	4980	+	720	=	5700
1978	5340	+	660	=	6000
1979	6000	+	600	=	6600

<sup>3.4</sup> Ibid, pp. 2, 59-60

#### Estimating Average Length of Stay and the Inmate Turnover Rate

Exhibit III.2. provides data on the average length of stay for inmates released. Combining this data with the information on intake (felony and misdemeanor) a rough estimate can be derived of the expected length of stay for all defendants using the following formula:

$$[(\text{Felony Intake} \times \text{Avg Felony}) + (\text{Misd Intake} \times \text{Avg Misd})] / \text{Total Felony and Misd Intake} = T$$

Felony Intake per Year	Avg Felony Length of Stay (in years)	Misd Intake per Year	Avg Misd Length of Stay (in years)	Total Felony and Misd Intake ( $\lambda_i$ )/Year
------------------------	--------------------------------------	----------------------	------------------------------------	---

$$[(I_F * T_F) + (I_M * T_M)] / (I_F + I_M) = T$$

Using this formula the expected length of stay for 1979 can be calculated as follows:

$$[(6000 \times 2.8) + (600 \times .5)] / 6600 = 2.59 \text{ years}$$

Similar calculations for the average length of stay can be performed for each year with the inmate turnover rate the inverse of the average length of stay ( $1/T$ ). The resulting estimated values for each of the years 1974-1979 are provided below:

Year	Average Length of Stay (In Years)	Inmate Turnover Rate ( $1/T$ )
1974	1.63	.6135
1975	2.24	.4464
1976	2.15	.4651
1977	1.97	.5076
1978	2.19	.4566
1979	2.59	.3861

#### Estimating the Initial Population

With the determination of estimates for  $I$  and  $T$ , the only other variable needed for the deterministic model is the initial population,  $P_0$ . From Exhibit III.3. the average number of offenders in institutions for the years 1973-1979 can be determined (column 1 less column 2). For the deterministic model, the population as of the end of the

year (for which future estimates of the population are to be made) is needed. This can be approximated using the Exhibit III.3. data by taking the average of two adjacent years. For example, the estimated ending population for 1973 can be estimated by taking the average of the average 1973-1974 populations. This can then be done for each of the pairs of successive years through 1979 to calculate estimates of the active inmate population as of the end of the year. These estimates are provided below:

Year	Average Inmate Population for the Year	Estimated Actual Population End of the Year ( $P_t$ )
1973	6100	6221 ( $P_{1973}$ )
1974	6342	6906 ( $P_{1974}$ )
1975	7470	8356 ( $P_{1975}$ )
1976	9242	9920 ( $P_{1976}$ )
1977	10597	10782 ( $P_{1977}$ )
1978	10966	11139 ( $P_{1978}$ )
1979	11312	

For purposes of this illustration  $P_0$  is the  $P_{1973}$  estimate of the ending populations, 6221 inmates.

#### Estimating the Active Population

Using the deterministic model and the estimated values for  $I$ ,  $T$ , and  $P_0$  estimates can now be derived for the ending population in subsequent years,  $P_t$ . In this example the estimated values for  $\hat{P}_t$  are  $\hat{P}_{1974}$ ,  $\hat{P}_{1975}$ ,  $\hat{P}_{1976}$ ,  $\hat{P}_{1977}$ ,  $\hat{P}_{1978}$ ,  $\hat{P}_{1979}$ . The calculations for these estimated values for the active ending population using equation 3.11 are shown below:

$$\hat{P}_t = P_s + (P_{t-1} - P_s)e^{-1/T}$$

$$P_{1974} = 6750 + (6221 - 6750)e^{-0.6135} = 6464$$

$$P_{1975} = 11952 + (6464 - 11952)e^{-0.4464} = 8440$$

$$P_{1976} = 12384 + (8440 - 12384)e^{-0.4651} = 9907$$

$$P_{1977} = 11244 + (9906 - 11244)e^{-0.5076} = 10439$$

$$P_{1978} = 13146 + (10441 - 13146)e^{-0.4566} = 11433$$

$$P_{1979} = 17100 + (11432 - 17100)e^{-0.3861} = 13247$$

$P_s$  = the stable population which is  $I*T$  for each successive year

$\hat{P}_{t-1}$  at  $t=1974$  is  $P_0$ .  $\hat{P}_{t-1}$  in subsequent years is simply  $\hat{P}_t$  for the prior years.

The deterministic model's estimates of the active ending population for the successive years,  $\hat{P}_t$ , can now be compared to the actual estimates of  $P_t$  determined previously using the Exhibit III.3. data. This comparison is shown in Figure III.2. The resulting comparison shows that the predicted estimates of  $\hat{P}_t$  and the actual estimates of  $P_t$  are statistically very close to one another.

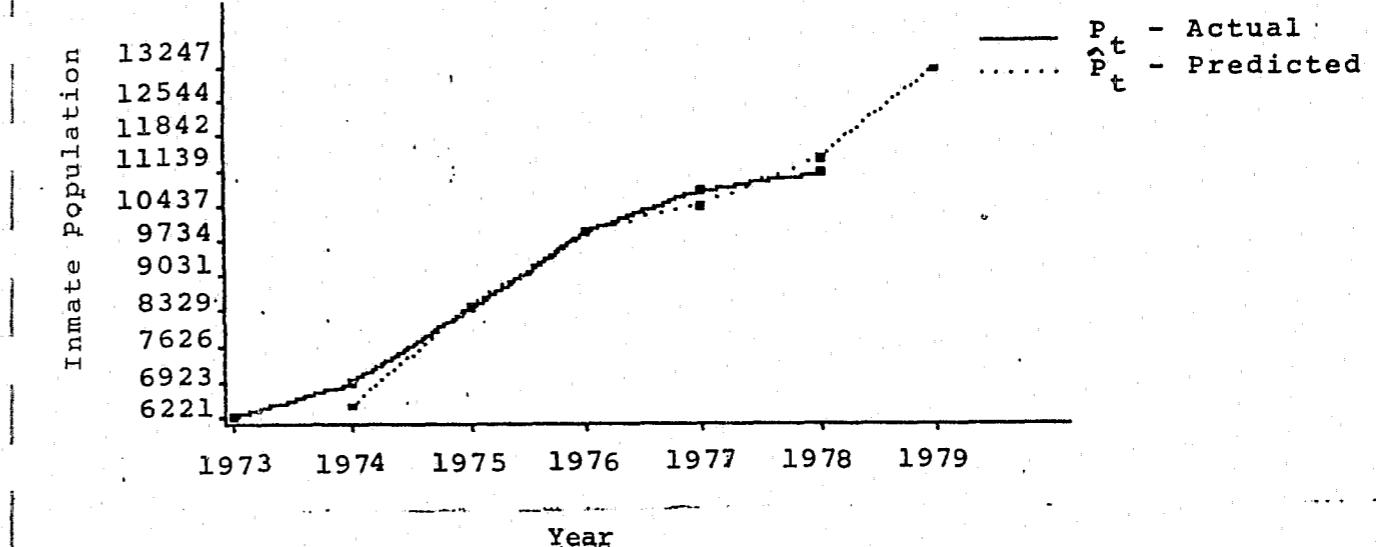
This illustration of the deterministic model using parameter estimates derived from actual corrections data, validates the potential utility of this framework for understanding corrections population data in terms of changes in the volume of inmate intake and length of stay. As will be illustrated in Chapter V on projections of future volumes of offender processing, this model can be used in developing forecasts of future corrections population pressure\* based on forecasts of future intake and length of stay.

As noted in the previous chapters, the ability to characterize offender processing by various attributes (e.g., type of offense, age, race, sex, sentencing jurisdiction, prior record) can add to the understanding of the dynamics of offender processing flows and stocks. An improved understanding of the corrections processing volume can also be obtained by performing the calculations described previously for subsets of the offender population. Naturally, the ability to do this is dependent on the availability of a data base which enables the offender population to be described by the desired characteristics.

Finally, it should be noted that in the calculations performed in this Section, data on average time served for a year is estimated based on the population of those that departed during the year. In actuality, those departing during the year, for the most part, entered the corrections system in prior years. For purposes of prediction it may be preferable for the average length of stay

\* Implicit in a forecast of future inmate population is the fact that facilities are available to hold the forecasted population. This may not be the case and so the resulting projections are really only projections of the apparent demand for bed space (i.e., population pressure).

FIGURE III.2 Comparison of the Predicted Estimates of Active Inmate Population ( $P_t$ ) to the Actual Estimates of Active Inmate Population ( $P_t$ )



Year	Estimated Actual Inmate Population End of the Year		Predicted Estimates of Inmate Population End of the Year ( $\hat{P}_t$ )
	( $P_t$ )		
1973	6221		6221
1974	6906		6464
1975	8356		8440
1976	9915		9907
1977	10781		10439
1978	11139		11433
1979	(Not Provided)		13247

R = Correlation Coefficient (1974-1978) = .99

$R^2$  = Coefficient of Determinator (1974-1978) = .98

for the year to be derived using data on length of sentence where the empirical relation between length of sentence and length of stay is known. The Illinois Department of Corrections Report described earlier contains data on both length of sentence and length of stay by type of offense. Illustrations of these respective tables from the report are shown in Exhibits III.4. and III.5. The availability of information on both length of sentence and length of stay suggests that the Illinois corrections' data base can support the analysis of inmate length of stay as a function of length of sentence for those inmates released. The analysis of this historical relationship may then be used to predict the anticipated length of stay for new inmate intake based on the length of sentence at intake.

EXHIBIT III.1.

FIGURE A  
AVERAGE MONTHLY ADMISSIONS

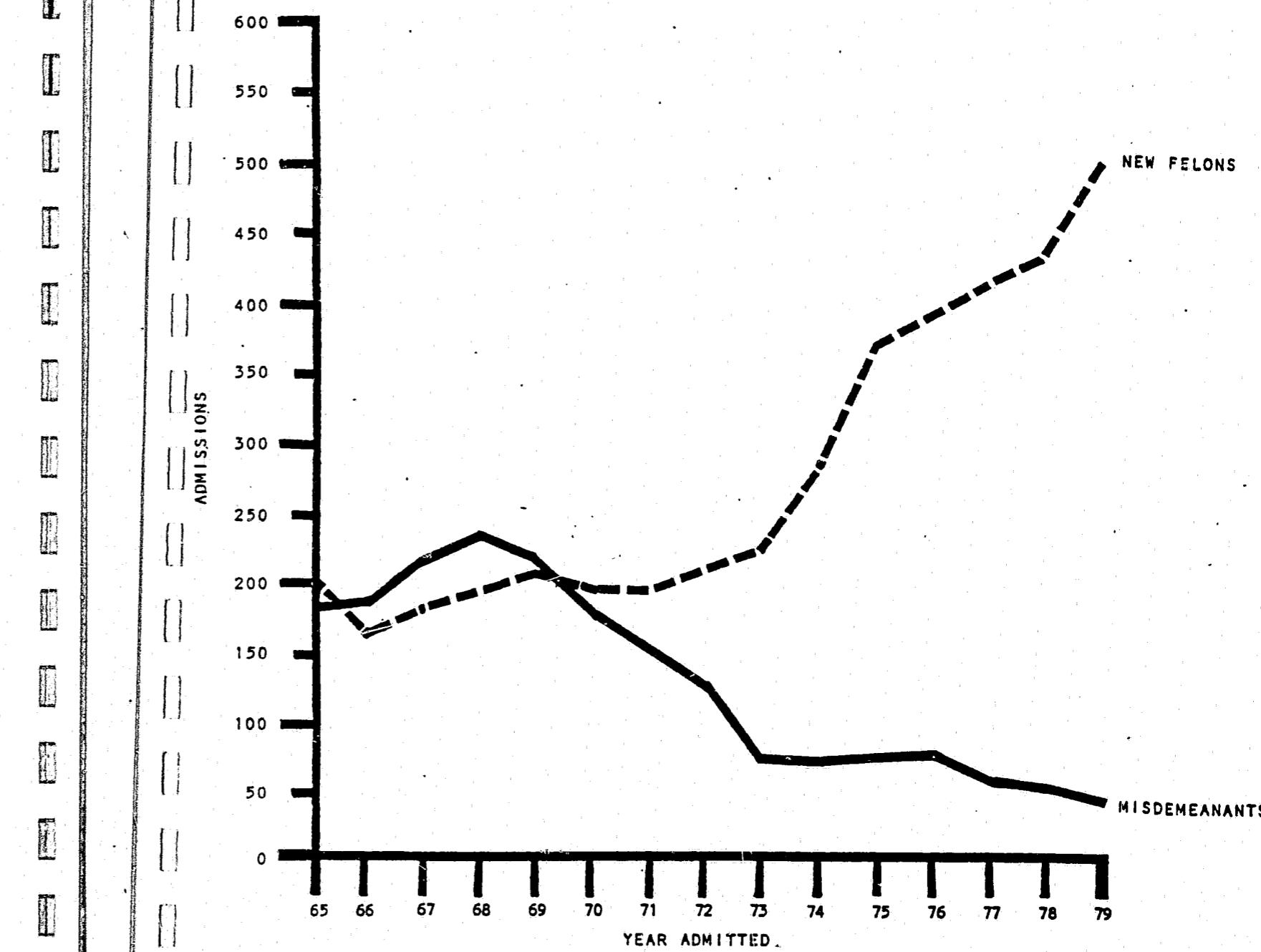


TABLE 19  
AVERAGE LENGTH OF STAY FOR FELONS/MISDEMEANANTS, 1974-1979

	FELONS					MISDEMEANANTS				
	CASES	AVERAGE STAY	STANDARD DEVIATION	MINIMUM STAY	MAXIMUM STAY	CASES	AVERAGE STAY	STANDARD DEVIATION	MINIMUM STAY	MAXIMUM STAY
1974	206	2.0	2.3	.0	12.0	615	.3	.1	.0	1.1
1975	411	2.6	2.2	.0	12.6	781	.3	.2	.1	3.4
1976	502	2.5	2.4	.0	14.6	832	.4	.3	.0	6.0
1977	1,194	2.2	2.1	.0	28.4	657	.4	.2	.0	2.1
1978	3,941	2.4	1.9	.0	28.4	477	.5	.5	.0	4.6
1979	3,619	2.8	2.0	.0	16.8	447	.5	.6	.0	4.4

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EXHIBIT III.2

TABLE 5  
AVERAGE ADULT POPULATION ON COMMUNITY SUPERVISION, 1969-1979

	AVERAGE POPULATION UNDER IDOC CUSTODY	AVERAGE POPULATION COMMUNITY SUPERVISION	
		NUMBER	PERCENT
1969	10,945	2,624	24.0
1970	10,744	2,805	26.1
1971	10,157	3,031	29.8
1972	9,557	3,073	32.2
1973	9,207	3,107	33.7
1974	9,559	3,217	33.7
1975	11,249	3,779	33.6
1976	14,134	4,892	34.6
1977	16,549	5,952	36.0
1978	19,176	8,210	42.8
1979	19,486	8,174	41.9

EXHIBIT III.4.

TABLE 7  
AVERAGE SENTENCE IMPOSED, 1974-1979

	CASES	AVERAGE MINIMUM	AVERAGE MAXIMUM	LOWEST MINIMUM	HIGHEST MAXIMUM
<b>MURDER</b>					
1974	158	31.2	68.3	4.0	900.0
1975	179	30.0	61.1	1.0	300.0
1976	177	32.7	66.1	5.0	400.0
1977	225	34.1	69.6	14.0	900.0
1978	168	34.3	69.1	6.0	600.0
1978 (Det.)	42	26.9	26.9	8.0	600.0
1979	82	34.8	73.5	14.0	600.0
1979 (Det.)	80	29.9	29.9	8.0	80.0
<b>ATTEMPTED MURDER</b>					
1974	47	5.0	13.6	1.0	75.0
1975	57	6.0	13.6	1.0	60.0
1976	69	7.9	16.4	1.0	200.0
1977	107	7.3	15.3	1.0	200.0
1978	75	8.0	16.5	1.0	200.0
1978 (Det.)	79	8.6	8.6	1.0	30.0
1979	15	6.6	11.9	1.0	30.0
1979 (Det.)	74	10.7	10.7	1.0	60.0
<b>VOLUNTARY MANSLAUGHTER</b>					
1974	149	3.5	11.4	1.0	30.0
1975	131	3.3	11.9	1.0	21.0
1976	140	3.3	11.2	1.0	20.0
1977	120	3.1	10.9	1.0	20.0
1978	58	2.7	9.4	1.0	20.0
1978 (Det.)	129	5.2	5.2	3.0	14.0
1979	14	2.9	11.0	1.0	20.0
1979 (Det.)	121	5.3	5.3	3.0	14.0
<b>RAPE</b>					
1974	112	5.5	12.5	2.0	75.0
1975	138	5.5	12.5	2.0	60.0
1976	146	7.2	15.2	2.0	200.0
1977	142	7.4	15.7	4.0	225.0
1978	65	6.9	13.7	4.0	100.0
1978 (Det.)	82	9.9	9.9	6.0	50.0
1979	27	11.3	23.0	4.0	100.0
1979 (Det.)	119	10.7	10.7	4.0	30.0
<b>ATTEMPTED RAPE</b>					
1974	24	2.0	5.9	1.0	15.0
1975	41	1.7	5.4	1.0	20.0
1976	30	2.1	6.1	1.0	20.0
1977	33	2.1	6.5	1.0	20.0
1978	17	1.7	4.8	1.0	15.0
1978 (Det.)	19	4.1	4.1	1.0	7.0
1979	3	2.0	4.0	1.0	6.0
1979 (Det.)	25	6.0	6.0	1.2	15.0

EXHIBIT III.4. cont'd.

TABLE 7 CONTINUED  
AVERAGE SENTENCE IMPOSED, 1974-1979

	CASES	AVERAGE MINIMUM	AVERAGE MAXIMUM	LOWEST MINIMUM	HIGHEST MAXIMUM
<b>ROBBERY</b>					
1974	482	1.7	4.8	1.0	20.0
1975	680	1.6	4.9	1.0	20.0
1976	728	1.6	5.1	1.0	25.0
1977	748	1.6	4.8	1.0	30.0
1978	353	1.6	4.6	1.0	20.0
1978 (Det.)	325	3.9	3.9	1.0	14.0
1979	49	1.7	4.8	1.0	15.0
1979 (Det.)	360	3.7	3.7	1.0	14.0
<b>ARMED ROBBERY</b>					
1974	526	4.8	9.8	1.0	50.0
1975	679	5.0	10.2	1.0	90.0
1976	647	5.0	9.1	1.0	100.0
1977	660	5.6	10.7	1.0	200.0
1978	352	5.0	9.0	1.0	100.0
1978 (Det.)	299	8.0	8.0	3.0	60.0
1979	95	5.6	10.0	1.0	90.0
1979 (Det.)	369	7.7	7.7	3.0	40.0
<b>ATTEMPTED ROBBERY</b>					
1974	76	1.6	4.6	1.0	18.0
1975	101	1.8	5.2	1.0	20.0
1976	102	1.9	5.3	1.0	20.0
1977	101	1.7	5.3	1.0	20.0
1978	38	1.8	5.0	1.0	20.0
1978 (Det.)	45	3.1	3.1	2.0	9.0
1979	7	1.6	5.1	1.0	10.0
1979 (Det.)	36	2.7	2.7	1.0	5.0
<b>AGGRAVATED BATTERY</b>					
1974	164	1.8	5.3	1.0	20.0
1975	234	1.7	5.3	1.0	20.0
1976	226	1.9	5.5	1.0	80.0
1977	248	1.8	5.0	1.0	100.0
1978	108	1.7	4.8	1.0	20.0
1978 (Det.)	142	3.2	3.2	1.5	8.0
1979	30	1.3	3.7	1.0	12.0
1979 (Det.)	144	2.9	2.9	2.0	8.0
<b>BURGLARY</b>					
1974	712	1.7	5.2	1.0	30.0
1975	1074	1.6	5.2	1.0	20.0
1976	1318	1.6	5.0	1.0	20.0
1977	1234	1.5	4.5	1.0	20.0
1978	505	1.5	4.2	1.0	30.0
1978 (Det.)	593	3.7	3.7	1.0	9.0
1979	115	1.5	4.3	1.0	15.0
1979 (Det.)	730	3.5	3.5	1.0	14.0

## EXHIBIT III.5.

TABLE 20

AVERAGE LENGTH OF STAY BY OFFENSE, 1974-1979

	CASES	AVERAGE STAY	STANDARD DEVIATION	MINIMUM STAY	MAXIMUM STAY	PERCENTAGE 1-5 YEARS
MURDER						
1974	5	9.1	5.0	.2	16.4	20.0
1975	8	7.3	4.0	.2	11.1	12.5
1976	10	8.5	3.4	2.2	14.4	20.0
1977	14	9.5	7.0	.5	28.4	14.3
1978	63	9.2	4.3	.5	24.0	7.9
1979	82	8.7	3.5	2.0	21.5	8.5
ATTEMPTED MURDER						
1974	0	0	0	0	0	0
1975	5	5.0	4.3	1.0	11.1	40.0
1976	5	5.3	2.9	2.6	8.7	60.0
1977	19	3.8	2.7	.7	11.8	73.7
1978	62	3.4	3.7	.0	28.4	72.6
1979	75	2.7	2.1	.0	9.1	62.7
VOLUNTARY MANSLAUGHTER						
1974	10	2.5	2.7	.0	8.7	60.0
1975	15	2.6	2.3	.2	8.4	60.0
1976	28	3.8	3.5	.2	11.3	50.0
1977	48	3.5	2.4	.1	9.8	58.3
1978	128	2.8	2.0	.0	9.0	68.8
1979	171	2.6	1.9	.0	10.6	69.6
RAPE						
1974	6	11.5	8.4	.1	23.0	16.7
1975	17	5.7	3.3	.1	12.6	52.9
1976	10	5.1	4.4	.5	14.6	60.0
1977	33	3.4	2.0	.2	9.8	78.8
1978	112	3.8	3.1	.4	22.2	80.4
1979	133	4.1	2.8	.0	13.7	72.9
ATTEMPTED RAPE						
1974	2	1.5	1.6	.4	2.6	50.0
1975	5	2.4	2.2	.2	5.5	40.0
1976	1	4.0	.0	4.0	4.0	100.0
1977	7	2.7	1.9	.5	5.6	71.4
1978	26	2.3	2.0	.1	8.1	57.7
1979	41	2.0	1.4	.1	5.4	75.6
ROBBERY						
1974	24	1.7	2.2	.0	10.4	50.0
1975	60	1.5	1.2	.0	6.2	56.7
1976	97	1.5	1.7	.0	11.1	46.4
1977	215	1.7	1.4	.0	10.9	64.2
1978	649	1.9	1.4	.0	8.7	65.3
1979	614	2.1	1.5	.1	14.4	75.6

## EXHIBIT III.5. cont'd.

TABLE 20 CONTINUED  
AVERAGE LENGTH OF STAY BY OFFENSE, 1974-1979

	CASES	AVERAGE STAY	STANDARD DEVIATION	MINIMUM STAY	MAXIMUM STAY	PERCENTAGE 1-5 YEARS
<b>ARMED ROBBERY</b>						
1974	25	3.7	3.3	.4	12.0	68.0
1975	64	3.6	2.9	.0	18.7	75.0
1976	67	3.7	2.3	.1	12.8	70.2
1977	186	2.9	1.7	.1	11.0	81.2
1978	523	3.2	1.9	.0	19.9	83.9
1979	647	3.3	2.0	.0	16.7	84.1
<b>ATTEMPTED ROBBERY</b>						
1974	4	1.7	1.5	.3	3.7	50.0
1975	6	1.4	1.3	.1	3.4	50.0
1976	9	1.4	1.0	.0	3.0	66.7
1977	33	1.9	1.6	.0	7.4	66.7
1978	108	2.3	1.7	.2	10.5	71.3
1979	106	2.1	1.3	.0	5.3	73.6
<b>AGGRAVATED BATTERY</b>						
1974	15	1.6	1.8	.2	5.9	33.3
1975	18	2.2	2.2	.1	6.6	38.9
1976	26	2.2	2.5	.1	8.6	34.6
1977	39	1.8	1.4	.2	7.4	71.8
1978	210	2.2	1.6	.2	9.8	75.2
1979	279	2.2	1.9	.0	12.7	63.8
<b>BURGLARY</b>						
1974	47	1.3	1.0	.1	4.1	42.6
1975	89	2.2	1.8	.1	9.7	65.2
1976	125	2.1	2.0	.1	10.0	52.0
1977	302	1.9	1.9	.0	16.2	52.7
1978	1,004	1.9	1.5	.0	11.2	65.4
1979	973	2.3	1.5	.0	16.8	77.4
<b>ATTEMPTED BURGLARY</b>						
1974	3	1.1	1.1	.1	2.3	33.3
1975	5	2.1	1.1	.5	3.0	80.0
1976	6	2.5	2.3	.1	7.1	50.0
1977	10	2.0	1.5	.2	4.3	70.0
1978	54	1.9	1.2	.1	5.5	72.2
1979	68	1.4	1.0	.0	4.9	55.9
<b>THEFT(Felony/Misd.)</b>						
1974	270	.4	.5	.0	4.9	3.7
1975	297	.5	.7	.1	6.5	5.7
1976	304	.5	.6	.0	5.2	6.6
1977	293	.8	.9	.0	6.2	16.0
1978	460	1.5	1.5	.0	8.7	46.1
1979	563	1.3	1.2	.0	7.4	40.0

C. Data Collection, Extraction, and Aggregation Issues for Statistics on Corrections Intake, Length of Sentence, Length of Stay, and its Impact on Corrections Populations

In Section A of this chapter a framework is described for predicting the corrections population and Section B illustrates the use of this framework for predicting corrections population using data from the Illinois Department of Corrections. Conceptually the size of a corrections population is quite simple to understand. Population size is controlled by three factors (1) the initial size of the population, (2) the number of admissions (intake) in subsequent periods, and (3) the length of stay in subsequent periods (which determines the rate of population turnover and thus the number of releases). In reality, there are a complex set of decisions internal to the system as well as some conditions external to the system (e.g., changes over time in the size of the overall population at risk) which may influence the size of the various corrections populations. Many of the factors which affect the size of corrections populations are policy sensitive and may change or be changed over time. Among the policies and procedures that can influence corrections population are the extent to which alternatives to prison are adopted (e.g., community corrections); the use of sentencing guidelines based on the identification of offender risk; and the use of programs and policies to redirect offenders - parole, commutation, revocation. Fundamental to predicting what a corrections population might be in the future is the ability to describe the characteristics of the existing population and the policies and practices of the existing system which impact on the corrections population.

Since corrections populations are the result of the volume of offender intake and length of stay, it is important to know what influences these factors. The principal contribution to much of the corrections population is the number of new commitments from the courts (e.g., to state prisons, community corrections, local jails, and probation) and the length of sentence given these new commitments by the courts. Corrections populations are also

affected by intake that is not the result of direct court sentence. This would include, for example, subsequent offender behavior which results in parole or probation revocation and commitment either because of a violation of conditions of release or the commission of a new offense. The alternative corrections processing flows are illustrated in the Figure III.1. flow diagram (Section A).

Decisions about the manner of offender processing and the duration of stay in a given correctional process are dependent on (1) the attributes of the offender and (2) the correctional alternatives that are available for sentencing. Among the attributes of the offender that appear useful in discriminating between offenders and between processing decisions made about offenders are:

1. Current Offense Type
2. Current Age
3. Age at First Arrest
4. Number of Prior Arrests
5. Number of Juvenile Probations
6. Number of Juvenile Commitments
7. Number of Prior Adult Probations
8. Number of Prior Adult Jail Terms
9. Number of Prior Adult Prison Terms
10. Known Alias (Yes or No)
11. History of Drug Abuse or Alcohol Abuse (Yes or No)
12. History of Narcotics Use (Yes or No)
13. Most Recent Employment Status
14. Occupational Skill Level
15. Educational Level
16. Marital Status
17. Pre-Trial Status
18. Jail Time on Current Sentence (if sentenced)

The correctional alternatives available for the sentencing of offenders are for the most part limited to straight probation, state prisons, local jails, and residential or community based corrections.

Efforts directed at trying to predict corrections populations require an understanding of the current system dynamics and anticipated future efforts to induce system change. For example, the fact that community residential treatment programs may be planned as alternatives to prison does not mean that they will be used for that purpose. Alternatively, while a function of sentencing may be to protect the public by minimizing risk, this does not mean that higher risk offenders will necessarily be imprisoned. When thinking about corrections processing it is important to take a "total system" view and to consider each decision-making point and each correctional program as contributors to the total functioning of the system.<sup>3.5</sup>

In support of this system perspective, offender processing needs to be described by those attributes of the offender (e.g., those associated with risk) and those attributes of processing (e.g., the various correctional alternatives and processing paths) which will support an understanding of the existing system. The collection, extraction, and aggregation of statistics on corrections processing needs to be tailored to those attributes of the offender and the system which will provide insight into existing practices. It is the description of these existing processes and the identification of potential areas for improvement that lie at the heart of initiating system change.

This process of developing a meaningful and insightful description of corrections processing can be illustrated based on the Iowa Statistical Analysis Centers' examination of "... actual sentencing practices and whether or not sentencing disparity and the lack of community residences in other than the Fifth (Judicial) District had led to the incarceration of a significant portion of the existing prison population."<sup>3.6</sup>

The description which follows is a summary of the analysis which appears in the Iowa SAC's report on prison population.<sup>3.7</sup>

<sup>3.5</sup> Crime and Criminal Justice in Iowa, Volume IX: Prison Population, Statistical Analysis Center, Office for Planning and Programming, January, 1980, p. 151,152.

<sup>3.6</sup> Ibid, p. 84

<sup>3.7</sup> Ibid, pp. 84-98

The study approach taken by the Iowa SAC was to look at new commitments from the courts to the various correction programs over a fixed period of time. (The population of new commitments was chosen over the population of offenders in a particular corrections program as of a given point in time. This was because the study was to look at sentencing disparity. The active corrections population may include not only offenders as a result of original court commitment but also offenders who are committed because of misconduct or a new offense while in a release condition). Consistent with the study purpose, differences in sentences for convicted offenders from the Fifth Judicial District (where there was a substantial residential corrections program) were compared to offenders from all other districts where there was no significant residential corrections program. The table below shows the resulting statistics on sentencing between the Districts for the period 1974-1976:

Judicial District(s)	Total Sentenced	Straight Probation	Residential Corrections	County Jail	State Prison
Fifth	1922	61.1% (1175)	18.2% (350)	0.9% (17)	19.8% (380)
Other Districts	5573	74.4% (4147)	0.2% (13)	3.7% (207)	21.6% (1206)
Statewide	7495	71.0% (5322)	4.8% (363)	3.0% (224)	21.2% (1586)

These statistics seem to suggest that the Fifth Judicial District's residential treatment program did not operate primarily as an alternative to imprisonment. One might hypothesize that had the Fifth District not had residential corrections that its state prison population might have been in the same proportion as the rest of the districts (i.e., 21.6%) with resulting commitments to state prison of 415 (21.6% of 1922). Based on this assumption then community corrections would on the surface appear to have obtained only 35 of its 350 commitments from state prisons.

The question which needs to be answered is whether or not sentencing would in fact have been the same in the judicial districts had there been no community corrections in the Fifth District. Based on an Iowa developed Offender Attribute Scale which significantly distinguishes between prison inmates and community based offenders, those offenders sentenced in the Fifth District tended to score slightly higher on the scale than offenders sentenced from the other districts.<sup>3.10</sup> These differences are shown in the following table:

Offender Attribute Grouping	Fifth District	Other Districts	All Districts
5,6,7 (High impris.)	13.6%	10.3%	11.1%
3,4 (Medium impris.)	36.2%	35.2%	35.5%
1,2 (Low impris.)	50.2%	54.5%	53.4%

<sup>3.10</sup> Ibid p. 47-57. Iowa's Offender Attribute Scale is a measure which differentiates between prison inmates and community based offenders. The seven point scale was developed based on characteristics of felony offenders active in the Iowa's adult correctional system. The offender characteristics scored in assigning each offender to a level in the scale are: type of offense (5 levels), prior record (4 levels), number of convicted offenses (2 levels), employment status (2 levels), age at sentencing (2 levels), marital status (2 levels), and race (2 levels). The following statistics summarize the results of the scorings for all felony offenders active in Iowa's adult corrections system as of October 1, 1976:

Scale Level	% of Total Offender Population	% in Community Programs*	% in Prison System**
7	2.5%	6.6%	93.4%
6	4.9%	21.6%	78.4%
5	8.5%	34.5%	65.5%
4	15.0%	57.9%	42.1%
3	19.7%	76.6%	23.4%
2	24.0%	86.5%	13.5%
1	25.3%	94.7%	5.3%

All Offenders 100% 72.7% 27.3%

\* includes offenders on probation and in community corrections

\*\* includes offenders in state institutions and post-institutional halfway houses, but not parole

This data would suggest that all things being equal, the Fifth District would have a somewhat higher rate of imprisonment than the other districts. The Iowa report then goes on to compare for each of the seven levels of the Offender Attribute Scale the breakdown of sentences received in the Fifth District and all other districts. These statistical results are:

SCALE LEVEL	JUDICIAL DISTRICT(S)	TOTAL SENTENCED	STRAIGHT PROBATION	RESIDENTIAL CORRECTIONS	COUNTY JAIL	STATE PRISON
7	-FIFTH	22	0.0%	5.0%	0.0%	95.0%
	-OTHERS	43	7.9%	0.0%	0.0%	92.1%
6	-FIFTH	86	14.1%	17.7%	1.3%	66.8%
	-OTHERS	162	24.0%	0.0%	2.9%	73.1%
5	-FIFTH	153	21.6%	26.3%	1.5%	50.6%
	-OTHERS	367	40.1%	0.5%	2.2%	57.1%
4	-FIFTH	281	44.8%	22.1%	0.8%	32.4%
	-OTHERS	771	56.9%	0.6%	3.8%	38.7%
3	-FIFTH	416	57.0%	25.9%	1.1%	16.1%
	-OTHERS	1192	71.1%	0.2%	6.3%	22.4%
2	-FIFTH	453	74.9%	15.6%	0.5%	9.0%
	-OTHERS	1449	86.2%	0.3%	3.0%	10.5%
1	-FIFTH	511	83.6%	10.4%	0.9%	5.1%
	-OTHERS	1589	89.5%	0.0%	2.9%	7.6%
ALL LEVELS						
	-FIFTH	1922	61.1%	18.2%	0.9%	19.8%
	-OTHERS	5573	74.4%	0.2%	3.7%	21.6%

By applying the observed sentencing percentages for the other districts for each scale level to the number of actual sentences in the Fifth District (and then accumulating the results over the seven scales) a comparison of the observed versus the expected results can be obtained for the Fifth District:

FIFTH JUDICIAL DISTRICT	TOTAL SENTENCED	STRAIGHT PROBATION	RESIDENTIAL CORRECTIONS	COUNTY JAIL	STATE PRISON
EXPECTED	1922	72.2% (1387.6)	0.2% (4.6)	3.7% (71.3)	23.9% (458.5)
OBSERVED	1922	61.1% (1175)	18.2% (350)	0.9% (17)	19.8% (380)
DIFFERENCE	0	11.1% (212.6)	18.0% (345.4)	2.8% (54.3)	4.1% (78.5)
		61.6% ←	↓	15.7% →	22.7%

Based on this comparison of the expected versus observed (controlling for the higher offender attribute scales in the Fifth District and assuming this is the sole source of sentencing difference) then residential corrections operated as an alternative to imprisonment for 78.5 persons or only 22.7% of new court commitments to these facilities. One would also conclude that residential corrections in the Fifth District was responsible for a 17.1% reduction in new court commitments to prison, a 76.2% reduction in new jail commitments and a 15.3% reduction in straight probation.

Alternatively, one could hypothesize what the impact of residential corrections would be if such facilities existed in the other districts by comparing the observed results in the other districts with the results that would have been expected given sentencing followed (per offender attribute scale) the patterns observed in the Fifth District:

OTHER JUDICIAL DISTRICTS	TOTAL SENTENCED	STRAIGHT PROBATION	RESIDENTIAL CORRECTIONS	COUNTY JAIL	STATE PRISON
EXPECTED	5573	63.5% (3540.6)	17.9% (997.2)	0.9% (48.1)	17.7% (987.0)
OBSERVED	5573	74.4% (4147)	0.2% (13)	3.7% (207)	21.6% (1206)
DIFFERENCE	0	10.9% (606.4)	17.7% (984.2)	2.9% (158.9)	3.9% (219)

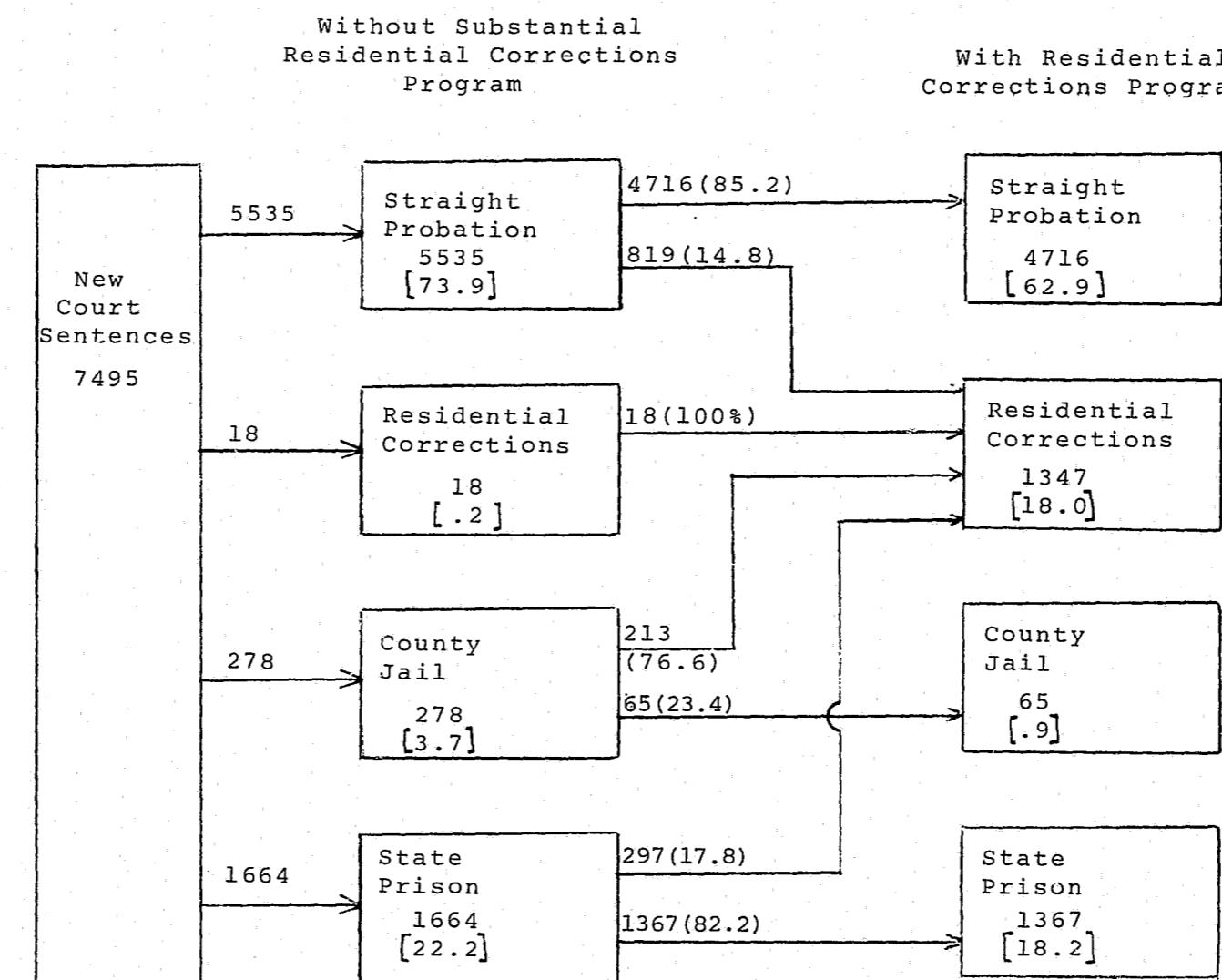
61.6% → ↑ ← 16.1% ← 22.3%

The expected result of having residential facilities outside of the Fifth District would be that 219 or 22.3% of the 984 direct court commitments to residential facilities would be from the existing prison commitments. Thus the availability of residential corrections throughout the state would be expected under the stated assumptions to reduce new court commitments to state prisons by 297 or a 17.8% reduction from an expected 1664 (1206 + 458) new court commitments to state prison without any residential program. Based on the original question of sentencing disparity, the analysis suggests that 219 offenders (outside the Fifth District) received state prison commitments because of the lack of residential corrections programs in those districts.

Figure III.3. summarizes this corrections processing flow. Shown are the expected sentences that would have occurred without residential corrections (under the stated assumptions) and the expected sentences that would occur with statewide residential corrections. As shown, the majority of the offenders that would receive residential corrections commitments come from straight probation - 819 or 60.8% (of 1347), followed by state prison -- 297 or 22.0%, and local jails -- 213 or 15.8%.

In planning for current and future correction needs, information on expected changes in court commitments (e.g., as a result of introducing statewide residential corrections) would be used in conjunction with the corrections prediction techniques of Section A to estimate the size of the expected offender population in each of the correctional alternatives (i.e., prison, jails, residential facilities, probation, parole). The above description

FIGURE III.3 Comparison of Expected Iowa Court Sentences With and Without Residential Corrections Respectively, 1974-1976



[ ] = % of Total New Court Sentences

( ) = % of Total Exiting a Stage

of Iowa's processing of adult felony offenders provides some insight into the attributes of the offender and of the manner of offender processing that are important in describing the corrections system and in anticipating the impact of change in the system.

When the issues of data collection, extraction and aggregation are discussed in the previous chapters of this report, a list of characteristics related to the type of processing being considered are identified as being important. Listed below are these same characteristics as they might apply to corrections processing:

1. Type of offense of the offender e.g., sentenced offense
2. Accounting unit for display e.g., the offender
3. Jurisdiction of the offender e.g., sentencing jurisdiction, county of residence
4. Manner of processing e.g., new court commitment, commitment as a result of revocation or return from escape, manner of release
5. Population and period of time e.g., number of offenders active in corrections as of a given day, offender stocks; offender intake over a given period of time or offender departures over a given period of time, offender flows
6. Elapsed time e.g., length of sentence, length of stay in a corrections program prior to departure
7. Elapsed Time Statistics - mean, median length of sentence and length of stay; the number and percent of offender admissions for length of sentence intervals; the length of stay for offenders released as a function of the length of sentence intervals.

In addition to these items, the Iowa work described in this Section illustrates the importance in describing corrections processing of knowing some additional characteristics of the offender. For example, the characteristics of the offender used in developing Iowa's Offender Attribute Scale include information on some or all of the following: age; race; prior arrest, conviction and corrections history (both juvenile and adult); drug and alcohol abuse

history and use; marital status; employment history and status; education level; use of alias; and pre-trial status. These attributes of the offender are combined in such a way to enable offender populations (active or intake) to be differentiated along some composite dimension or scale (e.g., the Offender Attribute Scale is intended to differentiate between the active population of community based versus prison offenders while the Risk Assessment Scoring is intended to differentiate between offender commitments based on measures of the offender's potential harm to public safety).

Thus, a meaningful description of offender processing through corrections is dependent not only on the ability to describe the offender for any one of a number of single dimensions, but also the ability to describe the offender along some composite dimensions. This latter capability is particularly important when describing corrections processing where determinations of program success and failure as well as offender eligibility and ineligibility for alternative programs may depend on the ability to differentiate or discriminate between offenders. The collection, extraction, and aggregation of offender processing information and statistics are thus likely to be more useful where meaningful composite attributes of the offender can be compared to the manner of processing. This should facilitate corrections decisions and the making of improved judgements about the effectiveness of existing treatments, the potential for change, and the consequences of change in terms of its impact on the public, the offender, and the criminal justice system.

D. Alternative Sources of Data in Support of Statistics on Corrections Intake, Length of Sentence, Length of Stay and its Impact on Corrections Populations

The same list of information systems and sources described in the previous two chapters for generating statistics on offender processing and elapsed time between events in processing are candidates for generating statistics on corrections processing flows and stocks. Information on the number of court commitments and length of sentence for persons sentenced to state prisons, probation, and local jails may be available from the sentencing component of judicial and prosecutor information systems (both local and statewide) as well as from a statewide computerized criminal history and/or offender based transaction statistics (CCH/OBTS) data base. With the possible exception of some CCH systems, the above systems typically do not, however, track the movement of the offender from corrections intake through departure. Information on offender intake, movement, and release is, instead, typically maintained on correctional agency information systems. These data bases, where properly maintained, are likely to support the generation of statistics on intake, length of sentence, length of stay, and the size of the active population. In addition to the automated systems, many correctional agencies produce manual counts and reports from which certain statistical tabulations on intake, length of sentence, length of stay, and size of the active population can be obtained.

Listed below are the offender oriented information systems and sources noted in Section D of both chapters I and II. The systems which are the likely candidates for information on court commitments and length of sentence are noted by an asterick (\*) and the systems which are likely to be able to support statistics on corrections intake, departures, length of sentence, length of stay, and size of the active population are noted by a double asterick (\*\*).

1. Examples of State Level Automated Information Systems
  - a. Uniform Crime Reports - Arrests
  - b. Automated Name Identification Index

- \*c. Computerized Criminal History System/Offender Based Transaction Statistics
- \*d. Prosecutor Management Information System (possibly a PROMIS)
- \*e. State Judicial Information System (or equivalent)
  - (1) Lower Court
  - (2) Upper Court
  - (3) Combined/Unified Court
- f. Public Defenders Information System
- \*\*g. Offender Based State Corrections Information System (or equivalent)
  - (1) State Custody
  - (2) State Supervision

2. Examples of Agency (Local) Management Information Systems

- a. Law Enforcement Arrest and Booking
- b. Pre-Trial Release MIS
- \*c. Prosecutor MIS (PROMIS or equivalent)
- \*d. Court Scheduling and Case Tracking MIS
- \*\*e. Jail Inmate Accounting MIS
- \*\*f. Local Supervision MIS
- g. Public Defender MIS
- h. Common/Integrated MIS serving several agencies and maintaining person in-process information from arrest through court disposition and sentencing

3. Examples of Manually Generated Data Bases

- \*\*a. Extracting processing information on a sample or universe of offenders using one or more agency files
- \*\*b. Use of various agency published or internal reports and working papers to put together an aggregate description of offender processing

In order to provide a composite description of offender processing through the corrections components of the criminal justice system (e.g., as represented in the Figure III.1. flow diagram) statistics on aggregate processing flows and stocks may have to be obtained from a number of the above sources (e.g., statewide judicial information system(s) for court commitment statistics, the various correctional agency information systems for intake, departure, and active population statistics). As illustrated in Section B of this chapter, both automated and manual sources of data maintained by the Illinois

Department of Corrections were necessary to meet the data requirements for the deterministic model for predicting inmate population. Similar data would be needed to develop comparable predictive equations for local jail, probation, and parole populations. This data would typically have to come from automated or manual sources maintained by the respective agencies which provide the correctional services. Also, the level at which the analysis is to be performed (e.g., for various subsets of the offender population as described by the offender's type of offense, age, race, prior record) impacts on the sources of data needed to generate the statistical description.

As stated in the previous chapters, the choice of which data base or data bases are used to generate the correction processing statistics depends on: (1) the types of questions being asked or anticipated to be asked, (2) the data needed to address the question(s) in whole or in part, (3) the availability of one or more data bases to choose from, (4) the ability to get access to the data bases for statistical purposes, and (5) the degree of difficulty (including the cost) in creating and maintaining the record structure and output program(s) which will support the needed statistics.

E. Data Files and Output Reports in Support of Statistics on Corrections Intake, Length of Sentence, Length of Stay and its Impact on Corrections Populations

The previous sections of this chapter describe an overall framework for predicting corrections population (Section A), illustrate the use of this framework for predicting inmate population using actual state data describing inmate processing (Section B), describe considerations in the collection, extraction, and aggregation of statistics on corrections processing, and provide examples of available information systems in support of a description of corrections processing (Section D). In this section, the actual data elements and output reports in support of statistics on corrections intake, length of sentence, length of stay and its impact on corrections populations are discussed.

To support the description of offender processing and prediction of corrections population (i.e., probation, parole, jail sentence, prison, and community corrections populations) data bases are needed which record certain basic offender information at the time of corrections admission and again at the time of offender release from corrections. Such a data base could naturally be made more complex by including information, for example, on status changes and/or movements while the offender is still active in corrections as well as information on prior history (criminal, socio/economic) and programs and treatments (past and current). Table III.1. shows the basic data elements required to describe the offender at intake, departure, and while active in the corrections system. The data elements listed are typically available on automated data bases that support prison, parole, probation, jail, and community corrections offender case tracking and movement. These same data elements are also included in the core data base\* of the national Offender Based State Corrections Information System (OBSCIS) Model. This model has been adopted by many states.

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\*The core data base includes those data elements needed to support a national corrections information system and meet state national reporting requirements.

TABLE III.1. - Core Data Elements for Developing a Statistical Description of Corrections Intake, Departure, and Active Population

	Offender Case Opened (Intake)	Offender Case Closed (Departure)	Offender Case Open (Active)
Sentencing Jurisdiction	X	X	X
Jurisdiction of Residence	X	X	X
Supervising Jurisdiction	X	X	X
Sentencing Court	X	X	X
Sentenced Offense(s)	X	X	X
Length of Sentence	X	X	X
Beginning Sentence Served Date	X	X	X
Date of Admission	X	X	X
Type of Intake	X	X	X
-Parole or Probation-e.g., honor, standby, intensive			
-Prison-e.g., new court commitment, parole or probation, revocation			
Date of Release		X	
Type of Release/Closure		X	
-Parole or Probation-e.g., revocation, transfer, satisfactory release			
-Prison-e.g., escape, parole, commutation, expiration			
Race	X	X	X
Sex	X	X	X
Date of Birth	X	X	X

Given a data base and a corresponding file structure in support of the Table III.1. data elements, then a number of very simple yet descriptive output reports on offender processing can be generated. The exhibits which follow are illustrative of the types of output reports that can be generated with such a data base for prison, probation, and parole offenders:

Exhibit III.6. - shows the intake, discharge, and current (active) parole and probation population broken down by sentencing jurisdiction, court, and offender sex, race, offense, and age groupings. This report is designed to be generated for any jurisdiction (or statewide or certain combinations of jurisdictions) where the jurisdiction can be either the original sentencing jurisdiction and court (e.g., District, Circuit Court) or the jurisdiction in which the offender is/was supervised. The report can also be generated for any desired time period (e.g., intake and discharge for the quarter and active population as of the end of the quarter).

Exhibit III.7. - shows probation and parole intake as a function of the length of sentence (i.e., maximum duration of stay). The report is generated for a given jurisdiction (sentencing court location), with breakdowns by type of court (e.g., District, Circuit) and type of offense (e.g., larceny, burglary, robbery).

Exhibit III.8. - shows for either probation or parole cases that closed for a given period, the relationship between the length of sentence (i.e., maximum duration of stay) and the length of stay (average supervision time) as a function of the type of case closure. The report is generated for a given jurisdiction (sentencing court location) with breakdowns by type of court (e.g., District, Circuit), type of case (e.g., parole, probation), and type of offense (e.g., larceny, burglary, robbery). Using the empirical relationship between length of sentence and length of stay as derived from this report, the expected length of stay could be estimated for new parole and probation intake based on the information on length of sentence provided in the Exhibit III.7. report.

Exhibit III.9. - shows the intake, discharge, and active state inmate population (both beginning and ending) broken down by sentencing jurisdiction and court as well as inmate sex, race, offense, and age groupings. This report is the inmate counterpart of the report on parole and probation supervision

population, Exhibit III.6. Like the supervision population report, this report can be generated for any jurisdiction where the jurisdiction can be either the original sentencing jurisdiction and court or the jurisdiction of inmate residence. The report can also be generated for any desired time period (e.g., inmate intake and discharge for the quarter and active population as of the end of the quarter).

Exhibit III.10. - shows the length of sentence for state inmate intake broken down by sentencing jurisdiction and court as well as sex, race, and offense groupings. The report can be generated for intake over any desired time period (e.g., month, quarter, calendar year, fiscal year), jurisdiction, and sentencing court.

Exhibit III.11. - shows the average length of stay (in days) for inmates released from the Division of Correction as a function of type of offense and type of release. The report is generated for a given sentencing jurisdiction (and/or court) with breakdowns as a function of length of original court sentence (e.g., 37-60 months). This report provides the empirical base for estimating the length of stay for new prison intake based on their length of sentence at admission.

While the corrections data base as represented in Table III.1. could support the generation of other reports describing corrections processing, the reports shown in Exhibits III.6. - 11. are illustrative of the principal types of reports needed to support the population prediction framework described in Section A and illustrated with actual data in Section B.

In order to be able to develop more complex descriptions of corrections processing and better prediction frameworks the Table III.1. data base is probably insufficient. More complex descriptions of corrections processing would require a data base that could support the ability to (1) identify offender characteristics associated with the decision to incarcerate versus to place in community based programs, (2) profile the current inmate population for classification and placement, (3) assess the risk (e.g., potential future harm to public safety) of convicted offenders as a guide to sentencing, and (4) anticipate the impact on court sentencing of the addition of alternative correctional services (e.g., residential facilities).

In Section C of this chapter a list of offender characteristics determined to be important in developing an understanding of more complex corrections processes is provided. These offender characteristics are listed in Table III.2. along with an indication of the extent to which information systems supporting Computerized Criminal Histories (CCH) and Offender Based State Corrections Information Systems (OBSCIS) are able to meet these data requirements. As Table III.2. indicates, a state CCH data base should support the generation of a number of the offender characteristics needed to support complex descriptions of corrections processing. With a state OBSCIS System (supporting inmate and parole and perhaps probation offenders) the potential exists for the systematic collection and extraction of many of the other needed offender characteristics. While the core level OBSCIS data base would typically only support the statistical description of processing as represented by Table III.1., the recommended level OBSCIS data base, and in particular the optional level OBSCIS data elements would support a more complex description of offender processing.

Where a state is maintaining both CCH and OBSCIS data bases (including the fingerprint supported link between offenders on these respective data bases) then the potential exists to systematically create a statistical data base in support of the complex analysis of corrections processing. The only data elements of importance that such combined data bases may not support are age at first arrest (where first arrest is as a juvenile), number of juvenile probations, and number of juvenile commitments. Even these data elements may be available where, for example, information collected during a pre-sentence report serves as an input document to an OBSCIS data base.

In summary, many existing corrections information systems are likely to be good sources of data in support of basic descriptions of offender intake, length of sentence, and duration of stay. These statistical descriptions can be used to support the corrections prediction framework as described and illustrated in Sections A and B.

TABLE III.2. - Data Elements for Developing More Complex Analyses of Corrections Processing

Offender Characteristics	Computerized Criminal History	Offender Based State Corrections Information System*		
		Core Level Data Elements <sup>a</sup>	Recommended Level Data Elements <sup>b</sup>	Optional Level Data Elements <sup>c</sup>
Current Offense Type	X	Offense Code	Offense Code	Offense Code; Parole Violation, New Offense
Current Age	X	Birth Date	Birth Date	Birth Date
Ethnicity	X	Ethnic Origin	Ethnic Origin	Ethnic Origin
Age at First Arrest				
Number of Prior Arrests	X(Adult)			
Number of Juvenile Probations				
Number of Juvenile Commitments				
Number of Prior Adult Convictions	X			
Number of Prior Adult Probations	X			Probation History
Number of Prior Adult Jail Terms	X			Time Served w/ Other Agency
Number of Adult Prison Terms	X			Parole History; Adult Criminal Commitment History
Known Alias	X		Alias	Alias
History of Drug or Alcohol Problem				Physical & Other Disabilities
History of Narcotics Use				Physical & Other Disabilities
Most Recent Employment Status			Employment	Employment
Occupational Skill Level			Employment	Employment; Vocational Education
Educational Level		Last Grade Completed; Tested Grade Level	Last Grade Completed; Tested Grade Level	Last Grade Completed; Tested Grade Level; Vocational Education
Marital Status			Marital Status	Marital Status
Pre-Trial Status	X			
Jail Time on Current Sentence		Status Action- Date, Jurisdiction, Location, Type	Status Action- Date, Jurisdiction, Location, Type	Status Action- Date, Jurisdiction, Location, Type

a. Core - data elements needed to support a national corrections information system and to meet state reporting obligations

b. Recommended - data elements necessary to meet the core needs plus a state's unique needs

c. Optional - data elements for states developing additional capabilities or features

\*Source: OBSCIS, Technical Report No. 16, SEARCH Group, Inc., November, 1976, pp. 3-15.

respectively. In addition, where more extensive CCH and OBSCIS data bases exist, the ability to combine information on the offender from these several data bases may go a long way towards the systematic generation of a corrections data base that can support more complex descriptions and analyses of corrections processing. While such a data base may still have to be supplemented by some information obtained from manual files, the task of constructing the data base may be made easier using available automated systems.

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## DIVISION OF PAROLE AND PROBATION

RUN DATE 10/30/79

INTAKE, DISCHARGE AND CURRENT POPULATION BY SEX, JURISDICTION, RACE, OFFENSE AND AGE

## MALES AND FEMALES-COUNTY TOTALS

COURT/JURISDICTION-BALTIMORE CITY

DISTRICT

-----INTAKE BETWEEN 07/01/78-06/30/79-----\*-----DISCHARGE BETWEEN 07/01/78-06/30/79-----\*

\*-----PAROLE-----\*-----PROBATION-----\*-----PAROLE-----\*-----PROBATION-----\*

(CASES A,B,C,N) (CASES F,G,H) (CASES A,R,C,N) (CASES F,G,H)

RACE DEFENSE GROUPS JND18 18-30 OVR30 TOTAL UND18 18-30 OVR30 TOTAL UND18 18-30 OVR30 TOTAL UND18 18-30 OVR30 TOTAL

WHITE	CRIM. HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	ROBBERY	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
	AGGRAV. ASSAULT	0	12	8	20	0	124	87	211	0	14	6	20	0	117	83
	BURGLARY	0	4	2	6	0	43	4	47	0	5	3	8	0	25	5
	LARCENY	0	5	5	10	0	118	28	146	0	7	4	11	0	71	34
	SER. NARCOTICS	0	1	0	1	0	13	2	.15	0	1	0	1	0	8	0
	OTHER OFFENSES	0	30	16	46	7	772	453	1232	0	29	13	42	3	739	536
WHITE - TOTAL		0	55	31	86	7	1070	574	1651	0	56	26	82	3	960	659
BLACK	CRIM. HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FORCIBLE RAPE	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0
	ROBBERY	0	11	7	18	1	1	0	2	0	3	1	4	0	0	0
	AGGRAV. ASSAULT	0	75	24	99	2	274	185	461	0	61	25	86	1	294	190
	BURGLARY	1	38	5	44	0	143	11	154	1	43	9	53	0	106	15
	LARCENY	1	60	11	72	5	358	108	471	1	78	10	89	2	378	102
	SER. NARCOTICS	0	2	2	4	0	8	1	9	0	2	5	7	0	14	2
	OTHER OFFENSES	0	132	51	184	5	1196	931	2032	0	101	49	150	4	1045	901
BLACK - TOTAL		2	319	101	422	13	1980	1136	3129	2	288	100	390	7	1837	1210
OTHER	CRIM. HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ROBBERY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AGGRAV. ASSAULT	0	0	0	0	0	5	1	6	0	1	0	1	0	5	2
	BURGLARY	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0
	LARCENY	0	0	0	0	0	2	1	3	0	0	0	0	0	1	1
	SER. NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	OTHER OFFENSES	0	0	0	0	0	17	12	29	0	0	0	0	0	16	16
OTHER - TOTAL		0	0	0	0	0	26	14	40	0	1	0	1	0	22	19
ALL	CRIM. HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FORCIBLE RAPE	0	0	1	1	0	0	0	0	0	1	1	0	0	1	1
	ROBBERY	0	14	7	21	1	1	0	2	0	3	1	4	0	0	0
	AGGRAV. ASSAULT	0	87	32	119	2	403	273	678	0	76	31	107	1	416	275
	BURGLARY	1	42	7	50	0	188	15	203	1	48	12	61	0	131	20
	LARCENY	1	65	16	82	5	478	137	620	1	85	14	100	2	449	137
	SER. NARCOTICS	0	3	2	5	0	21	3	24	0	3	5	8	0	23	2
	OTHER OFFENSES	0	163	67	230	12	1985	1296	3293	0	130	62	192	7	1800	1453
ALL - TOTAL		2	374	132	508	20	3076	1724	4820	2	345	126	473	10	2819	1888
																4717

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Exhibit III.6.

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BILLING NO. B30449

## DIVISION OF PAROLE AND PROBATION

RUN DATE 10/30/79

INTAKE, DISCHARGE AND CURRENT POPULATION BY SEX, JURISDICTION, RACE, OFFENSE AND AGE

## MALES AND FEMALES-COUNTY TOTALS

COURT/JURISDICTION-BALTIMORE CITY

DISTRICT

\*-----CURRENT POPULATION AS OF 06/30/79-----\*

\*---PAROLE---\*---PROBATION---\*

(CASES A,B,C,N) (CASES F,G,H)

RACE OFFENSE GROUPS UNDIA 18-30 OVR30 TOTAL UNDIA 18-30 OVR30 TOTAL

RACE	CRIM. HOMICIDE	0	0	7	0	0	0	0	0
	FORCIBLE RAPE	0	0	0	0	0	0	0	0
	ROBBERY	0	5	0	5	0	0	0	0
	AGGRAV. ASSAULT	0	9	7	16	0	193	137	330
	BURGLARY	0	3	1	4	0	73	15	88
	LARCENY	0	6	6	12	0	172	60	232
	SER. NARCOTICS	0	6	1	1	0	17	4	21
	OTHER OFFENSES	0	24	15	39	5	984	710	1699
	WHITE - TOTAL	0	47	30	77	5	1439	926	2370
BLACK	CRIM. HOMICIDE	0	0	2	2	0	0	0	0
	FORCIBLE RAPE	0	0	1	1	0	0	0	0
	ROBBERY	0	18	11	29	1	2	1	4
	AGGRAV. ASSAULT	1	57	27	85	1	422	314	737
	BURGLARY	0	32	6	38	0	201	26	227
	LARCENY	0	34	15	49	4	573	204	781
	SER. NARCOTICS	0	1	3	4	0	14	7	21
	OTHER OFFENSES	1	101	47	149	5	1715	1482	3202
	BLACK - TOTAL	2	243	112	357	11	2927	2034	4972
OTHER	CRIM. HOMICIDE	0	0	0	0	0	0	0	0
	FORCIBLE RAPE	0	0	0	0	0	0	0	0
	ROBBERY	0	0	0	0	0	0	0	0
	AGGRAV. ASSAULT	0	0	0	0	0	10	5	15
	BURGLARY	0	0	0	0	0	4	0	4
	LARCENY	0	0	0	0	0	6	5	11
	SER. NARCOTICS	0	0	0	0	0	0	0	0
	OTHER OFFENSES	0	2	0	2	0	23	23	46
	OTHER - TOTAL	0	2	0	2	0	43	33	76
ALL	CRIM. HOMICIDE	0	0	2	2	0	0	0	0
	FORCIBLE RAPE	0	0	1	1	0	0	0	0
	ROBBERY	0	23	11	34	1	2	1	4
	AGGRAV. ASSAULT	1	56	34	101	1	625	456	1082
	BURGLARY	0	35	7	42	0	278	41	319
	LARCENY	0	40	21	61	4	751	269	1024
	SER. NARCOTICS	0	1	4	5	0	31	11	42
	OTHER OFFENSES	1	127	62	190	10	2722	2215	4947
	ALL - TOTAL	2	292	142	430	16	409	2993	718

Exhibit III.6. (cont'd.)

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## PROG-B60002 MARYLAND DIVISION OF PAROLE AND PROBATION - INTAKE FOR PERIOD 01/01/76 - 12/31/76 (DATE CASE OPENED)

COURT LOCATION- 00, BALTIMORE CITY

TYPE OF COURT- 1,DISTRICT

OFFENSE

MAXIMUM DURATION OF SUPERVISION IN MONTHS (EXPIRATION DATE - DATE CASE OPENED)

	0-3	3-6	6-9	9-12	12-18	18-24	24-30	30-36	36-48	48-60	60-90	90-120	120+	IS	LS	NA	BAD	TOTAL
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TYPE OF CASE - A	3	5	10	3	4	2	2	0	1	0	0	0	1	0	0	0	1	32
Parole	B	1	0	5	0	2	0	0	0	0	0	0	0	0	0	0	0	8
	C	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	4
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	E	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	SUBTOTAL		5	6	15	4	7	2	2	0	2	0	0	1	0	0	1	45
	F	0	5	1	29	31	29	2	44	2	0	0	0	0	0	0	1	144
Probation	G	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	4
	H	0	0	0	0	1	3	11	0	4	0	0	0	0	0	0	0	19
	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	J	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SUBTOTAL		0	0	5	1	30	34	43	2	49	0	0	0	0	0	1	167
	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Support	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SUBTOTAL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mandatory	N	14	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	18
Support	O	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	SUBTOTAL		15	1	0	0	0	1	0	0	0	0	0	0	0	0	2	19

GRAND TOTAL . . . 231

Exhibit III.7.

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## PROG-B60002 MARYLAND DIVISION OF PAROLE AND PROBATION - INTAKE FOR PERIOD 01/01/76 - 12/31/76 (DATE CASE OPENED)

COURT LOCATION- OO, BALTIMORE CITY

TYPE OF COURT- 2,CIRCUIT 3,SUPREME BENCH

OFFENSE MAXIMUM DURATION OF SUPERVISION IN MONTHS (EXPIRATION DATE - DATE CASE OPENED)

6. BURGLARY													IS	LS	NA	BAD	TOTAL
	0-3	3-6	6-9	9-12	12-18	18-24	24-30	30-36	36-48	48-60	60-90	90-120	120+				
TYPE OF CASE - A	6	3	6	8	6	16	7	4	11	1	1	2	0	0	0	0	71
B	1	2	0	1	8	7	3	5	5	2	0	0	0	0	0	0	35
C	0	2	1	2	2	0	1	0	1	0	0	0	0	0	0	0	9
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	7	7	7	11	16	23	11	9	18	3	1	2	1	0	0	0	116
F	0	1	2	17	22	32	1	35	6	17	0	0	1	0	0	0	134
G	0	1	0	1	2	0	0	2	0	4	0	0	0	0	0	0	10
H	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	2	2	2	18	25	33	1	37	6	22	0	0	1	0	0	0	147
K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	6	4	2	2	3	1	0	0	0	0	0	0	0	0	0	0	18
O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	6	4	2	2	3	1	0	0	0	0	0	0	0	0	0	0	18
															GRAND TOTAL 281		

Exhibit III.7. (cont'd.)

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III. A.1. MARYLAND DIVISION OF PAROLE AND PROBATION - CASE CLOSED FOR PERIOD 01/01/73 - 12/31/73 (NOTE CASE CLOSED)  
COUNTY LOCATION- 16 PRINCE GEORGES

CLINT LOCATION- 16, PRINCE GEORG

**TYPE OF COURT- 1. DISTRICT (Probation)**

MAXIMUM DURATION OF EXHIBITION IN MONTHS - EXPIRATION DATE = DATE CASE PRENDRA

OFFENSE MAXIMUM DURATION OF SUPERVISION IN MONTHS EXPIRATION DATE - DATE CASE OPENED

0. BURGLARY	0-3	3-6	6-9	9-12	12-18	18-24	24-30	30-36	36-48	48-60	60-90	90-120	120+	IS	LS	NA	BAD	TOTAL	SCP
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II. A.2. MARYLAND DIVISION OF PAROLE AND PROBATION - CASE CLOSED FOR PERIOD 01/01/73 - 12/31/73 (DATE CASE CLOSED)

LOCATE LOCATION - 16, PRINCE GEORGES

(Probation)

TYPE OF OFFENSE - 21, INCLIT

TYPE OF CASE - F,G P+I+J

MAXIMUM DURATION OF SUPERVISION IN MONTHS (EXPIRATION DATE - DATE CASE OPENED)

6. BURGLARY	MAXIMUM DURATION OF SUPERVISION IN MONTHS (EXPIRATION DATE - DATE CASE OPENED)												IS	LS	NA	BAD	TOTAL	RCF	CCL
	0-3	3-6	6-9	9-12	12-18	18-24	24-30	30-36	36-48	48-60	60-90	90-120							
<b>TYPE OF CLOSURE</b>																			
0 DISCHARGED	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	440.0	
Avg. Based On	0	0	0	0	18.0	26.5	22.0	0	0	0	0	0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	50.0	50.0	0	0	0	0	0	0	0	0	0	0	0	0	
1 REVOCATION	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	110.0	
Avg. Based On	0	0	0	0	5.5	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	99.2	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	
2 ORDER PPR-SAT.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	
3 UNSATISFACTORY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	
4 ORDER CT-SAT.	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	220.0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0	29.2	12.0	12.0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0	50.0	50.0	50.0	0	0	0	0	0	0	
5 ORDER CT-UNSAT.	0	0	0	0	4	0	0	0	1	0	1	0	0	0	0	0	0	220.0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	14.6	0.0	21.0	0.0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	99.2	0.0	0.0	0	50.0	50.0	50.0	0.0	0	0	0	0	0	0	
6 CT. REVERSED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
7 TRANSF'L OUT ST	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110.0	
Avg. Based On	2.0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
% LF ROW	99.2	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
8 COMMUTATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
9 DECEASED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
10 BLANK-OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Avg. Based On	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
% LF ROW	0	0	0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	
TOTALS	1	0	0	0	0	3	2	0	1	1	2	0	0	0	0	0	0	10.994	
Avg. Based On	1	0	0	0	0.0	1.0	1.0	0	1.0	1.0	1.0	0.0	0	0	0	0	0	0	
% LF ROW	2.0	0	0	0	0.0	12.2	24.5	0	14.6	29.2	16.6	0.0	0	0	0	0	0	0	
ELF-MCH	10.0	0	0	0	0.0	30.0	20.0	0	20.0	30.0	10.0	20.0	0	0	0	0	0	0	

B-30460 FISCAL YEAR - 1979 DIVISION GF CORRECTION DATE 07/20/79

SENTENCING JURISDICTION - BALTIMORE CITY - CIRCUIT COURTS INMATE SEX - MALES ONLY

INTAKE, DISCHARGE AND CURRENT POPULATION BY JURISDICTION, COURT, RACE, OFFENSE AND AGE GROUP

\*-FY BEGINNING POPULATION---FISCAL YEAR INTAKE---FISCAL YEAR DISCHARGE---FY YEAR-END POPULATION\*

RACE	OFFENSE GROUPS	UND18	18-30	UVR30	TOTAL												
WHITE	CRIMINAL HOMICIDE	0	25	30	55	2	5	5	12	1	4	6	11	0	26	30	56
WHITE	FORCIBLE RAPE	1	10	9	20	0	5	1	6	0	3	1	4	1	11	10	22
WHITE	ROBBERY	3	54	36	96	3	17	4	24	0	24	9	33	3	48	36	87
WHITE	AGGRAVATED ASSAULT	1	32	23	56	1	19	17	37	1	21	19	41	1	29	22	52
WHITE	BURGLARY	1	36	25	62	1	28	8	37	0	20	11	31	1	44	23	68
WHITE	LARCENY	0	10	11	21	1	9	1	11	0	8	6	14	0	12	6	18
WHITE	SERIOUS NARCOTICS	0	5	3	8	0	8	4	12	0	5	1	6	0	6	8	14
WHITE	OTHER OFFENSES	0	60	42	102	1	42	30	73	0	41	25	66	0	59	50	109
WHITE	TOTALS	0	232	162	420	9	133	70	212	2	126	78	206	6	235	185	426
BLACK	CRIMINAL HOMICIDE	0	321	250	577	8	68	31	107	1	47	48	96	7	323	257	587
BLACK	FORCIBLE RAPE	5	78	66	149	2	26	15	43	2	11	15	28	2	88	74	164
BLACK	ROBBERY	23	1,115	342	1,480	41	251	47	339	5	299	99	403	24	1,050	341	1,415
BLACK	AGGRAVATED ASSAULT	5	107	97	209	7	102	40	149	2	71	44	117	3	195	103	301
BLACK	BURGLARY	6	266	68	340	19	115	13	147	8	133	20	161	8	244	72	324
BLACK	LARCENY	0	90	36	129	1	56	20	77	0	56	19	75	1	85	45	131
BLACK	SERIOUS NARCOTICS	0	27	47	74	0	10	15	25	0	11	30	41	0	18	40	58
BLACK	OTHER OFFENSES	2	335	282	619	9	240	145	394	2	215	181	398	5	340	269	614
BLACK	TOTALS	47	2,399	1,191	3,637	87	868	326	1,281	20	843	456	1,319	50	2,343	1,201	3,594
CTHER	CRIMINAL HOMICIDE	0	2	1	3	0	0	1	0	0	1	0	1	0	2	1	3
CTHER	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CTHER	ROBBERY	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	1
CTHER	AGGRAVATED ASSAULT	1	1	2	4	0	0	1	0	0	0	1	1	0	0	0	4
CTHER	BURGLARY	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
CTHER	LARCENY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CTHER	SERIOUS NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CTHER	OTHER OFFENSES	0	0	1	1	0	0	1	0	0	0	0	0	0	1	1	2
CTHER	TOTALS	1	3	6	10	0	3	0	3	0	1	2	3	0	6	4	10
UNKNOWN	CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	ROBBERY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	AGGRAVATED ASSAULT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	BURGLARY	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
UNKNOWN	LARCENY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	SERIOUS NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	OTHER OFFENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	TOTALS	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
ALL	CRIMINAL HOMICIDE	0	348	281	635	10	74	36	120	2	52	54	108	7	351	288	646
ALL	FORCIBLE RAPE	0	88	75	169	2	31	16	49	2	14	16	32	3	99	84	186
ALL	ROBBERY	20	1,164	382	1,577	44	268	51	363	5	323	109	437	27	1,098	377	1,502
ALL	AGGRAVATED ASSAULT	7	290	122	324	3	122	57	187	3	92	64	159	4	227	126	357
ALL	BURGLARY	7	302	65	404	20	143	21	184	8	153	31	192	9	288	97	394
ALL	LARCENY	0	100	50	150	2	65	21	88	0	64	25	89	1	97	51	149
ALL	SERIOUS NARCOTICS	0	32	50	32	0	18	19	37	0	16	31	47	0	24	48	72
ALL	OTHER OFFENSES	2	395	325	722	10	283	175	408	2	256	206	464	5	400	320	725
ALL	TOTALS	54	2,634	1,330	4,068	96	1,004	396	1,496	22	970	536	1,528	56	2,584	1,391	4,031

Exhibit III.9.

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E-30460 FISCAL YEAR - 1979 DIVISION OF CORRECTION DATE 07/20/79

SENTENCING JURISDICTION - BALTIMORE CITY - OTHER COURTS INMATE SEX - MALES ONLY

INTAKE, DISCHARGE AND CURRENT POPULATION BY JURISDICTION, COURT, RACE, OFFENSE AND AGE GROUP

\*-FY BEGINNING POPULATION---FISCAL YEAR INTAKE---\*FISCAL YEAR DISCHARGE---\*FY YEAR-END POPULATION\*

RACE	OFFENSE GROUPS	UND18	18-30	OVR30	TOTAL	UND18	18-30	OVR30	TOTAL	UND18	18-30	OVR30	TOTAL
WHITE	CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0
WHITE	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0
WHITE	ROBBERY	0	0	0	0	0	0	0	0	0	0	0	0
WHITE	AGGRAVATED ASSAULT	0	17	10	27	0	20	9	29	0	16	9	25
WHITE	BURGLARY	0	10	4	14	0	11	3	14	0	7	5	12
WHITE	LARCENY	0	8	11	19	1	13	15	29	0	15	15	30
WHITE	SERIOUS NARCOTICS	0	3	0	3	0	7	0	7	0	5	0	5
WHITE	OTHER OFFENSES	1	55	23	83	1	43	20	64	1	62	28	91
WHITE	TOTALS	1	57	46	146	2	94	47	143	1	105	57	163
BLACK	CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0
BLACK	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0
BLACK	ROBBERY	0	1	2	3	0	1	0	1	0	0	2	2
BLACK	AGGRAVATED ASSAULT	0	59	55	144	1	95	55	151	0	106	49	155
BLACK	BURGLARY	0	50	16	66	0	54	11	65	0	52	8	60
BLACK	LARCENY	2	45	32	129	11	103	23	137	3	111	25	139
BLACK	SERIOUS NARCOTICS	0	17	8	25	0	10	6	16	0	17	8	25
BLACK	OTHER OFFENSES	0	177	75	252	0	186	70	256	0	193	82	275
BLACK	TOTALS	2	429	186	619	12	449	165	620	3	479	174	656
CTHR	CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0
CTHR	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0
CTHR	ROBBERY	0	0	0	0	0	0	0	0	0	0	0	0
CTHR	AGGRAVATED ASSAULT	0	1	0	1	0	0	0	1	0	0	0	0
CTHR	BURGLARY	0	0	0	0	0	0	0	0	0	0	0	0
CTHR	LARCENY	0	0	0	0	0	0	0	0	0	0	0	0
OTHER	SERIOUS NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0
CTHR	OTHER OFFENSES	0	0	0	0	1	1	0	1	0	0	0	0
CTHR	TOTALS	0	0	1	1	2	0	1	1	2	0	1	1
UNKNWN	CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	ROBBERY	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	AGGRAVATED ASSAULT	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	BURGLARY	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	LARCENY	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	SERIOUS NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	OTHER OFFENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNKNWN	TOTALS	0	0	0	0	0	0	0	0	0	0	0	0
ALL	CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0
ALL	FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0
ALL	ROBBERY	0	0	1	2	3	0	1	0	0	0	2	2
ALL	AGGRAVATED ASSAULT	0	107	65	172	1	115	65	181	0	122	58	180
ALL	BURGLARY	0	60	20	80	0	65	14	79	0	59	13	72
ALL	LARCENY	2	103	43	148	12	116	38	166	3	126	40	169
ALL	SERIOUS NARCOTICS	0	20	8	28	0	17	6	23	0	22	8	30
ALL	OTHER OFFENSES	1	236	95	336	1	230	90	321	1	255	111	367
ALL	TOTALS	3	527	237	767	14	544	213	771	4	584	232	820

Exhibit III.9. (cont'd.)

- 214 -

**CONTINUED**

**3 OF 5**

B30461 DIVISION OF CORRECTION - LEN OF SENT AT INTAKE BY JURIS, COURT, RACE, OFFENSE AND LENGTH. 07/20/79 PERIOD 07/01/78 - 06/30/79

SENTENCING JURISDICTION - BALTIMORE CITY CIRCUIT COURTS INMATE SEX - MALES ONLY

	00-TL	07-TC	13-TC	19-TC	25-TU	31-TG	37-TC	49-TC	61-TG	121TG	OVER- LIFE	TOTAL INMS	TOTAL YRS & MOS	JURIS. MEAN
	00-40	12-MG	18-MG	24-MG	30-MG	36-MG	48-MG	60-MG	120MG	180MG	180MU	SENT.	IND.	
WHITE CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	2	1	3	0	6	116/00 19/04
WHITE FORCIBLE RAPE	0	0	0	0	0	1	0	1	1	0	2	1	0	68/00 13/07
WHITE RECEBERY	0	0	2	0	0	0	3	3	5	1	2	0	0	126/06 8/00
WHITE AGGRAVATED ASSAULT	2	7	3	2	0	2	0	6	9	2	2	0	0	222/06 5/10
WHITE BURGLARY	1	1	2	3	1	6	5	6	8	0	0	0	0	139/00 4/03
WHITE LARCENY	0	4	0	1	0	1	1	1	1	0	0	0	0	23/05 2/08
WHITE SERIOUS NARCOTICS	1	1	1	2	1	1	3	1	0	0	0	0	0	36/07 3/01
WHITE OTHER OFFENSES	6	6	2	6	1	10	15	8	9	3	3	0	0	346/11 5/00
WHITE T C T A L S	10	19	10	14	3	21	25	28	36	7	12	4	0	1,061/06 5/09
BLACK CRIMINAL HOMICIDE	0	0	1	0	0	1	0	3	17	12	29	18	0	1,179/08 18/09
BLACK FORCIBLE RAPE	0	0	0	0	0	0	1	4	11	4	11	4	0	495/00 16/00
BLACK RECEBERY	0	5	3	7	0	18	17	54	122	28	27	0	0	2,431/06 8/08
BLACK AGGRAVATED ASSAULT	4	13	9	17	0	7	6	26	34	13	11	0	0	1,015/03 7/03
BLACK BURGLARY	0	3	9	7	1	30	31	16	34	2	1	0	0	134 657/02 4/11
BLACK LARCENY	12	9	15	6	6	7	2	6	6	1	1	0	0	71 190/10 2/08
BLACK SERIOUS NARCOTICS	1	2	0	2	0	3	6	2	5	1	1	0	0	23 125/05 5/05
BLACK OTHER OFFENSES	23	31	74	19	5	98	26	30	52	6	20	0	0	383 1,655/06 4/04
BLACK T C T A L S	40	63	111	57	12	164	89	141	281	67	101	22	0	1,126 7,750/06 6/11
CTHR CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	1	0	0	0	0	8/00 8/00
CTHR FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
CTHR RECEBERY	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
CTHR AGGRAVATED ASSAULT	0	0	0	0	0	0	0	0	0	0	0	0	0	6/00 6/00
CTHR BURGLARY	0	0	0	0	0	0	0	0	0	0	0	0	0	0/00 0/00
CTHR LARCENY	0	0	0	0	0	0	0	0	0	0	0	0	0	0/00 0/00
CTHR SERIOUS NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0	0	0/00 0/00
CTHR OTHER OFFENSES	0	1	0	0	0	0	0	0	0	0	0	0	0	1/00 1/00
CTHR T C T A L S	0	1	0	0	0	0	0	0	2	0	0	0	0	15/00 5/00
UNKN CRIMINAL HOMICIDE	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN FORCIBLE RAPE	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN RECEBERY	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN AGGRAVATED ASSAULT	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN BURGLARY	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN LARCENY	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN SERIOUS NARCOTICS	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN OTHER OFFENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKN T C T A L S	0	0	0	0	0	0	0	0	0	0	0	0	0	C/00 0/00
ALL CRIMINAL HOMICIDE	0	0	1	0	0	1	0	3	20	13	32	21	0	1,303/08 18/07
ALL FORCIBLE RAPE	0	0	0	0	0	1	1	5	12	4	13	5	0	563/00 15/08
ALL RECEBERY	0	5	5	7	0	18	20	57	127	25	29	0	0	2,560/02 8/07
ALL AGGRAVATED ASSAULT	6	20	12	14	0	9	6	32	44	15	13	0	0	1,224/00 6/11
ALL BURGLARY	1	4	11	10	2	36	36	22	42	2	1	0	0	167 796/02 4/09
ALL LARCENY	12	13	15	7	6	8	3	7	7	1	1	0	0	80 214/07 2/08
ALL SERIOUS NARCOTICS	2	3	1	4	1	4	7	5	6	1	1	0	0	35 162/00 4/08
ALL OTHER OFFENSES	29	38	76	24	6	108	41	38	61	9	23	0	0	453 2,003/05 4/05
ALL T C T A L S	50	93	121	71	15	185	114	169	314	74	113	26	0	1,314 8,827/00 6/09

RETURN INTAKES NOT INCLUDED. NUMBER IN PERIOD 07/01/78 - 06/30/79 = 156

TOTAL INMS DOES NOT INCLUDE LIFE AND IND.

Exhibit III.10.

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830461 DIVISION OF CORRECTION - LEN OF SENT AT INTAKE BY JURIS, COURT, RACE, OFFENSE AND LENGTH. 07/20/79 PERIOD 07/01/78 - 06/30/79

SENTENCING JURISDICTION - BALTIMORE CITY OTHER COURTS INMATE SEX - MALES ONLY

	CO-TC 06-MU	07-TC 12-MU	13-TC 18-MU	15-TC 24-MU	25-TC 30-MU	31-TC 36-MU	37-TC 48-MU	49-TC 60-MU	61-TC 120MU	121TC 180MU	OVER- LIFE SENT.	TOTAL IND.	TOTAL INMS	TOTAL YRS & MOS	JURIS. MEAN
WHITE CRIMINAL HOMICIDE	0	0	C	C	C	C	0	0	0	0	0	0	0	0	C/00 0/00
WHITE FORCIBLE RAPE	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0/00 0/00
WHITE ROBBERY	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
WHITE AGGRAVATED ASSAULT	11	7	3	4	0	3	0	0	0	0	1	0	0	29	58/02 2/00
WHITE BURGLARY	5	4	2	1	0	2	0	0	0	0	0	0	0	14	17/06 1/03
WHITE LARCENY	12	7	6	4	0	0	0	0	0	0	0	0	0	25	29/04 1/00
WHITE SERIOUS NARCOTICS	2	4	0	C	0	0	1	0	0	0	0	0	0	7	8/09 1/03
WHITE OTHER OFFENSES	25	21	6	2	0	8	1	1	0	0	0	0	0	64	78/10 1/03
WHITE TOTALS	55	43	17	11	0	13	2	1	0	0	1	0	0	143	192/07 1/04
BLACK CRIMINAL HOMICIDE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
BLACK FORCIBLE RAPE	0	0	0	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
BLACK ROBBERY	0	0	1	C	C	0	0	0	0	0	0	0	0	1	1/06 1/06
BLACK AGGRAVATED ASSAULT	43	40	21	19	2	14	0	4	6	C	1	0	0	150	263/07 1/09
BLACK BURGLARY	14	18	10	6	2	6	2	1	3	1	1	0	0	64	138/07 2/02
BLACK LARCENY	44	37	31	7	2	2	2	7	1	C	0	0	0	133	171/10 1/04
BLACK SERIOUS NARCOTICS	4	4	1	2	0	1	0	0	3	C	0	0	0	15	39/08 2/08
BLACK OTHER OFFENSES	91	73	29	17	4	19	8	2	7	1	1	0	0	252	376/10 1/06
BLACK TOTALS	196	172	93	51	10	42	12	14	20	2	3	0	0	615	992/00 1/07
OTHER CRIMINAL HOMICIDE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
OTHER FORCIBLE RAPE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	0/00 0/00
OTHER ROBBERY	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
OTHER AGGRAVATED ASSAULT	0	0	1	C	C	0	0	0	0	0	0	0	0	1	1/06 1/06
OTHER BURGLARY	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0/00 0/00
OTHER LARCENY	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0/00 0/00
OTHER SERIOUS NARCOTICS	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0/00 0/00
OTHER OTHER OFFENSES	0	0	0	C	1	0	0	0	0	C	0	0	0	1	1/08 1/08
OTHER TOTALS	0	0	1	1	0	0	0	0	0	0	0	0	0	2	3/02 1/07
UNKAC CRIMINAL HOMICIDE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKAC FORCIBLE RAPE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKAC ROBBERY	0	0	0	C	C	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKAC AGGRAVATED ASSAULT	0	0	0	C	C	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKAC BURGLARY	0	0	0	C	C	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKAC LARCENY	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0/00 0/00
UNKAC SERIOUS NARCOTICS	0	0	0	C	C	0	0	0	0	0	0	0	0	0	0/00 0/00
UNKAC OTHER OFFENSES	0	0	0	C	C	0	0	0	0	0	0	0	0	0	C/00 0/00
UNKAC TOTALS	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
ALL CRIMINAL HOMICIDE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
ALL FORCIBLE RAPE	0	0	C	C	0	0	0	0	0	0	0	0	0	0	C/00 0/00
ALL ROBBERY	0	0	C	1	C	0	0	0	0	0	0	0	0	1	1/06 1/06
ALL AGGRAVATED ASSAULT	54	47	25	23	2	17	0	4	6	C	2	0	0	180	323/03 1/10
ALL BURGLARY	19	22	12	7	2	8	2	1	3	1	1	0	0	78	156/01 2/00
ALL LARCENY	56	44	37	11	2	2	2	7	1	C	0	0	0	162	201/02 1/03
ALL SERIOUS NARCOTICS	6	8	1	2	0	1	1	0	3	C	0	0	0	22	48/05 2/02
ALL OTHER OFFENSES	116	94	35	20	4	27	9	3	7	1	1	0	0	317	457/04 1/05
ALL TOTALS	251	215	111	63	10	55	14	15	20	2	4	0	0	760	1,167/09 1/07

RETURN INTAKES NOT INCLUDED. NUMBER IN PERIOD 07/01/78 - 06/30/79 = 11 TOTAL INMS DOES NOT INCLUDE LIFE AND IND.

## Exhibit III.11.

B-60020		DIVISION OF CORRECTION - RELEASE REPORTS										10/16/75		PAGE NO. 1											
		COURT LOCATION - BALTIMORE CITY RELEASE DATES 07/01/73 - 06/30/74 LENGTHS OF SENTENCES - 37 TO 60 MOS. (1096 - 1825 DAYS)																							
OFFENSE CODES	DESCRIPTIONS	EXPIRATION(EX) PARCELES (PR) COURT ORDICT) ESCAPEES (ES) TO PATUX.(PT) OTHR RELEASES TOTAL RELEASES # RELE AV-DYS # RELE AV-DYS																							
01	HURDER & NON-NEGL MANSLAU	0	0	3	453	0	0	0	0	1	961	0	0	4	580										
02	NEGLIGENT MANSLAUGHTER	1	594	3	313	0	0	1	388	0	0	1	109	6	328										
03	FORCIBLE RAPE	1	1390	0	0	1	19	0	0	0	0	0	0	2	705										
04	RIBBERY	11	1430	53	632	3	64	10	555	3	1036	1	777	81	727										
05	AGGRAVATED ASSAULT	16	1088	37	930	7	573	10	671	2	173	1	1249	73	828										
06	BURGLARY	25	1143	41	805	1	769	9	538	2	708	1	1006	79	881										
07	LARCENY	26	1115	33	850	4	807	5	761	0	0	2	1000	70	948										
08	AUTO LARCENY	0	0	2	698	1	1159	0	0	0	0	0	0	3	851										
09	OTHER ASSAULTS	6	1254	6	756	2	1149	3	597	1	1490	0	0	18	980										
10	ARSON	1	509	1	752	0	0	0	0	0	0	0	0	2	631										
11	FORGERY & COUNTERFEITING	0	0	1	738	0	0	0	0	0	0	0	0	1	738										
14	STOLEN PROPERTY	0	0	4	1152	0	0	4	582	0	0	0	0	8	867										
15	WEAPONS	6	1214	11	405	4	19	1	281	1	3	0	0	23	765										
19	MARCOТИC DRUG LAWS	20	1252	48	751	8	184	6	1145	0	0	0	0	82	847										
20	GAMBLING	0	0	1	376	0	0	0	0	0	0	0	0	1	376										
21	FAMILY OFFENSES	2	1404	2	505	1	7	0	0	0	0	0	0	5	765										
24	ALL OTHER TRAFFIC	3	844	5	727	3	401	0	0	0	1	1303	12	723											
26	ALL OTHERS	1	1103	0	0	0	0	0	0	0	0	0	0	1	1103										
28	PERJURY AND CONTEMPT	1	1427	1	327	1	1127	0	0	0	0	0	0	3	960										
29	PETITION VIOLATION	7	1008	15	603	1	15	1	452	0	0	0	0	24	630										
33	MINOR OFFENSES	0	0	1	1204	0	0	0	0	0	0	0	0	1	1204										
34	ESCAPE	9	1037	9	993	0	0	12	513	0	0	0	0	30	814										
35	OTHER	9	1256	8	1009	3	693	2	885	0	0	0	0	21	1046										
		CONFINEMENT TOTALS										144	1162	285	767	40	441	64	640	10	732	7	920	550	833

Chapter IV: Rates of Return of the Offender to the Justice System (Recidivism)

A. Conceptual Definition of Rates of Return of the Offender to the Justice System (Recidivism)

The previous chapters of this report have looked at offender processing as an integrated set of relations starting with arrest and proceeding through adjudication and corrections. The processing flows and stocks have been described in terms of system inputs and active populations that result from either the elapsed time between events in processing (adjudication) or the duration of stay in a process (corrections). Law enforcement arrests provide the input to the adjudication process and court convictions provide the input to corrections. The principal aspect of offender processing which has not yet been described is that portion of the defendant or offender population who leave the system (e.g., not guilty finding by the courts; release from corrections) subsequently return via a new arrest or revocation and become input to the criminal justice system, thus initiating the flow process again.

Defining Recidivism

The return of offenders to the system is called recidivism and is probably the single most widely used (as well as misused) measure of justice system success or failure. The difficulty with recidivism measures is that they are very much dependent on the choice of a definition for recidivism and on the characteristics of the offender population for which the recidivism measures are developed. Comparisons of recidivism measures across different corrections programs and offender populations is too often done without the proper controls (for either the definition of recidivism or for the characteristics of the offender populations being compared). Without such controls comparisons of gross levels of recidivism are likely to be meaningless and if used could lead to incorrect conclusions and actions. The first task in looking at rates of offender return or recidivism is,

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therefore, to identify the component features which constitute the definition of recidivism.

The concept of offender release and subsequent return to the system can be represented using an extension of the flow diagram concept of Chapter I. Figure IV.1. illustrates the processing of individuals through the principal stages of the justice system with feedback loops for offenders returning to the system, i.e., recidivists. The flow diagram description has the following elements:

1. Stages - the principal decision making points in the criminal justice system.
2. Flow paths - connecting lines between stages which represent alternative paths an offender may follow.
3. Release Types - points in process where the offender may exit or leave the system with some probability of being arrested again (after some elapsed time) and, thus, become part of the future input to the system.
4. Virgin Arrests - inputs of persons with no prior arrest record.
5. Crime Switch Matrix - method of illustrating how a person, when rearrested, may be apprehended for a different crime than that of the prior arrest.

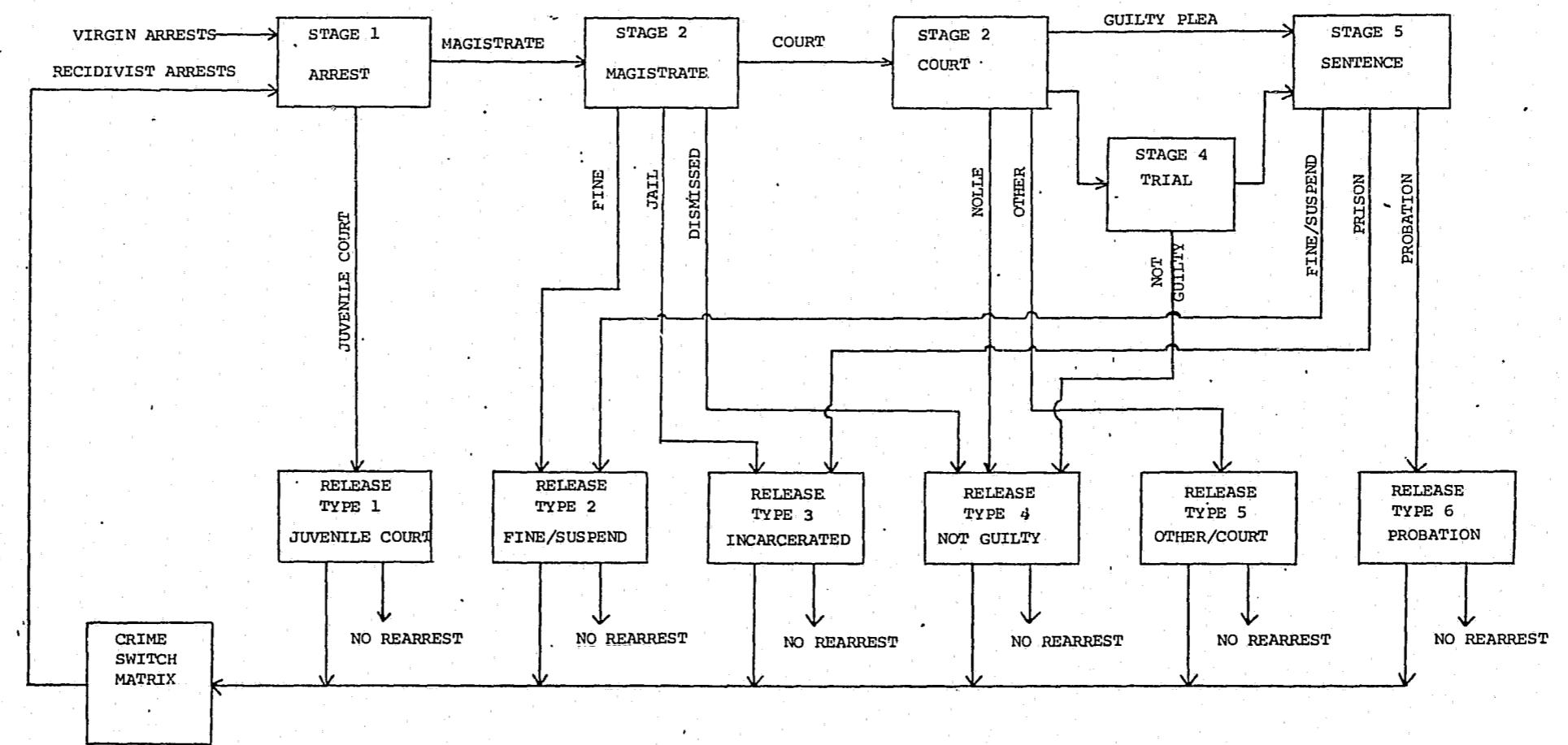
With the Figure IV.1. flow diagram in mind, the principal features of the definition of recidivism can be identified by posing the following questions:

1. What population of released persons are to be analyzed: (e.g., persons released via expiration of sentence from state prisons; persons released via parole from state prisons; persons released from probation supervision; persons found not guilty).
2. What type of reentry and degree of subsequent system penetration is to be analyzed? (At a minimum, a released person cannot be counted as a reentry into

4.1 Belkin, Jacob; Blumstein, Alfred; Glass, William, JUSSIM II, An Interactive Feedback Model for Criminal Justice Planning, Urban Systems Institute, Carnegie-Mellon University, June, 1973, pp. 4,5.

4.2 Much of the discussion which follows is based on a report by the Iowa SAC: Crime and Criminal Justice in Iowa, Volume VII: Recidivism, Statistical Analysis Center, State of Iowa Office for Planning & Programming, May, 1979 pp. 1-4, 9.

Figure IV.1. - Flow Diagram Description of Offender Processing  
with a Feedback Loop for Recidivists



the system unless a subsequent arrest (or revocation) occurs; other more stringent reentry and system penetration requirements might include: arrest and conviction; arrest, conviction, and sentencing to state prison; arrest, conviction and sentencing to local jail; arrest, conviction, and sentencing to probation; arrest, conviction, and sentencing to incarceration or supervision.)

3. How much time is to elapse between release and reentry when calculating the rate of recidivism? (Recidivism is time dependent in the sense that as time elapses from the date of release, the number or percent of those released who reenter the system increases, approaching some asymptotic value; recidivism might well be measured as a cumulative distribution with time as an independent variable.)
4. How should the seriousness of the new arrest be characterized? (The level of seriousness of the offense for which the new arrest occurs may be a factor in assessing the seriousness of the recidivism as well as a determinant in what the disposition and sentencing outcome for the new arrest will be; distinction by type of crime would appear desirable with, at a minimum, a differentiation between felonies against persons, felonies against property, misdemeanors, and technical violations of parole and probation.)

The definition of recidivism is, thus, as varied as the set of possible answers to the above four questions. The number of possible recidivism measures can be thought of as the product of the number of possible choices of answers to the four questions.

For example, if one assumes:

1. 3 release groups (i.e., prison, community correction, and probation releases);
2. 4 reentry and subsequent system stages of penetration: (i.e., arrest; arrest and conviction; arrest, conviction and incarceration or probation; arrest, conviction, and incarceration);
3. 16 elapsed time periods at which to measure recidivism (i.e., at 3 month intervals for 4 years); and
4. 5 classifications for the seriousness of the offense associated with the new arrest (i.e., felony against person, felony against property, misdemeanor, technical violation of parole or probation; all offenders)

then the total number of recidivism measures that can be generated are 960 ( $3 \times 4 \times 16 \times 5$ ) or 320 measures ( $4 \times 16 \times 5$ ) for each of the three

release groups. The potential for variation in recidivism for even the same group of released persons can, thus, be attributable in part to the large number of recidivism measures that can be generated (i.e. recidivism for a release group is a function of the length of the followup time, degree of system reentry, and seriousness of the new charges or violations). Since recidivism is a function of these several factors, it is preferable to think of recidivism, not as a single measure, but instead, as a "system of rates" with the rate varying for each possible combination of answers provided to the four questions. The adoption of a "system of rates" for the definition of recidivism provides the potential for a far greater understanding of the underlying basis for a given recidivism rate and an opportunity for the development of comparable measures.

#### Additional Factors Influencing Recidivism Rates

The use or application of a "system of rates" for measuring recidivism should take into consideration the influence that the following additional factors have on recidivism.<sup>4.3</sup>

1. Offender Characteristics - such factors as age, prior record, employment history and status, and drug or alcohol abuse which may collectively constitute the degree of "offender risk" of future criminal behavior.
2. System Factors - would include the effectiveness with which released persons who commit subsequent criminal behavior are detected, apprehended, and/or prosecuted.
3. Statutory Factors - such as mandatory sentencing, which would affect sentencing alternatives and length of stay in incarceration and, thus affect the opportunity to recidivate due to incapacitation.
4. Screening Decisions - would include the choice of sentence for convicted offenders; the method and timing of release (e.g., parole) decision for incarcerated offenders; and the detection and enforcement of technical violations while an offender is on parole or probation supervision.

4.3 Ibid., pp. 4-8

5. Incarceration Effects - would include the so-called "prisonization" effect of contact with more experienced offenders and the "incapacitation" effect that may contribute to the "burn-out" of an offender's criminal career.
6. Treatment Effect - would include the effect of rehabilitation - drug or alcohol rehabilitation; education; vocational training; work release experience; psychiatric care.
7. Post-Release Environmental Effect - would include effect of employment, family environment, and community support after release from the criminal justice system.

These seven factors can be used in differentiating among offender populations. Such differentiation may be needed when comparing recidivism measures for offenders where the same "system of rates" are used to describe recidivism. Of the above seven factors, those that are most amenable to influence by the criminal justice system are the screening decisions and treatment effect. In using recidivism measures to gauge the success or failure of certain interactions (e.g., screening decisions, treatment) the task is to determine what the recidivism rates would be without an interaction and to see whether or not the introduction of the interaction results in any reduction in the recidivism rates.

In summary, to a "system of rates" for describing recidivism, a cohort of released offenders must be identified. Each offender in the cohort must then be followed up or tracked for equal periods of time (i.e., date of release to date of arrest or reentry and system penetration) so that subsequent returns (rearrests) and the degree of system penetration can be determined. In addition, since offender characteristics are among those factors that may influence the recidivism rates, it is desirable to have such information (e.g., criminal history, age, race) available for each offender in the cohort. The "system of rates" which constitute recidivism are then calculated as the percent of offenders in the cohort who return to the system as defined by the type of reentry and degree of subsequent penetration, the elapsed time from release to reentry, and the seriousness of the new arrest.

B. Illustration of the Use and Display of Statistics on Rates of Return of the Offender to the Justice System (Recidivism)

In this section the measuring of recidivism is illustrated through a "system of rates" which reflect the components of the definition of recidivism described in Section A. As noted previously, the "system of rate" concept is derived principally from the work of the Iowa Statistical Analysis Center. The real world application of this concept is also best illustrated by the work in Iowa. This section summarizes the Iowa work on the generation of actual recidivism measures using a range of definitions and attributes of the offender population. In this way some insight should be provided as to how changes in basic parameters (e.g., of process and the offender) can affect recidivism measures. Additionally, based on the Iowa effort, this section shows how recidivism measures can be useful in an effort to bring about change in system processing.

The principal portion of the Iowa recidivism work is based on a population of 2231 individuals released via parole (1495 inmates) or expiration of sentence (936 inmates) from Iowa's adult correctional institutions from July 1, 1973 to December 31, 1976. The released population studied includes both offenders originally admitted to state prisons because of new court commitments as well as parole or probation violations. Computer records on this released population were established using the FY1974-FY1978 data file of the Iowa Division of Adult Corrections. This source provided the data base for the generation and analysis of recidivism as measured from corrections release to return to prison (where returns include both new criminal commitments and revocations). Since the recidivism study was interested in looking at other types of return, in addition to simply return to prisons, information on new charges at arrest and subsequent court dispositions of conviction were collected for these same released offenders using the 1974-1976 pre-trial and post-conviction data files and the 1977-1978 community corrections data file maintained by the Iowa Social Services Department.

It should be noted that the Iowa report states that given the above sources of data, the recidivism measures subsequently generated are based on an incomplete although high percentage of the actual post-prison involvements of state inmates in Iowa for the period of followup chosen.<sup>4.4</sup>

The actual followup of the released inmates was through June 1, 1978. Since the released group consisted of offenders released from June 1, 1973 to December 31, 1976 the length of time that a given offender could be followed up ranged from a high of 59 months to a low of 17 months. The decision was made to conduct the follow up at three month intervals (ranging from 3 to 48 months) so that the cumulative nature of the recidivism measures over time could be shown. Therefore, while all the released offenders could be followed up for the 3 month intervals starting at 3 months and ending at 15 months, only a subgroup of the original cohort could be followed up for the remaining 3 month intervals from 18 to 48 months. Thus, the recidivism rates generated for each of the follow up time intervals are based either on the original cohort or that portion of the cohort which could be tracked for the respective 3 month follow up periods ranging from 3 to 48 months.<sup>4.5</sup>

Using the Section A concept of a "system of rates" for measuring recidivism, the Iowa study proceeds to generate a series of recidivism measures based on the percentage of inmates who return over time as a function of the seriousness of the new involvement. The set of recidivism measures shown in Table IV.1, looks at the percentage of persons released from state institutions who have some subsequent involvement in the criminal justice system. Subsequent involvement is defined here as including all offenders with new charges (at arrest) or technical violations during the follow up period inclusive of those newly convicted or returned to prison. The recidivism

4.4 Crime and Criminal Justice in Iowa, Volume 1: Statistical Overview, Statistical Analysis Center, Iowa Office for Planning and Programming, pp. 127-128.

4.5 Ibid, p.129

RECIDIVISM RATES FOR ADULT  
CORRECTIONAL INSTITUTIONS IN IOWA  
PERSONS RELEASED BY PAROLE OR EXPIRATION OF SENTENCE  
BY MOST SERIOUS NEW INVOLVEMENT

MOST SERIOUS NEW INVOLVEMENT	FOLLOW-UP PERIOD IN YEARS			
	ONE	TWO	THREE	FOUR
FELONY AGAINST PERSON(S)	3.0%	5.2%	7.8%	9.9%
Parole	2.6%	5.1%	6.9%	9.2%
Expiration of Sentence	3.5%	5.3%	9.8%	11.1%
PART I FELONY NOT AGAINST PERSON(S)	4.3%	7.4%	9.3%	10.0%
Parole	3.4%	6.1%	8.4%	11.3%
Expiration of Sentence	6.1%	10.0%	10.7%	7.8%
PART II FELONY NOT AGAINST PERSON(S)	4.0%	6.4%	8.8%	12.0%
Parole	3.9%	6.7%	9.5%	11.9%
Expiration of Sentence	4.1%	5.9%	7.4%	12.3%
MISDEMEANOR	3.6%	5.5%	7.3%	8.5%
Parole	3.2%	5.3%	7.2%	9.5%
Expiration of Sentence	4.5%	6.1%	7.7%	6.7%
TECHNICAL VIOLATION	4.4%	6.9%	6.2%	4.8%
Parole	6.6%	10.2%	9.3%	7.4%
Expiration of Sentence	0.0%	0.0%	0.0%	0.0%
TOTAL WITH NEW INVOLVEMENT	19.3%	31.4%	39.4%	45.3%
Parole	19.8%	33.3%	41.2%	49.1%
Expiration of Sentence	18.2%	27.3%	35.8%	38.0%
OFFENDERS FOLLOWED	2231	1773	1160	517
Parole	1495	1194	772	338
Expiration of Sentence	736	579	388	179

SOURCE: Crime and Criminal Justice in Iowa, Volume VII: Recidivism; Statistical Analysis Center, Iowa Office of Planning and Programming, p.18

measures are shown cumulatively by year as a function of both the seriousness of the new involvement and the original type of release. Table IV.2 looks at the same release cohort but only that percentage whose subsequent involvement results in return to state prison (either as a result of a new charge or violation). The Table IV.2 format is otherwise identical to that in Table IV.1 (note in Table IV.2 the most serious new charge/violation is that for which the offender returned to prison as compared to Table IV.1 where the most serious charge is that associated with the new involvement).

As can be seen by studying the two tables, the recidivism measures (i.e.% of releases who return) increase cumulatively over time\* for a given group of releases. In addition, the recidivism measures in Table IV.1 are always equal to or greater than their corresponding measure in Table IV.2. This is because the reentry criteria and degree of system penetration which defines the recidivism measure is less strict in Table IV.1 than in Table IV.2. Thus, these two tables illustrate the concept of recidivism as a "system of rates" and show how the resulting rates of recidivism change as a function of:

1. The release population i.e., paroled and expiration of sentence offenders respectively;
2. The type of reentry and degree of subsequent system penetration i.e., new involvement and return to prison respectively;
3. The elapse time between release and reentry i.e., one, two, three, and four years respectively; and
4. The level of seriousness of the new involvement i.e., felony against person, Part I felony not against person, Part II felony not against person, misdemeanor, technical violation, and total

These types of recidivism measures can be generated for other groupings of the release population to determine the degree to which offender characteristics and criminal justice processing influence

\* Those few instances where the recidivism percentage for the same group of releases in a subsequent year is lower than that for a prior year is due to the changes in the size of the release cohort. If the cohort was exactly the same over the four years then the recidivism percentage in a subsequent year would always be equal to or greater than that for a prior year.

RECIDIVISM RATES FOR ADULT  
CORRECTIONAL INSTITUTIONS IN IOWA  
PERSONS RELEASED BY PAROLE OR EXPIRATION OF SENTENCE  
BY MOST SERIOUS NEW CHARGE/VIOLATION FOR WHICH  
RETURNED TO PRISON

MOST SERIOUS NEW CHARGE/VIOLATION FOR WHICH RETURNED TO PRISON	FOLLOW-UP PERIOD IN YEARS			
	ONE	TWO	THREE	FOUR
FELONY AGAINST PERSON(S)	2.2%	3.5%	5.5%	7.2%
Parole	1.9%	3.4%	4.4%	6.2%
Expiration of Sentence	2.7%	3.6%	7.7%	8.9%
PART I FELONY NOT AGAINST PERSON(S)	3.2%	5.9%	7.2%	7.7%
Parole	2.6%	4.9%	6.7%	8.6%
Expiration of Sentence	4.5%	7.9%	8.0%	6.1%
PART II FELONY NOT AGAINST PERSON(S)	3.1%	5.1%	7.2%	7.9%
Parole	3.2%	5.4%	7.8%	8.6%
Expiration of Sentence	3.0%	4.5%	5.9%	6.7%
MISDEMEANOR	.7%	1.3%	1.6%	1.5%
Parole	1.1%	1.9%	2.4%	2.4%
Expiration of Sentence	0.0%	0.0%	0.0%	0.0%
TECHNICAL VIOLATION	4.4%	6.9%	6.2%	4.8%
Parole	6.6%	10.2%	9.3%	7.4%
Expiration of Sentence	0.0%	0.0%	0.0%	0.0%
TOTAL WITH NEW INVOLVEMENT	13.6%	22.7%	27.7%	29.1%
Parole	15.4%	25.8%	30.6%	33.2%
Expiration of Sentence	10.2%	16.0%	21.6%	21.7%
OFFENDERS FOLLOWED	2231	1773	1160	517
Parole	1495	1194	772	338
Expiration of Sentence	736	579	388	179

SOURCE: Crime and Criminal Justice in Iowa, Volume I: Statistical Overview, Statistical Analysis Center, Iowa Office of Planning and Programming p. 133

the recidivism "system of rates". In Section C of Chapter II the Iowa Offender Attribute Scale was briefly described. This seven point scale was designed to identify those factors about the offender which successfully differentiated between incarcerated and community based offenders. The factors in the Offender Attribute Scale are: severity of offense, number of offenses, prior record, drug and alcohol abuse history, age, employment status, marital status, and race. In the Iowa recidivism study each offender in the release cohort was assigned a rating using this scale based on the offender's characteristics. The rate of return was then determined for those offenders with high and low ratings respectively when using the scale. Exhibit IV.1. shows the resulting cumulative recidivism rates for the groupings of released offenders with the high and low ratings who subsequently returned to prison or who received a new felony arrest/charge. The recidivism rates for the two groups are not markedly different from one another. As stated in the Iowa study, the reason for this is that the group of offenders tending to be rated high on the offender attribute scale are older, violent, drug offenders with previous convictions, while those offenders rated lower on the scale tend to be younger, more career intense property offenders. The former group also contains proportionately more of the less career intense property offenders who have lower recidivism rates.<sup>4.6</sup> This analysis, thus, suggests that the Offender Attribute Scale is not very successful in discriminating on the division of offender risk as measured by rates of return.

The reasons stated above for why the Offender Attribute Scale is not too successful in discriminating along recidivism measures is largely explained by looking at recidivism measures as a function of the age and prior commitment record of the offender. Exhibit IV.2. is taken from the Iowa prison study and shows the recidivism measures for six groupings of the release cohort by age of the offender at release and prior commitment record (both juvenile and adult). Recidivism is measured as a percent of the release cohort who return to prison or receive a new felony arrest/charge. It is interesting to note that the two groups with comparable and mid-range recidivism measures are the youngest offenders with no prior commitments and the oldest

4.6 Volume VII: Recidivism, op., cit., pp. 23-25

offenders with prior commitments. The highest recidivism measures are obtained for the youngest offenders with prior commitments. Conversely, the lowest recidivism measures are the oldest offenders with no prior commitments.<sup>4.7</sup> As indicated in Exhibit IV.2., the age and prior commitment history of the release cohort clearly differentiates between offenders as measured by rates of recidivism (i.e., differentiates between the two offender groups on either side of the age, prior commitment continuum, but not on the two groups in the middle of the continuum).

The Iowa study then goes on to show relationship between recidivism measures and offender risk. The Iowa developed Risk Assessment Scoring System is designed to rate offenders on two complementary risk scales 1) the overall risk of recidivating as reflected in the probability and potential seriousness of the new criminal act and 2) the risk of violence as reflected in the probability of new violent acts.<sup>4.8</sup> Because of the way the risk assessment scale is defined one would expect that if properly applied, then recidivism measures for offenders falling in the various risk categories would be directly related to their level of risk (i.e., a continuum from very poor risks having very high return rates to very good risks having very low return rates). Thus, a good risk assessment system would successfully discriminate among the release cohort as measured by recidivism. The application of the Iowa developed Risk Assessment System to the cohort of released state prisoners is shown in Exhibit IV.3. As shown, the risk assessment system and its scoring techniques<sup>4.9</sup>

4.7 Ibid., pp. 24-31

4.8 Risk Assessment in Iowa, op. cit., p.1. The characteristics of the offender used in determining level at risk are: current offense type, current age, age at first arrest, number of prior arrests, number of juvenile probations, number of juvenile commitments, number of prior adult probations, number of prior adult jail terms, number of prior adult prison terms, alias (yes or no), history of drug or alcohol abuse (yes or no), history of narcotics use (yes or no), most recent employment status, occupational skill level, educational level, marital status, pre-trial status, jail term on current sentence (if sentenced).

4.9 Volume VII: Recidivism, op. cit., pp. 38-40

would appear to be quite accurate since those with higher return rates fall into the higher risk categories and those with lower return rates fall into the lower risk categories.<sup>4.10</sup>

In summary, the recidivism rates for the release cohort have been analyzed for two composite scales or scoring systems that are based on offender characteristics. The Offender Attribute Scale is designed to discriminate between offenders based on the process decision to incarcerate or not incarcerate. The application of this scale to the inmate release cohort (Exhibit IV.1) shows that it has little predictive power in distinguishing among inmate releases as measured by the rates of return. Alternatively, the Risk Assessment Scoring System classifies or groups offenders in such a way as to discriminate among offenders based on the likelihood of subsequent contact with the criminal justice system (i.e. as measured by the probability of recidivism and the probability of seriousness of new criminal acts). The application of this scoring system to the inmate release cohort shows that it has strong predictive powers in distinguishing among inmate releases as measured by rates of return.

Risk assessment can be a useful way of classifying inmates so that existing programs and criminal justice decision-making patterns can be studied. Without knowing the underlying risk associated with the offender populations in the various corrections programs (e.g., state prisons, community corrections, probation, local jails) it is difficult to compare the performance (as measured by recidivism) across the programs or treatment modalities. By controlling for risks, the recidivism rates for like

4.10 One might conclude that this result is somewhat tautological since risk and recidivism are defined similarly and since the risk assessment scoring system is developed in part based on the analysis of the same release cohort for which the recidivism rates are calculated. Another report prepared by the Iowa SAC entitled The Iowa Offender Risk Assessment Scoring System, Volume I: System Overview and Coding Procedures, October, 1980 discusses the recidivism predictive efficiency of the risk assessment scoring system using construction, validation, and combined samples of offenders. See page 1-7 of this report for an analysis of the statistical validity of the approach.

groups of offenders in different programs or receiving different treatments can be measured to assess the possible impact of the program or treatment on rates of return.

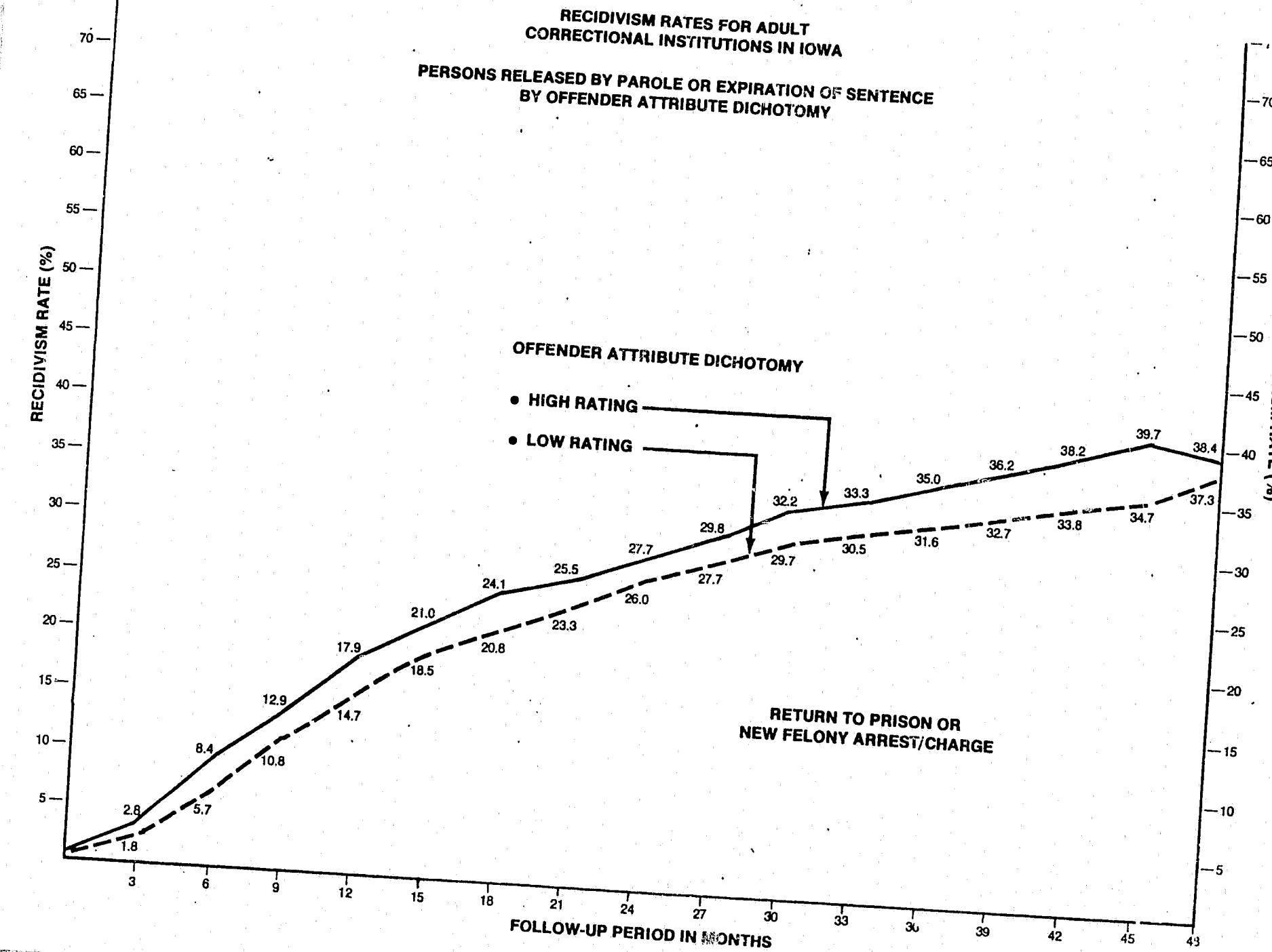
This can be done by looking at the observed rate of return for offenders in a given program (or receiving a given treatment) and comparing that to the "expected" return rates had these same offenders been in a different program (or not received treatment). The "expected" return rates are calculated by applying the return rates for each risk level of persons in the different program (or not receiving treatment) to the number of offenders in each of the respective risk levels who were in the program (or did receive treatment).<sup>4.11</sup> If the resulting expected return rate is higher than the observed, then it is possible that the difference is attributable to the program (or treatment). This is illustrated in Exhibit IV.4 (using the Iowa data) for male offenders who received work release experience prior to release. As shown, the actual observed return rate to prison is slightly less than the expected rate. The difference in the return rate (which reaches its peak in the ninth month from release) is sustained through about the thirty-seventh month when the actual observed return rate starts to exceed the expected return rate.<sup>4.11</sup>

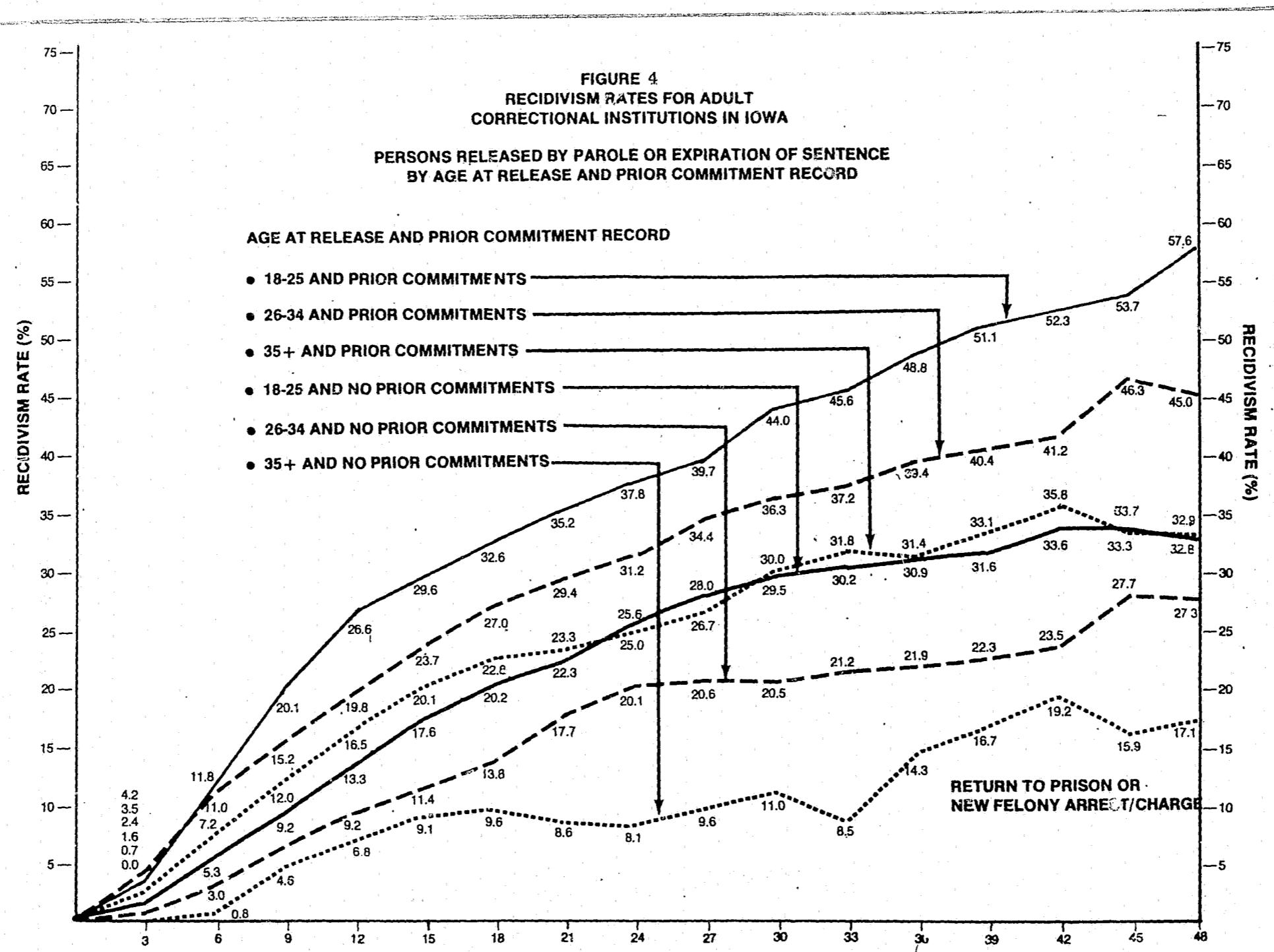
Changes in decision making (e.g., sentencing practices, parole decisions) can also be assessed in terms of their likely impact on recidivism by looking at the risk associated with offenders proceeding down the various processing alternatives. For example, sentencing decisions that result in more low risk offenders being placed in community programs and more high risk offenders in institutional programs should result in higher recidivism rates for institutional programs than for community programs. Parole board decisions that would cause higher risk offenders to be denied parole or have their parole

4.11 Volume VII: Recidivism, op. cit., pp. 48-51

date delayed would tend to curtail or slow down recidivism rates.<sup>4.12</sup> Of course such sentencing and parole decisions would depend on both the ability to identify "higher risk" offenders and the willingness to base decisions about processing on offender risk scores.

4.12 Ibid, pp. 45-47





C. Data Collection, Extraction, and Aggregation Issues for Statistics on Rates of Return of the Offender to the Justice System (Recidivism)

The conceptual framework for describing recidivism as a "system of rates" is described in Section A and illustrated with actual data in Section B. In order to generate the "system of rates" it is necessary to have a "release" population of identifiable offenders who are to be followed up or tracked to determine the number and percentage of these offenders who reenter the criminal justice system and to see how far into the system these offenders subsequently penetrate. In order to perform this followup an "intake" population of identifiable offenders must be available. The process of comparing the "release" population to the "intake" population to determine the number and percent of those released who return is the basis for deriving the "system of rates" recidivism measures. By assuring that the "released" population of offenders all have an equal opportunity (in terms of the elasped time from release) to reenter the system, the time demension of the recidivism measures can be controlled. Also, by differentiating between the released populations based on meaningful characteristics of the offender (e.g. risk factors), the resulting recidivism measures can be used as a tool for assessing alternative criminal justice processing decisions (e.g., sentencing, parole) and treatment programs.

The development of a series of meaningful recidivism measures requires the identification of the "released" and "intake" populations for which recidivism measures are to be generated. Examples of possible "release" populations include any one or combinations of the following:

1. Offenders released from state institutions
2. Offenders released from probation supervision

3. Offenders released from residential facilities
4. Offenders released from local jail sentences
5. Offenders found guilty but not receiving a sentence (e.g., fine)
6. Offenders not found guilty (e.g., acquitted, dismissed, nolle prossed)

Examples of "intake" populations include any one and certain combinations of the following:

1. New arrests
2. Arrests and convictions
3. New court commitments and/or returns to state institutions
4. New court commitments and/or returns to residential facilities
5. New court commitments and/or returns to local jails
6. New court commitments to probation

The selection of the "release" and "intake" populations to be compared, establishes the outer limits on the set(s) of recidivism measures that can be generated.

The specificity of the recidivism measures to be generated for given "release" and "intake" populations are determined by the data elements collected and/or extracted to describe these respective populations. The data to describe the "release" populations can be collected and/or extracted at two levels: Level I - those data elements which describe the offender's current release and Level II - those data elements that describe the offender's past contact with the justice system as well as the offender's socio/economic history and status. The former data elements are those required to develop simple non-predictive measures of recidivism while the latter represent those data elements needed to support measures of recidivism useful in assessing justice programs and processing decisions. The data

elements to describe the "intake" population are those needed to determine the type and date of reentry as well as the severity of the new involvement and the degree of system penetration. These "intake" and "release" population data elements are illustrated in Table IV.3.

The attributes of the offender and offender processing as represented by the "intake" data base and "release" data base form the basis for generating both descriptive recidivism measures (requires the Level I data elements) and discriminant recidivism measures (requires the Level II data elements). In the case of both the descriptive and discriminant measures of recidivism, the basic formulation of the measures themselves is unchanged (as described in Section A). However, the richness of the description of the "release" population (as represented by the Level II vis-a-vis Level I data elements) determines the complexity and potential range of usefulness of the "system of rates" generated (as illustrated in Section B). The collection, extraction, and aggregation of recidivism measures, while initially illuminating even at the descriptive level, are likely to be more meaningful where composite attributes of the offender can be formulated to support the discriminant level of display of recidivism measures. The later measures should, in particular, facilitate the making of improved decisions about the effectiveness of the existing manner of system processing and programming and the consequences of system change in terms of its impact on the public, the offender, and the criminal justice system.

Regardless of the level of recidivism measures generated, certain basic issues and concerns with respect to the representation of the statistics must be reconciled before initiating data collection, extraction, and aggregation. As described in

TABLE IV.3 - Data Elements to Describe the "Release" and "Intake" Populations in Support of Recidivism Measures

A. "Release" Population Data Elements

LEVEL I

Needed:

Date of Birth  
Race  
Sex  
Arrested Offense/Convicted Offense/  
Committed Offense  
Date of Exit/Date of Release  
Type of Exit/Type of Release

Optional:

Arrest Jurisdiction/Sentencing  
Court and Jurisdiction  
Jurisdiction of Residence  
Length of Sentence (if sentenced)  
Length of Time Serviced/Under  
Supervision (if sentenced)  
Releasing Institution (if sen-  
tenced to state institution)

LEVEL II\*

Ethnicity  
Age at First Arrest  
Number of Prior Arrests  
Number of Juvenile Probations  
Number of Juvenile Commitments  
Number of Prior Adult Probations  
Number of Prior Adult Jail Terms  
Number of Prior Adult Prison Terms  
Known Alias (Yes or No)  
History of Drug or Alcohol Abuse  
History of Narcotics Use  
Most Recent Employment Status  
Occupational Skill Level  
Educational Level  
Marital Status  
Pre-Trial Status  
Jail Time on Current Sentence (if  
sentenced)  
Institutional Treatment & History  
(e.g., work release, vocational  
training, education)

B. "Intake" Population Data Elements

Needed:

1. Date of Arrest/Date of Conviction/Date of Commitment/Date of Return (Revocation)
  2. Arrested Offense/Convicted Offense/Committed Offense/Returned Offense (revocation)
  3. Type of Commitment (if sentenced) e.g., probation, state insti-  
tution, local jail, residential facility
- Optional:
4. Arresting Jursidiction/Sentencing Court and Jurisdiction
  5. Jurisdiction of Residence
  6. Admitting institution (if sentenced to state institution)

\*Most of these data elements are used in Iowa Risk Assessment Scoring System

/= and/or

the previous chapters of this report, there are specific areas of concerns that apply to the generation of statistical descriptions of offender processing. Listed below are these same areas of concern as they apply to recidivism measures:

1. Type of offense of the offender e.g., at both "release" and "intake" or reentry
2. The accounting unit for display e.g., the offender
3. Jurisdiction of the offender e.g., sentencing juris-  
diction, jurisdiction of residence
4. Manner of processing e.g., "release" population -  
type of exit or type of release, "intake" population  
- type of reentry, and degree of subsequent system  
penetration
5. Population and period of time e.g., "release" population  
to be followed up - beginning and ending; the "intake"  
population against which the "releases" are to be  
compared to determine the number of returns - begin-  
ning and ending period
6. Elapsed time e.g., the time transpired from the date  
of release to date of intake where the date of intake  
may be either the date of initial reentry e.g., date  
of arrest, or the date associated with the furthest  
system penetration upon reentry e.g., date of new  
admission to state institution
7. Elapsed time statistics - e.g., recidivism measures  
such as the number and percent of a release cohort  
who return within so many months of release (cumulative  
returns) or alternatively the number and percent of  
releases who return in consecutive time intervals  
starting with the date of release (distribution of returns).

The recidivism framework described in this chapter, in conjunction with the frameworks described in the previous chapters (i.e., offender flows and stocks, elapsed time between events in processing, corrections processing and populations), constitute an overall framework for describing offender processing. The extent to which responses to the above concerns can guide the development of comparable statistics across these four frameworks, determines just how well the resulting statistical descriptions can be interrelated in support of an overall statistical descrip-  
tion of the existing criminal justice system. To the extent

possible, the development of the statistics in support of each of the four frameworks should be done with an awareness of these common issues and concerns associated with data collection, extraction and aggregation. At the same time unique issues and concerns associated with the collection and aggregation of statistics for each framework need to be addressed to assure that the resulting statistics are useful and meaningful in their own right.

D. Alternative Sources of Data in Support of Statistics on Rates of Return of the Offender to the Justice System (Recidivism)

As described in Section C of this Chapter, the generation of a "system of rates" for describing recidivism is dependent on the matching of a set of records on an offender "release" population to a set of records on an offender "intake" population.

Table IV.3. of Section C provides a general description of the types of data elements needed to support the "release" and "intake" data bases. Shown in Table IV.4. is the relationship between the "release" and "intake" data bases needed to support recidivism analysis and the various systems and sources of data that can support the generation of offender processing statistics. Table IV.4. suggests that the various offender oriented data bases may be used to extract the offender specific "release" and "intake" populations needed for recidivism analysis.

Some of the automated data bases listed in Table IV.4 are better candidates than others for the extraction of "release" and "intake" records consistent with all or some of the definitional and data element requirements for recidivism analysis. For example, the Offender Based State Corrections Information System (OBSCIS) and the Computerized Criminal History (CCH) system are shown as primary sources of information for the extraction of "release" and "intake" populations. OBSCIS and CCH systems should be able to support the Level I "release" data elements and the "intake" data elements as well as some or all of the Level II "release" data elements of Table IV.3 (also see Table III.2 of the previous Chapter for the relationship between the Level II data elements and the CCH and OBSCIS data bases). The CCH and OBSCIS data bases also have another feature which should be of assistance in the systematic generation of recidivism measures i.e., both information systems are based on fingerprint supported identification of the offender using the state identification number. This means that offenders on the "release" and "intake" data bases are uniquely identifiable. Therefore, the matching of a "release" record to an "intake" record for purposes of recidivism analysis can be performed

Table IV.4.- Relationship Between Data Base Needed for Recidivism Analysis and Offender Oriented Information Systems and Sources

EXAMPLES OF DATA BASES TO SUPPORT RECIDIVISM ANALYSIS	OFFENDER PROCESSING INFORMATION SYSTEM AND SOURCES										
	STATE LEVEL AUTOMATED SYSTEMS				AGENCY/LOCAL AUTOMATED SYSTEMS					INTEGRA-TED LOCAL CJIS	AGENCY MANUAL FILES ON OFFENDER ARRESTED, DISPOSED ADMITTED, DISCHARGED
	CCH/ OBTS	OBSCIS	SJIS	PROMIS	PROSE-LAW ENF. ARREST & BOOKING	CUTOR MIS	JUDI-CIAL MIS	JAIL MIS	SUPER-VISION MIS		
<b>"Release Populations:</b>											
1. Releases from State Institutions	P*	P								P	
2. Releases from Probation Supervision	P*	P*								P	
3. Releases from Residential Facilities	P*	P*								A	P
4. Releases from Local Jails	P*							P		A	P
5. Releases - Other Guilty	P		A	A		A	A			A	P
6. Releases - Not Guilty	P		A	A		A	A			A	P
<b>"Intake" Populations:</b>											
1. New Arrests	P		A	A	A	A	A			A	P
2. Arrests and Convictions	P		A	A		A	A			A	P
3. Intake - State Institutions	P*	P	A	A		A	A			A	P
4. Intake - Probation	P*	P	A	A		A	A	P	A	A	P
5. Intake Residential Facilities	P*	P	A	A		A	A			A	P
5. Intake Local Jail Sent	P*		A	A		A	A	P		A	P

P - Potential primary sources for the creating of "release" or "intake" data bases

A - Potential alternative sources for creating "release" or "intake" data bases

\* - Systems without the respective corrections components may not be able to support these "release" and "intake" data bases.

with greater ease and certainty than where the offender is not uniquely identifiable. Also, the fact that both OBSCIS and CCH use the same unique identifiers enables an OBSCIS extracted "release" population (inmates released from state institutions) to be compared to a CCH extracted "intake" population (e.g., offenders arrested, offenders arrested and subsequently convicted).

Table IV.4 also indicates those other automated data bases which may exist to support the systematic generation of recidivism measures. For example, a local jail system may be useful in measuring recidivism as a function of release from jail sentence and subsequent return for a new jail sentence. The jail released population may also be matched to the intake populations from a state CCH (where sufficient offender identifying information is available) to determine more general rates of return for the local jail released offenders. In addition, local or regional criminal justice information and offender tracking systems (particularly those that are fingerprint supported) may be candidates for the systematic extraction of "release" and "intake" populations to support certain recidivism measures at the local level.

Other agency data bases at the state and local level (e.g., court and prosecutor information systems) may be able to support recidivism analyses where suitable OBSCIS and CCH data bases are not available. However, such automated systems may be more difficult to use in the systematic extraction and matching of "release" and "intake" populations where unique offender identifying information is not maintained on the data bases. Finally, "release" and "intake" data bases can be constructed from the manual records maintained by one or more agencies. Such manual sources may also be used to supplement the offender information extracted from automated systems. This would be particularly useful, for example, where Level II "release" data elements (see Table IV.3) are desired, but are not maintained or cannot readily be extracted from the automated data bases(s).

As is the case with all offender processing statistics generated as a by-product of existing automated systems or from manual data collection efforts, the choice of which data base or data bases to be used to generate the recidivism statistics ultimately depends on:

1. the types of questions being asked or anticipated to be asked;
2. the data needed to address the question(s) in whole or in part;
3. the availability of one or more data bases to choose from;
4. the ability to get access to the data for statistical purposes; and
5. the degree of difficulty (including the cost) in creating and maintaining the record structure and output program(s) which support the needed statistics.

E. Data Files and Output Reports in Support of Statistics on Rates of Return of the Offender to the Justice System (Recidivism)

The previous sections of this chapter describe an overall framework for generating a "system of rates" for measuring recidivism (Section A), illustrate with data from the State of Iowa recidivism measures using the "system of rates" framework (Section B), describe considerations in the collection, extraction, and aggregation of statistics on recidivism measures (Section C), and provide examples of available information systems in support of recidivism measures (Section D). In this section, the actual requirements for generating output reports in support of recidivism measures are discussed.

The systematic generation of computer outputs in support of a "system of rates" approach to recidivism measures requires the following:

1. The availability of one or more data bases describing a "release" population where each record on the data base represents a unique offender;
2. The availability of one or more data bases describing an "intake" population where each record on the data base represents a unique offender; and
3. The ability to match offenders appearing on the "release" data base to offenders appearing on the "intake" data base (preferably using a positive fingerprint supported match or alternatively a matching routine based on criteria such as name, date of birth, and race\*)

\*Maryland's Division of Corrections, for example, used with some success a computer matching routine based on FBI number, name, date of birth and race. All matched "release" and "intake" records must have identical race. Type 1 matches are those with the same FBI number. Type 2 matches are those with identical last name, first name, middle name and four of the six birth digits. Type 3 matches are the same as type 2 excluding the middle name. Type 4 matches match on last name, first and middle initials, and full date of birth. Type 5 matches match on last name, date of birth, and first and middle names reversed. Type 6 matches match on last name, date of birth, and first and middle initials reversed.

The "release" populations are those groups of offenders who exit the criminal justice system for whom rates of return are to be calculated, and the "intake" populations are the groups of offenders who reenter and subsequently penetrate the system. By matching offenders in a "release" population to an "intake" population, the number of releases who return (i.e. instances where the "release" offender record is matched to an "intake" record for the same offender) can be determined. By controlling for time so that all persons "released" are given the same opportunity (i.e. length of time) within which to return, rates of recidivism can be calculated by dividing the number of returns (i.e. matches) by the number of releases.

Figure IV.2 illustrates the basic structure of an output report which shows the number of returns (i.e. recidivists) generated over time for a given "release" population and "intake" population. The row headings show the number of releases by month ( $R_i$ ) and the column headings show the number of intakes by month ( $I_j$ ). The body of the output report shows the number of those released in month  $i$  who return in the  $k$ th month from the date of release where  $k = j-i$  and  $k \geq i$ . The number of returns can be expressed mathematically as  $r_{i,k}$ . Since the rate of recidivism is time dependent, the number of returns ( $r_{i,k}$ ) for releases in a given month can be summed across a row to determine the cumulative number of releases in a month  $i$  who have returned by month  $k$ . For example, the number of returns within a year from the date of release for those offenders released in the first month can be expressed as:

$$\sum_{k=0}^{12} r_{1,k} \quad (4.1)$$

and the recidivism rate at the end of one year for those offenders released in the first month is:

$$\frac{\sum_{k=0}^{12} r_{1,k}}{R_1} \quad (4.2)$$

Figure IV.2.- The Number of Returns of Offenders for Given "Release" and "Intake" Populations

		Release Month i	"Intake" Population ( $I_j$ )													$I_n$	
			1	2	3	4	5	6	7	8	9	10	11	12	13	... n	
"Release" Population ( $R_i$ )	Number of Releases/Month i	Intake Month j	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	$I_6$	$I_7$	$I_8$	$I_9$	$I_{10}$	$I_{11}$	$I_{12}$	$I_{13}$	...	$I_n$
1	$R_1$	Number of Persons Released in Month i who return in the kth Month from the Month of Release where K = j-i where $(r_{i,k})$	$r_{1,0}$	$r_{1,1}$	$r_{1,2}$	$r_{1,3}$	$r_{1,4}$	$r_{1,5}$	$r_{1,6}$	$r_{1,7}$	$r_{1,8}$	$r_{1,9}$	$r_{1,10}$	$r_{1,11}$	$r_{1,12}$	...	$r_{1,n-1}$
2	$R_2$		$r_{2,0}$	$r_{2,1}$	$r_{2,2}$	$r_{2,3}$	$r_{2,4}$	$r_{2,5}$	$r_{2,6}$	$r_{2,7}$	$r_{2,8}$	$r_{2,9}$	$r_{2,10}$	$r_{2,11}$	...	$r_{2,n-2}$	
3	$R_3$			$r_{3,0}$	$r_{3,1}$	$r_{3,2}$	$r_{3,3}$	$r_{3,4}$	$r_{3,5}$	$r_{3,6}$	$r_{3,7}$	$r_{3,8}$	$r_{3,9}$	$r_{3,10}$	...	$r_{3,n-3}$	
4	$R_4$				$r_{4,0}$	$r_{4,1}$	$r_{4,2}$	$r_{4,3}$	$r_{4,4}$	$r_{4,5}$	$r_{4,6}$	$r_{4,7}$	$r_{4,8}$	$r_{4,9}$	...	$r_{4,n-4}$	
5	$R_5$					$r_{5,0}$	$r_{5,1}$	$r_{5,2}$	$r_{5,3}$	$r_{5,4}$	$r_{5,5}$	$r_{5,6}$	$r_{5,7}$	$r_{5,8}$	...	$r_{5,n-5}$	
6	$R_6$						$r_{6,0}$	$r_{6,1}$	$r_{6,2}$	$r_{6,3}$	$r_{6,4}$	$r_{6,5}$	$r_{6,6}$	$r_{6,7}$	...	$r_{6,n-6}$	
7	$R_7$							$r_{7,0}$	$r_{7,1}$	$r_{7,2}$	$r_{7,3}$	$r_{7,4}$	$r_{7,5}$	$r_{7,6}$	...	$r_{7,n-7}$	
8	$R_8$								$r_{8,0}$	$r_{8,1}$	$r_{8,2}$	$r_{8,3}$	$r_{8,4}$	$r_{8,5}$	...	$r_{8,n-8}$	
9	$R_9$									$r_{9,0}$	$r_{9,1}$	$r_{9,2}$	$r_{9,3}$	$r_{9,4}$	...	$r_{9,n-9}$	
10	$R_{10}$										$r_{10,0}$	$r_{10,1}$	$r_{10,2}$	$r_{10,3}$	...	$r_{10,n-10}$	
11	$R_{11}$											$r_{11,0}$	$r_{11,1}$	$r_{11,2}$	...	$r_{11,n-11}$	
12	$R_{12}$												$r_{12,0}$	$r_{12,1}$	...	$r_{12,n-12}$	
13	$R_{13}$													$r_{13,0}$	...	$r_{13,n-13}$	
m	$R_m$															$r_{m,n-m}$	

In the more general sense the cumulative number of returns within  $x$  months from the date of release for persons released in months  $y$  through  $z$  ( $y \leq z$ ) are:

$$\sum_{i=y}^z \sum_{k=0}^x r_{i,k} \quad (4.3)$$

and the cumulative recidivism rate or percentage can be calculated as follows:

$$\frac{\sum_{i=y}^z \sum_{k=0}^x r_{i,k}}{\sum_{i=y}^z R_i} \quad (4.4)$$

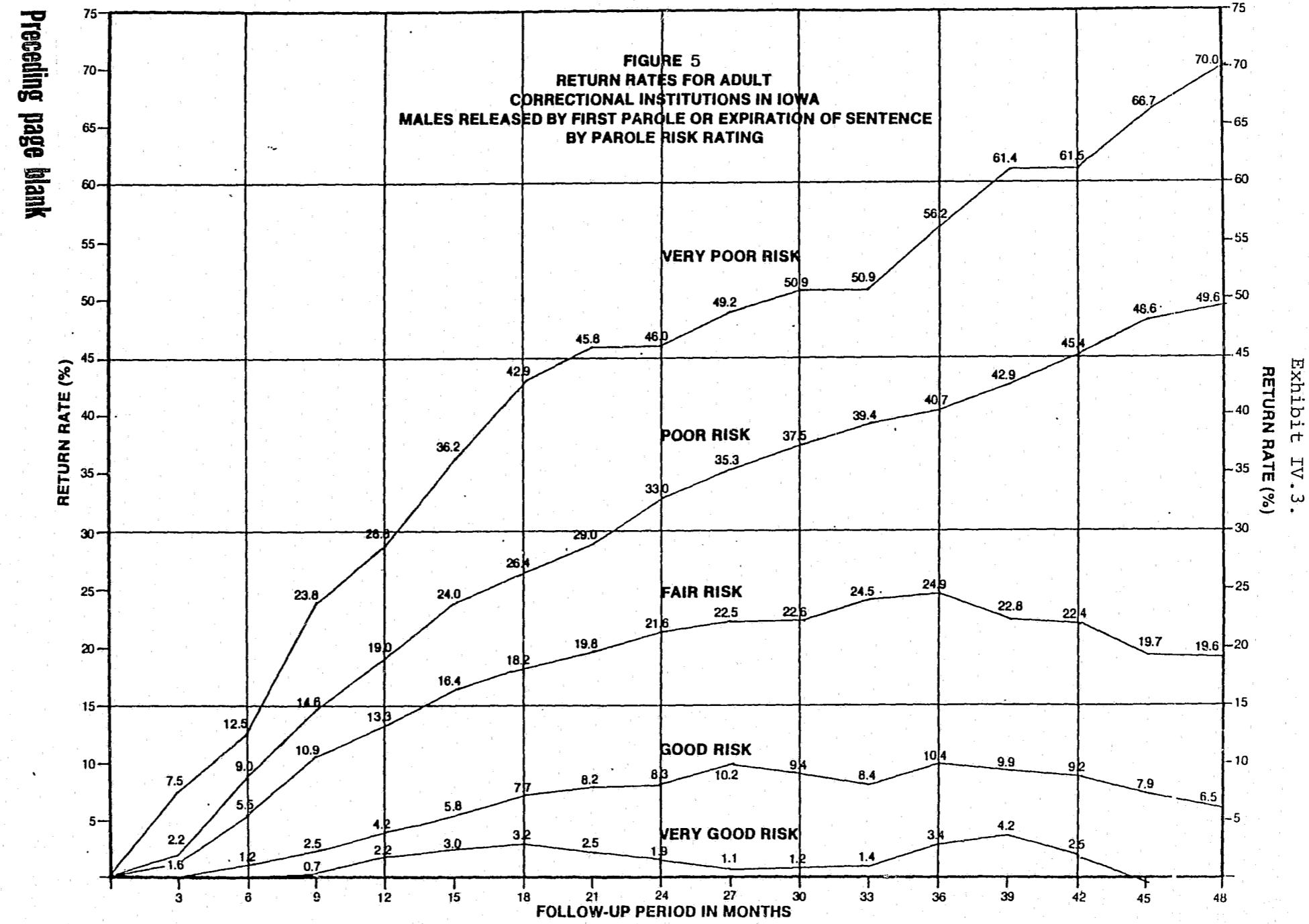
Using the Figure IV.2 representation one can thus calculate for a given set of "releases" and subsequent "intakes", the cumulative number of returns over a given period of time and the cumulative percent of those released who do return (i.e. the recidivism rate). Figure IV.2 can also be thought of as a "working output report" which can be generated incrementally at the conclusion of each month when "new releases" and "new intakes" are added to the existing "release" and "intake" populations. In other words, after each month an additional column of the Figure IV.2 return values ( $r_{i,k}$ ) can be determined by comparing each prior months releases that have yet to return to the new intakes as well as by comparing the new months releases to the new months intakes. Any resulting matches then would constitute returns.

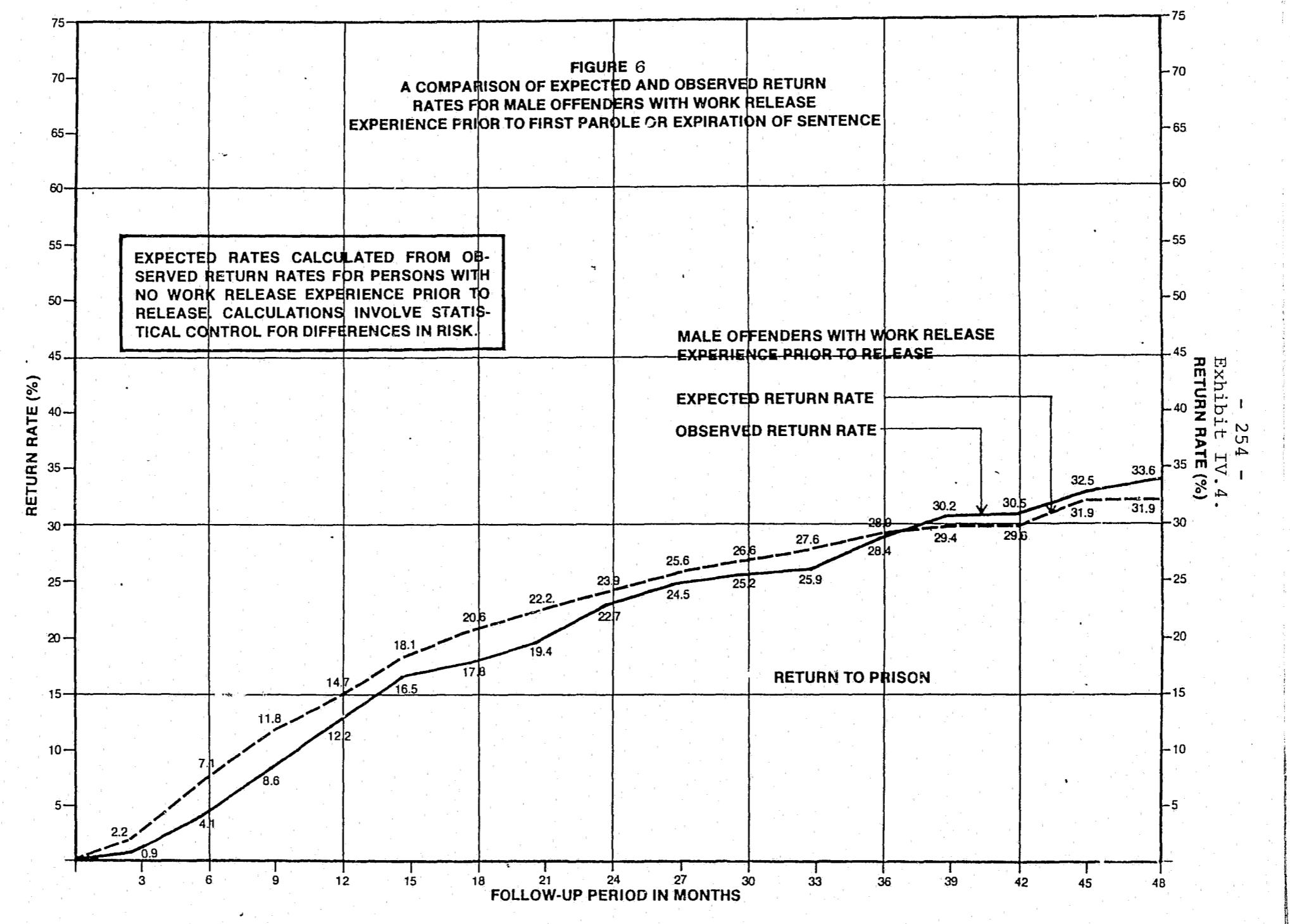
The Figure IV.2 representation of returns of released persons by month of follow up can be generated for various combinations of the alternative "intake" and "release" populations (see Section C for examples) as well as for various attributes (e.g., age, prior commitments) of the "release" and "intake" populations (see Section B for examples). The resulting returns ( $r_{i,k}$ ) can then be summarized in the form of an output table of "rates of return" showing the percentage of those released who return within so many months

of followup. Examples of such outputs are shown in Exhibits IV.5. through IV.7.<sup>4.13</sup>. These exhibits show in table form the rates of return which were previously displayed graphically in Section B, Exhibit IV.1 through IV.3 respectively.

In summary, the number of returns (i.e., recidivists) can be generated by matching a "release" population to an "intake" population to determine the number of those released in month  $i$  who return in the  $k$ th month from the date of release. By cumulating the number of returns over time in such a way that all those released have the same amount of time to return, the cumulative number of recidivists as of a given elapsed time can be determined. The recidivism rate after so many months of follow up can then be calculated by dividing the cumulative returns by the number of releases that are in the follow up cohort. For given "release" and "intake" populations, recidivism rates can be generated for the different follow up periods (e.g., after 3 months, 6 months, 9 months....48 months) and for different attributes (e.g. age, prior record) of the intake and/or release populations. The resulting recidivism rates can then be displayed in table or graphic form which constitute the "system of rates" framework for representing recidivism statistics.

4.13 Ibid., pp. 67, 69, 73





Appendix Table 8

Recidivism Rates (Return to Prison or New Felony Arrest/Charge)  
 For Adult Correctional Institutions in Iowa  
 Persons Released by Parole or Expiration of Sentence  
By Offender Attribute Dichotomy

Offender Attribute Dichotomy	Follow-Up Period in Months															
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
HIGH RATING Cases Followed	2.8 1155	8.4 1155	12.9 1155	17.9 1155	21.0 1155	24.1 1097	25.5 1014	27.7 927	29.8 843	32.2 752	33.3 690	35.0 626	36.2 553	38.2 476	29.7 380	38.4 294
LOW RATING Cases Followed	1.8 933	5.7 933	10.8 933	14.7 933	18.5 933	20.8 892	23.3 820	26.0 736	27.7 667	29.7 590	30.5 532	31.6 459	32.7 385	33.8 334	34.7 262	37.3 185
Composite Cases Followed	2.3 2088	7.2 2088	12.0 2088	16.4 2088	19.9 2088	22.5 1989	24.5 1834	26.9 1663	28.8 1510	31.1 1342	32.1 1222	33.5 1085	34.7 938	36.5 810	37.7 642	38.0 479

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 Exhibit IV.5.

Appendix Table 10

Recidivism Rates (Return to Prison or New Felony Arrest/Charge)  
 For Adult Correctional Institutions in Iowa  
 Persons Released By Parole or Expiration of Sentence  
 By Age at Release and Prior Commitment Record

Age at Release and Prior Commitment Record	Follow-Up Period in Months															
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
18-25 AND PRIOR COMMITMENTS	3.5	11.8	20.1	26.6	29.6	32.6	35.2	37.8	39.7	44.0	45.6	48.8	51.1	52.3	53.7	57.6
Cases Followed	398	398	398	398	398	383	355	328	295	257	237	201	176	153	123	92
26-34 AND PRIOR COMMITMENTS	4.2	11.0	15.2	19.8	23.7	27.0	29.4	31.2	34.4	36.3	37.2	39.4	40.4	41.2	46.3	45.0
Cases Followed	409	409	409	409	409	389	357	320	291	259	242	221	198	170	136	100
35+ AND PRIOR COMMITMENTS	2.4	7.2	12.0	16.5	20.1	22.8	23.3	25.0	26.7	30.0	31.8	31.4	33.1	35.8	33.3	32.9
Cases Followed	334	334	334	334	334	320	292	276	247	226	201	185	160	137	105	85
18-25 AND NO PRIOR COMMITMENTS	1.6	5.3	9.2	13.3	17.6	20.2	22.3	25.6	28.0	29.5	30.2	30.9	31.6	33.6	33.7	32.8
Cases Followed	618	618	618	618	618	590	542	476	436	387	351	311	263	232	184	137
26-34 AND NO PRIOR COMMITMENTS	0.7	3.0	6.3	9.2	11.4	13.8	17.7	20.1	20.6	20.5	21.2	21.9	22.3	23.5	27.8	27.3
Cases Followed	271	271	271	271	271	253	237	214	194	176	160	146	121	98	79	55
35+ AND NO PRIOR COMMITMENTS	0.0	0.8	4.6	6.8	9.1	9.6	8.6	8.1	9.6	11.0	8.5	14.3	16.7	19.2	15.9	17.1
Cases Followed	132	132	132	132	132	125	117	111	104	91	82	70	60	52	44	35
Composite Cases Followed	2.4	7.3	12.1	16.6	20.1	22.8	24.8	27.1	29.0	31.1	32.1	33.6	35.1	36.8	38.0	38.1
	2162	2162	2162	2162	2162	2060	1900	1725	1567	1396	1273	1134	978	842	671	504

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 Exhibit IV.6.

Appendix Table 14

Return Rates For Adult  
Correctional Institutions in Iowa  
By Parole Risk Rating  
Males Released by Expiration or First Parole

Parole Risk Rating	Follow-Up Period in Months															
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
VERY POOR RISK	7.5	12.5	23.8	28.8	36.2	42.9	45.8	46.0	49.2	50.9	50.9	56.2	61.4	61.5	66.7	70.0
Cases Followed	80	80	80	80	80	77	72	63	59	57	53	48	44	39	30	20
POOR RISK	2.2	9.0	14.6	19.0	24.0	26.4	29.0	33.0	35.3	37.5	39.4	40.7	42.9	45.4	48.6	49.6
Cases Followed	500	500	500	500	500	478	438	394	346	304	277	241	203	176	146	115
FAIR RISK	1.6	5.5	10.9	13.3	16.4	18.2	19.8	21.6	22.5	22.6	24.5	24.9	22.8	22.4	19.7	19.6
Cases Followed	451	451	451	451	451	435	400	362	324	279	249	221	189	161	127	92
GOOD RISK	0.0	1.2	2.5	4.2	5.8	7.7	8.2	8.3	10.2	9.4	8.4	10.4	9.9	9.2	7.9	6.5
Cases Followed	240	240	240	240	240	235	220	193	176	159	143	125	101	87	63	46
VERY GOOD RISK	0.0	0.0	0.7	2.2	3.0	3.2	2.5	1.9	1.1	1.2	1.4	3.4	4.2	2.5	0.0	0.0
Cases Followed	135	135	135	135	135	127	120	108	93	85	73	59	48	40	26	22
Composite	1.7	5.9	10.5	13.6	17.1	19.2	20.8	22.8	24.4	25.1	26.4	28.1	28.9	29.6	30.9	31.2
Cases Followed	1406	1406	1406	1406	1406	1352	1250	1120	998	884	795	694	585	503	392	295
Mean Cost Rating (MCR)	.44	.36	.34	.33	.34	.34	.36	.38	.38	.41	.42	.40	.44	.45	.52	.54

Chapter V. Projections of Future Volume and Manner of Criminal Justice Processing

A. Conceptual Definition of the Projection of Future Volume and Manner of Criminal Justice Processing

The previous chapters of this report provide frameworks for the statistical representation of data on offender processing. The combined frameworks discussed in Chapters I-IV (i.e., offender processing flows and stocks, elapsed time between events in processing, corrections flows and populations, and rates of return or recidivism) constitute the basis for developing a quantitative description of the existing criminal justice system. This existing system description can be used to consider the impact of proposed system changes. This includes the preimplementation assessment of the likely impact of alternative strategies for bringing about a specific change. In this way the quantitative description of the existing system can be used to assist in making more rational choices from among alternative courses of action.

This concept of planning for change and the role that statistics and good analytic frameworks can play in this process is discussed in some detail in the introduction to this report. The description of the existing system provides a benchmark from which to gauge or consider the impact of change. The limitation with the description of the existing system when planning for change is that change not only impacts on the present, but also on the future. Therefore, it is desirable to extend the existing system description out into the future. In a planning context the initial future projection should be one in which the various components of the criminal justice system are assumed to continue to behave in essentially the same way as reflected by current and recent trends. Such projections may be thought of as reference projections. These reference projections are an extension into the future of existing system benchmarks. Thus, a reference projection is one which assumes all changes to the justice system are due to externalities and not to planned interventions.

Given both present and future benchmarks as represented by the existing system description and the reference projections, interventions (e.g., introduction of a mandatory sentencing) can be considered and their likely impact assessed. The difference between the intervention level of activity and the reference projection level of activity (e.g., as shown by offender processing statistics) provides an idea of the direction and magnitude of change that will take place if the intervention is implemented (e.g., mandatory sentencing's impact on the size of the prison population). The direction and magnitude of the change resulting from the intervention can then be judged in terms of its desirability (e.g., costs versus benefits) as well as in terms of the desirability of other possible interventions. Thus, the analysis process aids the decision-making process in the ultimate determination of whether or not the particular intervention or some alternative action should be implemented.

Reference projections can also be useful in efforts to plan for some new or desired future level of activity (e.g., reduction of prison population through expanded community corrections facilities). The desired level of activity can be compared to the reference projection to determine the direction and magnitude of change that must take place. The strategies or interventions to bring about the desired change (e.g., creation and expansion of community based facilities) can then be assessed to determine whether or not they appear reasonable and sufficient to bring about the desired level of activity (e.g., to what extent will community facilities divert inmates from state prisons versus attracting offenders currently sentenced to probation and local jails). In this way, reference projections can be the basis for formulating a plan and course of action directed at achieving a desired and planned for future state for the criminal justice system.

In the remainder of this section a methodology for the develop-

ment of reference projections of the future volume and manner of criminal justice processing is described using the technique of demographically disaggregated projections.<sup>5.1</sup> As will be demonstrated, this methodology is built upon the statistical frameworks described in the previous chapters. The demographically disaggregated reference projection technique as described illustrates how to project future prison populations but could in fact be adapted to the development of reference projections for any part of offender processing from arrest through corrections. Again, it should be stressed that the reference projection is one which assumes the criminal justice system continues to behave as it has based on current and recent trends. The changes in the volume and manner of offender processing are from a reference projection standpoint due solely to external factors.

#### Demographically Disaggregated Projections of Arrests

In criminal justice, the factor which is most likely to produce a change in the volume and manner of offender processing is the number of crimes committed and how the level of crime is translated into arrests. There is substantial evidence that one of the largest factors contributing to the volume of crime is the change in the size and distribution (age, sex, race) of a

5.1 Much of the methodological description which follows is based on work done in both Pennsylvania and Maryland. Specific references include: Blumstein, A., Cohen, J., and Miller, D. (1978), Demographically Disaggregated Projections of Prison Population, Urban Systems Institute, Carnegie-Mellon University, Pittsburgh, Pa.; Renninger, P., et al., (1980), An Analysis of the Adequacy of Our Current State Correctional Facilities Now and in the Future, Pennsylvania Commission on Crime and Delinquency; "A Detailed Explanation of the Arrest/Demographic Inmate Population Projection Technique" (1977) and Projections of Maryland Adult and Juvenile Arrests Through 1990, 1978 Update, Statistical Analysis Section, Maryland Governor's Commission on Law Enforcement and the Administration of Justice.

jurisdiction's population.<sup>5.2</sup> The criminality of different components of the population varies considerably. Therefore, even if criminality among specific components of the population (e.g., as defined by age, race, and sex groupings) remains the same, changes in the number of persons in each of the component groups of the population could cause significant changes in the volume of crime. While the demographics of the crime committing population are not known with certainty, data is available on the demographics of the arrest population. The actual analysis of arrest rates for various age, race, sex, and offense specific breakdowns of the arrest population indicate that these component rates have been reasonably stable over recent years for states and counties within states. From a reference projection point of view, the stability of arrest rates by age, race, sex, and type of offense becomes the logical starting point from which to construct reference projections of offender processing. This choice is reinforced by the fact that state and jurisdiction population projections (both those typically performed by state agencies as well as the U.S. Census Bureau) use a cohort survival model based on the birth, death, and in and out migration rates for various age, race, and sex components of the population. Thus, the population projections for various age, race, and sex groupings in a jurisdiction or state can be combined with the existing age, race, and sex specific arrest rates for a specific offense to derive reference projections of the future volume of age, race, and sex specific arrests for the offense.\*

<sup>5.2</sup> Sagi, P., and C. Wellford (1968) "Age Composition and Patterns of Change in Criminal Statistics," Journal of Criminal Law, Criminology, and Police Science, Vol. 59: 29-36; President's Commission on Law Enforcement and the Administration of Justice, Task Force Report: Crime and Its Impact - An Assessment (Washington, D.C.: U.S. Government Printing Office, 1967). Appendix D, pp. 207-210; Ferdinand, T., (1970) "Demographic Shifts and Criminality: An Inquiry," British Journal of Criminology, Vol. 10: 169-170; Wellford C., (1973), "Age Composition and the Increase in Recorded Crime," Criminology Vol. 11: 61-70; Blumstein, A., and D. Nagin, "Analysis of Arrest Rates for Trends in Criminality," Socio-Economic Planning Sciences, Vol. 9: 221-227; Fox, J. (1978), Forecasting Crime Data, Lexington, Mass: Lexington Books, Heath Co., D.C.

\* In actually developing the reference projections, sex is typically ignored since the male to female proportion of the population by race and age do not change appreciably over time. As a result, sex does not appreciably influence the resulting projections of arrests.

The generation of disaggregated arrest rates can be represented mathematically as follows:

$$A/R_{ijkh} = (A_{ijkh}) (P_{ikh})^{-1} (100,000) \quad (5.1)$$

Where:

A/R = arrest rate	i = age groupings
A = arrests	j = type of offense
P = population	k = race
	h = historical year of arrest data

Thus,  $A/R_{ijkh}$  represents the arrest rate per 100,000 population for persons in age grouping i (e.g., 20-24 year olds), for type of offense j (e.g., burglary), race k (e.g., non-white) during year h (e.g., 1979).

The disaggregated arrest rates can then be combined with estimates of the future population for the same age and race specific groupings ( $P_{ikf}$ ) to derive reference projections of future disaggregated arrests. Mathematically this can be represented as follows:

$$(h) A_{ijkf} = (A/R_{ijkh}) (P_{ikf}) (100,000)^{-1} \quad (5.2)$$

Where: f = future year, and (h)  $A_{ijkf}$  represents the projected number of future arrests for year f (e.g., 1990) for age grouping i (e.g., 20-24 year olds), type of offense j (e.g., burglary) and race k (e.g., non-white) based on arrests in historical year h (e.g., 1979).  
<sup>5.3</sup>

Where summary UCR data is used in developing arrest projections, a problem arises with the above formulation. UCR data is available for offense X sex X age and for offense X sex X race, but not offense X age X race. Race by age and offense is more important than sex by age and offense when projecting future arrests since the distribution of the population by race is more subject to change over time than by sex. This is significant since overall arrest rates are sharply different by race. Therefore, it is desirable to estimate future arrests for a given offense based on complete offense X age X race breakdowns. Several techniques for doing so have been developed. See for example, Blumstein, et al., Demographically Disaggregated Projections of Prison Population, Urban Systems Institute, Carnegie-Mellon University, Pittsburgh, Pennsylvania, July, 1978, pp. 13-22, which uses a statistical technique called "iterative proportional fitting." An alternative technique based on a weighted sum ratio of arrest rates by race and age groupings is described in Projections of Maryland Adult and Juvenile Arrests through 1990, 1978 Update, Statistical Analysis Section, Maryland Governor's Commission on Law Enforcement, pp. 9-14. See also CJSA Bulletin #2 (December 14, 1980), Item 5 and Attachment II, which describes this latter technique.

Given the demographically disaggregated reference projections of arrests, the development of reference projections of offender commitment to prison and the resulting prison populations can be done by:

1. Generating reference projections of court commitments based on the reference projections of arrests (the flows of offenders into prisons); and
2. Generating reference projections of prison populations based on the reference projections of those committed to prisons.

#### Demographically Disaggregated Projections of Commitments to Prison

In Section A of Chapter I, a flow diagram description of offender processing (Figure I.2.) is used to illustrate how, given a specified number of arrests and a series of flow probabilities (from arrest through court disposition and sentencing), the number of commitments to prisons can be calculated. A simplified version of Figure I.2. is shown in Figure V.1. and is used to illustrate how demographically disaggregated projections of court commitments to prisons might be generated.

For a particular jurisdiction, the aggregate number of court commitments to prison for a year can be represented by the Figure V.1. flow rates and volumes and the flow probabilities of offender movement through the successive processing stages. Mathematically, the aggregate court commitments to prison,  $C_t$ , in year  $t$ , can be represented as follows:

$$C_t = (P_t) (A/R_t) (100,000)^{-1} (\alpha_t^1) (\alpha_t^2) (\alpha_t^3) \quad (5.3)$$

Where:

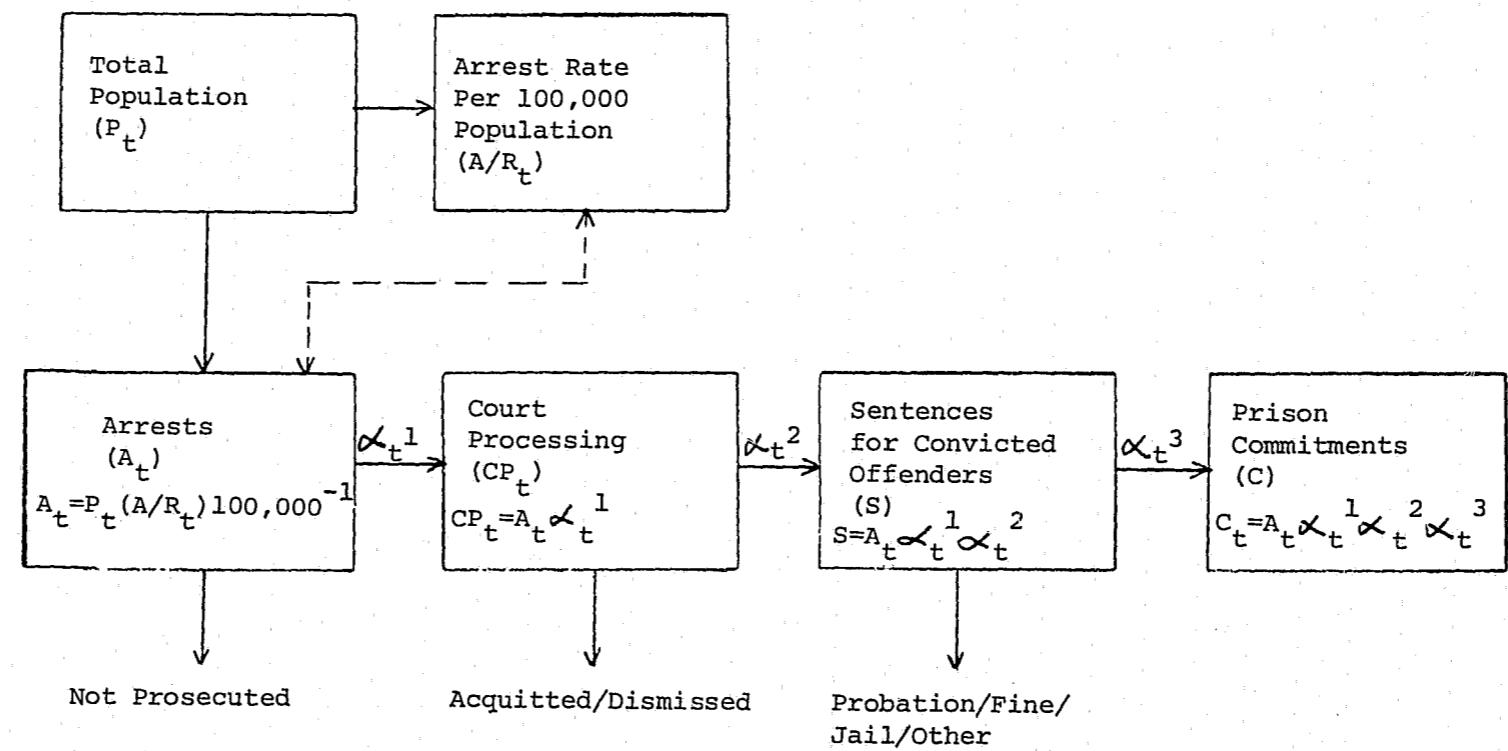
$C_t$  = the total number of court commitments to prison in year  $t$

$P_t$  = the size of the population of the jurisdiction in year  $t$

$A/R_t$  = the arrest rate per 100,000 for the jurisdiction in year  $t$  (i.e., the number of arrests in the jurisdiction in year  $t$ ,  $A_t$ , divided by the jurisdiction population in year  $t$ ,  $P_t$ , and multiplied by 100,000)

$\alpha_t^1$  = the probability of arrests disposed in year  $t$  resulting in a court disposition

Figure V.1. - Flow Process to Generate Prison Commitments



$\alpha_t^2$  = the probability of court dispositions in year t resulting in a conviction

$\alpha_t^3$  = the probability of convictions in year t resulting in sentence to prison.

The above equation is an aggregation across all demographic groups and types of offenses. In order to see the demographic affects, this equation can be applied to each of the same demographically disaggregated groups used previously to represent arrests. The demographic disaggregation of court commitments in historical year h, for specific groupings of age i, race k, and type of offense j can be represented as follows:

$$C_{ijkh} = (P_{ikh}) (A/R_{ijkh}) (100,000)^{-1} (\alpha_{ijkh}^1) (\alpha_{ijkh}^2) \\ \times (\alpha_{ijkh}^3) \quad (5.4)$$

The demographically disaggregated reference projection of future court commitments in year f based on projected jurisdiction population in year f and arrest rates and flow probabilities in historical year h can be represented as follows:

$$(h) C_{ijkf} = (P_{ikf}) (A/R_{ijkf}) (100,000)^{-1} (\alpha_{ijkh}^1) \\ \times (\alpha_{ijkh}^2) (\alpha_{ijkh}^3) \quad (5.5)$$

Given that the demographically disaggregated arrests in future year f based on arrest rates in historical year h can be represented by equation 5.2:

$$(h) A_{ijkf} = (P_{ikf}) (A/R_{ijkh}) (100,000)^{-1}$$

and given that the demographically disaggregated probability of commitment given arrest ( $\alpha^C$ ) in historical year h can be represented by:

$$(h) \alpha_{ijk}^C = (\alpha_{ijkh}^1) (\alpha_{ijkh}^2) (\alpha_{ijkh}^3) \quad (5.6)$$

then the demographically disaggregated reference projection of future commitments in year f based on historical year h can be simplified by

substituting in equation 5.5, equations 5.2 and 5.6:

$$(h) C_{ijkf} = (h) A_{ijkf} \cdot (h) \alpha_{ijk}^C \quad (5.7)$$

Thus, (h) C<sub>ijkf</sub> represents the number of projected commitments in future year f of offenders in age grouping i, race k, and type of offense i based on arrest rates and flow probabilities for historical year h.<sup>5.4</sup>

The resulting demographically disaggregated projection of commitments is a reference projection since it assumes that the criminal justice system will continue to process in the same way those offenders who are in the same age, race, and type of offense groupings. The only difference between the present and the future is that the size and distribution of the arrest population by the age, race, and sex groupings is different. Since these component groupings are currently processed differently by the system, this difference is reflected in the reference projection for each offender component grouping as well as in the aggregate (i.e., where the projections for each of the offender component groupings are added together). While the above reference projections are for court commitments to prisons, the same technique could be used to develop reference projections of court commitments for

5.4 The Pennsylvania Commission on Crime and Delinquency in its report entitled An Analysis of the Adequacy of our Current Correctional Facilities: Now and in the Future uses an alternative formulation for estimating prison commitments in future years based on demographically disaggregated reference projections of arrests. This formulation assumes that there is a direct relationship in a given year between arrests and prison commitments when disaggregated by age, race, and type of crime. Assuming that both arrests and commitments in year h are available by age, race, and type of offense, then the demographically disaggregated commitment probability ( $\alpha^C$ ) is calculated as follows:

$$(h) \alpha_{ijk}^C = (C_{ijkh}) (A_{ijkh})^{-1}$$

The reference projection for commitments in a future year f is then calculated using the above estimate of the commitment probability in year h and the reference projection of arrests in future year f. The result is the same as equation 5.7 shown above:

$$(h) C_{ijkf} = (h) A_{ijkf} \cdot (h) \alpha_{ijk}^C$$

other types of offenders (i.e., probationers) or to project the volume of court processings (e.g., convictions).

#### Demographically Disaggregated Projections of Prison Population

Now that demographically disaggregated reference projections of court commitments to prisons have been developed, the final task is to generate reference projections of the prison population. In Chapter III, Section A of this report, a deterministic model is described for estimating corrections populations based on the number of commitments and length of stay.<sup>5.5</sup> This model looks at corrections as an inventory process where offenders enter prison, serve their sentence, and are released. The "queue" of offenders active in prison results from the length of time served by offenders prior to their release. It is the time served by inmates which transforms the flow of offender commitments to prison into the stock of offenders who are active in prison.

The corrections population model assumes that the distribution of time served in prison is exponential. It is this exponential distribution of time served which then acts to reduce during the year the inmate population present at the beginning of the year and to accumulate over the year prison population as a result of new intakes.<sup>5.6</sup> The mathematical representation of the model for estimating the prison population (or more generally any corrections population) at the end of a given year is:

$$P_t = P_s + (P_{t-1} - P_s)e^{-1/T} \quad (5.8)$$

Where:

$P_t$  = the prison population at the end of year  $t$

$P_s$  = the stable inmate population which is derived by multiplying the intake over year  $t$  ( $C_t$ ) times the average time served in prison ( $T$ )

$P_{t-1}$  = the prison population at the beginning of year  $t$

$T$  = the average length of stay in prison

5.5 Stollmack, op. cit., p. 143.

5.6 Blumstein, et. al., Demographically Disaggregated Projections of Population, p. 12.

Given the above definitions, equation 5.8 can alternatively be expressed as follows:

$$P_t = C_t \cdot T (1-e^{-1/T}) + P_{t-1} e^{-1/T} \quad (5.9)$$

As with the previous equations, equation 5.9 can also be demographically disaggregated in order to estimate for year  $h$  the inmate population for race  $k$ , type of offense  $j$ , and age at commitment  $i$ :

$$P_{ijkh} = [C_{ijkh} \cdot T_{ijk} (1-e^{-1/T_{ijk}})] + [P_{ijk(h-1)} e^{-1/T_{ijk}}] \quad (5.10)$$

Where:

$P_{ijkh}$  = the number of individuals in prison as of the end of year  $h$  who were admitted at age  $i$  for race  $k$ , and type of offense  $j$

$C_{ijkh}$  = the number of commitments for year  $h$  for age  $i$ , race  $k$ , and type of offense  $j$

$T_{ijk}$  = the average time served for offenders committing offense  $j$ , are of race  $k$ , and were at age  $j$  when committed

The demographically disaggregated equation for population prediction (equation 5.10) can then be used to generate demographically disaggregated reference projections of population for a future year  $f$ , race  $k$ , type of offense  $j$ , and age at commitment  $i$ :

$$(h) P_{ijkf} = [(h) C_{ijkf} \cdot T'_{ijk} (1-e^{-1/T'_{ijk}})] + [P_{ijk(f-1)} e^{-1/T'_{ijk}}] \quad (5.11)$$

Where:

$(h) P_{ijkf}$  = the number of individuals in prison as of the end of future year  $f$  who were admitted at age  $i$  for race  $k$  and type of offense  $j$  (based on historical data for year  $h$ )

$(h) C_{ijkf}$  = the reference projection for commitments in a future year  $f$  for age  $i$ , race  $k$  and type of offense  $j$  (see equation 5.7)

$T'_{ijk}$  = the anticipated average time served in future years for individuals committed for offense  $j$ , race  $k$ , and were of age  $i$  at commitment.

Thus, given some initial value for prison population (e.g., starting with most recent year for which actual data is available) and both the projection of future court commitments (from equation 5.7) and the estimate of the future average time served (e.g., based on historical trends), equation 5.11 can be used to project prison populations for future years.<sup>5.7</sup>

In summary, the principal equations for developing demographically disaggregated reference projections of prison populations are:

$$(h)A_{ijkf} = (A/R_{ijkh}) (P_{ikf}) (100,000)-1 \quad (5.2)$$

for arrest projections;

$$(h)D_{ijkf} = (h)A_{ijkf} \cdot (h)C_{ijk} \quad (5.7)$$

for court commitments; and

$$(h)P_{ijkf} = [(h)C_{ijkf} \cdot T'_{ijk}(1-e^{-1/T_{ijk}})] + [P_{ijk}(f-1) \cdot e^{-1/T_{ijk}}] \quad (5.11)$$

for prison population projections.

The aggregate values for the reference projections of arrests, commitments, and prison populations in future years f (based on historical year h) can then be obtained by summing over the age

5.7 The Pennsylvania Commission on Crime and Delinquency in its report entitled An Analysis of the Adequacy of our Current Corrections Facilities Now and in the Future uses an alternative formulation for estimating prison population in future years based on demographically disaggregated reference projections for commitments to prison. This formulation assumes that there is a direct relationship in a given year between the average daily prison population (ADP) for a given offense and the number of commitments for the offense in the same year. The average daily prison population (ADP) for some future year f for offense j is simply the projected future commitments for year f and offense j times the ratio for some historical year h of the average daily population (ADP) to the number of actual commitments for offense j:

$$ADP_{jf} = (\sum_i \sum_k (h)C_{ijkf}) \cdot (\sum_i \sum_k C_{ijkh})^{-1} (ADP_{jh})$$

groupings i, the racial groupings k, and the type of offense groupings j:<sup>\*</sup>

$$(h)A_f = \sum_i \sum_j \sum_k A_{ijkf},$$

$$(h)C_f = \sum_i \sum_j \sum_k C_{ijkf}; \text{ and}$$

$$(h)P_f = \sum_i \sum_j \sum_k P_{ijkf}$$

\* Available data bases in a state may not always support the generation of demographically disaggregated projections of arrest, commitments, and/or prison population by age, race, and offense. For example, data bases may support the development of arrest projections by age and offense with an adjustment factor for race while only supporting the generation of commitment and prison population projections by offense. The resulting projection while not fully disaggregated, may still provide sufficiently meaningful reference projections for many planning purposes. Such reference projections should be performed while encouraging the upgrade of available data bases in support of greater disaggregation in the future.

B. Illustration of the Use and Display of Statistics on the Future Volume and Manner of Criminal Justice Processing

In Section A a framework is described for the development of reference projections of future offender processing using demographically disaggregated data on the age, race, and offense of the offender population and the age and race composition of the current and projected future population of a jurisdiction. The reference projection technique is illustrated for the projection of future prison population, but can be applied in a similar manner to develop projections of other criminal justice processing flows and stocks. The specific steps described in Section A for the development of the reference projections of prison population are:

1. Project the volume of future arrests for the demographically disaggregated groupings of arrests;
2. Using the arrest projections develop demographically disaggregated projections of the volume of commitments to state prisons; and
3. Using the projections of commitments, project the size of the active prison population.

In this section, the reference projection technique is illustrated using actual data from the Commonwealth of Pennsylvania on arrests, commitments, and prison population. The resulting reference projections are then used to illustrate how changes in sentencing patterns might impact future state correctional needs. The data displays in this section are from the previously referenced report of the Pennsylvania Commission on Crime and Delinquency entitled An Analysis of the Adequacy of our Current State Correctional Facilities Now and in the Future.

Demographically Disaggregated Projections of Arrests

The first step in the development of reference projections using the technique of demographic disaggregation is to project the volume of future arrests. To do this requires a decision about the categories of age, offense, and race for which the arrests are to be disaggregated and the number of future years for which the arrests are to be projected. Exhibit V.I. shows the disaggregated categories

used in the Pennsylvania projections. Given these categories, the calculation of the reference projections of arrests is dependent on data on the number of arrests (demographically disaggregated) for the reference (historical) year and data on the jurisdiction population (demographically disaggregated) for both the reference year and the future years for which the projections are made. Exhibit V.2. shows for Pennsylvania the number of arrests by the age, race, and offense categories for the reference year 1978.<sup>5.8</sup> Exhibit V.3. shows the Pennsylvania population figures by age and race for the reference year and projected future years.

Using the arrest data in Exhibit V.2. and the reference population data in Exhibit V.3., arrest rates per 100,000 population are calculated for the reference year (1978) using equation 5.1 of Section A. The resulting arrest rate calculations are shown in Exhibit V.4. The Exhibit V.4. arrest rates are then used in conjunction with the projection population data of Exhibit V.3. to derive reference projections of future arrests for each of the demographically disaggregated groupings using equation 5.2 of Section A. The resulting demographically disaggregated projections of Pennsylvania arrests for the years 1980-2000 are shown in Exhibit V.5a.-e. Exhibit V.6. is a graphic display of the Exhibit V.5a.-e. reference projections for all adult arrests for the years 1980-2000.

The difference in the number of arrests from the reference year, Exhibit V.1., and the respective future years, Exhibit V.5a.-e., are due solely to shifts in the overall population size and distribution as shown in Exhibit V.3. Very different reference projections of arrests for future years would be obtained where the shifts in population size and distribution for future years when compared to the reference year is significantly

5.8 Demographically disaggregated arrest rates were calculated by the Pennsylvania Commission on Crime and Delinquency for the years 1974-1978. Since these arrest rates varied little over these years, the 1978 arrest rates were selected for use in the reference projections. See page C-3 of the report referenced in footnote 5.7 for the actual arrest rates by year.

different than those shown in Exhibit V.2. For example, where a state is expected to experience in the future a significant increase in its population in the high "arrest prone" years, the reference projection of arrests would be significantly different from those shown in Exhibit V.5a.-e.

#### Demographically Disaggregated Projections of Commitments to Prison

The next step in the development of the reference projections of prison population is to combine the reference projections of arrests with commitment rates to derive the reference projections of future commitments to prisons. The alternative techniques for deriving demographically disaggregated estimates of the commitment rates are shown in Section A, equation 5.6 and footnote 5.4, respectively. Exhibit V.7. shows for Pennsylvania the probability of commitment given arrest for the various age, offense, and race groupings for the reference year 1978. The Exhibit V.7. commitment rates are then used in conjunction with the Exhibit V.5a.-e. reference projections of arrests to derive reference projections of future commitments to prison for each of the demographically disaggregated groupings using equation 5.7 of Section A. The resulting demographically disaggregated projections of Pennsylvania commitments to prison for the years 1980-2000 are shown in Exhibit V.8a.-e.

#### Demographically Disaggregated Projections of Prison Population

The final step in the development of the reference projections of prison population is to determine estimates of the future relationships between commitments and active prison population. Equation 5.11 of Section A describes a process for projecting future estimates of demographically disaggregated prison population based on the projected number of commitments and average time served in prison for those committed. Footnote 5.7 of Section A describes an

\* These commitment rates are estimates derived using the technique described in Section A, footnote 5.4. Depending on data availability and reliability, the technique described in the Section A narrative and summarized by equation 5.6 may be preferable.

alternative technique for projecting prison population based on the relationship in the reference year between the commitments and the average daily prison population.\* Exhibit V.9. displays the reference projections of future average daily prison population (ADP) for Pennsylvania using the technique described in footnote 5.7 of Section A. Exhibit V.10. is a graphic display of the Exhibit V.8. reference projections of average daily prison population for all offenders for the years 1980-2000.<sup>5.9</sup>

Changes in Sentencing and the Impact on Future State Correctional Needs

The current total useable capacity of the Pennsylvania Bureau of Correction is 8,380. In 1978 the average daily population physically present was 7,392 or 88% of the total useable capacity. The total committed population as of November 30, 1979 was 8,275. Based on the Exhibit V.8. reference projections, the average daily physical capacity is expected to exceed the current capacity by 1982 with a peak of 8,682 projected in 1990. Not until 1994 is the projected average daily population expected to fall below the current level of useable cell space. Since the projected average daily population physically present does not account for the normal peaks and valleys in the daily population, an inclusion of a 10% slack in the average daily prison population to account for these fluctuations would require 9,550 units to be available in 1990 to accommodate the population pressure based on the reference projection.

Using the above reference projections the Pennsylvania Commission on Crime and Delinquency (in its previously reference report) analyzes the relationship between selected options for housing inmates and selected sentencing options. Exhibits V.11. and V.12.

\* The former technique may be preferable where reliable data is available. Also, this technique may be preferable where the length of time served for the demographically disaggregated groupings has changed over recent years and it is believed this trend will continue into the future.

5.9 For a different set of demographically disaggregated projections of prison populations for Pennsylvania using the formulation as described in the Section A narrative (excluding the techniques described in footnotes 5.4 and 5.7) see the report by Blumstein, et. al., referenced in footnote 5.1.

show this relationship for the peak population year 1990 assuming no slack and 10% slack in the average daily prison population respectively. For each of the housing and sentencing options shown in the exhibits, the prison cell availability (supply) is compared to the prison cell need (demand).<sup>5.10</sup> Where the demand exceeds the supply, the number of additional cells required is shown. Where the supply is greater than the demand, the number of excess cells is shown.

The Exhibit V.11. and V.12. alternative forecasts of prison requirements illustrate the type of information needed by planners and decision makers when determining future corrections needs. With this information, the costs and benefits of the alternative courses of action can be considered and choices made about which types of interventions to implement. Where the selected forecasts results in a projected undercapacity in future years, decisions must be made about which combination of the following types of interventions to implement to bring the supply of prison cells in line with the demand:

1. Increase the supply of prison cells by
  - a. improving the utilization of existing facilities (e.g., renovation, conversion)
  - b. initiating new construction
2. Decrease the demand for state prison cells through
  - a. increasing the use of alternatives to state incarceration (e.g., residential facilities, intensive supervision)
  - b. shifting the responsibility for incarcerating certain offenders from state to local facilities
  - c. decreasing the length of sentence of committed persons
  - d. reducing the length of time served in relationship to the length of sentence

The reference projection methodology described in Section A and illustrated with actual data in this section, thus, provides the future benchmarks needed to assess alternative interventions and to select a course of action to bring about a planned level of future activity.

5.10 The methods used to derive the estimates of prison supply and cell demand for the respective housing and sentencing options is described in Appendices D-F of the Pennsylvania report.

Disaggregate Categories Used in Projections:

Age Group 1: 18-19 years  
Age Group 2: 20-24 years  
Age Group 3: 25-34 years  
Age Group 4: 35-44 years  
Age Group 5: 45-54 years  
Age Group 6: 55 + years

Offense Group 1: Homicide  
Offense Group 2: Rape  
Offense Group 3: Robbery  
Offense Group 4: Aggravated Assault  
Offense Group 5: Burglary  
Offense Group 6: Larceny  
Offense Group 7: Drugs  
Offense Group 8: All Other Offenses

Race 1: White  
Race 2: Non-White

Year 1: 1980  
Year 2: 1985  
Year 3: 1990  
Year 4: 1995  
Year 5: 2000

TABLE IIIa

PENNSYLVANIA ARRESTS BY AGE, BY OFFENSE, BY RACE, 1978

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
Age	Race								
18-19	White	38	69	367	580	2,220	3,711	1,627	32,115
	Non-White	37	102	853	476	964	1,791	625	11,829
20-24	White	95	156	491	1,322	2,341	4,743	2,923	40,233
	Non-White	91	229	1,144	1,084	1,016	2,289	1,123	14,819
25-34	White	115	175	338	1,392	1,485	3,996	2,086	30,660
	Non-White	111	257	787	1,140	645	1,928	802	11,292
35-44	White	59	54	72	526	333	1,534	402	16,582
	Non-White	57	79	168	431	144	740	154	6,108
45-54	White	28	22	20	274	100	1,009	131	12,135
	Non-White	26	32	47	224	43	487	50	4,469
55 +	White	19	10	5	153	41	966	46	8,687
	Non-White	18	15	12	125	18	466	18	3,199

Exhibit V.2 - 280 -

TABLE I

PENNSYLVANIA POPULATION PROJECTIONS BY AGE, BY RACE, BY YEAR

		1978	1980	1985	1990	1995	2000
18-19	White	412,193	383,614	321,442	266,309	296,790	328,441
	Non-White	48,697	45,261	41,291	40,022	50,243	61,534
20-24	White	868,578	970,211	869,389	738,117	604,734	712,339
	Non-White	101,824	121,226	127,571	110,928	102,375	133,458
25-34	White	1,438,312	1,674,425	1,841,883	1,774,142	1,540,326	1,309,563
	Non-White	159,455	188,427	230,909	250,626	240,326	217,980
35-44	White	1,155,925	1,149,267	1,341,948	1,613,490	1,781,904	1,723,737
	Non-White	122,185	124,583	144,827	185,874	225,988	248,976
45-54	White	1,257,872	1,161,069	1,028,647	1,086,093	1,274,062	1,543,080
	Non-White	115,681	115,855	111,545	119,244	138,987	179,819
55 +	White	2,589,025	2,707,366	2,798,881	2,766,141	2,686,156	2,687,619
	Non-White	174,694	203,342	223,603	234,891	245,305	257,459

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Exhibit V.3.

TABLE III (Calculated from Table I and Table III)

PENNSYLVANIA ARREST RATES<sup>1</sup> BY AGE, BY OFFENSE, BY RACE

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
18-19	White	9.29	16.81	88.97	140.79	538.64	900.32	394.66	7791.36
	Non-White	75.41	208.89	1752.21	976.77	1979.12	3677.75	1283.96	24290.15
20-24	White	10.93	17.96	56.58	152.23	269.51	546.07	336.49	4632.10
	Non-White	89.45	224.92	1123.04	1064.32	997.93	2247.98	1103.22	14553.11
25-34	White	8.02	12.17	23.51	96.75	103.26	277.80	145.04	2131.63
	Non-White	69.40	161.17	493.45	715.24	404.34	1209.32	502.86	7081.86
35-44	White	5.12	4.66	6.24	45.50	28.77	132.71	34.75	1434.52
	Non-White	46.49	64.75	137.38	352.80	118.17	605.64	126.34	4998.98
45-54	White	2.19	1.74	1.60	21.76	7.93	80.22	10.39	964.69
	Non-White	22.86	27.77	40.52	193.94	37.42	421.03	43.45	3864.19
55 +	White	0.73	0.39	0.20	5.90	1.59	37.31	1.79	335.51
	Non-White	10.37	8.51	6.81	71.68	10.22	266.83	10.17	1831.43

<sup>1</sup> Arrest rate per 100,000 population assumed constant for future years.

TABLE IVa (Calculated from Table I and Table III)  
 PENNSYLVANIA ARREST PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1980

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
18-19	White	36	64	341	540	2,065	3,452	1,513	29,879
	Non-White	34	95	793	442	897	1,666	582	11,005
20-24	White	109	181	574	1,521	2,667	5,411	3,324	45,738
	Non-White	105	261	1,336	1,246	1,158	2,612	1,276	16,846
25-34	White	135	205	398	1,631	1,737	4,674	2,439	35,838
	Non-White	130	302	925	1,337	754	2,256	937	13,199
35-44	White	60	54	73	529	333	1,538	402	16,486
	Non-White	57	80	170	433	145	742	155	6,228
45-54	White	27	21	20	262	94	957	124	11,459
	Non-White	25	31	46	215	41	462	47	4,220
55 +	White	21	11	6	168	45	1,047	50	9,360
	Non-White	20	17	13	137	19	506	19	3,448

Exhibit V.5a. - 283

TABLE IVb (Calculated from Table I and Table III)

## PENNSYLVANIA ARREST PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1985

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
18-19	White	31	57	303	470	1,777	2,977	1,300	25,633
	Non-White	30	83	706	386	772	1,436	499	9,441
20-24	White	107	179	579	1,473	2,521	5,136	3,130	43,000
	Non-White	102	264	1,346	1,208	1,095	2,479	1,203	15,837
25-34	White	157	241	473	1,887	1,978	5,335	2,769	40,644
	Non-White	151	355	1,099	1,547	858	2,574	1,064	14,970
35-44	White	69	63	85	617	388	1,793	469	19,251
	Non-White	67	93	198	505	169	865	180	7,240
45-54	White	24	20	19	242	86	873	112	10,403
	Non-White	24	29	43	198	37	422	43	3,831
55 +	White	22	12	6	179	47	1,107	53	9,856
	Non-White	22	18	15	146	20	534	20	3,630

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Exhibit V.5b.

TABLE IVc (Calculated from Table I and Table III)

PENNSYLVANIA ARREST PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1990

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
18-19	White	28	52	282	421	1,553	2,610	1,130	22,268
	Non-White	27	76	656	345	674	1,260	435	8,202
20-24	White	92	155	500	1,266	2,159	4,400	2,678	36,786
	Non-White	88	227	1,163	1,038	937	2,124	1,029	13,549
25-34	White	161	251	497	1,928	1,984	5,368	2,770	40,610
	Non-White	155	369	1,157	1,581	861	2,591	1,064	14,958
35-44	White	86	79	107	764	477	2,204	575	23,146
	Non-White	83	117	249	626	207	1,063	221	9,292
45-54	White	26	21	20	257	91	926	119	11,024
	Non-White	25	31	46	211	40	447	46	4,060
55 +	White	23	13	7	182	47	1,119	53	9,925
	Non-White	22	18	15	150	21	540	20	3,656

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Exhibit V.5C.

**CONTINUED**

**4 OF 5**

TABLE IVd (Calculated from Table I and Table III)  
 PENNSYLVANIA ARREST PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1995

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
18-19	White	53	63	344	500	1,808	3,049	1,312	25,819
	Non-White	32	92	800	409	785	1,471	504	9,510
20-24	White	81	137	448	1,105	1,849	3,780	2,286	31,360
	Non-White	77	202	1,044	905	802	1,824	878	11,551
25-34	White	148	233	465	1,764	1,787	4,846	2,487	36,435
	Non-White	142	342	1,083	1,445	775	2,339	956	13,419
35-44	White	100	93	127	884	544	2,519	654	25,562
	Non-White	96	136	295	724	236	1,215	251	11,297
45-54	White	31	25	23	301	107	1,084	139	12,906
	Non-White	29	36	54	246	46	523	54	4,754
55 +	White	23	13	7	184	47	1,118	53	9,870
	Non-White	22	18	15	150	21	539	20	3,635

Exhibit V.5d.

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TABLE IVe (Calculated from Table I and Table III)

PENNSYLVANIA ARREST PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 2000

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Drugs	Other
18-19	White	39	75	412	584	2,083	3,521	1,507	29,626
	Non-White	38	109	958	479	904	1,699	579	10,912
20-24	White	101	173	572	1,377	2,268	4,647	2,795	38,308
	Non-White	96	255	1,330	1,128	984	2,243	1,074	14,110
25-34	White	131	207	416	1,553	1,558	4,232	2,164	31,682
	Non-White	125	304	968	1,273	676	2,042	832	11,669
35-44	White	104	98	135	914	551	2,561	660	24,727
	Non-White	100	144	315	749	239	1,235	254	12,446
45-54	White	38	31	29	376	132	1,346	172	15,956
	Non-White	37	46	69	309	58	649	66	5,877
55 +	White	23	13	7	189	48	1,140	53	10,036
	Non-White	23	19	16	154	21	550	21	3,697

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Exhibit V.5e.

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Exhibit V.6.

Figure A

Adult Arrest Projections, 1980-2000

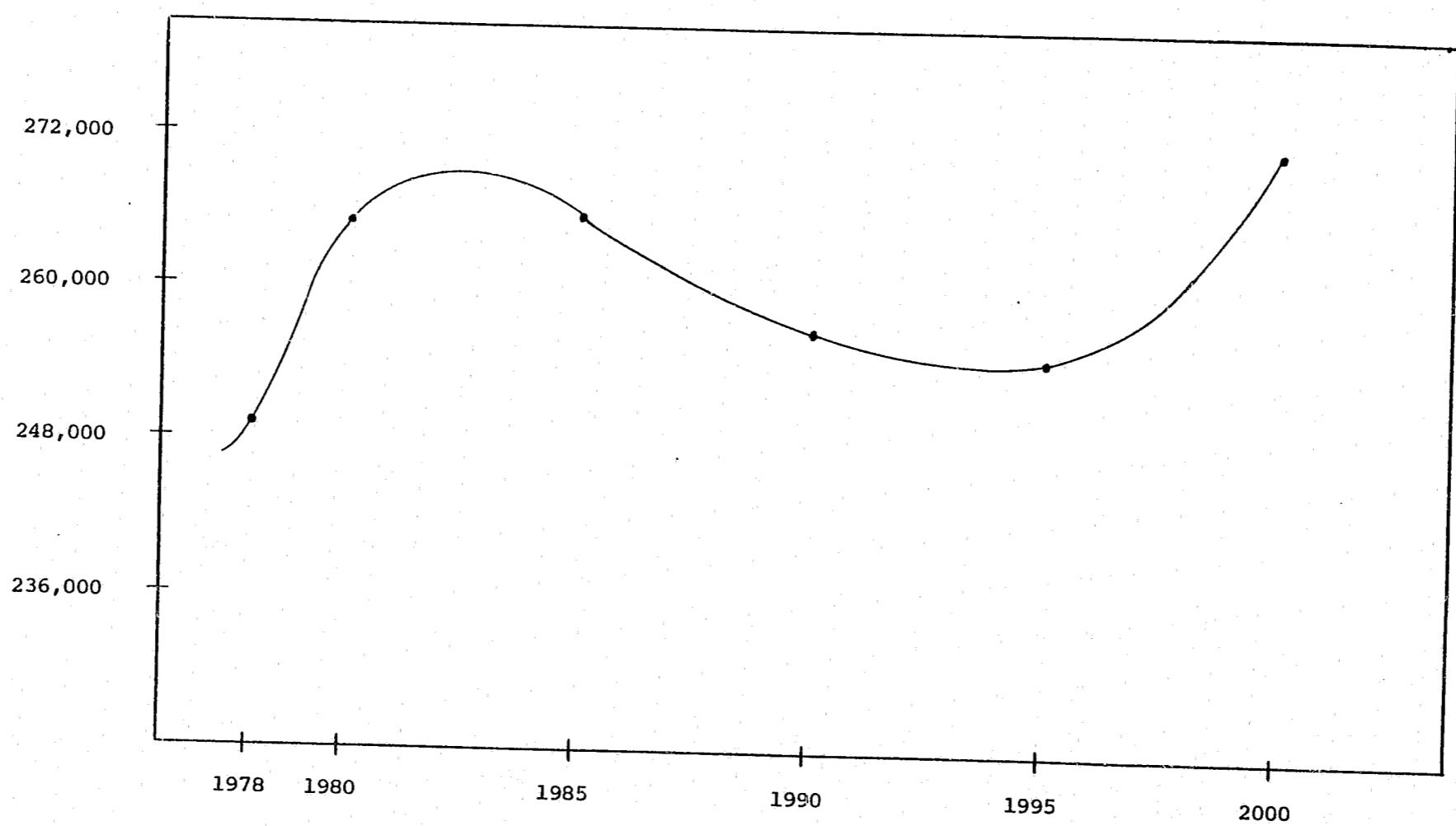


TABLE VIII (Calculated from Table II and Table VII)  
PENNSYLVANIA COMMITMENTS PER ARREST<sup>1</sup>, BY AGE, BY OFFENSE, BY RACE, 1978

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Theft	Drugs	Other
18-19	White	.302	.089	.051	.013	.017	.004	.007	.002
	Non-White	.375	.081	.034	.019	.016	.004	.012	.002
20-24	White	.504	.165	.159	.024	.066	.012	.017	.006
	Non-White	.716	.170	.118	.040	.072	.016	.030	.006
25-34	White	.370	.130	.205	.020	.092	.012	.021	.007
	Non-White	.768	.198	.225	.050	.149	.024	.055	.011
35-44	White	.201	.118	.268	.015	.115	.009	.030	.003
	Non-White	.333	.144	.234	.029	.149	.014	.064	.004
45-54	White	.153	.104	.348	.010	.137	.005	.033	.002
	Non-White	.260	.127	.299	.020	.178	.008	.071	.002
55 +	White	.261	.266	1.61	.022	.388	.006	.110	.003
	Non-White	.161	.155	.671	.021	.244	.005	.112	.002

<sup>1</sup> Assumed constant for future years.

TABLE IXa (Calculated from Table IVA and Table VIII)

## PENNSYLVANIA COMMITMENT PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1980

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Theft	Drugs	Other
18-19	White	10.9	5.7	17.4	7.0	35.1	13.8	10.6	59.8
	Non-White	12.8	7.7	27.0	8.4	14.4	6.7	7.0	22.0
20-24	White	54.9	29.9	91.3	36.5	176.0	64.9	26.5	274.4
	Non-White	75.2	44.4	157.6	49.8	83.4	41.8	38.3	101.1
25-34	White	50.0	26.7	81.6	32.6	159.8	56.1	51.2	250.9
	Non-White	99.8	59.8	208.1	66.9	112.3	54.1	51.5	145.2
35-44	White	12.1	6.4	19.6	7.9	38.3	13.8	12.1	55.6
	Non-White	19.0	11.5	39.8	12.6	21.6	10.4	9.9	27.9
45-54	White	4.1	2.2	7.0	2.6	12.9	4.8	4.1	22.9
	Non-White	6.5	3.9	13.8	4.3	7.3	3.7	3.3	8.4
55 +	White	5.5	2.9	9.7	3.7	17.5	6.3	5.5	28.1
	Non-White	3.2	2.6	8.7	2.9	4.6	2.5	2.1	6.9
Total by Offense:		354.0	203.7	681.6	235.2	683.2	278.9	252.1	1003.2

Exhibit V.8a.

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TABLE IXB (Calculated from Table IVb and Table VIII)

PENNSYLVANIA COMMITMENT PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1985

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Theft	Drugs	Other
Age	Race								
18-19	White	9.4	5.1	15.5	6.1	30.2	11.9	9.1	51.3
	Non-White	11.3	6.7	24.0	7.3	12.4	5.7	6.0	18.9
20-24	White	53.9	29.5	92.1	35.4	166.4	61.6	53.2	86.0
	Non-White	73.0	44.9	158.8	48.3	78.8	39.7	36.1	31.7
25-34	White	58.1	31.3	97.0	37.7	182.0	64.0	58.1	284.6
	Non-White	116.0	70.3	247.3	77.4	127.8	61.8	58.5	164.7
35-44	White	13.9	7.4	22.8	9.3	44.6	16.1	14.1	64.9
	Non-White	22.3	13.4	46.3	14.6	25.2	12.1	11.5	32.4
45-54	White	3.7	2.1	6.6	2.4	11.8	4.4	3.7	20.8
	Non-White	6.2	3.7	12.9	4.0	6.6	3.4	3.1	7.7
55 +	White	5.7	3.2	9.7	3.9	18.2	6.6	5.8	29.6
	Non-White	3.5	2.8	10.1	3.1	4.9	2.9	2.2	7.3
Total by Offense:		377.0	220.4	743.1	249.5	708.9	290.2	261.4	799.9

Exhibit V-8b  
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TABLE IXc (Calculated from Table IVC and Table VIII)

PENNSYLVANIA COMMITMENT PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1990

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Theft	Drugs	Other
18-19	White	8.5	4.6	14.4	5.5	26.4	10.4	7.9	44.5
	Non-White	10.1	6.2	22.3	6.6	10.8	5.0	5.2	16.4
20-24	White	46.4	25.6	79.5	30.4	142.5	52.8	45.5	220.7
	Non-White	63.0	38.6	137.2	41.5	67.5	34.0	30.9	81.3
25-34	White	59.6	32.6	101.9	38.6	182.5	64.4	58.2	284.3
	Non-White	119.0	73.1	260.3	79.1	128.3	62.2	58.5	164.5
35-44	White	17.3	9.3	28.7	11.5	54.9	19.8	17.3	78.0
	Non-White	27.6	16.8	58.3	18.2	30.8	14.9	14.1	41.6
45-54	White	4.0	2.2	7.0	2.6	12.5	4.6	3.9	22.0
	Non-White	6.5	3.9	13.8	4.2	7.1	3.6	3.3	8.1
55 +	White	6.0	3.5	11.3	4.0	18.2	6.7	5.8	29.8
	Non-White	3.5	2.8	10.1	3.2	5.1	2.7	2.2	7.3
Total by Offense:		371.5	219.2	744.8	245.4	686.6	281.1	252.8	998.5

Exhibit V.8C.

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TABLE IXd (Calculated from Table IVd and Table VIII)

## PENNSYLVANIA COMMITMENT PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 1995

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Theft	Drugs	Other
18-19	White	10.0	5.6	17.5	6.5	30.7	12.2	9.2	51.6
	Non-White	12.0	7.5	27.2	7.8	12.6	23.5	6.0	19.0
20-24	White	40.8	22.6	71.2	26.5	122.0	45.4	38.9	188.2
	Non-White	55.1	34.3	123.2	36.2	57.7	29.2	26.3	69.3
25-34	White	54.8	30.3	95.3	35.3	164.4	58.2	52.2	255.0
	Non-White	109.1	67.7	243.7	72.3	115.5	56.1	52.6	147.6
35-44	White	20.1	11.0	34.0	13.3	62.6	22.7	19.6	86.1
	Non-White	32.0	19.6	69.0	21.0	35.2	17.0	16.1	50.6
45-54	White	4.7	2.6	8.0	3.0	14.7	5.4	4.6	25.8
	Non-White	7.5	4.6	16.1	4.9	8.2	4.2	3.8	9.5
55 +	White	6.0	3.5	11.3	2.3	18.2	6.7	5.8	29.6
	Non-White	3.5	2.8	10.1	3.2	5.1	2.7	2.2	7.3
Total by Offense:		355.6	212.1	726.6	232.3	646.9	283.3	237.3	939.6

Exhibit V.8d.  
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TABLE IXe (Calculated from Table IVe and Table VIII)

## PENNSYLVANIA COMMITMENT PROJECTIONS BY AGE, BY OFFENSE, BY RACE, 2000

		Homicide	Rape	Robbery	Aggravated Assault	Burglary	Theft	Drugs	Other
18-19	White	11.8	6.7	21.0	7.6	35.4	14.1	10.5	59.3
	Non-White	14.3	8.8	32.6	9.1	14.5	6.8	6.9	21.8
20-24	White	50.9	28.5	90.9	33.0	149.7	55.8	47.5	229.8
	Non-White	68.7	43.4	156.9	45.1	70.8	35.9	32.2	84.7
25-34	White	48.5	26.9	85.3	31.1	143.3	50.8	45.4	221.8
	Non-White	96.0	60.2	217.8	63.7	7.3	49.0	45.8	128.4
35-44	White	20.9	11.6	36.2	13.7	63.4	23.0	19.8	83.3
	Non-White	33.3	20.7	73.7	21.7	35.6	17.3	16.3	55.8
45-54	White	5.8	3.2	10.1	3.8	18.1	6.7	5.7	31.9
	Non-White	9.6	5.8	20.6	6.2	10.3	5.2	4.7	11.8
55 +	White	6.0	3.5	11.3	4.2	18.6	6.8	5.8	30.1
	Non-White	3.7	2.9	10.7	3.2	5.1	2.8	2.4	7.4
Total by Offense:		369.5	222.2	767.1	242.4	572.1	274.2	243.0	966.1

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Exhibit V.8e.

TABLE X (Calculated from Table VIII and Table IX)  
PROJECTIONS OF AVERAGE DAILY PRISON POPULATIONS IN PENNSYLVANIA, 1980-2000

	Homicide	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Narcotics	Other Offenses	Total Projected Commitments by Year	Total Projected ADP by Year	Average Daily Surplus Cell Capacity <sup>3</sup>	New Cell Capacity Needed
1978 Commitments by Offense	317	182	602	211	614	249	227	860	3262 <sup>4</sup>	-	-	-
1978 ADP by Offense	1,771	623	1,684	377	1,155	329	322	1,131	-	7392 <sup>4</sup>	988	-
1980 Projected Commitments Ratio R <sup>1</sup>	354.0 1.117	203.7 1.119	681.6 1.132	235.2 1.115	683.2 1.113	278.9 1.120	252.1 1.111	1003.2 1.165	3691.9	-	-	-
Proj. ADP by Offense <sup>2</sup>	1978.2	697.1	1906.3	420.4	1285.5	368.5	357.7	1318.0	-	8332	48	-
1985 Projected Commitments Ratio R	377.0 1.189	220.4 1.211	743.1 1.234	249.5 1.182	708.9 1.155	290.2 1.165	261.4 1.152	799.9 .930	3650.4	-	-	-
Proj. ADP by Offense	2105.7	754.5	2078.1	445.6	1334.0	383.3	370.9	1052.0	-	8524	-	144
1990 Projected Commitments Ratio R	371.5 1.172	219.2 1.204	744.8 1.237	245.4 1.163	686.6 1.118	281.1 1.129	252.8 1.114	998.5 1.161	3799.9	-	-	-
Proj. ADP by Offense	2075.6	750.1	2083.1	438.5	1291.3	371.4	358.7	1313.1	-	8682	-	302
1995 Projected Commitments Ratio R	355.6 1.122	212.1 1.165	726.6 1.207	232.3 1.101	646.9 1.054	283.3 1.138	237.3 1.045	939.6 1.093	3633.7	-	-	-
Proj. ADP by Offense	1987.1	725.8	2032.6	415.1	1217.4	374.4	336.5	1235.7	-	8325	55	-
2000 Projected Commitments Ratio R	369.5 1.166	222.2 1.221	767.1 1.274	242.4 1.149	572.1 .932	274.2 1.101	243.0 1.070	966.1 1.123	3656.6	-	-	-
Proj. ADP by Offense	2065.0	760.7	2145.4	433.2	1076.5	362.2	344.5	1270.5	-	8458	-	78

<sup>1</sup> Ratio R = (Projected Commitments) ÷ (1978 Commitments).

<sup>2</sup> Projected Average Daily Prison Populations = (Ratio R) (1978 ADP).

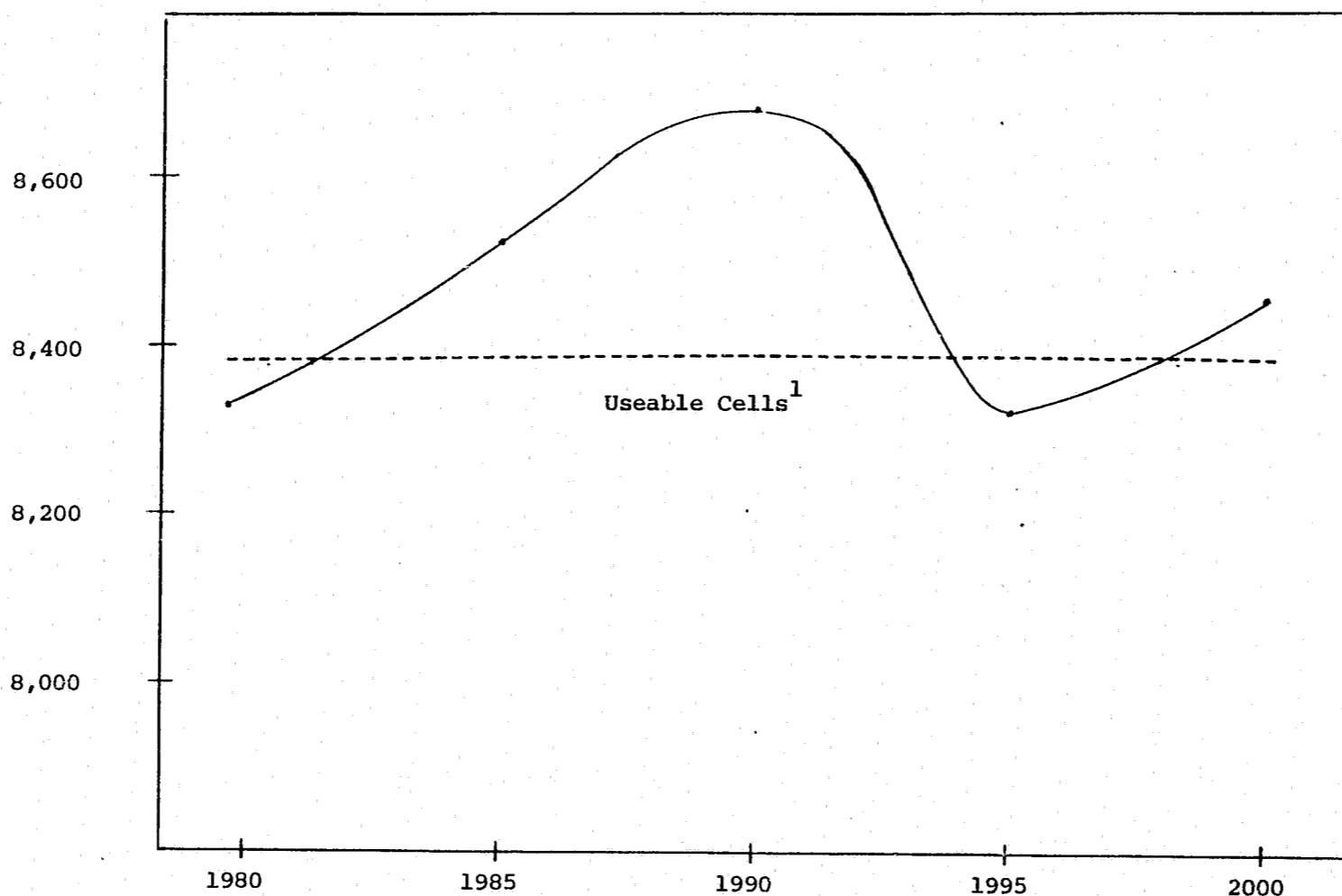
<sup>3</sup> (8875 Total Possible) - (495 Unuseable) = 8380 Useable (November, 1979).

<sup>4</sup> Figures represent actual rather than projected statistics.

Exhibit V.9  
1 295 1

Figure B

Projected Average Daily Prison Population in the Pennsylvania  
Bureau of Correction, 1980-2000



<sup>1</sup> 8,380 useable cells in the Bureau of Correction as of November, 1979.

ADDITIONAL CAPACITY NEEDED FOR 1990, YEAR OF PEAK PRISON POPULATION DURING 1980-2000, PENNSYLVANIA

Selected Options for Housing Inmates	SELECTED SENTENCING OPTIONS				
	Current Practices Continued	1 for 1 Good-Time Policy	25% Increase in Sentence 1 for 2 Good-Time Policy	50% Increase in Sentence 1 for 2 Good-Time Policy	50% Increase in Sentence 1 for 5 Good-Time Policy
	Peak-8682 Inmates	Peak-5108 Inmates	Peak-7774 Inmates	Peak-9220 Inmates	Peak-11726 Inmates
(1) Present Useable Capacity 8380	302	None (3272)*	None (606)*	840	3346
(2) Present Useable plus Salvage Current Unuseable Space $8380 + 495 = 8875$	None (193)*	None (3767)*	None (1101)*	345	2851
(3) Present Useable plus Adapt Farview $8380 + 750 = 9130$	None (448)*	None (4022)*	None (1356)*	90	2596
(4) Present Useable plus Salvage Unuseable Space plus Adapt Farview $8380 + 1245 = 9625$	None (943)*	None (4517)*	None (1851)*	None (405)*	2101
(5) Present Useable plus One New Regional Correction Facility $8380 + 200 = 8580$	102	None (3472)*	None (806)*	640	3146
(6) Present Useable plus Seven New Community Service Centers $8380 + 147 = 8527$	155	None (3419)*	None (753)*	693	3199

\*Figure in parentheses represents excess or slack prison capacity.

ADDITIONAL CAPACITY NEEDED FOR 1990 ASSUMING TEN PERCENT SLACK\* CAPACITY

Selected Options for Housing Inmates	SELECTED SENTENCING OPTIONS				
	Using Current Practices of Sentencing	With 3 for 1 Good-Time Policy	With Increase of 25% in Sentence Length and 1 for 2 Good-Time Policy	With Increase of 50% in Sentence Length and 1 for 2 Good-Time Policy	With Increase of 50% in Sentence Length and 1 for 5 Good-Time Policy
	(110%)(8682) = 9550	(110%)5108 = 5619	(110%)(7774) = 8551	(110%)(9220) = 10142	(110%)(11726) = 12899
(1) Present Useable Capacity 8380	1170	None	171	1762	4519
(2) Present Useable plus Salvage Current Unuseable Space 8380 + 495 = 8875	675	None	None	1267	4024
(3) Present Useable plus Adapt Farview 8380 + 750 = 9130	420	None	None	1012	3769
(4) Present Useable plus Salvage Unuseable Space plus Adapt Farview 8380 + 1245 = 9625	None	None	None	517	3274
(5) Present Useable plus One New Regional Correction Facility 8380 + 200 = 8580	970	None	None	1562	4319
(6) Present Useable plus Seven Additional Community Service Centers 8380 + 147 = 8527	1023	None	24	1615	4372

\*Peak inmate populations were increased ten percent over projected populations to provide excess housing required for daily fluctuations of populations, inmate transfer capacity and other management and/or programmatic requirements.

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Exhibit V.12.

C. Data Collection, Extraction, and Aggregation Issues for Projecting the Future Volume and Manner of Criminal Justice Processing

The basic data ingredients needed for generating reference projections of the future volume and manner of criminal justice processing in a jurisdiction are, as noted in Sections A and B of this chapter, arrests for the reference or historical year (h), population for the reference year (h), and estimates of the population for future years (f) for the jurisdiction of interest. Using these data, arrest rates for the reference year (h) can be determined. Assuming that these arrest rates will remain stable over time, reference projections for future years (f) can then be made.

Typically, arrest rates vary significantly by age and race grouping. Additionally, the distribution of the population by age and race is more subject to change over time than the distribution of the population by sex. Hence it is desirable to estimate future arrests for a given offense based on complete offense by age by race breakdowns.\*

Using the estimates of future arrests derived, and by assuming that the manner of processing arrests through the system (e.g., probability of being convicted given arrest, probability of incarceration given arrest) will remain the same over time, estimates can then be made of future system "flows" (i.e., volume of offenders to be processed through the system) and "stocks" (i.e., volume of offenders active in the system (e.g., serving time) at a given point in time or the average active population over a year). This can be done by taking data for reference year (h) on the volume of "flows" and "stocks" through the system and multiplying these figures by the ratio of arrests for future year (f) to arrests for reference year (h). That is

$$\text{Future flows/stocks} = \text{reference yr flows/stocks} \times \frac{\text{future arrests}}{\text{reference yr arrests}}$$

\* UCR arrest data is not typically available by age x race x offense. Footnote 5.3 in Section A references two techniques for estimating future arrests for a given offense based on complete offense X age X race breakdowns using UCR data.

The following are examples of the types of "flows" (excluding arrests) and "stocks" for which reference projections can be made:

1. Defendants disposed at the lower court and upper court levels
2. Defendant cases filed in upper court
3. Number of Commitments/Intake to state corrections, local jail, probation
4. Active Population in state corrections, local jail, under supervision (probation and parole)

Generating reference projections of the above flows and stocks essentially requires an existing system description as described in Chapter I. Additionally when generating prison population projections, data on length of sentence and length of stay in various correctional alternatives may be desirable. Issues related to the collection, extraction, and aggregation of data on offender flows and stocks and length of sentence, duration of stay and impact on corrections stocks in particular have been discussed in Chapters I and III respectively.

While arrests should ideally be projected by age, race, and offense (and sex depending on the need) it may also be desirable to develop reference projections of future offender processing by age, race, and/or sex groupings in addition to offense type when the data permits. This is particularly true where the volume and manner of offender processing varies significantly by age, race, and/or sex in addition to offense.

Finally, since the reference projection methodology discussed in this chapter uses estimates of current and future population as the base of information from which to project changes in arrests, it is important that a reliable source for the population data be chosen. In some instances several sets of estimates of the current and future population may be available either from different sources or from the same source but which are based on different assumptions (e.g., one series may assume a birth rate of 2.1 births per woman till 1985, another series may assume a birth rate of 2.5 births per woman from 1980-1990). It may be wise in these instances

to generate the arrest projections using the different series of population estimates available in order to determine the sensitivity of the resulting projections to the population estimates.

D. Alternative Sources of Data in Support of Projecting the Future Volume and Manner of Criminal Justice Processing

As described in Section C of this chapter, the basic data ingredients for generating reference projections of the future volume and manner of criminal justice processing are the current volume of arrests and estimates of the current and future population in a jurisdiction. The arrest data can typically be obtained from a state level Uniform Crime Reporting (UCR) System which generally maintains arrest data by jurisdiction, age, race, sex and offense or a local law enforcement arrest and booking system. Estimates of current and future population are usually made by a state department of planning or some state level agency and are generally available by jurisdiction within the state and by age, race, and sex. These population estimates may be updated every few years as new census data becomes available.

Additionally, the U.S. Census Bureau publishes current and future estimates of state populations by age, race, and sex.<sup>5.8</sup> They also publish projections of total U.S. population by year and by age, race, and sex.<sup>5.9</sup> The latter projections are for individual ages (e.g., 1,2,3...) up to 44 years and are in 5 year intervals through 85 years of age. This information could prove useful in further disaggregating jurisdictional population data by age if necessary. For example, some states may only provide population estimates for 5 year age intervals (e.g., 0-4, 5-9...). However, in some instances it may be desirable to project arrests for some finer subdivisions of the population (e.g., 15, 16, 17,...). By assuming that the distribution of the population in a jurisdiction in an age group (e.g., 15-19) is the same as the distribution of the U.S.

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<sup>5.8</sup> Illustrative Projections of State Populations by Age, Race and Sex: 1975 to 2000; U.S. Dept. of Commerce, Bureau of the Census; Series P-25, No. 798; March 1979.

<sup>5.9</sup> Projections of the Populations of the United States, 1977-2050; U.S. Dept. of Commerce, Bureau of the Census; Series P-25, No. 704; July, 1977.

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population in the same age group, estimates can be made of the jurisdiction's population by individual or some division of ages (e.g., 15-16, 17, 18-19) within the age group.\*

Using the estimates of current arrests and current and future population, estimates of future arrests can be made. The arrest projections can in turn be used to generate reference projections of the future volume and manner of criminal justice processing. Essentially all that is needed is a description of the existing system, the level of detail of the description depending on the level of detail desired for the reference projections of future processing.

Section D of Chapter I listed sources of data in support of offender processing flows and stocks. These sources included state level automated information systems, agency (local) management information systems, and manually generated data bases.

Section D of Chapter III listed sources of data on length of sentence, duration of stay in correctional alternatives, and corrections processing data. These latter data elements may be necessary for more detailed estimates of future prison population as described in Section B of this chapter.

\* This can be done in the following manner. The 15-19 age grouping is used as an example where estimates are desired for the 15-16, 17 and 18-19 year old populations in a jurisdiction and data is only available for the 15-19 year old population combined. Then

$$(15-16)\bar{J} = (15-19)_J \times \frac{(15-16)US}{(15-19)US}$$

$$17\bar{J} = (15-19)_J \times \frac{17US}{(15-19)US}$$

$$(18-19)\bar{J} = (15-19)_J \times \frac{(18-19)US}{(15-19)US}$$

where J is the known jurisdiction population and US is the known U.S. population for the age groupings referenced (e.g., 15-16, 15-19).  $\bar{J}$  is the estimated jurisdiction population for the age grouping referenced.

The selection of the data bases for the generation of offender processing data in general, as noted in earlier chapters, and specifically in support of projecting the future volume and manner of criminal justice processing ultimately depends on (1) the issues being addressed (e.g., prison overcrowding), (2) the data needed to address the issue in whole or in part, (3) the availability of one or more data bases to choose from, (4) the ability to get access to the data base for statistical purposes, and (5) the degree of difficulty (including cost) in creating and maintaining the record structure and output programs that support the needed statistics.

E. Data Files and Output Reports in Support of Projecting the Future Volume and Manner of Criminal Justice Processing

The previous sections of this chapter provided a conceptual definition of the reference projection technique for estimating the future volume and manner of criminal justice processing (Section A), provided an illustration of the use of a demographically disaggregated projection technique for estimating future prison population based on existing processing trends (Section B), described issues or concerns to be addressed in the collection, extraction, and aggregation of data to be used in projecting the future volume and manner of criminal justice processing (Section C), and described alternative sources of data which could be used to project future offender processing flows and stocks (Section D).

In this section the use of a series of interactive computer programs to assist in the development of projections of future state and local (e.g., county, city) arrests are described. While the illustration is specifically for projecting arrests based on the reference projection methodology discussed in Sections A and B of this chapter, the programs (and corresponding input and output files) could be expanded to generate projections of future offender flows and stocks in general.

Arrest Projection Methodology

The basic methodology for generating arrest projections was described in Section A. Essentially arrest rates per 100,000 population for specific age groupings of offenders (in the programs  $\leq 10$ , 11-12, 13-14, 15-16, 17, 18-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 49+ are used) and categories of offenders classified by type of crime at arrest (e.g., murder, rape, robbery) are calculated for a given jurisdiction and year. In order to generate the arrest rates, data is needed for one or more years on the number of actual arrests by age and type of crime for the particular jurisdiction of interest. Also needed are overall population figures for the jurisdiction of interest broken down by the

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same age groupings and years for which the UCR data is available. Section D gives possible sources of arrest and population data.

The arrest rates are then combined with estimates of the future population of the jurisdiction broken down by the same age groupings. In this way arrest projections for a given future year (e.g., 1990) can be derived based on one or more historical years (e.g., 1975, 1976, 1977, 1978, and 1979) for which arrest rates can be calculated. The only additional data needed to do this is the number of projected people for the jurisdiction of interest identified by the same age groupings for which the arrest rates are calculated.

As noted in Section A, historically arrest rates differ significantly by racial groupings of the arrestees. However, UCR data on race is not available by the various specific age breakdowns, only by total juvenile and total adult arrests. In the programs developed to do arrest projections, an adjustment factor is used to modify or adjust the arrest projections so as to compensate for shifts in the racial distribution of a jurisdiction's population.\*

As noted previously, projections of arrests for a future year (e.g., 1990) may be derived for each historical year for which data is available (e.g., 1976, 1977, 1978). Since the arrest rates by type of crime and age will differ somewhat for each historical year, the future arrests for year f will differ somewhat depending on which of the historical years is used in making the projection. As such, the programs developed provide "smoothed" projections by applying

\*The adjustment factor is determined as follows:

$$\begin{aligned} \text{ADJ}_{ijf} &= (\%WP_{if} * WA/R_{gjh}) + (\%NWP_{if} * NWA/R_{gjh}) \\ \text{based on historical year (h)} &= (\%WP_{ih} * WA/R_{gjh}) + (\%NWP_{ih} * NWA/R_{gjh}) \end{aligned}$$

Where: ADJ = adjustment factor  
 %WP = % of Population White (Non-Black)  
 %NWP = % of Population Non-White (Black)  
 WA/R = White (Non-Black) Arrest Rate per 100,000  
 NWA/R = Non-White (Black) Arrest Rate per 100,000  
 i = age grouping  
 j = crime type  
 f = future years (e.g., 1985, 1990)  
 h = historical years (e.g., 1977, 1978)  
 g = juvenile arrestees or adult arrestees

weights to each of the projections for a given future year. Two types of smoothing options are used. One option uses exponential smoothing and the other uses a weighted sum of the individual estimates.

#### Exponential Smoothing Method:

For example, an exponentially smoothed projection for 1990 based on the arrest projections for 1990 using 1979, 1978, 1977, and 1976 data respectively is derived using the following formula in a recursive manner starting with t = 1976 and proceeding through t = 1979.

$$E(D_t) = \bar{F}_t + \frac{(1-\alpha)\bar{T}_t}{\alpha}$$

$$\text{Where: } \bar{F}_t = \alpha \bar{D}_t + (1-\alpha)\bar{F}_{t-1}$$

$$\bar{T}_t = \alpha(\bar{F}_t - \bar{F}_{t-1}) + (1-\alpha)\bar{T}_{t-1}$$

$\bar{D}_t$  = projected arrests for a given year,  
e.g., 1990, based on year t (t = 1976, 1977, 1978, 1979)

$\alpha$  = smoothing constant ( $\alpha$  must be between 0 and 1; a large  $\alpha$  will cause the smoothed projection to respond quickly to the most recent year, a small  $\alpha$  will respond more slowly)

#### Weighted Sum Method:

$$\begin{aligned} \text{Smoothing Weights (a,b,d,c)} &= (a * 1976Aijf) + (b * 1977Aijf) + \\ &\quad (c * 1978Aijf) + (d * 1979Aijf) \end{aligned}$$

Where  $a+b+c+d = 1$  and

Where  $1976Aijf$ , for example, is the projected number of arrests for future years, f, for crime type, j, and age grouping, i, based on the arrest rate for year 1976 for i and j.

$$\begin{aligned} \text{Example (0,0,0,1)} &= (0 * 1976Aijf) + (0 * 1977Aijf) + \\ &\quad (0 * 1978Aijf) + (1 * 1979Aijf) \\ &= 1979Aijf \end{aligned}$$

In addition to providing a smoothed estimate of future arrests, using the above two techniques, the number of current arrests (e.g., 1979) are also smoothed using the same smoothing technique (i.e., exponential or weighted sum) applied to the number of arrests for

the prior and current years (i.e., 1976, 1977, 1978, and 1979).

Arrest Projection Programs

The following describes three computer programs which support the above arrest projection methodology.\* The programs are written in an interactive mode, prompting the user through a series of questions so that arrest and population data can be entered, stored, and retrieved and so that calculations can be performed and output reports generated.

1. Projection Data Entry Program - program to enter and display the past, current and future population for a jurisdiction using either standard (based on UCR) or non-standard age groupings by year and, if desired, by race. The data may be entered directly from the terminal or may be retrieved from a file (previously entered and saved using this program). Additionally, the population data may be saved to files for later retrieval and use, with the past and current population data saved to one file and the future population data to another. Finally, several types of output reports displaying the past and current population data (by age grouping and year), as well as the future population data may be generated. The types of outputs available are displayed in Exhibit V.13. using population data for the state of Maine as an example.
2. Arrest Data Entry and Display Program - program to enter arrest data and calculate and display arrests and arrest rates per 100,000 population. The program initially retrieves the current and past population data from a saved file (created through use of the previous program). Arrest data by crime type is then entered (or retrieved from a file if entered and saved on a previous run of this program) and may be saved to a file. Finally, arrest rates are calculated and the arrests and arrest rates displayed (see Exhibit V.14. using burglary arrests from the state of Maine as an example).

\*The programs were written by the CJSA staff for use on their Apple II micro computer. They are written in the BASIC programming language. See CJSA Bulletin #2, attachment II.

The program also allows the user to enter and accumulate arrests for a group of crimes (e.g., all Part I crimes), save the cumulative arrests to a file, calculate the arrest rates for the crime groupings (e.g., all Part I crimes), and display the cumulative arrests and arrest rates for the crime grouping.

3. Arrest Projection Calculate and Display Program - program to enter population and arrest data and calculate and display projected arrests for future years. This program retrieves the past and current population, the future population and the arrest data from the saved files in order to calculate the future projected arrests.

The program calculates and displays the number of future arrests using either the exponential or weighted average techniques described previously. If the population data was entered by race, the program will adjust the future projected arrests to account for any racial shifts in the population which may influence projected arrests. The type of output report available is displayed in Exhibit V.15.

Exhibit V.13.

REPORT: ESTIMATED POPULATION BY AGE GROUPING FOR 1975-1979  
JURISDICTION: MAINE  
TOTAL POPULATION IN 100S

AGE GROUPINGS	1975	1976	1977	1978	1979
TOTAL	10579	10704	10829	10955	11080
=<10	1881	1870	1859	1848	1836
11-12	404	395	385	375	365
13-14	429	417	406	395	384
15-16	400	398	396	395	393
17	199	200	200	201	202
18-19	404	407	410	413	416
20-24	928	948	968	988	1008
25-29	797	823	849	874	900
30-34	638	679	720	761	802
35-39	558	580	602	625	647
40-44	522	529	536	543	551
45-49	574	571	569	566	563
50+	2845	2887	2929	2971	3013
JUV	3314	3280	3246	3213	3179
ADULT	7265	7424	7583	7742	7901

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Exhibit V.13. (cont'd.)

REPORT: ESTIMATED AND PROJECTED POPULATION BY AGE GROUPING FOR 1975-2000

JURISDICTION: MAINE

TOTAL POPULATION IN 100S

AGE GROUPINGS	1975	1980	1985	1990	1995	2000
TOTAL	10579	11205	11958	12727	13435	14055
=<10	1881	1825	1975	2199	2240	2168
11-12	404	356	323	351	416	428
13-14	429	372	367	335	407	434
15-16	400	391	360	322	362	417
17	199	202	175	163	170	205
18-19	404	420	369	364	332	403
20-24	928	1028	1030	909	854	877
25-29	797	926	1030	1030	919	860
30-34	638	843	964	1068	1065	940
35-39	558	669	863	1003	1108	1101
40-44	522	558	705	903	1024	1127
45-49	574	561	589	715	914	1056
50+	2845	3055	3208	3364	3624	4040
JUV	3314	3146	3200	3370	3595	3651
ADULT	7265	8059	8758	9357	9840	10404

AGE GROUPINGS	%CHANGE 1980/1975	%CHANGE 1985/1975	%CHANGE 1990/1975	%CHANGE 1995/1975	%CHANGE 2000/1975
TOTAL	5.92	13.04	20.3	27	32.86
=<10	-2.98	5	16.91	19.09	15.26
11-12	-11.88	-20.05	-13.12	2.97	5.94
13-14	-13.29	-14.45	-21.91	-5.13	1.17
15-16	-2.25	-10	-19.5	-9.5	4.25
17	1.51	-12.06	-18.09	-14.57	3.02
18-19	3.96	-8.66	-9.9	-17.82	-25
20-24	10.78	10.99	-2.05	-7.97	-5.5
25-29	16.19	29.23	29.23	15.31	7.9
30-34	32.13	51.1	67.4	66.93	47.34
35-39	19.89	54.66	79.75	98.57	97.31
40-44	6.9	35.06	72.99	96.17	115.9
45-49	-2.26	2.61	24.56	59.23	83.97
50+	7.38	12.76	18.24	27.38	42
JUV	-5.07	-3.44	1.69	8.48	10.17
ADULT	10.93	20.55	28.8	35.44	43.21

Exhibit V.14.

REPORT: NUMBER OF ACTUAL REPORTED ARRESTS FOR 1976-1979

JURISDICTION: MAINE

CRIME TYPE: BURGLARY

AGE GROUPINGS	1976	1977	1978	1979	%CHANGE 1979/1978	%CHANGE 1979/1976
TOTAL	2601	2707	2846	2844	-.07%	9.34%
=<10	36	39	37	62	67.57%	72.22%
11-12	116	98	83	93	12.05%	-19.83%
13-14	293	305	351	306	-12.82%	4.44%
15-16	563	600	624	719	15.22%	27.71%
17	278	328	366	360	-1.64%	29.5%
18-19	448	485	556	463	-16.73%	3.35%
20-24	511	503	529	525	-.76%	2.74%
25-29	204	197	148	164	10.81%	-19.61%
30-34	71	65	70	75	7.14%	5.63%
35-39	43	28	29	31	6.9%	-27.91%
40-44	23	27	26	24	-7.69%	4.35%
45-49	7	15	13	11	-15.38%	57.14%
50+	8	17	14	11	-21.43%	37.5%
JUV	1286	1370	1461	1540	5.41%	19.75%
ADULT	1315	1337	1385	1304	-5.85%	-.84%

REPORT: ADJUSTED ARREST RATE PER 100,000 POPULATION FOR 1976-1979

JURISDICTION: MAINE

CRIME TYPE: BURGLARY

AGE GROUPINGS	1976	1977	1978	1979	%CHANGE 1979/1978	%CHANGE 1979/1976
TOTAL	242.99	249.98	259.79	256.68	-1.2%	5.63%
=<10	19.25	20.98	20.02	33.77	68.68%	75.43%
11-12	293.67	254.55	221.33	254.79	15.12%	-13.24%
13-14	702.64	751.23	888.61	796.88	-10.32%	13.41%
15-16	1414.57	1515.15	1579.75	1829.52	15.81%	29.33%
17	1390	140	1820.9	1782.18	-2.13%	28.21%
18-19	1100.74	1182.93	1346.25	1112.98	-17.33%	1.11%
20-24	539.03	519.63	535.43	520.83	-2.73%	-3.38%
25-29	247.87	232.04	169.34	182.22	7.61%	-26.49%
30-34	104.57	90.28	91.98	93.52	1.67%	-10.57%
35-39	74.14	46.51	46.4	47.91	3.25%	-35.38%
40-44	43.48	50.37	47.88	43.56	-9.02%	.18%
45-49	12.26	26.36	22.97	19.54	-14.93%	59.38%
50+	2.77	5.8	4.71	3.65	-22.51%	31.77%
JUV	392.07	422.06	454.57	484.28	6.54%	23.52%
ADULT	177.13	176.32	178.92	165.06	-7.75%	-6.81%

Exhibit V.15.

REPORT: SMOOTHED ESTIMATED AND PROJECTED ARRESTS FOR 1979-2000

JURISDICTION: MAINE

CRIME TYPE: BURGLARY

EXPONENTIAL SMOOTHING CONSTANT = .3

AGE GROUPINGS	1979	1980	1985	1990	1995	2000
TOTAL	2814	2833	2714	2573	2658	2919
=<10	50	50	54	60	61	59
11-12	92	88	79	86	102	105
13-14	319	302	298	273	331	353
15-16	666	661	609	545	612	705
17	354	355	308	286	299	360
18-19	493	500	440	434	396	481
20-24	522	540	541	478	449	461
25-29	166	175	194	194	173	163
30-34	72	79	90	99	99	87
35-39	30	32	41	48	53	53
40-44	25	26	33	41	47	52
45-49	12	12	13	15	20	23
50+	13	13	14	14	15	17
JUV	1481	1456	1348	1249	1405	1582
ADULT	1334	1377	1366	1324	1253	1337

AGE GROUPINGS	%CHANGE 1980/1979	%CHANGE 1985/1979	%CHANGE 1990/1979	%CHANGE 1995/1979	%CHANGE 2000/1979
TOTAL	.68	-3.55	-8.56	-5.54	3.73
=<10	0	8	20	22	18
11-12	-4.35	-14.13	-6.52	10.87	14.13
13-14	-5.33	-6.58	-14.42	3.76	10.66
15-16	-7.75	-8.56	-18.17	-8.11	5.86
17	.28	-12.99	-19.21	-15.54	1.69
18-19	1.42	-10.75	-11.97	-19.68	-2.43
20-24	3.45	3.64	-8.43	-13.98	-11.69
25-29	5.42	16.87	16.87	4.22	-1.81
30-34	9.72	25	37.5	37.5	20.83
35-39	6.67	36.67	60	76.67	76.67
40-44	4	32	64	88	108
45-49	0	8.33	25	66.67	91.67
50+	0	7.69	7.69	15.38	30.77
JUV	-1.69	-8.98	-15.67	-5.13	6.82
ADULT	3.22	2.4	-.75	-6.07	.22

END