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National Institute of Justice
United States Department of Justice
Washington, D. C. 20531
To be added to these lists, write to the National Criminal Justice Reference Service, User Services Dept. B, Box 6000, Rockville, Md. 20850.

Bibliography on Crime Forecasting and Related Topics

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Forecasting techniques have been used for decades in both the public and private sectors. On the federal level, models of the national economy have helped to shape monetary and fiscal policy. In the private sector, forecasts of series such as sales and inventory have reduced uncertainty of management. In criminal justice, prison population forecasts began being used during the 1970's. As we emerge into the 1980's, crime forecasting is being evaluated as to its potential usefulness.

Crime forecasts can be useful to criminal justice planners in a number of ways. In regard to long term planning, models for forecasting crime could be of service for those who need to anticipate the construction of law enforcement and correctional facilities, or the training of highly skilled personnel in specialized fields, e.g., forensics science. In addition, knowing about the future (for example, knowing that crime will not continue to increase in the next ten years) allows law enforcement administrators lead time to begin preparing for anticipated budget cuts. Models that include social and economic indicators as predictors of crime may also generate the costs and benefits of long range policies in areas other than criminal justice.

Crime forecasting with shorter time horizons is likely to be most useful to planners at the local and state level; such problem centered information enables one to anticipate the level of resources required and to allocate existing resources efficiently. For example, location specific predictions of crime by...
type could be helpful in assigning the manpower of a law enforce-
ment agency to different regions of the state or different
areas of the city. Additionally, patrol routes could be set
according to weekly or monthly crime forecasts. Furthermore,
knowing monthly rates of crime for specific areas of a law
enforcement jurisdiction could be useful in scheduling vacation
time and in buying gasoline for patrol cars.

Community based crime prevention is another policy area that
can benefit from short term problem centered forecasts. For
example, in the mid 1970's, the New Orleans Police Department
issued two week crime probability forecasts of specific crime in
specific police districts to alert residents and businesses (Crime
Control Digest, 1975). Future crime estimates by type and loca-
tion could also be made available to citizen groups interested in
working with the police.

The foregoing discussion has focused on uses of crime fore-
casts for the purposes of problem identification. That is,
results help define the specificity of the problem, i.e., type,
location, time horizon, etc., but there is no information pro-
vided on what alternative policies are more likely to reduce the
crime problem. Forecasting based on policy grounded theory can
provide this information. For example, some forecasting methods
yield crime estimates that are predicted, not from previous crime
data, but from a variety of other independent variables such as
police expenditures, prison admissions, unemployment, and risk
population estimates. In these instances, future crime estimates
are produced as well as information on the causes of crime. With
this additional data on crime causal factors, the administrator
can begin to formulate policy or programs that can impact the
cause of crime, like unemployment in particular areas; and, in
return can expect a reduction in the crime problem.

A final policy area in which crime forecasts can be useful is
the evaluation of crime control and prevention programs. Fore-
casting can be used as an evaluative tool in two ways. First, an
intervention analysis might involve the evaluation of a proposed
change in a specific policy, such as the reallocation of effort to
combat a particular type of crime. A technique like Box-Jenkins
time series could provide information on the potential impact of
alternative policies and/or programming before the change has
been implemented. Second, in cases where there is no control
group for evaluating an alternative policy, a post hoc interven-
tion analysis can generate crime forecasts based on preinterven-
tion data. These results can predict a crime pattern which would
stimulate a decision not to implement the alternative policy.

Since forecasting has only recently been introduced to crimi-
nal justice as a planning tool, the "state of the art" has yet to
be established. Toward this end, the following bibliography
includes one of the most comprehensive listings of crime fore-
casting works available, and, in addition, presents an extensive
listing of closely related topics. It is one of the major pro-
ducts of a project funded by the Bureau of Justice Statistics to
the Alaska Department of Public Safety. This larger project,
entitled Crime and Arrest Rate Predictions for the States of
Alaska and Oregon, centered on piloting a multiple method
approach to forecasting crime at the state level. The bibliography introduction includes information about the format and content of this bibliography, along with the methods and procedures used to locate relevant citations.

It is important to give special acknowledgment to the Project Advisory Group, James Fox, Clinton Goff and Robert Willstatter, who assisted in several reviews of our draft materials. We are grateful for their suggestions and input and feel that their contribution is worthy of collaborating authorship.

We also wish to thank Jos Mapranath, the Director of Administrative Services, Department of Public Safety in Alaska and John Jones of the Bureau of Justice Statistics, for their encouragement and responsiveness as state and federal Project Monitors. Special thanks is extended to Phyl Booth who was responsible for formatting, typing and organizing the Bibliography. Editorial assistance provided by Darline Creen and administrative support of Jane Barcott should also be acknowledged. Finally, we appreciate the responsiveness of the National Criminal Justice Reference Service, the Directors of state Statistical Analysis Centers, and the Uniform Crime Reporting Program who provided us with reference material and unpublished documents.

August 1983
Knowlton Johnson
Janet Eidson

INTRODUCTION

Format and Content

In Section I of the bibliography, literature is presented that shows the development of crime-related forecasting. This is a comprehensive and exhaustive listing of crime and arrest forecasting work with most of the documents abstracted. Of the 55 citations addressing crime-related forecasting, 34 concern discussions of empirical forecasting studies; and of these, 30 center specifically on crime and/or arrest forecasting. The remaining work deals mostly with theoretical and methodological issues associated with crime forecasting.

In regard to the time frame of the 55 crime forecasting related citations, only two pre-1970 listings were found, neither one a crime forecasting study. In 1976 an increasing number of crime-related forecasting works began to appear; from 1976 through 1979 30 citations were uncovered. Most of these studies centered on forecasting vis-a-vis regression, structural equation techniques and Box-Jenkins time series analysis, both in the U.S.A. and other countries. With the emergence of the 1980s came new developments and controversy in the area of crime forecasting. Fifteen citations appeared during the 1980-82 period.

Twenty-six of the 30 crime forecasting empirical studies are also indexed according to type of analytical forecasting method and the unit of analysis. The original document for the remaining four studies could not be located. These indexes enable readers to identify those studies which used cities,
states, the nation or foreign countries as the basis of their forecasts and what mathematical method they used to arrive at their forecasts, i.e., regression, Box-Jenkins, etc.

In an effort to uncover crime and arrest forecasting works, we discovered many practitioners in the criminal justice field had a strong interest in prisoner and inmate population forecasting. Budget and manpower allocations are often based on such projections, and in this era of prison overcrowding and court ordered minimum of prisoner living space such studies are increasingly valuable. Because of this increasing importance, Section II presents "Prison Population Forecasting" citations. Included are the more current literature on the subject and many unpublished documents from state governments.

Section III traces the development of the Uniform Crime Report System in the United States, as well as presenting publications that deal with issues in the use of such statistics and the use of criminal statistics in other countries. This section provides an illustrative but not exhaustive list of literature on the history of crime indicators.

In Section IV, an illustrative listing of crime causation literature is presented. Crime causation work is too numerous to present in any comprehensive manner. Instead, we present illustrative causation literature, most of which was used in our forecasting project. This listing concerns only theoretical and empirical work concerning explanations of the level of crime, not individual criminality. Additionally, this listing is divided according to the major sets of theories that have influenced crime forecasting works. These include economic ecology, deterrence, opportunity, social disorganization, and demographic theories.

Section V, Social Forecasting Methodology, is included as a sampling of forecasting "basics." Prediction studies are used throughout the social science field with a great deal of respectability. With its growth as an accepted practice, problems and refinements have developed that can be applied to forecasting in the criminal justice field as well as in other areas. This section is only intended to serve as a guide for those practitioners interested in the technicalities of conducting forecasting studies.

Methods and Procedures

The primary method employed in the creation of the bibliography was the use of DIALOG Information Retrieval Service, available through the University of Alaska, Anchorage Library. DIALOG is a computerized bibliographic data base which allows easy access to a wide range of data bases. Through contract agreement, DIALOG references all the citations and abstracts provided by such traditional services as Sociological Abstracts. It can perform system searches quickly, and is far more efficient, both in terms of cost and time, than searching such data bases by hand. For approximately $300, we received over a thousand possible citations for consideration in compiling this bibliography.
The first step in using DIALOG was to identify those data bases which would be appropriate, i.e., those which might conceivably include publications dealing with crime and arrest forecasting. The following data bases were so identified:

- Legal Resource Index (LRI)
- Criminal Justice Periodicals Index (CJPI)
- Sociological Abstracts (SocAb)
- Social Science Citation Index (SSCI)
- Conference Papers Index
- Dissertation Abstracts
- Foundation Grants Index
- National Technical Information Service (NTIS)
- National Institute of Justice - National Criminal Justice Reference Service (NIJ-NCJRS)

The second step involved indentifying "key words" or phrases with which to search each individual data base. Some of these bases index publications according to title; others use pertinent content or abstract phrases and some use both. Identifying the correct key words for each data base increased efficiency, avoided duplications and irrelevant publications, and kept costs down.

Obtaining a search of the National Institute of Justice-National Criminal Justice Reference Service (NIJ-NCJRS) was made more efficient and cost objective by going directly to NIJ-NCJRS. The NIJ-NCJRS is an international clearinghouse of information on law enforcement, criminal justice and juvenile justice. It draws on a great variety of sources for its data base - publications, film, speeches, etc. - and has many services available to researchers. NIJ-NCJRS will perform reference searches, help in identifying appropriate key-words for a search and suggest other possible sources. Many documents referenced by NIJ-NCJRS are available from commercial publishing houses, the National Technical Information Service or the U.S. Government Printing Office. In addition, most documents are available from NIJ-NCJRS through interlibrary loan. Many documents are also available from NIJ-NCJRS through their microfiche program. In this program, they provide requesters with single free microfiche copies of documents.

The NIJ-NCJRS provides not only citations of relevant material, but also abstracts of the documents. The abstracts are very complete and useful. In Section I, Crime and Arrest Forecasting, several of NIJ-NCJRS's abstracts were modified for our bibliography. These modified abstracts are so indicated by having "NIJ-NCJRS" appear in parentheses at the end of the abstract.

The citations that were gathered were sorted for relevance and content. Those selected were catalogued and every effort was made to try to obtain the original publication through resources at the University Library or through Inter-Library Loan, connecting the UAA Library with libraries all across the country. In addition, references used by the authors of all the articles reviewed were examined for publications that our searches may have missed. Finally, the National Forecasting Survey, which was responded to by Statistical Analysis Center directors as well as directors of Uniform Crime Report Programs in 48 states, the District of Columbia and Puerto Rico, revealed unpublished crime forecasting related documents.
SECTION I

CRIME FORECASTING*


This study examines the impact of population growth (particularly the crime-prone age group 13 - 29) on crime rates. Crime rates are highly correlated with the crime-prone age group and it is predicted that 1976 will see a downward trend in crime that is expected to continue. Other inflationary factors impacting crime, such as unemployment, are also discussed. (NIJ - NCJS)


This paper shows that the rise in crime since 1960 corresponds precisely with the rise in the number of persons aged 15 through 29, the most crime prone ages. The author presents the technique used for making crime projections based on this population age group and forecasts crime rates for Virginia and the nation for 1976 to 1980 and beyond.


Brenner feels, in this review of James Fox (Forecasting Crime Data, 1978), that Mr. Fox's book is largely irrelevant for research workers in criminology. No real explanation of econometric models appears, nor any comparison of models, and Brenner believes this limits the usefulness of the volume. In addition, Brenner takes argument with Fox's determination that the unemployment rate has no impact on the crime rate.

* INDEX to Crime Forecasting studies only:

A - Unit of Analysis: 1=nation; 2=city; 3=state; 4=foreign.

B - Analytical Method: 1=regression; 2=time-series; 3=straight line projection; 4=system dynamic model; 5=smoothing; 6=cross-spectral analysis; 7=diffusion model.
CALIFORNIA BUREAU OF CRIMINAL STATISTICS
California Division of Law Enforcement, Department of Justice.
(A3; B3)

Brief crime/arrest forecast included in report.

CALIFORNIA INSTITUTE OF TECHNOLOGY JET PROPULSION LABORATORY
Washington, D.C. National Aeronautics and Space Administration.
(A2; B2)

This study presents various techniques for crime prediction and discusses the usefulness of the alternatives, functional forms, parameter estimation techniques and the quality of the resultant predictions. An extrapolative technique was employed to predict crime in the city of Los Angeles as part of an evaluation of the use of police helicopters as patrol vehicles. (NIJ - NCJRS)

COHEN, LAWRENCE E.
(A1; B1)

This article models trends in reported robbery, burglary, larceny and auto theft. A "criminal opportunity perspective" is used to formulate several social production functions for these crime rate trends, showing how relatively moderate social changes - such as the participation of women in the labor force, presence of lightweight durable goods and increases in the number of people living alone - can generate dramatic increments in the crime rates. (NIJ - NCJRS)

COHEN, LAWRENCE E.; FESELON, M.; and LAND, K.C.
(A1; B1)

This article develops several macrodynamic social indicator models of post-World War II property crime trends. The theory presented suggests that a decrease in the density of the population in physical locations which are normally the sites of primary groups' routine activities - family patterns in a household - could produce an increase in criminal opportunities and hence in property crime rates. Forecasts based on the model indicate that robbery and auto thefts should drop in the 1980's, but burglary rates should continue to grow or drop less. (NIJ - NCJRS)
Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

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Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.

Brief crime/arrest forecast included in report.
A mathematical model using econometric techniques is developed to explain and predict trends in crime rates and related variables. The crime trend was most significantly related to the consumer price index with age composition of the population accounting for fluctuations. A general upward trend, with fluctuations, through the year 2,000, is predicted. (NIJ - NCJRS)


This is an expanded study of Econometric Analysis of Crime Data (Fox, 1976). A simultaneous equation model is presented of national crime trends with forecasts through the year 2000. Results, with the Consumer Price Index and age distributions used as prime predictors, show a general reduction in the upward trend in crime rates during the 1980's and an increase during the 1990's. Race distribution and birth rates are also discussed. (NIJ - NCJRS)


Drawing on his work in Forecasting Crime Data (Fox, 1978), Fox presents a discussion of the "baby boom" and consequent use in violent crime. Because the baby boom generated a larger group of 14- to 21-year-olds, a group with a greater than average propensity toward committing crime, Americans saw the crime rate escalate in the 60's and early 70's. Now that this cohort of baby boom children is aging, crime, especially violent crime, will naturally go down. Policies of police, judges or prosecutors cannot be credited or blamed for these changes in the crime rate. It is suggested that as this birth cohort ages there may be increases in "adult" crimes, i.e., embezzlement, fraud, graft, or computer theft. As the baby boom cohort have children of their own, there should be a slight increase in the violent crime rate in the 90's. Barricading any great wars, depressions or disasters, however, the birth rates and crime rates will both even out and remain fairly steady: the "crime wave" of the 60's is over.


In this article, Fox answers issues brought up by Decker and Kohfeld (1982) concerning suggested problems in his work, Forecasting Crime Data - An Econometric Analysis (1978). Fox addresses the arguments dealing with aggregation and specification, the use of the Consumer Price Index rather than the unemployment rate, and time trends in time series data.


This study presents a description of the development, operation and appreciation of an adaptive decision-aiding concept in which a human decision-maker is aided by a trainable, computer parallel decision-maker. The author then describes how this type of model is suitable for crime prediction. (NIJ - NCJRS)


This study is a discussion of the most common kind of social forecasting, the extrapolation of existing trends. In applying this technique to crime rates, the social consequences of demographic change, especially changes in the number of young males aged 17 to 20 must be accounted for to achieve valid forecasts. Other factors affecting the crime rate, such as unemployment, affluence, birth rates and crime reporting, are also discussed. (NIJ - NCJRS)
GOLDMAN, JERRY; HOOPER, RICHARD; and MAHAFPEY, JUDY

Testing two types of models, indicator-based regression model and a time-series or autoregressive model, the authors describe in detail efforts to forecast caseloads for the U.S. District Courts. A total of 158 general, civil and criminal indicators were originally analyzed in the regression model. The time-series model was based on the number of past court filings, and in every case the indicator-based models were superior to the time-series in terms of utility and goodness of fit. The most predictive indicators appeared to be economic measures, number of lawyers in the population and federal budget data. Arrest indicators were not significant.

HASENPUSCH, B.

This article presents an introduction to criminological forecasting in general and to previous forecasting efforts in Canada. Multiple regression analysis of reported crime and demographic factors suggests that while total crime reported to police and the number of violent crimes in Canada will continue to rise, property crimes will decrease for the projections 1977-1982. (NIJ - NCJRS)


The results of a crime trend forecast for the years 1978 to 1984 are examined in conjunction with past Canadian forecasts and forecasting methods in general. Results suggest a slow increase in total offenses and homicides, bombings and theft, with a leveling off of break-ins and a decrease in rapes, assaults, auto thefts and frauds. (NIJ - NCJRS)

HELLER, NELSON B. and MARKLAND, ROBERT E.

Weekly demand for police service is forecasted for St. Louis, Chicago and Detroit. The authors report forecasting errors of very close to zero, with the most significant variable being the weekly average temperature.

IOWA STATISTICAL ANALYSIS CENTER

Crime/arrest forecasts included in report.

JEPSEN J. and PAL, L.

JONES, LANDEY, V.

KENNEDY, J.B.

Application of statistical forecasting methods in criminology are briefly reviewed in this article. Common applications of these methods, their data requirements, forecasting ability and the situations each is best suited for are discussed. Forecasting crime, police demand and seasonality of crime are also discussed. (NIJ - NCJRS)

KLEPINGER, D.; WEIS, J.; and STARK, R.

KUBE, E.

This paper reviews the basic applications of crime rate prediction to police work as conceived by the West German police and briefly summarizes the experiences of Canada, Sweden, Japan, and West Germany in this field. It concludes that crime rate prediction is still based more on experience and intuition than on scientific methods. (NIJ - NCJRS)

This study relates eight socioeconomic factors to specific crimes over 5-year periods to determine whether correlations are simultaneous and constant or lagged. The correlation was found to vary according to the length of time a particular socioeconomic trend was prevalent and suggests that predicting the incidence of a particular crime needs careful consideration on which socioeconomic factor should be adopted for each year. (NIJ - NCJRS)


This study compares various juvenile delinquency forecasting methods and explains the ARIMA method of forecasting. In its application here, however, ARIMA failed to show long-range forecasting capabilities and did not retain the cyclical variation of delinquency. (NIJ - NCJRS)


This study attempts to predict murder rates of police officers, by civilians, for urban areas. Demographic and environmental variables along with crime rates and police statistics were correlated with police murder figures for the cities analyzed. The proportion of blacks in the city, the proportion of people below the poverty line and having a high crime index were moderately significant. The author suggests that variables within the police structure, such as age, training and racial structure, might be more significantly related to police murder rates, but that such data are difficult to obtain. (NIJ - NCJRS)

MC MASTER, D.J.; O'LEARY, M.K.; and COPLIN, W.D. 1979 "Testing Two Methods of Short-Term Forecasting of Political Violence," Technological Forecasting and Social Change 14:115-37.

In an effort to aid foreign policy decision making, the authors have created two forecasting models to predict political violence. Argentina, Ethiopia and Thailand were chosen as test subjects and monthly data from diplomatic reporting and surveys of crime were gathered for a 6-month period. It was concluded that the techniques and models employed were successful and that further investigation would be useful.


The paper describes and rates three different forecasting models which might be appropriate for medium-sized cities with limited resources. It suggests that (1) elaborate models are not always necessary, and (2) the most likely type of intuitive forecast undertaken by an experienced police administrator would probably yield a cost-effective forecast. (NIJ - NCJRS)
This article evaluates four alternative short range crime forecasting models. These models are: Naive, Extrapolative, Holt-Winters Exponential Smoothing, and Box-Jenkins Forecasting Models. All four models are then applied to the same data set. Box-Jenkins was easily the most accurate of the methods, with the naive and extrapolative models being least accurate. The actual choice of a forecasting model for use by a police department, however, depends on the amount of crime there is to forecast, and the resources available to use in developing the models. For some departments, especially small ones, the most accurate techniques may not be the most cost effective.

MISSISSIPPI CRIMINAL JUSTICE PLANNING COMMISSION

Brief crime/arrest forecast included in report.

MONTANA CRIMINAL JUSTICE DATA CENTER

This report includes a statistical analysis of the number and types of crime, a projection of how much crime may be expected in the future and a summary of arrests, criminal court proceedings and prison admissions. (NIJ - NCJRS)

NOBLE, R.

ORSAGH, THOMAS

This comment takes issue with Harvey M. Brenner's book review of Forecasting Crime Data, 1978, by James Fox (Brenner, J. of Criminal Law & Criminology 70(2):57-74). Orsagh devotes his rebuttal to the issue of whether or not the unemployment rate has an effect on crime and he cites many studies to show that it does not.

PENNSYLVANIA COMMISSION ON CRIME AND DELINQUENCY

Brief crime/arrest forecast included in report.

PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND ADMINISTRATION OF JUSTICE

This paper presents projections of the percentages of U.S. population which will have a criminal record (non-traffic arrest) and the percentage which will have a conviction resulting from such an arrest. The predictions were made based on the assumptions that current situations (i.e., current age-specific arrest probabilities) will continue on into the future.

SAGI, PHILIP C.

SEPLER, H.J.

A standard celeration charting (SCC) method for system analysis is applied to the criminal justice system in this paper. SCC is extensively described and presented as a rapid, easily interpreted and inexpensive way to examine and predict protective, rehabilitative and judicial services as well as juvenile delinquency arrests and court cases. (NIJ - NCJRS)

STEVENS, P.

This article examines the number of blacks represented in the 15 to 24-year-old age group and unemployed population of London and correlates it with the number of blacks arrested.
It predicts rapid escalation of young, unemployed blacks, and accordingly, escalation of the number of blacks arrested and convicted. (NIJ - NCJRS)


This research indicates that a crime slope is a more consistent and useful indicator of crime trends than is the crime rate. Because the number of index crimes has a linear relationship with the exponential growth in population, the authors suggest using crime slope and intercept methodology to produce a crime trend indicator that is statistically useful for comparisons. (NIJ - NCJRS)


This article combines spectral analysis and the autoregressive moving average (ARMA) methodologies to examine the statistical relationship between two stationary time series: seasonally adjusted unemployment rates for males aged 20 to 24 and monthly data on homicide rates for 1963-1974. This demonstrates a useful method for identifying socioeconomic and demographic factors which explain temporal variations in homicide rates. The author then suggests applications for developing forecasting models. (NIJ - NCJRS)


This study predicts total crime, violent crime and property crime for Washington state to the year 2000, taking into account the future number of males aged 15 to 34. It suggests that crime rates have stabilized since 1974 and will remain so unless social change of the magnitude of that of the late 1960's recurs. (NIJ - NCJRS)


This paper discusses issues involved in forecasting the incidence of crime, the variety of approaches used to produce forecasts and the literature dealing with these methods. The author suggests that extrapolation by means of one of the univariate methods would be most appropriate for generating short-term forecasts at a reasonable cost and that coherent theoretical models offer the possibility of long-term forecasts. (NIJ - NCJRS)
SECTION II
PRISON POPULATION PROJECTION MODELS

BECK, ALLEN RAY


BLUMSTEIN, ALFRED

BLUMSTEIN, A.; COHEN, J.; and MILLER, H.D.

BLUMSTEIN, ALFRED; COHEN, J.; and NAGIN, D.

BLUMSTEIN, A. and MOITRA, S.

CARLSON, K., ET AL

COLORADO DEPARTMENT OF CORRECTIONS


CONNECTICUT GOVERNOR'S OFFICE JUSTICE PLANNING DIVISION

CRAGO, T.G. and HROMAS, C.S.

DELAWARE STATISTICAL ANALYSIS CENTER

DISTRICT OF COLUMBIA


DISTRICT OF COLUMBIA OFFICE OF PLANNING AND PROGRAM ANALYSIS

FLANAGAN, J.

FLORIDA DEPARTMENT OF OFFENDER REHABILITATION


FRIS, CHARLES M.

HROMAS, C.S. and CRAGO, T.G.

IOWA STATISTICAL ANALYSIS CENTER

JANKOVIC, IVAN

KENTUCKY, COMMONWEALTH OF, DEPARTMENT OF JUSTICE

KOLOMNEE, S.E. and RYAN, V.

LEUTHEU, M.W.

MILLER, DAN

MITTRA, S.

MONTANA DEPARTMENT OF INSTITUTIONS

RAGIN, DANN

OKLAHOMA DEPARTMENT OF CORRECTIONS
1982 Revised Prison Population Pressure Projections. Oklahoma City, OK: Planning and Research, Department of Corrections, Apr. 21.

OREGON LAW ENFORCEMENT COUNCIL


PANNELL, W.C.

PENNSYLVANIA COMMISSION ON CRIME AND DELINQUENCY

PETEILLIA, J. and GREENWOOD, P.W.


SECTION III CRIMINAL STATISTICS


1928 A Uniform Classification of Major Offenses. International Association of Chiefs of Police.


OECD 1976 "Data Sources for Social Indicators of Actual Victimization Suffered by Individuals with Special Reference to Victim Survey." OECD Social Indicators Development Programme Special Studies No. 3. Paris: OECD.

ECONOMIC PERSPECTIVE


OPPORTUNITY PERSPECTIVE


COHEN, LAWRENCE E. and CANTOR, DAVID


COHEN, LAWRENCE E. and FELSON, MARCUS E.

COHEN, LAWRENCE E.; FELSON, M.; and LAND, K.C.

COHEN, L.; KLEUCEL, J.; and LAND, K.


GOULD, LE ROY

WILKINS, L.T.

DETERRENCE TRADITION

BAILEY, WILLIAM C.

BECKER, G.S.

BLOCK, M.K. and HEINFKE, J.M.

BLUMENSTEIN, COHEN and NAGIN, (EDS.)

CARR-HILL, R.A. and STERN, N.H.

EHRICH, I.

MATHIESON, DONALD and PASSELL, PETER

SULLIVAN, R.F.

SWIMMER, EUGENE


VOTZ, HAROLD and PHILLIPS, LLAD

ECOLOGICAL PERSPECTIVE

BURT, C.

GIBBS, JACK P. and ERICKSON, MAYNARD L.
GILLIS, A.R. and HAGAN, JOHN

HARRIES, K.D.

OGBURN, W.F.

PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND ADMINISTRATION OF JUSTICE

PURPURA, P.P.

SHAW, CLIFFORD R.

VOSS, HARWII L. and PETERSON, DAVID M. (EDS.)

WALKER, N.D.

SOCIAL DISORGANIZATION
CLOWARD, R.A. and OHLIN, L.E.

HOBART, C.W.

MERTON, R.K.

OGBURN, W.F.

SCHUESSLER, K. and SLATIN, G.

SELLIN, T.

SHAW, C.R. and MA KAY, H.D.

WILLIAMS, LARRY E.: CHADWICK, BRUCE A.; and BAHR, HOWARD M.

DEMOGRAPHY
CHRISTENSEN, R.

PERDINAND, THEODORE N.

FOX, J.

HARTNAG8I.I, T. F.

MAXIM, P.S. and JOCKLIN, A.
PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND THE ADMINISTRATION OF JUSTICE

SAGI, P. and WELLFORD, C.

WELLFORD, CHARLES

SECTION V
SOCIAL FORECASTING METHODOLOGY

BOX, G.E.P. and JENKINS, G.M.

GILCHRIST, WARREN

MC CLEARY, R. and HAY, R.A, JR.

MAKRIDAKIS, S. and WHEELWRIGHT, S.C.

WELSON, CHARLES

PINDYCK, ROBERT S. and RUBENFELD, DANIEL L.

THIEL, HENRI