

U.S. DEPARTMENT OF JUSTICE

REPORTING RECIDIVISM RATES:  
THE CRITERION/FOLLOWUP ISSUE



UNITED STATES PAROLE COMMISSION RESEARCH UNIT  
REPORT NINETEEN

March 1978

49098  
86067

RECEIVED  
FEB 21 1978  
FBI - NEW YORK

UNITED STATES PAROLE COMMISSION

Cecil C. McCall, Chairman

William E. Amos, Commissioner  
J. Robert Cooper, Commissioner  
Audrey A. Kaslow, Commissioner  
Benjamin J. Malcolm, Vice-Chairman  
Joseph A. Nardoza, Commissioner  
Dorothy Parker, Commissioner  
Robert D. Vincent, Commissioner

RESEARCH UNIT

Peter B. Hoffman, Director of Research  
Sheldon Adelberg, Research Analyst  
Barbara Stone-Meierhoefer, Research Analyst

REPORTING RECIDIVISM RATES:  
THE CRITERION/FOLLOWUP ISSUE

By

Peter B. Hoffman  
Director of Research

Barbara Stone-Meierhoefer  
Research Analyst



Despite the attention focused upon prisons and recidivism, there still appears to be considerable controversy as to how many released prisoners again have 'difficulty' with the law. The following excerpts are illustrative:

Two of every three offenders released from the Federal Prison System did not return to prison for a serious offense within a two-year period . . . [T]his recidivism rate is by no means as low as I would like to see for the federal system . . . [B]ut it certainly refutes the charges we keep hearing about a 70 or 80 percent recidivism rate for all prison systems.1/

The national data show that parole is "working" very well indeed. The 72 percent success rate after three years' follow-up [Uniform Parole Reports] is particularly important to note in relation to the "Careers in Crime" [FBI] report that: "Of those persons released on parole, 71 percent repeated".2/

The conditions within many prisons achieve nothing but an increase in the number of recidivists (those released from institutions who commit additional crimes). Eighty percent of all felonies are committed by repeaters.3/

While statistics are incomplete and conclusions drawn from them are uncertain, no one disagrees that recidivism is very high. The best speculation places repeater rates between 50 and 80 percent. The average prisoner is back in society within three years, repeating crimes within a year.4/

Part of this confusion can be attributed to a lack of agreement as to how recidivism is to be defined and/or to differences in other methodological decisions from one study to the next. Reported rates of recidivism are meaningless unless accompanied by information concerning the various definitional and methodological choices of those conducting the research. The purpose of this

paper is to illustrate the extent to which the 'rate of recidivism' can vary given different definitions of two variables: criterion measure and length of follow-up period. To accomplish this task, data for a relatively large sample of federal prisoners released in 1970 were examined, using Federal Bureau of Investigation records to provide a consistent six year exposure period for each case. From this data, recidivism rates were calculated using different criterion and followup periods, and the effects of varying these factors were observed.

Before presenting the results of this analysis, we believe it is worthwhile to review briefly two methodological errors that not infrequently have been made in attempts to report recidivism rates:

(a) Recidivism may appropriately be defined as the proportion of a specified group (e.g., released prisoners) who sustain an outcome defined as negative (e.g., new arrest; new conviction) within a given period of time (e.g., three years from date of release). An example of a statistic which does not measure recidivism as defined above, but is likely to be misinterpreted as doing so, is the proportion of persons in prison at any one time who have been in prison before. Similarly, studies which compute a recidivism rate using the rate of parole or mandatory release warrants issued during a given period to the number of persons

granted parole or mandatory release (or the average number of persons on parole or mandatory release) during the period are not validly measuring recidivism as defined above.

[INSERT TABLE I ABOUT HERE]

Both appropriate and inappropriate formulae for assessing recidivism are shown in Table I. Formula (1) is the correct formula. The problem with formula (2) is that drawing a sample of persons in prison at any one time (or period) is not the same as drawing a sample of persons released from prison at any one time (or period). Since repeat offenders tend to receive longer sentences and thus collect in prison, they will have a higher likelihood of being chosen in a sample of those incarcerated at any one time than in a sample of those at the point of release. Consequently, the sample used in formula (2) will not be representative of all released prisoners and will tend to overestimate the recidivism rate. The difficulty with formula (3) is that the numerator and denominator do not necessarily refer to the same individuals. Thus, any one of several changes (in unrelated factors) could severely distort the recidivism rate obtained. For example, if this formula is used when the number paroled in one year is substantially lower than in the previous year, the recidivism rate for the latter year may appear inflated since the decline in the denominator from first to second year will exceed the decline in the

numerator (i.e., the numerator will still include the violations committed by parolees released in previous years). Formula (4) is subject to a similar weakness. For example, if sentences (and thus parole terms) become longer over a period of years, the denominator will tend to increase (as persons collect on parole) and - everything else equal - recidivism will appear to decline. Similarly, if a policy of early discharge from parole for those with good behavior is instituted, the denominator will drop and the recidivism rate will appear to go up. By considering recidivism as the proportion of persons released who sustain a negative outcome within a given followup period, formula (1) avoids the difficulties noted.

(b) A second methodological error involves the failure to apply a consistent followup period to each case in the sample. This error is encountered with studies which, in order to use parole file data as the source of followup information, define the followup period as a given number of years (e.g., five years) from date of release or the period of parole supervision, whichever is less. If, for example, a substantial proportion of cases reaches the end of sentence during the first or second year, the net result is a one year (or less) followup period for some cases in the sample, a followup period of between one and two years for others, and so on. Clearly, this is not a five

year followup period for each case as any negative outcome after the expiration of sentence but prior to the five year point will go unrecorded. In such case, the recidivism rate will likely be underestimated.

#### The Present Study - Sampling and Data Collection

A fifty percent sample (N=1806) of federal prisoners serving a maximum term of more than one year and one day who were released to the community during the first six months of 1970 was selected.<sup>5/</sup> All three major forms of release (parole, mandatory release, expiration of sentence) were included.<sup>6/</sup> Cases were selected by last digit<sup>7/</sup> of prison register (identification) number. For example, including all cases with register numbers ending in odd digits produces a fifty percent (50%) sample. As prison register numbers are assigned sequentially upon admission, this method can be assumed to approximate random selection. Followup data was obtained through the cooperation of the Federal Bureau of Investigation, which provided a copy of a current FBI record of arrest (rap sheet) for each sample case. The six year followup period for each case was calculated from month of release (i.e., followup for a prisoner released in June 1970 would extend through June 1976).<sup>8/</sup> While use of FBI data has a number of disadvantages,<sup>9/</sup> a major advantage for purposes of this research is that a uniform followup period for all cases (regardless of mode of release) can be used.

### Criterion Measures

Even with the use of 'official' records (such as FBI data), there are a large number of ways in which recidivism may be defined. For example, one might define recidivism as any of the following: any new arrest, new felony arrest only, any new conviction, new felony conviction only, any new commitment of 60 days or more, or new prison commitment only. Return to prison for administrative parole violation (e.g., absconding) might be excluded, while administrative return to prison as a parole violator in lieu of prosecution for a new offense might be counted. Or, one might wish to include or exclude all types of parole violation. In addition, if other than an arrest criterion is used, one must decide how pending charges or unknown dispositions are to be counted. Clearly, for comparative purposes it is essential that any recidivism rate reported be accompanied by an explicit operational definition of the criterion used. In this paper, four criterion measures will be reported as defined in Table II.

[INSERT TABLE II ABOUT HERE]

### Length of Followup Period

Another decision requiring a choice by the researcher concerns the length of followup period. Obviously, the longer the period of exposure, the greater is the chance of any releasee being classified as a recidivist. While there exists a popular belief in correctional

circles that most unfavorable outcomes (however defined) occur within the first year after release, two well-designed long term followup studies by Gottfredson and Ballard<sup>10/</sup> and Kitchener et. al.<sup>11/</sup> indicate that the number of releasees experiencing difficulty subsequent to the first year is not insignificant. In the present study, the data collection strategy allowed the computation of a recidivism rate for all cases using each criterion measure with six followup periods (from one through six years).

### Findings

Table III displays the rates of recidivism using four different criterion measures (shown on the vertical axis) and six followup periods (shown on the horizontal axis). Thus, a four by six matrix is created with twenty-four possible recidivism rates.

[INSERT TABLE III ABOUT HERE]

Examination of the above data indicates that the choice of criterion measure can affect the recidivism rate considerably. For example, after one year the recidivism rate obtained varies from 29.0% to 8.7% depending upon whether Criterion A (new arrest) or Criterion D (new prison term) is chosen. After six years, Criterion A produces a recidivism rate of 60.4% compared to 27.5% for Criterion D.

Similarly, the length of followup period chosen has considerable impact. After one year, Criterion Measure A (new arrest) shows

a recidivism rate of 29.0%; after two years it is 43.7%, and after six years it has reached 60.4%. Using Criterion Measure D (new prison term), the rate of recidivism varies from 8.7% after one year to 15.8% after two years, and 27.5% after the full six years. If both criterion measure and followup period are considered, the rate of recidivism reported for this sample could vary from 8.7% (Criterion D - one year followup) to 60.4% (Criterion A - six year followup).

#### Summary and Implications

Both the choice of criterion measure and the length of the followup period have been shown to have substantial impact on the rate of recidivism reported. If results of various research efforts are to be compared, it is apparent that these methodological choices need to be clearly articulated. Moreover, while it is not necessary that only one criterion measure or followup period be reported, it would appear extremely useful if the criminal justice research community endeavored to achieve some greater standardization in both criterion measures and followup periods used. It may be that strong and consistent relationships among the recidivism rates for various criterion and followup periods will be discovered, so that a given result with one criterion/followup can be predicted from another. If so, construction of a criterion/followup matrix in the form of Table III could enable the comparison of studies using different criterion/followup.<sup>12/</sup> However, it appears to us

that adoption by researchers of a limited number of 'standard' criterion measure/followup periods would represent an even simpler method of achieving this goal.<sup>13/</sup>

It must be stressed that we do not intend to imply that all of the methodological problems inherent in recidivism research are avoidable. Obviously, those who commit crimes normally have a vested interest in concealment. Not all released prisoners who commit new crimes are detected and arrested. Of those who are arrested and convicted, some may be innocent. Of those who are not convicted, some are undoubtedly guilty. If the label of the conviction offense (or severity of the sanction imposed) is used in the criterion measure, the workings of the criminal justice system (particularly plea bargaining and sentencing disparity) may further obfuscate assessment of the underlying criminal behavior. Nevertheless, it is our belief that properly conducted studies of recidivism can be useful for comparative evaluations of program effectiveness and determinations of social policy, provided both researcher and reader are continually aware that it is difficult, if not impossible, to isolate the behavior of the offender from the behavior of the other actors (police, prosecutor, court) in the criminal justice system; and provided the outcome measures utilized and other methodological choices made are clearly defined.

## FOOTNOTES

1. W.B. Saxbe (Attorney General), Department of Justice Press Release (April 11, 1974).
2. W.H. Moseley, "Parole: How It is Working," 5 Journal of Criminal Justice 3 (1977), p. 194. [citing Federal Bureau of Investigation, "Crime in the United States - 1975," Washington, D.C.: U.S. Government Printing Office (1976), p. 44].
3. Chamber of Commerce of the United States, "Marshaling Citizen Power to Modernize Corrections," Washington, D.C.: Chamber of Commerce of the United States (1972), p. 5.
4. R.L. Goldfarb and L.R. Singer, After Conviction, New York: Simon and Schuster (1977), p. 9.
5. A total of 1838 cases were identified by the selection method described. Of these, 28 cases could not be identified by the F.B.I. from the data available. In addition, the records of four subjects were destroyed by the F.B.I. because the subjects were over 80 years of age. These cases were excluded, reducing our sample to an N of 1806. For a more detailed description of data collection and coding procedures, see P.B. Hoffman and B. Stone-Meierhoefer, "Post Release Arrest Experiences of Federal Prisoners," Washington, D.C.: U.S. Parole Commission Research Unit, Report Seventeen (December 1977).
6. In the present sample, 45.6% of cases were paroled; 29.3% were released to mandatory release supervision; and 25.1% were released by expiration of sentence with no supervision.
7. The last three register number digits designate the institution to which the prisoner is initially assigned. Therefore, the digit referred to here is the fifth register number digit (i.e., the last digit of the personal identification number).
8. Followup studies using rap sheet data must allow for time lag between the date of an arrest and the date such arrest is posted on the rap sheet. For this study, followup data collection was begun in February 1977, allowing a minimum of seven months lead time for each case from the end of the followup period to beginning of data collection.

9. For example, not all police agencies regularly report all arrests to the F.B.I.; and dispositional information (particularly at the court level) is frequently missing. In the present sample, there were 714 cases with one or more pending/missing dispositions recorded. Appendix I displays the effect of alternative methods of scoring pending/missing dispositions.
10. D.M. Gottfredson and K.B. Ballard, "The Validity of Two Parole Prediction Scales: An Eight Year Followup Study," Vacaville, California: Institute for the Study of Crime and Delinquency (1965), pp. 29-30.
11. H. Kitchener, A.K. Schmidt, and D. Glaser, "How Persistent is Post-Prison Success," 41 Federal Probation 1 (1977), pp. 9-15.
12. There has recently also been some effort to develop a method for extrapolating recidivism rates for extended followup periods from knowledge obtained early on in the followup period; see M.D. Maltz and R. Cleary, "The Mathematics of Behavioral Change: Recidivism and Construct Validity," 1 Evaluation Quarterly 3 (August 1977), pp. 421-438.
13. Recommendations for definitional uniformity have been made by others previously; see for example, National Advisory Committee on Criminal Justice Standards and Goals, "Criminal Justice Research and Development: Report of the Task Force on Criminal Justice Research and Development," Washington, D.C.: U.S. Government Printing Office (1976), p. 120. For an example of an effort to standardize reporting of parole outcome see M.G. Neithercutt, W.H. Moseley, and E.A. Wenk, "Uniform Parole Reports: A National Correctional Data System," Davis, California: National Council on Crime and Delinquency Research Center (March 1975).

# TABLE I

## COMMONLY USED FORMULAE FOR ASSESSING RECIDIVISM \*

### Recidivism Rate

$$(1) = \frac{\text{Number of Persons Released From Prison During Time Period (X) With Unfavorable Outcome (Y) Within (Z) Number of Months From Date of Release}}{\text{Number of Persons Released From Prison During Time (X)}}$$

$$(2) = \frac{\text{Number of Persons in Prison (At Time X) With Previous Unfavorable Outcome (Y)}}{\text{Number of Persons in Prison (At Time X)}}$$

$$(3) = \frac{\text{Number of Parole or Mandatory Release Warrants Issued During Time Period (Z)}}{\text{Number of Persons Granted Parole or Mandatory Release During Time Period (Z)}}$$

$$(4) = \frac{\text{Number of Parole or Mandatory Release Warrants Issued During Time Period (Z)}}{\text{Average Number of Persons Under Parole or Mandatory Release Supervision During Time Period (Z)}}$$

\* It should be noted that the above formulae do not imply that the entire population must be studied. Properly selected samples may be used.

TABLE-IF .

CRITERION MEASURES \*

Criterion Measure A (Arrest)

Favorable  
Outcome = No known new arrest.

Unfavorable  
Outcome = At least one known new arrest.

Criterion Measure B (Conviction)

Favorable  
Outcome = No known new conviction.

Unfavorable  
Outcome = At least one known new conviction.

Criterion Measure C (Commitment of 60 days or more) \*\*

Favorable  
Outcome = No known new commitment of 60 days or more.

Unfavorable  
Outcome = At least one known new commitment of 60 days or more.

Criterion Measure D (Prison Commitment)

Favorable  
Outcome = No known new commitment of more than one year.

Unfavorable  
Outcome = At least one known new commitment of more than one year.

- \* Arrests for certain petty offenses (such as drunkenness, gambling and vagrancy) and arrests for 'Driving While Intoxicated' are excluded, as are arrests for parole violations [Appendix II displays an alternative method of counting parole violations]. Convictions/commitments resulting from the above are also excluded. The term 'commitment' refers to the maximum term of confinement actually imposed (not suspended). For more specific coding instructions, see P.B. Hoffman and B. Stone-Meierhoefer, "Post Release Arrest Experiences of Federal Prisoners - A Six Year Follow-up", United States Parole Commission Research Unit, Report Seventeen, December 1977.

TABLE III

## RECIDIVISM RATE (PERCENT UNFAVORABLE OUTCOME) BY CRITERION/FOLLOWUP PERIOD

[All Releasees (N=1806)]

<u>Criterion Measure **</u>	<u>Followup Period*</u> <u>(Years After Release)</u>					
	1	2	3	4	5	6
Criterion Measure A (Arrest)	29.0 %	43.7 %	51.4 %	54.9 %	57.5 %	60.4 %
Criterion Measure B (Conviction)	15.4 %	25.7 %	32.2 %	36.4 %	39.2 %	41.7 %
Criterion Measure C (Commitment of 60 days or more)	12.6 %	21.0 %	26.4 %	30.3 %	32.7 %	34.3 %
Criterion Measure D (Prison Commitment)	8.7 %	15.8 %	20.4 %	23.9 %	26.0 %	27.5 %

\* The date of arrest leading to the criterion specified is the basis for the calculation of date of unfavorable outcome.

\*\* In this table, pending/missing dispositions are counted as 'favorable outcome'. While it appears that new prison commitments (Criterion D) routinely are reported to the FBI (either by the court or prison system), it is known that reporting of other dispositions (e.g., dismissal, probation, jail sentence) is seriously deficient. Appendix I displays an alternative method of counting pending/missing dispositions (in relation to Criteria B and C).

# APPENDIX I

## RECIDIVISM RATE (PERCENT UNFAVORABLE OUTCOME) BY CRITERION/FOLLOWUP PERIOD: PENDING/UNKNOWN DISPOSITIONS

[All Releasees (N=1806)]

<u>Criterion Measure</u>	<u>Followup Period*</u> <u>(Years After Release)</u>					
	1	2	3	4	5	6
Criterion Measure B (Conviction )						
Pending as Favorable	15.4%	25.7%	32.2%	36.4%	39.2%	41.7%
Pending as Unfavorable	20.3%	34.1%	43.6%	49.1%	53.3%	57.4%
Criterion Measure C (Commitment of 60 Days or More)						
Pending as Favorable	12.6%	21.0%	26.4%	30.3%	32.7%	34.3%
Pending as Unfavorable	18.7%	31.7%	40.9%	46.4%	50.7%	54.4%

\* The date of arrest leading to the criterion specified is the basis for the calculation of date of unfavorable outcome.

## APPENDIX II

### RECIDIVISM RATE (PERCENT UNFAVORABLE OUTCOME) BY METHOD OF RELEASE/CRITERION/FOLLOWUP PERIOD

	Followup Period (Years After Release)					
	1	2	3	4	5	6
<u>Criterion Measure A (Arrest)*</u>						
1. All Releasees	29.0	43.7	51.4	54.9	57.5	60.4
2. Parolees (adult)	14.8	24.2	31.9	35.5	39.0	42.0
3. Mandatory Releasees (adult)	35.3	50.5	59.5	62.0	64.3	66.9
4. Expiration Cases (adult)	36.0	51.4	58.5	61.7	64.2	66.9
5. Releasees (youth)**	32.6	53.4	59.8	64.6	66.7	69.7
<u>Criterion Measure A Modified (Arrest or Parole Violation***)</u>						
6. All Releasees	32.2	46.8	54.2	57.5	60.0	62.5
7. Parolees (adult)	18.8	29.4	36.3	39.7	43.3	45.9
8. Mandatory Releasees (adult)	39.4	53.6	61.4	63.7	65.7	68.2
9. Expiration Cases (adult)	36.0	51.4	58.5	61.7	64.2	66.9
10. Releasees (youth)	36.9	57.0	64.1	69.0	70.5	73.0
<u>Criterion Measure C (Commitment of 60 Days or More)</u>						
11. All Releasees	12.6	21.0	26.4	30.3	32.7	34.3
12. Parolees (adult)	4.8	9.6	13.2	15.3	17.9	19.0
13. Mandatory Releasees (adult)	15.2	25.3	32.2	37.2	39.6	41.5
14. Expiration Cases (adult)	17.5	28.5	33.6	38.3	39.8	41.5
15. Releasees (youth)	14.5	23.2	29.3	33.6	36.6	38.4
<u>Criterion Measure C Modified (Commitment of 60 Days or more or Parole Violation)</u>						
16. All Releasees	17.9	28.6	33.8	37.1	39.3	40.8
17. Parolees (adult)	10.0	18.6	22.1	24.0	26.7	27.8
18. Mandatory Releasees (adult)	23.0	34.3	39.6	43.1	45.2	46.8
19. Expiration Cases (adult)	17.5	28.5	33.6	38.3	39.8	41.5
20. Releasees (youth)	23.2	34.6	42.0	45.5	48.1	49.4

\* Category N's are as follows: All Releasees (1806); Adult Parolees (521); Adult Mandatory Releasees (487); Adult Expiration Cases (405); Youth Releasees (393).

\*\* 76.8% of youth cases were released to parole supervision. Of the remainder, 10.9% were mandatorily released and 12.2% were released at the expiration of their sentence. As the latter sub-categories were small, combined results are presented.

\*\*\* Defined as the issuance of a parole/mandatory release violation warrant.



**END**