



Research Publication

Sentencing, parole & recidivism

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Research Publication No. 1
March 1982
ISSN 0813 5800

NSW Department of Corrective Services

Research Publication



Material published by the
Research Division includes
Research Digests, Research
Bulletins, and Research
Publications.

SENTENCING, PAROLE & RECIDIVISM

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No. 1 MARCH 1982

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SUMMARY

Controversy about the release of prisoners on parole before expiration of their sentences is reviewed. The costs of abolition of parole and the difficulty in identifying in advance those prisoners likely to commit serious offences while on parole must be weighed against the social, political and economic costs of offences committed by parolees while under supervision. Proposals that could lead to restriction of parole so that the larger part of a sentence is served before conditional release are discussed. It is suggested that early release on parole could in fact reduce the likelihood of re-offending because those released earlier would, on re-conviction, have more of the original sentence to serve. In other words, they would have more to lose, and thus would be more careful to not re-offend in the crucial months following release.

This study attempted to test this hypothesis in two ways. It was expected that the higher costs had more often set short non-parole periods in 1973 than in the year before or the year after. Thus, a natural experiment should have occurred to test the effect of shorter versus longer non-parole periods. This was the basis of the first approach. A sample of prisoners sentenced at the higher courts to terms of three years or less was therefore drawn from those sentenced in the first nine months of 1973, and similar samples were drawn from the first nine months of 1972 and 1974. Fifty cases convicted of armed robbery and 50 other cases were drawn from the 1973 sample at random and matched cases were drawn from the 1972 and 1974 samples. The over-sampling of armed robbers was intended to ensure that this type of offender could be considered in some detail, as there appeared to be special concern about them. Data on a variety of measures of past criminal conduct and of the current offence were then obtained from police, court and departmental sources.

The difference in the proportion of the sentence served before release was, in fact, too small to allow a fair test of the hypothesis. For reasons discussed in the report, when the courts set shortened non-parole periods, release on parole was more often delayed after the end of the non-parole period. Thus, the lack of difference between the samples in rates of re-imprisonment over the three years after release did not disprove the hypothesis.

A second approach was then adopted. The 300 cases were formed into three groups: those paroled early (112 cases), those paroled late (121 cases) and those not paroled (67 cases). For the total group of 300, multivariate statistical procedures were used to estimate for each case a probability of being re-imprisoned over the three years after release. The actual rates found for the three groups were then compared to the rates expected from their background and offence characteristics.

The results showed that:

(1) The parole system did tend to select for early release those with the best chance of success and to deny parole to those with the highest chance of failure, if the chances are estimated from background and offence characteristics that are predictive of re-imprisonment.

(2) After allowing for this difference in expected success rates, there was a statistically not significant but substantial trend for those not given parole to fail more often than expected, while those paroled did slightly better than expected. Thus, the hypothesis that early parole reduces chances of failure, while not proven, was not inconsistent with the data. Early release did not increase re-offending and delayed release might be associated with increased chances of re-offending.

(3) Persons convicted of robbery were significantly more likely than other offenders to be re-convicted for a violent offence. This effect appeared slightly stronger for those robbers who had used or threatened serious violence in their original offence, but this further trend was not significant even when further data from a larger sample were analysed. Thus, if parole or other special programmes are to be denied to any group of prisoners because they are more likely to commit violent offences while in the programme, the group selected should be robbers. Restrictions based on a desire to prevent violent offences should not be placed on non-robbers, including non-robbers who have committed other violent offences than robbery, as they have a very low rate of further convictions for violent offences.

(4) Restricting parole or other benefits even for the higher risk group of robbers could be questioned on the grounds of social and economic costs compared to the gains. In this sample such a policy would have at best delayed (but probably not have prevented) violent reoffences for one offender in every 12 denied parole or other benefit. The economic and human costs of this gain would seem, at least to some people, to be too great, although others would no doubt consider these costs acceptable.

D. Porritt
August, 1981

SENTENCING, PAROLE & RECIDIVISM

Paul Ward

Introduction

Of all the changes in penal practices which have been introduced in the twentieth century, probably none has been more subject to public criticism than parole. Apart from being perceived by many as undue clemency, the early release of prisoners obviously means that some at least of this group are going to commit a crime in the community at a time when they would otherwise be within prison. When any person on parole is detected committing some spectacular offence this becomes a newsworthy event with calls that people "of this type" be not released. The unfortunate fact of the matter is that the so-called "type" of person liable to commit a violent offence (or, strictly speaking, be detected committing an offence) is virtually impossible to identify from the general population of prisoners, and so the call to try to stop violent offences by parolees is in effect a call for the abolition of parole.

On the other hand, the supporter of parole can show that the majority of prisoners released on parole are not detected committing serious offences and presumably are living reasonably law-abiding lives. The second obvious benefit of parole is that it saves the community money by reducing the size of the prison population. On June 30th, 1979, there were 3674 prisoners held under sentence in NSW prisons and 2662 parolees.⁽¹⁾ If parole were not available, more than half these parolees would not have reached their date of release (with remissions) and would therefore be in prison. Thus it is obvious that, without parole, the NSW government would be forced to build several new prisons and employ a large number of prison officers. The cost of a prisoner per day in 1980 exceeded \$55, and is far higher than for a parolee, so the parole system considerably reduces the cost of the penal system.

Parole systems have usually been introduced by people who believe that rehabilitation is the most important aim of a penal system and that supervision by an officer, who treated the parolee in much the same manner as a social worker deals with a client with problems, would result in more people adopting law-abiding life styles and less recidivism. The rehabilitative movement has in the past decade been subject to severe criticism because a succession of recidivism studies have indicated that in fact it is rare for any rehabilitative programme to show clear-cut, reliable, statistically significant reductions in recidivism rates.⁽³⁾ This has resulted in the USA in the drafting of laws which severely limit the range of sentences (both maxima and minima) which can be given for certain classes of offence and which set minimum percentages of the sentences which must be served before becoming eligible for parole.

The Muir Committee ⁽⁴⁾ made recommendations of this kind, and these, if followed by the government, would have resulted in a large proportion of prisoners having to serve a longer period in prison. Apart from the rise in the prison population, and hence cost which would result from this, there is the problem that it is not known what effect increasing the proportion of the sentence a convict spends in prison will have upon his chances of re-offending. It is this question that this study sets out to examine.

Although Martinson was one of the chief architects of the destruction of the belief in rehabilitative programmes ⁽⁵⁾, he supports parole and indicates that the available evidence is that release on parole is superior to mandatory release at the end of the sentence ⁽⁶⁾. He argues that the supervisory aspect of parole rather than the helping aspect may be the relevant variable making the recidivism rate of parolees lower than expected.

As well as the supervisory element of parole, there is also the potential penalty involved in return to prison. This is especially important in New South Wales where the parolee is liable to return to prison for a period equivalent to that which he would still have had to serve (with remission) on the date of release. Other systems allow "free time" and reduce the liability by the period which the parolee spends in the community without offence. As a NSW parolee faces the same penalty whether he commits an offence the day after release or the day before his parole period ends, it would be expected that deterrent effect (if any) would be greater than in jurisdictions with "free time".

It might also be the case that the prisoner who had served a small fraction of his sentence in prison and faced a long parole period with a consequent high penalty for breach might be more likely to be deterred than a parolee who had served most of his sentence in prison and had only a short parole period with a relatively small penalty for breach. In this study an attempt has been made to see if this effect can be detected and to assess its magnitude.

METHODOLOGY

Theoretical Considerations

There are three basic methods one might apply to assess the effect of the proportion of sentence served in prison upon subsequent recidivism rates.

These are:

- (a) Random allocation
- (b) Matched Groups
- (c) Base Expectancy Methods

With a random allocation experiment, a group of randomly chosen applicants for parole would have their release on parole deferred for a substantial period. Their recidivism rates would be compared with other randomly chosen groups who would be released at the first legal opportunity. Such an experiment would be inhumane in the extreme, effectively sentencing some people to a longer period in gaol merely for gaining knowledge. Only when one deals with situations where there is a choice of penalties of almost equal severity but different quality is the random allocation technique likely to be acceptable. An example of such an experiment is described by Meham ⁽⁷⁾, the penalties being: (a) a fine, (b) disqualification of driving licence for 3 weeks, (c) compulsory attendance at driving school, and (d) compulsory writing of an essay on road safety.

None of these penalties is so obviously more harsh than the others that one could claim that some persons sentenced were being unfairly given harsh treatment. In the present situation, however, such a technique is unavailable and we must rely on one of the other methods.

To apply the matched groups technique one must obtain two groups of persons receiving sentences who would seem likely to show equal recidivism rates, and then find situations where different policies of different sentences have resulted in the two groups receiving different sentences. Wilkins (8) used the technique to compare two English magistrates courts which were in the same area and received similar sorts of offenders. One court placed offenders on probation far more often than the other and so Wilkins was able to compare the relative effectiveness of probation with the sentences matched offenders received in the second court.

This study started out to try to utilise the matched group methodology because it was known that in 1973 in New South Wales there had been a different approach to sentencing, which was enunciated in Portolesi's case (9), where non-parole periods were, in general, a smaller proportion of the total sentence than in the years before or after. However it was found that those sentenced in the Portolesi period had a greater chance of having their application for parole deferred, so that the proportion of their sentence, which they actually served before release, was not as different as expected from that of prisoners sentenced in other years. We were therefore forced to try to use some form of base expectancy approach to assess the effect.

The base expectancy method required that information be collected on each case and used to develop some form of predictive device enabling the assessment of the probability of recidivism. A group of cases which have been subjected to a particular type of treatment is then assessed against the probabilities predicted by the device to find whether the observed number of failures is higher than, lower than, or the same as the number of expected failures (ie, the base expectancy of the group).

An example of this technique occurs in Mannheim & Wilkins' study of Borstal trainees.(10) They were interested in whether 'open' or 'closed' Borstals were more likely to lead to a better than average rate of recidivism. The rate of failures from 'open' institutions was much lower than that from 'closed', but this was obviously because a greater proportion of 'good risk' trainees were sent to the 'open' institutions. They took the prediction scale which they had developed to estimate the probability of recidivism of the trainees and examined groups equated for risk sent to each type of institution. The results indicated that open institutions still had lower rates of recidivism over and above the effect expected by selective allocation.

The problem with a base expectancy approach is that it can never be as conclusive as a random allocation procedure, for two reasons. Firstly, any predictive device can only include readily available information which applies to many cases. The hard to obtain, or idiosyncratic, inform-

ation which may assist prediction may be used in the process of allocating cases to a particular treatment and this may result in one treatment group looking better than the other.

Secondly, some factors may be so confounded with the treatment that it is impossible to say whether the confounded factors or the treatment caused the observed difference. For example, in the Mannheim and Wilkins study it may be the case that if one selects a group with mainly 'good' risk cases in it and sends them to one institution, the regime in that institution may be more conducive to success whether or not that institution be 'open' or 'closed'. A proportion of 'good' risks in the group is, as the statisticians say, confounded with the type of institution in the Mannheim-Wilkins study. It is impossible without a further experiment, in which a higher proportion of 'good' risks are placed in a 'closed' institution, to be sure what caused the observed outcome.

In the present study, it is obvious that prisoners who receive sentences with shorter than average non-parole periods were a-priori likely to be better risks than the average prisoner. Some device is required to estimate just how much better than average this group of prisoners might be expected to be. In this study, the predictive device chosen has been the Discriminant Function, the reasons for which are outlined in the next sections.

Practical Problems

(a) Choosing a Criterion of Failure.

In any recidivism one has to define clearly what constitutes a success and what a failure. The first requirement is that the criterion will not introduce a bias, making it more difficult for one group to achieve success than another. If one, for example, chose the criterion of success on parole in New South Wales (ie, successful completion of the parole period without breach or conviction), then those with a short parole period have more chance of being successes. On the other hand, if one just looks at those who have been reconvicted by the date the records are examined, those released earlier are more at risk than those released later. Success has been defined in this study as completing three years in the community after the date of release without being both convicted of a further offence and sentenced to a period of more than two (2) months in prison.

The requirement that the person released should be returned to prison for more than two months was included because it was felt that the main opposition to parole arises from the fear that parolees may commit serious offences. Release on parole does not automatically turn anyone into a saint; some parolees get drunk, are rude to policemen, get into fights, streak naked across football or cricket fields, etc, but none of these activities surely is enough to make even the most conservative critic of parole feel too uneasy about the danger of parole to the fabric of society.

The two month period was considered comparable to the distinction made by the US Uniform Parole Statistics between minor and major offences, ie, sentences of less

than 70 days in gaol are regarded as minor. Length of sentence is not a perfect method of defining seriousness but it is probably the only practical solution to the problem of providing an operational definition of success.

Parolees who were returned to prison for a breach of conditions of parole were not counted as failures if they were subsequently released and the total period out of prison without conviction was greater than three years. Parolees who breached parole by going interstate but were not sent to prison in that state for more than two months were similarly regarded as successes.

(b) Sampling

The population sampled were all persons convicted in the higher courts during the first three quarters of the years 1972, 1973 and 1974 who received a prison sentence in which either the length of sentence was less than three years or the non-parole period was less than three years. This meant that, in nearly every case, it was to be expected that the prisoner would be released in time to have three years of freedom before the beginning of 1980, when the records were checked.

The final quarter of each year was rejected because of the change in the law in August 1974 which increased the scope of the jurisdiction of the magistrates' courts and so altered the composition of cases coming before the higher courts. The years 1972 and 1974 represented periods in which longer non-parole periods were set than in 1973 when the 'Portolesi' sentencing decision was operating.

One hundred cases were randomly sampled from the 1973 cases, choosing 50 convicted of armed robbery and 50 convicted of other offences. Because persons convicted of (armed) robbery appear to be considered more dangerous by certain sections of the community the sample was stratified so that a higher proportion of robbers were selected than the other offender types. As robbers tended to have a failure rate almost identical to the average rate for the other types of offenders corrections for this stratification were found to make negligible differences to estimations of the overall success rate from the estimate obtained by the uncorrected sample.

One hundred cases from the 1972 population and one hundred from the 1974 population were then chosen, attempting as far as possible to find the case which matched as closely as possible a case chosen for the 1973 sample. The cases were matched as closely as possible on the four variables (a) type of present offence, (b) length of head sentence, (c) age and (d) previous record as far as this could be ascertained from the higher court data. Where it was not possible to find a perfect match on these variables some attempt at matching to give roughly equal risk of recidivism was attempted. For example it is known that younger offenders are worse risks than older offenders and people with more previous convictions worse risks than those with fewer. Therefore, if it was impossible to find someone the same age with a similar previous record one would look for someone younger with a less serious record or older with a more serious record in an attempt to balance the propensity for recidivism.

The groups of 100 from the 1972 and 1974 populations were chosen by matching as far as possible to the randomly chosen sample. Very accurate matching was not possible. Even the offence for which the offender was serving his sentence occasionally had to be altered because it was found that the conviction had been one of several and that in fact the offender was serving this sentence concurrently with one for a more serious offence. Occasionally we disagreed with the person who had originally coded the most serious offence and we substituted our own choice of offence code for the original.

When it was found that a case could not be classified either as a success or a failure because he had not been released sufficiently early to have three years in the community or because he had died or been deported, it was necessary to replace the case by another of similar age and previous record. The numbers of cases which had to be rejected and the reasons for rejection are set out in Appendix 1.

(c) Collection of Data

The items of information which are collected are obviously determined by two major factors: what the researcher feels is important to collect and what those originally recording the information have seen fit to record. The information was collected from the following sources: the Clerk of the Peace files of the Higher Court proceedings; the Prisoner Index File; the Parole Board files; and the Police Department's records.

From the court records the date of birth of the offender, the type of offence and details of the seriousness of the offence were obtained (see Appendix A for fuller description). The total length of sentence, the date from which the sentence was to commence and non-parole period (if any) were also obtained. For those cases where parole was not ordered the prisoner index was consulted to find the date of release on expiry of sentence (with remissions). Where a nonparole period was set the Parole Board's file was examined to see whether the prisoner had been released more or less at the earliest opportunity, deferred and then released on parole or refused parole and released at the expiry of his sentence and the date of release was recorded.

Finally, the Police Department's files were checked to find details of the case's prior and subsequent criminal history (if any). From this source it was possible to discover the date of first arrest, the number of times the person had been:

- (a) Placed on bond and/or probation
- (b) Placed in a C.W. institution
- (c) Placed in an adult prison
- (d) Fined, and/or
- (e) Dealt with as an inebriate or for a psychiatric condition.

It was also possible to determine whether the person was subsequently arrested and to record:

- (a) The length of imprisonment for the subsequent offence
- (b) The type of offence for which this sentence was awarded
- (c) The number of subsequent minor convictions.

Having to consult at least three sources to complete the collection of data for each case was an extremely tedious and lengthy procedure, but it did provide an adequate base with which to assess the effect of shorter non-parole periods upon recidivism.

RESULTS AND IMPLICATIONS

Recidivism Data

Table 1 shows how the three groups of prisoners (ie. 1972, 1973, 1974) were released and how many of these met the criterion of success found above. It was discovered that there was no significant difference in the average success rates of the three groups. This did not necessarily disprove the hypothesis that prisoners with short non-parole periods would have a higher success rate than other prisoners, because it was found that the shorter sentences awarded during the Portolesi period were in fact negated by being significantly more frequently released, not when the non-parole period ended but after a deferral of some months. Table 2 shows that the fraction of the sentence served before release did not differ significantly between the three years. This may have occurred because prisoners given shorter sentences under the Portolesi policy were coming up for consideration at the same time as prisoners sentenced earlier under a policy of longer non-parole period. The added workload probably meant that several cases had to be deferred because the parole officer had not had sufficient opportunity to examine the case thoroughly. When work was heavy, it would naturally be more likely to give priority to prisoners who had spent longer periods in prison rather than disadvantage them at the expense of cases which had spent only a short period in prison and who had in fact been given a shorter effective sentence because of the Portolesi decision.

Whatever the reason for the delay in releasing this group of prisoners, the result was that the Portolesi group did not differ significantly in regard to the proportion of time spent in prison from the other groups. This meant that it was necessary to use a base expectancy approach to assess the effect, if any, of non-parole period upon recidivism.

The offences committed by the offenders covered a wide range and are set out in Appendix 2.

Offence Type, Recidivism and Violence

Of the three hundred cases finally processed 198 (66%) were classified as successes having completed three years in the community without being convicted and sentenced to more than two months in prison. Of the 102 failures (34%), the types of crime for which the offenders were subsequently reconvicted are set out in Appendix 3.

In general, the group most at risk of being failures were the property offenders other than robbers. The group with the best prognosis were those offenders convicted of offences against the person (other than robbery) and sex offenders (the numbers are however small). Those convicted of robbery offences were about average in their risk of being failures.

However, those persons convicted of robbery involving major assault were more likely to be reconvicted of a major violent offence. Only 14 of the 102 re-offenders were convicted of a major violent offence but of these 8 were committed by persons convicted of robbery with major assault.

As only fifty-nine offenders out of three hundred fell into this category this indicated that there is a significantly higher chance of this type of offender being involved in violent crime after release (chi-square with Yates' Correction = 10.51, 1 df, p .001).

Fifty-nine offenders constitute a small group. It was thus decided to check the finding of the higher risk rate of robbers with a larger sample. The remainder of the 347 robbers' records were examined and it was found that overall there were 161 violent robbers and 186 non-violent robbers. Of the violent robbers, 16 (9.9%) were reconvicted of a violent offence within three years of release, compared with nine (4.8%) of the non-violent robbers. This difference is not large enough to reach statistical significance.

Although it is plausible to suppose that someone convicted of using violence in a crime perpetrated for monetary gain might be more likely than other offenders of further acts of violence, it does not appear that this increased probability of violence, if it exists, is very large. Accordingly, if the whole 347 robbers had been incarcerated for an extra three years (which implies an increase of 347 or about 10% in the daily average prison population) then 25 known violent offences would certainly have been delayed and possibly prevented. Even if one divides the number of known offences by the chance of being detected and convicted for a violent offence, to allow for the number of undetected violent offences which may have been committed by this group, it is certain that the policy of locking up all robbers for an extra three years would have a slight effect only on the overall rate of violent crime in the community. It would be wonderful if there existed a method for detecting which 25 robbers were the ones who were going to be violent but unfortunately no magic crystal ball to do this exists. As parole appears at least to have a small positive effect on recidivism, it can be argued that it is preferable to allow a small number of offenders to have the chance to offend somewhat earlier than otherwise, rather than to penalise a whole group for the sake of delaying a few violent offences.

Variables Affecting Success-Failure

Besides the differences in success rates of the groups convicted of different types of offence it was found that certain other variables were significantly correlated with success.

(a) Previously sentenced to prison.

It was found that a previous sentence of imprisonment influenced the chance of success after release as can be seen from Table 3.

(b) Previously in a Child Welfare Institution.

Whether there was a previous history of committal to a Child Welfare Institution was also a predictor of success or failure as can be seen in Table 4.

(c) Age at First Arrest.

Those cases which were successful had a mean age of 19.2 years with a standard deviation of 7.5 years. The failures had a mean age of 17.0 years with a standard deviation of 4.83 years. This represents a difference of 3.5 standard errors which is obviously significant.

This variable is correlated with the previous two variables; obviously if one is arrested for the first time at an age greater than 18 one cannot have been in a Child Welfare Institution and is less likely to have been previously in prison.

(d) Number of previous occasions upon which a person has been convicted and fined.

If there had been more than one conviction involving a fine the chance of reconviction within three years was greater (see Table 5).

A large number of other variables were tested and found to have little or no predictive value for success or failure after release. The previous record variables in this category were 'placed on Child Welfare probation' and 'placed on previous adult bond with or without probation'.

Trends were found for some other variables that, while not statistically significant, were of interest. These are described below and in Tables 6, 7 & 8.

The variable concerned with the seriousness of the offence which brought the offender into the sample was also checked to see whether this increased or decreased the chances of success. Those offenders who caused some degree of injury to their victim(s) were overall slightly more successful than average but this is only to be expected as they include all of the offenders convicted of an offence against the person other than robbery, who have been shown previously to be better risks than average.

Apart from the three offenders convicted of manslaughter who were all successes there were 81 other cases where at least one victim was injured. Injury was classified as either minor (no treatment required), intermediate (treated and discharged) or major (admitted to hospital). The chances of being classified as a success for these different degrees of injury are set out in Table 6.

Although there is an impression that the offenders causing the most serious injuries are worse risks than others, this does not reach a level of significance to reject the hypothesis that it could be a chance fluctuation in a sample of this size.

Whether a weapon was used or not in the commission of the offence was found to make no difference to the subsequent risk of failure.

As well as the seventy-three (73) offenders whose principal

offence was break, enter and steal, there were eight (8) other offenders with a more serious conviction who also had forcibly entered premises. The number of premises illegally entered was recorded. As this group was predominantly property offenders the overall chance of success was lower than average.

As Table 7 indicates, there is apparently a lower chance of failure for those offenders who are involved in breaking into greater numbers of premises.

Although it is reasonable to suppose that those offenders who have broken into more premises are more likely to have adopted burglary as a way of life and so be more likely to re-offend, the numbers involved in this sample are too small for the differences to be significant. A similar pattern of increasing chance of failure with increasing numbers of cars stolen (also not significant) was observed.

As far as the amount of money taken during the offence was concerned the differences found in the rates of success were insufficient to reach the 5% level of significance. The results are set out in Table 8.

The Assessment of the Effect of Parole

Initially, the object of the experiment had been to try to match groups with a priori equal chances of success to see whether the group released in the middle ('Portolesi') period had better chances of success. The results of this analysis were disappointing as there was no significant difference in the chance of success between the three groups as can be observed in Table 1.

On examining the data, however, it was found that the 'Portolesi' group were not as different in terms of the period they had served before release as had been expected. Although they tended to receive shorter non-parole periods this was to a marked extent cancelled out by the greater chance of having their parole application deferred for (typically) three months before release. Ten (10) persons sentenced in 1973 compared with two (2) in 1972 and only one (1) in 1974 were released after having their parole application deferred. The hypothesis that a shorter non-parole period might have an effect on the chance of success was not being properly tested and a more sophisticated analysis was required.

The method used was a Base Expectancy procedure where a prediction scale was used to estimate each offender's chance of failure and then the rate of failure actually observed in groups released before half their sentence (allowing for remissions) had been served were compared with those released on parole after serving more than half their sentence and those upon expiry of their sentence without parole.

As a first step, a prediction equation was prepared using a statistical technique known as Discriminant Function analysis. From the pool of possible predictors a set of variables were chosen that met the criterion that the inclusion of that variable in the prediction equation removed an amount of variance equal to four (4) times the residual variance. If the variables had been from a multi-

dimensional normal distribution this would have implied that the chance of a variable which actually was not a predictor being included in the prediction equation would be approximately 5%. Applying this criterion should limit the amount of 'over-prediction' ie, overestimating the degree of separation of the two groups on the prediction scale.

The variables meeting this criterion were:

1. Type of offence.

This was reduced to a three point scale with 1 = Offences against the person other than robbery, 2 = Robbery type offences and 3 = Other offences almost all against property.

2. Age at first offence.

The older the offender was at the time of his first offence the greater the chance of success after release. This variable was a better predictor than age at time of present offence and was so highly correlated with the latter that after inclusion in the prediction equation the predictive ability of present age fell below the required criterion.

3. Previously in a Child Welfare Institution.

Although also highly correlated with the previous variable this variable still met the criterion for inclusion.

4. Previous prison sentence(s) without option of fine.

As would be expected the greater the number of times a person had been in prison before, the less chance of success after release.

5. Number of previous convictions where a fine was imposed.

Greater numbers of these implied a higher chance of failure.

6. A variable produced by squaring the number of fines.

In the original set of possible predictors a set of variables to test for possible non-linear effects for all those variables which were not of a simple zero-one type were introduced into the analysis. These variables were equal to the squares and cross-products of the basic variables. Of these, only the square of the number of fines reached the criterion for inclusion. This indicated that the response was non-linear, ie. after being fined twice the chance of failure tended to flatten out.

The final prediction equation was:—

$$S = 1.48606 \quad .7701362 x_1 + .05275239 x_2 \\ - .3823762 x_3 - .2061882 x_4 - .5474213 x_5 \\ + .002798804 x_6$$

Where S is the prediction score aimed at discriminating successes from failures and x_1 to x_6 are the scores on each

of the six variables defined previously. The between group variance was only 12.1% of the total variance. This is somewhat lower than usual but comes about because of the more stringent than usual criterion for inclusion used in developing the prediction scale. This was done deliberately to try to minimise the degree of overprediction.

When the prediction scores were standardised with mean zero and standard deviation equal to one, the mean score for the success group was 0.24888 and the mean score for the failure group was -0.48311. From these data, assuming that the distribution of scores in each group is a sample from a Normally distributed population it is possible to calculate the probability of a person with a given score falling into one class or another.

If resources are available, the ideal next stage is to select an independent sample and validate the expected probabilities against the predicted probabilities and then to use these validated probabilities on a third sample to test whether differences in treatment such as release on parole versus mandatory release have any effect upon probability of success.

As gathering information on even a single sample requires months of work it was unfortunately impossible to carry out this procedure and the predicted probabilities had to be applied to the same sample.

Success rates were compared for three groups of prisoners:

- (a) Those released on parole having served less than half the period to which they were sentenced (less remission).
- (b) Those released on parole having spent a period in prison of more than half the period to which they were sentenced (less remissions).
- (c) Those released having completed their sentence (with remission).

The results of the three groups are shown in Table 9. A chi-square test of significance of the above table gives a value of 6.54 with 2 degrees of freedom which is significant at the 5% level of significance. This implies that groups A and B had success rates significantly better than group C. One cannot conclude from this that it is better to release on parole than to release without parole because it may be that the worst risks have been refused parole. To test this, the predicted probability for each person in each group was calculated.

We have 3 sub-groups, each with its own expected probability of success. It is possible to test using a special chi-square procedure whether the actual probabilities of success differ significantly from the expected probabilities. Table 10 shows the expected and observed probabilities and chi-square values. The total value of chi-square is obviously not sufficient to be statistically significant.

The only conclusion that one can validly arrive at from these data is that the major reason for the better results obtained with those released on parole is that this group

were better risks in the first place. This indicates that to some extent the system is selecting the better cases for release on parole, which even the most extreme critics of parole usually concede is what a parole board should be attempting to do.

On the other hand, there is no evidence from the data that being 'soft' and releasing people on parole has meant that this group has for this reason tended to become more recidivist.

The differences in this study, though small, point in the opposite direction: it is those prisoners released at the last moment, without any parole supervision, who tend to have more failures than one would expect considering their previous records. Considering the vast cost-savings parole has for any penal system any proposal to abolish conditional release with compulsory supervision should not be seriously considered until a far larger study has been carried out. When only 36 people are successful in a group where one expects 41.22 this represents a drop in efficiency of about 1 in 8. Although it does not necessarily follow that if these people had been given parole supervision that the rate of success would necessarily have risen, it is surely worth trying to use any system which appears to be raising the relative chance of success. There have been too many programmes introduced without adequate measures taken to evaluate whether or not they are achieving beneficial results, and on the present (admittedly slight) evidence, one can only conclude that the parole system is almost certainly not harming a prisoner's chances of successfully staying out of trouble with the law and may in fact be slightly improving them.

CONCLUSIONS

1. The Parole system does work in some part as a method for early release of those prisoners who are better risks. The prediction scale indicated that on the basis of characteristics that predict recidivism, those prisoners who were released having served less than half their sentence had a 71% expected chance of success, those released on parole having spent half or more of their sentence a 65% expected chance of success, and those released after serving the whole of their sentence a 61% expected chance of success.

Thus, contrary to popular beliefs, parole does tend to keep worse-risk prisoners in prison for longer periods than better risk prisoners. Taking into account the difficulty of predicting who will be a success (even the best predictive devices rarely achieve a correlation greater than 0.4 on validation) and the other factors entering into the decision whether to release or not, the results obtained in selecting good risk prisoners for release on parole must be viewed as satisfactory.

2. After taking into account the difference in predicted risk between prisoners released on parole and those not released on parole, the observed success rates for each group of prisoners were not sufficiently different from the predicted success rates to be significant. Thus there is no evidence that early release tends to make released prisoners more likely to become involved in criminal activity. Indeed the pattern of results gives some hope

(albeit not statistically significant) that parole supervision may be slightly improving the chances of success and holding a prisoner for his full sentence may be reducing his chance of success.

3. If one considers the chance of a released prisoner committing a violent crime, all that can be said is that robbers (especially those convicted of a violent offence) may be more likely than others to commit a violent offence in the three years after their release. However, any policy which refused parole to robbers simply because they had been convicted of robbery would result in many prisoners who would commit no offence after being released being held for longer than necessary. Long sentences do not stop, but merely postpone the opportunity for, further offences. Because of the comparative rarity of offences of violence one would need to study everyone convicted of a violent offence in New South Wales for at least a decade before one might have sufficient numbers to make a statement concerning how much (if at all) a prior record of violent crime increases the probability of a subsequent offence. All that one can say on the basis of this study is that a postponement of some violent offences can only be obtained at the cost of keeping imprisoned about 12 people who would not commit violent offences if released for each person who will finally commit a violent offence.

4. Contrary to popular beliefs (but consistent with much other research), both 'sex' offenders and violent offenders who did not commit robberies had low rates of re-offence. Policies which restrict or penalise such offenders because of concern about the conduct of some violent robbers appear misplaced.

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Table 1: Outcome by Year Sentenced by Mode of Release

	Year of Sentence			Total
	1972	1973	1974	
RELEASED ON PAROLE				
Outcome				
Success				
Number	49	58	55	162
Percent	73.2	66.6	69.6	69.6
Failure				
Number	18	29	24	71
Percent	26.8	33.4	30.4	30.4
Total Parolees	67	87	79	233
RELEASED ON REMISSION				
Outcome				
Success				
Number	16	5	15	36
Percent	48.5	38.5	71.4	53.7
Failure				
Number	17	8	6	31
Percent	51.5	61.5	28.6	46.3
Total Parolees	33	13	21	67
TOTAL	100	100	100	300

Success v. Failure by Year: chi-square = 1.16, 1df, not significant.

Table 2: Proportion of Sentence Served by Year Sentenced for Those Released to Parole

Proportion of Sentence Served	1972		1973		1974		Total	
	n	%	n	%	n	%	n	%
Less than Half	25	37.3	48	55.2	39	49.4	112	48.1
More than Half	42	62.7	39	44.8	40	50.6	121	51.9
TOTAL	67		87		79		233	

Chi-square = 3.71, 2df, ns.

Table 3: Outcome by Number of Previous Prison Sentences

	Number of Previous Prison Sentences							Total
	0	1	2	3	4	5	More than 5	
Outcome Success								
Number	126	29	24	9	3	3	4	198
Percent	72.9	61.7	63.2	50.0	37.5	42.9	44.4	66.0
Failure								
Number	47	18	14	9	5	4	5	102
Percent	27.1	38.3	36.8	50.0	62.5	57.1	55.6	34.0

Table 4: Outcome by Juvenile Incarceration

	Number of times in a Child Welfare Institution					Total
	0	1	2	3	4	
Outcome Success						
Number	144	31	10	10	3	198
Percent	78.6	52.4	40.0	71.4	50.0	66.0
Failure						
Number	52	28	15	4	3	102
Percent	21.4	47.6	60.0	28.6	50.0	33.0

Table 5: Outcome by Number of Fines Imposed

	Number of occasions a fine imposed				Total
	0	1	2	More than 2	
Outcome Success					
Number	140	46	12	0	198
Percent	68.0	67.6	54.5	0.0	66.0
Failure					
Number	66	22	10	4	102
Percent	32.0	32.4	45.5	100.0	34.0

Table 6: Outcome by Degree of Injury to Victim

Outcome	Degree of Injury to Victim(s)			Total
	Minor	Intermediate	Major	
Success				
Number	22	26	8	56
Percent	71.0	76.5	50.0	69.1
Failure				
Number	9	8	8	25
Percent	29.0	23.5	50.0	30.9

Table 7: Outcome by Number of Premises Entered

Outcome	Number of Premises Entered					Total
	1	2	3	4	5	
Success						
Number	25	11	6	5	0	47
Percent	54.3	57.9	75.0	83.3	0.0	58.0
Failure						
Number	21	8	2	1	2	34
Percent	45.7	42.1	25.0	16.7	100.0	42.0

Table 8: Outcome by Amount Stolen

Outcome	None	Amount of Money				Total
		Less than \$10	\$10-250	\$251-2000	\$2001-9000	
Success						
Number	39	6	59	71	19	198
Percent	66.5	37.5	62.8	68.9	61.3	80.0
Failure						
Number	12	10	35	32	12	102
Percent	23.5	62.5	37.2	31.1	38.7	34.0

Table 9: Type of Release by Outcome

Group	Successes	Failures	Total	% Successes
A ('Early' Parole)	81	31	112	72.3
B ('Late' Parole)	81	40	121	66.9
C ('No' Parole)	36	31	67	53.7

Table 10: Expected and Observed Success in Three Release Groups

Group	Observed Number	Successes %	Expected Number	Successes %	Chi square	df
A ('Early' Parole)	81	72.3	79.85	71.3	0.07	1
B ('Late' Parole)	81	66.9	78.25	64.7	0.31	1
C ('No' Parole)	36	53.7	41.22	61.5	2.08	1
TOTAL	198	66.0	199.35	66.5	2.46	3

APPENDIX 1 – Reasons for loss of cases from the sample

Reason	No
Not custodial sentence after appeal:	3
Bond	0
Periodic detention	2
Child Welfare Transfer	1
Life sentence	2
Suspended sentence	3
Cannot be located	4
Deceased	2
Deported	4
Insufficient period	4
TOTAL	22

APPENDIX 2 – Type of Offence for the Offence by which Cases were Recruited to the Sample

TYPE OF OFFENCE	1972 Sample	Total	1973 Sample	Total	1974 Sample	Total
Offences Against the Person						
Murder (attempted or accessory)	—	—	— ²⁷⁶	2	—	1
Manslaughter	1	8	1	21	1	8
Malicious Wounding	5	19	4	26	3	70
Arson (People in the Building)	—	3	—	2	—	2
Assault O.A.B.H. (+ other assaults)	1	56	1	50	1	14
Armed Robbery	48	94	50	150	52	103
Other Offence Against Person	—	6	—	2	—	29
Sexual						
Rape and Attempted Rape	—	24	—	28	—	34
Carnal Knowledge (All types)	2	35	2	29	2	10
Indecent Assault	1	24	1	14	2	20
Other Heterosexual Offences	—	10	—	7	—	3
Buggery	—	5	—	5	—	9
Indecent Assault on a Male	—	4	—	11	—	14
Serious Motoring						
Motoring Manslaughter	—	2	—	4	—	10
Culpable Driving (+ other serious motoring off.)	1	15	1	17	1	9
Property						
Arson	—	3	—	4	—	5
Break, Enter & Steal	25	508	24	405	24	374
Fraud (+ False Pretences, Cheque offences)	2	36	2	32	1	28
Vandalism	—	4	—	4	—	—
Larceny of a Motor Vehicle	9	269	9	184	8	187
Larceny	1	67	2	37	1	47
Embezzlement & Misappropriation	1	15	1	13	2	18
Receiving & Unlawful Possession of Goods	3	75	2	55	2	47
Forgery	—	10	—	12	—	4
Other Property	—	1	—	1	—	6
Drugs & Miscellaneous Offences						
Drugs (+ Drugs other)	—	11	—	16	—	23
Other Miscellaneous (Escape, Firearms, Smuggling, etc)	—	35	—	42	—	60

APPENDIX 3 – Type of Offence for Offences After Release

Type of subsequent Offence in 3 years	Code	Release by Remission	Release by Parole Without deferments	Release by Parole With Deferments
Manslaughter	120	0	1	0
Malicious wounding	130	2	2	1
A.O.A.B.H.	140	1	2	
Assault	150	1	0	
Abduction	180	0	1	0
I.A.F.	200/220	0	1	
Major Robbery	300	0	2	
Robbery minor assault	310	1	0	
Other Robbery	319	0	4	
Forgery	335	1	1	
Fraud	340	1	2	
Misappropriation	350	0	1	
B.E.S.	360	8	16	2
Car Theft	373	4	10	1
Steal	379	4	4	1
Unlawful possession	380	4	5	
Other property	399	1		
Other driving	410	1	2	
Dangerous driving	415	0	1	
Driving without licence	440	0	1	
	441	1	0	
Breach of conditions of release	510	0	1	
Resist arrest	540	0	1	
Trespass	560	0	1	
Drug possession	600	0	3	1
Drug selling	620	0	1	
Language	652	0	1	
Firearms	685	1		
Other			1	
TOTALS		31	65	6