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PAROLE DECISION-MAKING IN CANADA

Research Towards Decision Guidelines

Joan Nuffield

Research Division Division de la recherche

PAROLE DECISION-MAKING IN CANADA:

RESEARCH TOWARDS DECISION GUIDELINES

by

Joan Nuffield

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TABLE OF CONTENTS

FIGURES AND TABLES

ABSTRACT

The research described in this report was initiated by the National Parole Board of Canada in 1975 and carried out by the Research Division of the Ministry Secretariat of Solicitor General Canada between 1975 and 1977. The researcher studied a random sample of 2,500 full-parole decisions in order to determine which factors were most strongly related to the outcome of the decisions. The results of this analysis were used to form a "model" or abstract description of the decision-making process.

It was found that the seriousness of the offences was not related in a consistent fashion to the rate at which parole was granted. Rather, the study revealed that various offender characteristics were significant to the full-parole decision, characteristics which were in turn related to the probability that the offender would be re-arrested after release.

As a consequence of this finding, the researcher tested three statistical techniques designed to predict whether the offender would be re-arrested within three years of release for any serious (indictable) offence. The simple summation method pioneered by the American criminologist E.W. Burgess, and refined by the British Home Office Research Unit, proved to be the most effective technique for distinguishing between "high" and "low" risk inmates. When tested for its ability to predict violent criminal activity after release, the method was unable to isolate "high risk" inmates with precision, although it was able to identify large numbers of persons who were extremely unlikely to be re-arrested for violent offences after release.

The report concludes by proposing a set of guidelines for the systematic incorporation of this predictive technique into the decision-making processes of the National Parole Board. It is recommended that offenders identified as "good statistical risks" be granted an operating "presumption" in favour of full parole release at their initial date of eligibility; "poor risk" inmates would receive a "presumption" against parole, but would be given priority status for a carefully planned program of graduated conditional releases. Procedures would be established whereby the Board could step outside these guidelines, but exceptions to these operating principles would be monitored and analyzed for their policy implications. It is suggested this new system would address the problem of ensuring greater visibility and equity in the administration of parole policy in Canada.

CHAPTER I

WHY RESEARCH PAROLE DECISIONS?

Parole as it is known today in North America and Britain began in a rudimentary fashion in the late 1800s. As correctional systems have evolved and changed during the 20th century, so have ideas about the proper function of the parole system been challenged and modified. Over the years, penal institutions have been expected in varying degrees to punish wrongdoers, deter potential criminals, protect the public and rehabilitate lawbreakers through physical confinement and special programs. Historical shifts in objectives for the correctional system have usually been reflected in changing ideas about parole. At times when "punishment" is the dominant correctional goal, for example, parole is a rare occurrence and its function is usually to give executive clemency, or some sort of benevolent reprieve to offenders whose sentence seemed unduly harsh in the light of their age or inexperience. Where "protection of the public" is the prevailing rhetoric, the parole authority is expected to be particularly concerned with separating high from low risk inmates. With "rehabilitation" as a central correctional goal, parole boards are perceived to be agencies whose professional expertise should guide the offender through various program stages to freedom. The so-called "justice" model of corrections which has gained popularity in some American jurisdictions is based on the idea that the system should restrict itself to such manageable objectives as humaneness, fairness and cost-efficiency; parole, under this model, is either eliminated or cast in an "equity" role of evening out disparities in sentences given for similar offences by different courts.

The following section outlines the way in which the objectives of the Canadian parole system have been modified over the years and highlights the kind of debate that led to the establishment of the Canadian research project described in this report.

Trends in Canadian Parole

Parole began in Canada with the passage of the Ticket of Leave Act in 1899. The Act provided only for simple clemency, but the ticket of leave system eventually grew to resemble the modern parole process, providing community supervision to inmates conditionally released from federal prisons under specific restrictions. The Fauteux Committee established by the federal government to inquire into the system, reported in 1956 that while it was "astonished" that "such antiquated legislation" could provide "such satisfactory results," (1956:55) it felt the parole authority should become organizationally independent from the penal service (1956:80). Each case should be decided on its merits in order to further the rehabilitation of the offender without unduly jeopardizing the protection of society.

The National Parole Board of Canada (NPB) was established by the Parole Act of 1958 largely as a result of recommendations made by the Fauteux Committee.* The Board was specifically charged with the responsibility of granting parole to inmates if it would aid their "reform and rehabilitation." The new Act contained the somewhat unusual provision that parole be granted when the inmate had "derived maximum benefit from imprisonment" (Canada, Parole Act, 1958, S.8).

From the beginning, parole in Canada was based on the idea of separating high risk inmates from potential victims for the "protection of society" while permitting the release of low-risk inmates "in the shortest possible time" as a part of a program of reform and rehabilitation (Canada, House of Commons, 1958:3373). The Justice Minister introducing the new system even went so far as to add that "it will be [the] responsibility [of NPB Board Members] also to concern themselves indirectly with questions of the rehabilitation and reform training programs in penitentiaries as well as with provision for assistance of those who are released on parole" (Canada, House of Commons, 1958:3727). Parole was therefore to be a "logical step" in the total treatment program of the inmate, and "a transitional step" between confinement and freedom. The assumption was that the incarceration experience of an inmate could be formed into a sequence of increasingly greater benefits for the individual prisoner, until a point of "maximum benefit," or "optimum time" occurred. This point would presumably be detectable by the Board and its staff, who would then release the inmate.

Never in the discussions of the new parole system was parole intended as a means of amending the sentence of the court. If at all, it provided a means of altering the form of service of the sentence from greater to lesser security and vice versa. Ten years later, the Ouimet Committee, appointed to advise the federal government on reform of the entire criminal justice system, was still vigorously advancing this perspective on parole: "Parole is a treatment-oriented correctional measure, not a sentence-correcting measure" (1969:330).

Ouimet saw parole as "designed particularly to assist the offender's reintegration into the community," an "opportunity and a test of his self-control" (1969:330). F.P. Miller, a National Parole Board member writing a little earlier than Ouimet, assumed the same basic position, but without such deliberate naiveté:

> We must also recognize that a release on parole is to some extent a lessening of the punitive effect of the sentence ... Institutional and parole officials may be inclined today to think much more in terms of rehabilitation of the criminal than of the punitive content of the sentence and its deterrent effect on the public. A [minimum parole eligibility date] regulation may be described as an administrative

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*See Appendix A for a description of the structure and powers of the Board.

> method designed to preserve the purpose of the sentence as passed by the court, in both its punitive content and its rehabilitation value. It protects the parole authorities from charges that they are assuming the functions of an appeal court (1965:340-41).

Punishment of serious criminal behaviour and general deterrence of crime were thus not considered parole functions. If they entered the parole equation at all, it was in the service of the minimum period prior to eligibility.

Ouimet also proposed that "every effort be made to reduce the prison population of Canada" (1969:310), and recommended that both probation and parole be increasingly used as alternatives to imprisonment. The Ouimet Committee advocated the passage of "dangerous offender" legislation, partly on the grounds that "improved methods of identifying the dangerous offender would promote a wider acceptance of community-based treatment for non-dangerous offenders with a consequent reduction in the use of imprisonment as a correctional measure" (1969:24).

The years following Ouimet saw an all-time peak in the parole grant rate in 1970, followed by a gradual decline which, with minor fluctuations, has continued to the present.* These years marked a period of increasing criticism of the parole system, fed by a number of visibly violent parole failures. Criminal court judges expressed the view that parole was, in fact, usurping the sentencing function, and undermining the deterrent effect of the original term. This climate of feeling was largely responsible for the creation of two more commissions of inquiry into the Canadian parole system: the Hugessen Committee, which reported in 1973, and the Goldenberg Committee of the Senate, which presented its recommendations in 1974.

Although different in tone, both reports are remarkably similar in their major recommendations and in the belief that parole should divest itself of its origins as "the benevolent state giving clemency-type freedom to the deserving few" (Goldenberg, 1974:5) and achieve full "integration with the criminal justice continuum" (Hugessen, 1973:57). Despite the public criticism of parole, both committees advocated its liberal use. In the words of Goldenberg, "parole should be extended to the greatest possible number of incarcerated offenders" (1974:43). Hugessen saw parole as a way of reducing the "social and human costs" incurred by the "necessary evil" of prisons (1973:57). Both Committees recommended the role of the parole authority be expanded. Unescorted temporary absences, and in the Hugessen report, transfers from one institution to another, were to become the responsibility of the National Parole Board in order that an offender's sentence could be shaped into a "smooth, efficient plan of testing his performance through stages of increasing freedom." In 1977, Parole Board jurisdiction was statutorily extended to include unescorted temporary absences.

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* See Appendix B for NPB parole rates.

Both Goldenberg and Hugessen advocated that the parole authority become a "quasi-judicial" body. Only Hugessen, however, contemplated any mechanism for ensuring that the Board operate in a quasi-judicial manner. The Hugessen Task Force recommended that the Parole Act be amended to place it within the purview of the Federal Court Act. Conformity of Board procedures to standards of "natural justice" could thus be reviewed in the courtroom. It is clear, however, that Hugessen did not support the idea of actual judicial appeal of the substance of parole decisions, on the grounds that a flood of litigation would result, and the importance of the parole authority would be "downgraded" (1973:45-6). The Hugessen position has been reflected in subsequent policy which enshrines procedural safeguards in law, but stops short of allowing a direct appeal of a parole decision in a court of law. Reviewing courts may now rule on whether the Board's [illegible] conform to standards of natural justice, but no parole decision may be directly appealed on its substantive merits.

Notably absent from both reports is any overt support for the rehabilitative model of corrections. The Senate Report, in fact, took pains to sever the traditional link between parole and rehabilitation, stating that the rehabilitative notion of parole is a "misconception which must be destroyed" (1974:41-2). Hugessen was conspicuously silent on the subject, though there is indirect support for the rehabilitative idea in his endorsement of Model Penal Code criteria developed by American reformers. With this model, parole may be refused if, in the opinion of the Board, the inmate's continued treatment in the institution "will substantially enhance his capacity to lead a law-abiding life when released at a later date" (American Law Institute, 1958:305-9). The language implies, however, that a certain proof of the efficacy of the treatment would be required before parole could be refused on these grounds.

The absence of any explicit endorsement of the rehabilitative ideal in Goldenberg and Hugessen marks a significant shift away from the very language of the Parole Act, which stipulates that "the reform and rehabilitation of the inmate will be aided by a grant of parole." This transition reflects a growing disenchantment with the idea of correctional treatment during the late 1960s and early 1970s. Beginning principally in California with Robison (1971), criticisms of the rehabilitative model were brought into focus in a review, commissioned by the State of New York, of all English-language treatment studies (Martinson, 1974). The anti-treatment position was endorsed in part by the U.S. National Advisory Commission on Criminal Justice Standards and Goals (1973), and found its way into legislative proposals in a number of American states. It soon found Canadian echoes in the work of the Law Reform Commission of Canada and discussion papers produced by Canadian correctional authorities.

The landmark Imprisonment and Release (1975) paper of the Law Reform Commission recommended that incarceration be used only as a "last resort." Specifically, the Commission limited the justifications of imprisonment to three: "denunciation" of serious criminal behaviour, "separation" of the dangerous offenders from society, and as a penalty for an individual's "wilful non-compliance" with community-based sanctions

(1975:12-13). Rehabilitation was rejected as a rationale for sentencing and releasing decisions. A release authority similar to a parole board would be established with jurisdiction only over "dangerous offenders." Other prisoners would not be subject to its authority and they would normally serve their entire sentence in the institution. The chief function of this proposed "Sentence Supervision Board" would be to interrupt a dangerous offender's predetermined program of graduated release where, in the board's judgment, he has demonstrated his inability to satisfactorily handle a given stage in that program. The board's role would be essentially a negative one: veto over a program largely planned and executed by prison officials (1965:41-44).

This view of incarceration is similar to the one advanced in the 1977 discussion paper, The Role of Federal Corrections in Canada, wherein it was suggested that an offender should never be sent to prison for the purpose of receiving treatment. This is not to say program "opportunities" would not be provided in the institution, but rather that an offender could not be imprisoned for the express purpose of treatment. The Role paper did not directly address the question of parole, but the existence of program "opportunities" could arguably provide an inmate with a means of demonstrating readiness for release to paroling authorities. Although it was not made explicit, it is possible that the role of a releasing body would be reduced as a result of the diminished significance placed on treatment and clinical judgment.

Parole critics in New York (Clark and Rudenstine, 1975), Illinois (Illinois Law Enforcement Commission, 1975), and elsewhere have even argued that if it is true that prison treatment programs are worthless, then there is no need for a decision-making body to evaluate the inmate's progress in the institution, and to estimate when he or she has achieved the maximum benefit from incarceration. The popularity of this "parole abolition" position is reflected in the fact that the states of Maine, California, Illinois, Indiana, Alaska, Colorado, Minnesota, Missouri, New Mexico, New Jersey, North Carolina and Tennessee have eliminated their discretionary release boards.

Although pressure for the abolition of parole has not reached such dramatic proportions in Canada, some critics in this country have indicated fundamental concerns about the parole system as a whole. Reformers concerned with inmates' rights criticize parole generally on the grounds that it is inequitable because inmates committing similar crimes often serve dissimilar amounts of time. They find the system unduly reliant on the opinions of criminal justice professionals which they equate with arbitrariness and low visibility in decision-making and suggest it increases inmate anxiety over release dates.

Identifying the Research Task

Charges of inequities in the administration of parole and running debates about the proper objectives of the parole system point to a central and persistent question about the actual substance of parole policy. It would

seem that the practice of evaluating each parole application "on its merits" has had the side effect of reducing the visibility of actual policy and creating the appearance of an inequitable system. The Auditor General of Canada stated that the National Parole Board was "not in a position to evaluate its effectiveness since it has not specified criteria for assessing the quality and consistency of its decision" (1978:95-6). Fluctuations in the parole rate have done nothing to mitigate the charge of inconsistency. Between 1964 and 1970, the parole rate climbed from a low of 26% to a high of 66%, declining almost steadily again to 33% by 1976. Goldenberg flatly states: "The number of paroles granted should neither fluctuate with events nor personalities. The fact that large numbers of parolees fail to observe parole conditions does not justify denial of parole to others who have made plans" (1974:43).

Considerations such as these led the National Parole Board to consider researching its own decisions in order to determine which parole objectives were actually being served in the paroling process and how they might be more consistently applied. Parole boards in other countries facing similar criticisms had commissioned research during the 1960s and 1970s with some success. In particular, several boards of parole had financed studies designed to "model" parole decision-making, that is, to create a compact, abstract description of the central factors entering into the process. In "parole modelling" studies, researchers examine past decisions made by a parole board in an attempt to discover substantive determinants of actual decisions that may not, on the surface, be apparent in the confusing welter of individual cases. In some jurisdictions, the research also led to the development of standardized formulas for release and guidelines for the consistent administration of parole policy. In this way, parole boards were able to meet criticisms that policy was unfairly or inequitably applied to individual cases.

Chapter II presents a background review of parole research projects and illustrates the kinds of issues raised by these projects and the methods developed by the researchers. These studies provided important groundwork for the Parole Guidelines Project established by the National Parole Board in 1975 and helped frame its central research question: "What inmate case characteristics are being taken into account in NPB decisions?" As the following chapter illustrates, American and British researchers were able, in several instances, to translate the results of their studies into standardized parole decision rules. Similarly, the findings of the research project described in the report are used as the basis of a proposal for the development of parole guidelines for use by the National Parole Board of Canada.

CHAPTER II

A DISCUSSION OF THE LITERATURE

Parole Decision-Making

In the late 1960s, the U.S. federal Board of Parole was under heavy criticism for its apparent lack of substantive policy. The Board was accused of being "arbitrary and capricious" in its decision-making, "arbitrary" in the sense that criteria for parole release were either entirely absent or arbitrarily determined, and "capricious" in that individuals coming before the Board were not certain of having release policy equitably applied to their case. The Board in turn replied that it had no policy as such, but examined each case on its individual merits.

In the early 1970s, Gottfredson et al. (1973b) were engaged to conduct a "modelling" study of the Board's decisions. They examined a sizeable sample of past decisions that the Board had made on youthful offenders under its jurisdiction. These were offenders who had entered federal prisons with a maximum sentence only, so the Board was under no judicial constraints to observe a fixed minimum term prior to parole eligibility. The research revealed that in fact two considerations were consistently reflected in the Board's decisions: the "seriousness" of the crime and the "risk" that the offender would engage again in criminal activity upon release. Although the Board believed it was taking the offender's performance in the institution into account, this factor was only of marginal significance.

These findings were eventually used to create a standardized "schedule" for deciding cases. Each inmate committing a crime of a given "seriousness" and displaying a given set of characteristics was assigned an approximate time to be served in the institution; the inmate characteristics used in the schema were those empirically established as best reflecting the "risk" that the offender would commit future crimes upon release. Case decisions for the vast majority of inmates thus became a relatively simple and non-discretionary matter of ensuring that the offender's crime was accurately classified on a set scale and that other information about the offender was correctly combined into a mathematical score reflecting risk. Hearing officers were then able to make final parole decisions in most cases on the basis of the predetermined schedule. Inmates were informed of the basis for decision-making, and could be virtually certain of their release date soon after their admission to the prison. If the Board wished to step outside the predetermined range of months to be served, it was required to give the inmate written reasons.

Various "laboratory" experiments were also performed at the time of the Gottfredson research. A set of fictional case files was drawn up, and actual Board members were asked to make decisions on them under controlled conditions. A statistical estimate of "risk" was then computed for each hypothetical inmate and included in the case file. The addition of this mathematical score had the effect of reducing the overall institutional time awarded to offenders, but did not reduce the differences among the parole decisions of individual Board members. There was also some evidence to support the notion that the mere provision of a statistical score did not affect the perceived difficulty of deciding a case. On the whole, the experiments suggested that although the use of a statistical device may have an overall net effect on the parole rate, it will not necessarily increase the consistency of parole decisions (Gottfredson et al., 1973b:1073).

Another "modelling" exercise was undertaken with the Parole Board of England and Wales. There, an inmate generally serves one-third of the sentence of the court before being considered for parole. Extensive screening of parole-eligible cases is done by Local Review Committees (LRCs), boards attached to each prison and comprising five members: the prison governor, a probation officer, a member of the Board of Visitors, and two members of the public. Local Review Committees not only assess the cases of parole-eligible prisoners, but actually eliminate some cases from consideration before they are ever seen by the Board. For most cases found by the LRCs to be unsuitable for parole, the decision is effectively final.

The researchers, Nuttall et al. (1977), discovered that there was considerable variation among the policies of the different Local Review Committees: some were very conservative in the numbers of persons they recommended for parole, and others were more liberal in their recommendations. This was partially a function of the different types of cases being considered by each Committee: some dealt with populations of "serious" offenders, while others saw mostly offenders with less extensive records, with the result that each Committee's "skimming" of their best cases meant considerable differences in cases ultimately referred on to the Board. The Board's tendency was to adopt Committee recommendations in most instances, so the disparity remained uncorrected at the national level. Despite these inconsistencies, however, the researchers observed that parolled inmates on the whole were those who were less likely to be re-arrested for criminal activity after release.

The researchers therefore devised a method to increase standardization of decisions. They developed a statistical instrument to estimate inmates' chances of re-arrest after release. All inmates approaching their eligibility date were scored on this instrument, and the score was included in case file materials. All offenders whose score suggested that the "risk" of their re-arrest was 35 per cent or less were automatically referred to the Board at the time of parole eligibility, and in most cases the Board paroled these persons at that date without extensive review. In later years, this system was altered to create automatic referral for property offenders with a less than 50 per cent

chance of re-arrest. Subsequent refinements provided for reviews later in the sentence. In effect, the model the Board moved towards was that of "presumption of parole" for low-risk cases: that is, a functional assumption that an offender will be paroled, unless significant factors exist to reverse that presumption.

A similar research project was mounted in California. By the middle of this century, the California correctional system was the American jurisdiction most characterized by the treatment expertise/discretion orientation advocated by Menninger (1955). Sentences in California were set by statute, not by the judge, and most statutory terms were fixed at lengthy periods in order to allow for extensive incarceration of the worst possible malefactor, and to give broad scope to the discretion of prison and officials, who were formally committed to the rehabilitative ideal. As a result, the average time served by California prisoners was almost a year longer than that served by felons in state prisons as a whole (Crother, 1969). Charges that the California system led to high inmate anxiety, staff tension, riots and other institutional violence were common (Mitford, 1971).

The problems associated with this sentencing and releasing system eventually became a matter of concern to decision-makers. Accordingly, a "modelling" study was mounted there in the mid-1970s, with the intention of creating voluntary guidelines for parole decision-making (California, 1975). Data from the California record-keeping system were used to determine the average amounts of time being served by offenders who committed various crimes in the penal code. Crimes in each category were further subdivided into "typical" and "aggravated" types, an "aggravated" crime being one exhibiting characteristics perceived to be particularly reprehensible. One of the most interesting features of the typical/aggravated breakdown is that the criteria for classifying an offender into one or the other category were entirely based on the circumstances surrounding the offence: the use of a weapon, the age of the victim, and so on. Each category of crime was then assigned a predetermined time to be served falling within a narrow range of months: additional months were also added to an inmate's time for each previous prison term. At a hearing six months after admission, each inmate was told how he or she had been classified and on what grounds. The release date was set and this remained firm unless additional relevant information was discovered, in which case a new hearing was held and this information discussed. Thus, the former rehabilitative ideal was entirely eliminated as a formal objective of the system. The parole authority received regular and frequent feedback on the decisions it made each month, and this feedback was used in order to ensure that decisions were equitable for persons committing similar crimes under similar circumstances. Interestingly, these reforms did not save the parole authority from abolition in 1977.

Another "modelling" exercise took place in Minnesota prior to the abolition of the parole authority there. The sentence structure in the state of Minnesota was akin to California's: long, statutorily fixed maximum terms and no minimum term prior to parole eligibility, except in

the case of first degree murder and selected weapons offences. State researchers studied a sample of recent releases from Minnesota prisons and for each offender determined "months served," "offence severity," and statistical "risk" of re-arrest. "Risk" and "severity" scores were formed into categories, and for all combinations of "risk" categories with each level of "seriousness," the average time offenders had served was calculated. These averages were eventually used to create a "schedule" of presumptive release dates. In a later and very interesting development, most non-violent offenders were made eligible for a "Mutual Agreement Programming" contract in which they were permitted to plan a program of treatment in consultation with correctional officials. Successful completion of the contract guaranteed the offender release at a date fixed approximately six months earlier than the date at which the same offender would have otherwise been released (State of Minnesota, undated).

Exercises in parole "modelling" of this type have taken place in other jurisdictions in the United States. Daiger et al. (1978) report the findings of a study designed to predict time served by Maryland inmates. The research revealed decisions were primarily a function of crime seriousness and institutional disciplinary record. Gottfredson (1978b) has surveyed "modelling" exercises done in a number of American states and developed a typology of "modelling" approaches.

Other empirical studies of parole decision-making somewhat more limited in scope than these modelling studies have also produced some interesting results. A study (Heinz et al., 1976) of the Illinois parole authority, found that institutional personnel's clinical predictions of the risk of re-arrest bore the strongest association with Board decisions. This finding was considered potentially problematic, because it indicated Board reliance on "junior" correctional officials whose decisions were of low visibility and whose procedures were unregulated.

In recent years, some empirical study of parole decision-making has been undertaken in Canada. Léveillé (1970) examined a sample of decisions made by the National Parole Board, and found that recommendations made by penitentiary and parole staff were by far the best predictors of a parole grant or refusal. When such evaluative statements by case staff were suppressed from the analysis, and all other available information retained, including much of the data upon which staff recommendations must have been based, the efficiency with which Board decisions could be explained appeared to drop dramatically.

Waller (1974) also examined certain aspects of National Parole Board decision-making, as it applied to Ontario region inmates. While the author warns against drawing causal inferences, he did note that persons committing more serious offences and admitted under longer sentences were more likely to be granted parole. Marital status, age, educational level, and prior record were also found to be somewhat related to the parole decision, but apparently had no major impact.

Macnaughton-Smith's (1976) findings from a study of federal parole decisions served to focus attention on the same kinds of issues as

Léveillé. The author studied the effect of offender- and offence-related information on parole decisions, and also constructed a "ranking" of the organizational proximity to the Board of the source of the information or recommendation. When the factors were analyzed, it appeared that the source of the information was more important to Board decisions than the nature of the information itself. In general, the closer the source was to the Board in organizational structure and in professional status, the more influential was the recommendation.

The results of these studies point to a number of conclusions about parole decision-making. In jurisdictions where the sentencing structure does not create minimum terms to be served prior to parole eligibility, empirical research suggests parole decision-making is principally a function of the perceived "seriousness" of the crime and the "risk" of re-offending. Where there are minimum terms which, in a sense, could be seen as settling the matter of punishment to be exacted for a crime, the parole decision may be more exclusively concerned with "risk." In certain cases, it seems the opinions of correctional staff may have a greater impact on parole decisions than substantive factors taken alone.

These empirical studies represent an attempt to render parole policy "visible" to decision-makers, offenders, and the public. In certain jurisdictions, they have led to the development of parole guidelines or a "presumption of parole" model which allow inmates to know early on in their sentence, approximately how much time they are going to serve. These research exercises also mark a major step forward in the effort to inject greater "equity" into decisions by permitting the development of standardized "schedules" of release and by paving the way for the ongoing monitoring of individual cases against a "standard." For now, these exercises are all "descriptive," in the sense that they merely distill the functions of the past into a model for the future. However, they also provide the possibility for a later exercise in "prescriptive" policy-making, for once the relevant information about actual decision-making is "on the table", rendering parole policy more visible, the players in the game may be able to discuss a change in the rules.

Almost without exception, the studies point to the significance in parole decision-making of the "risk" function; that is, the probability or perceived probability that the offender will "recidivate." "Recidivism" is variously defined in the literature: definitions range from failure to complete the parole or mandatory supervision period without significant problems, to conviction of the offender for a new crime within a specified period after release. Generally speaking, "recidivism" means that the offender has come again into contact with an agency of the criminal justice system in a manner considered to be negative, be it through the commission of a new crime or though the failure to live up to one of the technical conditions imposed upon him after release.

Parole boards are concerned about inmates' risk of recidivating. They are also increasingly concerned about how accurately they are able to predict recidivism, and especially how their own judgment and the "clinical" judgment of criminal justice professionals such as psychologists and parole officers happens to compare with the predictive capacity of statistical "devices" and computers. The following section presents a general discussion of statistical risk prediction devices. The question of predicting violent recidivism is addressed separately.

Predicting General Recidivism: The View From the Boardroom

Statistical methods of predicting criminal recidivism have been around for more than half a century.* Despite fifty years of efforts, however, statistical prediction devices are not particularly efficient in telling us who will recidivate and who will not. In fact, a theme in many recent reviews on the subject (Heinz et al., 1976; Friedman and Mann, 1976; Inciardi and McBride, 1977) has been our distinct lack of progress in improving the hit-miss ratio of such devices. As one study put it: "While great effort has been exerted and methodology has been improved, it still appears that parole predictions have not become vastly more accurate than the original predictions made by Burgess 40 years ago" (Dean and Duggan, 1968:458).

Statistical prediction devices group together offenders displaying similar characteristics, of which an anticipated number are expected to recidivate and the remainder are not. The ideal prediction device, therefore, would group all offenders into one or the other of only two categories: the first containing persons, all or 100% of whom would recidivate, and the second containing persons, none of whom would recidivate. Uncertainty would be entirely removed. Unfortunately, prediction devices rarely work with such efficiency. The groups isolated usually display recidivism rates closer to 50% than to 100% or 0%, so that not a great deal of predictive power is gained over blind assignment of subjects to categories, or the use of the general average recidivism rate as the best guess for all offenders.**

Critics have offered various explanations to account for these shortcomings. They have suggested the field suffers from a lack of theoretical models to serve as the basis for prediction and cite various methodological problems, including the absence, to date, of models incorporating conditional, situational information. Data sets may also be inadequate and the data contained in them inaccurate. Perhaps most importantly, it has been argued that the vast diversity of human experience and environmental influence may never be susceptible to predictive analysis.

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* There is a vast amount of research and writing on this subject. The reader is referred to several excellent reviews: Simon, 1971; Gottfredson, 1967; Mannheim and Wilkins, 1955.

**For an excellent discussion of the problem of predictive efficiency generally, see Simon (1971).

It has been noted (Hayner, 1966) that parole decision-makers are often less than enthusiastic about using statistical devices in their work. Parole board members are no doubt left cold by an item in a case file stating that an inmate falls into a category from which 60 per cent of the offenders will recidivate. Such information, standing alone, is of limited utility to a decision-maker who must identify the individual recidivist and who may wish to think in terms of "dynamic" or "conditional" risk; that is, in terms of the possibility of improving or decreasing an offender's chances of success with a certain program of treatment, a particular parole officer, or a longer or shorter period of imprisonment. Prediction instruments are typically made up from information items such as age, offence and prior record, which are known from the day the offender enters the institution. In general, they are unable to detect the influence of treatment on parole programs. Waller (1974) found that differences in success rates between parolees and persons not paroled could be accounted for by differences in offender characteristics, and that the fact of parole supervision added no additional weight. It has been argued (Robison and Smith, 1971) that the reason predictive devices are unmoved by treatment program participation is that treatment simply does not work. It may of course be that correctional interventions do have a real effect on recidivism rates, but this influence is presently untapped or unmeasurable. Little is known for certain in the correctional field about the impact of institutional programs, and prediction devices can offer no help to decision-makers who are interested in this "dynamic" risk.

Another problem parole authorities have with prediction devices is that research definitions of recidivism are not always designed to fit the organizational needs of parole decision-makers. Researchers make use of a standard follow-up period which is often different in length from the parole supervision period, and prefer a re-arrest or re-conviction criterion which is more clear cut and less susceptible to organizational and judgmental fluctuations than is parole revocation (Takagi and Robison, 1968). Parole authorities prefer to use the parole period as the designated period of study because it yields statistics tailored to fit the period during which they have legal control over an offender. Researchers, however, continue to use re-arrest or re-conviction within a standardized time frame as a measure of recidivism in an attempt to create an analytical framework from which they can isolate actual determinants of criminal behaviour more effectively.

A second objection made by parole authorities is that using only re-arrest, within a fixed period, even for an indictable offence, provides too little information about the offence. Specifically, will the crime be violent or non-violent? Will it seriously harm someone in a way spectacular enough to reach the media and undermine public credibility in the parole system? Or will it be a "nuisance" or property crime? Parole board members who are convinced that an inmate's return to crime is likely to be through rape will weigh their parole decision differently than if they believe the inmate might forge a cheque. There is clearly a need to differentiate between the "risk" of violent recidivism and the "risk" of non-violent recidivism. Meeting this need is another matter, however.

In view of the somewhat limited efficiency of prediction devices, their chronic unresponsiveness to treatment data, and the problem of establishing a unitary measure of recidivism, what advantages can there be to their use? Criminologists argue that there are three. The first is that statistical devices with all their acknowledged limitations are apparently still more accurate than human judgment, even where this human judgment is "clinical" or professionally informed. In his classic 1928 work in prediction, Burgess describes how he tested his scoring system against the judgments of two prison psychologists and against his own educated guesses. The statistical device fared consistently better than did the three humans (Burgess, 1928). Gottfredson (1967) conducted a similar experiment over 30 years later, testing a prison superintendant and a group of psychologists and psychiatrists against the general California recidivism rate. The statistical score did better. Moreover, when the clinical judgments were added to the score in order to form a multiple index, no further predictive power was gained.

Gottfredson et al. (1973b: Volume 6), in the course of the "laboratory" work connected to the U.S. Board of Parole Project,* found that members of the Board, studying the same five cases, varied an average of 40 per cent in their estimates of an offender's chances of re-offending. Moreover, members' estimates tended on the whole towards a greater pessimism than actual parolee performance warranted. Meehl (1954), in a multi-disciplinary review of clinical and statistical prediction, tended to the view that where a reasonably objective, narrowly defined phenomenon is to be "predicted", statistical instruments on the whole will be more efficient than clinical judgments. Heinz et al. (1976) also conclude that the bulk of the available evidence favours statistical prediction.

The second advantage to using statistical prediction is, of course, that, where the score is relied upon, it serves as a uniform basis for risk assessment. It will be recalled that the Gottfredson research suggested that where the risk score was simply supplied as a data item in the case file, none of the variation in individual members' decisions would be reduced. However, if the score is in some way incorporated directly into policy guidelines, as it was in the U.S. federal project and for the low-risk inmates in England, the risk function has at least the potential for consistent application in all cases.

Equity in criminal justice decision-making has assumed a greater importance as a correctional objective in recent years as perhaps the only measurable approximation of "justice" available to us. Few other objective or universal standards can be found to determine what a decision ought to be about a particular offender at a given critical stage. From the standpoint of denouncing reprehensible behaviour, for example, there is little agreement on how much punishment a given offender or offence deserves. Critics of the rehabilitative model of sentencing have been especially vocal in advocating that equity and predictability of decisions replace the ideal of "individualizing" the term and treatment to fit each inmate (Illinois Law Enforcement Commission, 1975; von Hirsch, 1976;

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* In 1976 the U.S. Board of Parole was renamed the United States Parole Commission.

Frankel, 1972). In the absence of any real concensus about punishment or rehabilitation, criminal justice professionals have increasingly concerned themselves with ensuring equitable treatment for similar offenders, although there is no clear agreement on what that treatment should be.

It would probably be fair to characterize most parole "modelling" projects as exercises in introducing greater equity into parole decisions. Although standardized release schedules created from this type of research activity ensure that similar offenders receive similar prison terms, there is little tradition to dictate how long these periods of time will be in years, months, or weeks. Thus, the "capriciousness" or lack of equity of which the U.S. Board of Parole was accused is eliminated for those cases using the guidelines, but a certain "arbitrariness" remains, inasmuch as time-served ranges were derived from parole practice prior to the reform.

The third advantage to using a statistical index of risk is that it renders parole policy more "visible." The public is then in a position to become better informed on the operations of public agencies and policies may be more easily debated and more rationally modified. Greater accountability is also possible under a system where policies are explicit. When the factors entering into a decision become more visible, an inmate is in a position to contest their validity if he feels he has been improperly categorized. Such visibility could arguably increase the perception that the system is one administering "criminal justice."

Predicting Violent Recidivism

To be able to identify "dangerous" persons would be clearly desirable. The Ouimet Committee (1969) adopted the position that resources and secure confinement should be reserved for the "dangerous," in order that the non-dangerous majority could be handled in less severe settings. Unfortunately, social scientists have searched virtually in vain for clues to the violent personality, even to the point of suggesting we might wish to suspect children of later violence if they had wet their beds, tortured animals, or set fires at an early age. Criminologists studying populations of individuals convicted of criminal offences have been similarly unable to accurately determine which of them is dangerous, and, in fact, no reliable method of identifying those offenders who will recidivate violently has ever been developed, despite enthusiastic attempts (Kozol, 1975; Molof, 1965; Steadman and Cocozza, 1974; Steadman and Braff, 1975; Sturrup, 1968; Wenk, et al., 1972). Efforts to predict violent recidivism have fallen on the double-edged sword of failing to identify most of the offenders who would recidivate violently, and incorrectly labelling as "dangerous" a host of offenders who would not recidivate violently.

This double-edged sword bears further examination. It is inextricably tied to what has come to be known among researchers as "the base rate problem." Violent recidivism chronically has a low "base rate," that is, among the entire population of persons under study, typically only a small percentage commit, or at least are detected* in the commission of, later violent crime. Researchers Wenk et al. (1972) defined "violent recidivism" as any homicide, assault (including resisting arrest), or act of mayhem. Only 2.5 per cent of their sample were detected committing such crimes after release. Molof (1965), using a definition which included any homicide, assault, kidnapping, violent sex offence, and certain other crimes with potential for physical harm, emerged with a base rate of 11 per cent.

When base rates are typically so low, they almost inevitably invite overprediction. In a classic hypothetical example, Livermore et al. (1968) explain:

> Assume that one person out of a thousand will kill: a low "base rate". Assume also that an exceptionally accurate test is created which differentiates with 95 per cent effectiveness those who will kill from those who will not. If 100,000 people were tested, out of the 100 who would kill, 95 would be isolated. Unfortunately, out of the 99,900 who would not kill, 4,995 people would also be isolated as potential killers. In these circumstances, it is clear that we could not justify incarcerating all 5,090 people.

In this example, moreover, the authors assume that one side of our double-edged sword has been blunted: their hypothetical prediction instrument is 95 per cent effective. In the real world such instruments are far from being that accurate. Of all the methods they tried, for example, the best predictor located by Wenk et al. (1972) was only about 50 per cent effective. This means it only identified about half the persons who later recidivated violently.

In Canada, little work has been done on violent recidivism. Marcus (1970) presents an unvalidated "dangerousness score" developed on a sample of persons officially sentenced to indeterminate (potential life) terms as dangerous sexual offenders. In an exploration of possible new directions for violence-prediction methodology, Chase and Krames (1977) conclude that the "existing approaches" are "not notably successful."

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*It is, of course, next to impossible to determine how much of violent crime committed goes undetected, unreported, or otherwise unrecorded for the researcher to examine.

Quinsey et al. (1977) are more forceful in their assessment of the current state of the art: "We cannot yet predict with an acceptable degree of accuracy which men will be dangerous upon release."

The tendency to over-predict violence generally leads to the creation of "false positive" errors whereby certain offenders are incorrectly identified as future violent recidivists when in fact they will not be. Researchers will often argue that, under the circumstances, it is best for decision-makers to simply assume that no one coming before them will recidivate violently. If, for example, it is true that only 2.5 per cent of an existing inmate population will ever recidivate violently, the most accurate prediction about any one individual is that he or she is non-violent. Given the low base rates of violent recidivism then, "not dangerous" in all instances will be the "best guess."

Scientific logic notwithstanding, it is clear parole boards must continue in their attempts to identify offenders with the potential for violence. "False positive" errors are commonly perceived by boards and the public as much less serious than "false negative" errors: errors of releasing persons who will later commit violence. In practical terms, the "best guess" method may seem hopelessly inadequate. Individuals like Charles Manson and Richard Blass make it clear that it would be foolish to suggest parole boards should refrain from making intuitive judgments where case factors are unusually disturbing and point inescapably to the conclusion that the inmate will be dangerous after release.

A more practical approach to research-based policy than the simple "best guess" method is obviously required. Unless an acceptable violence-prediction device can be developed, however, advising parole boards on "who is dangerous" is not possible. However, exploring the notion of "who is not dangerous" would seem to be in order.

CHAPTER III

TOWARDS A "MODEL" OF NATIONAL PAROLE BOARD DECISION-MAKING

Questions such as the ones raised, in the last chapter, by "modelling" and recidivism studies in other jurisdictions helped clarify the direction of the Parole Guidelines Project established by the National Parole Board of Canada in 1975. It was determined that the first objective of the Project would be to "model" a large sample of parole decisions made by the NPB. As we shall see, the results of this "modelling" exercise were such that it was decided that several techniques for estimating recidivism should be tested and evaluated for possible use by the Board. The report concludes with a proposal for incorporating a recidivism prediction instrument into the decision-making procedures of the National Parole Board.

The empirical work described in this report was conducted by the Research Division of the Ministry of the Solicitor General. The research took place between 1975 and 1977; the period under study ran effectively from 1970 to 1975. In this chapter, the "modelling" segment of the research is described.

Design of the Study

The researcher undertook to examine some 2,500 Parole Board decisions made over a three-year period in order to make explicit which factors, if any, were consistently related to the outcome of parole decisions. Pertinent case information on each offender about whom a decision had been made was analyzed statistically to determine which offender characteristics were actually associated with parole decisions in a systematic way.

The researcher sought to draw out the more significant case factors using two statistical techniques: regression analysis and predictive attribute analysis. The results of these analyses of all the parole decisions were abstracted into a single working "model" of the decision-making process as a whole.

The Sample

The research was based on a representative sample of about one-quarter of male inmates released from Canadian federal penitentiaries in the years 1970, 1971 and 1972. The inmates studied were those who had entered federal institutions following a criminal conviction: those entering through revocation or forfeiture of parole or mandatory supervision, and those entering through transfer from provincial jurisdiction, were not included in the research. A small number of inmates who had left the penitentiaries through death, court order, deportation or transfer to provincial jurisdiction, were also excluded from the data base. A random

sample of 2,500, drawn from the remaining population, constituted the offender group on which the research was based.

Data was collected and merged from three sources: the Inmate Records System of the Canadian Penitentiary Service,* admission and career files from Statistics Canada, and records of arrests and convictions noted by police and court agencies and centrally collated in Ottawa.

Information was gathered on the offender's crime as it appeared in the formal charge of conviction, his prior criminal history, and certain "social" characteristics such as marital status, and education. Additional criminal convictions after release were also a part of the data set, and the follow-up period ran through to 1975.

No data was compiled about the inmate's participation in treatment programs in the institution. It was felt that the information available on this subject would be of a general nature and quite undefinitive about the actual type or quality of the treatment received, the offender's response to it, or any conclusions the Parole Board might have drawn from it. Another item deliberately excluded from the data set was the recommendation forwarded to the Board by the case staff at the time of parole consideration. Previous studies of Parole Board decisions (Macnaughton-Smith, 1976) have indicated that recommendations by penitentiary and parole case staff are strongly associated with parole decisions, but it is not known the extent to which the decision-maker follows the recommendations, the person making the recommendations second-guesses the decision maker's inclination, or both decision and recommendation are determined by assumptions and policies common to both parties. The principal objective of this research, however, was to discover if certain factors were systematically associated with the outcomes of parole decisions rather than to determine the influence of third-party interpretations of case factors on decisions. Therefore, the parole recommendation was eliminated as a data item.

Offender Characteristics

About a quarter of the offenders in the sample entered the penitentiary system on break and enter charges. In all, "pure" property crimes account for about half of the sample. Offences of this type include break and enter, theft, fraud, forgery, possession or receiving of stolen goods, and acts involving damage to property. Robbery, that is, theft where there is a real or implied threat of violence accounts for an additional fifth of the offences; other crimes of violence for another fifth; and miscellaneous offences, such as narcotics and escape, for the remainder.

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*In 1978, the Canadian Penitentiary Service was amalgamated with the federal parole service to form The Correctional Service of Canada.

Four out of every five offenders had been convicted of a serious (indictable) offence at least once before. Half had more than three prior convictions. Three-quarters had been imprisoned before, either in federal or provincial institutions.

The average offender in the sample was 28 years old at the time of admission to penitentiary and had never been married; less than a third were married or had a common-law spouse. About half never reached high-school; ninety per cent never went beyond grade 10 in high school. Sixty per cent were unemployed at the time of the arrest which resulted in their admission to penitentiary. One-fifth were sent to penitentiary from a court located in Metropolitan Toronto or Montreal. Half were sentenced from an urban area with a population of 100,000 or more persons.

About two-fifths of the offenders in the sample received a sentence of two years. About 70 per cent entered with a term of three years or less, and 90 per cent with five years or less.

Measurement of Parole Decisions

An offender's "aggregate" sentence, that is, the total time awarded by the court which may include consecutive sentences for multiple convictions, largely determines the "time-discretion" within which the Parole Board operates. The initial parole eligibility date is normally set at one-third of the total term and the date at which an offender is generally released under "mandatory supervision"* occurs near the two-thirds mark, so only the middle third of an offender's term remains discretionary. Thus, there will be about eight months' discretion on a two-year term and about twelve months' discretion on a three-year term. Because the majority of inmates are serving sentences that are three years or less, the period of parole discretion is usually between eight and twelve months.

In the analysis of parole decisions, there are three principal ways of expressing decision outcome. The first, and most common, is the "release type" method which simply expresses outcome as the decision to grant parole or refuse it. The second way is to express the outcome by the length of "time served" by the inmate prior to the parole decision. In jurisdictions where parole boards are constrained by legislatively or judicially set minimum terms, as in Canada, it is usual to conceptualize parole decisions using the simple "release type" method. The "time

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*Inmates in Canadian penitentiaries are awarded a remission amounting to a maximum of one-third of their sentence when they conform to the rules and programs of the institution. Upon release they are subject to compulsory or "mandatory" community supervision and must abide by certain specified conditions until their sentence is completed. The offender may be returned to penitentiary without a court appearance if any of these conditions of release are violated. Life sentences are not subject to mandatory release provisions: inmates serving life sentences must be paroled in order to be released from penitentiary.

served" perspective, on the other hand, provides a more useful comparative measure of the actual outcome of sentencing and paroling decisions, particularly where no minimum term exists, and is the measure which best reveals the extent to which parole may serve to "smooth" out sentencing differences for similar crimes. A third measure, "per cent of aggregate sentence served," is also used for some analyses. It is "time served" expressed as a percentage of the "aggregate" sentence and indicates at what stage in the sentence the parole or expiry occurred: whether at the minimum date (33%), the mandatory release date (66%), or at some intermediate point. It also reflects the parole rate insofar as the general average percentage for a group of offenders will be high if the parole rate is low. If no one received parole, for example, the group average would approach 66%, but if an entire group was paroled when first eligible, it would be nearer 33%. Each of these three measures is used in this report according to its utility for a particular analysis.

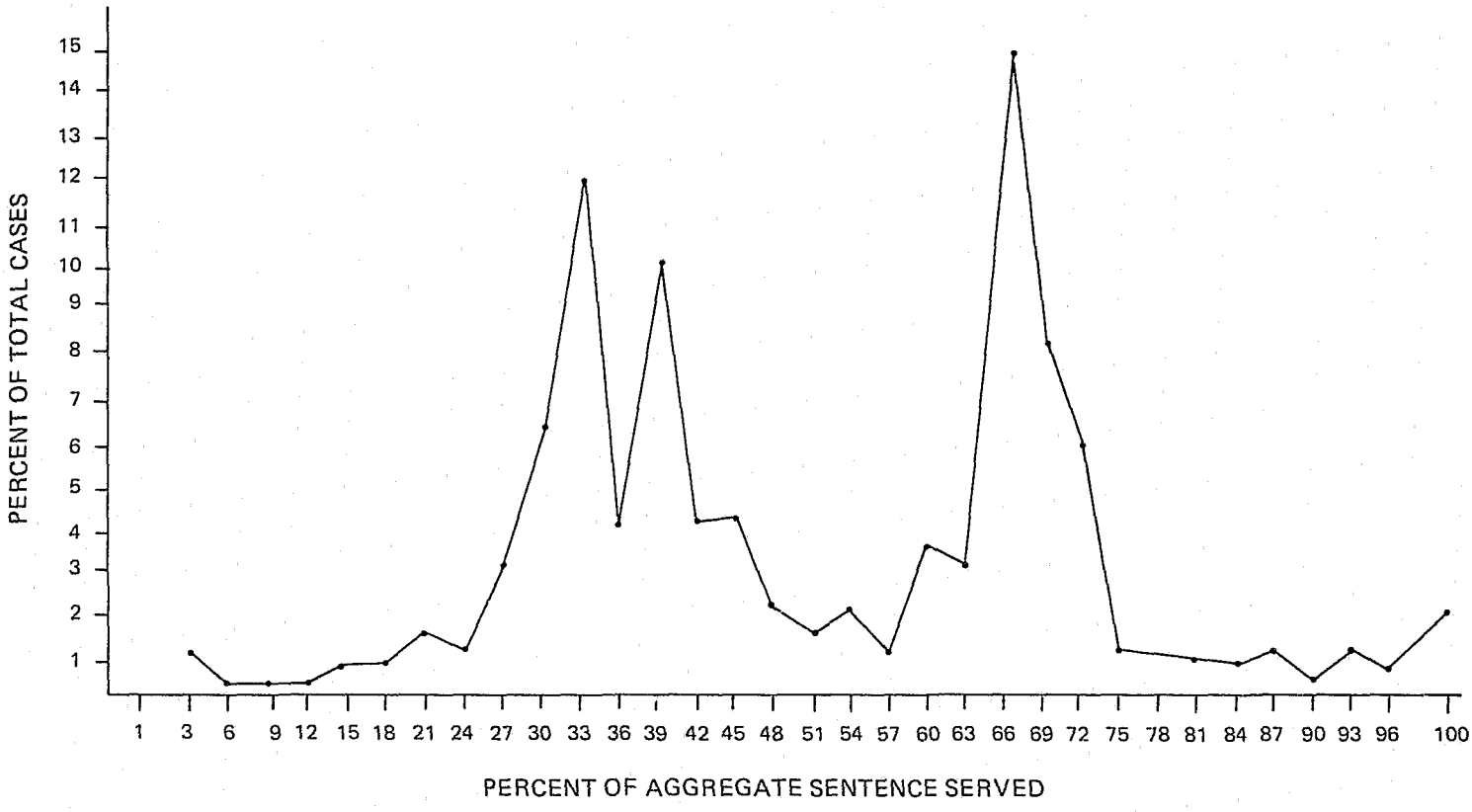
General Patterns of Parole Decisions

The periods of time served by most offenders in Canadian penitentiaries resemble those served by offenders in most American states for similar types of crimes (Gottfredson et al., 1973a). Two peak parole granting periods occur, one around the 10-month mark, or very close to the earliest release date for the 40 per cent of the sample with a two-year sentence, and the other around the 16-month mark. The average or "mean" time served by the sample group was 20.3 months. The "median" or point below which half of the cases fall is 16.0 months. One-third of the cases had been released after serving a year, four-fifths after serving two years.

Figure 1 illustrates the proportions of "aggregate sentence" served by the inmates in the sample. As one would expect, a large number of cases are released around the one-third mark in their sentence, that is, at the time of their first parole eligibility date. Forty-two per cent of the sample were released after serving 37 per cent or less of their term. The other major release period comes around the mandatory supervision date: 33 per cent of the cases were released at or after the two-thirds mark. The remaining 25 per cent of the sample were released in the "intermediate" period. These are the cases which were deferred or denied for a subsequent hearing or until certain conditions specified at the first hearing were met.

FIGURE 1.

PERCENT OF AGGREGATE SENTENCE SERVED PRIOR TO RELEASE FROM PENITENTIARY



On the whole, inmates with longer sentences served a slightly lesser proportion of their term, than did inmates with shorter sentences. About a quarter of those persons entering with a two-year aggregate sentence were paroled on or very close to their first eligibility date, whereas of those given longer sentences, over 35 per cent will be released at this earliest point. This illustrates the "smoothing" function of the parole authority which tends to even out differences in sentences for similar types of crimes. This finding is supported in a recent study conducted by the Ministry of the Solicitor General which revealed that inmates who received parole were serving longer sentences for the same type of crime than inmates who were not released until their mandatory release date (Canada, Solicitor General, 1981).

Statistical Analysis

In order to create a "model" of National Parole Board decision-making over the three-year period, two principal techniques of statistical analysis were used to determine which case factors or inmate characteristics were most closely associated with the outcome of parole decisions. These two techniques were:

1) regression analysis; and

2) predictive attribute analysis.

Regression analysis is a technique used to determine which factors in a situation are important in determining a particular outcome, and which are not. In the case of parole, a number of factors might plausibly be related to the parole decision, factors such as "prior convictions," "drug abuse," or the "seriousness of the offence." But which are the most important? One is able to determine the influence of each factor, taken separately, on the situation by the calculation of a "simple R" coefficient. This score indicates how variations in the determining factor, for example "prior convictions," relate to variations in the outcome, in this case, the parole decision expressed as a proportion of a sentence an inmate served in the penitentiary before release. In a complex situation, one might assume all the factors present play a role in determining the outcome as reflected in the "simple R" score. But when the influence of each is examined more closely, it may be that there is some overlap between the factors: perhaps "previous escapes" and "previous breach of parole supervision" are actually examples of the same type of behaviour in the minds of parole board members and their decisions reflect this assumption. How then, would one calculate the cumulative or net influence of each to determine its relative power to explain a situation? With regression analysis, the computer is programmed to select the factor or "predictor" with the strongest relationship to the outcome, as displayed by the "simple R" score. Because the first predictor cannot explain all the variations in the decision-making behaviour, that is, all the variance in the proportions of sentences served by individual inmates, it moves on to select the predictor which

explains the largest proportion of the residual variation; and so on until no more variation can be explained, or until the list of available predictors is exhausted. For each predictor that the computer evaluates, a score, the "R square" score, is calculated which gives a mathematical value to the added influence of each predictor in the situation.

It is worth noting that after the first three or four predictors enter the regression equation, it is rare for additional factors to be very helpful in explaining variance. The proportion of variance drops off sharply because of the overlap between predictors. Because the predictors are inter-related they may not, in combination, explain much more variance than they would if each entered the equation individually.

The results of multiple regression analysis on the full sample are given in Table 1. Here "proportion of sentence served" is used as the measure of Board activity. The "simple R" scores express the correlation of each predictor with proportion of sentence served, where +1.0 would indicate a perfect, positive relationship between factors; "0", no relationship; and -1.0 the upper limit for a negative or inverse relationship. The ascending "R square" scores describe the cumulative influence of each additional factor as it enters the equation.

Inspection of the "simple R" scores in Table 1 indicates that while none of the characteristics is a strong predictor of proportion of sentence served, the more important factors show themselves to be a) number of previous imprisonments; b) number of previous escapes; c) age at time of admission; d) employment status; and e) previous breach of parole supervision. The more imprisonments and escapes an inmate has on his record, the less likely it is he will be paroled. This is also true if he was previously returned to an institution for a breach of parole supervision. The younger an offender was when admitted to the penitentiary, the smaller the proportion of the sentence he served in the institution. If he was employed at the time he was arrested, the more likely it is he will be released early. Although the relationship between "aggregate sentence" and the proportion of sentence served is not a particularly strong one, it is interesting to note the association is a negative one, suggesting that those with longer sentences may serve smaller portions of their sentence in the institution.

The "seriousness" of the offence, a ranking obtained from the average length of sentence awarded by the courts for each of the major offence types, is apparently unrelated to the parole decision, showing a "simple R" of .004. Various other rankings, based on subjective rating and Criminal Code sentence provisions, were developed as measures of crime "seriousness," but none proved to be a good predictor.

TABLE 1

REGRESSION ANALYSIS OF FACTORS INFLUENCING PAROLE DECISIONS: SIMPLE R AND R SQUARE SCORES INDICATING THE INDIVIDUAL AND CUMULATIVE RELATIONSHIPS BETWEEN SELECTED PREDICTORS AND PAROLE DECISIONS EXPRESSED AS PROPORTION OF SENTENCE SERVED FULL SAMPLE: 2,500 CASES

Predictor	Simple R	R Square
Number of Previous Imprisonments	.241	.058
Number of Previous Escapes	.141	.070
Age at Time of Admission	.185	.082
Employment Status at Arrest	-.109	.093
Length of Aggregate Sentence	-.088	.103
Previous Breach of Parole Supervision	.132	.111
Marital Status*	-.023	.118
Drug Abuse	.082	.124
Interval at Risk Since Last Offence	-.076	.129
Number of Previous Non-Violent Sex Offences	.086	.133
Seriousness of Current Offence	.004	.137
Age at First Conviction	-.003	.140
All Predictors Combined		.153

*Marital Status was ranked in an attempt to reflect marital stability, that is, single (never married), divorced, separated, common-law union, married. The more stable the marital situation the less the proportion of the sentence served.

The "R square" scores indicate the cumulative influence of each additional predictor on the "proportion of sentence served." The final score .153 indicates that only about 15% of the variance in parole decision-making could be accounted for. It should be noted that it is rare in social science research for even as much as 40% of the variance to be explained through a regression equation. The inability to explain a large proportion of the variance may indicate there is a good deal of randomness in the behaviour, in this case, parole decision-making. The .153 score is, however, statistically significant at the .001 level, indicating that there is less than one chance in a hundred that the relationships displayed are a result of mere chance.

The second method used to determine the factors in the decision-making process was predictive attribute analysis, or P.A.A. (Wilkins and Macnaughton-Smith, 1970). The P.A.A. is a data analysis technique in which various factors in a situation are dichotomized according to the strength of their relationship with a particular outcome. In this study, offender characteristics were dichotomized according to how strongly they related to decisions to grant parole, expressed as the "release type" parole rate. Thus, "security classification" was split into two discrete groups, one containing inmates held in minimum or medium security whose parole rate was high, and the other composed of inmates held in maximum security or community correctional centres whose parole rate was low. The two sub-groups resulting from this first "breakpoint" were then subjected to the same process in order to determine which predictor or offender characteristic related most strongly with the granting of parole for the offenders in each group. The process was repeated until the number of cases in a sub-group was too small to permit further reliable groupings, or until further splits would not reduce predictive error in the group to any significant degree.

The object of the technique is to split cases into categories that are as discrete as possible, ending up with groups that have either a very high parole rate or a very low one. The most powerful explanatory factor is the one which has the greatest ability to discriminate between high and low parole rates.

The technique is particularly useful for revealing how a certain characteristic may have a particular effect on parole decisions when analyzed with a certain set of factors, but when combined with other characteristics may be associated with an entirely different outcome. For example, Board members may consider "alcohol dependence" a negative factor when making decisions on maximum security inmates, but may not take it into account at all for inmates of lesser security classifications.

FIGURE 2.

FACTORS INFLUENCING PAROLE DECISIONS:

RELEASE TYPE PAROLE RATES FOR SUB-GROUPS FORMED BY PREDICTIVE ATTRIBUTE ANALYSIS. FULL SAMPLE: 2500 CASES

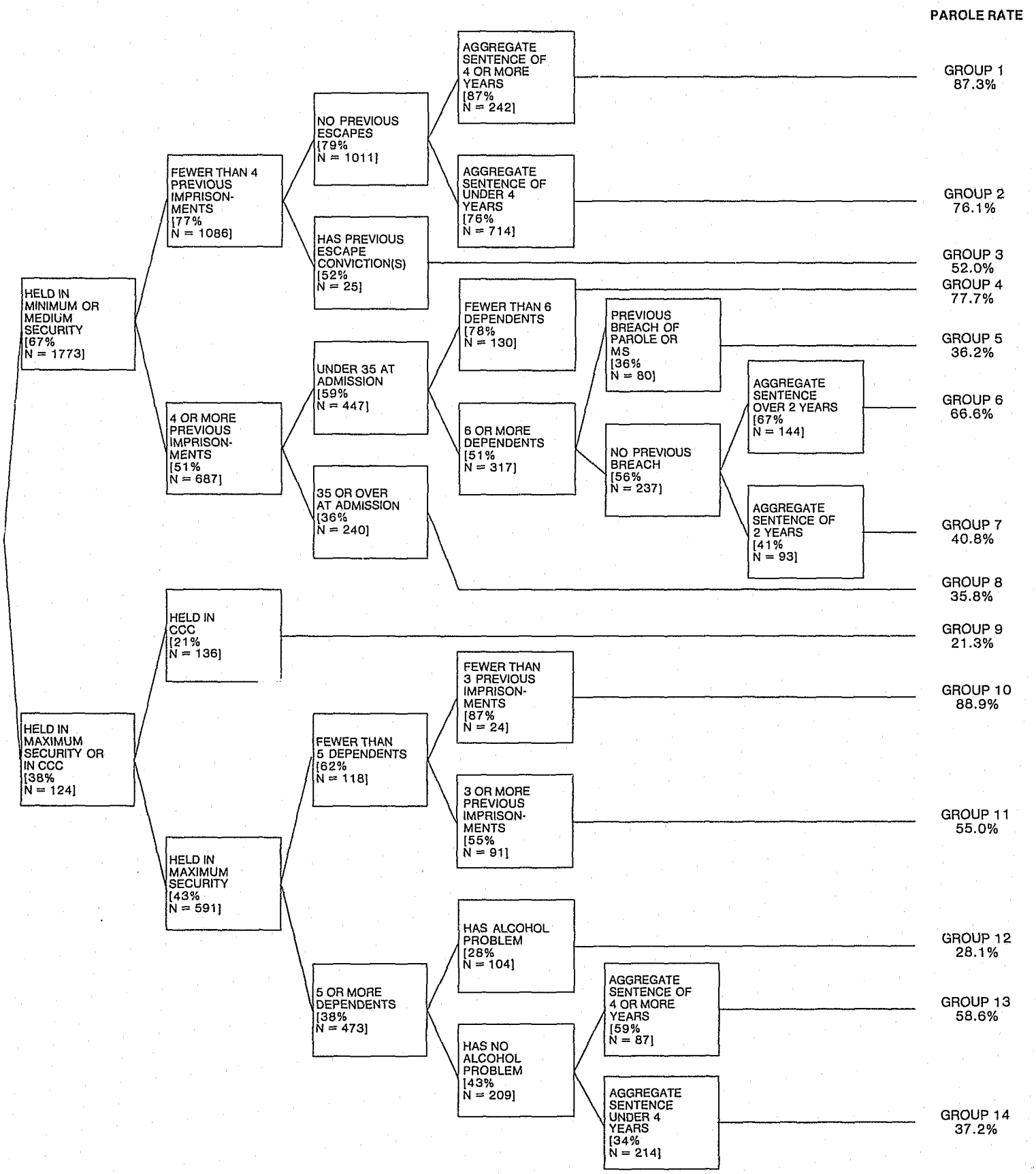


TABLE 2

PREDICTIVE ATTRIBUTE ANALYSIS OF FACTORS INFLUENCING PAROLE DECISIONS: RELEASE TYPE PAROLE RATES FOR SUB-GROUPS FORMED BY P.A.A. FULL SAMPLE: 2,500 CASES

Group Number	Predictors	N	Parole Rate
10	Held in maximum security Fewer than 5 dependents Fewer than 3 previous imprisonments	27	88.9
1	Held in minimum or medium security Fewer than 4 previous imprisonments No previous escape convictions Aggregate sentence of 4 years or more	292	87.3
4	Held in minimum or medium security 4 or more previous imprisonments Under 35 at admission Fewer than 6 dependents	130	77.7
2	Held in minimum or medium security Fewer than 4 previous imprisonments No previous escape convictions Aggregate sentence under 4 years	719	76.1
6	Held in minimum or medium security 4 or more previous imprisonments Under 35 at admission 6 or more dependents Parole or mandatory supervision has not been revoked or forfeited Aggregate sentence of more than 2 years	144	66.6
13	Held in maximum security 5 or more dependents Has been identified as having an alcohol "problem" Aggregate sentence of over 3 years	87	58.6
11	Held in maximum security Fewer than 5 dependents 3 or more previous imprisonments	91	54.9

TABLE 2 (continued)

Group Number	Predictors	N	Parole Rate
3	Held in minimum or medium security Fewer than 4 previous imprisonments Has 1 or more previous escape convictions	75	52.0
7	Held in minimum or medium security 4 or more previous imprisonments Under 35 at admission 6 or more dependents Parole or mandatory supervision has not previously been revoked or forfeited Aggregate sentence of 2 years	93	40.8
14	Held in maximum security 5 or more dependents Has not been identified as having an alcohol "problem" Aggregate sentence of under 4 years	212	37.2
5	Held in minimum or medium security 4 or more previous imprisonments Under 35 at admission 6 or more dependents Parole or mandatory supervision has previously been revoked or forfeited	80	36.2
8	Held in minimum or medium security 4 or more previous imprisonments 35 or over at admission	240	35.8
12	Held in maximum security 5 or more dependents Has been identified as having an alcohol "problem"	174	28.1
9	Held in Community Correctional Centre	136	21.3

Figure 2 and Table 2 show the 14 sub-groups which result from this analysis, and the parole rate of each of these sub-groups. The first and most significant factor splitting the population is the "security status" of the inmate at the time of his hearing: those in maximum security are generally less likely to be paroled. The same is true of a small number of offenders held in community correctional centres who may be high risk inmates who have been placed in this institutional situation just prior to their mandatory release date. Other factors which enter the

analysis by creating marked "splits" in the sample are: "number of previous imprisonments," "previous escapes," "age at admission," "number of dependents," "previous breach of supervision," and a perceived "alcohol problem." The offender's "aggregate sentence" forms a significant split in three instances, following the consideration of other factors. The direction of the association is towards a higher parole rate for those offenders with longer sentences, other factors being equal.

The parole rate of the sub-groups identified by P.A.A. varies from 21 per cent to 89 per cent. Table 2 shows that the analysis in fact splits the population up fairly well into high-parole and low-parole groups: almost half the cases (groups 1, 2, 4, and 10) fall into categories with parole rates above 75 per cent, another third of the cases (groups 5, 8, 9, 12, and 14) into categories with parole rates below 40 per cent. In fact, 80 per cent of the population falls into these high and low categories, indicating that these factors do have the power to discriminate between decision outcomes. It is not, however, so much individual factors that are being tested for their importance to parole decisions as particular combinations of factors.

A "Model" of National Parole Board Decisions

American modelling studies have suggested that two basic considerations are most commonly reflected in parole decisions: the "seriousness" of the offence and the "risk" of future recidivism. In some jurisdictions, only one of these factors appeared; in others both seemed to be influencing decisions.

Crime "seriousness", defined by the length of sentence typically awarded for an offence, did not appear to affect the outcome of NPB parole decisions, however. The regression analysis performed on the study data did not show the "seriousness" of the offence to have any particular influence on what proportion of his sentence an offender served. Nor did "seriousness" show up in the predictive attribute analysis, although researchers did test it for its power to discriminate between decision outcomes.

Because of the theoretical importance of the "seriousness" predictor, a further statistical test was performed on the data to check for its possible influence on parole decision-making. For each major crime category the "mean" or average number of months served by offenders was calculated. The "standard deviation" was also calculated for each crime category to indicate the amount of dispersion of cases around the central or average figure.

As Table 3 shows, the average or "mean" time served for such very different crime groups as assault, miscellaneous property offences, and non-violent sex offences is very similar. The average time served for narcotics offences, break and enter, and theft is also virtually identical. Moreover, the variation in time served within offence types, as indicated by the standard deviation, is rather marked. These patterns

would seem to confirm that the "seriousness" of the crime is not a powerful discriminating factor in time-served patterns.

This finding is consistent with other research. Models developed in the U.S. federal jurisdiction, California and Minnesota, have suggested that the "seriousness" of the crime tends to appear as a factor in parole decisions where no minimum term is set or it is extremely low. In jurisdictions such as Canada, however, where the one-third parole eligibility date may in a sense settle the denunciation requirement, the association between the parole decision and the seriousness of the crime may be less clear.

Having eliminated crime seriousness as a major determinant of over-all patterns of National Parole Board decision-making, let us look at the other factors which showed themselves to have relevance to the outcome of parole decisions. In the regression analysis, the offender characteristics which had the strongest association with the amount of time served by inmates were "number of previous imprisonments," "age at time of admission," "number of previous escapes," and "previous breach of parole supervision."

"Security status" appeared as the most discriminating factor in the predictive attribute analysis. This finding is suggestive, but must be approached with some caution because it is quite likely the classification itself was based on other factors appearing in the analysis. Furthermore, the classification system for Canadian penitentiaries has been revised since this research was done so it cannot be considered a stable predictor. Moving beyond security classification we find the P.A.A. also reveals "number of previous imprisonments" as a discriminating factor. "Previous escapes," "age at admission," "number of dependents," "previous parole breach," perceived "alcohol problem" and "aggregate sentence" show up further on in the analysis. These factors have significance only in combinations and apply only to part of the population under study. Certain of them, however, gain importance because they were brought forward by both statistical exercises.

Our "model" or "snapshot" of parole decision-making then focuses on four central predictors:

1) number of previous imprisonments;

2) age on admission;

3) number of previous escapes;

4) previous breach of parole supervision.

The extra factors which pop up in the P.A.A. clusters are interesting and suggestive, but bear further study. It is possible they are important predictors for certain parts of the inmate population, but their influence may be illusory or temporary.

TABLE 3

TIME SERVED PRIOR TO FULL RELEASE FROM PENITENTIARY, BY OFFENCE TYPE

FULL SAMPLE: 2500 CASES

Offence Type	N	Time Served in Months	
		Mean	Standard Deviation
Homicide	55	35.6	24.6
Armed robbery	127	33.4	22.9
Violent sex offences	77	25.7	19.3
Assaults	99	22.2	18.1
Miscellaneous property offences*	27	22.0	12.6
Non-violent sex offences	62	21.9	17.3
Miscellaneous personal offences**	60	20.7	9.9
Unarmed robbery	347	19.7	13.0
Frauds	258	17.5	9.2
Narcotics offences	164	17.3	13.8
Break and enter	798	17.3	10.4
Theft	130	17.0	8.8
Receiving or possession of stolen goods	106	16.2	6.2
Escape	65	15.4	6.7
Weapons offences	18	12.3	9.2
Other	107	20.5	11.3
All offences	2500	20.3	16.6

* Includes trespassing, possession of burglar's tools, wilful damage, taking a motor vehicle without consent.

**Includes dangerous or drunken driving, arson, pointing a firearm, manslaughter by automobile, kidnapping, hijacking.

The four offender characteristics isolated by the analyses are all classic risk indicators and point to "risk of recidivism" as the central consideration in National Parole Board decision-making. This is consistent with official Parole Board statements of policy, as well as with the Board's statutory mandate. A recently published guide (1978) for potential parolees places heavy emphasis on the importance of the risk factor; and amendments to the Parole Act made in 1969 added the specific provision that the release of an inmate on parole "must not constitute an undue risk to society" (S. 10(1)).

Problems arise, however, when Parole Board members form individual assessments of offender risk, and incorporate these along with other case factors into a final decision. Both the risk assessment and the way it is used may vary markedly from member to member. This jeopardizes the chances for equitable handling of large numbers of cases, particularly in a system where Board members typically make judgments only for a specific region, a phenomenon which could conceivably lead to the same types of problems witnessed with the British paroling authority.

Because of the empirical evidence pointing to "risk" as the prime consideration of Board members in their decisions, it was agreed that the researcher would test a number of recidivism prediction techniques and extract the most powerful for use by the National Parole Board.

CHAPTER IV

PREDICTING RECIDIVISM

Statistical devices for predicting recidivism have traditionally presented certain problems for decision-makers, among them their chronic inability to identify future recidivists with great precision and their notable unresponsiveness to the eternal query: "What future program efforts will increase or decrease this offender's chances of recidivism?" Although statistical instruments do typically predict more accurately than "clinical judgment," or "best guesses," it becomes particularly important to locate the best possible instrument in a field where predictive efficiency has never been notably high.

Predicting General Recidivism

Three classical prediction methods were chosen for testing:

1) regression analysis, as used in the California base expectancy studies (Gottfredson, 1962);

2) predictive attribute analysis, as designed for criminological use by Wilkins and by Macnaughton-Smith (1970); and

3) simple summation, as pioneered by Burgess (1928) and later successfully adapted by Nuttall et al. (1976).

"Re-arrest for any indictable offence within 3 years" was used as the definition of general recidivism. Each of the three statistical techniques was tested against the sample data to see which provided the best "retrospective prediction" of the recidivism which actually occurred after offenders were released. The case factors selected for entry into each statistical instrument were those commonly considered "classic" recidivism predictors: these included the risk predictors isolated in the "modelling" segment of the research plus others of recognized theoretical importance. The object of the exercise this time was not so much to identify the best predictors of recidivism as to determine which of the three techniques made best use of the potential predictors and was itself the best predictive tool. "Previous imprisonments," for example, shows itself to be a predictor of some importance with all three techniques, but the way it is "used" in each is somewhat different, particularly in terms of how it is interpreted in relation to other predictors. The ultimate measure of the usefulness of this predictor is the over-all accuracy of the "instrument" as a statistical technique.

Re-arrest follow-up data was obtained for all but 25, or one per cent, of the total sample of 2500. The remaining 2475 cases were split randomly in half to form a "construction" and a "validation" sample. Each instrument was developed using the construction sample and tested for effectiveness against the validation sample. This "split-half" method is used to determine whether a predictive method will hold up reliably on another randomly selected group of offenders. Any prediction system must, of course, be re-validated periodically to ensure that it remains useful, or undergo appropriate modifications.

Patterns of Re-Arrest

Table 4 shows the general performance of the construction sample in remaining free of arrest within three years of release. A total of 56.1 per cent of the sample were not re-arrested for an indictable offence within three years. Of the remainder, the majority committed property crimes. Break and enter, typically, is the most common recidivist offence, and it, together with theft, receiving or possession of stolen goods, and frauds, accounts for half the re-arrests in the sample. Violent offences, defined as homicide, assault, and violent sex offences such as forcible rape, but not including robbery, account for only 6.8 per cent of the cases. Similar patterns were observed with the validation sample.

Testing the Instruments

Table 5 sets forth results of the regression analysis performed on the construction sample, using "re-arrest within 3 years for an indictable offence" as the measure of recidivism. The only factor which emerges as having any particular importance is "interval at risk," a term describing the time the offender was on the street before he was convicted for the "commitment" or "pre-release" offence. The longer this interim period, the less likely he was to be re-arrested after release. Factors of marginal statistical interest are "number of dependents," "total previous imprisonments" and "aggregate sentence." The more dependents the offender had, the less likely it was that he would be re-arrested. The more previous imprisonments he had experienced, the greater were the chances that he would recidivate and, interestingly, the longer his aggregate sentence had been the less likely he was to be re-arrested in the three years following his release.

"Previous imprisonments," it will be recalled, emerged as one of the central predictors in the "modelling" exercise. "Number of dependents" and "aggregate sentence" assumed minor importance in the "model." It is interesting to note that "age at admission" is negatively related to re-arrest whereas it was positively related to "time served." Younger offenders, it seems, are more likely to be paroled, but very slightly more likely to be re-arrested.

TABLE 4

OFFENCE OF RE-ARREST WITHIN 3 YEARS
CONSTRUCTION SAMPLE: 1,238 CASES

Re-Arrest Offence	N	Per cent
Not re-arrested* or re-arrested for a minor alcohol or narcotics charge	694	56.1
Homicide	7	0.6
Assault	63	5.1
Violent sex offences	14	1.1
Unarmed robbery	26	2.1
Armed robbery	45	3.7
Non- violent sex offences	3	0.2
Other crimes against the person**	76	6.2
Break and enter	122	9.9
Theft	86	7.0
Receiving or possession of stolen goods	33	2.7
Fraud	33	2.7
Weapons offences	10	0.8
Other crimes against property	26	2.1
TOTAL	1238	

* Includes those who died during the three-year follow-up period.
**Most of the persons in this category were re-arrested for impaired or dangerous driving.

The problem with the regression instrument generally is that it only explains about 7% of the variance as shown by the cumulative R square score. Although this is not inconsistent with other studies of this kind (Simon, 1971), it is an unimpressive figure. The four strongest individual predictors are not really very strong or very definitive: they can provide little help separating offenders who will recidivate from those who will not. Regression analysis performed on the "validation" sample confirmed the poor predictive capacity of this instrument. Only about 5% of the variance was explained there.

TABLE 5

REGRESSION ANALYSIS OF FACTORS INFLUENCING GENERAL RECIDIVISM: SIMPLE R AND R SQUARE SCORES INDICATING THE INDIVIDUAL AND CUMULATIVE RELATIONSHIPS BETWEEN SELECTED PREDICTORS AND GENERAL RECIDIVISM (RE-ARREST WITHIN 3 YEARS FOR ANY INDICTABLE OFFENCE) CONSTRUCTION SAMPLE: 1,238 CASES

Predictor	Simple R	R Square
Interval at Risk	-.190	.036
Total Previous Imprisonments	.098	.053
Age at Admission	-.066	.060
Aggregate Sentence	.090	.064
Number of Dependents	-.106	.068
Education	-.069	.072
Alcohol	.073	.074
Total Previous Convictions	.078	.075
Number of Escapes	.071	.076
Drugs	.013	.076
Employment	-.074	.077
Previous Breach of Parole or Mandatory Supervision	.058	.077
Security Status of Releasing Institution	.029	.077
Marital Status	-.085	.077
All Predictors Combined		.077

Tables 6 and 7 show the results of predictive attribute analysis (P.A.A.) performed on the same data. Like regression analysis, this instrument was not terribly good at telling us who would recidivate and who would not. As we see in Table 6, Groups 4 and 5 are both within about 10% of a 50% success rate figure, a figure with the same predictive power as a coin flip. These two groups together account for 739 offenders or more than 60% of the sample. This phenomenon repeats itself with the "validation" sample in Table 7.

TABLE 6

PREDICTIVE ATTRIBUTE ANALYSIS OF FACTORS INFLUENCING GENERAL RECIDIVISM: SUCCESS RATES FOR SUB-GROUPS FORMED BY P.A.A. CONSTRUCTION SAMPLE: 1,238 CASES

Group Number	Characteristics	N	Success Rate
1	No previous imprisonments 19 or older at first adult conviction	253	84.9
2	7 or more months at risk between previous convictions Under 19 at first adult conviction No previous imprisonments	21	80.9
6	2 years or more at risk between previous convictions One or more previous imprisonments	192	70.8
4	Aggregate sentence of 5 years or longer Less than 2 years at risk between previous convictions One or more previous imprisonments	124	55.6
5	Aggregate sentence of under 5 years Less than 2 years at risk between previous convictions One or more previous imprisonments	615	39.4
3	Less than 6 months at risk between previous convictions Under 19 at first adult conviction No previous imprisonments	33	33.3
Index of predictive efficiency (P.E.) = .264			

TABLE 7

PREDICTIVE ATTRIBUTE ANALYSIS OF FACTORS INFLUENCING GENERAL SUCCESS RATES FOR FOR SUB-GROUPS FORMED BY P.A.A. VALIDATION SAMPLE: 1,237 CASES

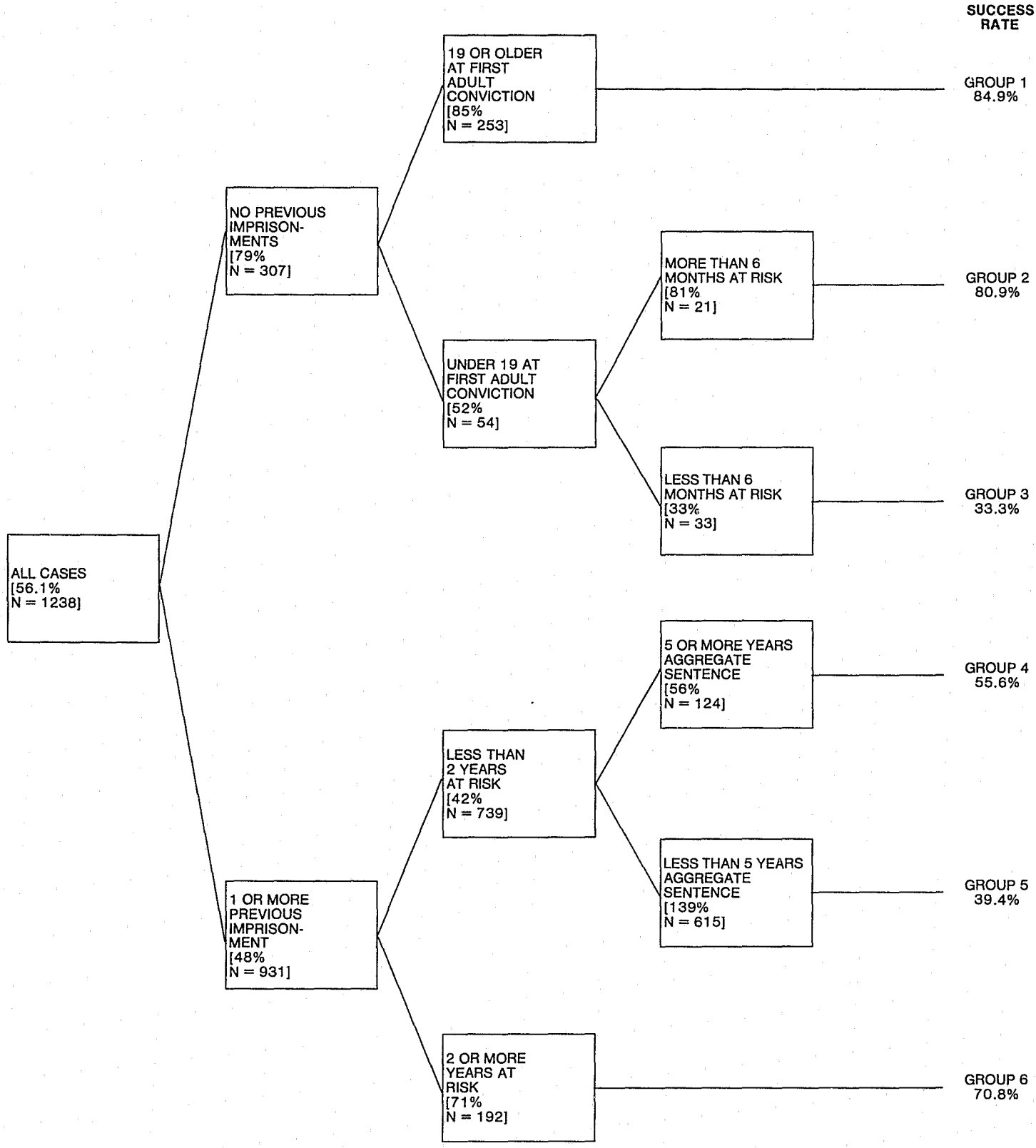
Group Number	Characteristics	N	Success Rate
1	No previous imprisonments 19 or older at first adult conviction	240	84.6
2	7 or more months at risk between previous convictions Under 19 at first adult conviction No previous imprisonments	16	68.7
6	2 years or more at risk between previous convictions One or more previous imprisonments	194	67.6
4	Aggregate sentence of 5 years or longer Less than 2 years at risk between previous convictions One or more previous imprisonments	135	51.4
5	Aggregate sentence of under 5 years Less than 2 years at risk between previous convictions One or more previous imprisonments	614	43.7
3	Less than 6 months at risk between previous convictions Under 19 at first adult conviction No previous imprisonments	38	38.4
Index of predictive efficiency (P.E.) = .160			

The predictors that do display some power to discriminate between recidivism rates may be seen in Figure 3: they are "previous imprisonments," "age at first adult conviction," "interval at risk" and "aggregate sentence," characteristics which would describe a large number of federal inmates. "Previous imprisonments" is again the one "risk" factor from the "modelling" exercise to show up in the recidivism results. This predictor, "interval at risk," and "aggregate sentence" were also isolated by the regression instrument. Interestingly, aggregate

FIGURE 3.

FACTORS INFLUENCING GENERAL RECIDIVISM:

SUCCESS RATES FOR SUBGROUPS
FORMED BY PREDICTIVE ATTRIBUTE
ANALYSIS. CONSTRUCTION SAMPLE: 1238 CASES



sentence, although its effect is only seen after that of other predictors, is again inversely related to success after release: those with shorter sentences are more likely to be re-arrested. When success rates are calculated for crime types, we find a general pattern emerging whereby property crimes are associated with lower success rates than crimes against the person (Table 8).

TABLE 8

SUCCESS RATES (NO RE-ARREST WITHIN 3 YEARS FOR AN INDICTABLE OFFENCE), BY PRE-RELEASE (COMMITMENT) OFFENCE CONSTRUCTION SAMPLE: 1,238 CASES

Commitment Offence	N	Success Rate After Release
Non-violent sex offences	33	78.7
Narcotics offences	81	74.1
Homicide	33	72.8
Other crime against the person	30	70.0
Unarmed robbery	170	67.0
Other crimes against property	17	58.9
Violent sex offences	35	57.1
Armed robbery	64	56.3
Assault	47	55.3
Fraud	116	55.1
Theft	65	50.7
Receiving or possession of stolen goods	60	50.0
Break and enter	395	45.5
Weapons offences	7	42.8
Escape	36	33.3
Other	47	70.3
Overall	1238	56.1

The third method tested was a technique developed for the British Parole Board (Nuttall et al., 1977) and adapted from the original Burgess method of "simple summation." With this technique, any interdependence between predictors is ignored, or by gross suspension of disbelief assumed not to exist. A scoring system is constructed based on the way the "values" of predictors discriminate between the success rates of offenders after release. The system is then used to evaluate individual offenders who receive a "score" reflecting their statistical chances of recidivating. Basically, the instrument is constructed as follows:

1) The average recidivism rate is calculated for the construction sample as a whole. For this study, the overall success rate was 56.1%.

2) Case factors or predictors are selected for their theoretical or classical ability to predict recidivism.

3) For each category or value of each predictor showing a difference of plus or minus five per cent from the average rate, a score of plus or minus one is assigned. For differences of plus or minus ten per cent, a score of plus or minus two is assigned; and so on. Scores of zero are assigned when the value of a predictor does not differ from the average rate by more than 5%. In the case of "number of previous imprisonments," shown in Table 9, 1 or 2 previous imprisonments produces a score of "0" because the overall success rate for persons in these categories shows itself very close to the average rate for the whole sample. Persons with 3 or 4 previous imprisonments have a success rate about 5% lower than the whole group, so these categories are "worth" +1. Five or more imprisonments produce a score of +2. The higher the positive score, the greater the risk of recidivism. Offenders with no previous imprisonments have a success rate of 79.1% which is 23% greater than the 56.1% average rate: the score assigned for this "value" of "previous imprisonments" is therefore -4. The higher the negative score, the less the risk of recidivism.

4) A scoring system is developed in this way for each predictor. A strong predictor will tend to discriminate more clearly between cases. For example, if "number of dependents", shown in Table 10, has no influence on the recidivism rate, each of its values would be worth "0". As it is, two, one, or no dependents produces a score of "0": the success rates for offenders falling into these categories is very close to the average. For offenders with 3 or more children, however, the recidivism rate is about 12% lower (the success rate 12% higher), so this "value" of dependents is worth -2. A stronger predictor will tend towards fewer "0" scores for its values, all other things being equal.

TABLE 9

SUCCESS RATES AND RESULTING SCORES FOR OFFENDERS CATEGORIZED BY NUMBER OF PREVIOUS IMPRISONMENTS CONSTRUCTION SAMPLE: 1,238 CASES

Number of Previous Imprisonments	N	Success Rate	Simple Summation Score
0	331	79.1	-4
1	145	55.1	0
2	149	53.6	0
3	107	48.5	+1
4	110	51.1	+1
5	74	40.5	+2
6	228	42.1	+2
7	60	43.3	+2
8 or more	34	42.1	+2

TABLE 10

SUCCESS RATES AND RESULTING SCORES FOR OFFENDERS CATEGORIZED BY NUMBER OF DEPENDENTS CONSTRUCTION SAMPLE: 1,238 CASES

Number of Dependents	N	Success Rate	Simple Summation Score
0	890	53.4	0
1	73	56.1	0
2	99	57.5	0
3 or more	176	68.7	-2

5) With scoring systems in place for the individual predictors, it is possible to calculate a cumulative or net recidivism score for a given offender with plus and minus values cancelling each other out. A final score in the minus range (-) will indicate an individual whose projected chances of recidivating are less than average; a positive score (+) suggests his chances are greater than average. The larger the score in either direction, the more defined the statistical chances of success or failure after release.

Table 11 shows the predictors used to construct the overall scoring system.

TABLE 11

PREDICTORS USED FOR SIMPLE SUMMATION SCORING

1. Age at admission
2. Number of previous imprisonments
3. Previous breach of parole supervision or mandatory supervision
4. Number of previous escapes
5. Security classification
6. Age at first adult conviction
7. Number of previous convictions for assault
8. Marital status
9. Interval at risk
10. Number of dependents
11. Aggregate sentence
12. Number of previous convictions for violent sexual offences
13. Number of previous convictions for break and enter
14. Employment status at time of arrest for commitment offence
15. Type of commitment offence

TABLE 12

RISK CATEGORIES ON GENERAL RECIDIVISM CRITERION ISOLATED BY SIMPLE SUMMATION: CONSTRUCTION AND VALIDATION SAMPLES

CONSTRUCTION SAMPLE (1,238 CASES)				
Group Number	**Score Range**	**N**	**% Of Cases**	**Success Rate**
1	-6 to -27	276	22.2	84.5
2	-1 to -5	224	18.1	67.9
3	0 to +4	276	22.2	50.8
4	+5 to +8	231	18.6	41.9
5	+9 to +30	231	18.6	31.6
Total		1238	99.7	---
Average		--	--	56.1
Index of predictive efficiency (P.E.) = .224				

VALIDATION SAMPLE (1,237 CASES)				
Group Number	**Score Range**	**N**	**% Of Cases**	**Success Rate**
1	-6 to -27	249	20.1	84.0
2	-1 to -5	256	20.7	66.5
3	0 to +4	310	25.0	54.9
4	+5 to +8	220	17.8	36.8
5	+9 to +30	202	16.3	33.6
Total		1237	99.9	---
Average		--	--	56.4
Index of predictive efficiency (P.E.) = .230				

The Success Rates and Resulting Scores for each of these predictors are shown in Tables 17 to 31, located in Appendix C. Inspection of these tables reveals some interesting results. Crimes against the person are associated with generally lower recidivism rates than are crimes against property. Interestingly, escape is the offence category associated with the highest overall re-arrest rate. Recidivism rates for robbery resemble those for crimes against the person more than they do those of property crimes: break and enter, theft, and possession of stolen goods all have higher recidivism rates than robbery. The only remaining major property crime category, fraud (which involves cheque forgery, fraudulent use of a credit card and other similar offences), is not associated with a high rate of recidivism.

The offender's "age at admission" for the commitment offence and the "age at first adult conviction" are both negatively associated with recidivism, suggesting the younger an offender is at admission and when first convicted in adult court, the more likely it is he will be re-arrested. The shorter the interval the offender has been "at risk" in the community between previous convictions, the greater the chances of his re-appearance in police arrest files. Post-release success is more likely for persons with 3 or more dependents, and for persons with fewer previous imprisonments. Previous criminal history in fact appears in one form or another for 8 of the 15 predictors, confirming the cliché that the best predictors of future behaviour are indicators of past behaviour.

Each offender in the construction sample was scored using this system. Total scores for individuals ranged from -27 (lowest recidivism) to +30 (highest recidivism). These scores were then grouped together to reflect natural clusters of roughly equal size: Table 12 shows the "risk" groups which resulted from dividing the construction sample in this manner, and shows the recidivism rates for each. Offenders in the validation sample were scored using the same method.

Ideally, our "instrument" would produce risk groups which separate large numbers of cases into categories with recidivism rates approaching either 0% or 100%. As we see, however, Groups 3 and 4 in the construction sample and Group 3 in the validation sample are all within 10% of the 50% mark, accounting for 40% of the offenders in the first instance, and 25% in the second. Nonetheless, this outcome is considerably better than the one we saw with the P.A.A. instrument where 60% of the cases displayed recidivism rates within 10% of the 50-50 coin flip probability. The success rates for the risk groups are quite similar between the construction and validation samples, displaying a little more stability for the top two groups than for the lower ones. It would seem that the low scores hold up somewhat better than the high ones suggesting the instrument is somewhat more accurate in identifying "good risks."

Selecting the Best Instrument

As Mannheim and Wilkins (1955) have pointed out, a good prediction device embodies the qualities of simplicity, efficiency, validity and repeatability. Basically, this means an easy-to-use instrument maintaining the best possible predictive power over time.

The term "predictive power" refers to the ability of a technique to separate offenders into groups with either "very high" or "very low" recidivism rates: the elusive 100% and 0%. The regression analysis, it will be recalled, could only account for about 5% to 7% of the variance in the equation. This is of little help in accurately identifying high and low risk groups. The predictive attribute analysis (P.A.A.) lumped the majority of its cases into two groups close to the 50-50 mark. The simple summation method appeared to do better with only about 25% to 40% of offenders falling around the centre mark.

In fact, we can transform the mathematical results of the predictive attribute analysis and the simple summation method into a statistical index of "predictive efficiency." "P.E." is a calculation which measures the proportion of the errors of misclassification that would be reduced using a given prediction instrument, relative to the number of errors which would result from simply making "the best guess" based on knowledge of the success rate of the entire population.*

The P.E. calculated for the construction sample of the simple summation method indicates one would save a total of 122 errors over the "best guess" method, for a score of .224. The same calculation performed for the validation sample produces a reduction of 124 errors, for a P.E. of .230. P.E. scores for the construction and validation samples of the predictive attribute analysis were .264 and .166. Given the general predictive instability indicated by this fluctuation, we would assume the actual predictive efficiency was more closely reflected in the lower score (.166).

Of these instruments, the simple summation appears to have the most predictive power and to hold up best when validated against a second sample. The P.A.A. results did not hold up and the regression instrument, although stable upon validation, displayed no particular predictive power.

The characteristics of inmates coming into federal penitentiaries vary over time as laws and social conditions change. The factors which once served as good predictors of behaviour may "decay," that is, lose a certain amount of explanatory power. It has been noted that if the first-loading variable in a regression equation begins to decay, the entire instrument is suspect: Mannheim and Wilkins' (1955) Borstal predictor decayed in this fashion when the first-loading alcohol predictor began to show a lessening relationship to recidivism. Similarly, groups formed by predictive attribute analysis often capitalize on relationships between offender characteristics which may change as the population changes. Simple summation has the advantage that no single predictor accounts for a large amount of the total predictive power. Because more factors are taken into account in the final score, a low score on a more important predictor might be offset by high scores on other more marginal predictors. Therefore, even if decay begins to occur, the instrument may remain stable for a time.

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*The formula for this calculation is: $P.E. = \frac{X - Y}{X}$

where X = number of errors using base rate alone
Y = number of errors using predictive table

complex statistical precedures. The summation technique is mathematically simple, easy to administer and lends itself to intuitive understanding. On the balance, it would seem to be the best available instrument for predicting general recidivism.

Predicting Violent Recidivism

Originally, the researcher had only planned to test techniques for predicting general recidivism. However, for a number of reasons it was decided that an attempt would also be made to predict violent recidivism: among these reasons was the Board's particular concern about violent parole failures, the increasing conviction among certain critics that prisons should be reserved only for the "dangerous" (Ouimet, 1969), and the general concern about violence generated by the debates over abolition of the death penalty and introduction of "dangerous offender" legislation (Canada House of Commons, 1977). On the assumption that Parole Board members and other correctional authorities are constantly required to assess inmates' for their potential for violence anyway, it was resolved to attempt this notoriously difficult task, if only to demonstrate low rates of violent recidivism among offenders displaying characteristics allegedly predictive of violence.

The difficulty of predicting violence is inescapably tied in with the low "base rate" of violent recidivism, a phenomenon which virtually ensures a high proportion of "false positives": persons identified as "dangerous" who do not in fact later recidivate violently. The rarer an event, the more difficult it is to predict efficiently, as mathematical models demonstrate (Livermore et al., 1968). The "base rate" problem of violent recidivism was apparent in Table 4. Those re-arrested for homicide, assault, including sexual assaults, constitute only 6.8 per cent of the sample. If robbery, an act involving at minimum the threat of possible violence, is included within the definition of a "violent crime," those re-arrested for violence constitute 12.6 per cent of the sample. Given these low overall rates, even among the federal offenders who are assumed to have committed high proportions of "serious," "aggravated," or "violent" crimes, the prediction problem is considerable.

The same types of predictive analyses were performed for violent recidivism as were performed for general recidivism. The same construction sample of 1,238 cases was examined to determine in retrospect which federal releases would recidivate violently. The follow-up period was again 3 years. The researcher chose to include robbery in the definition of violent recidivism, thus establishing the base rate for the construction sample at 12.6 per cent.*

*Choosing to include robbery within a "violent recidivism" criterion clearly invites an overestimation of the actual violence involved in the recidivist act. The author chose this criterion, however, in order to illustrate the problems of error which might arise even with a very broad criterion variable.

Table 13 shows the results of the regression analysis performed, yielding an explained variance of only 5.8 per cent. The variable which appears as the most powerful predictor of violent recidivism is the offender's age at the time of his admission for the current offence, suggesting that the younger an offender, the more likely is a violent act after release. However, as with general recidivism, none of the predictor variables shows other than a very weak correlation with the outcome, such that only "number of previous escapes," and "total previous imprisonments" even reach an association with violent recidivism of .100 or higher.

TABLE 13

REGRESSION ANALYSIS OF FACTORS INFLUENCING VIOLENT RECIDIVISM: SIMPLE R AND R SQUARE SCORES INDICATING THE INDIVIDUAL AND CUMULATIVE RELATIONSHIPS BETWEEN SELECTED PREDICTORS AND VIOLENT RECIDIVISM (RE-ARREST FOR A VIOLENT OFFENCE WITHIN 3 YEARS) CONSTRUCTION SAMPLE: 1,238 CASES

Predictor	Simple R	Square R
Age at Admission	-.118	.013
Total Previous Imprisonments	.100	.040
Security Status of Releasing Institution	.092	.046
Number of Escapes	.116	.051
Education	-.067	.054
Number of Dependents	-.025	.055
Marital Status	-.056	.056
Interval at Risk	-.043	.057
Employment	-.018	.057
Previous Breach of Parole or Mandatory Supervision	.068	.058
Alcohol	.021	.058
Total Previous Convictions	.098	.058

Figure 4 shows the sub-groups formed through predictive attribute analysis of the same data. Interestingly, the first "split" occurs on the presence or absence of previous break and enter convictions in the offender's criminal record. Previous assault convictions, which one might more readily associate with violent recidivism, appears as a significant predictor only after the break and enter split, and only for those offenders who have no previous burglary record. The offender's age at admission, which was the strongest predictor of violent recidivism in the regression analysis, appears also in the predictive attribute analysis, splitting those offenders with one or more previous burglary convictions.

The P.A.A. results in Table 14 show seven different sub-groups with almost 84 per cent of the construction sample falling into only two of these groups. In effect, the analysis produces, for the vast majority of cases, either a very high success rate (94.1 per cent) or a moderately high success rate (85.2 per cent). Only 21 cases, or less than one per cent of the sample, are classified into a category associated with a less than 50 per cent chance of success. This dramatically illustrates the difficulties involved in attempting to identify "dangerous" individuals.

FIGURE 4.

FACTORS INFLUENCING VIOLENT RECIDIVISM:

SUCCESS RATES FOR SUBGROUPS FORMED
USING PREDICTIVE ATTRIBUTE ANALYSIS
CONSTRUCTION SAMPLE 1238 CASES

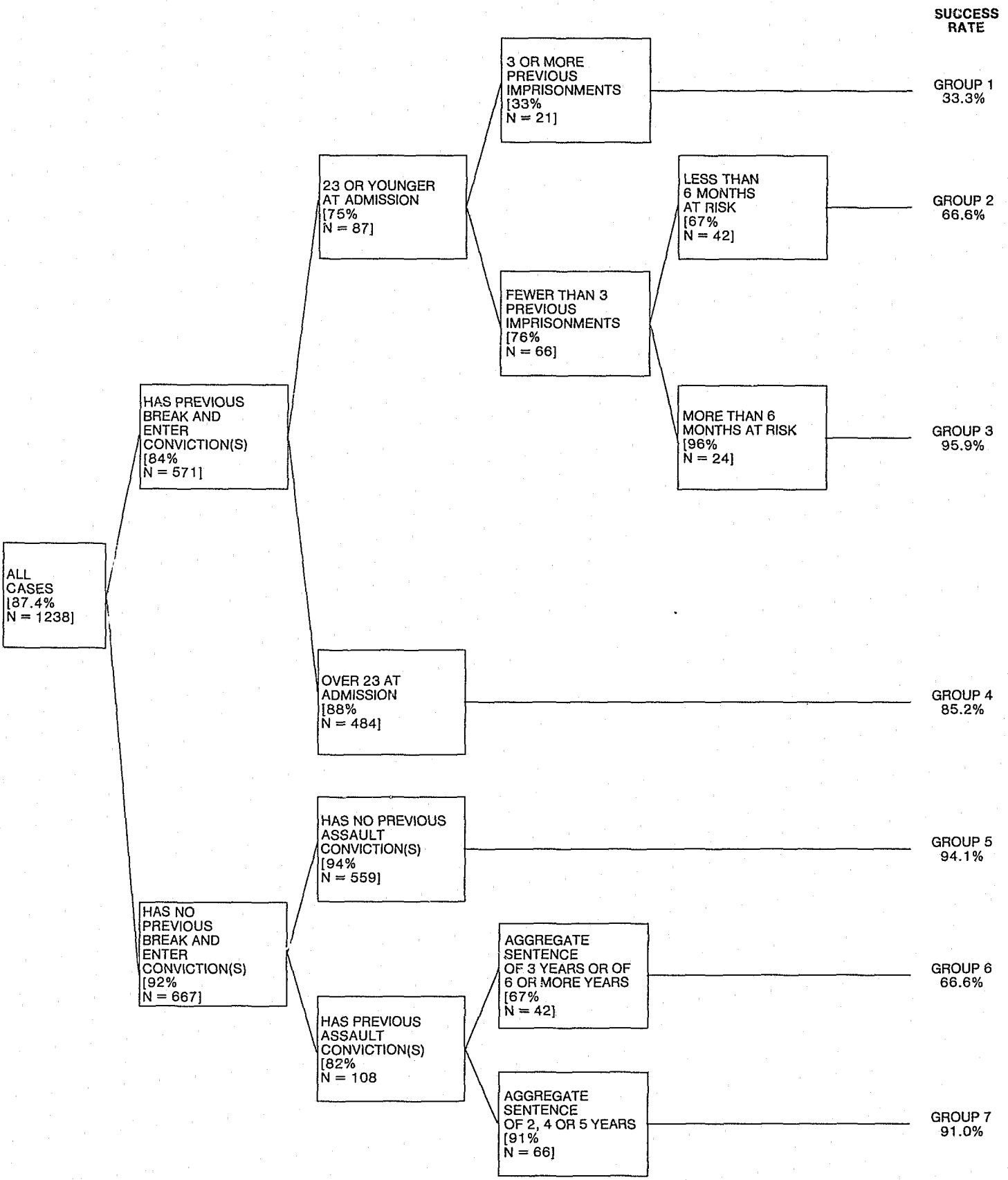

TABLE 14

PREDICTIVE ATTRIBUTE ANALYSIS OF FACTORS INFLUENCING VIOLENT RECIDIVISM: SUCCESS RATE FOR SUB-GROUPS FORMED BY P.A.A. CONSTRUCTION SAMPLE: 1,238 CASES

Group Number	Characteristics	N	Success Rate
3	6 months or longer at risk between previous convictions Fewer than 3 previous imprisonments 23 or younger at admission Has previous break and enter convictions	24	95.9
5	Has no prior assault convictions Has no prior break and enter convictions	559	94.1
7	Aggregate sentence of 2, 4 or 5 years Has previous assault convictions Has no previous break and enter convictions	66	91.0
4	Has previous break and enter convictions 24 or older at admission	484	85.2
2	Aggregate sentence of 3 years or of 6 or more years Has previous assault convictions Has no previous break and enter convictions	42	66.6
6	Less than 6 months at risk between previous convictions Fewer than 3 previous imprisonments 23 or younger at admission Has previous break and enter convictions	42	66.6
1	More than 2 previous imprisonments 23 or younger at admission Has previous break and enter convictions	21	33.3
Index of predictive efficiency (P.E.) = .045			

In the validation sample (Table 15), the proportions of cases in each sub-group are roughly equivalent. Their success rates, however, differ enough from those in the construction sample to shrink the index of predictive efficiency from a weak but positive value (.045) to a slightly stronger, but negative value (-.199).*

*The P.E. is based on a cut-off criterion of .50; there are considerable problems with the assumptions behind this calculation, however. These are discussed in more detail below.

TABLE 15

PREDICTIVE ATTRIBUTE ANALYSIS OF FACTORS INFLUENCING VIOLENT RECIDIVISM: SUCCESS RATE FOR SUB-GROUPS FORMED BY P.A.A. VALIDATION SAMPLE: 1,237 CASES

Group Number	Characteristics	N	Success Rate
3	6 months or longer at risk between previous convictions Fewer than 3 previous imprisonments 23 or younger at admission Has previous break and enter convictions	26	88.1
5	Has no prior assault convictions Has no prior break and enter convictions	540	90.0
7	Aggregate sentence of 2, 4 or 5 years Has previous assault convictions Has no previous break and enter convictions	70	86.3
4	Has previous break and enter convictions 24 or older at admission	507	83.4
2	Aggregate sentence of 3 years or of 6 or more years Has previous assault convictions Has no previous break and enter convictions	42	74.0
6	Less than 6 months at risk between previous convictions Fewer than 3 previous imprisonments 23 or younger at admission Has previous break and enter convictions	37	76.2
1	More than 2 previous imprisonments 23 or younger at admission Has previous break and enter convictions	15	73.3
Index of predictive efficiency (P.E.) = .199			

The third type of analysis performed on the data was the simple summation technique. The scoring system resulting from this analysis, and success rates associated with individual score totals, are contained in Appendix D. As we saw in the previous simple summation exercise, the score totals can be collapsed into a few categories. Table 16 sets forth the four predictive categories isolated by this analysis. The success

TABLE 16

RISK CATEGORIES ON VIOLENT RECIDIVISM CRITERION ISOLATED BY SIMPLE SUMMATION: CONSTRUCTION AND VALIDATION SAMPLES

CONSTRUCTION SAMPLE (1,238 CASES)			
Group Number	Score Range	N	Success Rate
1	-1 to -10	471	96.9
2	+1 to 0	396	89.2
3	+2 to +3	231	78.0
4	+4 to +17	140	66.2
Index of predictive efficiency (P.E.) = .000			

VALIDATION SAMPLE (1,237 CASES)			
Group Number	Score Range	N	Success Rate
1	-1 to -10	462	93.2
2	+1 to 0	389	87.4
3	+2 to +3	225	81.2
4	+4 to +17	161	69.3
Index of predictive efficiency (P.E.) = .000			

rates corresponding to each of these categories dramatizes once again the difficulties of accurately identifying individuals likely to commit violence. The "highest" risk category identified contains a group of offenders of whom only one in three will be re-arrested for crimes involving violence or the threat of violence. Moreover, over two-thirds of the offenders in the sample fall into a group where approximately nine persons will not be re-arrested for a violent crime for every one who will. The predictive efficiency of both samples is the same but it is .000.

None of our three devices has much predictive power: a decision-maker's "best guess" for any one offender would still be to

simply assume that he would not recidivate violently. The regression equation explains only 5.8% of the variance. A few of the predictors isolated are suggestive, but do not serve to isolate any particular group of offenders with any precision. The regression analysis is perhaps most useful in eliminating factors commonly associated with violence. Alcohol abuse, for example, is often associated with violent behaviour but appears as a predictor of little importance in the regression analysis.

The P.E. scores calculated for the predictive attribute analysis (.045 and -.199) and the simple summation method (.000) warn against drawing many conclusions from these techniques. They do suggest, however, that assumptions about previous convictions for violent crimes being good indicators of violent recidivism may be unfounded. In the P.A.A., the most discriminatory predictor of a violent return to crime was a previous break and enter conviction. In the course of constructing the simple summation scoring system (Appendix D), it was noticed, for example, that even offenders with 5 or more convictions for violent crime defined as homicide, assault, forcible rape, indecent assault but not robbery, had a 72.4% success rate on the violent recidivism criterion after release. Inmates with one to three previous convictions for violent crime had a violent recidivism rate of only 17.6%.*

The poor predictive capability of all three statistical devices prevented the researcher from recommending any of them as an instrument for identifying the violent recidivist. The results they produced, however, do serve to challenge certain common assumptions about violent recidivism, and although none of the instruments taken as a whole displays any particular predictive power, results from simple summation suggest that it does have some capacity to identify "good risks." The two best-risk categories on the simple summation technique, after all, contain offenders with about a one-in-twenty and one-in-ten chance of being re-arrested for a violent crime, indicating the method lends itself to reducing "false positive" errors for individuals who fall in the best risk categories. In this sense, it shows promise for correcting the persistent tendency to over-estimate violence and decision-makers may find it useful to have this information available to help them more accurately identify who is <u>not</u> violent.

"Modelling" and Risk

A final analysis was undertaken to determine if the "best statistical guess" of the risk of recidivism came close to representing a "model" of parole decisions. Figure 5 shows the result of plotting offenders' simple summation risk scores against the rate at which they were paroled. The

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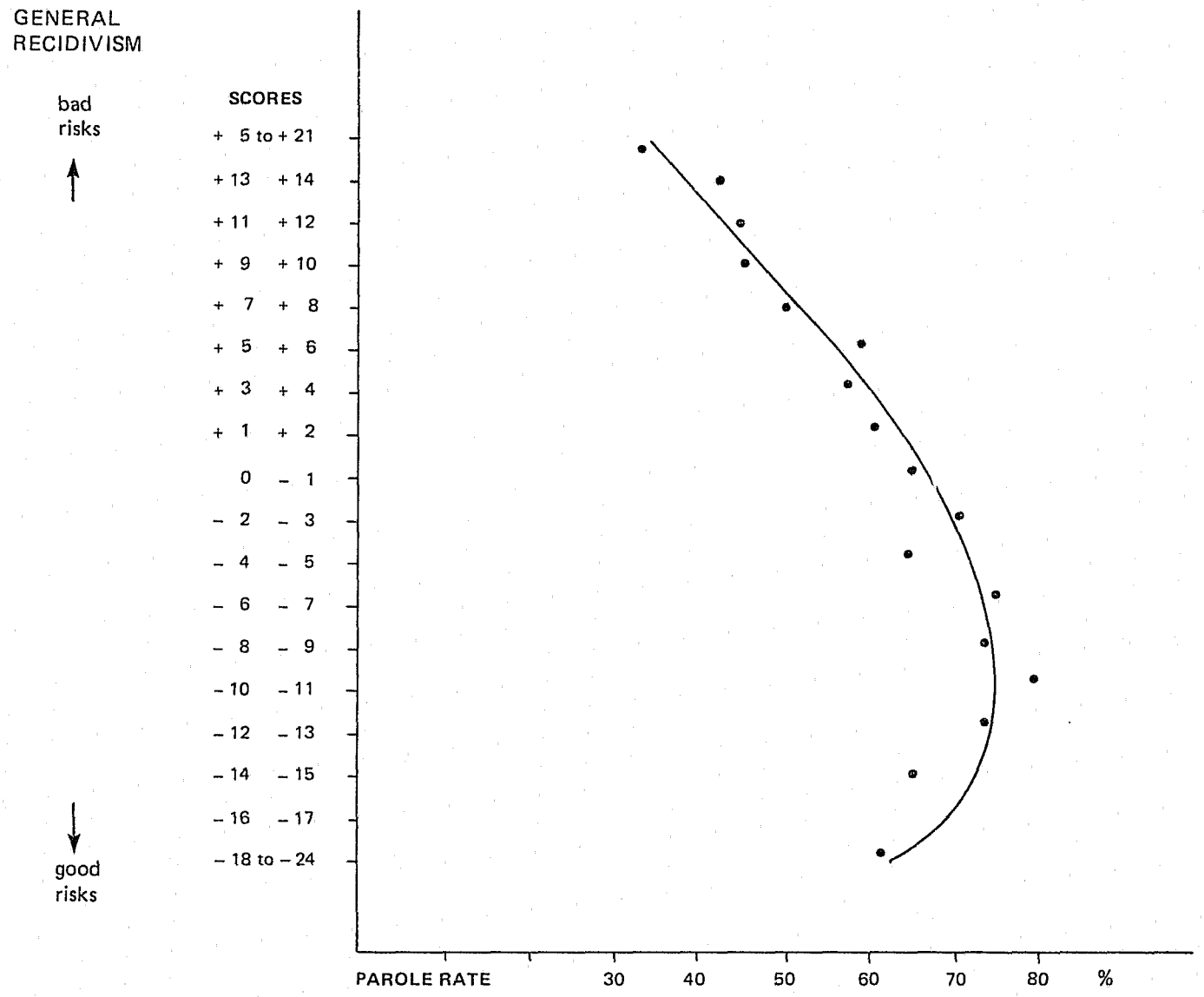
*It should be noted that there is some positive association between previous violent crime and violent recidivism. This predictor alone, however, does not offer much help in identifying the violent recidivist because a substantial majority of persons with a record for violence do not recidivate violently.

FIGURE 5.

PAROLE AND GENERAL RECIDIVISM:

PLOT OF SIMPLE SUMMATION SCORES AGAINST
RELEASE TYPE PAROLE RATE. FULL SAMPLE 2500 CASES



tight clustering of data points in the Figure suggests a primary, if not exclusive, concern with risk.

As scores begin to drop below -11, however, the straight linear relationship between risk and the parole rate begins to dissolve, indicating an interesting tendency for inmates with the best risk scores to be paroled at a lower rate than those with slightly less favourable scores. Thus, the Board seems to deprive itself of the successful outcomes of these high scoring inmates at a cost to its own "success rates," a cost to the inmate of additional punishment and lost street time, a cost to the inmates' family, and a cost to the taxpayer in dollars spent holding the inmate and, in many cases, supporting his dependents.

It can not be assumed, of course, that Board policy is merely a function of risk. It may be these high scoring inmates, whose parole rate was lower than might be expected, were serving time for serious crimes which the Board was unwilling to "settle" through the service of the one-third minimum term. This explanation may be unlikely, however, in view of the absence of any observable relationship between crime "seriousness" and the parole rate. Perhaps these high scoring inmates were serving relatively short sentences for the type of crime they had committed: earlier we noted a tendency for the Board to parole relatively fewer persons serving brief sentences, a tendency too slight, possibly, to account for the disparity.

It is also possible the discrepancy reflects differences between predictors entering the recidivism device and those isolated in the "modelling" exercise. We noticed a tendency for younger offenders to be worse risks than older ones, although they were paroled more frequently. The length of the interval the offender had spent on the street or "at risk" before being arrested for his commitment offence was one of the stronger recidivism predictors we located, but did not show up in the "modelling" study. Number of dependents, too, seem to assume more importance as a risk predictor than was recognized in the parole rate. The convergence between the parole rate and the recidivism rate is quite remarkable for bad risks and lower-scoring good risks: the "simple summation" instrument would seem to offer considerable promise for correcting the discrepancy that creeps in at the "best risk" end of the continuum.

Figure 6 shows violent recidivism scores plotted against the parole rate. The relationship between violent risk and the parole rate drops off even more sharply for the best risks than it did in the case of general recidivism. It would appear that the best risks are paroled at a rate that is quite similar to the rate for some rather bad risks. There is a clearer relationship between violent risk and the parole rate at the "bad risk" end of the continuum, although the convergence is less marked than it was for general recidivism. Again the simple summation technique would seem to be a useful aid for decision-makers interested in reflecting their concern for violent recidivism in their day-to-day parole decisions.

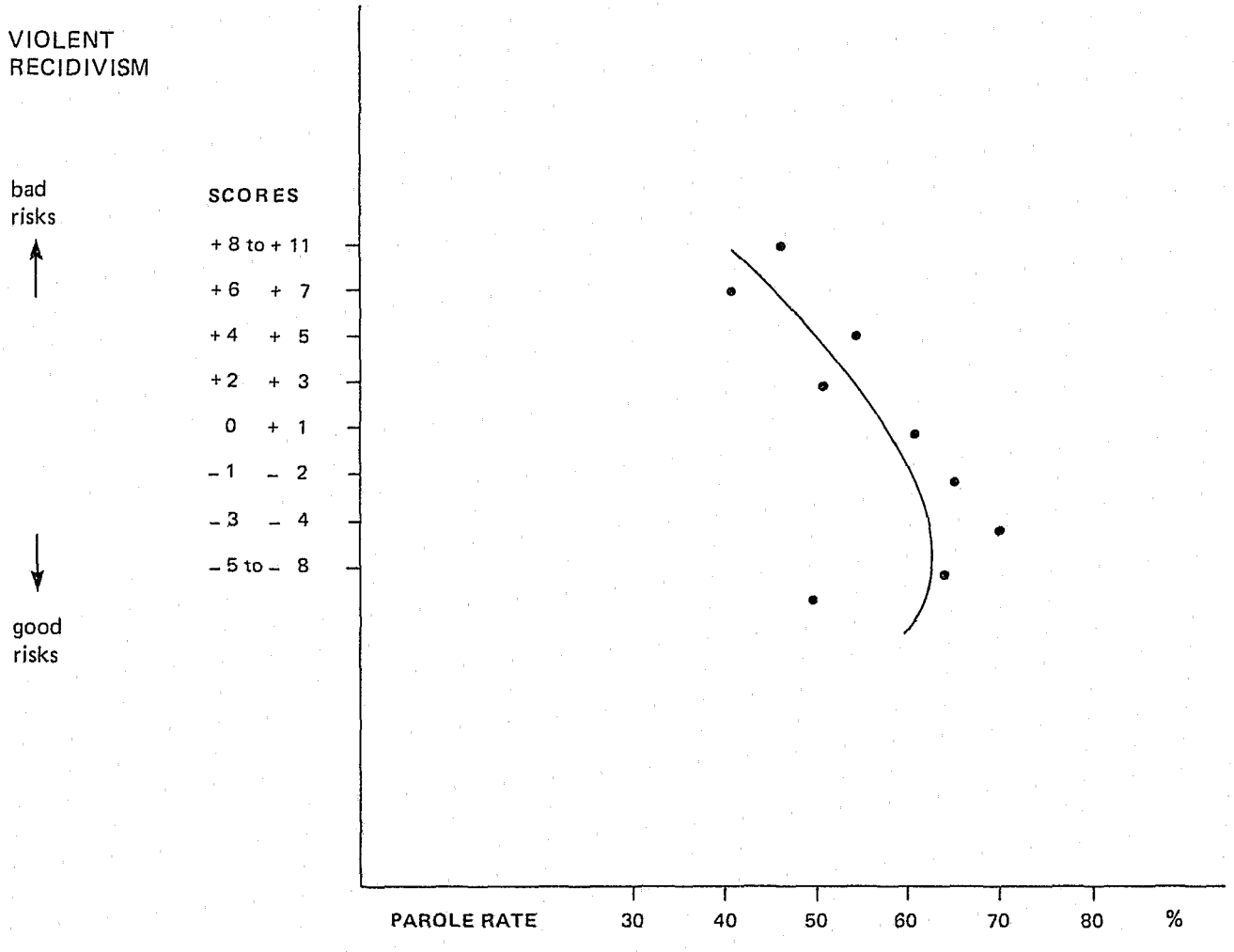
Because the particular effectiveness of this technique lies in identifying "best risks," it shows promise as a method for increasing the consistency of parole decisions at the "good risk" end of the spectrum.

With "equity" gaining importance as an end in itself in the administration of parole policy, the idea of systematically incorporating a risk prediction technique into the decision-making activities of the National Parole Board bears consideration. In the following chapter, a method of introducing the simple summation scoring device into the parole process is proposed.

FIGURE 6.

PAROLE AND VIOLENT RECIDIVISM:

PLOT OF SIMPLE SUMMATION SCORES AGAINST
RELEASE TYPE PAROLE RATE. FULL SAMPLE: 2500 CASES



CHAPTER V

GUIDELINES FOR PAROLE DECISIONS

Based on the research described in this report, the author proposes that the National Parole Board of Canada adopt a standardized set of guidelines for releasing inmates under its jurisdiction. By guidelines is meant a set of decision rules for making "presumptive" parole decisions. As a matter of administrative practice, it would be "presumed" that certain predetermined categories of inmates would be granted parole whereas inmates who did not meet the pre-established criteria would normally not receive parole. These "presumptive" decisions would not be binding on the decision-maker, but they could only be over-turned if clear reasons were advanced for reversing them. Guidelines imply that parole procedure would be standardized to the extent that any correctional official could really determine the outcome of the initial "presumptive" decision, given certain information on an offender and directions about how to use it.

The guidelines proposed here would reflect "risk" as the central consideration in the parole process. As we have seen, this is currently the most important determinant of Parole Board decisions. A "presumption in favour of parole" would therefore reflect the statistical probability that an inmate would be very unlikely to commit a violent crime upon release. For those other inmates receiving a "presumption of parole denial," there would normally be a series of stages of conditional releases, involving increasingly greater degrees of freedom, by which the Parole Board could "test" the offender prior to his eventual release.

For every inmate entering a federal penitentiary, two statistical scores would be calculated shortly after admission: one predicting re-arrest for a violent offence, the other calculating the probability of re-arrest for any indictable offence. The inmate would be shown the manner and results of these calculations as soon as they were completed and would be permitted to comment upon the accuracy of the information on which they were based. He or she would be informed in writing of the implications of these scores at the outset.

All inmates who obtained a "good risk" score on the violence prediction instrument would be awarded an operating presumption in favour of parole at the normal eligibility date one-third of the way into the sentence, or in the case of certain violent offences, half way through the sentence. Inmates obtaining scores which placed them in "poor risk" categories on the violence prediction device would be informed that they could presume they would not be paroled at their initial eligibility date.

The Board would be permitted to step outside of these guidelines under a variety of circumstances. Where an inmate was presumed paroled on the violent recidivism criterion, statistical evidence suggesting he or she was an exceptionally bad risk on the general recidivism criterion, might be brought into play. Other reasons for reversing the presumption of parole might include aggravated circumstances of a serious nature related to the offence, a particularly light sentence, or unusual

information that had not been used in determining the recidivism score, indicating the need for caution. Similarly, a presumption of parole denial might be reversed if the sentence was unusually long or perhaps if a community alternative was available sufficient to fulfill the offender's need for control. Medical, family or other clemency-related factors might also be considered reasons for reversing the denial.

If early review of "good risk" cases by Board members and correctional personnel revealed no reason for reversing the positive presumption, an inmate would be notified in writing of the formal grant of parole. There would in fact be no need for a parole hearing in these cases. If the Board wished to countermand the presumption in an individual case, it would be required to provide written reasons for the reversal, along with factual or clinical arguments for the decision.

It would be presumed from the outset that inmates whose scores indicated they were "poor risks" would not receive parole, although they would, by law, be given a parole hearing after they had served one-third of their sentence. For these poor risk inmates, priority attention would be turned towards designing a program of graduated conditional releases through different levels of security: temporary absences, day paroles, and finally, if warranted, full parole. Because the inmate's status would be known virtually from the day of admission, there would be ample time to plan this "testing program" and arrange for admission to community correctional and residential centres. While temporary absences and day paroles would also be available to good risk inmates for humanitarian reasons such as preserving family ties, it would be acknowledged that these offenders would be likely to succeed on full parole, regardless of the partial or "graduated release" programs they might enter. Priority would therefore go to the poorer risk inmates, giving the Board a chance to expand on the traditional alternatives of "in" or "out" for difficult cases. Of course, for what is expected to be a small minority of inmates about whom there is virtual consensus among clinical decision-makers as to their dangerousness, early release prior to the mandatory release date would be highly unlikely.

Federal inmates typically become eligible for temporary absences and day paroles after serving half the time until their parole eligibility date, that is, after one-sixth of the sentence has been served, or with certain violent conduct, one-quarter (certain exceptions and special rules exist for life sentences and other longer terms). It is at this point that extensive testing of poorer-risk inmates should begin, first with escorted temporary absences, then unescorted temporary absences, and finally moving to day parole and transfer to community correctional centres. The number and expected dates of each type of graduated release would be planned near the beginning of the sentence by the inmate in conjunction with classification and parole officers. At their parole hearings, poor-risk inmates could advance successful completion of temporary absences and day paroles as reasons for relaxing the presumption of parole denial.

Under the guidelines, a roughly predictable proportion of federal inmates would receive parole at their initial eligibility date. The exact point of division between inmates receiving a "presumption of parole grant" and inmates receiving a "presumption of parole denial" would be decided by the National Parole Board. As presently constituted, the violent risk categories reflect chances of approximately one-in-twenty, one-in-ten, one-in-five and one-in-three, that offenders will recidiviate violently. If only the two most promising of these categories were presumed paroled, for example, about 60 per cent of federal offenders would enter penitentiary with a presumption of a parole grant. The cut-off point established by the Board would be made a matter of public policy and could be altered according to the level of success and failures the Board considered acceptable at any given time. All risk scoring systems would of course be re-validated every few years to ensure their reliability.

With this risk-based presumption model, discretion would be controlled, but not eliminated. A record-keeping and data feedback system would allow the Board to monitor the amount of discretion entering into the paroling process. Information collected on Board decisions would be classified to distinguish between "presumptive" (good risk) cases and "non-presumptive" (poor risk) cases. The percentage of persons in each group would be recorded and used to assess the extent to which the system of presumptions had been followed. For all cases where the presumption was not observed, reasons for the reversal would be noted, categorized and percentaged in tabular form. The parole process would end by grouping all federal inmates into four categories: paroled good risks, non-paroled good risks, paroled bad risks and non-paroled bad risks. For each of these groups, data would be collected on key items such as sentence length, age, offence type, performance on temporary absence and day parole, and the parole staff's recommendation. Thus, the Parole Board could trace any systematic differences in case factors relating to individuals whose presumption was reversed and could explore the policy implications of these patterns. All information would also be broken down by region to permit regional comparisons. Not only would the feedback program permit the Board to monitor discretion, but it would be a useful aid to the Board when it reviewed cases appealed to headquarters by individual inmates.

Implications of the Guidelines

This parole model attempts to respond to current trends in correctional thinking. It reflects the recent tendency to question the validity of rehabilitation as an achievable goal. Instead, it proposes protection of the public as its central objective, suggesting that correctional resources be focused on carefully designed programs for poor risk inmates. It proposes early release of statistically good-risk inmates making it consistent with the recently identified goal of restraint in the use of incarceration and the "last resort" model of imprisonment advocated by the Law Reform Commission. The objective of denunciation of criminal

behaviour is met by the requirement that one-third of the sentence be served prior to parole release.

There is growing pressure to observe human rights considerations with reference to the individual offender. Increasingly, correctional agencies are being called upon to preserve both the appearance and the reality of fairness, equity and humaneness. These concerns are closely related to the idea that the system would be a better one if actual policy could be more easily identified. The use of a statistically-based decision model and parole guidelines would go a long way towards making parole policy both more equitable and more visible. A carefully constructed system of decision monitoring and feedback would permit authorities to assess the manner in which parole was meeting the more abstract objectives set for it by decision-makers. Certainly by standardizing and monitoring its decisions in such a fashion, the National Parole Board would be ushering in a new era of bureaucratic openness and public accountability in the correctional field.

APPENDICES

APPENDIX A

STRUCTURE AND POWERS OF THE NATIONAL PAROLE BOARD

The National Parole Board at present consists of 26 full-time members who are appointed by the Governor in Council for renewable terms not exceeding ten years. The Board is split into five regional divisions which hear cases and, with certain exceptions, make final decisions regarding parole. The Board has jurisdiction over all persons sentenced to imprisonment in a federal penitentiary for two years or more, and over provincial inmates with the exception of those in Québec, Ontario and British Columbia where provincial boards have been established.

Inmates sentenced to other than life imprisonment are eligible for full parole after serving one-third of their term of years, or seven years, whichever is the lesser; however, by regulation, inmates whose crimes involved "violent conduct"* and who receive five years or more for an offence which can invoke a sentence of ten years or more, are not eligible for parole until service of one-half the sentence. Life-sentence inmates become eligible for parole at some time between seven and 25 years, depending on the type of sentence and the statute which was applicable at the time.

All federal inmates who do not waive consideration for parole are interviewed for full parole by a regional division of the Board, consisting of at least two Board members. All cases of person serving sentences of under five years require two favourable votes in order to be paroled. Other cases, involving longer sentences, require more Board members to consider and vote on the case.** A majority of votes cast will decide the case, with the exception of life-sentence or indeterminate-sentence cases, where two-thirds of the members voting must be favourable to the parole.

Parole hearings are conducted by regional Parole Board members, supplemented by any additional members who may be required to vote in more serious cases. Provincial inmates are not normally interviewed by Board

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* "Violent conduct" is defined as conduct which "seriously endangered the life or safety of anyone or resulted in serious bodily harm or severe psychological damage to anyone" (Canada, National Parole Board, 1978:9).

**An inmate serving 5 or more years, but less than 10 years needs three Board votes; an inmate serving 10 years and up needs five votes; an inmate facing an indeterminate term or a life term for murder needs to be considered by seven Board members.

members. If a decision is reached immediately following the hearing, the inmate will usually be told immediately of the outcome. In any case, he must by law receive written notice of the decision and of the reasons for it. Any inmate who is denied parole at the time of his initial eligibility date may be re-considered at any time, but must be granted another hearing at least every two years. In practice, some offenders are heard more frequently than this.

Paroled federal inmates are released to the supervision of parole officers employed by the government or private after-care agencies. Government-employed parole officers work within The Correctional Service of Canada; agency-employed parole officers receive funds from and are ultimately responsible to the CSC. Since 1970, inmates released prior to the completion of their sentence due to remission or credit for good behaviour, have been subject to "mandatory supervision" in the community under conditions similar to parole conditions. Remission amounts to a maximum of one-third of an inmate's sentence, placing the normal "mandatory supervision" release date two-thirds of the way through the term awarded by the court. In recent years, federal inmates have been permitted by law to refuse mandatory supervision and serve their entire sentence in the penitentiary.

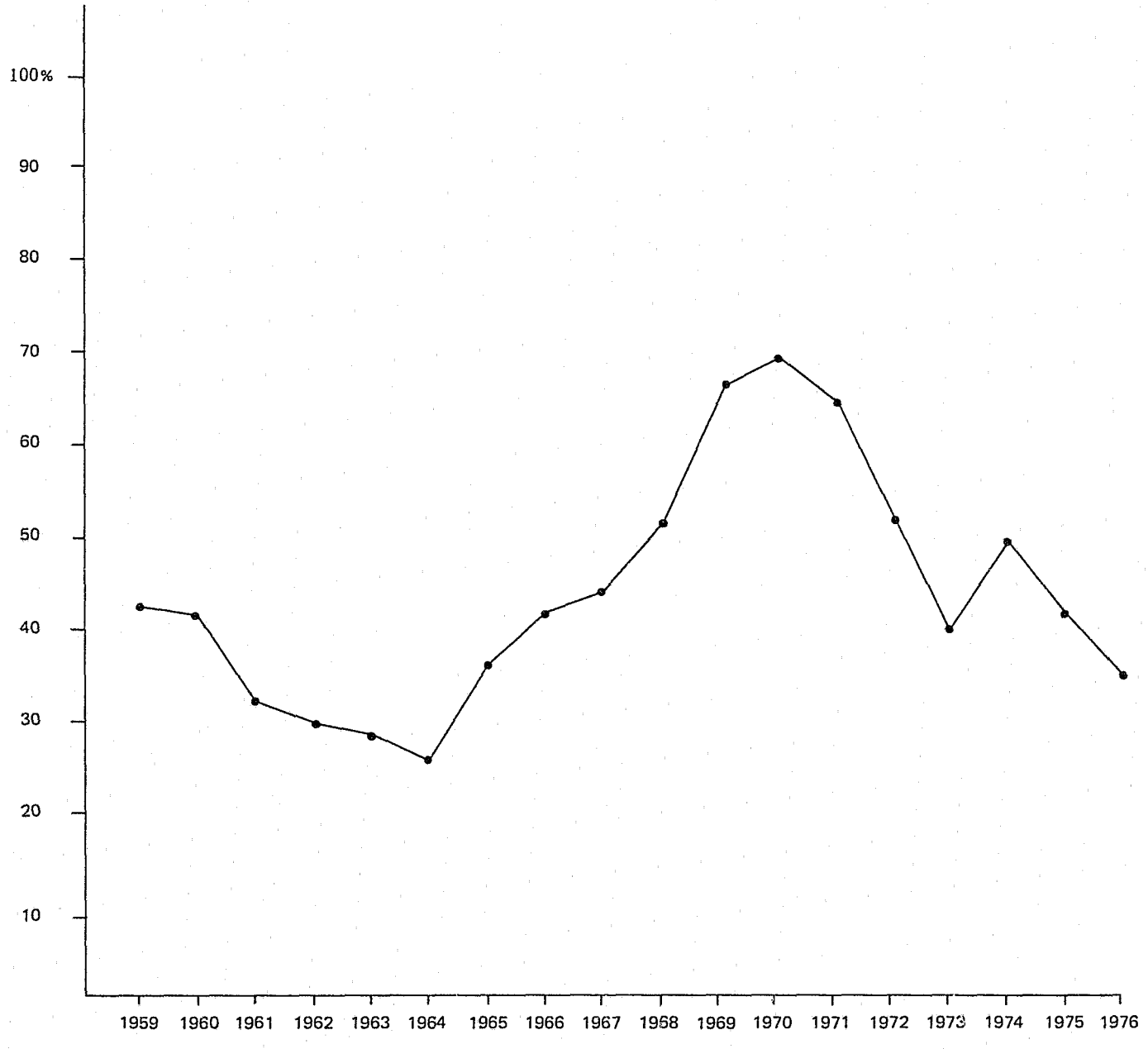
If an offender under supervision is suspected of being seriously in violation of the conditions of his release, his parole will be suspended, and he will be held in a local detention facility. Within 14 days, the parole supervision agency must decide whether to cancel the suspension and reinstate the offender on supervision, or to refer the offender to the Board for a possible "revocation." In cases of revocation, the offender is credited for the number of days spent in the community under supervision after his release and the number of days spent in custody under suspension (including remission credits). He is obliged to serve only the portion of the sentence which remains when his time served in penitentiary is deducted, together with the above deductions for time served outside the penitentiary.

The only statutory criteria for parole decision-making are contained in the Parole Act (R.S. 1970), which reads, "the Board may grant parole to an inmate ... if the Board considers that (i) ... the inmate has derived the maximum benefit from imprisonment, [and] (ii) the reform and rehabilitation of the inmate will be aided by the grant of parole, and (iii) the release of the inmate on parole would not constitute an undue risk to society." The NPB Policy and Procedures Manual also contains a list of factors to be taken into account in making parole decisions.

APPENDIX B

PAROLE RATES, 1959-1976:

PERCENTAGE OF APPLICANTS GRANTED PAROLE FROM FEDERAL AND PROVINCIAL INSTITUTIONS IN CANADA



APPENDIX C

MATERIALS RELATED TO GENERAL RECIDIVISM PREDICTION: SIMPLE SUMMATION METHOD

SECTION 1: TABLES 17 TO 31

SUCCESS RATES AND RESULTING SCORES FOR SELECTED PREDICTORS (CITED IN CHAPTER IV, TABLE 11)
CONSTRUCTION SAMPLE (ALL TABLES): 1,238 CASES

TABLE 17: AGE AT ADMISSION

Age at Admission	N	Success Rate	Score
Under 21	244	46.1	+2
21 to 24	329	56.6	0
25 to 29	246	59.3	0
30 to 34	153	54.2	0
35 to 39	97	53.6	0
40 to 49	113	67.2	-2
50 an older	56	69.6	-2

TABLE 18: NUMBER OF PREVIOUS IMPRISONMENTS

Number of Previous Imprisonments	N	Success Rate	Score
0	331	79.1	-4
1	145	55.1	0
2	149	53.6	0
3	107	48.5	+1
4	110	51.1	+1
5	74	40.5	+2
6	228	42.1	+2
7	60	43.3	+2
8 or more	34	42.1	+2

TABLE 19: PREVIOUS BREACH OF PAROLE OR MANDATORY SUPERVISION

Previous Breach of Parole or Mandatory Supervision	N	Success Rate	Score
No previous breach	1095	57.8	0
One or more previous breaches	143	42.6	+2

TABLE 20: NUMBER OF PREVIOUS ESCAPES

Number of Previous Escapes	N	Success Rate	Score
0	1025	59.6	0
1	162	38.2	+3
2 or more	51	41.1	+3

TABLE 21: SECURITY CLASSIFICATION

Security Classification	N	Success Rate	Score
Minimum or Community Correctional Centre	298	55.3	0
Medium	649	58.6	0
Maximum	291	50.1	+1

TABLE 22: AGE AT FIRST ADULT CONVICTION

Age at First Adult Conviction	N	Success Rate	Score
Under 19	587	44.7	+2
19 to 22	364	59.0	0
23 to 30	180	70.0	-2
31 to 40	56	73.2	-3
41 to 49	32	90.6	-6
50 and over	19	94.7	-7

TABLE 23: NUMBER OF PREVIOUS CONVICTIONS FOR ASSAULT

Number of Previous Convictions for Assault	N	Success Rate	Score
0	964	58.7	0
1	177	45.7	+2
2 or more	97	40.0	+3

TABLE 24: MARITAL STATUS

Marital Status	N	Success Rate	Score
Single	816	52.9	0
Married or has common-law spouse	346	63.0	-1
Other	76	57.0	0

TABLE 25: INTERVAL AT RISK

Interval at Risk	N	Success Rate	Score
less than 6 months	613	47.6	+1
from 6 to 11 months	217	56.0	0
from 12 to 23 months	189	52.9	0
24 months or longer	219	69.8	-2

TABLE 26: NUMBER OF DEPENDENTS

Number of Dependents	N	Success Rate	Score
0	890	53.4	0
1	73	56.1	0
2	99	57.5	0
3 or more	176	68.7	-2

TABLE 27: AGGREGATE SENTENCE

Aggregate Sentence	N	Success Rate	Score
24 months	500	54.1	0
25 to 36 months	387	52.1	0
37 to 48 months	135	57.0	0
49 to 60 months	107	71.1	-3
61 months and up	109	66.9	-2

TABLE 28: NUMBER OF PREVIOUS CONVICTIONS FOR VIOLENT SEXUAL OFFENCES

Number of Previous Convictions for Violent Sexual Offences	N	Success Rate	Score
0	1193	56.7	0
1	38	34.2	+4
2*	6	83.3	0
3*	0	N.A.	0
4 or more*	1	0.0	0
* Too few cases in this cell to warrant scoring.			

TABLE 29: NUMBER OF PREVIOUS CONVICTIONS FOR BREAK AND ENTER

Number of Previous Convictions for Break and Enter	N	Success Rate	Score
0	667	66.2	-2
1	239	46.0	+2
2	153	43.7	+2
3	90	41.0	+3
4	48	40.0	+3
5 or more	41	34.1	+6

TABLE 30: EMPLOYMENT STATUS AT TIME OF ARREST FOR COMMITMENT OFFENCE

Employment Status	N	Success Rate	Score
Employed	439	62.2	-1
Unemployed	799	53.3	0

TABLE 31: TYPE OF COMMITMENT OFFENCE

Type of Commitment Offence	N	Success Rate	Score
Non-violent sex offences	33	78.7	-4
Narcotics offences	81	74.1	-3
Homicide	33	72.8	-3
Other crimes against the person	30	70.0	-2
Unarmed robbery	170	67.0	-2
Other crimes against property	17	58.9	0
Violent sex offences	35	57.1	0
Armed robbery	64	56.3	0
Assault	47	55.3	0
Fraud	116	55.1	0
Theft	65	50.7	+1
Receiving or possession of stolen goods	60	50.0	+1
Break and enter	395	45.5	+2
Escape	36	33.3	+4

* The miscellaneous "other" category was dropped from the scoring system; those convicted of offences relating to weapons offences were also dropped out, because of small numbers.

APPENDIX C: SECTION 2

GENERAL RECIDIVISM PREDICTION: SCORING SYSTEM

NOTE: The system below explains how to assign a score to each of the 15 items on the "INMATE SCORING SHEET."

Not all of the items below mention all the possible values for each item, e.g., the only designation under "Previous breach of parole or mandatory supervision" is "has previously been revoked or has forfeited his parole or mandatory supervision." This means that any other possibility, i.e., "has not previously been revoked or forfeited," must receive a score of Zero. Therefore, items should receive a score of zero unless one of the values below applies to the inmates.

It is important to ensure that all information on the inmate is accurate. In most cases, this will mean that the inmate should be asked to confirm the accuracy of each item in a personal interview or letter.

Item	Description	Scoring	
1	CURRENT OFFENCE		
	Homicide: any act resulting in death, except by automobile	-3	
	Unarmed robbery	-2	
	Non-violent sex offences, including incest, sexual intercourse with the underage, seduction, gross indecency	-4	
	Dangerous driving, criminal negligency in operation of motor vehicle, arson, kidnapping, hijacking, abduction, obstructing peace officer	-2	
	Narcotics offences	-3	
	Receiving or possession of stolen goods		+1

Item	Description	Scoring	
1	CURRENT OFFENCE (continued)		
	Theft		+1
	Break and enter, forcible entry, unlawfully in dwelling		+2
	Escape		+4
2	AGE AT ADMISSION		
	Under 21		+2
	Over 39	-2	
3	PREVIOUS IMPRISONMENTS		
	Has never been in penal institution (jail, prison, or penitentiary) before	-4	
	Has served a sentence in a penal institution on 3 or 4 previous occasions		+1
	Has served a sentence in a penal institution on 5 or more previous occasions		+2
4	PREVIOUS BREACH OF PAROLE OR MANDATORY SUPERVISION		
	Parole or mandatory supervision previously revoked or forfeited		+2
5	PREVIOUS HISTORY OF ESCAPE		
	Has escaped or attempted to escape on one or more previous occasions		+3
6	SECURITY CLASSIFICATION		
	Is in maximum security at the time of parole hearing		+1
7	AGE AT FIRST ADULT CONVICTION		
	Was under 19 at time of first adult conviction		+2
	Was between 23 and 30 inclusive at time of first adult conviction	-2	

Item	Description	Scoring	
7	AGE AT FIRST ADULT CONVICTION (continued)		
	Was between 31 and 40 inclusive at time of first adult conviction	-3	
	Was between 41 and 49 inclusive at time of first adult conviction	-6	
	Was over 49 at time of first adult conviction	-7	
8	PREVIOUS CONVICTIONS FOR ASSAULT		
	Has 1 previous conviction for assault		+2
	Has 2 or more previous convictions for assault		+3
9	MARITAL STATUS		
	Is married or has common-law spouse	-1	
10	INTERVAL AT RISK SINCE LAST OFFENCE		
	If it has been less than 6 months between the inmate's current conviction and his last offence (or his release from his last imprisonment, if he was jailed for his last offence)		+1
	If it has been 2 years or more between the inmate's current conviction and his last offence (or his release from his last imprisonment, if he was jailed for his last offence)	-2	
11	NUMBER OF DEPENDENTS		
	Has 3 or more dependents (includes dependents from common-law marriage)	-2	
12	AGGREGATE SENTENCE		
	Aggregate sentence is 5 years	-3	
	Aggregate sentence is 6 years or more	-2	
13	PREVIOUS CONVICTIONS FOR VIOLENT SEX OFFENCES		
	Has 1 previous conviction for forcible rape, attempted rape, or indecent assault		+4

Item	Description	Scoring	
14	PREVIOUS CONVICTIONS FOR BREAK AND ENTER		
	Has no previous convictions for break and enter, or being unlawfully in dwelling	-2	
	Has 1 or 2 previous convictions for break and enter		+2
	Has 3 or 4 previous convictions for break and enter		+3
	Has 5 or more previous convictions for break and enter		+6
15	EMPLOYMENT STATUS AT TIME OF ARREST FOR CURRENT OFFENCE		
	Was employed at time of arrest for current offence	-1	

APPENDIX C: SECTION 3

INMATE SCORING SHEET: GENERAL RECIDIVISM

Item	Description	Score
1	Current offence	
2	Age at admission	
3	Previous imprisonments	
4	Previous breach of parole or mandatory supervision	
5	Previous history of escape	
6	Security classification	
7	Age at first adult conviction	
8	Previous convictions for assault	
9	Marital status	
10	Interval at risk since last offence	
11	Number of dependents	
12	Aggregate sentence	
13	Previous convictions for violent sex offences	
14	Previous convictions for break and enter	
15	Employment status at time of arrest for current offence	
	Final Score	

APPENDIX C: SECTION 4

SUCCESS RATES ASSOCIATED WITH INDIVIDUAL SCORE TOTALS FOR GENERAL RECIDIVISM

Score Total	Success Rate	N
-24.	100.0	1
-23.	100.0	1
-22.	100.0	3
-21.	100.0	1
-20.	100.0	3
-19.	75.0	4
-18.	75.0	4
-17.	100.0	5
-16.	100.0	11
-15.	100.0	10
-14.	94.1	17
-13.	93.3	15
-12.	85.7	21
-11.	80.0	20
-10.	93.1	29
-9.	85.2	27
-8.	68.4	38
-7.	75.0	32
-6.	88.2	34
-5.	78.9	38
-4.	67.6	38

Score Total	Success Rate	N
-3.	51.8	56
-2.	70.0	50
-1.	59.3	54
0.	66.7	48
1.	51.8	55
2.	41.9	62
3.	51.8	56
4.	47.3	55
5.	43.8	77
6.	42.4	59
7.	40.0	45
8.	40.0	50
9.	27.9	61
10.	49.0	49
11.	30.0	33
12.	25.0	32
13.	29.4	17
14.	15.8	19
15.	25.0	8
16.	60.0	5
17.	0.0	2
18.	0.0	3
19.	0.0	2

APPENDIX C: SECTION 5

SCORE EVALUATION CATEGORIES: GENERAL RECIDIVISM

Prognosis:

Very good	(-6 to -27: indicates that 4 out of every 5 offenders in this group will not commit an indictable offence after release)
Good	(-1 to -5: indicates that 2 out of every 3 offenders in this group will not commit an indictable offence after release)
Fair	(0 to +4: indicates that 1 out of every 2 offenders in this group will not commit an indictable offence after release)
Fair to poor	(+5 to +8: indicates that 2 out of every 5 offenders in this group will not commit an indictable offence after release)
Poor	(+9 to +30: indicates that 1 out of every 3 offenders in this group will not commit an indictable offence after release)

NOTES: Making distinctions <u>within</u> prognosis categories on the basis of differences in numerical scores is <u>not</u> warranted, e.g., it is not justified to consider an inmate with a score of +20 a substantially worse risk than an inmate with a score of +10.

It is important to ensure that all information on the inmate is accurate. In most cases, this will mean that the inmate should be asked to confirm the accuracy of each item in a personal interview or letter.

APPENDIX D

MATERIALS RELATED TO VIOLENT RECIDIVISM PREDICTION: SIMPLE SUMMATION METHOD

SECTION 1: VIOLENT RECIDIVISM PREDICTION: SCORING SYSTEM

	Description	Scoring	
1	CURRENT OFFENCE		
	Assault, attempted homicide, causing bodily harm, illegal possession of firearm, or carrying concealed firearm		+3
	Rape, attempted rape, indecent assault		+2
	Non-violent sex offences, including incest, sexual intercourse with the underage, seduction, gross indecency	-1	
	Forgery, false pretences, false uttering, other frauds	-1	
2	AGE AT ADMISSION		
	Under 21		+1
	Over 39	-1	
3	PREVIOUS CONVICTIONS		
	Has no convictions prior to the current offence	-1	
4	PREVIOUS IMPRISONMENTS		
	Has never been in a penal institution (jail, prison, or penitentiary) before	-1	
	Has served a sentence in a penal institution on 4 previous occasions		+1

Item	Description	Scoring	
4	PREVIOUS IMPRISONMENTS (continued) Has served a sentence in a penal institution on 5 previous occasions		+2
5	PREVIOUS CONVICTIONS FOR VIOLENT CRIME Has 1 or 3 previous convictions for homicide, assault, rape, or indecent assault		+1
	Has 2 or 4 previous convictions for homicide, assault, rape, or indecent assault		+2
	Has 5 or more previous convictions for homicide, assault, rape, or indecent assault		+3
6	PREVIOUS BREACH OF PAROLE OR MANDATORY SUPERVISION Has previously been revoked or has forfeited his parole or mandatory supervision		+1
7	PREVIOUS HISTORY OF ESCAPE Has escaped or attempted to escape on one previous occasion		+1
	Has escaped or attempted to escape on 2 or more previous occasions		+3
8	SECURITY CLASSIFICATION Is in maximum security at the time of parole hearing		+1
	Is in minimum security at the time of parole hearing	-1	
9	AGE AT FIRST ADULT CONVICTION Was between 23 and 40 inclusive at time of first adult conviction	-1	
	Was over 40 at time of first adult conviction	-2	
10	PREVIOUS CONVICTIONS FOR ASSAULT Has one previous conviction for assault (does <u>not</u> include indecent assault)		+1

Item	Description	Scoring	
10	PREVIOUS CONVICTIONS FOR ASSAULT (continued) Has 2 previous convictions for assault (does not include indecent assault)		+3
11	PREVIOUS CONVICTIONS FOR FORGERY OR FRAUD Has 1 or more previous convictions for forgery, false pretences, false uttering, other frauds	-1	
12	EDUCATION Has attained grade 12 education or higher	-1	
13	MARITAL STATUS Is separated from spouse	-1	

APPENDIX D: SECTION 2

INMATE SCORING SHEET: VIOLENT RECIDIVISM

Item	Description	Score
1	Current offence	
2	Age at admission	
3	Previous convictions	
4	Previous imprisonments	
5	Previous convictions for violent crime	
6	Previous breach of parole or mandatory supervision	
7	Previous history of escape	
8	Security classification	
9	Age at first adult conviction	
10	Previous convictions for assault	
11	Previous convictions for fraud, forgery, etc.	
12	Education	
13	Marital status	
	Final Score	

APPENDIX D: SECTION 3

FAILURE RATES ASSOCATED WITH INDIVIDUAL SCORE TOTALS FOR VIOLENT RECIDIVISM

Score Total	Failure Rate	N
-8.	0.0	2
-7.	0.0	10
-6.	0.0	17
-5.	0.0	38
-4.	0.0	60
-3.	1.3	75
-2.	4.2	119
-1.	5.3	150
0.	9.5	211
1.	12.4	185
2.	21.2	137
3.	23.4	94
4.	33.3	51
5.	17.1	35
6.	40.0	30
7.	36.4	11
8.	50.0	8
9.	100.0	3
10.	0.0	2

APPENDIX D: SECTION 4

SCORE EVALUATION CATEGORIES: VIOLENT RECIDIVISM

Prognosis:

Excellent	(-1 to -10: indicates that 19 out of every 20 offenders in this group will not commit a violent crime after release)*
Very good	(+1 and 0: indicates that 9 out of every 10 offenders in this group will not commit a violent crime after release)*
Good	(+2 to +3: indicates that 4 out of every 5 offenders in this group will not commit a violent crime after release)*
Fair	(+4 to +17: indicates that 2 out of every 3 offenders in this group will not commit a violent crime after release)*

NOTES: Making distinctions <u>within</u> prognosis categories on the basis of differences in numerical scores is <u>not</u> warranted, e.g., it is not justified to consider an inmate with a score of +13 a substantially worse risk than an inmate with a score of +5.

It is important to ensure that all information on the inmate is accurate. In most cases, this will mean that the inmate should be asked to confirm the accuracy of each item in a personal interview or letter.

* A "violent crime" is defined as any homicide, assault, rape or other indecent assault, or robbery.

BIBLIOGRAPHY

American Friends Service Committee. Struggle for justice. New York: Hill and Wong, 1971.

American Law Institute. Model penal code: proposed draft. Philadelphia: 1958.

Bewley, J. Parole boards demean courts, breed insecurity. The Globe and Mail, December 14, 1977, p.7.

Brockway, Z. Fifty years of prison service. Montclair, New Jersey: Patterson-Smith, 1912.

Burgess, E.W. Factors determining success or failure on parole. In A.A. Bruce et al. (Ed.) The workings of the indeterminate sentence law and the parole system in Illinois. Springfield: State Board of Parole, 1928.

California. Internal guidelines for parole decisions. Sacramento: State of California, 1975.

California turns to fixed sentences. Corrections Magazine, 1976. 2, (6).

Canada. Auditor General. 100th Annual Report of The Auditor General of Canada to the House of Commons. Ottawa: Supply and Services, 1978.

Canada. Criminal Law Amendment Act, 1977. c.53.

Canada. Federal Court Act, 1970-71-72, c.1.

Canada. House of Commons. Debates. August 11-18, 1958.

Canada. Law Reform Commission. Imprisonment and release. Ottawa: Information Canada, 1975.

Canada. National Parole Board. A guide to conditional release for inmates. Ottawa: Supply and Services, 1978.

Canada. Parole Act, 1958, c.38.

Canada. Parole Act, R.S.C. 1970, c.P-2.

Canada. Solicitor General. Solicitor General's study of conditional release. Ottawa: Supply and Services, 1981.

Canada. Solicitor General. Task Force on the Creation of an Integrated Canadian Corrections Service. The role of federal corrections in Canada. Ottawa: Solicitor General, 1977.

Canada. Ticket of Leave Act, 1899. c.49.

Carrière, Pierre and Silverstone, Sam. The parole process. Ottawa: Supply and Services, 1976.

Carter, Robert M. and Wilkins, Leslie. Some factors in sentencing policy. In Robert M. Carter and Leslie Wilkins (Eds.) Probation and parole: Selected readings. New York: John Wiley and Sons, 1970.

Chase, M. and Krames, L. "Situational definition of violence and aggression." Unpublished research report, Ministry of the Solicitor General of Canada, Research Division, February, 1977.

Ciale, Justin. Rate of success in institutional treatment. In Papers of the American Society of Criminology, 1964. Columbus, Ohio: Ohio State University, 1965.

Clark, Ramsey and Rudenstine, David. Prison without walls: report on New York parole. New York: Praeger, 1975.

Cocozza, James and Steadman, H. The failure of psychiatric predictions of dangerousness: clear and convincing evidence. Rutgers Law Review, 1976. 29.

Crowther, Carol. Crimes, penalties and legislatures. Annals of the American Academy of Political and Social Science, 1969. 381.

Dean, Charles and Duggan, Thomas. Problems in parole prediction: An historical analysis. Social Problems, 1968. 15 (4).

Demers, Donald. "Discretion, disparity and the parole process." Doctoral Dissertation, University of Alberta, Edmonton, 1978.

Ennis, Bruce and Litwack, T. Psychiatry and the presumption of expertise: Flipping coins in the courtroom. California Law Review, 1974. 62 (3).

Fauteux, G., Chairman. Report of a committee appointed to inquire into the principles and procedures followed in the remission service of the Department of Justice of Canada. Ottawa: Queen's Printer, 1956.

Fewer convicts is Blais' goal. The Ottawa Journal, August 11, 1978, p.2.

Fogel, David. We are living proof ...; the justice model for corrections. Cincinnati: W.H. Anderson, 1976.

Frankel, Marvin E. Criminal sentences: Law without order. New York: Hill and Wong, 1972.

Friedman, C.J. and Mann, Fredricka. Recidivism: The fallacy of prediction. International Journal of Offender Therapy and Comparative Criminology, 1976. 20 (2).

Goldenberg, H., Chairman. Parole in Canada; report of the standing committee on legal and constitutional affairs. Ottawa: Queen's Printer, 1974.

Gottfredson, Don M. A Shorthand formula for base expectancies. Sacramento: California Department of Corrections, 1962.

Gottfredson, Don M. Assessment of prediction methods in crime and delinquency. In President's Commission on Law Enforcement and Administration of Justice, Task force report: Juvenile delinquency. Washington: G.P.O., 1967.

Gottfredson, Don M. et al. Four thousand lifetimes; a study of time served and parole outcome. Davis, California: NCCD Research Centre, 1973(a).

Gottfredson, Don M. et al. Parole decision-making study (10 volumes). Davis, California: NCCD Research Centre, 1973(b).

Gottfredson, Don M. et al. The utilization of experience in parole decision-making: Summary report. Washington: G.P.O., 1973(c).

Grygier, Tadeusz et al. Decision and outcome: Studies in parole prediction. Canadian Journal of Criminology and Corrections, 1971. 133 (2).

Hayner, N. Why do parole boards lag in the use of prediction score. In R. Carter and L. Wilkins (Eds.) Probation and parole: Selected readings. New York: J. Wiley and Sons, 1970.

Heinz et al. Sentencing by parole board: An evaluation. Journal of Criminal Law and Criminology, 1976. 67 (1).

Hogarth, J. Sentencing as a human process. Toronto: University of Toronto Press, 1971.

Hugessen, James K., Chairman. Report of the task force on the release of inmates. Ottawa: Information Canada, 1973.

Illinois. Illinois Law Enforcement Commission. Flat-time prison sentences: A proposal for swift, certain and even-handed justice, 1975.

Inciardi, James and McBride, Duane. The parole prediction myth. International Journal of Criminology and Penology, 1977. 5 (3).

"Just keeping the people off the streets," chief of federal prison services says. Globe and Mail, March 9, 1979, p.17.

Kozol, H. The diagnosis of dangerousness. In S. Pasternack (Ed.) Violence and victims. Toronto: Halstead Press (John Wiley and Sons), 1975.

Landreville, Pierre. Prédiction de la gravité de l'agir delinquant. Thèse de doctorat, Université de Montréal, 1969.

Langlois, Robert. Analyse de la récidive sur une période d'épreuve de 10 ans. Thèse de doctorat, Université de Montréal, 1972.

Léveillé, Yves. A qui accorde-t-on la libération conditionelle? Canadian Journal of Criminology and Corrections, 19.

Lindsey, Edward M. An historical sketch of the indeterminate sentence and parole system. Journal of Criminal Law, 1925. 16 (9).

Livermore, J.M. Malmquest, C.P. and Meehl, P.E. On the justification for civil commitment. University of Pennsylvania Law Review, 1968. 117.

MacGuigan, Mark, Chairman, Standing Committee on Justice and Legal Affairs, Sub-Committee on the Penitentiary System in Canada. Report to Parliament. Ottawa: Supply and Services, 1977.

Macnaughton-Smith, Peter. Permission to be slightly free. Ottawa: Supply and Services, 1976.

Mandel, Michael. Rethinking parole. Osgoode Hall Law Journal, 1975. 13 (2).

Mannheim, Herman and Wilkins, Leslie. Prediction methods in relation to Borstal Training. London: H.M.S.O., 1955.

Marcus, A. Nothing is my number: An exploratory study with a group of dangerous sexual offenders in Canada. Toronto: General Publishing Co., 1971.

Martinson, Robert. What works? Questions and answers about prison reform. The Public Interest, 1974. 35 (1).

Meehl, Paul. Clinical versus statistical prediction. Minneapolis: University of Minnesota Press, 1954.

Menninger, Carl. The crime of punishment. New York: Viking, 1968.

Miller, Frank. Parole. In McGrath, W.T. (Ed.) Crime and its treatment in Canada. Toronto: Macmillan, 1965.

Minnesota. Board administrative rules and parole release date matrix. St. Paul, Minnesota: Minnesota Corrections Board, undated.

Mitford, Jessica. Kind and usual punishment in California. The Atlantic Monthly, 1971. 227 (3).

Molof, M.J. Prediction of future assaultive behavior among youthful offenders. Sacramento: California Department of the Youth Authority, Research Division, 1965.

Morris, Norval. The future of imprisonment. Chicago: University of Chicago Press, 1974.

Must we have a whipping boy? (Remarks of Deputy Attorney General of Nova Scotia at Atlantic Criminology and Corrections Association Conference) Liaison, October, 1978, pp.4-7.

Nuttall, Christopher et al. Parole in England and Wales. London: H.M.S.O., 1977.

Ouimet, R., Chairman, Committee on Corrections. Report. Ottawa: Queen's Printer, 1969.

Outerbridge, William et al. Report of the task force on community-based residential centres. Ottawa: Information Canada, 1973.

Parole release decision-making and the sentencing process. Yale Law Journal, 1975. 84 (4), (Entire issue).

"Public safety before more parole" - Outerbridge. The Citizen, February 23, 1979, p.12.

Quinsey, U. et al. "Institutional release policy and the identification of dangerous men". Presentation at the Symposium on Violence in Canadian Society, Qualicum Beach, Marcix 1977.

Robison, James et al. It's time to stop counting (Technical Supplement No. 2 to California's Prison Parole and Probation System). Sacramento: California Department of Corrections, 1971a.

Robison, James. By the standard of his rehabilitation (Research Report No. 39). Sacramento: California Department of Corrections, 1971b.

Robison, James and Smith, Gerald. The effectiveness of correctional programs. Crime and Delinquency, 1971. 17 (1).

Rubin, Sol. The law of criminal correction (1st ed.). St. Paul, Minnesota: West Publishing Co., 1963.

Scott, Joseph. The use of discretion in determining the severity of punishment for incarcerated offenders. Journal of Criminal Law and Criminology, 1974. 65 (2).

Simon, Frances. Prediction methods in criminology. London: H.M.S.O., 1971.

Steadman, Henry and Cocozza, James. Careers of the criminally insane. Lexington, Massachusetts: Lexington Books, 1974.

Steadman, Henry and Braff, Jeraldine. Crimes of violence and incompetency diversion. Journal of Criminal Law and Criminology, 1975. 66 (1).

Sturrup, G. Treating the untreatable: Chronic criminals at Herstedvester. Baltimore: John Hopkins Press, 1968.

Takagi, Paul and Robison, James. Case decisions in a state parole system (Research Report No. 31). Sacramento: California Department of Corrections, 1968.

Takagi, P.T. and Robison, J. The parole violation: An organizational reject. Journal of Research in Crime and Delinquency. 6 (1).

United States. National Advisory Commission on Criminal Justice Standards and Goals. Corrections. Washington: G.P.O., 1973.

von Hirsch, Andrew. Doing justice; the choice of punishments. New York: Hill and Wong, 1976.

von Hirsch, Andrew. Prediction of criminal conduct and preventive confinement of convicted persons. Buffalo Law Review, 1972. 21 (3).

Waller, Irvin. Men released from prison. Toronto: University of Toronto Press, 1974.

Wenk, Ernst et al. Can violence be predicted? Crime and Delinquency, 1972. 18 (2).

Wilkins, Leslie. Evaluation of penal measures. New York: Random House, 1969.

Wilkins, Leslie and Macnaughton-Smith, Peter. Predictive attribute analysis, in N. Johnston et al. (Eds.) The sociology of punishment and correction (2nd Ed.) New York: John Wiley and Sons, 1970.

Williams, Wright and Miller, Kent. The role of personal characteristics in perceptions of dangerousness. Criminal Justice and Behaviour, 1977. 4 (3).