

92766

"A BIBLIOGRAPHY OF STATISTICAL APPLICATIONS
IN LAW AND JUSTICE"*

by

S. James Press

Technical Report No. 120

October, 1983

Department of Statistics
University of California
Riverside, California 92521

U.S. Department of Justice
National Institute of Justice

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this copyrighted material has been granted by

Public Domain/Bureau of Justice
Statistics/US Dept. of Justice

to the National Criminal Justice Reference Service (NCJRS)

Further reproduction outside of the NCJRS system requires permission of the copyright owner.

*A project sponsored by the Bureau of Justice Statistics of the U.S. Department of Justice under a cooperative agreement with the American Statistical Association

CATEGORIES

	<u>Page</u>
Crime Statistics	1
Method of Statistical Proof	2
Prediction	2
Sampling and Data Collection	3
Model Application.	3
Normative Forecasting.	4
Experimental Design.	4
Testing Significance	4
Estimating Crime Incidence	4
Standard of Proof.	5
Court Fact-Finding	5
Comparison of the Criminal Statistics of Different Countries	5
Victimization Survey	5
Criminal Justice Examples.	7
Critiques.	7
Jails, Prisons, etc.	7
Courts	7
Criminals (characteristics, etc.).	7
Juries	7
Specific Crimes ,Rape, Murder.	7
Miscellaneous.	8

CRIME BIBLIOGRAPHY

Crime Statistics

Arbous, A. G., and Kerrick, J. E. "Accident statistics and the concept of accident proneness", 7 Biometrics, 340, (1951.)

Bishop, Yvonne M. M., Fienberg, S. E., and Holland, P. W. Discrete Multivariate Analysis, Theory and Practice, Cambridge, Mass: MIT Press, (1975).

Blalock, Hubert M., Jr. "Four-variable models and partial correlation", 68 American Journal of Sociology, 182, (1962).

Carr-Hill, Roy. Crime, the Police and Criminal Statistics an Analysis of Official Statistics for England and Wales using Econometric Methods, Academic Press, 1979

Carver. "The case against statistical testing," 48 Harv. Ed. Rev., 378, (1978). *SPOD, 9.32.

Cohen L. Jonathan. "Subjective probability and the paradox of the gatecrasher", 1981 Ariz. St. L. J. 627-634, (Spr'81).

Coleman, S. B. Statistical Problems in Assessing Racial Disparities in Income, Rand Corp. (Memo R. M. 6041-RC/OEO), (Nov. 1969). *SPOD, 5.121 2

Dixon, W. J. & F. J. Massey Jr., Introduction to Statistical Analysis, McGraw-Hill Book Company (3d ed. 1969). *SPOD, 8A.42.

Dorsaneo. "Statistical evidence in employment discrimination litigation: selection of the available population, problems and proposals," 29 S.W.L.J. 859, (1975). 1.0, 4.212.

Draper, N. R. and H. Smith. Applied Regression Analysis, John Wiley & Sons (1966). *SPOD, 8.0, 8.3, 8A.2, 8A.21, 8A.22, 8A.3, 8A.42

"Employment discrimination: statistics and references under Title VII," 59 Vir. L. Rev. 463, (1973). *SPOD 1.0.

"Evidence: statistical proof in employment discrimination cases," 28 Okla. L. Rev. 885, (1975). *SPOD, 1.0.

Ferber, Robert. "On the reliability of responses secured in sample surveys", 50 Journal of the American Statistical Association, 788, 1961.

Finkelstein, "The application of statistical decision theory to the jury discrimination Cases," 80 Harv. L. Rev. 338, (1966). 1.0, 3.112 12 , 5.22.

Finkelstein, "Regression models in administrative proceedings," 86 Harv. L. Rev. 1442, (1973). 8.01, 802 1 , 8.22, 8A.42

Kitsuse, John, and Cicourel, Aaron. "A note on the use of official statistics," 11 Social Problems, 131, (1963).

Montlock, "Using statistical evidence to enforce the laws against discrimination," 22 Cleveland St. L. Rev. 259, (1973). *SPOD, 1.0

*Statistical Proof of Discrimination.

- Namboodiri N. Krishnan (ed.). "Survey sampling and measurement", Crime, the Police and Criminal Statistics.
- Penick, Bettyek Eidson (ed.), Surveying Crime/Panel for the Evaluation of Crime Surveys, 1976, National Academy of Science.
- Price, J. E. "A test of the accuracy of crime statistics," 14 Social Problems, 214 (1966).
- Shoben. "Differential pass-fail rates in employment testing: statistical proof under Title VII," 91 Harv. L. Rev. 793, (1978). 1.0, 1.23, 10.111 1 .
- Sperllich & Jaspovice, "Statistical descision theory and the selection of grand jurors: testing for discrimination in a single panel," 2 Hastings Con. L.Q. 75, (1975). *SPOD, 1.0.
- U.S. Department of Commerce, Bureau of the Census. National Crime Survey, Interviewer's Manual (and current revision) Washington, D. C.: U. S. Government Printing Office, (1974).
- Walker, Nigel. Crimes, Courts and Figures; an Introduction to Criminal Statistics, Harmondsworth, Penguin, (1971).
- Washington National Criminal Justice Information and Statistics Service Sourcebook of Criminal Justice Statistics, (1973).
- Wheeler, Stanton. "Criminal statistics: a reformulation of the problem." 58 Journal of Criminal Law, Criminology and Police Science, 317 (1967).

METHOD OF STATISTICAL PROOF

- Abate, Kathleen "Employment discrimination: probative value of statistical proof," 84 W Va. L. Rev. (Fourth Circuit Survey: 1981), (April '82).
- Bettman, Alfred, L. C. Marshall, W. C. Jamison and R. E. Miles, Criminal Statistics, 1931; An experiment in methods and techniques of state reporting, by an associated group from the Institute of Law and the Ohio Institute, The John's Hopkins press (1932).
- Cole, Baldus. Statistical Proof of Discrimination, Shepard's/McGraw-Hill.
- National Advisory Committee on Criminal Justice Standards and Goals, "Criminal justice research and development report of the task force on criminal justice research and development."

PREDICTION

- Stein, P., Joel N. Bloom. The Prediction of Crime in a Metropolitan Area, The Franklin Institute Research Laboratories Philadelphia, Pennsylvania.

*Statistical Proof of Discrimination.

SAMPLING AND DATA COLLECTION

- Akresh, Abraham D., and George Russell Zuber, "Exploring statistical sampling: how practitioners may introduce themselves to this procedure," 151 J. Accountancy 50-56, (Feb'81).
- Biderman, Albert D., and Albert J. Reiss, Jr. "On exploring the 'dark figure' of Crime", 374 The Annals of the American Academy of Political and Social Science. (Nov. 1967).
- Biderman, Albert D., "Surveys of population samples for estimating crime incidence", 374 Annals of the American Academy of Political and Social Science. 16, (1967).
- California Comprehensive data systems criminal justice profile, California Bureau of Criminal Statistics, Statistical Analysis Center.
- Hellman, Daryl A. The Economics of Crime, St. Martin's Press, New York.
- MacDonald, Arthur, 1856-1936 Statistics of crime, suicide, insanity, and other forms of abnormality, and criminological.
- McKee, Thomas Z. "On audit sampling (response to audit sampling: a practical approach in Jan. 1982 issue)" (letter), 154 J. Accountancy, 60(3) (Sept'82).
- Reich, Daniel. "How to evaluate an expert's statistical analysis," 28 Prac. Law. 69-76 (April 15'82).
- Reiss, Albert J. Data Sources on White-Collar Law-Breaking, U. S. Dept of Justice, National Institute of Justice, (1980).
- Sudman, Seymour. Applied Sampling

MODEL APPLICATION

- Fox, James Alan, (ed.), Models in Quantitative Criminology, New York: Academic Press, (1981).
- Goldsmith, Robert. W. "Studies of a model for evaluating judicial evidence." Acta. Psychologica 45, 211-221, (1980). North Holland Publishing Company.
- Harrington, Diana R. "Trends in capital asset pricing model use." 108 Pub. Util. Fort., 27-30, (Aug. 13'81).
- Kaye, David, "Mathematical models and legal realities: reflections on the Poission model of jury behavior," (special section: models and legal policy), 13 Conn. L. Rev., 1-15 (Fall '80).
- Mellinger, G. D. et al., "A mathematical model with applications to the study of accident repeatedness among children," 60 Journal of the American Statistical Association, 1046, (1965).

Nagel, Stuart S. "Some statistical considerations in legal policy analysis." (special section: models and legal policy), 13 Conn. L. Rev., 17-32 (Fall '80)

Thorndike, F. "Applications of Poission's probability summation." 5 Bell System Technical Journal, 604, (1926).

Turner, Anthony G. "Methodological issues in the development of the national crime survey panel: partial findings," Washington, D.C.: Law Enforcement Assistance Administration, National Crime Justice Information and Statistics Service, Statistics Division, (December 1972) - Mimeographed.

Walker III, Gilbert. "Mathematical models of legal rules: application, exploitation, and interpretation," 13 Conn L. Rev. 33-83 (Fall '80)

NORMATIVE FORCASTING

Deutsch, Stuart Jay, and Phillip E. Pfeifer. "Normative forecasting: An application of stochastic models to crime rates," 4 Int'l J. Comp and App. Crim. Just. 139-145, (Winter '80).

EXPERIMENTAL DESIGN

Campbell, D. T. and J. C. Stanley, Experimental and Quasi-Experimental Designs for Research, (1966). Rand McNally, 4.0, 2.312.

Cochran, W. G., and G. M. Cox. Experimental designs (2nd ed.), 127-243, (1957). New York: Wiley

Kemphorne, O., The design and analysis of experiments, 10-17, (1952). New York: Wiley.

Sechrest, Lee and William H. Yeaton. "Magnitudes of experimental effects in Social Science research," 6 Eval. Rev., 579-600 (Oct. '82).

TESTING SIGNIFICANCE

Morris and Henkel. "Significance Tests Reconsidered," 4 Am. Sociologist, 131, (May 1969). 9.32

ESTIMATING CRIME INCIDENCE

Biderman, Albert D. "Surveys of Population Samples for Estimating Crime Incidence," 374 The Annals of the American Academy of Political and Social Science, (Nov. 1967).

Press, S. J. "Some effects of an increase in police manpower in the 20th Precinct of New York City," R-704 NYC. (1971). New York: New York City RAND Institute.

Press, S. J. "Police manpower versus crime." In J. M. Tanur et al. (eds), Statistics: A guide to the unknown, (1972). San Francisco: Holden-Day.

STANDARD OF PROOF

Milanich, Patricia G. "Decision theory and standards of proof," 5 Law and Human Behavior, 87-96. (Spr '81).

COURT FACT-FINDING

Caudill, David S. "Probability theory and constructive possession of narcotics: on finding that winning combination," 17 Hous. L. Rev. 541-571, (March '80).

Caudill, David S. "Probability theory and constructive possession of narcotics: on finding that winning combination," 21 Jurimetrics J. 235-263, (Spr '81).

Jackson, J. D. "Probability and mathematics in court fact-finding," 31 N. Ir. Legal Q. 239-254, (Aut '80).

Kaye, David, "Paradoxes, Gedanken experiments and the burden of proof: a response to Dr. Cohen's reply," 1981 Ariz. St. L.J., 635-645, (Spr '81).

Saks, Michael J., Robert F. Kidd, "Human information processing and adjudication: trail by heuistics," 15 Law & Soc'y Rev., 123-160 (F '80-81).

Spence, Robert M., "The Supreme Court of Michigan during the survey period: a statistical analysis (1981 annual survey of Michigan law)," 28 Wayne L. Rev., 511-516, (Winter '82).

"Statistical analysis of (1979), S.C.R. (Supreme Court reports of Canada). 18 Osgood Hall L. J., 280-294, (Aug '80) - 614-625, (Dec '80).

COMPARISON OF THE CRIMINAL STATISTICS OF DIFFERENT COUNTRIES

Carr-Hill, R. A., and N. H. Stern. Crime the Police and Criminal Statistics: An analysis of official statistics for England and Wales using Econometric Methods, Academic Press.

Teske Jr., Raymond H.C., and Harald R. Arnold. "Comparison of the criminal statistics of the United States and the Federal Republic of Germany," 10 J. Crim. Just., 359-374. (Sept-Oct '82).

VICTIMIZATION SURVEY

Argana, Marie G., Marvin M. Thompson and Earle J. Gerson, "The Measurement of Crime through Victimization Surveys." Paper presented at the Annual Meeting of the American Statistical Association, (December 27, 1973), New York.

Aromaa, Kauko. "Victimization to violence: some results of a Finnish survey." 1 International Journal of Criminology and Penology, 245, (1973).

Aromaa, Kauko. The Republication of a Survey on Victimization to Violence. Helsinki: Institute of Criminology, (1974).

Biderman, Albert D. "Notes on the significance of measurements of events and of conditions by criminal victimization surveys," Washington, D. C.: Bureau of Social Science Research, (July 1975).

Biderman, Albert D. "Time distortions of victimization data and mnemonic effects," Washington, D. C.: Bureau of Social Science Research (July 1970).

Biderman, Albert D. (ed. by Israel Drapkin and Emilio Viano) "Victimology and victimization surveys." In Victimology: A New Focus, Vol 3, Lexington, Mass.: Lexington Books, (1975).

Dodge, Richard W., and Anthony G. Turner, "Methodological foundations for establishing a national survey of victimization," paper presented at the annual meeting of the American Statistical Association, (August 23-26, 1971), Fort Collins, Colorado.

Ennis, Philip H. Criminal Victimization in the United States: A Report of a National Survey. Report of the President's Commission on Law Enforcement and Administration of Justice. Field Surveys II. Washington, D. C.: U.S. Government Printing Office, (1967).

Schneider, Anne. "Victim surveys and criminal justice system evaluation," In Wesley G. Skogan (ed.), Sample Surveys of the Victims of Crime. Cambridge, Mass.: Ballinger, (1976).

Sparks, Richard F., Hazel G. Genn, and David J. Dodd, Surveying Victims: A study of the measurement of criminal victimization. (1976), John Wiley.

Skogan, Wesley G., (ed.) "crime and crime rates," In Sample Surveys of the U.S. Department of Justice, Enforcement Assistance Administration. Criminal Victimization Surveys in the Nation's Five Largest Cities: Washington D.C.: Government Printing Office, (April 1975).

— Criminal Victimization Surveys in the Nation's Five Largest Cities (Front Report). Washington, D. C.: U.S. Government Printing Office, (April 1975).

— Criminal Victimization Surveys in 13 American Cities. Washington, D.C.: U.S. Government Printing Office, (June 1975).

— Criminal Victimization in the United States: Advance Report January-June 1973. Vol. 1. Washington, D.C.: U.S. Government Printing Office, (November 1974).

— Criminal Victimization in the United States: 1973 Advance Report. Vol. 1. Washington, D.C.: U.S. Government Printing Office, (May 1975).

CRIMINAL JUSTICE EXAMPLES

Akman, Dogan D., and Normandeau, Andre. "The measurement of crime and delinquency in Canada," 7 British Journal of Criminology, 129, (1967).

Caudill, David S. "Probability theory and constructive possession of narcotics: on finding that winning combination," 21 Jurimetrika J. 235-263, (Spr '81).

Cirace, John. "A game theoretic analysis of contribution and claim reduction in antitrust treble damage suits," 55 St. John's L. Rev., 42-62, (Fall '80).

Nelson, James F. "Choosing and interpreting a metric for data analysis: Some Criminal justice examples," 5 Eval. Q., 639-670, (Oct '81).

CRITIQUES

Thompson, Bruce McLeod. "A critique of Lee Loevinger's jurimetrics - the next step forward," 7 Dalhousie L. J., 166-171 (March '82).

JAILS, PRISONS, ETC.

Profile of Jail Inmates, Sociodemographic Findings from the 1978 Survey of Inmates of Social Jails, (UCR Lib.)

Prison statistics 1981, (Great Britain) (editorial), 132 New L. J., 869-870, (Sept 16 '82).

COURTS — N/A

CRIMINALS (CHARACTERISTICS ETC.)

Barnett, Harold C. "Wealth, Crime and Capital Accumulation," 3 Contemporary Crises, 171-186, (1979)

Barnett, Harold C. "The Distribution of Crime and Punishment," Paper presented at the Western Economics Association Meeting, San Francisco, (June 24, 1976).

Greenberg, David F. Mathematical Criminology, Rutgers University press, (1979).

JURIES — N/A

SPECIFIC CRIMES RAPE, MURDER

Griffin, Susan. "Rape: The All-American Crime," Ramparts, 10, No. 3, 10 (September 1971).

McClintock, F. H. Crimes of Violence. London: Macmillian & Co., (1963).

MISCELLANEOUS

- Bennett, Carl A., and Arthur A. Lumsdaine (eds.), EVALUATION AND EXPERIMENT: Some Critical Issues in Assessing Social Programs.
- Berk, Richard A., Harold Brackman, and Selma Lesser, A MEASURE OF JUSTICE: An Empirical Study of Changes in the California Penal Code, (1955-1971).
- "Beyond the Prima Facie Case in Employment Discrimination Law: Statistical Proof and Rebuttal," 89 Harv. L. Rev. 387 (1975). 1.0, 801, 8.02 1
- Bottomley, A. Keith. Decisions in the panel process, (1973).
- Box, G. E. P., W. G. Hunter, and J. S. Hunter, Statistics for Experimenters: An Introduction to Design, Data Analysis, and Model Building, John Wiley & Sons (1978). 8A.22, 8A.42.
- Box Steven. Deviance, reality and society, London, New York, Holt, Rinehart and Winston. (1971).
- Eastin, "The Use of Models in Litigation: Concise or Contrived?" 52 Chi. Kent L. Rev. 610 (1976). 1.0
- Feller, William. "On a general class of 'contagious' distributions," 14 Annals of Mathematical Statistics, 384 (1943).
- Hall, George E. "The program of the statistics division on the law enforcement assistance administration," paper presented at the 1971 meeting of the American Statistical Association, Fort Collins, Colorado, (August 23-26).
- Hanushek, E. A. and Jackson, J. E., Statistical Methods for Social Scientists, Academic Press (1977). 8.3, 8A.22
- Johnson & Koch, "A Note on the Weighted Least Squares Analysis of the Ries-Smith Contingency Table Data," 18 Technometrics (1971). 8.3
- Morris, F. C., Jr., Current Trends in the Use (and Misuse) of Statics in Employment Discrimination Litigation, Equal Employment Advisory council (1977). 1.0, 4.11, 4.124, 5.11.
- Moser, C. A., and Kalton, G., (eds.), Survey Methods in Social Investigation, 2nd ed. New York: Basic Books, (1972).
- Murchison, Carl Allanmore, 1887 Criminal Intelligence, Mass., Clark University, (1926).
- Nagel, Stuart S. "Some statistical considerations in legal policy analysis. (special section: models and legal policy), 13 Conn. L. Rev., 17-32 (Fall '80).

- Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., and Bent, D. H., SPSS: Statistical Package for Social Sciences, McGraw Hill Book Company (2nd ed, 1975). 5.3.21, 5.323, 8.1, 8.22, 8A.0.
- Shannon, Mary Lee. The Map Abstract of Criminal-Justice Information: Alabama/University of Alabama Press, (1976).
- Shepard, Roger N., Romney A. Kimball, and Sara Beth Nerlove (eds.) MULTI-DIMENSIONAL SCALING: Theory and Applications in the Behavioral Sciences, Vol. I - Theory; Vol. II - Applications
- Task Force Report: Science and Technology, prepared by the Institute for Defense Analyses, (June 15, 1967).
- The Jury System: New Methods for Reducing Prejudice.

END