

COMPUTER-LINKED TRANSACTIONAL RECORDS FOR CRIMINAL JUSTICE STATISTICS

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For years, national and state authorities, commissions and hearings have recognized the need for and generally agreed upon the goals of criminal justice statistics systems. Studies and reports have focused both on the uses of such statistics and on the design features that would assure that these systems supply necessary criminal justice information.

The President's Crime Commission Report of 1967 [1, p. 123] summed up a comprehensive statement of user need by stating:

"Adequate statistical programs are of enormous importance. If a serious effort to control crime is to be made, a serious effort must be made to obtain the facts about crime."

Likewise, the Science and Technology Task Force saw better information about crime and the criminal justice system as essential for both research and immediate operational improvements:

"Information about the consequences of actions by the criminal justice system is essential for improving those actions" [2, p. 2].

Later work, notably the *Report on National Needs for Criminal Justice Statistics* by the Bureau of the Census in August 1968, and the *Hearings before the Subcommittee on Census and Statistics*, House of Representatives, March and May 1969, endorsed the same general goals, and agreed that summary statistics from separate agencies cannot provide a basis for any detailed analysis.

The major purposes of improved statistics systems [3, p. 1-4] can be summarized as follows:

- Better statistics are needed to determine the impact of crime; to determine the effects of criminal justice system policies and operations upon individual citizens and social groups, and to forecast the results of changes in penal policy or the redefinition of agency roles and responsibilities.
- Cost and effect data must be generated in order to allocate resources to the most efficient existing techniques, procedures and programs; to provide comparable agencies or personnel with standards of performance; to identify areas where increased expenditures will bring maximum benefits; and to ascertain that the use of the most basic criminal justice

resources, both legal and fiscal, is generally adjusted to social priorities.

- The directors of operations must also use statistical methods to predict agency workloads in relation to both crime incidence and internal system factors such as changes in arrest policies, criminal procedures, or sentencing policies.
- Varying portions of this planning, evaluation, and daily decision making information are needed by legislators and administrators at all levels of government.

With so much agreement about goals and emphasis on the immediacy of these needs, can present criminal justice statistics systems provide the necessary information? Again, using the President's Crime Commission Task Force Report: *Crime and Its Impact--An Assessment* [4, pp. 190-199] to describe the state of the art:

Police Statistics

"The area of police statistics in this country is the area in which there is available the most highly developed reporting system--the Uniform Crime Reports prepared by the FBI with the cooperation of the International Association of Chiefs of Police. . . which is steadily increasing its coverage of arrest data.

Prosecution Statistics

". . . statistics pertaining to this area of law enforcement activities are not available not only on a national scale, but by and large, also not on a state or local level . . . after police report the arrests, a total statistical black out sets in . . .

Jail Statistics

"In the sense of either their total absence or their extremely low level of development, jail statistics are unquestionably next to the prosecution statistics . . .

Judicial Statistics

"There are no national judicial criminal statistics in the United States . . . Their absence is responsible for a major portion of a most serious gap in the total picture of criminality which consists in the absence of any data on crime between arrest statistics and the statistics of offenders committed to state and federal penal and correctional institutions . . .

Probation Statistics

"There are no national probation statistics in this country. . . Probation. . . offers a special difficulty in developing national or even statewide compilations, because the probation departments are frequently attached to the individual courts and thus are not subject to statewide administration. . .

Penal and Correctional Institution Statistics

"This country has National Prisoners Statistics. . . There is, however, one serious weakness. . . That is, the existence of local variations in the policies governing which institutions are classified as State institutions and which are treated as county or city jails or workhouses, etc., and also the policies concerning the kinds of sentences and the offenders to be sent to the State and local institutions.

Parole Statistics

"Presently there are no national parole statistics in this country. There is, however, a very promising effort to develop such a program. . ."

This review of the status of criminal justice statistics highlights the incapacities of present systems; incapacities which are a direct result of our traditional concepts of the administration of justice.

Traditionally, local agencies have been tasked with the responsibility for defining crime and developing a response to it. Different approaches are exhibited in the variety of administrative structures and policies that translate penal code and criminal procedures into actions, and that allocate funds to what is viewed as a serious crime or a serious offender.

More importantly, the criminal justice system is loosely structured and poorly defined: it is not a true system, but by law a set of systems with different aims and contradictory goals. The result is a network of agencies ill-suited to develop comparable or consistent statistics on crime, processes or persons. The structural problems are compounded by the fact that agency officials do not include statistical training in their backgrounds. Even now, when administrators are realizing the larger significance of their workload statistics, the ability to state criminal justice information requirements, design data systems, collect data, and interpret for diverse users is rare.

Faced with the foregoing realities, Project SEARCH, a federally funded multi-state effort to develop a prototype computerized criminal justice information

system, set about accomplishing its second of two major objectives--to design and demonstrate a computerized statistics system based on an accounting of individual offenders proceeding through the criminal justice system.

Sets of annual, single-agency process counts were immediately rejected as an adequate description of criminal justice activity.

Under the direction of a Statistical Advisory Committee, a new approach was developed. This approach focuses on the individual person, whether suspect or offender, and traces his movement through the agencies of the criminal justice system. The individual is the thread that holds the system together, for he is the common element that all agencies process and it is his experience that describes criminal justice functioning.

The approach, termed offender-based transaction statistics, loses none of the advantages of older systems because traditional summary data can be produced by analyzing cross-sections of the longitudinal files. In addition, the design provides new kinds of information that are needed for uses ranging from daily decision-making to long-range planning.

First, the passage of time is accounted for. Speedy prosecution and judicial processing are required for justice and economy. The evaluation of penalty levels and correctional programs and the effects of more or less punishment necessitates that time values be known.

Second, the relationship of agencies to one another, particularly the inputs of agencies related to the output of agencies preceding them in sequence of criminal justice processing, is described. The consequent data on the "fall-out" of offenders as they move through the system presents a structure which can be used as a model to reveal underlying assumptions and to provide a vehicle for simulated experimentation and calculation of the consequences of proposed changes.

Finally, multiple actions toward the same offender (the offender "recirculation") can be accounted for. This information has great implications regarding true arrest and conviction rates, and the extent to which prison input-output includes recirculation of the same people.

The basic concept was demonstrated by Project SEARCH in ten states which experimentally traced offenders step-by-step through the entire criminal justice process. Because of time and resource limits, an arbitrary group of 250 offenders arrested in 1968 was tracked in each state. Facts that were found scattered throughout the files of local police, county prosecutors, different levels of courts, and various state and local

correctional agencies, were linked to show how each states' administration of criminal justice and adult criminal defendant processing could be analyzed.

Information about the following four stages of offender-system interaction was collected:

- Stage 1 - Police Action
- Stage 2 - Lower Court (Pre-Felony Trial) Action
- Stage 3 - Felony Trial
- Stage 4 - Corrections Action

The arresting agency gave Stage 1 detail. The personal characteristics and criminal history of the individual were recorded, along with other information about the offense and the police disposition of the arrest. Defendants who remained in the system entered Stage 2, where all data relating to lower court processing was secured. This included information on arraignments, hearings, and misdemeanor trials. Stage 3 described the processes and results of felony trials. Finally, for those who remained in the system, corrections action, Stage 4 was recorded.

The differences in the number of possible routes within stages were allowed for. Police and felony trial actions normally occur in only one sequence, although the offender may exit at any point. In the lower court and corrections stages an offender can follow several different routes without exiting from the system stage. That is, one proceeding produces another proceeding, which may produce still another proceeding before the individual can exit; all of these "cycles" were recorded.

Data elements were developed and data collection forms designed. To describe the project, explain data collection forms and define data elements, a data collection manual was compiled. The manual carefully defined the sample unit, the person-arrest, to assure that comparable cases were tracked in each state.

Upon execution of the experiment, technical shortcomings of present data collection structures became apparent:

- Data collection was irregular and incomplete, even within the limits of single agency annual workload concept.
- Stable offender identification codes were lacking and other information which would permit continuous tracking was also absent.
- The meaning of basic criminal justice terms were unstable across jurisdictions.

The data collected by each of the participating states was processed

through a computer system. Tables were compiled separately for each state in the same analytical format.

Computer software was developed to reduce process and analyze the information from offender-based records to demonstrate the production of summary statistics describing each level or stage in the criminal justice process. Exhibits 1 through 3 are examples of the data content of this prototype system.

Experience with this demonstration project has made it clear that useful criminal justice statistics cannot be developed by linking the summary workload data collected by operating agencies. As management information is developed for particular segments of the system, however, design of the state-level statistical systems must include methods of integrating these data subsystems.

A number of guidelines for the organization and operation of state statistical systems were identified as a result of this experimental project.

Some of the major requirements for sound data collection design are:

- Offenders must be traceable throughout their processing, generally by the assignment of a unique identification number.
- Offender characteristics require careful definition and coding, and should not be repeated at various process levels.
- Agency reporting which must be exhaustive and consistent should be reinforced through training and quality control procedures.
- All transaction reports must account for the passage of time and be reconcilable between agencies.

From an organizational perspective, the ideal is a single agency in the state responsible for collection, analysis, interpretation, and dissemination of criminal justice statistics. The character and authority of the statistical center is extremely important. It must be staffed with professionals empowered to determine basic data needs and interpretations. Most importantly, the director of the statistics center must possess statutory authority to require all persons or agencies dealing with crime or criminals to report all requested data in a specified form that guarantees completeness and uniform quality of response. Most of the desirable and necessary conditions appear in the Uniform Criminal Statistics Act which was drafted in 1946 by the National Conference of

Commissioners on Uniform State Laws. The needs expressed in the Act have not changed in the 24 years since the model was published.

The findings from the SEARCH prototype statistical system experimentation led generally to the conclusion that this was the nature of the information required for the upgrading of state and national level statistical capability, and the next step should be taken to begin to create this capability. Consequently, the Law Enforcement Assistance Administration (LEAA) funded a first phase implementation effort involving five states: California, Florida, Michigan, Minnesota, and New Jersey.

The primary objective of this effort is to begin this implementation on as nearly a statewide basis as possible. An important element of the current effort is the intention to provide each of these states with a state level capability for the collection and preparation of statistical data of use to decision-makers within the state, and extract from the state systems the national level data required by LEAA and other federal agencies.

This project is a beginning toward a national system for the collection and dissemination of criminal justice statistics. The project is being coordinated by the State of California through the California Crime Technological Research Foundation. Public Systems inc. provides the technical staff for project coordination. Each state has a project coordinator. The Statistical Steering Committee for the project was appointed by the SEARCH Project Group to direct the project.

From a technical standpoint, the experience of the experiment originally conducted showed rather dramatically that a critical component of an ongoing national system is the establishment of routine methods for the collection of data from the various criminal justice agencies in such a way as to permit the linking of data on offenders as they pass from agency to agency. Although the post-facto collection of data for research purposes is certainly possible, it is far too costly for an ongoing statistical system. The main thrust, therefore, at this point in time is to establish the routine reporting techniques along with the quality control procedures needed to insure the accuracy of the data.

One of the continual problems in this field has been the difficulty of deciding on data elements and data element coding which would be consistent across jurisdictional boundaries. It is likely that this will continue to be a problem, and

the present SEARCH effort is exploring ways to keep the flexibility required within jurisdictions and at the same time produce comparable national data. Because of these varying needs, the choice of data elements and coding is likely to vary and be changed considerably over time as more knowledge is obtained and more applications for the data are identified.

A long-range goal of this effort is to create a consistent, though rather loosely defined, "transaction space," having the general dimensions of: (1) the agency involved, (2) the offender and his characteristics, (3) the criminal justice process involved, (4) the event and its associated characteristics. The purpose of having this transaction space is to enable both routine and one-time research questions to be asked along one or more of these dimensions, with the capability of linking all subsets of the transaction space.

There is a fairly wide spread acceptance of this conceptual approach. There are many differences of viewpoints and needs in actually defining this concept in sufficient detail to make it operational. It should also be pointed out that the state of the art in data collection and analysis in criminal justice lags far behind this conceptualization. For example, only last year the Bureau of Census attempted to count the number of jails in this country. Not being able to know even the number of agencies involved in criminal justice makes it somewhat difficult to structure the transaction space.

If the present five-state implementation effort succeeds, these states will begin to have available for their own use and for reporting to the National Statistics Center, the beginnings of a transaction-based system. Hopefully, the calendar year 1972 will find the state of the art advanced by the routine operations of statistical centers in the states, producing data for improved decision-making in their own criminal justice systems. The experience of these beginning states will provide considerable assistance to other states attempting to begin to create a useful statistical system.

REFERENCES

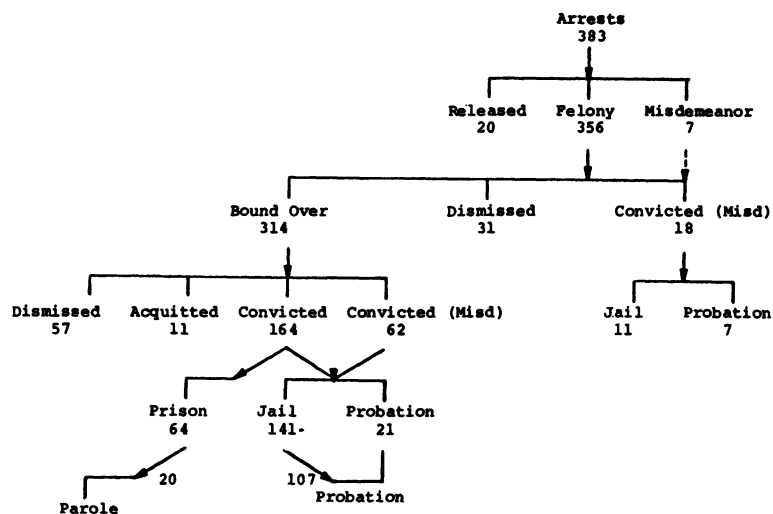
- [1] President's Commission on Law Enforcement and Administration of Justice, "Crime and Its Impact--An Assessment," Task Force Report (1967).
- [2] _____, "Science and Technology," Task Force Report (1967).

[3] Project SEARCH Statistical Advisory Committee, "Designing Statewide Criminal Justice Statistics Systems--The Demonstration of a Prototype,"

Technical Report No. 3 (November 1970).

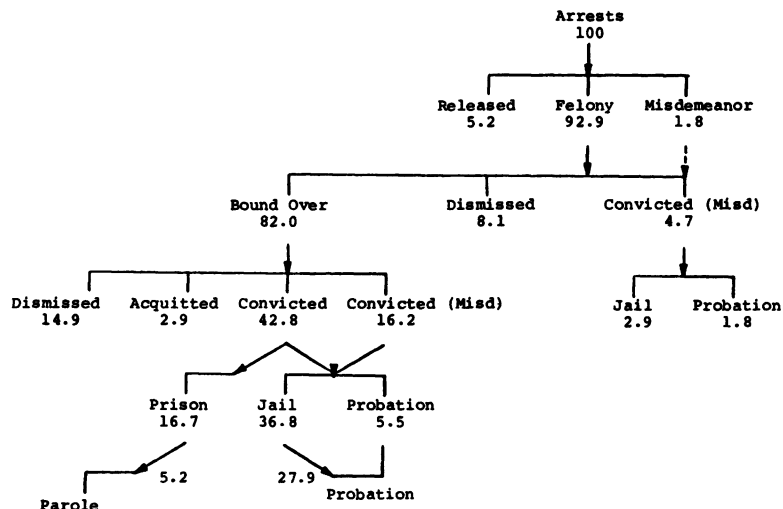
[4] Op. Cit. [1] , pp. 190-199.

(Not available from existing statistical systems)



a. Number of Arrests

(Not available from existing statistical systems)



b. Percent of Total Arrests

Exhibit 1: Flow of Arrestees Through Criminal Justice System
(Example for One State)

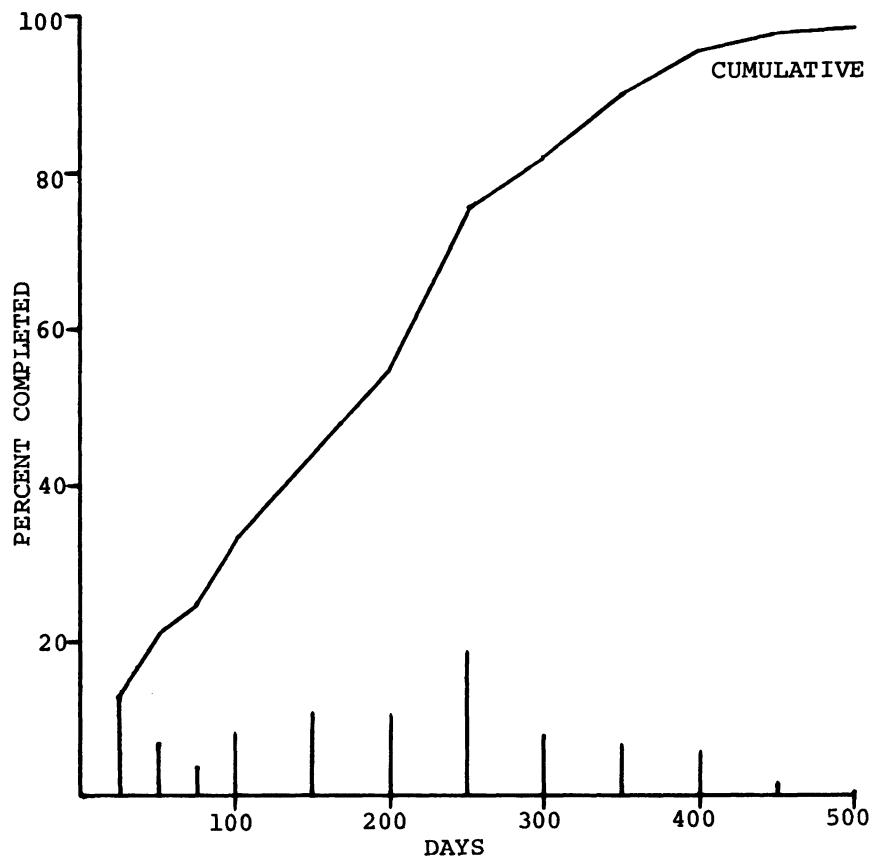


Exhibit 2: Time Lapse Between Filing and Disposition--Felony Trial

(Not available from existing statistical systems)

COMPARISON OF OFFENDERS ENTERING
CORRECTIONS RECEIVING AGENCY FROM FELONY TRIAL
(PERCENT OF ARRESTEES)

<u>CORRECTIONS RECEIVING AGENCY</u>	<u>STATE A (%)</u>	<u>STATE B (%)</u>	<u>STATE C (%)</u>	<u>STATE D (%)</u>	<u>STATE E (%)</u>	<u>STATE F (%)</u>	<u>STATE G (%)</u>	<u>STATE H (%)</u>
STATE INSTITUTION	4.1	1.8	6.0	16.7	37.7	19.9	13.4	10.5
PROBATION AGENCY	4.6		19.2	5.5	6.6	16.6	17.2	7.4
JAIL	6.6		1.8	36.8	13.9	1.1	4.2	12.1
OTHER							1.7	
TOTAL	15.3	1.8	27.0	57.0	58.3	37.6	36.5	30.0

Exhibit 3: Comparison of Offenders Entering Corrections Receiving Agency From Felony Trial
(Percent of Arrestees)