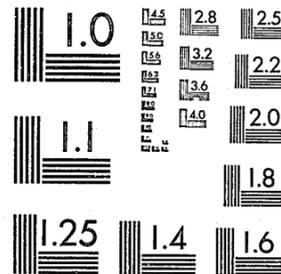


National Criminal Justice Reference Service



This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504.

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U. S. Department of Justice.

National Institute of Justice
United States Department of Justice
Washington, D. C. 20531

10/3/83

MF-1

Proceedings
of the
1979 RESEARCH AND EVALUATION
CONFERENCE

Criminal Justice in Minnesota

84559-
84566

Proceedings
of the
1979 RESEARCH AND EVALUATION
CONFERENCE
on Criminal Justice in Minnesota

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
Minnesota Criminal Justice
Program

to the National Criminal Justice Reference Service (NCJRS).

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

Sponsored by
The Crime Control Planning Board
and
The College of St. Thomas
St. Paul, Minnesota

NCJRS

AUG 10 1982

ACQUISITIONS

CONTENTS

Preface 1

Introduction
Robert Griesgraber 3

RESEARCH METHODS

EVAL [Reliability and Validity Issues In
Evaluation Research: The Community
Corrections Experience *84560* 5
Barry B. Cohen

EVAL [Cost Benefit Analysis In The Criminal
Justice System *84561* 15
Marjorie C. Gritzke

EVAL [Evaluability Assessments: Toward Useful
Program Evaluations *84562* 23
Joe Hudson and Burt Galaway

EVAL [Routinizing Evaluations In Corrections
Clifton A. Rhodes *84563* 35

RESEARCH APPLICATIONS

Minnesota Statewide System On Battered Women
Maggie Arzdorf-Schubbe 49

[The Rape Victim In The Legal Process *84564* 53
Eugene Borgida and Catherine Ludden

NBCL [Some Biogenetic Considerations In Antisocial
Behavior *84565* 59
Irving I. Gottesman

Aspects of Computer Related Crime
Don Rawitsch 67

[Demographic Factors Related To Successful
Completion of Community Corrections Programs
Peter Rode *84566* 77

List of Authors 85

PREFACE

The Crime Control Planning Board is the state planning agency for the Law Enforcement Assistance Administration (LEAA) in Minnesota. Over the last several years, the Board has undertaken a variety of research and evaluation projects relative to the State's participation in the Federal assistance program. More recently, the Board has begun to direct its research and evaluation efforts toward the needs of the Governor and the Legislature, as well as toward fulfilling LEAA requirements.

Historically, the Crime Control Planning Board has been a strong proponent and supporter of the roles of research and evaluation in criminal justice planning. Although the Board has made a significant effort to support these activities, its resources are limited. Other state and local agencies, colleges, universities, and private corporations are expending resources on criminal justice research and evaluation. Yet, as is often the case in a field as diverse as criminal justice, the work being done by the Board was not widely known by others and the work being done by others was not always known to the Board.

In an attempt to make research and evaluation activities more widely known, the Crime Control Planning Board and the College of St. Thomas jointly sponsored a Criminal Justice Research and Evaluation Conference. The conference was initiated, participants were solicited, presenters were selected, and the conference was held within a period of four months. Given the relatively short time period from initial advertisement to the actual conference, many presenters were able to participate in the conference but were unable to develop formal papers on their topics. Hence, this set of proceedings does not include papers from all presenters, or even on all the topics of discussion at the conference. However, we feel that these papers are representative of the kinds of topics and the quality of work which is being done in criminal justice research and evaluation in Minnesota.

The conference, according to the evaluations of participants, was well received and proved to be useful for most of the people who attended. As a result, the Crime Control Planning Board intends to make the Research and Evaluation Conference an annual event in Minnesota. With more long range planning for future conferences, we hope that future volumes of the Proceedings will be able to include the majority of the papers presented at future conferences.

INTRODUCTION

Robert Griesgraber

I became Executive Director of the Crime Control Planning Board on February 26, 1979. Before I took the Crime Control Planning Board job I was a criminal justice practitioner. I was president of a nonprofit corporation that provided residential treatment to chemically dependent offenders as well as a parole agent and probation officer in the State and Federal systems.

Not long after I took this job, I was forced to make a forceful decision concerning research and evaluation within the Crime Control Planning Board. The Governor, my employer, had proposed drastic cuts in our budget for these two activities. Personnel on our evaluation team would have been cut from 17 to 5 within two years. Research would have been cut also.

I took action immediately and successfully had the cuts restored. However, I believe convincing the Governor is only the first step. Now for me, on behalf of the Crime Control Planning Board, the legislature must be convinced--and frankly many of them question the need for continuous research and evaluation efforts in the criminal justice field. They have not been convinced that there is a practical benefit to the criminal justice system; this is a matter that should be addressed at this and future conferences. Policy makers must be convinced of the viability and potential cost savings of the research and evaluation efforts. The larger community, the public and the criminal justice practitioner also need education and persuasion in this area. My experiences as a former practitioner indicate that, except for their philosophical moments or when they are after an advanced degree, practitioners often fail to realize the benefits and applicability of research and evaluation to their current situation.

Education is the key. I have heard complaints from some legislators that we in the planning field do too much research and evaluation whereas others have said we do too little. Some have stated that results from research and evaluation are manipulated to propagandize a particular philosophy.

Too often our efforts are viewed in a pejorative sense as being unduly detached, academic, and arbitrary. I believe policy makers and criminal justice practitioners can learn

to appreciate the results of planning, research, and evaluation activities such as analysis of data, visualization of options and consequences, and coordination.

The planning effort in criminal justice is at a critical stage. I believe that for criminal justice planning to survive the demise of LEAA money or the concept or the structure of LEAA as we now know it, our efforts must be of important assistance to public officials in the discharge of their official responsibilities. In addition to the work necessary to be of assistance, such as collecting and analyzing data, we must let public officials, the decision makers, in on our results and do a much better job of educating, selling, and informing.

The Omnibus Safe Streets Act of 1968, although enacted and undertaken with good intention, was also enacted with a poor understanding or appreciation for the obstacles, institutionalized difficulties, and the uniqueness of the criminal system. As a governmental system in which component elements are spread across levels of government and constitutionally vested in autonomously separate branches of government, LEAA may have been oversold as an answer to the crime problem. LEAA expenditures, for example, comprise only 2 percent of criminal justice expenditures in the State and in this country. We face further cuts in State and local government aid from the Federal government as Washington decides on the Justice System Improvement Act of 1979 reauthorizing LEAA and the work of the Crime Control Planning Board.

I fought for the restoration of cuts to research and evaluation budgets because I believe they are invaluable activities in the planning and coordinating effort. The public mandates for the criminal justice system, as I see it, are threefold: to reduce crime, to improve system performance, and to maintain the quality of justice guaranteed by the Constitution. No one part of the system can address these goals by itself. The question is not whether a system exists but how well it functions. Our citizens can no longer afford the financial and human costs associated with a nonsystem of duplication and inefficiency. The planning and coordinating effort utilizing the results of research and evaluation has made valuable contributions to better coordination, information, and management of criminal justice functions. It may be that we as planners are coming of age; to establish our credibility, however, we must work to offset the impression of some policy makers and practitioners that what we do is only bureaucratic gobbledygook.

RELIABILITY AND VALIDITY ISSUES IN EVALUATION RESEARCH:
THE COMMUNITY CORRECTIONS EXPERIENCE

Barry B. Cohen

It is common practice in papers on evaluation research to extoll the virtues of experimental design or to claim that experimentation is in all instances the requisite procedure.¹ This position, on strict methodological grounds, is not unreasonable since many of the validity problems attendant to evaluation research could be avoided were experiments always employed. Experimentation, however, is frequently precluded by practical considerations. In criminal justice research this is particularly true because it generally involves politically sensitive and volatile public concerns. Convincing judges, for example, to randomly assign probation offenders to community corrections projects who they would have otherwise sentenced to prison is no mean task. For such reasons evaluators continue to rely upon jerry-built, quasi-experimental designs making do under circumstances that are inhospitable to research.²

The reliability and validity issues discussed in this paper reflect the practical problems that were encountered in research on community corrections projects and correctional treatment programs. They are presented as a caution to the unseasoned evaluator and as a basis for skepticism to the official who would use evaluation data in resolving matters of public policy. Of the solutions offered to these problems, few are satisfactory. They are tendered as accommodations to the world as it is.

CHARISMATIC LEADERSHIP, SELF-FULFILLING PROPHECY AND THE HAWTHORNE EFFECT

Directors of new programs are ebullient, optimistic and innovative spokespeople for nontraditional alternatives to corrections. In their ranks are ex-offenders, clergy, correctional professionals and social workers who, weary of past failures and conventional approaches, ardently champion their own respective cures for recidivism. These mavericks ultimately secure the monies necessary for establishing their pet programs because with their flair and political savvy they successfully attract legislative, foundation and media support.

What limited success correctional programs have achieved in reducing recidivism may be due in no small measure to the directors' charismatic personalities and to their belief that

their programs will be effective. Through a conviction that they will succeed, buttressed by a manner and style that it could not be otherwise, directors, it is hypothesized, generate a self-fulfilling prophecy.³ Conceivably their expectations and character have a salutary effect on their staffs and clients, who in response to these expectations, act in the anticipated fashion. Evaluation research should look more closely at this and other social psychological factors. They may help to explain why the research comparing alternative treatment modalities uncover even small significant differences in the outcomes that they produce.⁴

The Hawthorne effect is a phenomenon associated with novelty and special treatment.⁵ Research subjects have been found to respond positively to being the objects of investigative concern by behaving in a manner independent of any effect from the experimental manipulation. Even, for example, deliberate efforts to depress work output, were, under experimental conditions, observed to elevate it.⁶ Extrapolating to an evaluation of correctional programs, any gains on the part of project clientele in lower levels of recidivism or in the achievement of any other program goals may only reflect satisfaction in having been included in a special prototypical program. Outcomes of a desired nature are perhaps only the artifacts of novelty.

What happens then once the programs deemed successful through evaluation are institutionalized? Charismatic figures either 'burn out' or move on to new endeavors. The projects which they so carefully nurtured multiply under the direction of people lacking in their drive and concern. In the control of pedestrian professionals whose personal commitments outweigh their dedication, once successful programs, it is believed, will go into eclipse. When novelty wears thin newly institutionalized programs are in danger of assuming the routine character of their forerunners, surrendering to bureaucratic concerns the promise that they registered in evaluation. In short order they are likely to be no more successful in reducing recidivism than those they were organized to augment or to replace. The Hawthorne effect is for these reasons a potential threat to an evaluation's external validity.

SELECTION BIAS AND SAMPLE MORTALITY

Unlike the classic experiment in which cases are at random assigned to treatment and control groups, the evaluator generally is faced with making comparison between nonequivalent groups.⁷ This seems particularly true of research on correctional programs where, as was mentioned above, political pressure against experimentation is unusually strong.

Selection bias is introduced in the quasi-experimental design

of most such studies by a multi-staged client screening process. With community corrections it begins when the courts or parole boards define the pool of program candidates from the population of eligibles. Then, in a careful sifting process, project personnel select from this pool only those candidates whom they believe will benefit from the program.⁸ In the eyes of the cynical observer it is a process of creaming, whereby only low risk clientele are selected to enhance the prospect for successful outcomes and project renewal.⁹ Still further selection bias is introduced when candidates for the program are permitted to decide if they wish to join it. Finally a board of directors comprised of community members including representatives of law enforcement may have the ultimate authority to exclude from a program candidates whom they deem a threat to community welfare.¹⁰

Granted the program's interest in selecting a worthy group of potential beneficiaries and the community's interest in protecting itself, it is both surprising and ironic that despite the selection bias community corrections programs do not register significantly lower recidivism rates.¹¹ When their rates of recidivism are compared to those of seemingly higher risk groups, as for example, eligibles who were not probationed or eligibles put directly on parole, program clientele show no significant difference on this outcome.¹² What logically should have been a bias on behalf of the programs did not materialize, suggesting either inept selection, limitations of the programs to alter behavior in the long run or poor estimation of the programs' effects.

Non-equivalent groups would in this instance appear to provide a reasonable basis on which to make comparisons, because if the programs are at all successful in reducing recidivism, even marginal success should be measurable against a group that all agree should be more prone to criminal activity. Selection bias, unlike in other types of research, would not appear to have been as serious a problem in contrasts between the recidivism levels of 'treated' and 'untreated' offenders.

The ex-offender population poses unique mortality problems, which can inordinately shrink comparison groups to sizes smaller than necessary for valid statistical analysis and, if unaccounted for, can bias research results in directions unknown. Two of the traditional problems in studying ex-offenders longitudinally is that they are transients and they are commonly users of aliases. Contemporary computerized criminal information retrieval systems, particularly those using an offender based tracking system scheme, have mitigated the problem but have not yet eliminated it.¹³

Sample mortality in research on offender populations is also a result of a disproportionately higher death rate from chemical dependency related problems and unnatural deaths of a criminal nature. One has a mortality problem in the literal sense of the term. In order to avoid the registering of dead clients as program successes, crime related fatalities were weighted more heavily in the recidivism measures than other criminal involvements. Similarly one must take account of the failures and others who prematurely sever relations with the program.¹⁴ If their absences are due to criminal reinvolvement, their elimination from the sample should be explained and analyzed in subsequent longitudinal contrasts between graduates and the comparison groups.

THE TREATMENT ORIENTATION OF CLINICAL PRACTITIONERS AND LIMITS ON RELIABILITY

Often frustrating in the evaluation of correctional programs is the limited consistency in program content and conduct. Program personnel are commonly clinical practitioners who share a philosophy of individualized treatment. Rather than rigorously adhering to a systematic set of procedures, programs frequently reorganized. Even when formal procedures remain in force, they exist less as a model than as a set of guidelines loosely followed. Outcome measures are of little value if programs are haphazardly modified or inconsistently applied. Should a program succeed, it would be all but impossible to replicate and if it fails, it would be difficult to explain why. Unfortunately this is not a common concern of program personnel. They greet the experimental research orientation of the social scientist with disdain, considering research an irksome encumbrance on their time, patience and well intentioned efforts.

It has been argued cogently that evaluation be structured into a program model from the point of its conception.¹⁵ A design appropriate for measuring effectiveness is thus instituted without losing data and with the knowledge of personnel that participation in it is a condition of employment. Ideally this should be possible. Practically, however, programs experience in the first three to six months of operation serious start-up difficulties. Clientele are admitted on an irregular basis, there is staff hiring and turnover, and the program is modified because early on it is found to be unworkable or seriously flawed.¹⁶ A shakedown period is needed and is not undesirable. However, for the evaluator, who must present results at fixed intervals or by a deadline as short as a year after a program's contractual inception, no such grace period is allowable.¹⁷ Experience suggests that evaluation not begin until a program's operations are stabilized and its personnel are committed to conducting their activities according to a fixed scheme. It would

also behoove the evaluator to define for his sponsors a realistic time frame within which reliable data can be secured.

Evaluations in which the author was involved were constrained by time and staff limitations to rely upon program personnel to collect data on his behalf. Cooperation was erratic. Questionnaires were not systematically administered and information was either omitted or entered incorrectly. Worse yet there were instances of deliberate falsification. These were inadvertently uncovered through inconsistencies in penmanship and ink color. Since personnel believe that their livelihood is staked on a positive outcome, it is obvious that doctoring results would be to their advantage.

These problems may be averted if program staff are educated on the evaluation objectives, on the rudiments of methodology and design and on their respective roles in the evaluation process. Evaluators can establish rapport with individuals being studied and perhaps insure their empathy if not cooperation. Nevertheless so long as evaluation is associated with refunding and renewal in the eyes of the staff, the evaluator can rarely avoid being perceived as a threat. Differences in class, race, ethnic and educational background between evaluator and staff also contribute to a heightening of mistrust and misinterpretation. The evaluator must be reconciled to the role of an unwelcome outsider.

A means through which evaluators could test the reliability and external validity of their measures is through triangulation, the use of two or more different measurement techniques to measure the same phenomenon.¹⁸ Evaluation research tends to overrely upon scales that are incorporated in interviews and questionnaires and makes limited use of such techniques as: case histories,¹⁹ participant observation,²⁰ sociometry,²¹ and unobtrusive measures.²² Alternative methods of observation and measurement, when practicable, could reinforce the confidence of the investigator in results yielded by his primary instruments. Perhaps it is because such techniques lack the aura of scientific precision and would thus prove less convincing to legislative and executive consumers of evaluation data, that they are not more widely used.

Such techniques may also be of value in auditing field investigations and the reliability with which one's instruments are being employed. Observations made on site visits permitted the author to identify program modifications of which he would have otherwise remained ignorant. This

knowledge was critical in making comparisons between program types.

OUTCOME MEASURES OF EFFECTIVENESS: WHAT CRITERION?

Since a primary goal of community corrections programs is the reduction of crime, they have had their effectiveness measured by the extent to which they have reduced recidivism among their clients. By this measure they are largely unsuccessful. Research experience suggests that they have been no more effective in reducing recidivism than traditional correctional measures of imprisonment, probation and parole.²³ In the author's opinion while recidivism may be an appropriate measure of effectiveness for these programs, greater consideration should have been given to recidivism in the period prior to program release. There may be in addition other worthwhile and important criteria of effectiveness that have been overlooked and underemphasized.

As an investigator for the Minnesota Crime Commission's evaluation of community-based corrections projects, it was the author's impression that criminal involvement by program clientele was quite low for the duration of their program tenure.²⁴ Relative to the level of reported criminal activity in the surrounding communities, the ex-offenders in the programs appeared to be no more criminal than their noninstitutionalized neighbors. Furthermore, participants in the programs found their living arrangements satisfactory and generally were either employed or attending school.²⁵ It is the author's thesis that collective living arrangements of the type afforded by such programs may be effective in reducing recidivism. When this occurs it is likely to be attributable to the clientele's successful social integration and to their experience of group pressure and group support for their conventional behavior.

To the author's knowledge no one had considered permanent residential cooperatives for ex-offenders and their families as a viable alternative to conventional working-class or middle-class life styles, or as an alternative to institutionalization. Voluntary arrangements of this nature were probably never considered a practical option because ideological blinders obscured it from view. Government, in the words of an associate, 'is not in the commune business.' Community corrections programs are also more humane and safer than penal institutions for their staffs and clients because they experience significantly lower levels of intramural violence.²⁶ Though this is a desirable achievement, it has not been adequately stressed when these programs have been evaluated.

Evaluators are constrained by the mission to which they have

been assigned. As hired hand technicians they function within the limits defined for them by whoever funds their work and use as their outcome criteria the goals that are stated in program charters and contracts.²⁷ Nevertheless evaluators are in a unique position to identify and recommend alternative criteria associated with unintended but positive consequences. Programs may be effective in achieving ends hitherto ignored or unidentified with important implications for policy. Allowing evaluators to only measure that which they have been instructed to, unduly limits the scope of evaluation. Excellent programs may be scrapped because their full worth is unrecognized.

SUMMARY

Most of the validity problems involved in evaluation research are rooted in the structure of quasi-experimental designs. So long as experiments are impracticable the investigator must remain alert to the unexplained sources of variance that may confound the interpretation of his results. These include self-fulfilling prophecy, Hawthorne effect, selection bias and sample mortality which the author has had to confront in interpreting the data from a quasi-experimental study on the effectiveness of community corrections. It is the author's view that the assessment of social-psychological variables has been inadequate, that selection bias did not prove to be as serious a problem as had been anticipated and that sample mortality can be handled to some extent in the weighting of measures.

Reliability problems in evaluation stem from the instability of the programs under evaluation, the lack of rigor with which measurement is undertaken and the lack of precision in the measures themselves. To deal with these problems the author has recommended deliberate delay in the beginning of evaluation, better instruction of those individuals whose cooperation is required and the triangulation of measurement techniques.

It has also been pointed out that important criteria of evaluation are ignored because evaluators are narrowly constrained by contractually determined measures. This problem can be averted if evaluators are given greater discretion in the selection of evaluation criteria.

REFERENCES

1. Robert F. Boruch, "On Common Contentions About Randomized Field Experiments," in Robert F. Boruch and Henry W. Riecken (eds.), Experimental Testing of Public Policy: The Proceedings of the 1974 Social Science Research

2. James A. Caporaso, "Quasi-Experimental Approaches to Social Science: Perspectives and Problems," in James A. Caporaso and Leslie L. Roos (eds.), Quasi-Experimental Approaches: Testing Theory and Evaluating Policy (Evanston, Ill.: Northwestern University Press, 1973), pp. 3-38.
3. Robert Rosenthal, and Lenore Jacobson, Pygmalion in the Classroom (New York: Holt, Rinehart and Winston, 1968), pp. 28-30.
4. Robert Martinson, "What works?--questions and answers about prison reform," The Public Interest, 35 (1974): 22-54.
5. John Mann, "Technical and Social Difficulties in the Conduct of Evaluation Research," in Francis G. Caro (ed.), Readings in Evaluation Research, (New York: Russell Sage, 1971), pp. 174-184.
6. F.J. Roethlisberger, and W.J. Dickson, Management and the Worker (Cambridge, MA.: Harvard University Press, 1939).
7. Donald T. Campbell, and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally, 1963).
8. Barry B. Cohen, P.O.R.T. Alpha: A Preliminary Evaluation Report (St. Paul, Mn.: Governor's Commission on Crime Prevention and Control, 1974).
9. Paul Lerman, "Evaluation Studies of Institutions for Delinquents: Implications for Research and Policy," in Francis G. Caro (ed.), Readings in Evaluation Research (New York: Russell Sage, 1971), pp. 221-232.
10. Barry B. Cohen, P.O.R.T. of Crow Wing County: A Preliminary Evaluation Report (St. Paul, Mn.: Governor's Commission on Crime Prevention and Control, 1974)
11. Residential Community Corrections Programs in Minnesota; Evaluation Report Summary and Recommendations. (St. Paul, Mn.: Governor's Commission on Crime Prevention and Control, 1977).
12. Ibid., pp. 64-68.
13. Carl E. Pope, Offender-based Transaction Statistics: New Directions in Data Collection and Reporting, Utilization of Criminal Justice Statistics Project. SD-AR-5 (Washington, D.C.: U.S. Department of Justice, 1975).

14. Lerman, pp. 224-227.
15. Edward A. Suchman, "Action for What? A Critique of Evaluation Research," in Carol H. Weiss (ed.), Evaluating Action Programs: Readings in Social Action and Education (Boston: Allyn and Bacon, 1972), pp. 52-84.
16. Robert S. Weiss, and Martin Rein, "The Evaluation of Broad Rim Programs: A Cautionary Case and a Moral," in Francis G. Caro (ed.), Readings in Evaluation Research (New York: Russell Sage, 1971) pp. 287-296.
17. Herbert H. Hyman, and Charles R. Wright, "Evaluating Social Action Programs," in Francis G. Caro (ed.) Readings in Evaluation Research (New York: Russell Sage, 1971).
18. Eugene J. Webb, "Unconventionality, Triangulation and Inference." in Norman K. Denzin (ed.), Sociological Methods: A Sourcebook (Chicago: Aldine/Atherton, 1970)
19. Howard S. Becker, "The Relevance of Life Histories," in Norman K. Denzin (ed.), Sociological Methods: A Sourcebook (Chicago: Aldine/Atherton, 1970)
20. Raymond L. Gold, "Roles in Sociological Field Observations," in Norman K. Denzin (ed.), Sociological Methods: A Sourcebook (Chicago: Aldine/Atherton, 1970)
21. Fred N. Kerlinger, Foundations of Behavioral Research: Educational and Psychological Inquiry (New York: Holt, Rinehart and Winston, 1964)
22. Eugene J. Webb, Donald T. Campbell, Richard J. Schwartz and Lee Sechrest, Unobtrusive Measures: Nonreactive Research in the Social Sciences (Chicago: Rand McNally, 1966)
23. Martinson, pp. 38-48.
24. Residential Community Corrections Programs in Minnesota, pp. 65-68.
25. Ibid., pp. 41-51.
26. Martinson, pp. 48-49.
27. Residential Community Corrections Programs in Minnesota, pp. 19-21.

COST BENEFIT ANALYSIS IN THE CRIMINAL JUSTICE SYSTEM

Marjorie C. Gritzke

PURPOSE

Cost-benefit analysis in the criminal justice system is primarily a policy tool giving the economic implications of resource allocations to criminal justice projects. Such an economic study may occasionally be supplemented by other studies dealing with non-economic questions of a psychological or legal nature, provided such questions interest policy makers. Indeed, the Crime Control Planning Board's Evaluation Unit publishes its major economic studies in two ways: as part of a total detailed study which states overall policy recommendations and as a separate technical report detailing analytical techniques. This enables decision makers and practitioners to view the total analysis from which policy recommendations follow, and it also enables professional researchers to focus their attention on the analytical techniques employed.

APPLICATIONS OF TECHNIQUE

Cost-benefit analysis may be used before project implementation as a feasibility study tool or after project implementation as an evaluative tool. An example of a feasibility study is the cost-benefit analysis of PROMIS (Prosecutors' Management Information System) performed for Minnesota's Ramsey County by INSLAW (Institute for Law and Social Research). This study, which defines benefits primarily as averted costs in the present manual record-keeping system, is performed from a court's perspective. However, PROMIS is also expected to increase case flow through the court and reduce dismissals (among other effects). The larger corrections costs resulting from increased case flow through the courts is not calculated nor is the added fine revenue resulting from increased convictions. Also, no assessment nor mention is made of the possible deterrent effects and hence averted criminal justice system costs of speedy convictions and reduced dismissals.

Implementing the PROMIS cost-benefit analysis from a limited court's perspective of only averted manual system costs is often a computer system perspective. The economist, while acknowledging that the bureaucratic determination of separate budgets for each criminal justice system

sector encourages a narrow view of averted costs, examines the project's impact on the total criminal justice system if possible. Costs and benefits of interest to each sector should be presented in aggregate and disaggregate form, thus maximizing result accessibility for a variety of audiences. The rest of this paper deals with cost-benefit analysis as an evaluative tool.

STEPS IN COST-BENEFIT ANALYSIS

The Project's Goals and Objectives should completely describe the Project's Impact and should be as measurable as possible. By completely defining the project's goals and objectives, the project's impact on the criminal justice system and the environment is clarified. This step guides us to the later quantification of benefits. Economists attempt to quantify all project benefits whether or not they explicitly enter a project's stated goals and objectives. Therefore, evaluators, planners, and project personnel should try to include some measure of all anticipated impacts in the project's goals and objectives since the economist will attempt to quantify all impact costs and benefits.

Identify Interrelationships among the Project's Program Elements. In particular, the economist is interested in the production function of the project; i.e., the various combinations of inputs (staff, supplies, etc.) needed to achieve a given level of output (services). This process identifies key project inputs and their interrelationships which may form the basis for cost simulations addressing policy issues. For example, the publication "Cost Effectiveness of Residential Community Corrections: An Analytical Prototype"¹ examines the cost impact of variations in residential community correction facility client/staff ratios, occupancy rates, treatment effect durations, and length of stay in the most expensive alternatives for various facility types. In this manner, key inputs were identified and formed the basis for useful policy-oriented cost simulations.

Formulate a Cost Data Collection Method. Costs may be viewed from many perspectives. Consider, for example, a law enforcement project:

Law Enforcement Project Costs

<u>Perspective</u>	<u>Costs</u>
Criminal justice system sector	Law enforcement costs
Criminal justice system	Law enforcement, courts, and corrections costs
Government costs	Criminal justice system costs and transfer costs (AFDC, food stamps, etc.)
Societal and individual costs	Government costs plus cost of criminal acts plus defendants' foregone income.

As one broadens the analysis' perspective, the ability to rigorously quantify such costs declines. For example, few analyses attempt to quantify the value of increased (or decreased) fear and the loss of life, although theoretical studies have examined such issues.² However, Blumstein and Larson do present a model of the criminal justice system in which they track the flow of arrested persons through the criminal justice system by crime type. Two costs are examined: criminal justice system costs by crime type and the societal costs of criminal acts.

Where can one find cost data? There are three types of cost data: primary source data (project records, agency and department cost records), pilot studies, and simulations.³

Pilot studies are infrequently used in the criminal justice system because they are expensive and involve instituting on a small scale several program alternatives with similar goals. Costs and benefits from each project are then extrapolated up to full scale. Such extrapolation often fails to account for economies or diseconomies of scale occurring with project expansion. Selection bias and other intervening variables in each pilot project should also be examined.

Among other words of warning: expenditure data are more accurate than budget data. However, data problems will still arise, such as corrections costs hidden in sheriff's expenditures, project costs hidden in subcontracting figures and various accounting practices, such as passing unpaid bills forward to the next accounting year. It is best to look at a series of agency, department, or project expenditure or budget data in order to pick up large unique deviations in costs. Large training or equipment costs should be spread out over the project's or equipment's lifetime rather than be attributed to the year in which such costs occur. The economist views such costs as an investment with returns over a period of years.

With regard to inflation, two statements of caution must be made. First, if projects starting in different years are compared, adjustments must be made for the inflation which occurred between the older and more recent projects. This can be done by using the appropriate price deflator index from the Survey of Current Business published by the U.S. Department of Commerce. Using this method enables project cost comparisons to be made in terms of equivalent dollars of purchasing power. Second, when forecasting future costs for projects, concern must be given to changes in relative price levels for various key inputs. For example, projects with substantial health care components or which utilize large amounts of energy will face higher inflation rates than other projects.

Identify and Quantify Outcomes in Dollar Terms. To quantify benefits in dollar terms, four methods are used:

- a. Market prices. The price the project outcome commands in the market for such a public good or service.
- b. Shadow prices. The price the project outcome could command in a perfectly competitive market in the private sector given the forces of supply and demand.
- c. Intermediate/final prices. This method is used when no market exists for the outcome. Estimates are made using preferences expressed by consumers somewhere in the market. For example, one benefit of decreased burglaries in a community crime prevention area may be increased residential values beyond normal trends in the project area and surrounding neighborhoods.
- d. Regression estimates. Regression techniques are used to link variations in key variables to variations in averted expenditures. For example, to find the law enforcement benefit of reduced recidivism, Holahan uses regression techniques to gauge the impact of changes in property and violent crime on police expenditures.⁴

Also, a time frame for benefit and cost occurrence must be calculated. How long do the benefits from a particular criminal justice system project last? While follow-ups or past research may indicate this effect, benefit simulations based on varying assumptions of treatment duration provide essential information if other data are insufficient for such purposes.

Formulate a Model which links Factors in the Economic Setting to Economic Benefits. Economic theory identifies essential economic variables and their interrelationship. This leads to formulation of a model linking such variables and to testable policy-relevant hypotheses. It is through this method that possible causal variables (internal and external to the project) which impact upon benefits are formulated.

For example, to gauge the impact of hiring investigators to apprehend cigarette smugglers, a supply and demand model for cigarettes was developed.⁵ Economic theory explained cigarette demand as a function of cigarette prices, cigarette tax, income, population, and tastes, while cigarette supply was explained as a function of production costs and the price that cigarettes could command in the marketplace. Economic theory predicted the sign of the regression coefficients in these cigarette supply and demand equations. A two-stage least squares technique was used to estimate the supply and demand equation with cigarette revenue as the dependent variable in each equation. In this manner, the impact of factors normally affecting both sides of the cigarette market were accounted for. Next, since the apprehension of smugglers was expected to dry up the illegitimate market for cigarettes, consumers would thereby be forced into the legitimate market and hence would raise the quantity of cigarettes demanded. The equations estimated were used to predict tax revenues during the project period. These predicted revenues were then compared to actual revenues collected. If the program was working, actual revenues (which account for normal market variables plus the project's impact) should exceed predicted revenues (which account only for normal market variables). Although the estimated model had high explanatory value (corrected $R^2 = .94$) and compared favorably to other studies,⁶ the error bound surrounding the estimated equation was too large when compared to goal levels to gauge whether the difference between actual and predicted revenues was due to goal attainment or statistical error.

In the court's area, Landes⁷ makes two assumptions in his economic analyses of the courts: a prosecutor maximizes the expected number of convictions weighed by sentences subject to a budget constraint and the defendant maximizes the expected utility of his endowments. From these assumptions, the following hypotheses are derived and tested: bail and trial relationships are due to cost differences, not wealth differences.

In the juvenile area, problems arise. What is the benefit of reduced curfew violations? Truancy reductions? Juveniles usually do not have jobs, so foregone income due to criminal

justice system involvement is not an issue. Records are confidential, so the employment impact of "having a record" is not a problem. For such projects, a cost-effectiveness analysis may be more realistic. Cost-effectiveness analysis links costs to project outcome levels. No attempt is made to set a dollar value on these project outcome levels.

Develop a Decision Rule by which Costs are related to Benefits and which enable Trade-Offs between various Combinations of Program Elements to be made. There are three ways by which costs may be related to benefits: the benefit-cost ratio, the difference between benefits and costs, and calculation of a project's rate of return. While advantages and disadvantages of each rule and the problem of selecting a discount rate for multiyear projects will not be discussed here, the key to cost-benefit analysis is that it is a policy tool. As described earlier, the results should include, if possible, the cost and outcome impact of variations in key project inputs.

Compare the Cost-Benefit Results with those of a Control or Comparison Group. This step is not necessary if the model formulated rules out the impact of other factors. For instance, the cigarette model was based upon the standard economic market model, rigorously tested over the years. However, when one is not dealing with a project having such a broad impact (for example, a treatment program), one may need to rule out other factors (such as selection bias, history, etc.) through control or comparison group use.

CONCLUSION

The paper briefly outlines the steps in cost-benefit analysis as applied to criminal justice system projects. Since accountability for expenditures is a key issue in the public's mind, the method outlined here provides valuable feedback to decision makers and the public on project success from an efficient resource allocation viewpoint.

REFERENCES

1. C. Gray, C. Conover, and T. Hennessey. "Cost Effectiveness of Residential Community Corrections," Evaluation Quarterly 2, 3 (August 1978): pp. 375-399
2. See, for example, S. Martin, "Cost of Crime - Some Research Problems," International Review of Criminal Policy, 23 (1965): pp. 57-63; E. Mishan, "Evaluation of Life and Limb: A Theoretical Approach," Journal of Political Economy, 79 (1971): pp. 687-705.

3. M. Gritzke, "Technical Innovation and the Courts: An Economic Evaluation of Videotape Use," Evaluation Report, Minnesota Crime Control Planning Board, St. Paul, Minnesota, December 1978.
4. J.F. Holahan, A Benefit-Cost Analysis of Project Crossroads. Washington, D.C.: National Committee for Children and Youth, 1970.
5. M. Gritzke, "The Revenue Loss of Alcohol and Tobacco Smuggling," in C. Gray, ed., The Costs of Crime. Beverley Hills: Sage (forthcoming).
6. Advisory Commission on Intergovernmental Relations. Cigarette Bootlegging: A State and Federal Responsibility. Washington, D.C.: 1977.
7. W.M. Landes, "An Economic Analysis of the Courts," Journal of Law and Economics 14, 1 (April 1971), pp. 165-214.

EVALUABILITY ASSESSMENTS: TOWARD USEFUL
PROGRAM EVALUATIONS

Joe Hudson and Burt Galaway

INTRODUCTION

Publicly funded human service programs are increasingly being held accountable for results in the form of information derived from evaluation research. Although often forgotten, the essence of accountability is that it is an on-going, impartial, and public process of systematically documenting the extent to which the public charge is being carried out. While being accountable produces information, accountability itself is an on-going process since social action projects are never once and for all accountable. Furthermore, the fruits of demonstrated accountability are always transient because programs, needs, target populations, values and social conditions change, and being accountable at one point in time may be viewed as irresponsible during another.

Information generated from evaluation research is one way a project can be accountable. But accountable to whom? Our view is that a project should be evaluated primarily in relation to the decision needs of managers. Consequently, evaluation research can be defined as the use of scientific procedures to collect reliable and valid information on a planned set of interventions for the purpose of aiding in making decisions.

Our view is that a project evaluation should move through a series of sequential steps, as follows:

1. Develop a conceptual model of the project or program that defines and describes the interventions and activities;
2. Refine the conceptual model by using formative evaluation research procedures to develop an operational model of how the project actually operates;
3. Use summative evaluation approaches to assess the extent to which the project accomplishes its goals.

The first step constitutes doing an evaluability assessment which is prerequisite to formative evaluation research which in turn is a necessary, but not sufficient, condition for engaging in summative evaluation research. This paper

will present the rationale for doing an evaluability assessment and a brief outline of the process by which evaluability assessments are undertaken. Key terms are defined first and the purpose for evaluation research clarified.

Terms. According to the specific purpose of the research, an evaluation could be aimed at assessing inputs, effort, outputs, outcomes, or project efficiency. Project inputs refer to the resources used by the project. Examples of inputs are dollars spent, number and type of staff, types of clients served, and so on. Project effort refers to the processes used to convert and organize inputs in such a way that the project accomplishes what it intends to do. Project effort might include activities such as negotiating treatment agreements, counselling, client referral for services, arranging for job placement opportunities, and so forth. Edward Suchman suggests that measuring program effort is analogous to counting the number of times a bird flaps its wings.¹ In this analogy, inputs might be the food the bird consumes in order to be able to flap its wings, and might also include environmental influences which impact on the amount of wing flapping, such as temperature or wind velocity and direction. Project outputs refer to the immediate accomplishments of the project. In a work release program, for example, outputs might include the number of clients successfully completing work release and amounts collected for family support. Pursuing his bird analogy, Suchman suggests that outputs are the distance flown by the bird. While outputs can be considered the more immediate result of the program, outcomes refer to the longer term goals to be accomplished. An outcome of a work release project, for example, might be the reduction of recidivism or increased offender sense of justice. In the bird analogy, outcomes would be whether or not the bird reaches its intended destination.

These concepts can be organized as a linear model with inputs leading to efforts, leading to outputs, leading to outcomes. A series of questions can then be raised about each of these linkages. For example, are the inputs sufficient for the expected level of effort? Would increasing or decreasing inputs significantly effect the level of effort? Is the effort organized in such a way and at such a level to accomplish the desired outputs? Would increasing, decreasing, or changing the nature of the effort significantly effect the outputs? Is there any relationship between the outputs and the expected outcomes? Do the outcomes occur because of, or without any relationship to, the outputs?

The terms objectives and goals are also frequently used in regard to program evaluations. Objectives refer to targeted or expected levels of input, effort, or output which the project desires to accomplish and which are stated in measureable form.

It is quite possible to speak in terms of input objectives (such as securing a 10% increase in the project's budget), effort objectives (number of hours of family counselling provided), or output objectives (such as having 75% of the program's clients employed at the time of discharge). The term goal refers to a measureable and expected level of outcome (such as a 20% decrease in recidivism).

Finally, a project evaluation may be concerned with efficiency. Project efficiency refers to whether the same level of outputs or outcomes can be secured with a lower level of inputs and effort. In the Suchman analogy, efficiency could be measured by counting the number of wing flaps necessary for the bird to cover a given distance. In a job training project, an examination might be made of whether various uses of staff time and resources impact on likelihood of clients completing the program successfully. Are offenders who receive counselling, for example, any more likely to remain on the job than those who do not? Are offenders who meet weekly in a face-to-face contact with a staff member responsible for monitoring the client's activities, any more likely to complete the training than those who receive only a weekly telephone call or receive no formal monitoring? Efficiency involves attempts to secure the desired level of outputs or outcomes with the least costly use of inputs and program efforts. For example, research directed toward the cost effectiveness and cost benefits associated with particular projects involve studies directed at assessing the efficiency of a project. Figure I summarizes these key terms and their relationships.

Managerial purpose. But why bother with measuring project inputs, efforts, outputs, outcomes or efficiency? The definition of evaluation research given earlier specifies that information collected from an evaluation should be used as an aid to decision making. Thus, evaluation research information is collected to be of use to managers in making decisions. Clearly, however, the term manager is used broadly to mean any person who must make decisions about the allocation of resources to accomplish intended outputs and outcomes. Obviously, persons making funding decisions are managers in this sense as are persons vested with day-to-day responsibilities for the administration of projects. They must make decisions about allocating available dollars, staff time, and other resources, so as to accomplish project objectives. Less obvious, perhaps, is the notion that line workers having day-to-day contact with offenders are also managers; they must make decisions on how to use their time and in what way to intervene in a given situation so as to accomplish project objectives. The increasing frequency with which the term case manager is used as a job title for line level human service workers reflects a

FIGURE 1: Summary of Key Terms

1. Inputs
 - A. Project resources
 - B. Examples: staff, clients, material resources
2. Effort
 - A. Project processes and activities
 - B. Examples: treatment contract negotiation, job placement, supervision, counselling, referral
3. Outputs
 - A. Immediate accomplishments
 - B. Examples: number of clients employed, number of clients completing project requirements
4. Outcomes (sometimes called effects)
 - A. Longer term accomplishments; socially desired objectives
 - B. Examples: reduced recidivism, victim satisfaction, offender sense of justice
5. Efficiency
 - A. Relative costs
 - B. Examples: use of different type staff or client supervision procedures to accomplish comparable results

recognition of the truly managerial nature of such work.

The nature and magnitude of project decisions will obviously vary at different levels. At one level a decision might need to be made about funding one type of project as compared to another; at other levels, questions may relate to the allocation of resources within a project--how many staff should be assigned to contacting victims, how many to seeking employment opportunities for offenders, how many to counselling, how many for community relations, and so forth. Line staff may be confronted with decisions about how to allocate their own time--should they meet with a referral agency or schedule an extra meeting with the offender, and how much in developing employment opportunities? Because the nature of the decisions may vary, different approaches to evaluation are required to meet the information needs of persons at different levels. Consequently, all staff who have to make decisions among alter-

native courses of action or the allocation of resources are potential consumers of program evaluation activities. And appropriately designed evaluation research is directed toward meeting these information needs. But no single evaluation is likely to be able to answer the variety of questions of concern to different types of staff; priorities need to be established.

Besides the variety of explicit purposes that might be held by different intended users, there may also be a number of less legitimate, often implicit, reasons for commissioning an evaluation. For example, a program administrator might have an evaluation undertaken simply because it is an annoying, but very real, funding requirement. In such a case, the evaluation is likely to amount to a ritual. Other notoriously common, illegitimate reasons for an evaluation are those of postponing a difficult decision and as a public relations gimmick.

Given the variety of legitimate and illegitimate purposes for conducting evaluation research, the first task is to clarify the reasons for the research; what information is expected to be gained from the research, how is the expected information to be used, and by whom? Careful attention to these questions should:

1. Help insure that all parties clearly understand why the evaluation is being undertaken;
2. Help determine whether desired information can be obtained;
3. Help determine whether the available resources of staff, time and money are adequate to the job;
4. Help identify purposes in conflict with each other;
5. Help prioritize the different purposes to be achieved by the proposed research.

EVALUABILITY ASSESSMENT

As questions about the purpose of the planned research are being addressed, the evaluability of the project should also be assessed. An evaluability assessment is directed toward assisting program staff to conceptualize the program so as to arrive at a judgement about the feasibility of doing other

types of research. An evaluability assessment should assist project staff in gaining clarity about what they think the nature of the project is in the form of a conceptual model defining and linking program inputs, efforts, and outputs/outcomes. While such an exercise may have been done in the grant application or original program proposal such documents are commonly written in general terms, thus requiring an evaluability assessment to further refine the conceptual model of how the project is intended to operate.

Necessity for evaluability assessment. There are four reasons for conducting an evaluability assessment:

1. To clearly identify the project inputs and efforts (activities);
2. To clearly specify the intended outputs and outcomes of the project;
3. To articulate the logic or rationale linking the efforts (project activities) to the anticipated outputs;
4. To articulate the logic or rationale linking anticipated outputs to expected outcomes.

Unless these four conditions have been met, any evaluation research conducted on a project is likely to encounter major problems. Attention will first be placed on explaining why this is so, and then on the specific set of tasks involved in assessing a project's evaluability.

Specifying project activities. Before beginning an evaluation study, the project needs to be clearly conceptualized. Criminal justice projects are likely to involve a variety of different activities; project descriptions written for funding purposes or public information purposes may not accurately and completely reflect what the project actually does at any point in time. Instead of taking the project as a "black-box," the task for the evaluator and the relevant managers is to conceptually specify its presumed activity components.

Careful project specification is particularly important in the case of newly implemented projects. The project as conceptualized in the grant application is not likely to bear much resemblance to how it actually operates, especially as it is implemented over time. Given project specification, appropriate measures can then be developed and procedures established for the on-going collection of information for use in monitoring project operations. Unless the specific activities that make up the

project are clearly identified, difficulties will be experienced in explaining the research findings, generalizing the findings, and in replicating the project in other places.

Specifying expected outputs/outcomes. Clearly stating the intended outputs, objectives and outcome goals of social action projects are some of the most difficult problems of evaluation. A major reason for this is that programs commonly set lofty and vague output objective and outcome goals. Empirical referents or measures are then often difficult to develop. Both outputs and outcomes need to be stated in terms that are clear, specific, measurable, and meaningful to the life of the project.

Once outputs and outcomes have been clearly defined, the next step is to decide which are to be used for evaluation purposes. Several considerations need to be kept in mind including:

1. Practical issues of money, time and access to data will play a part in determining the output objectives and/or outcome goals to be evaluated (especially in terms of choosing to evaluate short term or long term accomplishments).
2. Intended use of the findings.
3. The relative importance of outputs and outcomes; some outputs and outcomes are likely to be more central to the program and others less so.

Articulating the linking to rationale. The logic of providing a particular service to achieve predictable outcomes rests upon the ability to specify the rationale linking together inputs, efforts, and expected outputs/outcomes. While this may seem apparent, the logic is often inadequately spelled out in both research and practice, or sometimes is forgotten. Ask practitioners what they do with probationers and they might respond that they provide services to help the probationer adjust or stay out of trouble. Ask what the logical connection is between what probation officers do (efforts) and the intended outputs and problems often begin to arise.

The conceptualization of the relationship between project inputs, efforts and intended outputs and outcomes requires consideration of another set of variables that directly impact on the extent to which results are likely to be obtained.

1. Was the service offered frequently enough to bring about the outputs sought? Services may be offered from occasional to weekly. While the frequency variable differs depending on the nature of the service and objectives sought, there should be a specification of the relationship between the two so that it can be monitored and changed according to experiences within the project. Projects may fail not because the services were inadequate, but because they were not offered frequently enough.
2. Were the services offered intense enough to bring about the inputs sought? Services may be made with a greater or lesser intensity and must be geared to the kinds of outputs and outcomes sought if the criteria for evaluation are to be valid.
3. Was the quality of service delivery sufficiently high to warrant an expectation of outputs and outcomes? While a method may be thought to be good, it can only be manifested through the skills of the practitioners delivering the service. These are likely to vary according to training, experience, personality, and a host of other variables. Quality needs to be ascertained so as to differentiate between a poor example of interventions and the ineffectiveness of the interventions themselves.
4. Was the program of sufficient duration to warrant a test of outputs? All of the previous criteria may be satisfied, but if the project does not last long enough, the attainment of desired output and outcome objectives is likely to fall short of those planned.

Any of the interrelated questions that are not answered positively creates a risk that the program will break down at the service delivery level and consequently limit the extent to which desired output and outcome objectives are attained. This indicates that the logic was poorly articulated, rather than that the project was in principle inadequate. Failure to make this distinction can result in the unwarranted abandonment of useful projects.

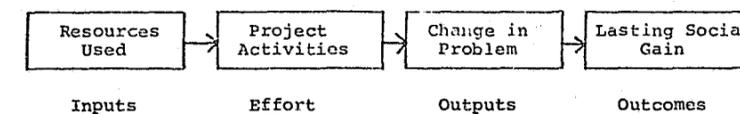
EVALUABILITY ASSESSMENT PROCEDURES

The procedures involved in conducting an evaluability assessment are aimed at identifying project inputs, efforts (activities), intended outputs and outcomes, and the linking rationales. Five tasks or sequential steps are involved. The first step is to obtain the views of the intended users of the planned evaluation on the following questions:

1. What are the resources to be used in the project?
2. What are the major types of activities or efforts that go to make up the project?
3. What are the outputs and outcomes sought from these activities?
4. What is the logic believed to tie together the efforts with the outputs and outcomes?

The aim of this step is to arrive at a beginning definition of the project. Figure II is an illustration of such a beginning definition.

Figure 2: Beginning Definition of Relationship Among Inputs, Efforts, Outputs, and Outcomes



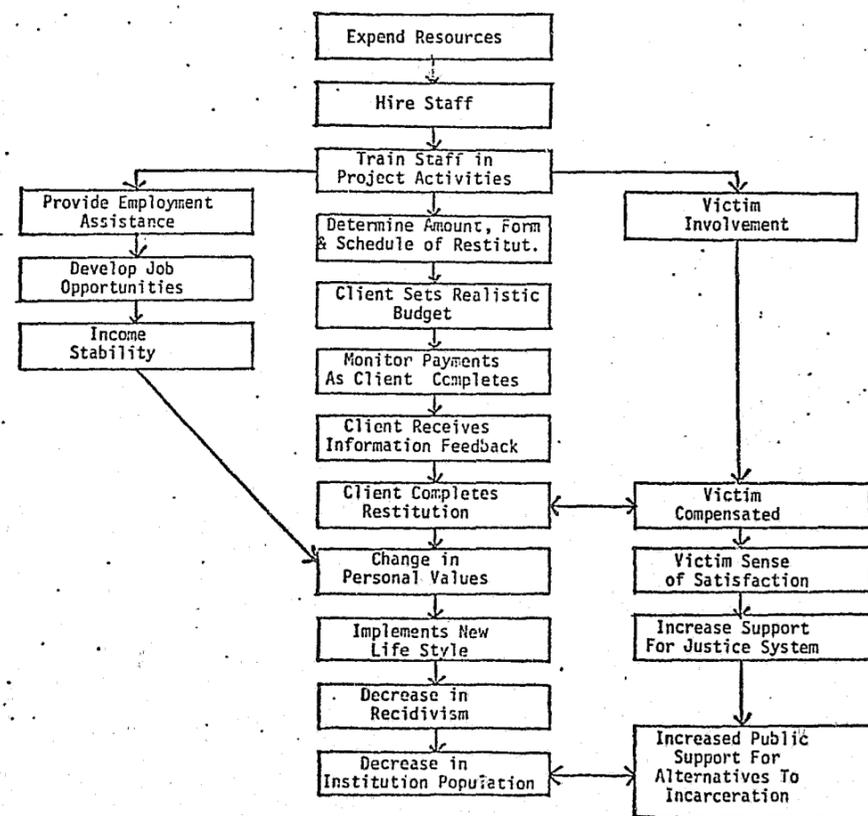
This over-simplified project model may help to illustrate the idea that certain resources (staff, equipment, and so on) are used to accomplish certain activities or efforts (individual counselling, provision of food and shelter, supervision, and so on) that are assumed to result in certain kinds of changes in the defined problem (obtain employment, complete restitution payments, school achievement) which leads to some socially justifiable outcome goal (reduction in recidivism).

The second step of an evaluability assessment is to collect additional information that will help to further refine the project model in terms of activities or efforts, outputs and outcomes, and assumed causal relationships. This needed information can probably best be obtained from written documents about the project, such as grant applications, quarterly reports, project descriptions, and so on. In addition, inter-

views should be conducted with project staff as well as with respondents who have some knowledge about the operation of the program.

The third step is to summarize the collected information in the form of a refined flow model. This model should graphically illustrate the way in which the project is believed to operate--the activities, objectives, and the assumed causal links between the activities and objectives. This conceptual project model represents a summary description of the project as defined by the information collected from documents and interviews. Figure 3 represents a conceptual model for a hypothetical restitution project having as an objective the decrease in institutional populations.

Figure 3: Conceptual Model of a Restitution Project



The fourth step of an evaluability assessment is to analyze the conceptual model to determine the type of evaluation that would be most appropriate. Two questions are to be addressed:

1. Have project effort, input and outcome objectives been stated in measurable terms?
2. Have the assumed causal relationships linking project outputs and outcomes been stated in such a way that they can be measured?

After eliminating from the conceptual model any outputs and outcomes that are unmeasurable and any linking assumptions that are untestable, a second model is developed. This evaluable project model contains only those project activities and output and outcome objectives on which there exist agreement by the intended users on what would constitute success, and only those assumed causal relationships linking resource inputs, efforts, outputs and outcomes for which there exist tests or comparisons that would provide evidence that any observed outputs were attributable to the project effort.

The final step is for project managers to assess the evaluable program model in relation to the intended use of the evaluation and to answer questions related to the managerial purpose for the evaluation:

1. What are the reasons for wanting to do the evaluation?
2. What information is expected to be gained from the proposed evaluation?
3. How is the expected information to be used and by whom?

In summary, questions about the purpose of an evaluation should be addressed and clearly answered in conjunction with an evaluability assessment of the project. The evaluability assessment attempts to identify the specific efforts (activities) that make up a project, the specific outputs and outcomes to be accomplished by these activities and the rationale linking the efforts to the outputs and outcomes. The information for an evaluability assessment is obtained from program documents and interviews with informed respondents from both within and outside of the project. The next logical set of tasks involves the collection of information about the actual operation of the project in the form of formative research.

SUMMARY

An evaluability assessment is directed towards developing a conceptual program model providing an explicit description of what the program is believed to be. The completion of a detailed evaluability assessment is prerequisite to either formative or summative evaluations. The purpose of formative evaluation is to measure the congruence between the conceptual model developed as a part of the evaluability assessment and what the program actually does. Is the project doing what its managers think it should be doing? Formative evaluations are, therefore, a study of the project in action and result in the development of an operational model providing measures of program inputs, efforts, outputs and outcomes as well as indications of the extent to which these sets of variables are actually linked in practice. In contrast to formative evaluations that provide information helpful to develop and refine project models, evaluation research conducted for summative purposes collects information to verify the causal relationships contained in the project model. Summative evaluations are conducted for the purpose of assessing the outcomes or efficiencies of projects. Summative evaluations attempt to measure the extent to which outcome goals are accomplished and test the relationships between project outputs and project outcomes. While formative evaluations are conducted to discover how the program operates and summative evaluations are conducted to determine if the program accomplishes its outcome goals, neither can be accomplished in any meaningful way until an evaluability assessment has been completed. The evaluability assessment will provide a clear conceptual framework to undergird other evaluation efforts and tie the evaluation effort to management needs.

REFERENCES

1. Edward Suchman, Evaluative Research (New York: Russell Sage Foundation, 1967), pp. 61-71.

ROUTINIZING EVALUATION IN CORRECTIONS

Clifton A. Rhodes

INTRODUCTION

Routinizing evaluation in corrections conjures up any number of pictures in one's mind. For example: when I asked my daughter what she thought routinizing evaluation in corrections meant, she answered that it must have something to do with the choreography for a dance of correctional evaluators. You should realize that she is presently into tap dancing. Admittedly, routine may mean something different in the two fields. But her answer might not be too far off the mark. Heaven knows, I have chased my tail often enough as a correctional evaluator. Perhaps, routinized evaluation should be looked upon as regularly going around in circles in search of program outcome.

On the other hand, some may think that routinizing evaluation has something to do with making that which is complex--correctional evaluation--simple and routine. Others may think that it bodes a time (heaven forbid!) when that which is complex will simply occur more frequently than it does now. And, some may be taking a lay-back attitude because books have already been written on the subject of routinizing evaluation in corrections. Take Glaser,¹ for example, or a more recent offering of the Urban Institute.² And, after all, once something is committed to paper we can all rest more comfortably.

We can think in terms of stages of project development:

1. Enthusiasm and Euphoria
2. Disillusionment
3. Panic
4. Search for the Guilty
5. Punishment of the Innocent
6. High Praise for the Uninvolved

I think something is accomplished if we get to a point somewhere between stages 1 and 2; a point where we may have a greater understanding of the place and potential value of routinized evaluation in corrections but also may have a greater appreciation of some of the limitations and

complexities associated with its design and implementation. Some help can be provided by addressing the following questions:

1. What is routinized evaluation?
2. Why do it?
3. What is the state of the art?
4. How might you go about designing a routinized evaluation system?

WHAT IS ROUTINIZED EVALUATION?

One way to think about routinized evaluation is as a series of wide-angle snap-shots which provide correctional managers with a regularly updated picture of program goal accomplishment. This is to be contrasted with customary evaluation studies which provide a single, narrowly focused shot of program effectiveness at one point in time.

Glaser provides a more formal definition and suggests that routinized evaluation is keyed to the institutionalization of research as a continuous source of data for correctional decision-making.³ Or, more specifically, it denotes the capability of a correctional agency to continuously collect, store, analyze and present data related to program effectiveness. Thus, when considering routinized evaluation, think in terms of a continuous evaluation strategy.

A routinized evaluation system in corrections is keyed to providing continuous data on client outcomes. The questions for which data are most often collected and presented to correctional managers include:

1. How many clients are being served?
2. Of what description?
3. With what type of problems relevant to the efforts of the correctional agency?
4. Through what services or programs?
5. At what cost?
6. With what outcome?

Glaser suggests that the other basic strategy for the measurement of correctional effectiveness is transient evaluation

which refers to research that provides evaluation data on a one-time-only basis.

Most reported evaluation efforts are transient in nature. Such evaluations cover the entire methods spectrum including field surveys, panel interviews, time series studies, quasi-experiments, and elaborately controlled field experiments. In most instances, the researchers have set out to answer one or more questions regarding the effort, efficiency or effectiveness of a program but after obtaining the necessary data and presenting a final report they have turned to researching other programs. The matter of continuity or replication related to the initial program has been left to chance.

WHY DO ROUTINIZED EVALUATION?

Why should we consider doing routinized evaluation in corrections? The reason is found in the maxim that the purpose of evaluation research is to provide information for use by decision-makers.⁴

We have all heard stories of how evaluators have rushed with their final report in hand to the station only to find that the correctional manager's train has already left. Or worse yet, there are stories that describe how the evaluator's ship has finally come in--regarding an opportunity to make an impact on correctional decision-making--but the evaluator is not at dock side, but still at the train station. If evaluation information is to be useful to correctional decision-makers, it must be delivered to the right place, at the right time, and in the right form.

The past decade has been a period of significant change in corrections. Major changes have occurred in the directions of decriminalization, determinant sentencing, deinstitutionalization, decentralization, diversion, community based treatment, work release and furlough programs. Yet, a cursory examination shows that in spite of marked increase in the number of correctional research projects, few of these changes were influenced by prior research.⁵

The challenge and the reason why we should invest in routinized evaluation is to provide the means for correctional decision-makers to obtain quick and timely data to make informed choices in otherwise uncertain situations. The bottom line or benefit lies ultimately in better program management, better accountability, and possibly better justification for existing programs.

WHAT IS THE STATE OF THE ART IN ROUTINIZED EVALUATION?

As with most things in life, and correctional research, there is a catch if not a Catch 22 or so in routinized evaluation. Here is where we must account, at least in rough terms, for the state of the art.

If we go out tomorrow looking for routinized evaluation systems that have already been installed in correctional agencies, you will find very few that are up and running and in usable order. You will also find that those that do exist are generally tied to some form of automated offender based tracking system. This is not to say that routinized evaluation must be tied to a computer. Continuous evaluation systems have been developed in some correctional agencies, and certainly in other human service organizations, where they are reliant on a manual-based operation. Automation is not the only barometer of sophistication. More important, perhaps, is whether the system is being used by its intended beneficiaries.⁶ Our experience suggests that the state of the art in developing routinized evaluation systems in corrections remains rather primitive or elementary.

There are any number of stories being passed around which suggest that routinized evaluation systems are often plagued by abandonment or partial use. Some systems have been abandoned outright because of cost overruns, or simply because managers have chosen to ignore both evaluation system processes and products. Other systems have seen only partial use because of poor design. Some of the basic design problems that effect use include:

1. Too much volume. Managers are snowed with an avalanche of information, only a small portion of which helps them make objective sense of what is going on in their organization.
2. Untimely reports. Even under conditions of a low volume of information management reports are delivered weeks or even months after they are due.
3. Problems at the data source. Line personnel, who are resistant to the depiction of their work in quantitative terms, are unsympathetic to the needs of managers for evaluation data. Awareness of these attitudes, in turn, leads managers to question the reliability of data collection practices and promotes suspicion about the validity of final reports.

These problems suggest several cautionary notes in the design of routinized evaluation systems. First, it is not possible, or even desirable, to design an evaluation system that provides all types of information needed by managers to carry out assigned tasks. Similarly, it is not likely that an evaluation system can encompass every functional component of an organization. Priorities should be set, with the primary focus on the measurement of effectiveness and cost related to direct services for correctional clients. Finally, it should not be assumed that evaluation system development will proceed smoothly if it is simply treated as the development of just another management tool. The reality is that an evaluation system will create change and some disruption in relations among staff members as new data collection and processing patterns impact the frequency and intensity of these relations. It will also likely impact the meaning of work especially if some data forms are modified which require users to conceptualize their work in new or different ways. And, with the emphasis on performance and expectation measures it may very well threaten employee autonomy or security.

The changes usually wrought by evaluation system development underscore the importance of viewing it as a social or organizational development enterprise as well as a technical exercise.

HOW TO DEVELOP A ROUTINIZED EVALUATION SYSTEM

Now that we have a better picture of the what, the why, and the problems of routinized evaluation, let us examine an approach to system development. The approach is keyed to an example of a project by the Minnesota Community Corrections Association (MCCA). The aim of the project is to develop a model evaluation system that can be installed in a variety of residential and non-residential community corrections programs.

Working with an evaluation committee composed of representatives of several MCCA-related programs, a routinized evaluation model with three basic component systems was designed. Each system produces a separate management report. Component System I measures the progress of correctional clients receiving services. System II measures client outcomes and costs 90 days after program discharge. And, System III measures results obtained by quarterly client cohorts one year after the provision of services. In addition, each of the three component systems produces routine data on key client descriptors and certain supplementary measures not accounted for in the measurement of primary objectives.

Figures I, II, and III provide an overview of the evaluation model as applied to one participating community corrections agency, Women Helping Offenders. Figure II is identified as Systems II which means that the program measurement strategy described is keyed to providing measures of client outcome and cost 90 days after services have been received.

Figure 1 depicts a method of describing the basic goals and related program structure of participating MCCA agencies. The diagram defines the boundaries or scope of the agency evaluation system and provides a short-hand method for establishing the pre-conditions for an evaluable program. The preconditions include:

1. Clear description of individual programs (or program components).
2. Specification of intended goals and effects.
3. Identification of causal assumptions that link programs to goals and effects (which are depicted in terms of services provided and clients served).

The evaluation system framework diagram consists of eight basic elements:

1. Program Influencers. The first element involves program influencers. The influencers are identified in the top row of boxes on Figure 1. No correctional program operates in a vacuum. Outside groups, organizations and individuals often have a significant influence on the program's mission and goals. It is helpful to identify who these influencers are prior to developing an evaluation system since they may shape the types of goals and objectives to be included. They may also suggest the types of data which the evaluation system should collect. Potential influencers include policy-making boards, funding sources, and referral sources.
2. Mission Statement. The second element is the mission statement. The mission statement is the keystone of the evaluation system framework. It provides a capsule view or profile of what the program is in business to accomplish.

3. Overall Admission Criteria. The third element involves the identification of program admission criteria. Admission criteria refer to statements or factors which specify the particular target population that can be served by the program.
4. Program Structure. The fourth element concerns the basic structure of the program. The program structure represents a way of organizing a facility into units (programs) which will be subjected to evaluation. In the Women Helping Offenders example, three programs were identified for potential evaluation: emergency services, direct services, and family therapy and support. Only the second program--direct services--was involved in the Model Evaluation System.
5. Goal Statements. The fifth element involves the development of goal statements for each of the identified programs within the facility. The goal statements describe what services are provided to whom with what expected results.
6. Program Admission Criteria. The sixth element defines admission criteria for each of the identified programs if the criteria in question differ from the overall facility admission criteria.
7. Services Provided. The seventh element calls for listing the services provided under each program component. A service can be viewed as a series of activities aimed at the accomplishment of program goals.
8. Clients Served. The final element is a brief description of the basic types of clients served by the program. The clients served should be identified in terms of key characteristics and conditions that correspond with the program admission criteria as well as influence the likely course and outcome of service.

Figure 2 and Figure 3 describe the measurement strategy for Women Helping Offenders direct services program using seven different elements.

1. **Primary Objectives.** The first element involves identification of the primary objectives to be evaluated. Each objective represents a measurable result to be achieved by the direct services program. MCCA's model evaluation system includes a set of nine generic objectives and measures related to program effectiveness and efficiency. Some of the objectives relate to the reduction of criminal activity, while others are concerned with improving social productivity.
2. **Type of Measure.** A specific measure is defined for each objective. The measures represent basic indicators of how the achievement of individual objectives will be determined. In the model evaluation system measures are pre-defined for each of the generic objectives.
3. **Who Applied To.** It is necessary to identify to which group of clients each measure applies. In the example of component system II we are referring to clients who have been formally terminated from the program (or who are no longer receiving intensive program services).
4. **Time of Measurement.** For each measure it is necessary to specify the point in time when the measure should be applied to individual program clients. This component of the model evaluation system is applied to clients 90 days after program termination.
5. **Data Source.** The measurement strategy should also identify what or who will be the primary source of data for each measure. In the Women Helping Offenders program the client's probation/parole officer or the Bureau of Criminal Apprehension was generally identified as the primary data source.
6. **Expectancies.** Expectancies relate to the program's expected level of performance on the measure for each objective. Expectancies are set at three levels: minimal, the level below which performance should not drop; goal, the aimed-for performance level; and optimal, the ultimate performance level that the facility could be expected to achieve.
7. **Relative Weight.** The last element accounted for is the relative weight of each objective. Assigning a relative weight to each objective is a way of showing priority or importance. There are two ways of expressing relative weight. One is to use percentage

where all relative weights added together equal 100% and the second is by rank-order.

Figure 3 shows three other elements included in the design of the model evaluation system, definitions of key terms, client descriptors and supplemental measures that program managers wanted in the routine evaluation reports.

CONCLUSION

Finally, we can suggest several closing thoughts and recommendations:

1. With a fairly structured approach to system design, the elements of a routinized evaluation system in corrections can be developed on a relatively inexpensive basis and in a fashion which permits a good measure of precision, simplicity, and understandability.
2. The participation of program staff should be sought to conceptualize system design and benefits as well as to validate and legitimize the resulting evaluation system.
3. Since the benefits of a new evaluation system will not be immediately apparent during the process of development, correctional managers (and researchers) must promote and demonstrate a clear commitment to the effort.
4. The value of the evaluation system should not be oversold. While some managers and researchers defeat themselves by failing to promote the benefits of system development, other defeat themselves by making unrealistic pronouncements regarding intended benefits.
5. Time must be spent training program staff in the design, application and use of evaluation systems. Seldom do managers and line staff have either time or interest to get their evaluation act together prior to system development.
6. System design should be viewed in terms of an incremental process, where development and implementation occur on a modular or sub-system basis. Early acceptance of a limited system is a crucial step toward implementation of a more comprehensive system.

REFERENCES

1. Daniel Glaser, Routinizing Evaluation: Getting Feedback on Effectiveness of Crime and Delinquency Programs (Rockville, Maryland: National Institute of Mental Health, 1973).
2. Louis H. Blair, et al., Monitoring the Impacts of Prison and Parole Services: An Initial Examination (Washington, D.C.: The Urban Institute, 1977).
3. Glaser, pp. 1 - 3.
4. Carol H. Weiss, Evaluation Research (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1972), pp. 24 - 25.
5. Charles H. Shireman, "Correctional Administration and Research: Prospects for Productive Partnership" (NCCD Conference Paper, 1975), p. 5.
6. This observation and related comments regarding problems and cautionary notes on system development are attributable in part to Ronald Geddes of Abt Associates, in a presentation made in Boston in January, 1979.
7. Joseph S. Wholey, "Evaluability Assessment", in Leonard Rutman (ed.), Evaluation Research Methods: A Basic Guide (Beverly Hills: Sage Publications, 1977, p. 18.

FIGURE 1
WOMEN HELPING OFFENDERS

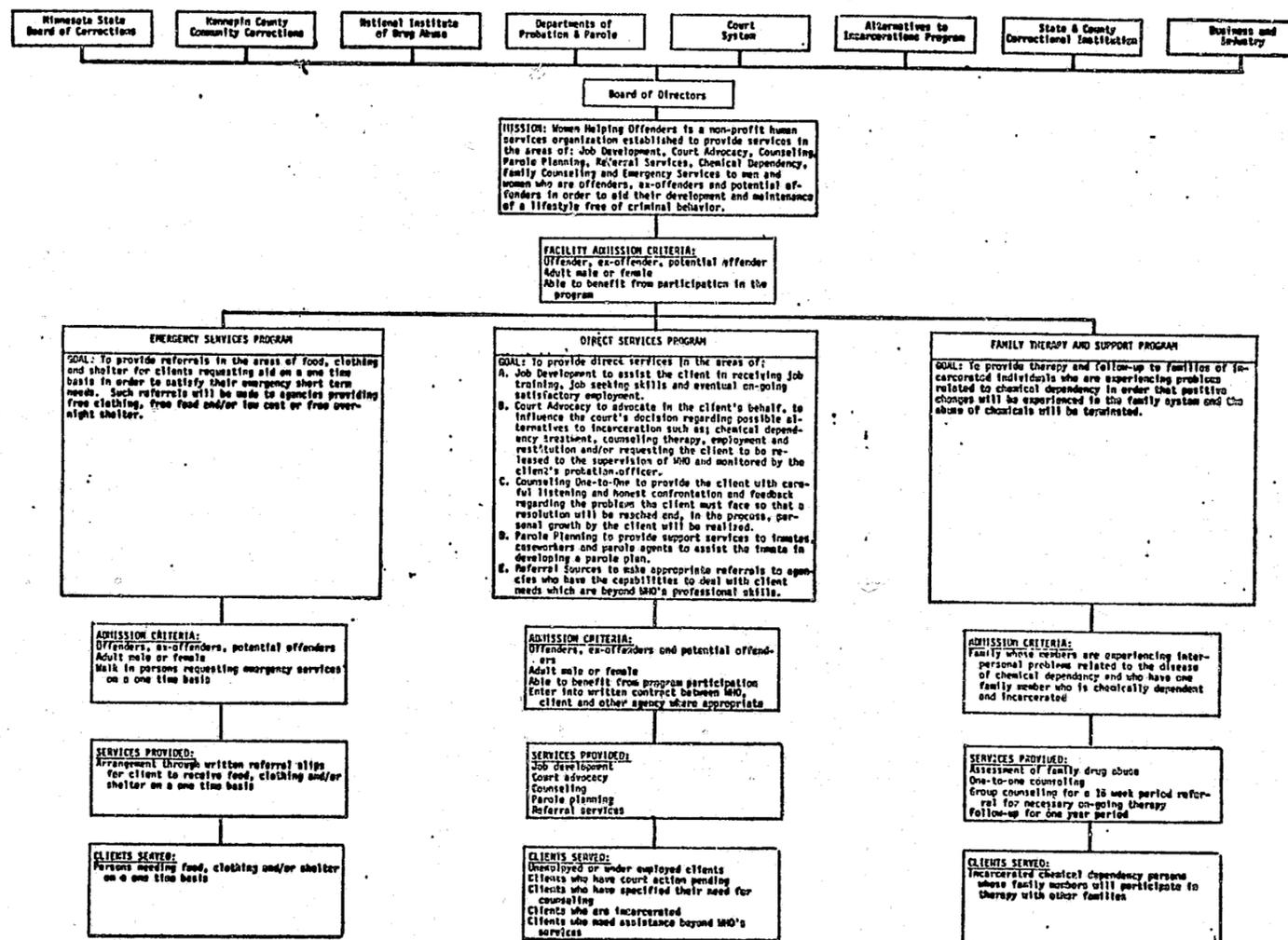


FIGURE 2: WOMEN HELPING OFFENDERS
SYSTEM II

PRIMARY OBJECTIVES	MEASURES	WHO APPLIED TO	TIME OF MEASURE	DATA SOURCE	OBTAINED BY	EXPECTANCIES			RELATIVE WEIGHT
						MINIMAL	GOAL	OPTIMAL	
1. Reduce <u>incarceration/recidivism</u>	Percent of Evaluatees who are not incarcerated	All Evaluatees	90 days after client classed as an Evaluatee	Probation/Parole Ofcr. Bureau of Criminal Apprehension, F.B.I.	Counselor/Data clerk	35%	40%	50%	20%
2. Reduce <u>serious crimes</u>	Percent of Evaluatees who are not convicted of a serious crime	All Evaluatees	90 days after client classed as an Evaluatee	Probation/Parole Ofcr. Bureau of Criminal Apprehension, F.B.I.	Counselor/Data clerk	35%	40%	50%	15%
3. Obtain an <u>earned income</u>	Percent of Evaluatees who are employed or are expected to complete a manpower training program	All Evaluatees unemployed at program entry	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/Data clerk	70%	80%	90%	25%
4. Minimize dependence on <u>public monies</u>	Percent of Evaluatees who have reduced use of public assistance payments by 10 percent or more	All Evaluatees obtaining public assistance following program entry	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/Data clerk	30%	40%	55%	15%
5. Attain financial responsibility	Percent of Evaluatees paying back a minimum of 75% of debts and has followed a plan to pay back remaining amount	All in debt Evaluatees	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/Data clerk				
6. Live in <u>optimal living situation</u>	Percent of Evaluatees living in an optimal living situation	All Evaluatees	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/ Data clerk	60%	75%	80%	15%
7. Contain cost of services	Average monthly expenditures divided by number of Evaluatees achieving objectives one and two	All Evaluatees	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/Data clerk				
8. Obtain referral and follow-up for chemical dependency services	Percent of Evaluatees who are participating or have successfully completed community services for chemical dependency	All Evaluatees who are chemically dependent	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/Data clerk	70%	80%	90%	20%
9. Achieve personal growth	Average score obtained on <u>individually set goals</u>	All Evaluatees who have goals individually set	90 days after client classed as an Evaluatee	Client probation officer or B.C.A.	Counselor/ Data clerk	85%	95%	100%	10%

See FIGURE 3 for definitions, client descriptions, and supplementals

FIGURE 3: WOMEN HELPING OFFENDERS
SYSTEM II

DEFINITIONS:

Incarcerated - A person who has been convicted, revoked or sentenced for more than a 90 day period.

Recidivism - A new offense or technical violation following prison release.

Evaluatee - A client who has been in the program for a minimum of 3 months. Three months in the program constitutes 90% of the services, or A client who, after intake, made no further contact with MHO and did not respond for a period of 3 months to MHO's follow-up efforts, or A client who, at any point prior to being in the program for 3 months, terminates.

Client - A person who has completed and signed the MHO intake form.

Serious Crime - Conviction for a felony offense which occurred after program entry resulting in a sentence of more than one year.

Earned Income - An evaluatee who has achieved one of the following: 1) is employed in unutilized employment and is earning a minimum of \$92 a week or 2) is participating in a manpower, employment or educational program which will prepare the person for employment or 3) has been officially accepted by a manpower, employment or educational program and a starting date has been set.

Public Money - Obtaining money or its equivalence from General Assistance, AFDC, or Food Stamps. (See Special Instrument)

Optimal Living Situation - A judgement made by the program that the living situation is one which would not encourage criminal behavior.

Participating - Directly receiving services from a program which will reduce chemical abuse or maintain the person as chemically free.

Successfully Completed - Is no longer receiving services for chemical dependency and, at the time services were completed, the person was either chemically free or chemicals were not interfering with the person's life.

Chemically Dependent - A person who was identified at the time of program entrance, during the program, or at the time the person was classed as an evaluatee who meets one of the following definitions: 1) Currently using chemicals to the point of abuse or 2) Has abused chemicals in the past and is in need of services which will maintain them as chemically free.

Average Score - Score of each individual goal divided by the of goals set.
Optimal: 100, Goal: 100, Minimum: 50

Individually Set Goals - Goals which are individually set with clients and are expected to be achieved 90 days following the person being classed as an evaluatee.

Parole Plan - A written set of goals and expectancies which the parolee is required to follow in order to maintain parole status. This plan will most often include place of residence and definite employment.

CLIENT DESCRIPTIONS:

1. Average number of prior convictions per person.
2. Total number of months prior to program entry in State or Federal prison, Workhouse or Juvenile Institution.
3. Percent of clients previously incarcerated.
4. Percent of clients previously on probation or parole.
5. Percent of clients at entry who were currently on, ever were on, or came from an immediate family which was on either AFDC, General Assistance, Food Stamps or Medical Assistance.
6. Percent of clients defined at entry as Chemically Dependent.
7. Percent of clients unemployed at program entry.
8. Percent of clients previously convicted for: 1) Crimes against person(s), 2) Crimes against property, 3) Other
9. Percent females.
10. Percent and number: White; Black; Native American; Chicano; Other; Unknown.
11. Highest grade completed.
12. Number of dependents
13. County: Hennepin; Ramsey; Anoka; Scott; Carver; Other.
14. Vocational Education: Earned certificate; Attended, no certificate; No training, Unknown.
15. Prior work history: Consistently employed; Irregular employment; Seldom or never employed.
16. Major occupation: Professional/technical; Clerical; Service; Unskilled, semi-skilled; Other.
17. Total number of months in correctional institutions.
18. Referral Source: Program staff; Client (self); Prosecutor; Court; Defense attorney; Police/Sheriff; Welfare Department; School; Clergy; Radio/television; Parents; Detox Centers; Parole officer/Probation officer; Institutional staff (i.e. case worker); Other inmate; Other (specify); Unknown.
19. Prior convictions by type of offense.
20. Number with history of Status Offense/Non-status Offense.
21. Estimated number of arrests.
22. Living situation at intake: Parent(s); Spouse/Partner; Foster Parents; Friends/Relatives; Self; Correctional Institution; Jail/Workhouse; Other (specify).
23. Number/Percent on parole at time of intake; On probation at time of intake.
24. Number ever in chemical dependency treatment program.
25. Number/Percent completing treatment.
26. Number of times re-institutionalized.
27. Institutional location.
28. Community program called upon for assistance.
29. City or State program called upon for assistance.
30. Age of first arrest; first conviction.
31. Number using public assistance.

SUPPLEMENTALS:

1. Number of clients:
Following parole plan devised by MHO
Committing new offense
2. Type of crime committed after program entry.
3. Number of clients:
Incarcerated on technical violation
Whose P.O. worked cooperatively with MHO counselor
Currently incarcerated
Whose job was suited
Who stayed on job for at least 6 months
Who quit job prior to 6 months but went on to an equal or better job
Placed in job developed through efforts of Job Developer working directly with company personnel department
Placed who found employment through their own efforts
Who needed training prior to employment
4. Time elapsed between first client request re employment and actual employment.
5. Number of interviews/contacts before actual employment.
6. Number of clients:
Receiving no public money
Who are head of household with dependent children and are currently financially responsible for same
Referred to residential treatment
Referred to outpatient treatment
Completing residential treatment
Completing outpatient treatment
Involved in aftercare program of MHO's involved in A.A.
Maintaining chemical free status at one year after treatment
Involved in on-going counseling through MHO
Involved in the following types of counseling:
A. Marriage or couples counseling
B. Parenting groups
C. Assertiveness training
D. Family counseling

MINNESOTA STATEWIDE RESEARCH SYSTEM ON BATTERED WOMEN

Maggie Arzdorf-Schubbe

INTRODUCTION AND METHOD

Chapter 428, Laws of Minnesota, 1977, requires that all hospitals, physicians, public health nurses, law enforcement agencies, social workers and community health workers report assaults on women by male relatives, husbands, or men with whom they are living or with whom they have lived in the past. This data is to be used for making recommendations to the legislature regarding programs and services for battered women. Specifically, the data provides information about the population of battered women in the state, identifies patterns of service referral and use, and adds to the current knowledge about spouse battering in Minnesota.

In addition to the statewide data collection system, staff members from shelters housing battered women and their children provide descriptive information to the Department of Corrections about the women and their children in the facilities, their assailants, and the kinds of services provided. The women housed in the shelters also provide information about the kinds of services received at the shelter.

The data collection system developed and implemented by staff in the Department of Corrections is based upon the statutory definition of assault: An act with intent to cause fear in another of immediate bodily harm or death; or intentionally inflicting or attempting to inflict bodily harm upon another. Instructions to reporters note that agencies are required by law to collect data on women who have been assaulted and/or threatened with assault. Data collection forms have been designed for each type of reporting agency. Clearly, however, the woman's identity is not revealed so all information provided is anonymous. The data requested includes date of occurrence and victim's residence, victim's age, number of children, race and legal status of relationship with assailant. Data has been collected from medical and law enforcement agencies since March, 1978, while human service providers began to submit data on July 1, 1978. The scope of the data collection system is evidenced by the fact that over 6,000 practicing physicians are included, along with 186 hospitals, 74 public health agencies, and 286 law enforcement agencies.

Monitoring a data collection system as extensive in scope as that described here raises major problems, given the limited resources available. All data forms are edited for completeness prior to processing and duplicate forms are removed.

Results are summarized and made available every six months.

RESULTS

Information presented here was compiled from law enforcement, medical, and human service providers for the period January through December, 1979. In addition, some information on women housed in shelters is also summarized. To avoid duplication of results, the information compiled from women housed in shelters is included only when it is not duplicated by law, medical and human service personnel.

A total of 4,542 incident forms were submitted during calendar year 1979. There are two reasons why this figure does not reflect the true extent of the problem. First, it is difficult to determine with any degree of precision the number of people assaulted by their partners who never reported to law enforcement, medical, or human service agencies. Second, it is difficult to determine how many professionals in the agencies failed to submit data forms on all of the cases of abuse with which they came in contact.

Under-reporting is evident in many cases where large law enforcement agencies, hospitals, and social service agencies submit only one or two forms when it is reasonable to assume they would have been involved with many more battering situations. For example, the Minneapolis Police Department reported 35 incidents of assault on women for the period March 1 to September 16, 1978. This obvious under-reporting was reduced after discussing the situation with the mayor and the Chief of Police. As a consequence, 626 additional reports were submitted from police logs for the period March 1 to November 15, 1978. It has recently been determined that these 626 reports were actual arrests for domestic assaults in Minneapolis in 1978. In fact, Minneapolis police officers respond to an estimated 7,000 domestic calls annually. The city of St. Paul is a further example. St. Paul has approximately three-fourths the population of Minneapolis and, if law enforcement personnel in that city were to report at the same rate as those in Minneapolis, approximately 470 arrest reports would have been expected from St. Paul for the period March through mid-November, 1978, and St. Paul police would have responded to 5,250 domestic calls. Instead, 192 reports were received during that period. Finally, many counties of the state have not reported any incidents of spouse abuse. At the same time, women from these counties have been housed in shelters. Based on under-reporting and non-reporting, we conservatively estimate that only one out of seven cases of spouse abuse are reported by law enforcement, medical and human service agencies.

In summary form, the data received for calendar year 1979 reveal the following:

Over 4,500 reports were received from agencies in 1979. Based on estimates that only one in seven cases are reported to the Department of Corrections, it is estimated that over 31,000 assaults on women by their partners were reported to law enforcement, medical and human service providers. This figure does not take into account women who were abused but did not seek assistance from one of the reporting agencies.

Partner abuse occurs in every region of the state. Non metro agencies representing half of the state population submitted approximately one-third of the reports in 1978 and two-fifths of the reports in 1979.

Findings from 1,292 medical reports indicate that 69 percent of the women had been assaulted previously, 62 percent of them by the same assailant. Women in shelters have been previously assaulted by the same person 92 percent of the time.

Human service providers indicate that 68 percent or 915 of 1,336 women have experienced abuse for more than a year.

In 1979 women from 15 to 96 years of age were physically abused; 75 percent of the women were younger than 34.

Women from all races were assaulted; 84.2 percent of the women were White, 7.1 percent American Indian, 6.1 percent Black, 1.4 percent Chicana/Latina, and 1.2 percent from other races.

Husbands and ex-husbands were assailants in 62.6 percent of the cases and boyfriends and cohabittees were assailants in 31.4 percent of the reported cases. 81 percent of the women had children.

Human service providers indicate that only 23 percent of the assailants were seeking assistance for their abusive behavior.

A summary of 1,292 medical reports indicate that the abused person required medical attention 86 percent of the time and hospitalization was required in nine percent of the reported cases. Women experienced bruises and lacerations over 80 percent of the time and 8.7 percent of the women suffered fractures from their abuse.

According to human service providers, services needed most frequently by battered women are support groups, safe housing, legal assistance and economic support.

Minnesota's 11 operating shelters housed 1,300 women and 1,675 children in 1979; approximately 2,900 or 70 percent of the women seeking shelter were turned away due to lack of space.

The Department of Corrections received 42 reports on battered men from human service providers in 1979. Services needed most frequently by battered men are support groups and counseling, legal help and safe housing.

SUMMARY AND CONCLUSIONS

Minnesota's mandatory data collection system has provided useful information about assaults on women by their partners for two years. Summary data on location of assaults, victim's age, race, relationship to assailant and injury incurred have substantiated the need for services.

It is difficult to obtain accurate figures on the incidents of assaults from this system. With such a large number of reporters, it is impossible to maintain contact to insure that all cases are reported. Reporting from some agencies is sporadic, and non-existent from many others.

Despite the problems with the mandatory data collection system, the battered women's program has benefitted from its existence. Reporters and editors often publish statistics that are released, thereby increasing the visibility of the issue and services available. Local grassroots organizations frequently use the figures to substantiate the need for services in their area and to support their proposals for local funding.

Initial training sessions on the data system for law enforcement, medical and human service providers were useful forums for exploring their response to battered women. Besides discussing the report forms, their professional attitudes and practices were addressed in an attempt to sensitize them to the special concerns and needs of battered women.

After two years in operation the reporting system is running smoothly. Letters and summary statistics are mailed annually to reporters as a reminder of their obligation to submit the forms. The system continues to serve as an important information link between the battered women's program and professionals who regularly respond to abused women.

p4564

THE RAPE VICTIM IN THE LEGAL SYSTEM

Eugene Borgida and Catherine Ludden

This paper will focus on the experience of the rape victim in the criminal justice system and on how recent reforms of rape laws affect the adjudication of sexual assault cases and the treatment of the victim in court. Some of the pertinent findings from a jury simulation research program will be presented and the legal and policy implications of the research discussed.

In a recent study based on interviews with rape victims, Holmstrom and Burgess found that the primary reason for not pressing charges in rape cases was the victim's desire to avoid the ordeal of courtroom testimony.¹ Testifying in court often precipitates as much of a psychological crisis as the rape itself. Traditional common law rules of evidence have permitted comparatively unrestricted admission of testimony about the victim's prior sexual history with persons other than the defendant in order to prove consent. These rules of evidence have been strenuously criticized by feminists and legal reformers for distorting the fact-finding process in a manner prejudicial to the rape victim.

To redress this situation, since 1925 forty states have enacted "rape shield" reform statutes which limit, to varying degrees, the admissibility of the victim's prior sexual history with persons other than the defendant. President Carter recently signed into law the Privacy Protection for Rape Victims Act of 1978, which similarly amends the Federal Rules of Evidence as they pertain to the admissibility of prior sexual history evidence.

The rationale behind such reforms is twofold. First, the reforms should prevent potentially irrelevant, prejudicial testimony from being heard by the jury. Restricting the admissibility of such evidence should therefore reduce juror prejudice and improve the abysmally low rate of convictions in rape cases. Second, by excluding evidence of the victim's prior sexual history, the victim is less likely to be subjected to humiliating cross-examination in court. The reforms are meant to alleviate the extent to which a victim is "on trial" along with the accused assailant.

State laws governing the admissions of third party sexual history have been classified into three categories based on the extent to which evidence concerning prior sexual history is excluded when a consent defense is raised. The common law category includes ten states without an exclusionary

statute and assumes the relatively unlimited admissibility of prior sexual history evidence. In twenty-one states, including Minnesota, a moderate reform exclusionary rule is in effect; prior sexual history evidence is generally excluded unless the court determines the evidence to be material to a fact in issue. Laws of this type allow the trial judge considerable discretion in weighing the probative and prejudicial aspects of the evidence in question. But the effect of the statute is clearly to screen the admissibility of prior sexual history evidence as compared to the common law. Finally, nineteen states have adopted statutes with a more restrictive radical reform exclusionary rule. The radical reform statutes require exclusion of third party prior sexual history evidence because it introduces the risk of unfair prejudice.

The critical assumptions underlying these various reform statutes are that jurors regard evidence of prior sexual history as much too probative of a rape victim's credibility and general moral character, and such inferences will have an unfair prejudicial impact on the outcome of the jury decision process in rape cases.

A large-scale jury simulation experiment was conducted to examine the empirical basis of these assumptions.² Participants for the jury simulation experiment were selected from two independent samples of prospective jurors from the Minneapolis-St. Paul metropolitan area. Forty-three percent had not previously served jury duty at the time that they were randomly selected from the metropolitan voter registration file. Fifty-three percent were selected from a second sample of people who had already served on a Fourth Judicial District Court criminal jury (but jurors who had served on cases involving sexual assault were excluded). The typical juror was white, middle-class, middle-aged, with some college education. Sixty-four percent were female and thirty-six percent were male. Jurors viewed one of several different versions of a two-hour videotaped rape trial involving a consent defense. The trial was based on the court transcript of an actual rape trial and was produced with the assistance of professional actors and actresses and two experienced trial attorneys.

All versions of the videotaped trial included representative features of an actual trial proceeding: opening remarks from a judge, opening arguments from the prosecution and defense attorneys, the victim's testimony and cross-examination, prosecution witnesses all of whom were cross-examined, the defendant's testimony and cross-examination, closing arguments, and the judge's final charge to the jury. In each version of the trial, the victim maintained that she had been forcibly raped and the defendant always claimed that the victim had voluntarily consented to sexual intercourse. The admissibility of prior

sexual history testimony was determined by the legal criteria that define the three exclusionary rule categories. Whereas these legal criteria are applicable to other rape cases, the specific content of the prior sexual history admitted in the videotaped trials may limit generalizability of the research to rape cases which do not involve a consent defense. After viewing the videotaped trial in one of the courtrooms at the University of Minnesota Law School, jurors deliberated in six-person juries for up to fifty minutes before they completed an extensive research questionnaire.

The results strongly supported the reformist contention that a rape victim is on trial along with the accused. When specific evidence of the victim's prior sexual history was admitted, jurors inferred victim consent, carefully and unfavorably scrutinized the victim's credibility and moral character, and attributed more responsibility to the victim. Most important, jurors' perceptions of victim credibility, moral character and contributory behavior were directly related to the conviction rate. Although defendant credibility was a consideration, perceptions of the defendant's moral character were much less of a consideration than the victim's general moral character. Perhaps defense counsel are intuitively aware of these tendencies and try to capitalize on knowledge of the victim's prior sexual history as well as certain features of the fact pattern to suggest that the victim may have consented to the sex. The strategy of course is to persuade the jury that, as the defendant contends, rape did not occur.

In the videotaped trials, this strategy was quite effective. Jurors were reluctant to convict the defendant when any testimony about prior sexual history was introduced in support of a consent defense. Only the radical reform rule effectively constrained the inference of victim consent, enhanced victim credibility, and increased the likelihood of conviction. A particularly distressing aspect of this pattern of results was that the admission of prior sexual history, even in an otherwise improbable consent case, was detrimental to the prosecution's case. Only the most restrictive shield statute offered protection to the victim.

These findings raise the more fundamental legal question about the need to strike a balance between the rights of the rape victim and the rights of the accused. A victim must be protected from humiliation in the courtroom and unnecessary intrusions into her personal life. A man accused of rape, however, is entitled to defend himself by presenting any evidence which might prove his innocence. Traditionally, the law has favored the accused at the expense of the victim. The purpose of legislative reforms is to protect the victim and

to prevent unjust acquittals of rapists because juries might be prejudiced by evidence of the victim's sexual past.

The essential difference between the moderate and radical reform statutes is that the latter presumes that a victim's prior sexual history with persons other than the defendant is never relevant to the issue of her consent to the act in question. Therefore, such evidence will not be admitted to prove consent, although it may be admitted for some other purposes such as to show source of semen, pregnancy or venereal disease. In a moderate reform jurisdiction like Minnesota, however, such evidence may be admitted on the basis of judicial discretion. Although the law provides guidelines, details of a victim's prior sexual history may be admitted more frequently than a literal reading of the law would suggest because many judges may admit the evidence since legal tradition favors such an approach.

If a moderate reform law such as Minnesota's admits prior sexual history evidence on a regular basis, and if, as this research suggests, this evidence may increase the likelihood of unjust verdicts, should not a radical reform statute be considered to further restrict prior sexual history evidence in rape trials? This is precisely the point at which the rights of the defendant become an issue.

Critics of the radical reform statutes argue that a strict exclusion of the victim's prior sexual history is a violation of the defendant's constitutional rights. An accused is presumed innocent until proven guilty. Due process of law requires the right of a defendant to present a complete defense, to call witnesses on his behalf, and to confront and cross-examine all witnesses against him. If the defendant can show that his accuser consented to have sexual relations with him, that constitutes a complete defense to a charge of rape. The defendant is therefore entitled to offer any evidence which is arguably relevant to the issue of consent. Most criminal defense attorneys would argue that a woman's general moral character and her past sexual activities in particular are relevant to the issue of consent. According to that view, the defendant is guaranteed by law the right to present evidence about the victim's character and the right to cross-examine her about her prior sexual history. A statute which prohibits such access is therefore unconstitutional.

Supporters of the reform statutes, however, argue that there is no constitutional right to present irrelevant, misleading or prejudicial evidence which may confuse or unfairly sway the jury. The reform statutes, according to this view, do not intrude upon constitutionally-protected rights. Thus, the fundamental question remains: Is a woman's prior sexual history relevant to consent? Does the fact that a woman has consented to sexual

relations with other men tend to prove that she consented in the present case? A radical reform statute addresses that question in the negative. The evidence is not admissible. Minnesota's statute as well as other moderate reform statutes, leaves the decision to the trial judge with a likelihood that the evidence often goes to the jury.

Constitutional challenges have been made to reform statutes in several states and in each case state courts have upheld the constitutionality of the statutes. Challenges have been directed even at moderate reform statutes, but it is the fate of radical reform statutes that is of most interest. Michigan passed one of the first radical reform statutes which has survived several battles. But they were not easy victories. One case was won by a two-tone decision of a three-judge court. The dissenting judge argued that the rape victim's prior sexual history did tend to prove that she consented and should have been presented to the jury. Old notions die hard--especially in the judiciary. Nevertheless, the rape shield statute which offers the maximum protection to the victim is being upheld. Since appellate courts continue to support the constitutionality of such reform laws, strict rape shield statutes should be enacted in those states which have not yet adopted reform. And in states like Minnesota, serious consideration should be given to further research evaluation of the new law's impact on the prosecution of sexual assault cases. There may be a need to tighten up the current law in Minnesota in order to provide genuine protection to the rape victim in court.

REFERENCES

1. L. Holmstrom and A.W. Burgess, The Victim of Rape: Institutional Reactions (New York: Wiley, 1978).
2. Eugene Borgida and P. White, "Social Perception of Rape Victims: The Impact of Evidentiary Reform," Law and Human Behavior, Vol. II (1978), pp. 339-351.

SOME BIOGENETIC CONSIDERATIONS IN ANTISOCIAL BEHAVIOR

Irving I. Gottesman

Granting the overriding importance of pernicious environmental factors to the etiology of most delinquent and criminal acts, prudent persons would be remiss to ignore the wealth of empirical studies that implicate biological and genetic factors. At the present time neither the pernicious environmental factors nor the biogenetic factors can be specified in the detail that would make them highly valuable for purposes of prediction or prevention. That is to say that knowing that a child comes from a "bad" neighborhood or a home broken by divorce or is the son or the identical co-twin of a felon does not permit a point prediction about that individual's liability for becoming a criminal. The purpose of this brief account is to introduce some of the classical and recent studies that use the twin or adoption strategies of research in the broad field called behavioral genetics so as to shed light on possible genetic contributors to antisocial behaviors. The methods are as useful for refuting claims of genetic contributions to a liability for becoming a criminal as they are for supporting such claims.

TWIN AND ADOPTION STRATEGIES OF RESEARCH

Twin Studies. One of the most common and important strategies to supplement family studies in behavioral genetics is the study of identical (monozygotic or MZ) and fraternal (dizygotic or DZ) same-sex twin pairs. Accurate diagnosis of zygosity is essential. Blood group analysis is very accurate but expensive. Questionnaire assessments of within pair similarities and differences are often accurate enough for large samples. Affected members of twin pairs should be selected through unbiased procedures such as a national register of penal code offenders. The rationale underlying twin studies is straight forward: MZ twins share all their genes in common so that any differences between members of a pair must have originated with environmental effects that could occur anytime after zygote formation. DZ twins share half of their genes in common (on average) and the same environment. Schematically, with G = genetic factors and E = environmental factors we have:

$$\begin{array}{rcl}
 \text{Differences within DZ pairs} & = & G/2 + E \\
 \text{Differences within MZ pairs} & = & E \\
 \hline
 \text{DZ minus MZ} & & = G/2
 \end{array}$$

Therefore, the comparison of the two kinds of twins permits an estimate of half the genetic contribution to within pair observed differences in a trait.* Twins can be compared by correlation coefficients for continuously distributed traits (e.g., height) and by concordance rates for dichotomized traits. The latter simply means the proportion of co-twins who are similarly affected so that one obtains both an MZ and a DZ concordance rate. For example, if ten DZ twin probands have been prosecuted for delinquency and eight of their co-twins are also affected, the DZ concordance rate is 80%. Concordance rates can be calculated two different ways; pairwise and proband wise. In the former every pair is counted only once, and the concordance rate is simply the proportion of pairs in which both members are affected. In the proband method some pairs are counted twice if both members of the pair are affected and if each affected member was ascertained independently.¹

Only a few of the strategic implications of twin studies can be mentioned here.

1. If genetic differences are not important for the familial clustering of a disease, there should be no difference in the MZ and DZ concordance rates.

Such is the outcome with mumps, measles, juvenile delinquency, and speaking with the same accent.
2. If genes are important in the origin of a trait, the MZ concordance rate will be significantly higher than the DZ rate. In the absence of proof that MZ twins per se are more predisposed to developing a trait or that their environments are specifically more alike in features that cause the trait, a genetic basis is the most likely explanation for the higher MZ concordance rate.
3. The variability of deviance seen in MZ co-twins of cases helps to identify the antisocial "equivalents" or forme frustes of a predisposition to antisocial behavior.

* Often the estimated magnitude of a genetic effect is expressed in the form of a "heritability coefficient." This statistic was originally developed to help agricultural geneticists predict the effects of artificial selection. Heritability data from human studies lend themselves mainly to explorations in model fitting.

4. The comparison of MZ pairs discordant for criminality helps to identify environmental causes of precipitation or protection. Caution is required in interpreting discordant MZ twin data; differences between twins may reflect effects of the problem behaviors and not the causes.

The twin method, like all methods in psychiatric genetics, has its limitations and provides only some of the data on which to make a case for the role of genetics. The twin method is one of the best ways to gather information about the roles of environmental effects and is the only way to look at environmental differences while holding genotypes constant.

Adoption Studies. Adoption studies add another important technique for assessing the roles of genes and environment in the development of antisocial behavior. Adoption methods try to separate the effects of these two factors by rearing a child in an environment free of the influences of the parents who provided the child's genes. The goal is very difficult to carry out in practice because children are not placed randomly for adoption; understandably placement workers try to find the best adoptive homes and to eliminate the undesirable ones. Often the adoptee and adopting parents are matched as best as possible for ethnic background, appearance, social status and religion. The effects of such selective placements on the results of adoption studies of psychopathology are not known; it first must be shown that the selection factors are relevant to the development of the disorder of interest before there is cause for concern.

Three varieties of the strategy have been used to advantage, particularly in Denmark where a register of adoptees has been established by a group of behavioral scientists.² The adoptees method requires that the behavioral conditions in the biological parents of all adoptees be determined, say, by trying to locate them in the national police register. Once all penal code offenders, for example, are identified, a control sample of "clean" (with no criminal history) biological parents of adoptees is then compared. In the adoptees' families design the probands are adoptees who became registered for criminality and the controls are adoptees who remained "clean" or undetected. The register status of the four groups of parents is then determined: the biological parents of the offender and non-offender adoptees and the adoptive parents of both sets of adoptees. If genes are important, only the biological parents (and other biological relatives) of the registered adoptees should show an excess of criminality. In the seldom used

cross-fostering design, the information from the adoptees method is supplemented by "reciprocal" information. That is, some normal biological parents will have had their children adopted by parents who later became penal code violators. If rearing by criminal parents is important in causing the disorder, the adoptees should be affected with a very high frequency.

SOME RESULTS OF TWIN STUDIES OF DELINQUENCY AND CRIME

Although the study of juvenile delinquency and adult crime in twins reported in 1941 by Rosanoff and colleagues can be criticized on numerous methodological grounds, it provides strong hints that delinquency as a trait behaves more like measles or some other infectious diseases than it behaves like a genetically conditioned trait.³ The inference comes from the exceedingly high concordance rates in both the identical and the fraternal twins: 29/29 male and 11/12 female identical twin pairs were concordant for delinquency compared to 12/17 male and 9/9 female fraternal pairs. The concordance rates for the samples, combining sexes, was 98% MZ and 81% DZ. Smaller samples of delinquent twins have been studied in Japan and Germany with similar results--very high concordance rates for both kinds of twins, suggesting that genetic loading is not important. Such conclusions however apply only to delinquency as a whole; some subset of delinquents do go on to careers as adult criminals and recidivists. Although not currently identifiable, it can be argued that it is precisely this subset that contains a large proportion of individuals with a strong genetic predisposition toward developing antisocial behavior.⁴ Hayashi's Japanese follow up study of delinquent twins, for example, suggested that the MZ concordant pairs for repeated serious offenses were much more likely to go to recidivist careers while the less serious concordant and discordant identical twins were mostly one time offenders handled in the family court rather than the criminal court.⁵

In a study of delinquent or aggressive twin boys referred to a child psychiatric department, Shields found that 4/5 MZ pairs and 7/9 DZ pairs were concordant, the smallest MZ--DZ difference observed for any of the disorders examined.⁶

Adult criminality presents a marked contrast with the results from studies of delinquent twins in the better conducted research. Sampling biases prevent us from accepting the results at face value of the first twin study of crime conducted by Lange in Germany. Only three of 13 MZ pairs were discordant while only two of 17 DZ pairs were concordant, yielding results favorable to a genetic interpretation with concordance rates of 78% MZ and 12% DZ. The discordant identicals are quite informative

for what they tell us about non-genetic contributors to crime: in one pair both boys had birth injuries but only one developed a feminized body and that one became a homosexual in trouble with the law; in a second pair both were mentally retarded but only one had epilepsy and it was he who committed a murder in a twilight state; in the third pair somatic pathology apparently served to protect the twin from a life of crime since his goitre-induced hypothyroidism left him too inert to keep up with his boastful, energetic alcohol abusing brother who became an embezzler.

Turning again to Rosanoff and colleagues work we find much greater MZ vs. DZ differences in concordance rates for adult crime than he reported for delinquency. The study can be faulted as before on methodological grounds involving sampling and the definition of concordance but it serves as a point of departure for describing a modern, well-designed study. For the male pairs the concordance rates were 76% MZ and 22% DZ, while for the female pairs the rates were 86% and 25% based on only seven MZ and four DZ pairs. Despite the results reported by Rosanoff and six other smaller studies, genetic interpretations lacked credibility. An unselected national sample of all twins combined with a centralized register of major and minor legal offences was needed to provide a firm foundation.

Karl O. Christiansen, the late Danish criminologist, launched a definitive study of crime in twins under the ideal conditions found in Denmark.⁷ The National Police Register was established in 1930 and contains copies of local registers for earlier periods from the beginning of the century. It records the nationwide contacts of the police with the Danish population including delinquent acts before the age of criminal responsibility (15), traffic offenses, and alcohol related offenses. The Penal Register consists of 57 archives maintained by district police chiefs and records the precise sentences of those born in the district who have been convicted of violations of the penal code; it was established in 1896. The Danish Twin Register is a birth record derived file of all same-sex twins born between 1870 and 1930 (opposite sex pairs were registered through 1910). Finally, a National Population Register is maintained that gives the current address of all Danish residents and goes back some fifty years. Access to all registers is strictly controlled.

In the preliminary stages of the Danish criminal twin study, Christiansen identified all twin pairs born in the Eastern half of Denmark between 1881 and 1910 where both members of the pair were alive at age 15. The 3,586 pairs identified were then searched for in the criminal registers and

799 pairs were found to have one or both members who committed a registered offense (crime, delinquency, or minor offense). Since Christiansen's death the work has continued under Gottesman, Mednick, and Hutchings and now deals with the 13,056 pairs of twins from the entire country of Denmark born between 1881 and 1920 where both were alive up to age 15. The epidemiological nature of this research allows us to report that a narrow definition of crime yields a lifetime prevalence of 9.94% in male twins and 1.55% in female twins, rates that do not differ from those calculated for the non-twin population of this time period. A broader definition of crime that includes minor offenses sanctioned by only fines or warnings yields lifetime prevalences of 18.22% in males and 3.05% in females.

The narrow definition of crime for the initial Christiansen sample yielded concordance rates for males ("probandwise" method) of 52% for MZ and 22% for DZ, and 35% MZ females vs. 14% DZ females. Note that male and female MZ rates are 5.2 and 22.6 times their respective prevalences. The expanded sample will permit us to calculate a number of refined concordance rates stratifying by age, type of crime, rural vs. urban, social class of rearing, and use of alcohol. These findings legitimize the claim that genetic factors are somehow or other importantly involved in the liability toward antisocial behavior. This is a far cry from saying that there are genes for criminality; it is our working hypothesis that any genetic contribution is mediated by a quantitatively different nervous system which, under certain learning regimes, leads to the development of an antisocial personality, which, under certain conditions, leads to the commission of an antisocial act.

SOME RESULTS OF ADOPTION STUDIES OF CRIME

Since identical twins spend more time together than fraternal twins and may be exposed to enticements to act antisocially as a consequence, the difference in concordance rates reported above may be viewed skeptically as sufficient evidence of genetic contributors. Since criminal parents provide both the genes and the rearing environments of their children, familial clustering of crime cannot be taken at face value as implicating genetic factors. For these reasons adoption studies are important for evaluating the claims made from the twin and family studies.

Hutchings and Mednick had access to the names of all 1145 male nonfamilial adoptees from the Copenhagen area, born 1924-27, and those of their biological and adoptive parents except for some missing fathers.⁸ They also had access to the files on all persons known to the police. The adoptees were transferred to their adoptive homes at a mean age of 12 months, and their mean age when the police files were searched was 35 years.

The 1145 adoptees were compared with the same numbers of non-adopted controls, whose fathers were matched for occupational status with the adoptive fathers. The incidence of criminality was fairly high in this population and higher in the adoptees (16.2 per cent) than the controls (8.8 per cent). There was evidence of selective placement of the adoptees in that social class of the biological and adoptive fathers was significantly associated, but the biological children of criminal fathers were not more often placed with criminal adoptive fathers than would be expected by chance.

The presence or absence of offenses among the adoptees was related to the criminal record of the father in all three groups. The association between criminal offspring and criminal adoptive father points to the influence of environmental factors and that between criminal biological father and criminal adoptee to hereditary factors. A remarkably large number of children placed for adoption had criminal fathers (30.8 percent). It is also surprising that so many adoptive fathers had a criminal record (12.6 percent). The rule which was generally applied by the adoption agencies at that time was that persons adopting children should have been free from a criminal record for five years. The sample was large enough to apply a cross-fostering design. It suggested that the hereditary effect may be more important than the environmental effect in this study. The highest rate of criminality (36.2 percent) was observed when both adoptive and biological fathers had a criminal record.

They went on to make a more detailed study of the 143 criminal adoptees with identifiable biological fathers born since 1890, comparing them with the same number of control adoptees not known to the police. They were matched for age and for adoptive father's occupation. Median age of transfer to the adoptive home (6-7 months) did not differ between the groups, indicating that age at placement was not of vital importance in relation to subsequent criminality among adoptees. The findings summarized in Table 1 demonstrated the influence of both genetic and environmental effects.

Table 1: Fathers of criminal and noncriminal adoptees.

	No. of criminal fathers			
	Biological		Adoptive	
143 criminal adoptees	70	49%	33	23%
143 control adoptees	40	28%	14	10%

Mednick and Hutchings believe that genetically transmitted characteristics of the autonomic nervous system could to a certain extent explain the inheritance of criminal behavior, placing certain individuals at great risk of succumbing to crime. Mednick, Hutchings, and Gottesman are now expanding the Danish adoption study to include all 15,000 adoptees born 1924-1947 as well as all their identifiable biological and adoptive parents.

Acknowledgment: Preparation of this paper was made possible by support from USPHS grant MH-25311-04 to Professor S. Mednick, University of Southern California, Social Science Research Institute.

REFERENCES

1. I.I. Gottesman and J. Shields, Schizophrenia and Tenetics-- A Twin Study Vantage Point (New York: Academic Press, 1972), appendix B.
2. S. Mednick, F. Schulsinger, J. Higgins, and B. Bell, Genetics, Environment and Psychopathology (New York: Elsevier, 1974).
3. A.J. Rosanoff, L.M. Handy, and I.R. Plesset, Psychiatric Monographs, No. 1 (Sacramento: California P.O., 1941).
4. L. Robins, Devian Children Grown Up (Baltimore: Williams & Wilkins, 1966).
5. S. Hayashi, "A Study of Juvenile Delinquency in Twins," Clinical Genetics in Psychiatry edited by H. Mitsuda (Tokyo: Igaku Shoin, 1967).
6. J. Shields, "Genetics and Mental Development," in M. Rutter (ed.), Scientific Foundations of Developmental Psychiatry (London: Heinemann Medical, in press).
7. S. Mednick and K.O. Christiansen (eds), Biosocial Bases of Criminal Behavior (New York: Gzrdner Press, 1977).
8. Ibid.

ASPECTS OF COMPUTER RELATED CRIME*

Don Rawitsch

CHARACTERISTICS OF COMPUTER RELATED CRIME

In order to best understand what computer related crime is and how it is accomplished, two approaches to categorizing the characteristics of such crimes are suggested, crime type and role of the computer.

Crime Type. Six different types can be identified.¹ Perhaps the most widespread computer crime is financial. This involves the theft or manipulation of money or other negotiable papers and is best performed on computers that handle payrolls, accounts payable and receivable, and other data files containing financial records. Financial crimes can be further broken down into the following groupings:²

Disbursement fraud. The criminal tricks the organization into paying for goods it never received by forging a purchase order to a phony company and forging the receipt for the goods supposedly delivered. The criminal then bills the victim company with an invoice from the bogus firm and collects the payment. The problem for the criminal is that the victim company's book inventory is now higher than its actual shelf inventory. However, if the firm's total inventory process is computerized there is often no manual back-up check on the records, and the discrepancies can remain hidden if the criminal has selected inventory accounts with high volume, heavy turn-around activity, high dollar values, and imprecise management.

Sales manipulation. The criminal misleads the victim company to bill him or her for a purchase at a much lower cost than is proper. This can be done by altering the sales order after the order has been shipped but before the billing goes out, manipulating the credit records on the criminal's account, or altering discounts or commissions associated with the sale.

* Excerpted with permission from "Computer Related Crime: A Resource Booklet For Teachers", MECC © 1978

Payroll fraud. This is accomplished by adding fictitious employees to the payroll and collecting their checks, failing to stop the issuance of checks to employees who have left the company, or in the case of a pension payroll, keeping a deceased person "alive" and collecting his or her benefits.

Funds transfer. This scheme, mainly used on banking computers, involves shifting sums of money between accounts. The criminal might choose to shift small amounts from a large number of accounts into his or her own, or to take large amounts from dormant accounts which are checked only infrequently.

A second type of crime is computer induced inventory theft, most commonly affecting the outflow of a firm's inventory, in which the criminal causes goods instead of money or securities to be erroneously delivered to her or him. As with the financial crime of disbursement fraud, the criminal must know how to select inventory accounts which are hardest to monitor and must have a scheme for picking up, storing, and dispensing the goods maneuvered over to his or her possession.

Other types of computer related crime include information crime in which data stored in computerized files (such as address lists, case histories) are stolen from an organization and sold to a competitor or enemy, direct theft of computer services/property in which computer time or supplies are stolen, blackmail in which the criminal threatens to disrupt the normal operation of the computer contingent upon demands being met, and vandalism in which computer property or supplies are deliberately damaged.

Role of the Computer. The computer can be the actual instrument of the criminal act, as in the altering of computer programs and files, or can be seen as creating a unique environment in which conventional crime takes on new dimensions. For example, the computer room as a physical space is unique in that its equipment is capable of storing massive amounts of information in a small concentrated area. Computer storage methods, which utilize electrical and magnetic impulses, have put money and valuable records in a completely new form. Also, the computer revolution has spawned a whole new branch of occupations whose members often have unique training and technological experiences. The computer can be used to intimidate or deceive the victim, as in a blackmail scheme or in situations where irregularities in customer accounts are rationalized as simply "computer error." Finally, the computer can be the object of attack in vandalism or sabotage cases.³

INFLUENCES ON THE COMPUTER CRIMINAL

A model is useful in analyzing which factors influence a person contemplating engaging in a criminal action. The person, compelled by motives to consider crime as a means to a desired ends, sizes up the norms of the peer or work group or the society at large to determine whether he or she is interested in conforming. The person then searches out an environment which is conducive to succeeding in the criminal act and considers the degree of deterrence measures present in terms of the chances of getting caught, the chances of being punished if caught, and the severity of the punishment. These four factors are applicable to the examination of computer related crime.

Environment. The environment in which computer related crime takes place is a function of both the technology of computing and the human organization of computerized operations. One of the biggest impacts of computing technology is the centralization of data. An organization can get the most value out of its computer if many applications are put on it together. The computers of today are large enough to accommodate this. Hence, data on many different aspects of a company's operations are concentrated in the same physical space making it easier to find and get at in a short time. Because of this concentration, while future computer crimes may decrease in number, the loss per crime will increase.⁴

New data forms have also been introduced. Punch card decks, magnetic tapes, and disk packs are so uniform in design that it is difficult to determine if one contains sensitive information or not. An employee may be altering the payroll card deck which looks just like a deck being handled by a co-worker who is producing address labels. Data on these new storage media are often in the form of a series of numerals that seem to be arranged in random patterns and are unreadable to all but the computer expert. Making changes in computerized records is an invisible process which leaves no trace, making the embezzler's job much less hazardous than erasures and telltale typewriter print styles.⁵ Technology has made computers reachable by telephone and vulnerable to users who can gain access via their own home phone. With more processing done on-line in this fashion, security codes become harder to protect. Many of these systems tend to house not only high level computer languages such as BASIC and FORTRAN, but also low level languages like the system assembler. The latter, being more fundamental in their technical construction, make hiding unethical program changes easier.⁶

As computers are made more self-sufficient, the need for people who can act as checkpoints in business procedures becomes less necessary. Martin and Norman predict: "there will be far fewer printouts (in the future). The machine will inform management only of circumstances that need attention. Many middle management functions will be taken over by the machine."⁷ This will lead to a dependence on the computer with no reliable audit trail and managers and employees increasingly accepting the computer's output without question. Such reliance will increase the value of working equipment and software (some computer programs currently being valued at \$100,000 or more), making them more tempting and vulnerable targets for thieves, blackmailers, and vandals.⁸

The procedures established by human organizations to implement computing technology also contribute to the environment of computer related crime. Security often becomes lax in the physical area where computer operations are housed. Because a room full of data processing equipment looks impressive, the computer room of a company is often given a large amount of exposure to outsiders.⁹ Staff members may have free access to all areas of a computer room, allowing operators and programmers to handle tapes and cards containing data of a sensitive nature or being stored as the critical back-up for working copies that might get damaged.¹⁰

A critical flaw in many data processing operations is inadequate separation of duties among staff. Giving one person too much responsibility removes the checks and balances provided by a separation of duties among a number of people. By failing to enforce vacations for employees or allowing them to work unsupervised during off-hours, an organization is opening the door for one person to plan and carry out an uninterrupted secret criminal activity using the computer. Unfortunately, many data processing firms in the small to medium range often deliberately hire an all-around computer employee who not only would have the skills to cause a modified program to be executed, but would also be the logical choice to reconcile errors in a financial report. This situation gives that person the chance to both alter the books and cover their tracks.¹¹

The fact that companies often adopt computerized operations to save themselves manual bookkeeping work means that records kept on the computer often have no back-up. This places management in the undesirable position of having no basis to question the computer's reports or the word of the computer center employees. If something goes wrong and a customer complaint is received, the firm usually has no choice but to claim computer error and reimburse the handful of aggressive customers to keep them quiet about discrepancies. Companies even anticipate such maneuvers. The Manufacturer's Hanover Trust Master Card

regulations for 1976 warn that "under certain conditions, a finance charge may be imposed for purchases which have not yet appeared on your billing statement."¹²

There are of course precautions which can be taken by an organization to prevent the creation of an environment conducive to computer related crime. Responsibility should be separated, extensive reference checks be carried out on prospective employees, and fired employees should be released immediately so that they have no time to gain revenge on the employer through the computer. In addition, a firm should create an internal audit team outside of the data processing department to act as a watchdog for computer crime activity. Auditing can be carried out by pumping test transactions through the system at random times to make sure they are handled properly by the computer's programs, or by running special auditing programs that scan computerized files for irregularities.¹³ Unfortunately, getting software packages to run is often a crisis procedure which cannot be inhibited by precautionary security without costing the organization time and money. Also, fully implemented security procedures can be costly, and some companies are willing to take the risk to save the expense.¹⁴

Norms. The people who work in any occupational category tend to generate norms of behavior for themselves, the computing world is no exception. The types of people who commit computer related crimes, and their rationalization for doing so, are to some degree a function of these norms. Although computer related crime could be the work of almost anyone who has contact with computer operations, most often the criminal is a member of an occupation that deals directly with running computers. These include operators who can copy files and disclose security procedures, system programmers who can disable protective software and alter files, and maintenance engineers whose diagnostic testing procedures can be used to browse through files and alter software.¹⁵

Parker describes the typical computer criminal as a male, 18-30 years old who is bright, energetic, highly motivated and self-confident. He rarely has a past criminal record and probably held a position of trust in his organization.¹⁶ In other words, he possesses all of the qualities that make a person a good programmer. Computer crimes often involve collusion as technical people team up with others who can convert their achievements into gain.¹⁷ Parker found that computer related fraud cases involved collusion about 50% of the time, compared to about 15% for non-computer fraud.¹⁸ The computer criminal tends to be a white collar type for whom exposure would cause great embarrassment and loss of peer prestige, in contrast to other criminal types for whom

an infamous public reputation is a source of pride.¹⁹

A particular set of norms develops among such persons and provides a rationale for their actions, some of the norms are similar to those created by other criminals. Often, a computer crime such as tapping into the system of a competitor is seen as normal business procedure, something that everybody else does. Cracking the security of an unfamiliar computer is approached as a challenge to the potential criminal's skills. Many crimes are committed under the belief that any information found unprotected in a computer, especially one shared by many users, is in the public domain and is available to anyone who can find it.²⁰ Computer employees not used to stringent control measures feel that security procedures simply get in the way of efficient data processing.²¹

Sometimes a Robin Hood syndrome influences the reasoning of the computer criminal—since computers and the firms that own them are harming society, why shouldn't they be harmed in return?²² Computer criminals may discriminate between harming individual people, which is bad, and harming organizations, which is permissible.²³ Brandt Allen concludes that "many data center employees simply lack the company identification and loyalty that has traditionally existed in other sensitive areas of business."²⁴

Motives. The motives of the computer criminal are both material and psychological. Financial need is a strong motivation and, as with criminals who commit non-computer financial crime, the computer embezzler usually intends to pay back the funds taken once back on his or her feet.²⁵ Students who carry out criminal-like activities against the security features of educational timesharing systems seek the rewards of increased access to the system, increased availability of special capabilities on the system, and in some cases power to destroy the work of other users.²⁶ Speculating on the future, if less emphasis is placed on material wealth and more on social prestige and power, the computer criminal might be motivated to alter data that results in damaging personal reputations or corporate images.²⁷

Intangible motives can be just as important as material reward to the computer criminal. At present, computer related crime carries an exotic image and is thus well publicized when discovered, similar to the skyjacking crimes of a few years ago. In an educational setting, the system hacker is often a student looking for glory that comes from telling friends about the mischief caused on the computer, despite the fact that the techniques may have been copied from more knowledgeable persons.²⁸ A criminal who claimed to have gained over one million dollars in computer fraud deals said that aside from

making money rapidly the motive was "to see how far he could go with his crime before he stopped and informed his victim of his acts".²⁹

Deterrence. The deterrence factor in computer related crime is not strong, especially if the plan is well conceived and the organization vulnerable to attack. In fact, most computer crime is detected simply by chance. Consider the following examples:³⁰

A computerized bank embezzlement scheme was uncovered when a bank contest promotion selected the false name used on the criminal's account as its winner and found that no one belonged to it.

The perpetrators of a successful computer fraud were caught after they left the resulting cancelled checks in an overdue rental car parked illegally and the policeman writing out the ticket found them.

The comprehensive audit of a bank that had folded discovered a computer embezzlement scheme which, while running successfully for a prolonged period, had nothing to do with the cause of the bank's failure.

Companies that do catch computer criminals are often reluctant to prosecute. The firm may find it more advantageous to avoid bad publicity than to bring the guilty party to justice. Usually, the employee is simply fired and is free to search the market again for another computer related job.

IMPLICATIONS FOR POLICY AND RESEARCH

Current knowledge about computer related crime, though far from complete, suggests several policy area changes for organizations with computer installations. Managers with some background or education in the computer field should be recruited to close the gap between management and technical staff. Technicians should not necessarily be forced into management, but preference should be given to managers whose training has included experience in using computers to solve problems and process information.

Computer criminals are often technically skilled and longing for a greater challenge in their work. Challenge can be integrated into the productive tasks assigned to employees by allowing flexibility to experiment with alternative solutions to problems and even to define problems.

Rewards must be kept commensurate with ability. Often higher salaries are reserved only for supervisors, leaving the excellent technical employee to choose between a forced uncomfortable entry into this role or settling for a salary dead-end. Technical professionals must be paid as much as their skills are worth to deter them from seeking some form of revenge or supplementary monetary rewards via the computer. Employees with a stake in the companies success will be less inclined to devise means of harming the company.

Finally, the deterrent of publicity must be used. The public must know the seriousness of computer related crime and potential criminals must be aware of the punishments awaiting their detection. Organizations must join together in acknowledging such crimes within their own ranks and stop hiding from the fear of bad publicity. The public must be made aware of the seriousness of the problem if pressure is to be mounted for stricter laws in this area.

Further research is needed in many technical areas such as auditing of computerized functions, hardware and software security, and effective work distribution. Studies of what constitute meaningful rewards for employees in the technical computer fields are greatly needed. Crimes are often perpetrated by dissatisfied people; in the relatively young career fields of the computer age knowledge is lacking about what keeps these skilled employees from becoming dissatisfied. Results of such research could help to modify work environments, procedures, and rewards for people in computer related jobs in ways that would lessen chances for development of cybernetic Robin Hoods.

REFERENCES

1. Roger Ford, "Computers, Crime, and the Law," in Avebury, et al., (ed.), Computers and the Year 2000 (Manchester: NCC Publications, 1972), 251-2; W. Thomas Porter, "Computer Raped by Telephone," New York Times Magazine 9/8/74, 32.
2. Brandt R. Allen, "Embezzler's Guide to the Computer," Harvard Business Review 53 (July/August, 1975): 81-86
3. Donn B. Parker, Crime By Computer (New York: C. Scribner's Sons, 1976), p. x.
4. Linda Flato, "EFT and Crime," Computer Decisions 7 (October, 1975); 31.
5. Brandt R. Allen, "Computer Security," Data Management 10 (January, 1972): 18-24 and (February, 1972): 24-30
6. Ibid., 25.
7. James Martin and Adrian Norman, The Computerized Society (London: Prentice-Hall, 1970), 371.
8. "The Computer Thieves," Newsweek 81 (June 18, 1973): 110
9. Porter, 36.
10. Felix Pomeranz, "Securing the Computer," Data Management 12 (June, 1974): 18.
11. Milo Gilson, "Computer Assisted Fraud - Who Gets the Axe?" Data Management 13 (April, 1975): 22.
12. Alan Taylor, "DPer's Evasions Aid Computer Crime Performance," Computerworld 10 (September 6, 1976): 0
13. Harvey S. Gellman, "Using the Computer to Steal," Journal of Systems Management 25 (10): 29-30
14. Porter, 36.
15. Tom Alexander, "Waiting for the Great Computer Rip-off," Fortune 90 (July, 1974): 144
16. Parker, 43-5.
17. Flato, 30.
18. Parker, 51
19. Donn B. Parker and Susan Nycum, "The New Criminal," Datamation, 20 (1): 58
20. "Using Computers to Steal - Latest Twist in Crime," U.S. News & World Report 74 (June 18, 1973): 42
21. Allen, 22-3.
22. Parker & Nycum, 58.
23. Porter, 35.
24. Allen, 25.
25. Brandt R. Allen, "Computer Fraud," Financial Executive 39 (May, 1971): 42
26. Interview with Michael Skow, University of Minnesota Computer Center, 2/10/77.
27. Ford, 252

- 28. Interview with Michael Skow, 2/10/77
- 29. Parker & Nycum, 57-8.
- 30. Allen, 83-6.

DEMOGRAPHIC FACTORS RELATED TO SUCCESSFUL COMPLETION
OF COMMUNITY CORRECTIONS PROGRAMS

Peter Rode

Most research on community corrections programs has been designed to measure and evaluate the overall impact of the programs on their clients. Typically, the unit of analysis is the program as a whole and the clients are treated for the most part as an undifferentiated group. Policy-makers and planners appear to be interested primarily in the overall rate of success--however that may be defined--which a given program or class of programs has been able to achieve. Research on the different success rates of various groups of clients within each program has been relatively neglected. Yet such research can be of considerable value to program staff as well as policy-makers and planners.

This paper describes the relationship between certain demographic variables and successful program completion in five community corrections programs. The findings point out which groups of clients are doing relatively well in the programs and which are not. The findings also raise several broad questions. Why are certain groups doing less well than others? What changes need to be made in the programs--in terms of content, style, staffing, relationships with the courts, and so on--to enable programs to work more effectively with certain clients? Are programs now trying to work with clients who could be better served elsewhere? While the present research does not allow answers to these questions, it does serve to point out some areas which require special attention and further investigation.

THE PROGRAMS

The five programs included in this study are Alpha House, Nexus, Portland House, Project Elan, and 180 Degrees. All are residential programs for adult offenders.¹ All are located in Hennepin County, Minnesota, and have been in operation for five or six years. They are not necessarily representative of community corrections programs in general; among the five, there are no non-residential programs, no juvenile programs, and no programs intended primarily for minority clients.

¹Nexus also operates a small program for juveniles. This paper is concerned only with the Nexus-Adult program.

Although all five are residential programs, they differ considerably from one another in terms of the clients they serve and the treatment they provide. Project Elan is the only program for women. The average age of clients ranges from 21 at Nexus to 31 at 180 Degrees. The proportion of minority clients ranges from 16 percent to 33 percent. In three programs almost all clients are on probation and are referred by court services, while over 40 percent of Alpha's clients and just under three-fourths of 180 Degrees' clients are on parole from state institutions. The proportion of minority clients ranges from 16 percent to 33 percent. In three programs almost all clients are on probation and are referred by court services, while over 40 percent of Alpha's clients and just under three-fourths of 180 Degrees' clients are on parole from state institutions. The proportion of clients with prior juvenile records ranges from 40 percent to 72 percent and the proportion with at least one prior adult felony conviction ranges from 40 percent to 77 percent. Some programs are intended to be short-term, with an emphasis on employment, vocational training, and individual and group counseling, while others are intended to be long-term, with a more intensive therapeutic orientation. The average length of stay for clients who successfully complete the residential phase is 3.7 months at 180 Degrees, 5.2 months at Portland House, 12.3 months at Nexus, 15.0 months at Project Elan, and 16.0 months at Alpha House.

METHOD

The Community Corrections Research Project, University of Minnesota, has collected uniform data on all clients admitted since the beginning of each program. The data base is modest in size, consisting of 23 items collected at program intake and 5 items collected at termination from the residential phase.

Findings are based on all clients who terminated from the residential phase prior to March 1, 1979. The demographic variables include education, age, race, prior juvenile record, prior adult record, correctional status, and current offense. Other variables were analyzed but provided no useful results. The dependent or outcome variable is successful completion of a program's residential phase.² Among the five programs, the

²Although four of the five programs also use a post-residential or independent living phase during which some contact is maintained with the client, the great bulk of services are provided during the residential phase.

proportion of clients who successfully complete the residential phase ranges from 27 percent to 47 percent.³

FINDINGS

Education. Level of education is related to successful completion in a consistent way in all five programs; less educated clients are less likely to complete the residential phase. The clearest division is between clients who have not finished high school and clients who have either a high school diploma or a GED.

Several rather common-sense explanations for these results can be suggested. Dropping out of school may in itself indicate a higher level of disaffection from major social institutions. High school dropouts may also experience more frustration in finding jobs and dealing with bureaucratic procedures and these difficulties may carry over into their participation in the program. There is, however, another possible explanation which is related more directly to the content of the programs. Some staff members have remarked that certain programs, particularly the long-term intensive therapeutic programs, require their clients to handle a large amount of conceptual material. Less educated clients may find this particularly frustrating or may not demonstrate the degree of progress sought by the staff. Some preliminary confirmation of this explanation can be found in Table 1; the three programs with the highest differential between high school dropouts and high school graduates are the long-term programs (average stay for successful clients is over twelve months) while the two programs with the lowest differential are the short-term programs (average stay for successful clients is less than six months).

³Aside from successful completion, terminations can also be classified as neutral (for example, transfer to another agency) and negative (for example, absconding, failing to cooperate, violating house rules, and being convicted of a new offense).

Table 1: PERCENT WHO COMPLETED RESIDENTIAL PHASE BY LEVEL OF EDUCATION

Program	11 Yrs or Less	12 Yrs or More	% Difference
Project Elan	8.7% (23) ^a	45.5% (44)	+36.8
Nexus	21.9% (64)	50.0% (70)	+28.1
Alpha House	20.0% (40)	31.3% (99)	+11.3
Portland House	42.4% (99)	51.8% (114)	+ 9.4
180 Degrees	21.5% (186)	29.8% (302)	+ 8.3

^aThe number in parentheses is the total number of clients at each level of education.

Age. Age is also an important factor but the relationship of age to program completion is more complicated than education. In four of the five programs, the relationship between age and successful completion is curvilinear. The very youngest and the very oldest clients are the least likely to finish, while the intermediate age group has the highest completion rate. Because the programs serve somewhat different age groups, the exact range of this intermediate age group varies from one program to another.

The relationship between age and successful completion is somewhat influenced by education and prior juvenile record. The youngest clients are also the most likely to be high school dropouts and the most likely to have juvenile records, which are both in turn related to failure to complete the residential phase. Even when the influence of these and other variables is taken into account, however, age still has an independent effect on successful completion in three of the five programs.

Table 2: PERCENT WHO COMPLETED RESIDENTIAL PHASE BY AGE

Program	18-21 Years	22-25 Years	26+ Years
Project Elan	33.3% (18) ^a	45.0% (20)	24.1% (29)
	18-19 Years	20-25 Years	26+ Years
Nexus	25.4% (59)	48.4% (64)	27.3% (11)
	18-21 Years	22-25 Years	26+ Years
Alpha House	13.3% (15)	24.0% (40)	22.6% (84)
	18-19 Years	20-25 Years	26+ Years
Portland House	42.6% (94)	49.5% (97)	59.1% (22)
	18-25 Years	26-29 Years	30+ Years
180 Degrees	23.0% (200)	34.0% (100)	26.7% (187)

^aThe number in parentheses is the total number of clients in each age group.

Race. In none of the five programs studied here are there any significant differences between black and white clients. In spite of the fact that they have acquired less formal education, blacks are just as likely to complete the residential phase as whites. The same cannot be said, however, for American Indians. The number of American Indians in the five programs is so small that it would be fruitless to analyze each program separately. However, if Indians from all five programs are combined, only 10 of 46 (22 percent) completed the residential phase; their completion rate is thus substantially below that of both blacks and whites. All ten who completed the residential phase were involved in short-term programs; none of the eleven American Indians in the three long-term programs completed the programs.

Prior Juvenile Record. In three programs, clients with a prior juvenile record are much less likely to complete the program than are clients with no juvenile record. However, education, age and juvenile record are often related to one another. The influence of juvenile record on successful completion of two of the three programs is substantially reduced, though not eliminated, when the effects of these and other variables are taken into account.

Table 3: PERCENT WHO COMPLETED RESIDENTIAL PHASE BY PRIOR JUVENILE RECORD

Program	Record	No Record	% Difference
Project Elan	14.8% (27) ^a	45.0% (40)	+30.2
Nexus	36.1% (97)	37.8% (37)	+ 1.7
Alpha House	20.0% (95)	45.5% (44)	+25.2
Portland House	42.6% (129)	54.8% (84)	+12.2
180 Degrees	27.6% (243)	25.7% (245)	- 1.9

^aThe number in parentheses is the total number of clients with and without a juvenile record.

Prior Adult Record. In one program, Nexus, clients with one or more prior felony convictions are much less likely to complete the program than are clients with no prior convictions. At 180 Degrees, clients with three or more prior felony convictions are only half as likely to finish as those with less extensive records. In Project Elan, however, the relationship is reversed; women with prior felony convictions have the higher completion rate.

Table 4: PERCENT WHO COMPLETED RESIDENTIAL PHASE BY PRIOR FELONY CONVICTIONS

Program	None	One or More
Project Elan	25.0% (40) ^a	44.4% (27)
Nexus	43.4% (76)	27.6% (58)
Portland	46.7% (120)	48.4% (93)

Program	None	One	Two or More
Alpha House	31.3% (32)	34.3% (35)	25.0% (72)

Program	None	One	Two	Three or More
180 Degrees	30.2% (179)	27.5% (171)	26.4% (72)	14.9% (67)

^aThe number in parentheses is the total number of clients with the indicated number of prior felony convictions.

Correctional Status. Only two programs, Alpha House and 180 Degrees, take any substantial number of clients who are on parole from state institutions. In both cases, parolees are less likely to complete the program than are probationers. One might expect parolees to have more extensive criminal records than probationers, but the data show little difference between the groups in the number of prior felony convictions. The influence of correctional status on successful completion is not weakened when prior convictions or any other variable is taken into account.

Current Offense. The current offense is the conviction which has led to the client's placement in a community corrections program. Although there are many ways to organize data on current offense, the simplest is to compare person offenders and property offenders. This distinction produces interesting results in two of the five programs. In Portland House, 65 percent of the person offenders but only 42 percent of the property offenders complete the program. In fact, current offense is more strongly related to successful completion of Portland House than is any other variable considered. In Project Elan, the relationship is reversed. Even though there are few person offenders in Elan, person offenders are not doing well there. Only one of the ten person offenders in Elan has completed the program, while 40 percent of the property offenders have done so. The programs for men have an especially low success rate with persons convicted of forgery, while Project Elan has done exceptionally well with such clients.

SUMMARY AND CONCLUSION

Figure 1 indicates each case in which there is at least a modest relationship between a demographic variable and successful completion. Education and age seem to exert some influence in every program, while other variables have an influence in two or three. In no program was the pattern of influence the same.

There are many inter-relationships among the demographic variables. When the effects of some variables are controlled, other variables, most notably age and juvenile record, are not as strongly related to successful completion as originally appeared. In most programs, education remains the variable with the strongest independent relationship to successful completion. All the demographic variables combined together have much more influence on the dependent variable in the three long-term programs than in the two short-term programs.

Fig. 1. Demographic Variables with Moderate or Strong Relationship to Successful Completion

Variable	Elan	Nexus	Alpha	Portland	180 Degrees
Education	+	+	+	+	+
Age	cv	cv	cv	+	cv
Have Juvenile Record	-		-	-	
Have Prior Felony Conv.	+	-	-		-
On Parole			-		-
Person Offender	-			+	

^{cv} Relationship is curvilinear

The kind of analysis presented here can only be regarded as a first step and as an invitation to further exploration. There are some important limitations to these findings. First, successful completion of a program does not guarantee successful adaptation after termination. Some clients who complete the residential phase commit new offenses, while others who receive negative terminations do not become involved in new criminal activity. Data on post program recidivism is being collected to permit later analysis of its relationship to demographic factors. Second, programs are constantly changing, sometimes in significant ways. Circumstantial evidence indicates that changes in location, staff size, and programming have in some cases affected the rate of program completion. No attempt was made to control for such changes. Third, the Community Corrections Research Project data base is limited to the most basic background factors. More detailed information about the host of social factors that are related to education, age, and the other variables analyzed is needed. Finally, qualitative information from both staff and clients, who are sometimes able to suggest non-obvious explanations or hypotheses based on their insights into the everyday operation of their programs would add richness to these findings.

LIST OF AUTHORS

Maggie Arzdorf-Schubbe is Assistant Director, Minnesota Program and Services for Battered Women, Minnesota Department of Corrections, St. Paul.

Eugene Borgida is an Assistant Professor of Psychology at the University of Minnesota, Minneapolis.

Barry B. Cohen is an Instructor in the Department of Sociology at Macalester College, St. Paul.

Burt Galaway is an Assistant Professor, School of Social Development, University of Minnesota, Duluth, and a senior staff person with Social Development Associates, Inc., St. Paul and Duluth.

Irving I. Gottesman is Professor of Psychology and Director, Behavioral Genetics Center, University of Minnesota, Minneapolis.

Robert Griesgraber is Executive Director of the Minnesota Crime Control Planning Board, St. Paul.

Marjorie Gritzke is a Team Leader in the Research and Evaluation Unit of the Crime Control Planning Board, St. Paul.

Joe Hudson is on leave from the Minnesota Department of Corrections, an Associate Professor, School of Social Development, University of Minnesota, Duluth, and general staff person with Social Development Associates, Inc., St. Paul and Duluth.

Catherine Ludden is an attorney with the firm of Hanft, Fride, O'Brien, and Harries in Duluth.

Don Rawitsch is Manager of User Services, Minnesota Educational Computing Consortium, St. Paul.

Clifton A. Rhodes is a Senior Research Associate with the firm of Walker and Associates, Inc., Minneapolis.

Peter Rode is the Research Director for the Minnesota Supreme Court's Juvenile Justice Study Commission, St. Paul.

END