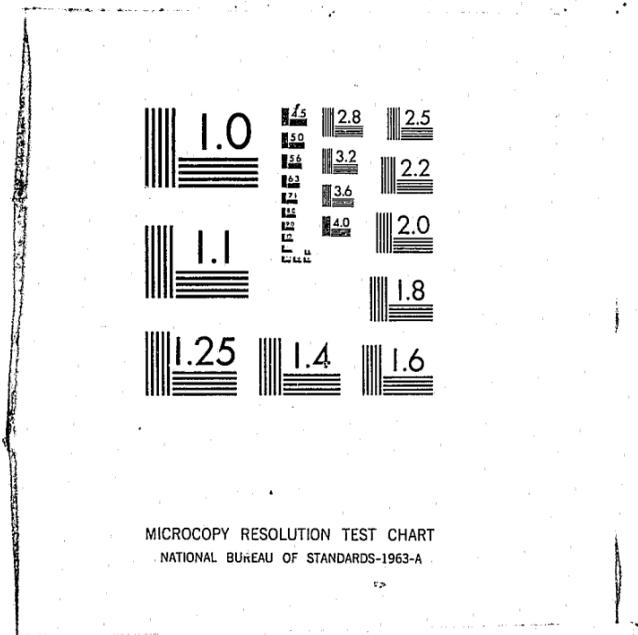


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Reduction of Pretrial Delay -- Demonstration Project

A final report to the National Institute of Law Enforcement and Criminal Justice of the
Law Enforcement Assistance Administration

Grant Number 73-NI-99-0015-G

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Professor of Law
and

Director, Center for Criminal Justice
October, 1975

CASE WESTERN RESERVE UNIVERSITY SCHOOL OF LAW

AN ANALYSIS OF A METHOD FOR REDUCING
PRETRIAL DELAY IN COURT SYSTEMS

by
Burton V. Dean
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Technical Memorandum No. 388

September 1975

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AN ANALYSIS OF A METHOD FOR REDUCING PRETRIAL DELAY IN
COURT SYSTEMS

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ABSTRACT

An analysis is performed to measure the effect on court processing times produced by a project implemented by Lewis Katz of the Case Western Reserve University's School of Law. The project formalized the procedure known as plea bargaining through the cooperation of prosecuting and defense attorneys in each of three test cities - New Haven, Connecticut; Norfolk, Virginia; and Salt Lake City, Utah. The analysis reveals that the project reduced the average processing time in New Haven by 45%, but had no significant effect on the processing times in the other two cities. Differences in procedures between New Haven and the other two cities that may account for this difference in effect of plea bargaining are discussed.

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I. Introduction

In 1972, Mr. Lewis Katz published a book on a study conducted for the U.S. Department of Justice (The Law Enforcement Assistance Administration) on the subject of pre-trial delay.¹ The subject of that study was the cause of delay in bringing defendants to trial in criminal cases. In this study he outlined procedural changes which might reduce this delay.² He was later given a grant by the same agency (Number 73-N1-99-0015) to implement some of his proposals. Specifically, he wanted to develop a method for formalizing plea bargaining to reduce the number of cases on the docket.

The Operations Research Department at Case Western Reserve University was asked to participate in that project to evaluate the effect of those changes which Mr. Katz wanted to make. The reader is referred to Mr. Katz's Justice is the Crime for a detailed description of the problem of pre-trial delay. We will describe the problem briefly as motivation for this analysis.

A court system with a limited number of judges, prosecutors and court facilities must process all defendants that are arrested. The justice system attempts to achieve many goals in administering the court system among which are providing a "speedy trial" and protecting the rights of the defendant. These two goals, in particular, often lead to conflicting alternatives. As Katz discusses in his book, it is the latter of those two goals which has

¹Katz, L. R., L. B. Litwin, and R. H. Bamberger; Justice is the Crime, the Press of Case Western Reserve University, Cleveland and London, 1972.

²ibid, pg. 217-222.

lead to a court system which allows (and sometimes requires) delays in bringing cases to trial.

From the defendant's point of view it may work to his advantage in some situations to delay his case coming to trial. Often he can reduce his probability of being convicted by delaying his case, since witnesses may move to another state, prosecutors may drop charges and evidence may be lost. Utilizing the procedures of the court system designed to protect his rights, the defendant may legally delay his case.

On the other hand, a defendant who is in jail based on circumstantial evidence on an unbailable offense is being punished for a crime for which he has not been tried. It has happened that defendants have spent nearly a year in jail awaiting trial and found not guilty when finally tried.³ In that situation the procedures designed to protect his rights could have just the opposite effect.

From the justice system's point of view (and hence society's) there are several primary concerns. The Constitution requires the justice system to provide a "speedy trial".⁴ This seeks to protect the defendant by requiring the court system to act efficiently and to protect society by bringing criminals to justice quickly.

Mr. Katz discusses the effects on society's respect for a justice system which allows criminals to remain free on bail for long periods of time while awaiting trial.⁵ The problem can be summarized as follows:

³Katz, et. al., pg. 7-11.

⁴United States Constitution, Amendment VI.

⁵Katz, et. al., pg. 51.

"During the period pending a disposition, the defendant is either free on the street and a symbol to others of the inability of the criminal justice system to protect the community from crime, or he is detained in jail and becomes a person who is punished without having been convicted of a crime."⁶

This study, as proposed by Mr. Katz seeks to demonstrate that much of the unwarranted delay may be eliminated as a result of procedural changes in the present system. In the existing system a case may be scheduled for trial for several weeks in the future (on the docket). Then, a few hours before the trial is to begin, the prosecutor and defense attorneys may agree that the trial is not necessary and reach a settlement (plea bargain). If this same agreement could have been reached earlier, two benefits would have resulted. First, the particular case could have been concluded that much earlier, to the possible benefit of the defendant and society. In addition, the case or cases which were scheduled after the settled case could have been scheduled earlier with the same ensuing benefits.

Mr. Katz's suggestion was to formalize this pre-trial meeting and have the prosecution and defense attorneys meet as soon as is feasible after the defendant is arrested. For the purpose of this study, this meeting is called a conference. The study hypothesis is that by instituting this procedural change,

- 1) the average time from arrest taken to determine the validity of a case can be reduced to two weeks and,
- 2) the size of the docket of cases awaiting trial can be reduced by 25 percent.

⁶Katz, et. al., pg. 2.

II. The Purpose of the Operations Research Study

The purpose of this analysis is to provide an independent evaluation of the effect of Mr. Katz's experimental procedures by analyzing the changes in processing times. This report should be viewed as a supplement to Mr. Katz's report.

As is the case in most research studies, preliminary plans were made to perform certain types of analyses which later proved to be inappropriate for the particular study. This study was no exception in the general rule.

The original proposal called for the Operations Research Department to develop a simulation program to analyze possible alternatives for improving the system. It was decided early in the project not to evaluate alternative procedural changes, but to actively participate in implementing Mr. Katz's proposal to hold a conference between prosecutor and defense as soon as feasible after the preliminary appearance, and to evaluate the effects of such a conference. Thus, there was no need for the use of simulation to evaluate alternative methods for reducing pre-trial delay, and expenditures in developing a simulation program would not have been warranted. The problem that the Operations Research Department accepted was to independently evaluate the ability of the project in achieving its goals of reducing processing time and reducing the percentage of cases on the docket. The department's role was to act as an independent evaluator of the consequences of the project, while supplying

technical support for accomplishing the data collection and processing tasks. Efficient and effective data handling tasks were conducted so as to achieve the goals of the project. The outline of the study is given in the following figure. (Page 6).

III. System Description

A. Introduction

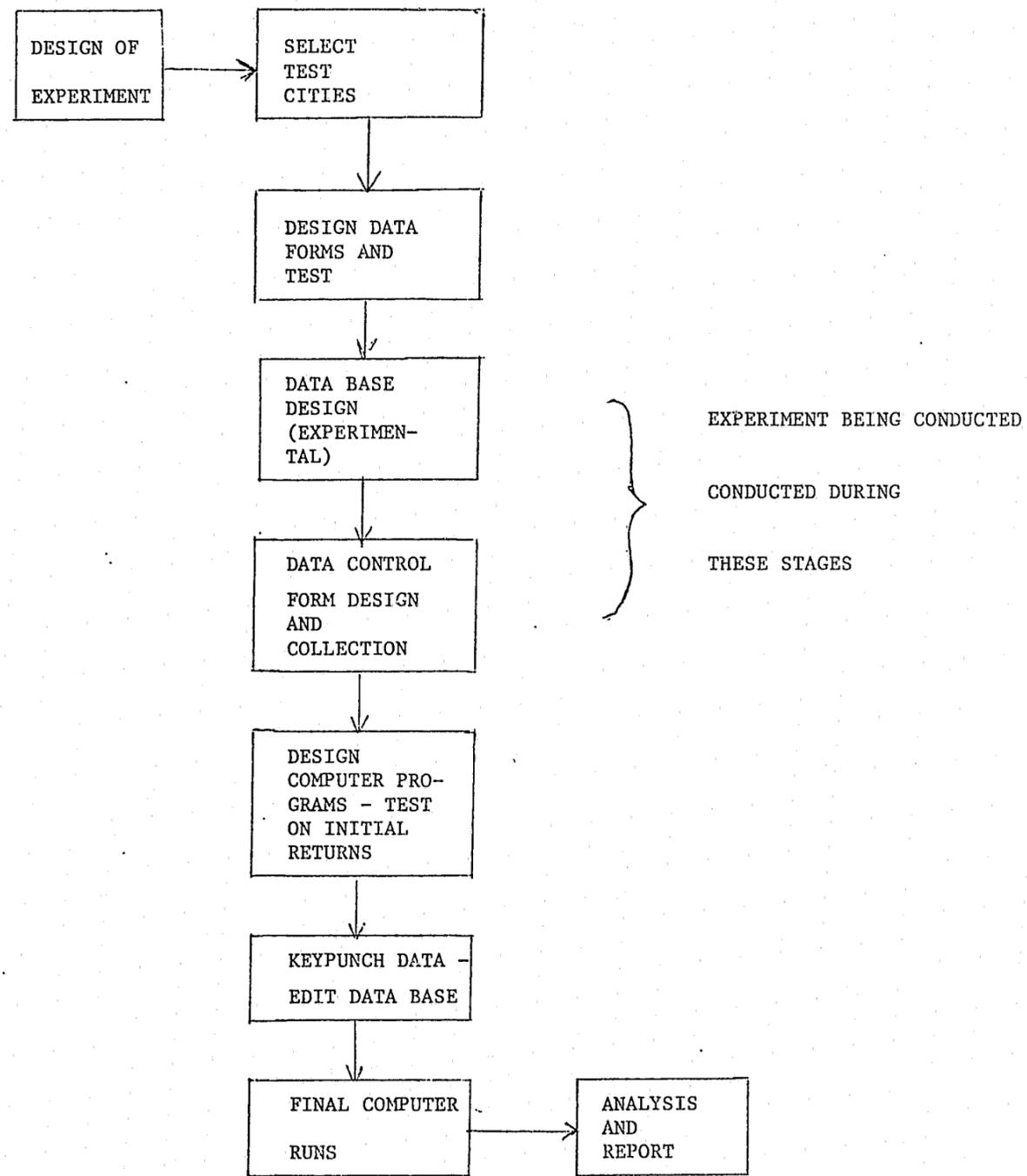
A system description is presented as an outline of the process, which contains sufficient detail to justify the method of analysis used. This description will not cover all of the elements that affect the progression of cases through the court system.

B. Original Stages of the System

The stages of the existing system are as follows:

- (1) Arrest - The defendant is brought to a police station (or served a warrant to appear).
- (2) Preliminary Appearance - The charge against the defendant is indicated to him in an appearance in court. Certain events occur at this appearance which can affect the time it will take to dispose of the case. The defendant decides whether to accept an appointed attorney or to secure a private counsel. He may be required to post bail in order to be released from custody. The case may be continued to give the defendant time to find an attorney.
- (3) Preliminary Hearing - It is generally at this stage that the case is evaluated to determine if there is sufficient evidence to bring the case to trial. Depending on the particular city, this evaluation may vary in thoroughness from hand-waving to almost a formal trial. The case may be dismissed at this stage. The defendant may waive this stage of the process.

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OUTLINE OF STUDY



- (4) Arraignment upon Indictment (information) - Once it has been decided that the case will go to trial, the defendant is formally charged with specific crimes and informed of his rights under the law.
- (5) Trial - The trial may involve a jury or may only involve a judge. It is a formal evaluation of the evidence in the case and usually results in the disposition of the case.
- (6) Disposition - This is the action which frees the particular court from further obligation to the case. A case may be disposed of by 1) having it dismissed as "untrialable" for a variety of reasons, 2) having the defendant plead guilty to certain crimes and receiving a sentence from the court, or 3) in the case of a trial, the court either dismisses the case or finds the defendant guilty or innocent.

C. Additional Stages Introduced by the Study

In addition to the above stages, two new terms were introduced as a result of the procedures used in the study.

- (1) Conference - In many situations in the original system the defense attorney and prosecutor reached an agreement without going to trial. Under the process proposed by Mr. Katz, a step was introduced to formalize this plea-bargaining meeting and to conduct it as soon as possible after the defendant was arrested. This meeting of the prosecutor and defense attorneys will be referred to as a conference.
- (2) Resolution - In using this term, there is an attempt to identify those cases which are disposed of as a result of the conference. Therefore, in this report, resolved cases refer only to cases which were disposed of as a result of the agreement reached at the conference.

D. Experimental Cities Selected⁷

Three cities were selected as test sites to implement and test the effectiveness of the new procedures. They were New

⁷For a thorough discussion of the method of selecting the test cities, see Mr. Katz's report on this study.

Haven, Connecticut (NH); Norfolk, Virginia (NFK); and Salt Lake City, Utah (SLC). These cities were selected from those which agreed to allow the project to conduct its experiment. It was originally desired to conduct the experiment in Cleveland, Ohio; however this was not possible. For a more detailed discussion of the reasons for selecting these particular cities, the reader is referred to the School of Law's final report on this grant.

(1) Timing of the Conference

Mr. Katz desired to have the conference held as soon as possible after the defendant was arrested. This period of time is referred to as the preliminary appearance stage.⁸ In the accompanying flow chart we show the conference occurring during the preliminary appearance stage (Figure 1).

In Salt Lake City, the conference is introduced at a later stage in the process (Figure 2). The reason it was introduced after the preliminary hearing stage was that the study team determined that the screening of cases done by the prosecutor's office in SLC was an effective measure, so the conference should not interfere with the existing process. This has obvious implications for the potential effect the conference procedure can have in reducing total processing time in that city. By the time of the conference, the case will have advanced through

⁸The preliminary appearance stage begins on a certain date and like other stages such as the preliminary hearing and trial, may last several days or weeks. In contrast, the arrest "stage" actually occurs on the date of arrest and does not extend beyond that date.

NORFOLK, VIRGINIA/NEW HAVEN, CONNECTICUT

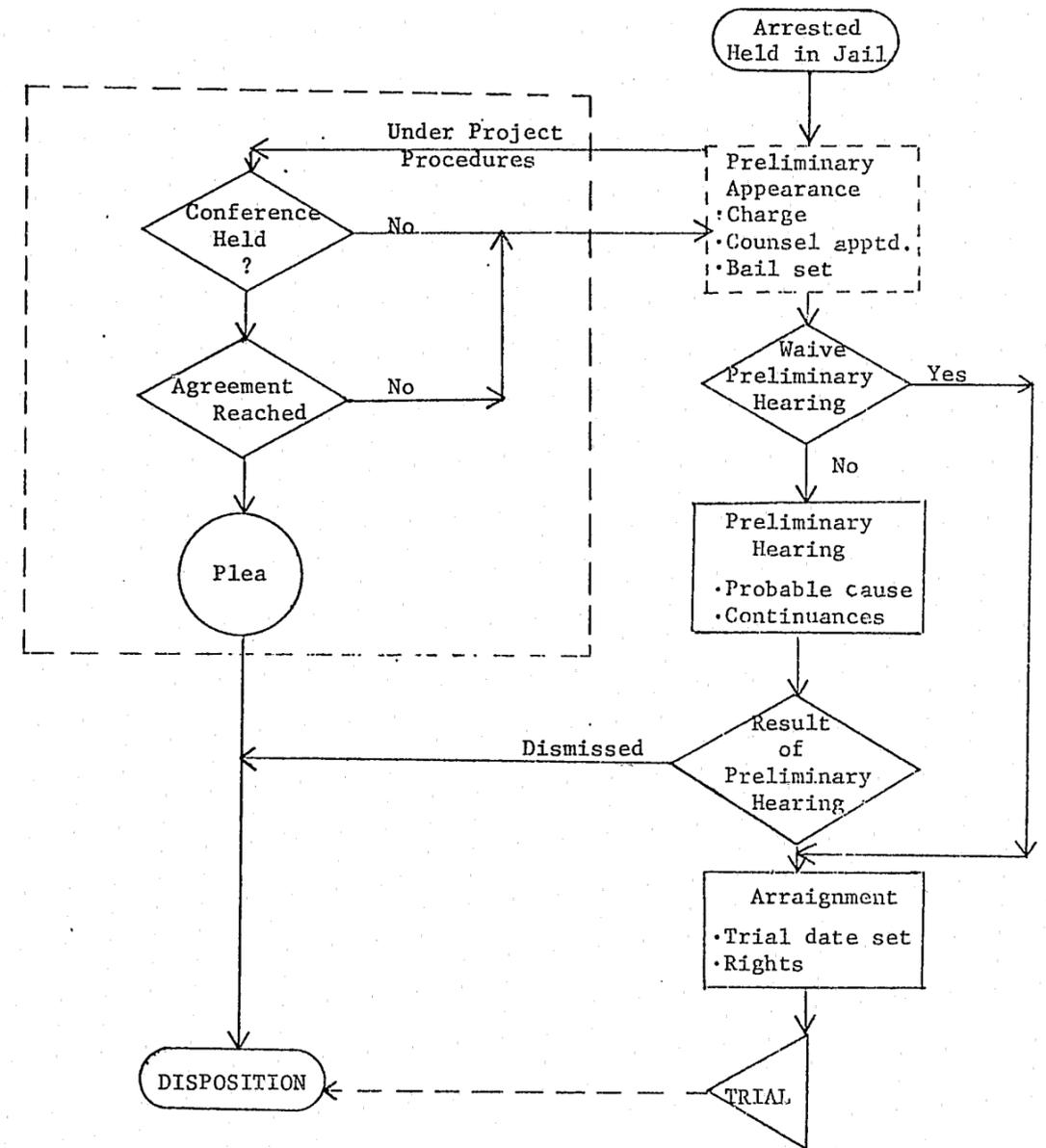


Figure 1.

SALT LAKE CITY, UTAH

Note: SLC differs from the other two test sites by the fact that the conference is not held until relatively late in the process and then only on cases bound over for trial.

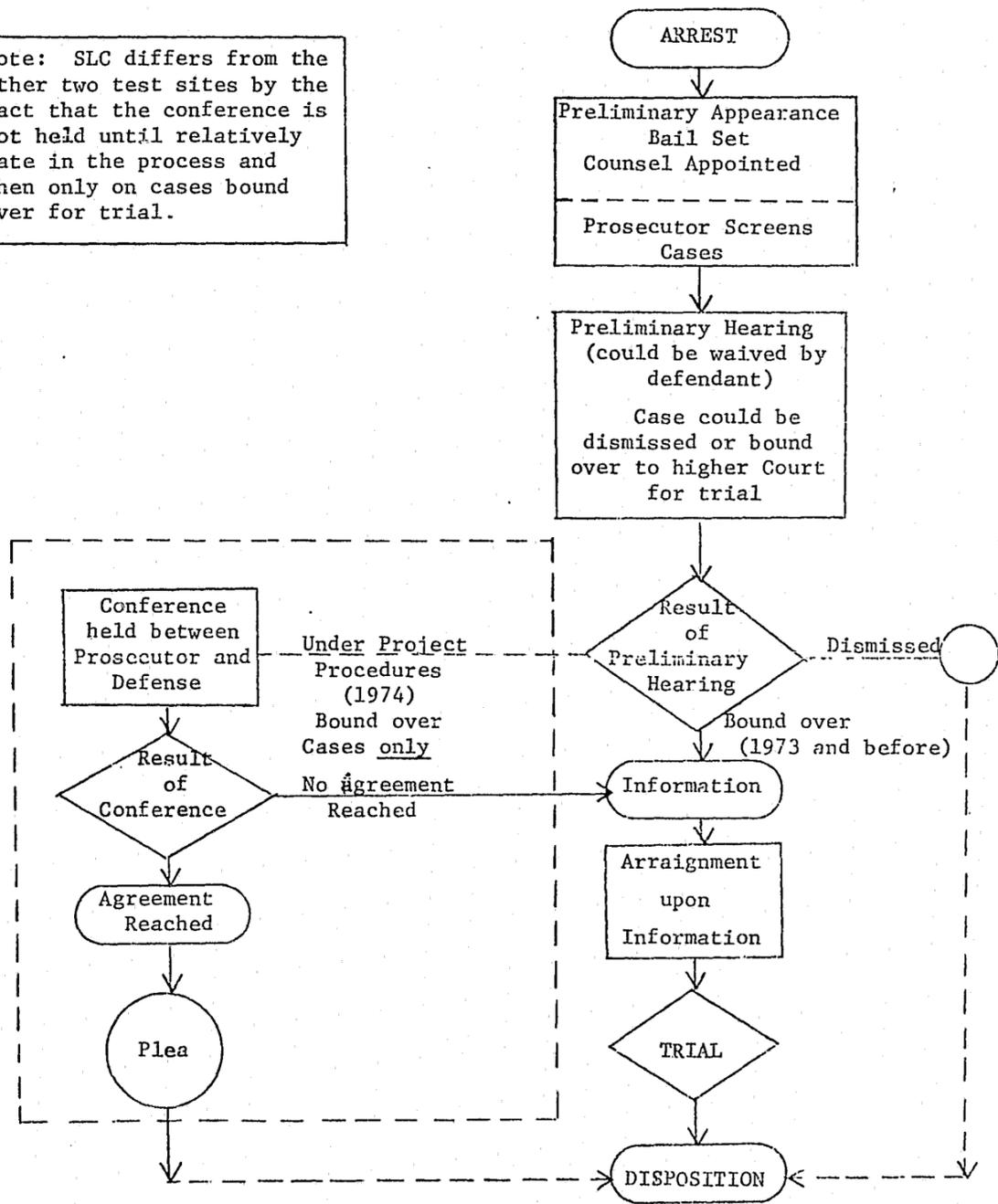


FIGURE 2.

the preliminary stages which allow the possibility of delays occurring. Accordingly, the potential for reduction in delay time is less in this city than in the others. Thus, for SLC, we will analyze the period of time between preliminary hearing and disposition in addition to overall time.

(2) Procedures used by attorneys

In New Haven, the assistant prosecutor and the public defender are both supported by the LEAA project funds. Both attorneys are located in the same building and as a result can communicate with each other very easily. All of the cases handled through the project procedures were processed by these two attorneys. A conference was held for 75 percent of the cases in this city.

In contrast to New Haven, the other two cities have multiple prosecutors and defense attorneys. In Norfolk, there are five prosecutors. All of the defense attorneys are in private practice and are paid fees by the state for services rendered to indigent defendants. Only the prosecutors' salaries are subsidized by LEAA project funds. In both Salt Lake City and Norfolk, the prosecutor sends a written offer to the defense after he (the prosecutor) has reviewed the case. The defense can accept, reject, or re-negotiate.

It is up to the defense attorney to follow through on any bargaining.

IV. Data Collection and Processing

A. Introduction

The goal of the project was to apply a single modification to the court system and observe its effect on the processing time. As with any complex system it is not possible to change one element of the system without affecting the activities and performance of other elements. Mr. Katz's study, Justice is the Crime, was concerned with some of these interactions which affect the time required to process a case. Using that study as a basis, data was collected on the time it required a case to be processed at each stage, as well as the individual and system variables believed to be the major determinants of the time. By selecting the relevant variables and measuring them properly, it would then be possible to determine the effect of the conference procedure alone.

Two sets of data were collected for each city. One set concerned cases which were initiated in 1974 while the conference procedure was in effect, which we will refer to as Experimental Data. The other set was collected in each city by examining the courts' historical records in 1973, before the conference procedure was introduced, which we will refer to as Control Data.

B. The Design of the Data Collection Forms

The forms for use in the experimental data collection were prepared first. These forms were used for two purposes and required careful consideration in their development. First it was

necessary to determine what data was required and allow sufficient space on the form itself. Second, the form was to be used by the project attorneys to monitor the progress of cases as they were processed. Thus, the order in which the data appeared on the form needed to be the same as the order of the stages of the process. Also, multiple copies were required so that the data could be transferred easily. The forms which resulted from this development were used in the study (Appendix III) and fulfilled all of the requirements of data collection and processing.

Separate forms were developed to collect the control data. The order in which the control data were collected was dependent on the way they were filed in each city, not on the stages of the court system. The form was also used to remind the person retrieving the information, where it was located.

C. The Experimental Data

When a new defendant came under the project procedures, a form was initiated by the project attorney in charge of the case. After the conference stage, one section of the multipart form was returned to the University to allow the preparation of preliminary and interim reports. When the case was finally disposed of (if not resolved by the conference), the remainder of the information was returned to the University. When the data collection effort was terminated on June 15, 1975, all pending cases were classified as such and treated separately.

A complete list of all data collected is presented in Appendix I. The following subset was used in the analysis.

- 1) Demographic variables of individuals arrested - Sex, Age, and Race.
- 2) Court variables - Charge, bail status, type of counsel, court in which the case was terminated, and final disposition.
- 3) Project variables - Was conference held, outcome of conference, resolution by conference.
- 4) Time variables - Dates of arrest, preliminary appearance, conference, preliminary hearing, trial, and disposition.

D. The Control Data

This set of data was collected by the project attorneys in each city. An initial attempt was made to have it collected in one city by a law student employed by the University, which proved unsuccessful.

Many unanticipated problems arose in collecting this data. For example, in order to obtain the data which was collected in New Haven, it was necessary to search 4 different files.

However, for comparison purposes the most important data items are:

- 1) Type of charge
- 2) Date of arrest
- 3) Date of disposition
- 4) Type of disposition
- 5) Manner of disposition

We were able to obtain this set of control data for most of the cases in all cities. In Salt Lake City and Norfolk it was possible to obtain the demographic variables.

Although there were differences in the size of the samples collected in each city, sufficient data for each city was collected.

In New Haven every fourth case was selected from the file of daily arrest records giving a 25% sample of 1973 felony cases. In Norfolk, data for all 1973 cases was obtained. In Salt Lake City there was a change in the court's crime classification system in the middle of 1973. Therefore, it was decided to use only the data from July 1973 through December 1973 as control data, resulting in approximately a 50% sample in this case.

Table 1 presents the variables for which data is available in each city. The symbol "/" indicates that this data is missing for over 50% of the cases in that city. For all data items there were a few cases for which the data was missing, so the symbol "x" indicates that the data is present for over 99% of the cases.

E. Data Processing

Originally, the data processing problem was seen as one of overcoming the large volume of data and the updating of records that was required by the interim processing of data. COBOL was selected as the processing language and the data base designed accordingly. When it became clear that COBOL could not produce the data in the required format without extensive programming, a change was made to the computer package known as Statistical Package for the Social Sciences (SPSS). This greatly simplified the processing in spite of difficulties which arose as a result of having a data base designed for COBOL.

SPSS is well suited to processing this type of data in that it allows the production of simple descriptions of the data such as frequency distributions, means and variances in addition to more complicated statistics. It produces data in readable format and requires very little programming effort.

TABLE 1 VARIABLES IDENTIFIED IN DATA BASE

	New Haven		Salt Lake City		Norfolk	
	Exp.	Cont.	Exp.	Cont.	Exp.	Cont.
Age	X	0	X	X	X	X
Sex	X	0	X	X	X	X
Race	X	0	X	X	X	X
Charge	X	X	X	X	X	X
Prior Record	X	0	X	X	X	X
Arrest/Summons/Warrant	0	0	0	0	X	0
Arrest Date	X	X	X	0	X	X
Date of Preliminary Appearance	X	0	0	X	X	0
Bail or Jail (Custody)	X	0	X	X	X	X
Counsel Appointed	X	X	X	X	X	X
Prosecutor	0	0	X	0	X	0
Continuance Date	/	X	0	0	X	0
Case Screened	NA	NA	0	NA	X	NA
Date of Screening	NA	NA	0	NA	X	NA
Conference Held	X	NA	X	NA	X	NA
Offer Made by Prosecutor	X	NA	X	NA	X	NA
Agreement Reached	X	NA	X	NA	X	NA
Agreement Same as Offer?	X	NA	X	NA	X	NA
Date of Resolution by Conference	X	NA	X	NA	X	NA
Preliminary Hearing Held?	/	/	X	X	X	X
Date of Preliminary Hearing	/	/	X	X	X	X
Result of Preliminary Hearing	/	/	0	X	X	0
Extra Trial Resolution?	NA	NA	0	0	X	0
Date of Resolution	NA	NA	X	X	X	X
Result of Resolution	NA	NA	X	X	X	X
Trial Date	X	/	0	0	X	X
Court of Trial	X	X	0	X	X	X
Verdict	X	X	0	X	X	X
Sentence	X	X	X	/	X	X
Final Disposition	X	X	X	X	X	X

X - Available for most cases

/ - Missing or not applicable for a significant number of cases

0 - Missing for a-1 cases

NA - Does not apply to this city

V. Data Analysis

A. Introduction

The primary purpose of this analysis is to determine whether the procedures implemented by the project were effective in reducing the time required for case processing in each of the three participating court systems. Accordingly, the study evaluates the efficiency of the conference procedures, as opposed to other measures of the success of the project such as equitability or quality. Mr. Katz discusses several other measures of success in his report. By other methods of measuring success the project also appears to have been successful.

The initial approach used in this evaluation was to compare the differences in the average time it takes a case to be processed without the conference (control) and with the conference (experimental), as is demonstrated in the following. The mean (or average) is not a good indicator of the time it takes a 'typical' case to be processed. The data indicate that there is a uniform distribution of processing times, having a large degree of variability which implies that there isn't a typical length of time for processing.

As an operational definition of what constitutes a desirable or "good" processing time, this study uses 30 days. In the original proposal it was stated that 15 days was the maximum amount of time it should take to reach a decision on a case. However, as a subsequent decision, the proposal's goal became that of

reducing the average processing time to 30 days. This is because 30 days is generally accepted as satisfying the requirements for a "speedy" charging process. Also the Speedy Trial Act of 1974 set 30 days as the 1980 goal for Federal courts. We will compare the proportions of cases resolved within 30 days with and without the conference procedure in each city to determine if there is an effective difference.

This study investigated the effects of the new procedures on each of these cities. In general, to study a certain population when it is impossible to examine each individual element of a population, a random sample of the population is selected and studied.

Inferences are then made concerning the nature of the population from which the sample was selected. If a different random sample were selected and studied, we would not expect the inferences drawn from that sample to be too different from the first, in the event that there were no biases in the sampling procedure. For this study it is necessary to determine 1) the underlying population to be investigated and 2) the nature of the sample that was selected.

It would be desirable to have our "control" data be representative of all cases in each particular city in which no conference is held. Also, it would be desirable to have "experimental" data be representative of all cases in which a conference was held. Finally, it would be desirable to say the selection of cities is representative of the range of cities so that these results could be expected to apply elsewhere in the U.S.

The original proposal called for implementing the procedures in Cleveland, Ohio. In the course of selecting cities it was found that some cities were not willing to participate, so that the problem became one of finding cooperative cities that would be willing to participate, rather than selecting a random sample of cities to represent a given population. The statement of what type of population might be represented by the selected cities was not made explicit at the time of selection. As far as can be determined in retrospect, the selected cities cannot be considered as a random sample of all U.S. cities or any particular type of cities. Therefore, we cannot generalize these results to all U.S. cities (or any subset of cities).

The selection of cases within each city does not represent a random sample of all cases for that city over time. If it is assumed that the years 1973 and 1974 are representative of the criminal justice system characteristics for the following years, say until 1978, then it could be expected that any differences in processing times produced by the project would probably be repeated in the ensuing years. This may not be a poor assumption: therefore, we can probably expect that these results would be repeated if the experiment were to continue. We emphasize that this is an assumption, since we have no data on the changes in these court systems over time.

In summary, we can say the following: 1) We know with certainty what the processing times were in 1973 (without the conference procedure) and in 1974 (with the conference procedure) in each of the three cities and can describe these effects using the data we have collected. 2) If we assume 1973 and 1974 were

representative of future years, we can predict some of the effects of continuing the project in each of the test cities. 3) We have no method of estimating the effects of the conference procedure in any other cities.

B. Characteristics of the Test Cities

In this section we present statistics summarizing the nature of the data samples in each city.

In Table 2 we present a breakdown of the seriousness of the charges against defendants in each city. A two letter code is used to describe each class of charges. The first letter is an F or M, indicating Felony or Misdemeanor. The second indicates seriousness A-D (1-4). In Norfolk, a different classification scheme is used involving three classes of crimes (Violent, Non-violent, and drug related.) A '+' following the class indicates that there were other crimes charged against these defendants. It can be seen that there was little change in the relative proportions of classes of crimes in the two sets of data.

It may be noticed that the totals indicating the number of observations are slightly different in several groups. This is due to the fact that some of the data items were not obtained for all of the cases. We have examined these instances and can find no evidence that this introduces any serious bias in the data. This is of greater concern when comparing sub-populations of the same data.

In Table 3, we present the data on characteristics of the defendants. It can be seen that the proportions of the various

TABLE 2: DISTRIBUTION OF INITIAL CHARGES AGAINST DEFENDANTS

	<u>Control</u>		<u>Experimental</u>	
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
New Haven				
FA	0	0.0	3	.1
FB	42	8.0	142	6.3
FC	25	4.8	215	9.5
FD	265	51.0	1081	47.8
MA	<u>188</u>	<u>36.1</u>	<u>822</u>	<u>36.3</u>
	520	100.0	2263	100.0
Salt Lake City				
F1	28	8.1	118	10.1
F2	92	26.5	316	26.9
F3	122	35.2	342	29.2
F4	0	0.0	3	.3
MA	52	15.0	110	9.4
Drug	<u>53</u>	<u>15.2</u>	<u>284</u>	<u>24.2</u>
	347	100.0	1173	100.0
Norfolk				
Violent +	34	4.0	85	5.4
Violent	186	21.9	462	29.3
Nonviolent +	97	11.4	141	8.9
Nonviolent	363	42.7	528	33.5
Drug +	29	3.4	103	6.5
Drug	<u>141</u>	<u>16.6</u>	<u>259</u>	<u>16.4</u>
	850	100.0	1578	100.0

sub-populations remained approximately the same between the two years.

TABLE 3 CHARACTERISTICS OF DEFENDANTS

		<u>Control</u>		<u>Experimental</u>	
		<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
New Haven					
Sex	Male	370	87.7	1955	86.8
	Female	52	12.3	298	13.2
		<u>422</u>	<u>100.0</u>	<u>2253</u>	<u>100.0</u>
Race	White	111	26.4	702	31.2
	Black	276	65.7	1377	61.2
	Other	33	7.9	170	7.6
		<u>420</u>	<u>100.0</u>	<u>2249</u>	<u>100.0</u>
Salt Lake City					
Sex	Male	314	91.5	1051	90.0
	Female	29	8.5	117	10.0
		<u>343</u>	<u>100.0</u>	<u>1168</u>	<u>100.0</u>
Race	White	274	80.1	978	85.0
	Black	31	9.1	102	8.9
	Indian	5	1.5	7	.6
	Other	32	9.4	64	5.6
		<u>342</u>	<u>100.0</u>	<u>1151</u>	<u>100.0</u>
Norfolk					
Sex	Male	796	86.9	1354	87.0
	Female	120	13.1	203	13.0
		<u>916</u>	<u>100.0</u>	<u>1557</u>	<u>100.0</u>
Race	White	392	44.9	689	44.5
	Black	477	54.6	855	55.2
	Other	5	.6	5	.3
		<u>874</u>	<u>100.0</u>	<u>1549</u>	<u>100.0</u>

In Table 4 we present the distribution of type of counsel. In New Haven, the proportions are almost identical in the control and experimental data. (Although we are not going to

analyze the quality of justice produced by the new procedures, we mention in passing that this similarity does have implications for that analysis).

TABLE 4 TYPE OF COUNSEL

		<u>Control</u>		<u>Experimental</u>	
		<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>
New Haven					
Appointed	Private	371	70.8	1487	72.8
		153	29.2	594	27.2
		<u>524</u>	<u>100.0</u>	<u>2181</u>	<u>100.0</u>
Norfolk					
Appointed	Private	Unavailable		473	30.4
				1084	69.6
				<u>1557</u>	<u>100.0</u>
Salt Lake City					
Appointed	Private	191	55.4	794	68.3
		154	44.6	369	31.7
		<u>345</u>	<u>100.0</u>	<u>1163</u>	<u>100.0</u>

Since we are using large sample sizes in all cases, we can assume that these percentages are close to the actual population figures for the cities. In such circumstances, statistical test may indicate that two samples were drawn from different populations. It is then up to the researcher to decide if that difference is "operationally" significant. That is, does a difference of one or two percentage points constitute a meaningful difference. This will be of concern also when we examine differences in the

mean time for processing. We will have to determine if a two or three day difference measured by the statistics indicates any meaningful difference.

In comparing the distributions of these variables for the control and experimental data, it can be observed that the percentages are almost identical. From this observation, we can support two assumptions. First, since the New Haven and Salt Lake City control data are samples (25% and 50%, respectively) of the year's cases, this similarity indicates that we have probably been successful in selecting a random sample. Second, the fact that the two sets of data are similar indicates that there was little change in the criminal population between years, so there is some evidence for assuming our results would apply to future years.

C. The Overall Effect of the Project on Processing Times

To avoid ambiguity in this section, we define the term "processing time" to mean the elapsed time in days from the date of arrest to the date of disposition. Also, for convenience, when describing a particular event such as the date counsel was appointed, we will refer to "the time until" the event in question. This will always mean the elapsed time in days from the date of arrest to the date of the event. Any other time periods will be defined explicitly (e.g., the time between the preliminary hearing and sentencing).

We present a breakdown of the percentage of cases resolved by the conference in Table 5. Notice that New Haven has a 30% higher proportion (75%) of resolved (by conference) cases than the other two cities, which have approximately the same rate (45%).

The possible reasons for this are examined in the Law School's portion of this report. There is no way to determine the possible causes of this result from the data.

TABLE 5 PERCENTAGE OF CASES RESOLVED BY
CONFERENCE IN EACH TEST CITY

	Resolved	Unresolved	Total
New Haven	1700 75%	566 25%	2266
Norfolk	680 45%	900 55%	1580
Salt Lake City	459 42%	633 58%	1092

1) New Haven, Connecticut

In New Haven, the conference was scheduled as soon as possible after the preliminary appearance. Therefore, the period of time that was susceptible to reduction was that between the preliminary appearance and disposition. The conference procedure could not be expected to reduce the time from arrest to preliminary appearance. Therefore, there are two ways of examining the effects. One is to examine the effect on the total processing time (arrest to disposition) and the other is to examine only that period of time which is susceptible to reduction. We shall examine the overall effect in this section and defer the discussion of other effects until the next section.

Table 6 gives the mean times from arrest to disposition of the control data and the experimental data. The two populations from which these samples are assumed to have been drawn (i.e., cases with and without a conference) are not normally distributed (as shown in Table 5), so a t-test is not an applicable test of the significance of this difference. However, since the sample

sizes are large (>500), the statistic $Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$ is approximately normal ($\mu=0, \sigma^2=1$). From Table 6, Z is computed to be 10.24 which is significant at .001 level.

From an operational standpoint, we would like to examine the proportions of cases resolved within 30 days. Figure 3 is a graph of the cumulative percentage of cases resolved for a given time period. This illustrates that under the conference procedure more cases were resolved earlier than before and that there was a higher percentage of cases resolved within any given length of time. Notice, for example, that 50% of the cases in the experimental year were resolved within 30 days, whereas 17% of the control year's cases were resolved in that length of time. At the other end of the scale, notice that only 10% of the experimental year's cases lasted over 120 days, while 21% of the control year's cases lasted longer than that.

As a test of significance of the difference between the proportion of cases resolved within 30 days, we use the statistic⁹

⁹Freund, J., Mathematical Statistics.

$$Z = \frac{\frac{x_1}{n_1} - \frac{x_2}{n_2}}{\sqrt{p(1-p) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \sim N(0,1), \quad p = \frac{x_1 + x_2}{n_1 + n_2}$$

where X_1 = number of cases resolved within 30 days in control group

n_1 = number of cases in control group

X_2 = number of cases resolved within 30 days in experimental group

n_2 = number of cases in experimental group

If this value for Z falls outside the interval (-3.27, 3.27) we conclude that there is a difference between the actual proportions, p_1 and p_2 (at the .001 level of significance). In our case:

$$X_1 = 89$$

$$n_1 = 519 \quad p = .44 \quad Z = -13.64$$

$$X_2 = 1026$$

$$n_2 = 2034$$

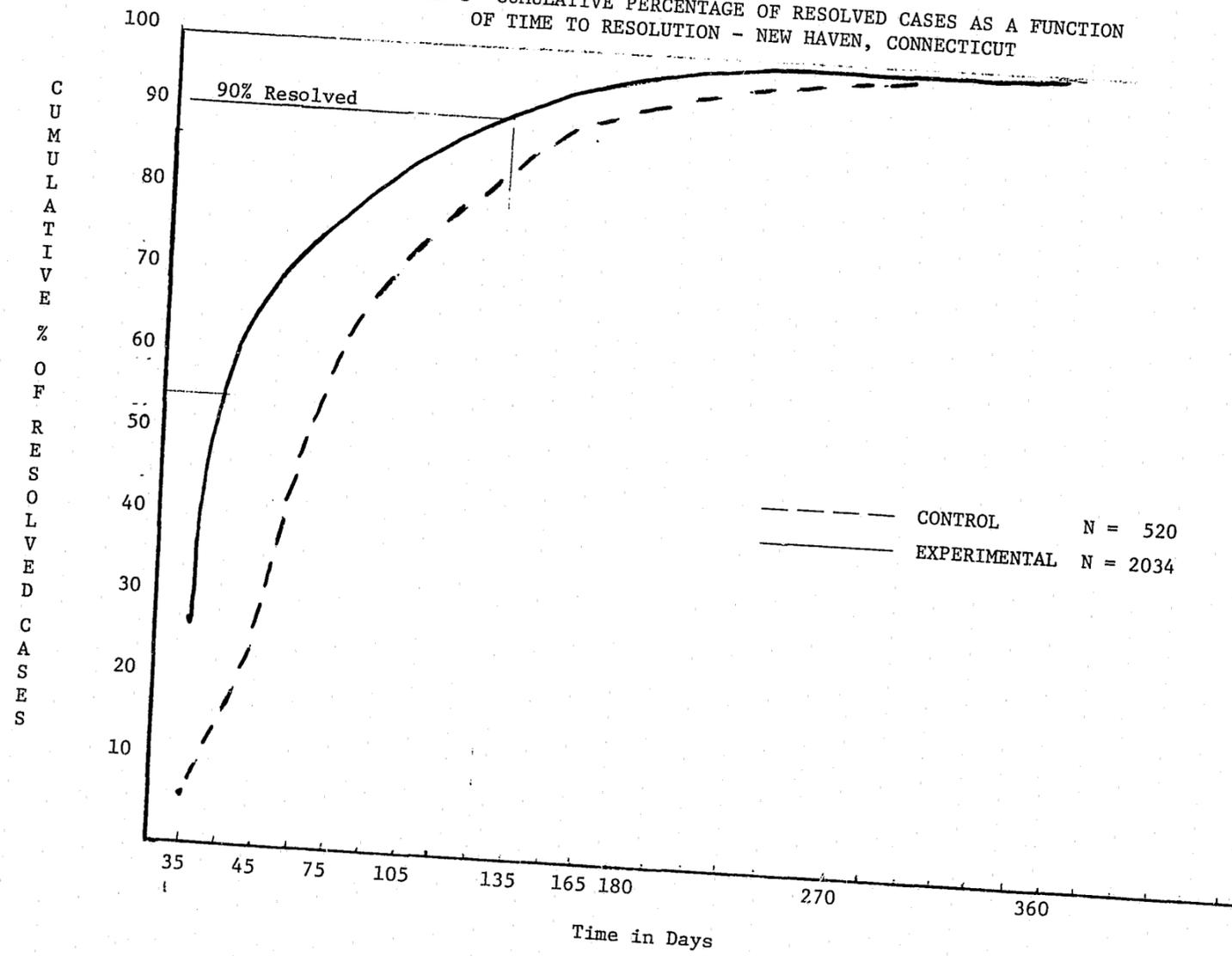
The conclusion that can be drawn from this result is that the probability that there was no difference in the proportion of cases resolved within 30 days (given that we observed a difference of $.17 - .50 = .33$) between the control year cases and the experimental year cases is less than .001. Therefore, we are safe in assuming that the percentage of cases resolved within 30 days increased during the experimental year.

TABLE 6 TIME FROM ARREST TO RESOLUTION IN
NEW HAVEN, CONNECTICUT
(in days)

	<u>Control (1973)</u>	<u>Experimental (1974)</u>
Mean	91.3	51.3
Standard Dev.	86.6	41.3
Sample Size	520	2043

<u>Time to Resolu- tion</u>	<u>Number of Cases</u>	<u>%</u>	<u>Cumulative %</u>	<u>Number of Cases</u>	<u>%</u>	<u>Cumulative %</u>
0-14	27	5.2	5.2	486	23.9	23.9
15-29	62	11.9	17.1	540	26.5	50.4
30-44	85	16.4	33.5	309	15.2	65.6
45-59	70	13.5	47.0	162	8.0	73.6
60-74	54	10.4	57.4	124	6.1	79.7
75-89	38	7.3	64.7	76	3.7	83.4
90-104	33	6.4	71.1	66	3.2	86.7
105-119	28	5.4	76.5	55	2.7	89.4
120-134	29	5.6	82.1	34	1.7	91.1
135-149	25	4.8	86.9	30	1.5	92.5
150-164	8	1.5	88.4	25	1.2	93.8
165-179	11	2.1	90.5	19	.9	94.7
180-194	6	1.2	91.7	18	.9	95.6
195-209	7	1.3	93.1	18	.9	96.5
210-224	4	.8	93.8	16	.8	97.2
225-239	4	.8	94.6	8	.4	97.6
240-254	5	1.0	95.6	5	.2	97.9
255-269	6	1.2	96.8	6	.3	98.2
270-284	3	.6	97.4	9	.4	98.6
285-299	2	.4	97.8	5	.2	98.9
300-314	--	0	97.8	9	.4	99.3
315-329	2	.4	98.1	4	.2	99.5
330-344	3	.6	98.7	1	.04	97.6
345-359	--			3	.1	99.7
360-374	2	.4	99.0	4	.2	99.9
375-389	1	.2	99.2	--		
390-404	2	.4	99.6	--		
405-419	--			1	.04	100.0
420-434	2	.4	100.0	1	.04	100.0
Total	519	100	100	2034	100	100

FIGURE 3 CUMULATIVE PERCENTAGE OF RESOLVED CASES AS A FUNCTION OF TIME TO RESOLUTION - NEW HAVEN, CONNECTICUT



2) Salt Lake City, Utah

Table 7 presents the data concerning the effect of the project on the overall processing time.

As can be seen, there is no evidence to suggest that the conference procedure reduced the processing times. In fact, the evidence suggests that the time increased.

This data must be examined cautiously because it is misleading. It was not possible to obtain the exact date of arrest for the control group cases. It was assumed that the date of preliminary appearance would be within a few (less than 3) days of the arrest date and that this would suffice. This assumption may be unjustified. However, even if an additional 5 days were arbitrarily added to the control group times, it would not effect the conclusion that there was no reduction in the mean processing times during the experimental year.

In Figure 4 the cumulative percentage of resolved cases is graphed as in Figure 3. It can be seen that there is very little difference in the distribution of processing times between the two years. We will discuss further ramifications of this finding in the next section.

TABLE 7 OVERALL EFFECTS IN SALT LAKE CITY

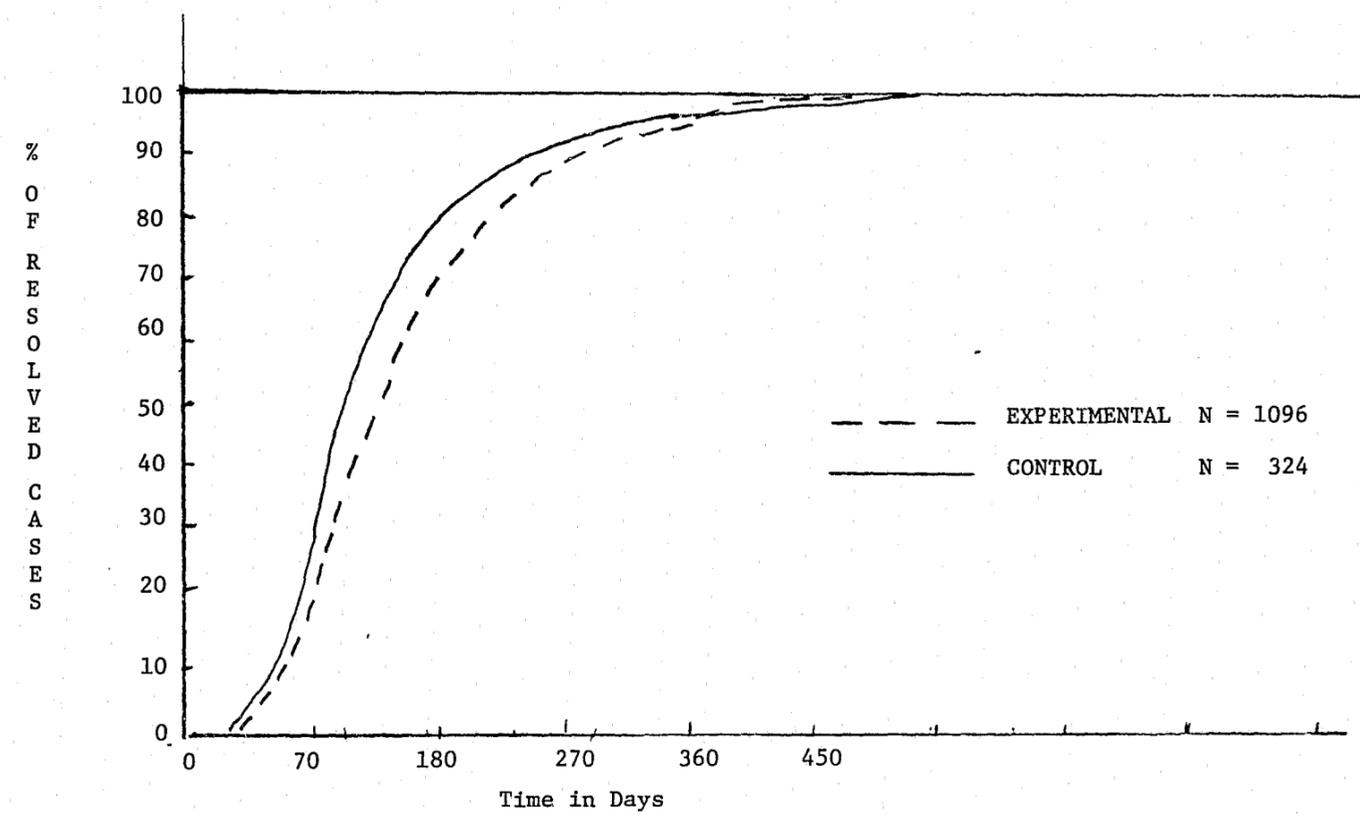
Times:

Control: Preliminary Appearance to Disposition (Plea)

Experimental: Arrest to Plea

	Control			Experimental		
	Number	%	Cumulative %	Number	%	Cumulative %
0-14	7	2.2	2.2	9	.8	.8
15-29	19	5.9	8.0	44	4.0	4.8
30-44	23	7.1	15.1	89	8.1	13.0
45-59	40	12.3	27.5	119	10.9	23.8
60-74	55	17.0	44.4	134	12.2	36.0
75-89	42	13.0	57.4	116	10.6	46.6
90-104	32	9.9	67.3	123	11.2	57.8
105-119	25	7.7	75.0	100	9.1	67.0
120-134	14	4.3	79.3	58	5.3	72.3
135-149	11	3.4	82.7	54	4.9	77.2
150-164	7	2.2	84.9	52	4.7	81.9
165-179	10	3.1	88.0	38	3.5	85.4
180-194	12	3.7	91.7	37	3.4	88.8
195-209	4	1.2	92.9	21	1.9	90.7
210-224	3	.9	93.8	18	1.6	92.3
225-239	4	1.2	95.1	12	1.1	93.4
240-254	--	--	95.1	9	.8	94.3
255-269	2	.6	95.7	12	1.1	95.3
270-284	2	.6	96.3	11	1.0	96.4
285-299	1	.3	96.6	4	.4	96.7
300-314	1	.3	96.9	10	.9	97.6
315-329	3	.9	97.8	6	.5	98.2
330-344	2	.6	98.6	5	.5	98.6
345-359	--	--	98.5	4	.4	99.0
360-374	1	.3	98.8	4	.4	99.4
375-389	2	.6	99.4	4	.4	99.7
390-404	2	.6	100	1	.0	99.8
405-419	--	--	--	2	.2	100
	324	100	100	1096	100	100
Mean	100			113		
Standard Dev.	72			77		
Sample Size	324			1101		

FIGURE 4 CUMULATIVE PERCENTAGE OF RESOLVED CASES AS A FUNCTION OF TIME
SALT LAKE CITY, UTAH



3) Norfolk, Virginia

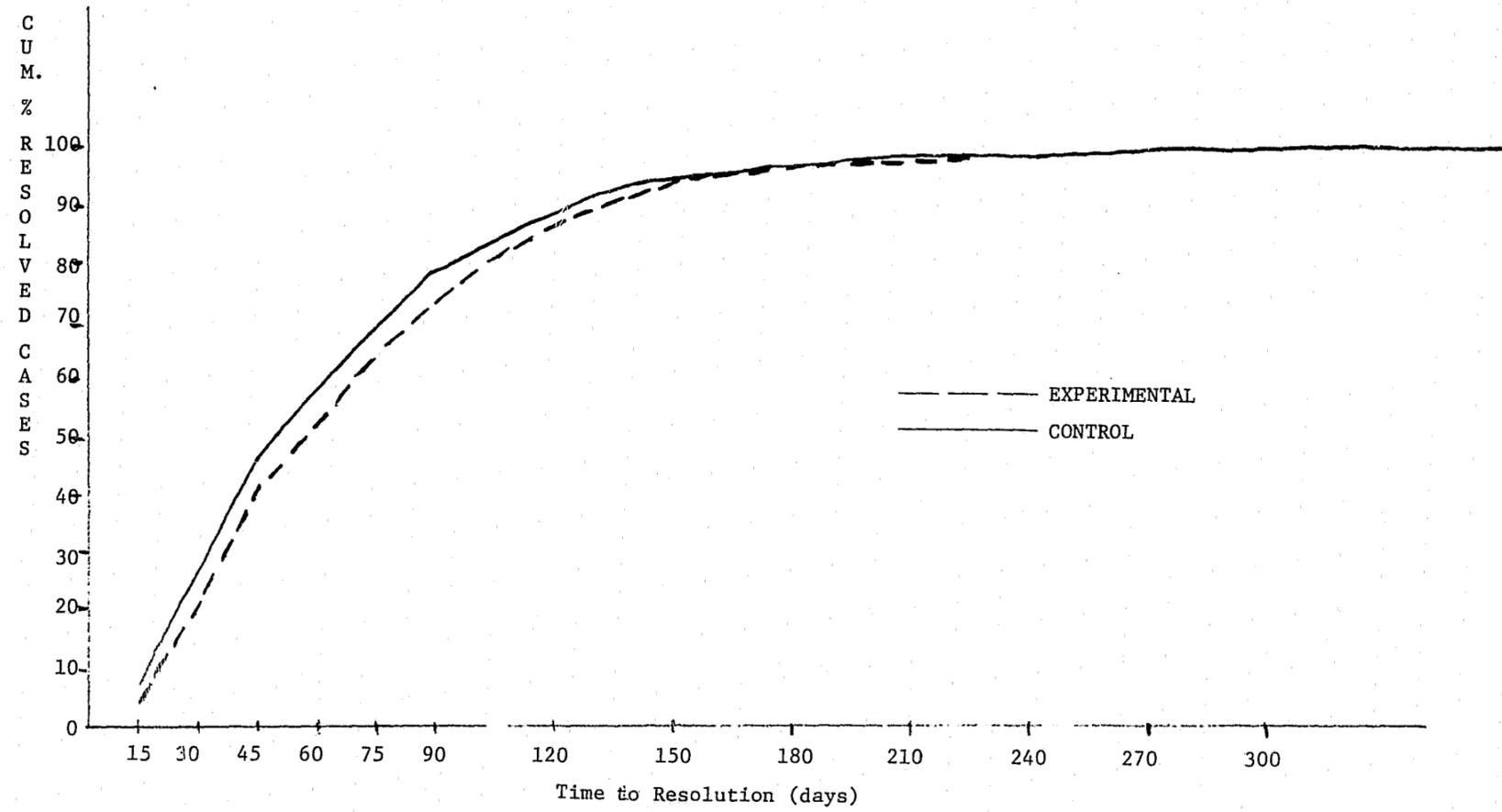
In Norfolk the conference procedure was supposed to have taken place as soon as possible after the preliminary appearance. Therefore, the time period which was susceptible to reduction was from preliminary appearance to disposition. Here also, we will examine the overall effect on processing time.

Table 8 presents the means and distributions of processing times for the control year and the experimental year. It can be seen that there is very little difference between the two sets of data. The means differ only by four days. In the control data, 21.5% of the cases were resolved within 30 days, while 25.4% were resolved in the experimental data. The cumulative percentage of resolved cases as a function of time is shown in Figure 5. This graphically illustrates that the percentage of cases resolved within any given length of time is approximately the same for both the control and experimental data. (Using the statistic z used in the analysis of New Haven we find $Z = .472$ which is not significant at .05 level).

TABLE 8 NORFOLK, VIRGINIA OVERALL EFFECT ON
PROCESSING TIMES

Days to Disposition	Control			Experimental		
	Number	%	Cumulative %	Number	%	Cumulative %
0-14						
15-29	40	4.7	4.7	95	6.6	6.6
30-44	144	16.9	21.5	271	18.8	25.4
45-59	162	19.0	40.5	291	20.2	45.6
60-74	100	11.7	52.2	161	11.2	56.8
75-89	164	12.2	64.4	161	11.2	56.8
90-104	75	8.8	73.2	146	10.1	78.1
105-119	70	8.2	81.4	78	5.4	83.5
120-134	53	6.2	87.6	66	4.5	88.1
135-149	26	3.0	90.6	55	2.8	91.9
150-164	25	2.9	93.6	30	2.1	94.0
165-179	15	1.8	95.3	19	1.3	95.3
180-194	8	.9	96.3	14	1.0	96.3
195-209	5	.6	96.8	18	1.3	97.6
210-224	5	.5	97.4	10	.7	98.3
225-239	3	.4	97.8	3	.2	98.5
240-254	5	.5	98.4	8	.6	99.0
255-269	2	.2	98.6	3	.2	99.2
270-284	2	.2	98.8	2	.1	99.0
285-299	3	.4	99.2	4	.3	99.7
300-314	2	.2	99.4	1	.0	99.7
315-329				0	0.0	99.7
330-344	3	.4	99.8	1	6.0	99.8
345-359				2	.1	99.9
360-374				0	.0	99.9
375-389	2	.2	100.0	0	.0	79.4
390-404	0	.0	0	1	.0	100
405-419	0	.0	0	0	.0	100
	0	.0	0	0	.0	100
	854	100	100	1440	100.0	100.0
Mean		68.9			64.67	
Standard Dev.		52.3			38.76	
Number		854.0			1440.0	

FIGURE 5 CUMULATIVE PERCENTAGE OF RESOLVED CASES AS A FUNCTION OF TIME
NORFOLK, VIRGINIA



D) Effects on Selected Subunits of Time

1) Salt Lake City

In the previous section we showed that during the experimental year there was an increase in the overall processing time. Since the conference did not take place until after the preliminary hearing, it could not effect the time before the preliminary hearing. If, for some reason, the mean time until the preliminary hearing increased from the control year to the experimental year, it may be that there was a decrease in the time from preliminary hearing to disposition.

Table 9 gives a summary of these critical times. It is clear that the time from arrest to preliminary hearing increased and that this is why the overall time increased. The period of time between the preliminary hearing and disposition actually decreased during the experimental year although this decrease is very slight. Therefore, we can conclude that there is evidence to suggest that the conference procedure may have reduced the processing time from what it would have been had these procedures not been in effect. However, the effect of the increase in processing time caused by the other factors far outweighed any effects of the project.

We do not know why the mean time from arrest to preliminary hearing increased nor why the time from preliminary hearing to disposition decreased. In the latter case we know of at least one change in the system (the conference) which

TABLE 9 SUB-UNITS OF PROCESSING TIME IN SALT LAKE CITY

	<u>Control</u>	<u>Experimental</u>
Time: Preliminary Appearance (or arrest) to preliminary hearing		
Mean (days)	28.2	48
Standard Deviation	25.4	--
Sample Size	341	980
Difference: (Control-Experimental)		-20
<hr/>		
Preliminary Hearing to Disposition		
Mean (Days)	73.7	68.5
Standard Deviation	67.4	65.7
Sample Size	322	982
Difference: (Control-Experimental)		+5

may be assumed to account for the change in time. Without further investigation we are unable to explain the overall effect of processing times in Salt Lake City.

2) New Haven & Norfolk

Since the conference had the potential to reduce the time from preliminary appearance to disposition and the date of arrest is usually within 2 or 3 days of the preliminary appearance date, we will not do a separate analysis.

E. Cases for Which a Conference was Held

Table 10 shows the percentage of cases in each city for which a conference was held.

TABLE 10 PERCENTAGE OF CASES IN WHICH A CONFERENCE WAS HELD

	<u>Conference Held</u>		<u>No Conference</u>		<u>Total</u>
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	
New Haven	2088	92.1	178	7.9	2266
Norfolk	1107	70.0	473	29.1	1580
Salt Lake City	1084	92.3	91	7.7	1185

It can be seen that although a conference was supposed to have taken place in all cases, for some reason it was not held in a certain percentage of cases. In our analysis we assume that because the conference was capable of being applied to all cases, the procedure was, in fact, applied to the entire population (just as penicillin is not effective on all people, but its total effect on the population has been significant).

Although the percentage of cases in which a conference was held in almost identical in New Haven and Salt Lake City, the effect on processing times was seen to be quite different. Therefore, we cannot attribute these differences in the effect of the project to a less intense application of the conference (as might be the case if New Haven and Norfolk were compared).

We have data which show that even though an agreement was not reached through the conference procedure, the processing times for unresolved cases with a conference was significantly (.001 level in New Haven) shorter than those cases without a conference. What we cannot determine is whether this is because the conference had an effect of reducing processing time or that cases which 'normally' take less time are more susceptible to having a conference.

F. Effect of the Project on the Size of the Docket

The original proposal mentioned that one of the goals of the project was to reduce the size of the docket (i.e., the number of cases awaiting disposition). The data were not collected in such a way that this can be determined. Mr. Katz has inquired of the project lawyers in the cities as to their subjective evaluation of this effect. A discussion is included in that portion of this report.

VI. CONCLUSIONS

Our analysis attempts to measure the effect of the project on the efficiency with which cases are processed in three cities. Our measure of efficiency is the time from the date of arrest (or preliminary appearance) to disposition (or date of final plea or sentencing in Salt Lake City).

In New Haven we found a significant impact on the processing times in the experimental year's cases. The mean processing time was reduced to 51 days from 91 days and the proportion of

cases resolved within 30 days was increased from 17% to 50%.

In the other two cities, there is no evidence to suggest that the project had any effect on the processing times. A slight increase in processing time was observed in Salt Lake City, but this was demonstrated to be due to an increase in the elapsed time between arrest and preliminary hearing which cannot be attributed to the project.

Thus it is clear that the procedures proposed by Mr. Katz will not have a significant impact on all cities in which they are implemented. However, there is at least one city and perhaps others which would benefit by implementing these procedures. The important question of why they worked in New Haven and not in Salt Lake City and Norfolk must go unanswered in this report because of lack of data.

In this report Mr. Katz discusses his opinions as to why the New Haven project was so successful and the others not very successful. In view of the difficulty encountered in obtaining this data, the opinions of a professional may be the only feasible way of obtaining this type of evaluation. Briefly, Mr. Katz suggests that the procedures implemented by this project were greatly affected by the personalities of the individuals involved and the difficulties encountered by each court system when trying to change its ways.

END