Recidivism Among Federal Prison Releasees in 1987: A Preliminary Report.

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Introduction

Within 3 years of their release from the Federal Bureau of Prisons (BOP) in 1987, 40.8 percent of the former inmates had either been rearrested or had their parole revoked, that is, recidivated. This finding is based on a representative sample of 1,205 BOP inmates released to the community during the first 6 months of 1987.

Since at least the late 1950's, the BOP has conducted several recidivism studies regarding recidivism risk prediction indexes and prison program effectiveness. The BOP has worked closely with the United States Parole Commission (USPC) in the development and revalidation of the Salient Factor Score (SFS), a statistical instrument used by the USPC in actual decision making (Gottfredson, Wilkins and Hoffman 1978; Hoffman and Beck 1974; Gaes 1986). The BOP has conducted recidivism studies to evaluate halfway house release (Beck, Seiter, and Lebowitz 1978); large scale rehabilitation programs, such as those at the Robert F. Kennedy Youth Center at Morgantown, West Virginia (Cavior, et al. 1972; Gerard, et al. 1969), and at Butner, North Carolina (Federal Bureau of Prisons 1987); and prison industry (UNICOR) and vocational training programs (Saylor and Gaes 1992). Presently, the BOP is conducting comprehensive recidivism studies to evaluate its intensive confinement centers (i.e., Federal prison boot camps, Klein-Saffran 1991) and expanded drug treatment programs (Federal Bureau of Prisons 1992).

In line with these past and ongoing recidivism studies, the current study will update our understanding of recidivism among Federal prison releasees by examining the association between pre-prison, prison, and post-release characteristics and experience and recidivism rates; revalidating the U.S. Parole Commission's Salient Factor Score and the U.S. Sentencing Commission's Criminal History Score; and testing the effectiveness of several BOP policies, operations, and programs aimed at reducing recidivism.

The study report is presented in six parts. Part I summarizes the study's findings and defines its sources. It also describes the release population and sample and the two-way, or bivariate, associations between each of the background, prison experience, and community variables and recidivism. Recidivism is also compared among 1970, 1978, 1980, 1982, and 1987 release cohorts.

Part II defines the concept of normalization and uses multivariate statistical models to test hypotheses about the normalizing effects of social furloughs and education programs and reviews the independent effects of individual characteristics, prison experience, and post-release living arrangements. By multivariate models, we mean statistical models

that describe the simultaneous and independent (or relative) effects of many variables on recidivism rates.

Part III uses multivariate statistical procedures to examine the effectiveness of drug and alcohol treatment programs, in place prior to July 1987.

Part IV uses multivariate statistical procedures to assess the predictors of recidivism frequency among those releasees who recidivate.

Part V uses multivariate statistical procedures to assess the effect of halfway house release on post-release employment.

Part VI summarizes the study's findings and suggests future research and data collection efforts to help confirm and deepen our understanding of what pre-prison, prison, and post-release individual and environmental variables predict recidivism and which prison operations, policies, and programs are most effective for reducing recidivism.

Part I. Summary, Data Sources, and Two-Way Associations

Summary of Findings

In this summary I discuss primarily the two-way associations between each of the pre-prison, prison, and community variables with recidivism. Unless otherwise noted, the significant two-way, or bivariate, associations described here were supported in the multivariate analysis, presented in Part II of this report.

Major findings of the study include the following:

- Within 3 years of their release from the Federal Bureau of Prisons (BOP) in 1987, 40.8 percent of the former inmates had either been rearrested or had their parole revoked, that is, recidivated.

- Recidivism rates were highest during the first year back in the community -- 11.3 percent of the released prisoners recidivated in the first 6 months and 20.3 percent did so in the first year after their release.

- Recidivism rates were higher among blacks and Hispanics than among whites and non-Hispanics -- 58.8 percent of the black releasees recidivated compared to 33.5 percent of the whites; 45.2 percent of the Hispanics recidivated compared to 40.2 percent of the non-Hispanics.

- Recidivism rates were almost the same for males and females; 40.9 percent of the males recidivated compared to 39.7 percent of

the females.

- Recidivism rates were inversely related to age at release; the older the person, the lower the rate of recidivism -- 56.6 percent of those 25 years of age or younger recidivated compared to 15.3 percent of those 55 years of age or older.

- Among offense types, persons in Federal prison for fraud or drug trafficking had the lowest recidivism rates at 20.8 percent and 34.2 percent, respectively, while those in prison for robbery or other crimes against a person (excluding homicide, manslaughter, and sex offenses) had the highest recidivism rates at 64.0 percent and 65.0 percent, respectively.

- Generally, the more years of schooling the person had completed when beginning their prison term, the less likely they were to recidivate.

- Both the U.S. Parole Commission's Salient Factor Score and the U.S. Sentencing Commission's Criminal History Score are strongly associated with recidivism. Persons in the "Very Good Risk" category (scores 8-10) of the Salient Factor Score recidivated at a 17.4 percent rate and those in the "Poor Risk" category (scores 0-3) at a 71.4 percent rate. Persons in the "Very Good Risk" category of the Criminal History Score (scores 0-1) recidivated at a 19.0 percent rate and those in the "Very Poor" risk category (scores 13 and above) recidivated at a 74.5 percent rate. Both the Salient Factor Score and the Criminal History Score are heavily weighted with measures of the person's prior criminal record, e.g., prior convictions and prior incarcerations.

- Persons who were employed full time or attended school at least 6 months within 2 years before they entered prison had a recidivism rate of 25.6 percent, compared to 60.2 percent for those not so engaged.

- Persons who were under criminal justice supervision (e.g., parole, probation) at the time of their Federal offense had a recidivism rate of 61.8 percent, compared to 28.4 percent for those not under supervision.

- Recidivism rates were higher among persons with a pre-prison history of drug or alcohol dependency. Among the specific drug types, heroin abusers had the highest rate of recidivism -- 69.5 percent of those with a heroin dependency recidivated -- while those with a dependency on powder cocaine had the lowest rate of recidivism (51.3 percent) among those with a dependency history. In the multivariate analysis of Part II, only heroin and alcohol abusers were found to have higher likelihoods of recidivating.

- Recidivism rates were directly related to prison misconduct; the higher the frequency of misconduct, the higher the rate of

recidivism -- 65.7 percent of those with four or more misconduct incidents recidivated, compared to 34.1 percent of those who had no misconduct incidents. However, in the multivariate analysis, misconduct was not found to be a significant predictor of recidivism. Apparently the variables predicting recidivism and used as controls in the multivariate models (e.g., prior record, age, race, gender, educational attainment, drug or alcohol dependency) also predict prison misconduct.

■ Recidivism rates were inversely related to educational program participation while in prison. The more educational programs successfully completed for each 6 months confined, the lower the recidivism rate. For inmates successfully completing one or more courses per each 6 months of their prison term, 35.5 percent recidivated, compared to 44.1 percent of those who successfully completed no courses during their prison term.

■ Recidivism rates were lower among inmates who received a social furlough while in prison than among those who did not. Of the 302 persons (25.1 percent) in the sample who received at least one social furlough during their prison term, 19.5 percent recidivated, compared to 47.8 percent of persons receiving no social furloughs.

■ Time served in prison was unrelated to recidivism -- 41.0 percent of those serving 6 months or less recidivated, compared to 42.1 percent among those who served more than 37 months. While longer prison terms may achieve varying degrees of crime rate reduction through incapacitation, depending on the incapacitated person's propensity to reoffend, longer prison terms apparently do not reduce crime rates through specific deterrence.

■ Releasees who had arranged for post-release employment prior to release had lower recidivism rates than those who did not make such arrangements; 27.6 percent of those arranging for post-release employment recidivated compared to 53.9 percent of those who made no plans for post-release employment.

■ Inmates released through a halfway house had a recidivism rate of 31.1 percent, compared to a rate of 51.1 percent for those released directly from prison. However, in the multivariate analysis in which several risk measures are used as controls (e.g., prior record, age, substance abuse, post-release employment and living arrangements) halfway house release was found not to reduce recidivism (see Part II). Nevertheless, a separate multivariate analysis found that halfway house releasees were significantly more likely to find post-release employment than persons released directly from an institution. In sum, while halfway house release appears not to reduce recidivism directly, it does appear to reduce recidivism indirectly, by increasing post-release employment. That halfway house

employment is to some extent coerced suggests that strong encouragement given inmates to participate in prison work, education, and drug treatment programs may pay off in reduced recidivism. When the number of days spent in a halfway house was examined in a multivariate model predicting recidivism, we found a modest recidivism-reducing effect. One possible explanation for this effect is the greater community adjustment a longer stay in a halfway house may allow.

■ Recidivism rates for releasees with a history of substance abuse were the same regardless of whether they had participated in a drug treatment program. Of the 799 releases with a drug or alcohol problem, 208 participated in a BOP drug treatment program and 591 did not. Participants had a recidivism rate of 50.0 percent. Non-participants had a recidivism rate of 47.6 percent. However, in the multivariate analysis where many variables were controlled, including age, we found that abusers with more severe dependency problems disproportionately received treatment. When a measure of the extent of drug dependency was used as a control variable, a very modest treatment effect was observed. We note that since 1987 the Bureau of Prisons has considerably enlarged the availability, variety, and intensity of drug and alcohol treatment programs provided (Federal Bureau of Prisons 1992). A massive research project is currently underway to evaluate the effectiveness of these new programs.

■ Persons living with a spouse after release had lower recidivism rates than those with other post-release living arrangements -- 20.0 percent of those living with a spouse recidivated, compared to 47.9 percent with other post-release living arrangements.

■ The more urban the area, the higher the unemployment rate, and the larger the percent of families living in poverty in the community where prison releasees resided (defined by ZIP Code), the higher the recidivism rate. In the multivariate analysis, however, the unemployment rate was found to be a strong and significant predictor of a lower likelihood of recidivating. That is, the higher the unemployment rate, the lower the likelihood of recidivating. Although this finding seems counterintuitive, it does, as discussed in more detail in the paper, support one criminological hypothesis about the relation of aggregate unemployment rates and crime rates.

■ In many cases releasees who recidivated were rearrested for committing a similar crime to the one for which they were just imprisoned, e.g., 47.2 percent of the recidivating drug offenders were rearrested for drug trafficking or possession and 35.3 percent of the recidivating property offenders were rearrested for a property offense.

■ Among the 490 recidivists from the 1,205 study group members, 246, or 50.3 percent were rearrested or had parole revoked once during the 3-year followup period, 128 (26.1 percent) twice, 48 (9.8 percent) three times, and 24 (4.9 percent) four times. One person accumulated 15 recorded recidivating events. The largest number of recidivating events, 245 (25.3 percent), were arrests for drug trafficking or possession, followed by 129 (13.1 percent) for larceny theft, and 127 (13.1 percent) for a parole violation. The fourth highest recidivating event was arrest for assault, with 67 events, or 6.9 percent of the total. We should note that the majority of these assaults were simple assaults. A multivariate analysis predicting the frequency of recidivism found the following variables to be significant predictors: the Salient Factor Score (the higher the SFS the lower the frequency; gender (males have higher frequency); pre-prison and post-release employment (employment reduces frequency); and length of prison term (a longer term has a very modest effect toward reducing recidivism frequency).

■ Except for the 1970 release cohort, recidivism rates for the 1978, 1980, 1982, and 1987 release cohorts were remarkably similar at around 40.0 percent during a 3-year followup and similarly defined as a rearrest or parole revocation. The 1970 release cohort had a recidivism rate of 51.5 percent, which, can be attributed to a disproportionate number of youthful auto thieves in that cohort. Both youth and an incarcerating offense for auto theft are significantly related to higher recidivism.

Data Sources and Measuring Recidivism

Information on demographic characteristics, criminal record, drug and alcohol use, prison misconduct, prison education, furlough, drug treatment program participation, and post-release plans was coded from the inmate files.

Information about population size, poverty rates, and unemployment rates for ZIP Code areas was obtained from the 1988 CACI sourcebook (CACI 1988). CACI, a private data collection firm, obtained data pertaining to different ZIP Code areas by aggregating census tract data collected by various Government agencies (primarily the U. S. Bureau of The Census).

The automated Interstate Identification Index (Triple-I) was searched to obtain criminal followup information for each releasee in the sample. The Triple-I searches automated criminal history records maintained by 21 States. For those States without automated criminal history systems, the Triple-I relies on a search of the FBI's National Criminal Information Center (NCIC) automated criminal history files. Record searches were started 44 months after the end of the 3-year followup period, allowing sufficient time for arrests or parole revocations to be recorded. Criminal history records for 383 releasees in the sample could not be found using the Triple-I. For these persons, the FBI's paper criminal history files were searched. Ultimately, criminal history records were found and followup information was recorded for all 1,205 persons in the sample.

Description of The 1987 Release Cohort

Table 1 provides a summary description of the releasees in the sample and the release population from which the sample was drawn. We see that the sample well represents the total release population for the first 6 months of 1987. For example, 89.2 percent of the sample were males compared to 89.1 percent of the population; 69.8 percent of the sample were white compared to 69.9 percent in the population; and similarly close percentages between the sample and population were observed for the remaining descriptive variables.

Table 1. Profile of Prisoners Released From Federal Bureau of Prisons, January Through June 1987, With Sentences of 3 Months or More and No Detainer -- Sample V. Population.

Group	Sample N	Sample %	Release Population N	Release Population %
GENDER				
Male	(1,069)	88.7	(3,887)	89.1
Female	(136)	11.3	(476)	10.9
RACE				
White	(845)	70.1	(3,051)	69.9
Black	(340)	28.2	(1,197)	27.4
American Indian	(15)	1.3	(84)	1.9
Asian	(5)	0.4	(31)	0.7
ETHNICITY				
Hispanic	(166)	13.9	(498)	11.4
Non-Hispanic	(1,030)	86.1	(3,865)	88.6
Missing Information = 9				
AGE AT RELEASE				
25 and under	(113)	9.4	(316)	7.2
26-35	(506)	42.0	(1,642)	37.6
36-45	(358)	29.7	(1,427)	32.7
46-55	(143)	11.9	(623)	14.3
56 +	(85)	7.1	(355)	8.1
COMMITMENT OFFENSE				
Drugs	(471)	39.1	(1,699)	39.0
Property	(199)	16.5	(701)	16.1
Extortion, Fraud	(202)	16.8	(783)	18.0
Robbery	(86)	7.2	(323)	7.4
Firearms, Explosives	(70)	5.8	(241)	5.5
White Collar	(69)	5.7	(240)	5.5
Court, Corrections	(33)	2.7	(74)	1.7
Miscellaneous	(25)	2.1	(87)	2.0
Other Crimes Against the Person	(20)	1.7	(74)	1.7
Immigration	(15)	1.3	(74)	1.7
Sex Offenses	(8)	0.7	(23)	0.5
Homicide/Manslaughter	(7)	0.6	(26)	0.6
Civil Rights Violations	(0)	0.0	(11)	0.3
TIME SERVED IN PRISON (Months)				
0-6	(271)	22.5		
7-12	(315)	26.1		
13-18	(226)	18.8	N/A	
19-24	(144)	12.0		
25-30	(101)	8.4		
31-36	(72)	6.0		
37-60	(66)	5.5		
61+	(10)	0.8		
PRIOR INCARCERATIONS				
Yes	(614)	47.8	N/A	
No	(563)	52.2		
Missing Information = 28				

Timing of Recidivism

Within 3 years of their release, 40.8 percent of the former inmates in the sample had been rearrested or had their parole revoked. As shown in Figure 1, nearly half of those recidivating, or 20.3 percent of those released, recidivated during the first year in the community. An additional 11.4 percent of the releasees recidivated in the second year and 9.1 percent in the third year following release.

Figure 1. Cumulative Monthly Recidivism Rate / 100 Releasees.

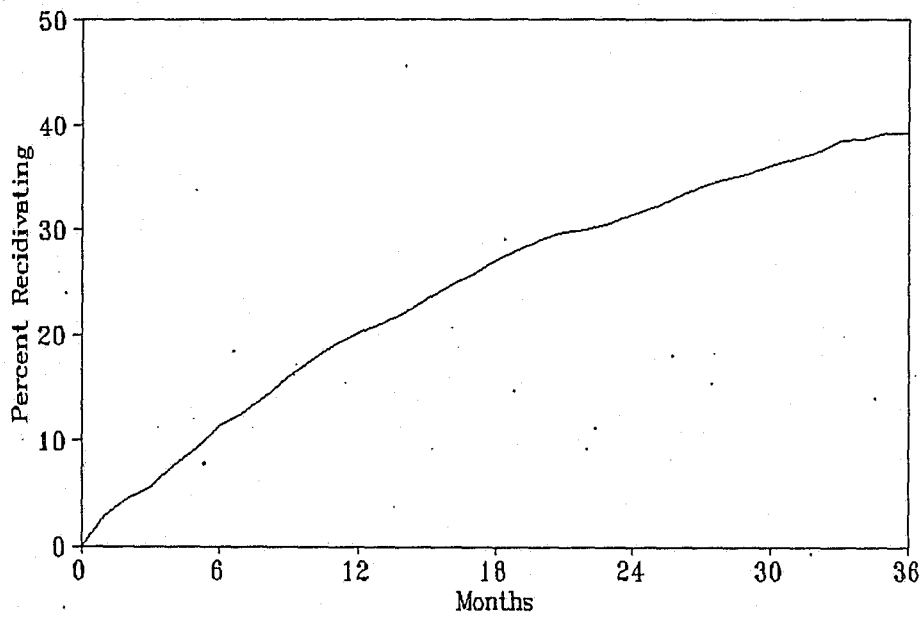
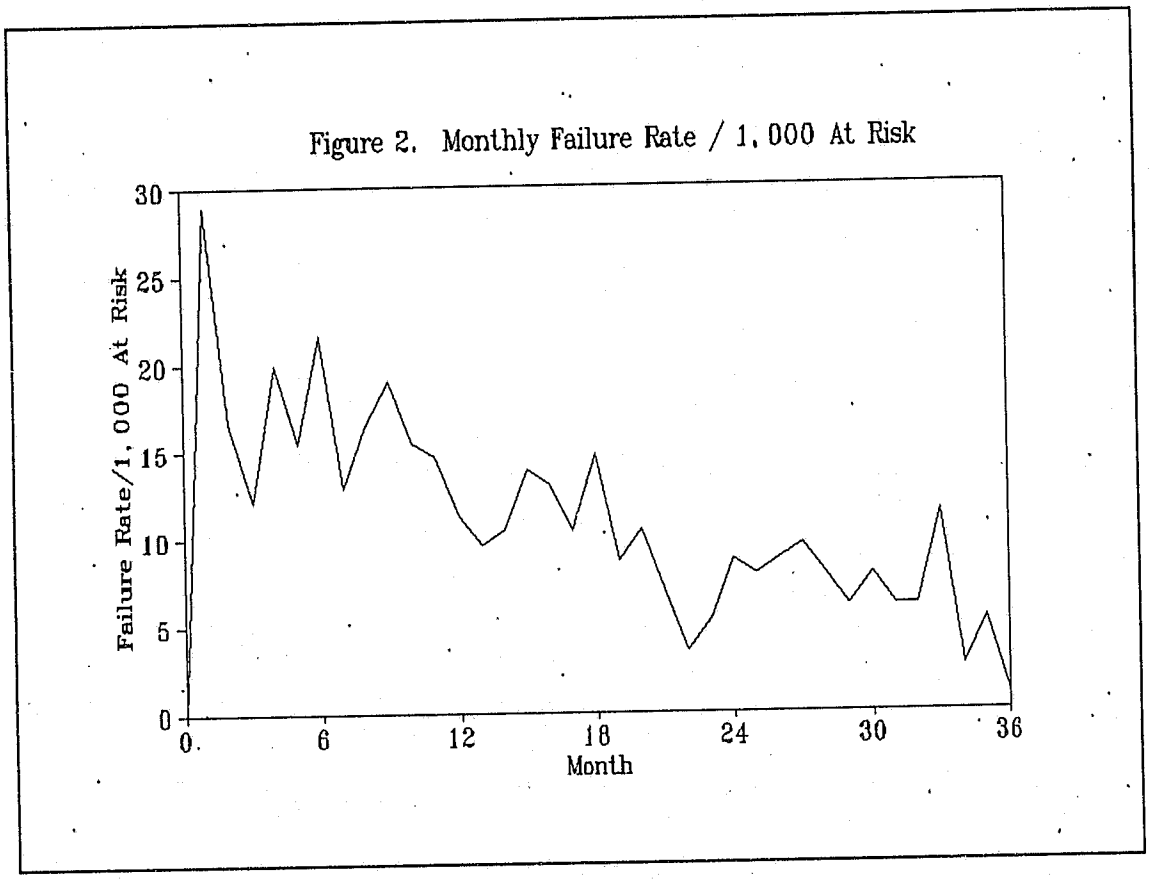


Figure 2 shows the monthly failure rates (i.e., number recidivating each month for each 1,000 releasees at risk of recidivating). We see that the failure rate dropped from 29 per 1,000 releasees in the 1st month after release to 2 per 1,000 in the 36th month.



Two-Way Associations

In this section, we examine the two-way associations between variables measuring various background characteristics, prison experiences, and release conditions with recidivism. We first examine background characteristics, move on to prison experiences, and end with a look at release conditions.

Background Characteristics and Recidivism

Table 2 displays recidivism rates for the gender, race, ethnicity, age, and offense groups described in Table 1. As we see, males and females had essentially the same recidivism rates; approximately 40.0 percent of each group recidivated during the 3-year followup period. Blacks had the highest recidivism rates, followed by American Indians and whites. Hispanics had higher recidivism rates than non-Hispanics. The older the releasee, the lower the recidivism rate. Releasees who were imprisoned for extortion or fraud had the lowest recidivism rates, with 20.8 percent of this group recidivating. Those imprisoned for robbery and crimes against the person had the highest recidivism rates at 64.0 percent and 65.0 percent, respectively. Interestingly, drug traffickers, who, in 1993, composed over 60 percent of the BOP population largely due to long sentences received under the Federal Comprehensive Crime Control Act, had next to the lowest recidivism rate at 34.2 percent.

Table 2. Background Characteristics and Recidivism.

Background Characteristic	Number & Percent Recidivating Within Each Category N	%
SEX		
Male	(437)	40.9
Female	(53)	39.7
RACE		
White	(283)	33.5
Black	(200)	58.8
American Indian	(8)	53.3
Asian	(0)	0.0
ETHNICITY		
Hispanic	(75)	45.2
Non-Hispanic	(414)	40.2
AGE AT RELEASE		
25 and under	(64)	56.6
26-35	(252)	49.8
36-45	(129)	36.0
46-55	(33)	23.1
56 +	(13)	15.3
COMMITMENT OFFENSE		
Drug, Liquor	(161)	34.2
Property	(121)	60.8
Extortion, Fraud	(42)	20.8
Robbery	(55)	64.0
Firearms, Explosives	(34)	48.6
White Collar	(24)	34.8
Court, Corrections	(12)	36.4
Miscellaneous	(13)	54.2
Other Crimes Against the Person	(13)	65.0
Immigration	(8)	53.3
Sex Offenses	(4)	50.0
Homicide/Manslaughter	(3)	42.9

Education

Table 3 displays the educational attainment at admission to the BOP and the percent recidivating within each of the five educational categories. We see that 14.6 percent of the sample had less than a high school education and an additional 29.0 percent had some high school for a total of 43.6 percent without a high school degree. The Census Bureau reported that in 1987 only 14.0 percent of the population 25 years old and over had less than a high school education. If we take a high school degree as the basic educational attainment needed to adequately function in modern society, then we see that a larger percentage of persons sentenced to Federal prison are in need of further education than in the general population.

Except for a slight rise from those with less than an eighth grade education to those with some high school, the percent recidivating declines steadily from 54.6 percent recidivating among those with some high school to 5.4 percent among those with a college degree.

Table 3. Pre-Federal Prisons Education and Recidivism.

Education Group (Highest Grade Completed)	Profile: Number & Percent In Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
8th Grade or Less	(171)	14.6	(86)	50.3
Some High School	(341)	29.0	(186)	54.6
High School Graduate	(362)	30.8	(135)	37.3
Some College	(207)	17.6	(61)	29.5
College Graduate	(93)	7.9	(5)	5.4
Missing Information = 31				

Drug and Alcohol Dependency

Table 4 shows the number and percentage of releasees who used alcohol or an illicit drug at the time of their Federal crime and recidivism rates within each category. Table 5 shows the number and percentage of persons with a drug dependency overall and recidivism rates within each category. For all drugs except alcohol, we define dependency as use of that drug five or more times prior to admission to Federal prison. Alcohol dependency is defined by information from the offender's pre-sentence report of multiple arrests for driving under the influence and/or public drunkenness, or reference to an alcohol problem, including referral for alcohol treatment. While these measures of drug dependence, except perhaps the one for alcohol, may appear to be a poor assessment of hard core drug use, the measures may actually be more useful than they seem. We coded the number of times the drug was used from the pre-sentence report (PSR), prepared for the court by a parole/probation officer. Presumably, this PSR information pertaining to whether a drug was used five or more times is only the tip of the iceberg, so to speak, representing actual drug involvement. For this reason, we are more confident that these drug dependency measures are more valid than they may seem from the description of them.

In Table 4, we see that 23.2 percent of the releasees were using a drug at the time they committed the incarcerating offense. We also see that 57.7 percent of this group recidivated, compared to 35.6 percent of those who were not under the influence of drugs when committing the incarcerating offense.

Table 4. On Drugs or Alcohol When Committing the Current Offense?

On a Drug at the Time of Current Offense?	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
Yes	(279)	23.2	(161)	57.7
No	(926)	76.8	(330)	35.6

In Table 5, we see that 66.3 percent of the releasees were dependent on at least one drug or alcohol. This finding is similar to that found in a self-report survey of drug use among State prison inmates in a 1986 sample (Innes 1988). As we see in Table 5, the recidivism rate was 50.3 percent for persons with a dependency problem, compared to 21.9 percent for those with no dependency problem.

Table 5. Dependent on Any Drug or Alcohol?

	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
Drug Dependency	N	%	N	%
Dependent	(799)	66.3	(402)	50.3
Not Dependent	(406)	33.7	(89)	21.9

Table 6 shows the number and percentage of those dependent on a particular drug, but who may also be dependent on other drugs as well. For example, persons in the "Yes" category of Opiate (Heroin) dependency may abuse only opiates or opiates and other drugs as well, while persons in the "No" category may be dependent on drugs other than opiates or have no drug dependency. Also presented in Table 6, are recidivism rates for each drug category.

In most cases, substance abusers do not limit their abuse to one drug. For each drug type listed in Table 6 (e.g. opiates, hallucinogens) Appendix E provides a break down of those who abuse it alone and those who abuse it in combination with other drugs. In Appendix E we see that the number and percent of persons abusing one specific drug only are the following: 21 persons or 9.9 percent of all opiate (heroin) abusers; 2 persons or 2.15 percent of all hallucinogen abusers; 2 persons or 2.4 percent of all stimulant abusers; 2 persons or 1.98 percent of all barbiturate abusers; 64 persons or 13.42 percent of all marijuana abusers; 107 or 29.64 percent of all alcohol abusers; 30 or 8.36 percent of all cocaine abusers; and 1 or 2.86 percent of other drug abusers. The highest drug abuse specialization is found among alcohol abusers. However, even for alcohol abusers, fewer than one-third (29.64 percent) abuse only alcohol. Obviously, there is little specialization in substance abuse. Because abusers do not specialize in one drug, the drug

categories used in Table 6 must be treated as an index of a particular pattern of drug abuse. We relate this index to recidivism, not abuse of a particular drug only.[1]

Table 6 shows that the highest percentage of drug usage was for marijuana, while the lowest usage was for stimulants. For marijuana, 46.6 percent of the releasees used it five or more times, while for stimulants the percentage was 8.5.

Recidivism was highest for persons dependent on opiates (heroin), with 69.5 percent recidivating, and lowest for persons dependent on cocaine, with 51.3 percent recidivating. Within the cocaine category, the recidivism rate for crack cocaine users may be greater than for powder cocaine users. Unfortunately, our data do not allow for this distinction, but based on self-reported information for a 1991 sample of Federal inmates, we estimated that the vast majority of cocaine abusers examined in the sample, over 80 percent, were powder cocaine abusers.

Given the large number of inmates who abuse drugs and/or alcohol, and given the association of abuse with recidivism, prison drug and alcohol treatment programs seem warranted.

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[1] That drug abusers do not specialize in the abuse of one drug, but appear at different times to substitute one drug for another, has implications for attempts to solve the nation's drug abuse problem by attacking drug supply. Because substance abusers substitute one drug for the other, if the supply of one or even two, three, or four particular drug types totally dried up, the evidence here suggests, abusers would simply switch to another drug. In short, to stop drug abuse by attacking the supply of drugs means that the supply of all drugs listed in Table 6 (including alcohol) would have to totally dry up. Furthermore, much of the effort currently targeted at drug supply has the goal of pushing up the street price of illicit drugs. Economic theory and research tells us that as the price of one product rises at least two things happen: (1) consumers find lower priced substitutes, and (2) suppliers have greater incentive to produce and supply the higher priced product. These facts, it seems to us, should be considered when formulating a strategy for solving America's drug abuse problem.

Table 6. Type of Drug Dependency.

Drug Type	Profile: Number & Percent of the Sample in Each Category N	%	Number & Percent Recidivating Within Each Category N	%
OPIATE (Heroin)				
Yes	(246)	21.6	(171)	69.5
No	(893)	78.4	(286)	32.0
Missing Information = 66				
HALLUCINOGEN				
Yes	(108)	9.5	(61)	56.5
No	(1,024)	90.5	(392)	38.3
Missing Information = 73				
STIMULANTS				
Yes	(96)	8.5	(58)	60.4
No	(1,034)	91.5	(395)	38.2
Missing Information = 75				
BARBITURATES				
Yes	(112)	10.0	(65)	58.0
No	(1,013)	90.0	(384)	37.9
Missing Information = 80				
MARIJUANA				
Yes	(527)	46.6	(280)	53.1
No	(603)	53.4	(180)	29.9
Missing Information = 75				
ALCOHOL				
Yes	(408)	35.8	(219)	53.7
No	(731)	64.2	(239)	32.7
Missing Information = 66				
COCAINE				
Yes	(384)	34.4	(197)	51.3
No	(735)	65.7	(251)	34.2
Missing Information = 86				
OTHER DRUGS				
Yes	(40)	3.6	(25)	62.5
No	(1,085)	96.4	(425)	39.2
Missing Information = 80				

Salient Factor Score

Table 7 examines the association between the United States Parole Commission's Salient Factor Score (SFS) and recidivism for the 1987 releasees. The SFS is an 11-score statistical prediction device developed by the U.S. Parole Commission and Federal Bureau of Prisons, and is used along with measures of offense severity and prison behavior to set inmate parole dates. The SFS ranges from 0, or poor risk of post-release success, to 10, or very good risk of post-release success. The following characteristics of inmates are incorporated into the SFS: number of prior convictions; number of prior jail or prison commitments; age at current offense; length of commitment- free period before commencing the current offense; whether under criminal justice supervision (e.g., parole, probation) at commencement of the current offense; and heroin dependence. Each of these items is scored numerically and their sum equals the inmate's SFS.[2]

In Table 7, the SFS has been grouped into four categories: Poor Risk (scores 0-3); Fair Risk (scores 4-5), Good Risk (scores 6-7); and Very Good Risk (scores 8-10). The Table shows a strong association between the SFS and recidivism. The Somers' D for that association is -0.506. Somers' D is a statistical measure of association and predictive power, ranging from 0, or no predictive power, to (+ or -)1, perfect predictive power (Somers, 1962; Liebetrau, 1983; Hoffman, Beck, and Greene forthcoming). A Somer's D of -0.506 indicates a high degree of predictive power for the SFS. The Somers' D measure is identical to the statistical measure called the Mean Cost Rating (MCR), which is used by Hoffman and Beck (1974, 1976) and Hoffman (1983) in their research evaluating the predictive power of the Salient Factor Score. The Pearson Correlation Coefficient, a second statistical measure of predictive power, referred to as the, "point biserial correlation" by Hoffman and Beck (1976), is -0.452 between the four-category Salient Factor Score and the two-category recidivism measure, which also indicates a high degree of predictive power for the SFS. For the full 11-score SFS with the 2-category recidivism measure, the Somers' D, or MCR, is -0.548 and the correlation is -0.472 indicating that across the full SFS range, we obtain a high degree of predictive power.

These measures of association (MCR [Somers' D]) and correlation) are actually higher than observed for previous release cohorts. For example, Hoffman and Beck report MCRs that range from -0.38 to -0.40 for Federal prisoners released in 1970, 1971, 1972, and 1978, compared to the -0.548 MCR for the 1987 release cohort discussed in this study. In sum, the SFS appears to be a somewhat better predictor of recidivism for the 1987

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[2] See the United States Parole Commission 1989. Rules And Procedures Manual, pp. 61-67, for a description of how to compute the Salient Factor Score.

release cohort than for previous cohorts examined.

It is clear that the SFS remains a powerful predictor of post-release success. Why the SFS was a better predictor for the 1987 cohort than for earlier cohorts is not clear. Two possibilities for which we observe some evidence are (1) a larger proportion of releasees are accumulating at the low and high ends of the SFS distribution, and (2) perhaps due to a larger proportion of drug offenders in this cohort than in previous ones, those at the high end of the distribution appear to be more successful than was previously the case. Both of these changes would improve the predictive power as measured by the MCR (Somers' D).

Table 7. The Number and Percent Recidivating and Not Recidivating in Each Salient Factor Score Risk Category.

	SFS Risk Category (Scores in Parentheses)				
Recidivism	Poor Risk (0-3)	Fair Risk (4-5)	Good Risk (6-7)	Very Good Risk (8-10)	Total
Recidivating (N)	247	113	52	79	491
Percent Recidivating	71.39	47.88	30.59	17.44	40.75
Not Recidivating (N)	99	123	118	374	714
Percent Not Recidivating	28.61	52.12	69.41	82.56	59.25
Total	346	236	170	453	1205
Percent	28.71	19.59	14.11	37.59	100.00

Criminal History Score

Table 8 examines the association between the United States Sentencing Commission's (USSC) Criminal History Score (CHS) categories, and recidivism for the 1987 releasees. The CHS is one component of the U.S. Sentencing Guidelines used to determine type (i.e., probation or prison) and length of sentence. Like the SFS, the CHS is a statistical device for predicting future criminal behavior. The CHS is additionally used to measure the degree of criminal culpability worthy of punishment. The CHS begins at 0, very low risk (low culpability), and can go as high as 50 or more (high risk, high culpability) depending on the offender's criminal history. The components of the CHS are the number and recentness of prior convictions and imprisonments. Also, like the SFS, the CHS considers whether the offender was under criminal justice supervision at the commencement of his or her current offense. But unlike the SFS, the CHS does not consider the offender's age at commencement of the current offense, or whether the offender has a heroin dependency.[3]

The Criminal History Scores in Table 8 are grouped into six risk categories, where the first category contains scores 0 and 1, representing very low risk, and the sixth category contains scores of 13 and above, representing very high risk. In our sample, scores range from zero (0) with 451 releasees, or 37.4 percent of the sample, to 1 releasee with a score of 36. We see a strong association between the CHS and recidivism; only 19.0 percent of those in the lowest CHS category recidivated compared to 74.5 percent of those in the highest category. The Somers' D (i.e., Hoffman and Beck's MCR) is 0.487 and the Pearson Correlation Coefficient is 0.427.[4] For the 36-category CHS with the 2-category recidivism measure, the Somers' D (MCR) is 0.499 and the correlation is 0.401.

The Zero Order (Pearson) Correlation between the 11-category Salient Factor Score and the full set of Criminal History Score categories is .808. This indicates a high degree of similarity between the SFS and CHS.

As an aside, we note that 44.5 percent of the releasees are in Criminal History Category I (scores 0 and 1). The overwhelming bulk of these people have no criminal convictions prior to their Federal incarcerating conviction. We also note that a relatively low 19.0 percent of these CHS Category I releasees recidivated. From these two facts we may surmise that

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[3] See the United States Sentencing Commission Guidelines Manual 1989, (4.1-4.10) for a description of how to compute the Criminal History Score and its proposed use as a sentencing tool.

[4] See the discussion on the equivalence between Somers D and the MCR in the previous section on the Salient Factor Score.

incapacitating this group through imprisonment prevents relatively few crimes. Despite this small incapacitation effect, the current Federal sentencing guidelines have more than doubled, and in many cases tripled or quadrupled, the prison terms for persons in this category. Our results here suggest that these significantly longer guideline prison terms are erroneously justified, in part, by the presumed benefit of reduced crime.

In Appendix D, we examine in detail the effectiveness of these longer guideline sentences for CHS Category I drug traffickers in meeting the objectives of reduced sentencing disparity, rehabilitation, incapacitation, deterrence, and "just punishment." Also examined are the added prison costs arising from these longer "new law" sentences. The analysis looks only at drug-traffickers in Criminal History category I (i.e., with criminal history scores of zero or one).

Table 8. The Number and Percent Recidivating and Not Recidivating in Each Criminal History Score Risk Category.

	Criminal History Score Risk Category (Scores in Parentheses)						
	I (0-1)	II (2-3)	III (4-6)	IV (7-9)	V (10-12)	VI (13+)	Total
Recidivating (N)	102	50	91	81	56	111	491
Percent Recidivating	19.03	40.00	50.84	61.36	66.67	74.50	40.75
Not Recidivating (N)	434	75	88	51	28	38	714
Percent Not Recidivating	80.97	60.00	49.16	38.64	33.33	25.50	59.25
Total	536	125	179	132	84	149	1205
	44.48	10.37	14.85	10.95	6.97	12.37	100.00

Full-Time Employment or Schooling

Table 9 displays recidivism rates for sample members who were full-time employees or students for at least 6 months during the last 2 years prior to commitment to the BOP, and for persons not so engaged prior to confinement. We see that 619 persons, or 62.1 percent, for whom we have information were either full-time employees or students prior to confinement. Of the full-time group, 25.4 percent recidivated compared to 60.2 percent of those who were not so occupied on a full-time bases.

Table 9. Full-Time Worker or Student and Recidivism.

Pre-Prison Worker/Student Status	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
Full-Time	(619)	62.1	(157)	25.4
Not Full-Time	(377)	37.9	(227)	60.2
Missing Information = 209				

Criminal Justice Supervision

Table 10 displays recidivism rates for persons who were under criminal justice supervision (e.g., probation, parole) at the time of their incarcerating offense. A total of 445 persons, or 36.9 percent of the releasees, were under some sort of criminal justice supervision at the time of their Federal crime. Of those under supervision, 61.8 percent recidivated, compared to 28.4 percent of those who were not under supervision.

Table 10. Criminal Justice Supervision and Recidivism.

Supervision Status At Current Offense	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
Under Criminal Justice Supervision	(445)	36.9	(275)	61.8
Not Under Criminal Justice Supervision	(760)	63.1	(216)	28.4

The Prison Experience and Recidivism

In this section, we look at the two-way, or bivariate, associations of variables measuring several aspects of prison behavior and experience with recidivism rates. The Bureau of Prisons' staff is greatly interested in the effects of correctional operations on recidivism. This interest is prompted by a desire to know whether confinement in BOP facilities affects post-release success. While there presently are few formal programs explicitly aimed at "rehabilitating" the criminal offender, there are various operational practices and programs that do attempt to "normalize" life in prison, such as education and social furloughs, and are meant to diminish or overcome the potentially negative effects of imprisonment. In Part II, we use multivariate statistical models to test a hypothesis relating education programs and social furloughs to reduced recidivism. In Part III we examine drug treatment program effectiveness for reducing recidivism among substance abusers, while controlling for variables measuring selection bias toward low-risk inmates as program participants.

Prison Misconduct

Table 11 presents the frequency of prison rule infractions (prison misconduct) for the release cohort, and recidivism rates for each category of misconduct. We see that 34.1 percent of those with no misconduct incident reports recidivated, compared to 65.7 percent of those with four or more incident reports. We see, therefore, at least on the surface, that inmates with more misconduct recidivate at a higher rate than those with less misconduct. However, in Part II, we see that when additional risk factors are controlled, prison misconduct is not significantly related to recidivism.

Table 11. Prison Misconduct and Recidivism.

Prison Misconduct	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
No Prison Misconduct	(833)	69.1	(284)	34.1
1 Incident Reported	(194)	16.1	(95)	49.0
2 Incidents Reported	(69)	5.7	(41)	59.4
3 Incidents Reported	(42)	3.5	(27)	64.3
4 + Incidents Reported	(67)	5.6	(44)	65.7

Prison Education Program Participation

Table 12 displays the frequency of education program participation, measured by the number of courses successfully completed for each 6 months confined. Courses reflected in Table 12 include Adult Basic Education (ABE), General Educational Development (GED), Adult Continuing Education (ACE), Post Secondary Education (PSE) including college courses and vocational training, and social skills courses (e.g., marriage enrichment). The table shows a definite decline in recidivism rates -- from 44.1 percent recidivating among those completing no courses during their prison term to 35.5 percent among those completing one or more courses each 6 months of their term.

Table 12. Education Program Participation and Recidivism.

	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
Education Program Participation	N	%	N	%
0 Courses Per 6 Months Served	(671)	55.7	(296)	44.1
>= 0.5 Courses	(182)	15.1	(71)	39.0
0.5-1.0 Courses	(163)	13.5	(57)	35.0
1 + Courses	(189)	15.7	(67)	35.5

Table 13, shows the number of persons in each educational attainment category (less than eighth grade through a collage education) taking or not taking courses in each of five course categories (ABE, GED, ACE, PSE including vocational or occupational courses, and Social Skills) and the percent recidivating for those who took a particular course and for those who did not. Each cell in the main part of the table is numbered in the upper right hand corner. The following 14 cells, with 30 or more persons taking the course listed in the column heading, have sufficient numbers to begin making inferences about the recidivism-reducing effects of course participation: 1, 2, 5-11, 13, 15, and 18-20. Twelve of these cells show a positive effect on post-release success for course participants, while 2 of the 14 cells show that participation increases the likelihood of recidivating. We hasten to add that this negative result cannot be interpreted to mean that course participation increases recidivism. The higher recidivism percentages for course participants in these two cells are most likely due to other characteristics of course participants that are not controlled here. Part II of this report shows that educational program participation reduces recidivism when other important predictors of recidivism, such as age and prior criminal record, are controlled. The results shown in Table 13 strongly suggest that prison educational program participation has a positive effect on post-release success. Of particular note, in this regard, are

the positive effects for those with an eighth grade or less education at admission who participate in ABE and GED courses (cells 1 and 2), and the positive effects on post-release success for those with some high school education, but not a degree, participating in all courses except Adult Basic Education (ABE).

The apparent anomalies in Table 13 where, for example, we see persons with high school degrees taking GED courses or persons with a college degree taking ABE or GED courses, probably resulted because of a discrepancy between the inmate's self reported educational attainment and his or her achievement test score. Inmates are guided into specific education courses based on an achievement test given at admission, not on self-reported educational attainment.

Achievement test scores, if tests are given to all incoming inmates, could, in the future, be combined with achievement test scores from a large sample of inmates given the test a second time near release to provide pre- and post-program test scores. These measures would allow an assessment of both prison program effectiveness in increasing academic skills and the effect of academic achievement in prison on post-release success.

Table 13. Educational Attainment at Admission, Courses Taken While in Prison, and Recidivism.

Educational Attainment at Prison Admission	Profile of Educational Attainment	Adult Basic Education (ABE) Number 0	≥ 1	General Educational Development (GED) Number 0	≥ 1	Adult Continuing Education (ACE) Number 0	≥ 1	Post-Secondary Education (PSE)* Number 0	≥ 1	Social Education Number 0	≥ 1
8th Grade or Less			(1)		(2)		(3)		(4)		(5)
N	171	111	60	143	28	163	8	169	2	147	24
%	14.6	64.9	35.1	83.6	16.4	95.3	4.7	98.8	1.2	86.0	14.0
Recidivating											
N	86	58	28	73	13	82	4	85	1	73	13
%	50.3	52.2	46.7	51.0	46.4	50.3	50.0	50.3	50.0	49.7	54.2
Some High School			(6)		(7)		(8)		(9)		(10)
N	341	258	83	280	61	318	23	319	22	290	51
%	29.0	75.7	24.3	82.1	17.9	93.3	6.7	93.6	6.4	85.0	15.0
Recidivating											
N	186	138	48	156	30	174	12	177	9	160	26
%	54.6	53.5	57.8	55.7	49.2	54.7	52.2	55.5	40.9	55.2	51.0
High School Graduate			(11)		(12)		(13)		(14)		(15)
N	362	298	64	350	12	330	32	341	21	309	53
%	30.8	82.3	17.7	96.7	3.3	91.2	8.8	94.2	5.8	85.4	14.6
Recidivating											
N	136	116	20	131	5	129	7	129	7	118	18
%	37.6	38.9	31.2	37.4	41.7	39.1	21.9	37.8	33.3	38.2	34.0
Some College			(16)		(17)		(18)		(19)		(20)
N	207	188	19	204	3	184	23	175	32	180	27
%	17.6	90.8	9.2	98.6	1.4	88.9	11.1	84.5	15.5	87.0	13.0
Recidivating											
N	61	55	6	59	2	52	9	58	3	56	5
%	29.5	29.3	31.6	28.9	66.7	28.3	39.1	33.1	9.4	31.1	18.5
College Graduate or More			(21)		(22)		(23)		(24)		(25)
N	93	88	5	92	1	78	15	86	7	67	26
%	7.9	94.6	5.4	98.9	1.1	83.9	15.1	92.5	7.5	72.0	28.0
Recidivating											
N	5	5	0	5	0	5	0	4	1	4	1
%	5.4	5.7	0.0	5.4	0.0	6.4	0.0	4.6	14.3	6.0	3.8

Missing Information = 31. Cell Number in Parentheses. * Includes vocational & occupational courses.

Social Furloughs

Table 14 displays the number of releasees in the sample who did or did not receive a social furlough during their prison term and associated recidivism rates. We see a dramatic difference between the recidivism rates of these two groups; 19.5 percent recidivated among those receiving a social furlough, compared to 47.8 percent among those who did not.

Table 14. Recidivism and Social Furloughs.

Social Furloughs	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
Received at Least One Furlough	(302)	25.1	(59)	19.5
Received No Furloughs	(903)	74.9	(432)	47.8

Time Served

Table 15 displays time served in months by recidivism rates or percentages. Essentially, we observe no difference in the percent recidivating across the time-served categories. It appears, therefore, that, by itself, an increase in time served in prison does not deter future offending. This finding conforms with those reported by Beck and Hoffman in their analysis of the effect of time served on recidivism in a Federal prison release cohort (Beck and Hoffman 1976).

Table 15. Recidivism and Prison Time Served.

Time Served in Prison (Months)	Profile: Number & Percent in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
≤ 6	(271)	22.5	(111)	41.0
7-12	(315)	26.1	(141)	44.8
13-18	(226)	18.8	(90)	39.8
19-24	(144)	11.9	(54)	37.5
25-30	(101)	8.4	(37)	36.6
31-36	(72)	6.0	(26)	37.5
37+	(76)	6.3	(32)	42.1

Halfway House Release

Table 16 displays recidivism rates for persons released from prison through a halfway house and for those released directly from prison. Slightly more than half of all releasees were released through a halfway house. Among halfway house releasees, 31.1 percent recidivated, compared to 51.1 percent recidivating among persons released directly from a BOP facility. Results reported for the multivariate analysis in Part II suggest that the lower recidivism rates for halfway house releasees is, in part, because only relatively low-risk inmates are selected for halfway house release. Additional multivariate analysis indicated that length of stay in the halfway house had a modest downward effect on the likelihood of recidivating. One possible explanation for this effect is the greater community adjustment a longer stay in a halfway house may allow. Additional analysis also showed that halfway house release increased post-release employment, which, in turn, was found to decrease recidivism.

Table 16. Halfway House Release and Recidivism.

HALFWAY HOUSE RELEASE	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
Released Through Halfway House	(614)	51.2	(191)	31.1
Released Directly From Prison	(585)	48.8	(299)	51.1
Missing Information = 6				

Release Conditions and Recidivism

In this section, we examine the two-way associations of post-release living arrangements and employment with recidivism rates.

Post-Release Living Arrangements

Table 17 displays the number of releasees in the sample who either did or did not reside with a spouse following prison release. We see a dramatic difference in the recidivism rates for those who live with a spouse (20.0 percent recidivated) when compared to those who do not (47.9 percent recidivated).

Table 17. Recidivism and Post-Release Living Arrangements.

Post-Release Living Arrangement	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
With Spouse	(401)	40.8	(80)	20.0
Other Living Arrangements	(582)	59.2	(279)	47.9
Missing Information = 222				

Post-Release Employment

Table 18 displays the number of releasees in the sample who had or had not arranged for post-release employment prior to release, along with the recidivism rates for each group. We see that inmates who arranged for post-release employment recidivated at a much lower rate (27.6 percent recidivated) than those inmates who did not make such arrangements (51.8 percent recidivated).

Table 18. Recidivism and Post-Release Employment.

Post-Release Employment	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
Arranged Post-Release Employment	(551)	45.7	(152)	27.6
Did Not Arrange Post-Release Employment	(654)	54.3	(339)	51.8

Geographic Distribution of Releasees.

A large number (74 percent) of study group members were released to a residence in one of 180 metropolitan areas (Census Bureau Metropolitan Statistical Area or MSA), while the remaining 26 percent were released to a residence in a small town or rural area. Metropolitan areas to which relatively large numbers of releasees returned were the New York MSA (5.5 percent); Washington, D.C. MSA (5.5 percent); Los Angeles MSA (4.7 percent); and Miami MSA (4.6 percent). The regional distribution of releasees, using Census Bureau regional definitions, was 14.4 percent to the Northeast, 47.6 percent to the South, 17.3 percent to the Midwest, and 20.8 percent to the West.

Population Size of Resident ZIP Code

Table 19 displays recidivism rates by population size categories for the releasees' resident ZIP Code.[5] Criminologists anticipate higher recidivism rates among persons released to more urban communities (here measured by population size of their resident ZIP Code). Population size is thought to indicate the availability of criminal peers, crime targets (both persons and property), and customers for illicit goods (e.g., drugs, stolen property). Table 19 shows there is a strong relationship between population size of resident ZIP Code and recidivism. The more populace (the more urban) in the ZIP Code area, the higher the recidivism rate.

Table 19. Recidivism and Post-Release Residence ZIP Code Population Size

	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
1988 Population	N	%	N	%
100-4999	(111)	10.8	(31)	27.9
5000-14999	(149)	14.5	(54)	36.2
15000-24999	(192)	18.7	(74)	38.5
25000-34999	(192)	18.7	(82)	42.7
35000-49999	(193)	18.8	(83)	43.0
50000-59999	(83)	8.1	(35)	42.2
60000 +	(109)	10.6	(51)	46.8

[5] Ideally, in addition to the ZIP Code measures, we would have the resident socioeconomic measures for Census tracts, which more closely conform to the neighborhoods in which people live. However, the time and cost requirements needed to obtain Census tract information for each release prevented the acquisition of the 1980 and 1990 Census tract measures.

Poverty and Unemployment Rates in Resident ZIP Code

Table 20 displays the distribution of releasees and recidivism rates by the poverty and unemployment rates in the released inmate's resident ZIP Code. Criminologists link poverty rates to crime rates, arguing that poverty represents a relative lack of opportunities for licit employment, making illicit opportunities for economic gain, such as drug selling, an attractive alternative. However, unemployment rates may be related to either high or low crime rates, depending on the perspective one takes. Some criminologists argue that unemployment rates represent economic deprivation and act similarly on crime rates as does poverty (Allen and Steffensmeier 1989). But other criminologists reason that unemployment is a measure of the number of adults at home and in the community during the daytime who provide surveillance and deter criminal activity (Cohen and Felson 1979).

As we see in Table 20, poverty is strongly related to recidivism rates; the higher the poverty rate, the higher the recidivism rate. On the other hand, unemployment is weakly related to recidivism, perhaps indicating simultaneous measurement of economic deprivation and surveillance. As we will see in Part II, when the ZIP Code area family poverty rate is controlled, unemployment is inversely and significantly related to the risk of recidivism. That is, the higher the unemployment rate in the releasees' residence ZIP Code, the lower their likelihood of recidivating. We hasten to add, that in all the analyses we conducted, unemployment at the individual level was found to increase the likelihood of recidivism independent of any aggregate (ZIP Code area) unemployment rate effect.

Table 20. Recidivism and Economic Conditions in Post-Release Residence ZIP Code.

Category	Profile: Number & Percent of the Sample in Each Category		Number & Percent Recidivating Within Each Category	
	N	%	N	%
1980 POVERTY RATE				
0-6%	(186)	18.1	(48)	25.8
6-10%	(191)	18.6	(71)	37.2
10-16%	(239)	23.2	(83)	34.7
16-25%	(205)	19.9	(93)	45.4
>25%	(208)	20.2	(115)	55.3
Missing Information = 175				
1980 UNEMPLOYMENT RATE				
0-5%	(330)	32.1	(108)	32.7
5-8%	(330)	32.1	(127)	38.5
8-10%	(156)	15.2	(73)	46.7
>10%	(213)	20.7	(102)	47.9
Missing Information = 175				

Recidivating Offense

Table 21 shows the type and frequency of first rearrest offense for the 490 study group recidivists. We see that the largest percent of recidivists were rearrested for a drug offense (24.8 percent). The next largest recidivating category was parole violation with 15.3 percent, followed by larceny/theft at 12.0 percent, and assault at 6.7 percent (both aggravated and simple). After fraud, which accounts for 4.1 percent of the recidivists, no other offense category accounts for more than 4.0 percent of the total.

Table 21. Frequencies For First Rearrest Offense

Rearrest Offense	Profile: Number & Percent of the Sample in Each Category N	%
Drugs	(122)	24.8
Parole Violation	(75)	15.3
Larceny	(59)	12.0
Assault	(33)	6.7
Robbery	(25)	5.1
Traffic	(21)	4.3
Fraud	(20)	4.1
Burglary	(18)	3.7
Forgery	(17)	3.5
Weapon	(17)	3.5
Stolen Property	(11)	2.2
Flight Escape	(10)	2.0
Other	(9)	1.8
Obstruction of Police	(8)	1.6
Public Peace	(8)	1.6
Motor Vehicle Theft	(7)	1.4
Tax	(4)	0.8
Manslaughter/Homicide	(4)	0.8
Trespassing	(3)	0.6
Obstruction of Courts, Etc.	(3)	0.6
Liquor	(3)	0.6
Sexual Assault	(2)	0.4
Arson	(2)	0.4
Property Damage	(2)	0.4
Sex Offenses	(2)	0.4
Family	(2)	0.4
Gambling	(1)	0.2
Kidnapping	(1)	0.2
Embezzlement	(1)	0.2
Bribery	(1)	0.2
Missing Information = 9		

Incarcerating Offense and Recidivating Offense

Table 22 examines the relationship between the incarcerating offense with the longest sentence and the first recidivating offense. The percentages shown in Table 22 represent the percentage of recidivists in each incarcerating offense category having a particular recidivating offense. An adequate test of whether offenders tend to specialize in one crime, such as drug trafficking, or are equally likely to commit any crime, would review the offender's entire criminal career. However, looking only at incarcerating offense and first recidivating offense, we see a high degree of offense specialization for many of the releasees. For example, looking at the row percentages, we see that 47.2 percent of the drug offenders who recidivated were rearrested for a drug offense; 35.3 percent of the property offenders were rearrested for a property offense; and 25.5 percent of the robbery offenders were rearrested for robbery. One notable exception to this seeming pattern of specialization are those committing crimes against a person (violent and sex crimes) since these individuals were most likely to be rearrested for a property crime. This finding suggests that incarceration, while not eliminating further criminal behavior, may at least reduce the level or seriousness among violent and sex offenders. On the otherhand, we see that compared to 19 recidivists incarcerated for a person crime, 41 of those who recidivated were rearrested for a person crime. We should add that a majority of these 41 arrests for a person crime were for simple assault.

Table 22. Incarcerating Offense by First Recidivating Offense.

Incarcerating Offense	First Recidivating Offense								
	Against Person	Robbery	Property	Drugs	Fraud	Traffic Viol.	Miscel.	Parole Viol.	
Against Person	3 15.79%	1 5.26%	7 36.84%	1 5.26%	0 0.00%	1 5.26%	2 10.53%	4 21.05%	19 100%
Robbery	8 14.55%	14 25.45%	8 14.55%	11 20.00%	0 0.00%	1 1.82%	7 12.73%	6 10.91%	55 100%
Property	8 6.72%	5 4.20%	42 35.29%	14 11.76%	15 12.61%	4 3.36%	14 11.76%	17 14.29%	119 100%
Drugs	11 6.92%	1 0.63%	11 6.92%	75 47.17%	10 6.29%	9 5.66%	16 10.06%	26 16.35%	159 100%
Fraud	5 7.58%	2 3.03%	12 18.18%	7 10.61%	13 19.70%	3 4.55%	9 13.64%	15 22.73%	66 100%
Miscel.	6 9.38%	2 3.13%	14 21.88%	14 21.88%	4 6.25%	3 4.69%	14 21.88%	7 10.94%	64 100%
Total	41	25	94	122	42	21	62	75	482

Frequency Missing = 9

Recidivism Frequency and Total Number of Recidivating Events by Type of Event

Table 23 below shows the recidivism frequency (i.e., the number of arrests or parole revocations within 3 years of release) for persons who recidivated during the 3-year followup period. We coded up to 15 recidivating events for each releasee. Among the 490 releasees out of the 1,205 in the study group who recidivated at least once, 246 (50.3 percent) were rearrested or had parole revoked once, 128 (26.1 percent) twice, 48 (9.8 percent) three times, and 24 (4.9 percent) four times. One person (0.2 percent) had 15 recidivating events recorded.

The number of recidivating events (i.e., arrest charges or parole revocations) that recidivists accumulated in the 3 years following their release are described by type of event in Table 24. The total number of events accumulated by the recidivists was 969. The largest number of these were for drug arrests accounting for 245 events, or 25.3 percent of the total, followed by larceny theft accounting for 129 events, or 13.3 percent of the total. The third highest category was parole revocation with 127 events (13.1 percent), followed in fifth place by assault with 67 events (6.9 percent). We should note that the majority of these assaults were simple assaults.

Table 23. Recidivating Frequency (i.e., Arrests or Parole Revocations Within 3 Years of Release) for Those in the Study Group Who Recidivated at Least Once.

Number of Events Recorded	Number of Persons	Percent
1	246	50.3
2	128	26.1
3	48	9.8
4	24	4.9
5	12	2.5
6	11	2.2
7	11	2.2
8	3	0.6
9	1	0.2
10	2	0.4
11	0	0.0
12	1	0.2
13	0	0.0
14	2	0.4
15	1	0.2
Total	490	100.0

Table 24. The Number and Percent of All Recidivating Events (i.e., Arrests or Parole Revocations), Within 3 Years of Release, by Event Type.

Offense	Number	Percent
Drugs	245	25.3
Larceny	129	13.3
Parole Violation	127	13.1
Assault	67	6.9
Burglary	44	4.5
Forgery	42	4.3
Weapon	42	4.3
Robbery	41	4.2
Fraud	38	3.9
Traffic	31	3.2
Obstructing Police	27	2.8
Auto Theft	22	2.3
Flight or Escape	20	2.1
Stolen Property	20	2.1
Public Peace	16	1.7
Liquor	9	0.9
Trespassing	9	0.9
Manslaughter/Homicide	8	0.8
Other	5	0.5
Property Damage	5	0.5
Arson	4	0.4
Tax	4	0.4
Family	3	0.3
Immigration Violation	3	0.3
Sex Offense	2	0.2
Sexual Assault	2	0.2
Bribery	1	0.1
Embezzlement	1	0.1
Gambling	1	0.1
Kidnapping	1	0.1
Total	969	100.0

Before moving on to the multivariate analyses, we will briefly compare recidivism among the 1987 release cohort with that among earlier Federal prison release cohorts.

Comparing Recidivism Across Release Cohorts.

Table 25 compares recidivism rates across release cohorts for 1970, 1978, 1980, 1982, and 1987. The table provides overall rates and rates for specific demographic, offense, and Salient Factor Score categories. To be included in the earlier cohorts, individuals had to have sentences of at least a year and a day, while persons in the 1987 cohort had sentences of at least 3 months. Recidivism for each release cohort is similarly defined as an arrest or parole revocation within 3 years of release from prison.

Except for the 1970 cohort, of whom 51.5 percent recidivated largely due to a concentration of high-risk, youthful auto-theft offenders, recidivism rates remained relatively stable at around 40.0 percent.[6] Except for gender and offense categories in the 1970 sample, we see a similar pattern of recidivism rates across each subcategory of releasees in the various release cohorts. Males and females had similar recidivism rates. Whites had lower rates than blacks. Younger releasees had much higher rates than older releasees. Robbery offenders had rates much higher than drug law offenders. Finally, we see a strong association between Salient Factor Score and recidivism in each release cohort.

In sum, while a more appropriate assessment of recidivism stability over time would adjust the overall recidivism rates for the compositional characteristics that affect recidivism, on the surface it appears that recidivism rates have remained remarkably stable over time.[7] We might expect, however, that this will be less true in the future as the effects of the current Federal Sentencing Guidelines are felt through larger and larger proportions of drug law offenders (who in the past have exhibited relatively low recidivism rates, see Appendix D) and greater numbers of older releasees (due to longer prison terms). For these two reasons, we would expect that, all else being equal, recidivism rates will decline for future release cohorts.

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[6] Of the individuals in the 1970 release cohort, 26.2 percent were under age 24 at release, and 32.3 percent were incarcerated for auto theft. In comparison, only 4.3 percent of the 1987 release cohort were under age 24 at release, and none were incarcerated for auto theft.

[7] We note that affirming the stability of rates across these cohorts would require using one cohort as a standard and adjusting, or standardizing, the other cohorts for compositional characteristics such as age and SFS, along with other variables known to influence recidivism rates.

Table 25. Percent Recidivating for Five Release Cohorts and Percent Recidivating Within Five Compositional Categories for Each Cohort.

Release Cohort	1970	1978	1980	1982	1987
Number	1,803	2,201	489	1,219	1,205
Overall Percent Recidivating	51.5	43.8	38.0	44.7	40.8
Compositional Categories					
Gender					
Male	52.1	44.0	38.1	44.8	40.9
Female	40.4	42.5	35.3	43.1	39.7
Race					
White	47.3	38.5	30.2	37.2	33.5
Black	62.2	53.4	50.8	58.5	58.8
American Indian	60.8	55.0	33.3	42.3	53.3
Age At Release					
19-29	53.8	49.5	45.6	52.2	55.5
30-39	57.3	46.5	38.2	47.1	44.9
40+	41.0	30.4	25.4	31.8	25.7
Commitment Offense					
Robbery	42.5	46.8	40.0	53.9	64.0
Drug	54.3	33.7	27.9	33.9	34.2
Salient Factor Score					
Poor Risk	64.8	68.0	62.5	73.4	71.4
Fair Risk	61.7	53.0	48.9	58.1	47.9
Good Risk	42.3	43.0	38.8	44.2	30.6
Very Good Risk	21.9	20.0	18.9	22.9	17.4

Part II. Prison Normalization and Recidivism

Introduction

In this part, we describe our use of a multivariate statistical procedure (logistic regression) to test the normalizing effects of social furloughs and prison education programs on recidivism. While prison furloughs most likely reduce recidivism by maintaining family and community ties and education programs by teaching cognitive and occupational skills needed for successful employment, these program outcomes are not analyzed here. Instead, in this study we test the normalizing effects of these two programs. We begin by defining normalization.

James V. Bennett, for many years Director of the Federal Bureau of Prisons, in 1928 had this to say about the purpose of work and education programs in Federal prisons:

> It is hoped that ... progressive training will make the transition from the ordinarily complete subjugation of the incarcerated man's ego to unrestricted independence less shocking, encourage the self-reliance of the federal offender, and inculcate in him a sense of responsibility and respect for the rights of others. It is an attempt to get away from the wholesale regimenting of the prisoner, mitigate the harshness of prison discipline, and preclude brutalizing the men.

Bennett was describing what sociologists call the normalizing effect of prison programs. We can restate Bennett's argument as a hypothesis: Normalized prison operations reduce prisonization (i.e, the sense of alienation and isolation that inmates tend to experience while in prison) and nurture pro-social attitudes and norms, thereby reducing recidivism.

In this study, we use a broader definition of normalization than implied by former Director Bennett. We take normalization to mean prison policies, operations, and programs aimed at preventing the growth of inmate subcultures (including prison gangs) that undermine prison management's control and support a return to crime after release. Normalization, as we use the term, seeks to replace norms, or moral rules, supporting prison misconduct and continued criminal behavior, with norms supporting law abiding behavior.[8]

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[8] We borrow the term normalization from Michel Foucault (1977). According to Foucault, normalization refers to the surveillance, examination, training, and sanctioning used by managers of schools, churches, hospitals, businesses, military services, prisons, and many other modern institutions to induce conformity to institution norms and norms of the larger society (Garland 1990). For

The normalizing policies, operations, and programs, to which we refer, facilitate the humane treatment of inmates; open lines of communication between staff and inmates, which allow inmates to express their needs and staff to provide guidance on meeting those needs in a law-abiding manner; and provide opportunities for diversion from the pains of imprisonment and for acquiring law-abiding habits, skills, norms, and attitudes (accompanied by rewards for taking advantage of these opportunities and sanctions for not doing so). In short, normalization dilutes, if not eliminates, the forces of prisonization and provides opportunities to instill law-abiding norms and attitudes in the inmate population.

To appreciate the way in which normalization may reduce recidivism, we first need to describe further what we mean by prisonization. Criminologists define prisonization as a process by which inmates become alienated from prison rules, staff, and the larger society (Thomas and Petersen 1977). The alienation of a large number of inmates tends to unify them as a group in opposition to institution staff and rules. This more or less unified inmate group or subgroup (e.g., prison gangs) acquires a distinctive subculture oriented toward criminal norms held by many inmates when first admitted to prison. Criminologists argue that the inmate subculture promotes criminal skills and norms that serve to increase recidivism (Thomas and Petersen 1977; Kassebaum et al. 1971; Thomas and Foster 1972; Thomas and Poole 1975). Several criminologists link the inmates' alienation from institution rules and staff to poor communication between staff and inmates, long stretches of nonproductive activity, limited contact with community and family, arbitrary rules, and capricious rule enforcement (Clemmer 1940; McCorkle & Korn 1954;

Foucault, normalization in prisons means operations striving to correct behavior rather than strictly punishing it. The normalizing techniques found in prisons, Foucault argues, differ only in being more intense from those found in other social institutions such as school and the work place.

The term normalization has also been defined as a process in which a deviant person (e.g., blind, mentally handicapped, criminal) is often redefined as normal by those who regularly interact with them (e.g., sighted family members who come to completely forget a blind family member's blindness) (Lemert 1972; Goffman 1961, 1962). Although this is not the way we use the term normalization in this report, this second definition may be used to describe the reorientation toward inmates' past criminal behavior that may need to occur among correctional officers for them to effectively work with inmates. For correctional officers to treat inmates humanely and develop lines of communication with them, the inmates' criminal pasts must be explained in the correctional officer's mind so that the officer can interact meaningfully with them.

Seymour 1977). While criminologists continue to debate the reality of prisonization (Goodstein and Wright 1989; Farrington, Ohlin, and Wilson 1986), many correctional practitioners take prisonization as a given and view normalizing operations and programs as the remedy (Sutherland, Cressey, and Luckenbill 1992, pp. 517-518). This assessment is based almost totally on the Federal Bureau of Prisons' operations as they have evolved in response to external forces and internal initiatives over the last several decades. It is not clear how much of what has occurred in the Federal system has also occurred in State systems as well. Given the communication that occurs among Federal, State, and local prison managers and similar historical experiences of State and Federal systems -- experiences that have pushed correctional operations toward normalization -- it may be safe to assume that most State systems have adopted an emphasis on normalization similar to that found in the Federal system.[9]

Operational changes in the Federal Bureau of Prisons over the last two decades provide ample evidence of the increased emphasis placed on normalization. The BOP has seen operations move increasingly toward normalization in a number of ways: through a human relations approach to managing inmates; through unit management; through classification and assignment of inmates to appropriate institutional security levels; through efforts to increase the number of female correctional officers at all institution security levels; through the use of independent discipline hearing officers (DHO's) to adjudicate serious misconduct; through inmate grievance procedures; through efforts to expand visitation programs and maintain a social furlough program; through strong support for prison work and education programs; through strategic particularism (e.g., case management, psychological, medical, and chaplaincy services); through a system of rewards for appropriate behavior and sanctions for inappropriate behavior; and through prison "Climate" surveys of staff and inmates (Galvin 1992; Karacki 1991). In Appendix C, we describe, in more detail, each of these policies, operations, and programs.

None of the normalizing operations, policies, or programs listed operate in isolation, but, instead, form an integrated whole of mutually reinforcing parts, the ultimate objective of which is a humane, safe, and secure prison system that operates to encourage inmates to adopt a non-criminal lifestyle.

For inmates, normalization is hypothesized to encourage adherence to the larger society's norms and laws, including the

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[9] The organizational/historical evolution of what we call normalization is described from various perspectives in several useful works. We refer the reader to the following: Foucault 1977; Rothman 1971, 1980; Cullen and Gilbert 1982; Johnson 1987; Karacki 1992; Galvin 1992.

rules and regulations of the correctional institution in which the inmate resides. The content of institution rules and how they are enforced, staff conduct, the interaction of staff with inmates, along with other dimensions of correctional operations affecting the inmate, serve to either legitimate and reinforce the larger society's norms and laws, including institution rules, or alienate the inmate from them, creating the conditions for prisonization and associated problems. Normalized prison operations and programs aim to legitimate institutional operations as fair and just.

Normalization, as we define it, occurs in the context of a prison environment and, despite one scholars definition of it, does not mean making life in prison identical to, or even necessarily similar to, life in the community (Richardson 1985). In fact, for many inmates, the prison environment may be viewed as more preferable for normalization efforts than in the communities from which they come. As the founders of the modern penitentiary system in America argued (Rothman 1971), the imprisoned offender is removed from the community environment where criminogenic forces (e.g., criminal peers, drug and alcohol abuse, structural inequality) are often salient. For other inmates, who have little or no serious prior criminal involvement, and who are more committed to law-abiding rather than law-breaking norms, normalization's main benefit is to mitigate against the alienating forces of prisonization. For this second group of inmates, the best normalization program for reducing recidivism is, most likely, a shortened prison term.

While institutional security level and normalization might be inversely correlated in some correctional systems, the theory of prisonization does not maintain that increased custody or reduced institutional openness necessarily reduces the ability to normalize the prison environment. On the contrary, normalization can occur at all institutional security levels. In fact, maintaining a hierarchy of institutional security appropriate to the inmate population's propensity toward violence and escape, may, by improving safety, order, and security, enhance the ability to normalize the prison environment. That is, normalization and the combined goals of safety, order, and security may be mutually reinforcing.

Normalization and Punishment

Some correctional scholars, arguing for "just deserts," justify imprisonment solely for its symbolic value to society as providing punishment. These scholars argue for a "confinement" model of prison management (Logan 1993). Any attempt to change the offender through normalization into a rule-abiding inmate and law-abiding citizen, these scholars argue, involves coercion and punishment that goes beyond that prescribed by the just deserts model and reduces the symbolic purpose of punishment by implying that the offender is not fully responsible for his or her criminal behavior. We disagree with this position. First, the very operation of safe, orderly, and secure institutions achieved either through normalization, extreme physical constraint, or any other legal means will necessarily involve coercion and manipulation aimed at changing the inmate's norms and behavior (Foucault 1977; Weber 1954). Second, and unlike the medical model of crime and rehabilitation, which suggests criminality is a sickness which can be corrected through rehabilitation programs, everything about normalizing operations and programs suggests the inmate is fully responsible for his or her behavior, criminal or otherwise. Normalization provides opportunities and encouragement to learn acceptable ways of coping with prison life and, after release, life in the community (Johnson 1987).[10]

The Tension Between Normalization and Custody

To many observers, especially prison staff, there appears to be a tradeoff between normalization and custody. For example, staff who are asked to treat inmates humanely must view inmates as complex human beings rather than simply as "crooks." This, however, could make staff more vulnerable to manipulation by inmates. Prison industry operations, which provide normalizing employment opportunities, mean increased custodial problems because they give inmates access to tools and other material that could be used as weapons or escape paraphernalia. Prison architecture that creates a humane environment may create increased difficulties in maximizing custody and security. Social furloughs and visiting programs pose obvious risks to

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[10] Johnson argues for prison operations that provide inmates with encouragement and opportunities to find niches, as he calls them, in which inmates can "maturely cope" with the "pains of imprisonment." Johnson claims that inmates who learn "mature coping," in prison will also cope more maturely with life in the community after release and, therefore, will be less likely to recidivate. In our terminology, Johnson argues for normalized prison operations which, he says, allow inmates to cope maturely with prison life. Johnson calls for research to assess exactly what programs and what encouragement works to increase the number of inmates who learn mature coping.

custody and security. However, if correctional managers are correct about the effect of normalization on inmate behavior, the apparent tradeoff between normalization and custody can be seen in a different light. That is, normalization is a highly efficient mechanism for improving custody, security, and safety and achieving these ends in a humane manner. Furthermore, normalization has the added attraction of potentially reducing recidivism. In sum, normalization reinforces sound custody practices (e.g., surveillance, searches, escape-proof architecture for high-risk inmates, dispersion of prison gang members).

Differential Association, Control Theory, and Prison Normalization

We rely on Edwin H. Sutherland's differential association theory (Sutherland 1947) to provide the theoretical underpinnings for normalization. Simply stated, Sutherland says that socialization among persons holding norms favorable to law violation and who violate institutional rules and societal norms is most often a prerequisite for criminal or rule-breaking behavior. Normalization, by undermining the inmate subculture and providing program opportunities and role models promoting law-abiding norms, employs Sutherland's theory. Sutherland's theory is at odds with the psychological theories that postulate individual psychopathy as a source of criminal behavior and which are often relied on to formulate clinically based rehabilitative treatments. Because they explain criminal behavior as a consequence of individual "sickness" or maladjustment, correctional experts have generally described these psychological theories as resting on a "medical model" of crime. Sutherland's theory implies no such sickness, but instead views criminal behavior as the result of socialization, albeit, socialization in a social environment containing a disproportionate set of norms favoring law-braking. Normalization is an attempt at resocializing the inmate by offering opportunities for contact with institutional programs and staff promoting law-abiding norms. Because it relies on conventional or "everyday" socializing mechanisms, normalization differs in its orientation from most psychologically based, clinically oriented rehabilitation programs.

Two criminologists, Michael Gottfredson and Travis Hirschi, have proposed a radically different theory of crime from Sutherland's differential association, which has recently caught the attention of many criminologists (e.g., Grasmick et al. 1993; Warr 1993; Sampson and Laub 1993). The theory is most fully explained in Gottfredson and Hirschi's book, A General Theory of Crime (G. & H. 1990). Their theory, which may be called the lack of self-control theory, or control theory for short, argues that lax discipline of children leaves them with poor self-control and a predisposition toward, among other things, smoking, substance

abuse, poor school and work participation, unstable marriages, accidents, drunk driving, and crime later in life. According to Gottfredson and Hirschi, "the origins ... of low self-control are to be found in the first six or eight years of life, during which time the child remains under the control and supervision of the family or a familial institution" (G. & H. 1990, p. 272). Gottfredson and Hirschi also describe "the conditions necessary for adequate child rearing to occur," they say, "in order to teach the child self-control, someone must (1) monitor the child's behavior; (2) recognize deviant behavior when it occurs; and (3) punish such behavior" (G. & H. 1990, p. 97). Gottfredson and Hirschi argue that the failure to discipline lack of self-control in children will leave them with an inability to control themselves that will persist throughout their lives. Regarding resocialization of persons lacking self-control, Gottfredson and Hirschi state, "Our theory would be consistent with efforts to teach the offender self-control, but all indications are that such teaching is highly unlikely to be effective unless it comes very early in development" (G. & H. 1990, p. 269).

Sutherland's differential association theory relies heavily on learning theory. That is, according to differential association theory, criminal behavior is learned in the same manner as law-abiding behavior. According to learning theory, human behavior is guided by norms and behavioral rules learned through explicit lessons and by observing, imitating, and internalizing the behavior of others. In this manner, children learn norms and behavioral rules for life in a given culture and subculture. Learning theory, as used by differential association theorists, holds that learning, or socialization and re-socialization, continues throughout a person's life as they participate in different social institutions (e.g., school, sports, work, military, and marriage). From the differential association/learning theory perspective, criminal behavior and any supporting cognitive skills are learned, just as socially acceptable behavior is learned, although the content of criminal learning is obviously different from the content of prosocial learning. Prosocial behavior is learned from prosocial parents, school, and work, while criminal behavior is learned from criminal parents and delinquent/criminal peers, gangs, and prison subcultures.

Gottfredson and Hirschi reject differential association/learning theory as an explanation of criminal behavior; according to them, if self-control is not learned by having unacceptable behavior punished during the first 8 years of life, they assert, then the individual is likely to face a lifetime of poor self-control and, most likely, dysfunctional behavior, including criminal behavior. Gottfredson and Hirschi also reject the possibility of any significant re-socialization to self-control after age 8.

Obviously Gottfredson and Hirschi's theory conflicts with our idea about the process and potentially positive outcomes of prison normalization. As we see it, normalization is better informed by differential association/learning theory than by control theory. We offer two justifications for this claim. Our first justification is the definition given to normalization by Michel Foucault, from whom we borrow the concept of normalization (Foucault 1977). For Foucault, normalization is a process of education and re-education achieved through lessons, surveillance, examination, rewards, and sanctions which occur, and reoccur, throughout a person's life as the individual participates in various social institutions such as religion, school, university, sports, military, work, marriage, prison, and nursing homes. Normalization is not limited to childhood, or to the family, but is taken up by all of society's institutions as a mechanism of shaping the individual's behavior and cognitive make-up in compliance with that institution's rules and desired behavioral outcomes.

Our second justification for taking differential association/learning theory as the theoretical root of normalization is prisonization. Evidence for prisonization, the creation of inmate subcultures in reaction to a management - versus - inmates style of prison operations, we take as evidence for differential association and against control theory. Prisonization occurs where prison management emphasizes only custody and security and neglects normalization. In such an environment, inmates are isolated as a group and, as a group, create a social system (subculture) among themselves, a subculture informed by the criminal norms that inmates bring with them into prison. Because, in this prisonized environment, social bonds are formed with other inmates only, normative orientations in opposition to institution management and to the larger society are fostered and reinforced.

While much additional research is needed to validate prisonization, that is, evidence showing prisonization really occurs, we argue that one validation has already occurred, that is, the assessment by prison managers that prisonization is likely to occur, unless operations, policies and programs to normalize the prison experience are put into place. Prison managers are closely involved over time with inmate populations and those populations' reactions to prison operations or environments. Based on this experience, we argue, prison managers take prisonization as a given and, on pragmatic grounds, adopt normalization as the remedy. This leads us to a further proposition: any evidence that normalization works to reduce prison misconduct, gang formation, and recidivism will provide evidence that prisonization exists and for the differential association/learning theory of crime.

Testing Normalization's Effectiveness

Statistically significant effects for measures of normalizing policies, operations, or programs on inmate misconduct, escapes, suicides, and recidivism provide evidence for normalization's effectiveness. These tests can be made by determining, across prisons or prison systems, the presence or absence of one or more of the normalizing operations listed in the preceding discussion, along with measures of program coverage and intensity, and testing for a link between these measures and outcome measures such as prison misconduct and recidivism rates. Researchers may also link normalizing operations to an inverted U-shaped function of prison time served on misconduct frequency, which is thought to be indicative of socialization into an inmate subculture (Wheeler 1969) as compared to a downward sloping straight line which would, we believe, indicate a normalization or, possibly, a custody and control explanation. Researchers may also examine the association between normalizing operations and subjective measures (e.g., survey responses) of inmate commitment to criminal and inmate subcultural norms and attachment to criminal peers.

Of course, any tests would need to control for alternative explanations of the behavioral or subjective outcomes used as the dependent variables. These controls would include measures of the norms and behaviors imported into prison and of custody or control mechanisms in operation to control inmate behavior.

A Test of the Normalizing Effects of Furlough and Education Programs

Because they promote the normalizing effects described above, social furloughs and education programs are hypothesized to reduce recidivism. Social furloughs provide the inmate with at least a brief reconnection with family, friends, and community and eliminate briefly the separation that most inmates experience as the most painful aspect of imprisonment.[11] Furloughs also communicate that prison management respects the inmate's need to maintain community and family ties. Education programs serve the function of resocializing toward prosocial norms while productively occupying the inmate's time, thus limiting the forces of prisonization.

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[11] A survey of Canadian prison inmates found that 82 percent of the respondents listed lack of regular contact with family and friends as the greatest pain they experienced from imprisonment. This was nearly twice the 44 percent who gave lack of freedom as the greatest pain suffered from imprisonment (Zamble and Porporino 1988). Surveys of American prisoners report similar results (Richards, 1978; Flanagan 1980).

In this analysis, we statistically controlled for variables predicting both recidivism risk and program participation, and variables measuring positive program outcomes, other than normalization, such as post-release employability, and family stability. By controlling for these variables, we can isolate and test the normalizing effects of furlough and education programs on post-release success. Such an assessment provides, however, only a partial test of normalizing operations because of the array of normalizing policies, operations, and programs described previously, only furlough and education programs are examined. More exhaustive research on the effectiveness of normalization would use measures for all of the normalizing operations discussed above and link them to several outcomes in addition to recidivism.

In addition to furlough and education program participation, we also examined the independent effect of a large number of variables measuring pre-prison characteristics, prison experience, and post-release experience.

The two hypotheses we test are:

1. Because of their normalizing effects, social furloughs increase post-release success.

2. Because of their normalizing effects, prison education programs increase post-release success.

Additionally, we will answer two questions pertaining to inmate needs that prison programs might satisfy:

1. Does post-release employment increase post-release success?

2. Does living with a spouse after release increase post-release success?

While these two questions do not address prison program effectiveness, they do have implications for prison programs. A finding that post-release employment increases post-release success, for example, suggests that any program assisting releasees with post-release employment would, potentially, reduce recidivism. Similarly, a finding that living with a spouse after release increases post-release success would suggest that any prison program promoting marital stability would reduce recidivism.

Control Variables

In the multivariate analysis, controls are introduced for criminal record or, as we are calling them, criminal momentum measures (i.e., number of prior convictions, number of prior incarcerations, Salient Factor Score, and USSC Criminal History Score); the demographic characteristics of the releasees (age,

gender, and race); pre-prison educational attainment; pre-prison work experience; prison misconduct; time served; post-release employment, and living arrangements (family, non-family); and the population size, poverty rates, and unemployment rates in the releasee's home community.[12] All of these control variables have been found in previous research to predict recidivism or prison program participation (Monahan 1981; Schmidt and Witte 1988).

As indicated, in addition to testing for the effects of furlough and education program participation, we will observe the independent effect of each of the control variables. These results will extend our understanding of releasee characteristics associated with recidivism beyond that provided by the bivariate analyses presented in the first part of this report.

Mode of Analysis and Dependent Variable

We use multivariate logistic regression models to assess the effect of program participation and the control variables on recidivism. The dependent variable was coded one (1) if the releasee recidivated in the 3-year followup period, and zero (0) if the individual did not recidivate. Therefore, the logistic regression coefficients indicate the increase (positive sign) or decrease (negative sign) in the log-odds of recidivating for a one-unit increase in the independent variable.

We also examined accelerated failure-time models. The dependent variable in these models is time to recidivism (in months), with those persons who did not recidivate in the followup period treated as "right censored," to use failure-time terminology. The explanatory variables used are those for the four logistic regression models the results of which are presented in Table 26. Exponential, logistic, and loglogistic distributions were assumed for failure times in three separate estimations of each of the four sets of explanatory variables. The pattern of significant coefficients and their signs (i.e., + or -) observed for each model were similar to those for the respective sets of predictors in logistic regression models presented in Table 26. However, rather than interpreting the coefficients as increasing or decreasing the log odds of recidivating, as in the logistic regression results, the coefficients in the failure-time model results are interpreted as increasing or decreasing the number of months until the first recidivating event occurs.

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[12] While the variables measuring prior convictions and incarcerations, along with the SFS and CHS, are used as measures of criminal momentum, they may be alternatively interpreted as capturing the effects of stigmatization and prisonization resulting from prior contact with the criminal justice system.

The logistic models presented in Table 26 were each subjected to a number of diagnostic tests (Hosmer and Lemeshow 1989, pp. 149-170). We discovered no problems that would invalidate the findings reported.

The logistic regressions used only observations with no missing information for any of the variables used in the models, that is, a list-wise deletion was used. Therefore, the number of observations in the logistic regressions reported in Table 26 are reduced to 865 from the full sample size of 1,205. Variables with the most missing values were the three ZIP Code measures. By eliminating these three variables from the logistic regressions, 140 observations were added, for a total of 1,005. Appendix A shows these logistic regressions. Results reported for the models in Table 26 are not significantly altered by the results in Appendix A. We are conducting further analyses to determine by how much, if at all, results differ when the full sample is used in the logistic analysis.

Results for Education and Furlough Program Participation

Table 26 presents results of the logistic regressions for four different models, each predicting the likelihood of recidivism. The models differ only in the criminal momentum measures used. Model 1 includes the number of prior convictions, Model 2 the number of prior incarcerations, Model 3 the Salient Factor Score, and Model 4 the criminal history score. We use four criminal momentum measures because each is of interest as a predictor of recidivism. However, these measures cannot be included in the same model because they are very highly correlated with one another. Collinearity problems could arise if all four were used in the same model, causing problems for accurately evaluating each variable's effect.

We first look at the effect of prison education program participation (X_{19}). We see in all four models that education program participation is significantly related, at the .10 significance level or less, with a reduction (negative sign) in the likelihood of recidivating, net of any effects the other variables in the model may have. That is, the more actively the inmates successfully participated in prison education programs,

Table 26. Logistic Regression Coefficients for Recidivism Within 3 Years After Release From the Federal Bureau of Prisons on Background, Prison, and Community Behavior and Experience Variables. N=865

Independent Variable	Model 1.	Model 2.	Model 3.	Model 4.
X_1 Number of Prior Convictions.	0.0773*** (0.0208)	_____	_____	_____
X_2 Number of Prior Incarcerations.	_____	0.1173*** (0.0354)	_____	_____
X_3 Salient Factor Score.	_____	_____	-0.1860*** (0.0433)	_____
X_4 Criminal History Score.	_____	_____	_____	0.0858*** (0.0207)
X_5 Race (Black=1, Other=0).	0.5004** (0.2123)	0.5098** (0.2120)	0.4858** (0.2126)	0.4648** (0.2136)
X_6 Male (Male=1, Female=0).	0.2552 (0.2840	0.2745 (0.2836)	0.2273 (0.2853)	0.2078 (0.2839)
X_7 Marijuana Abuse (Yes=1, No=0).	0.1289 (0.1289)	0.1169 (0.2107)	0.1343 (0.2113)	0.1262 (0.2119)
X_8 Cocaine Abuse (Yes=1, No=0).	0.0346 (0.2122)	0.0117 (0.2124)	0.0689 (0.2125)	0.0159 (0.2134)
X_9 Heroin Abuse (Yes=1, No=0).	0.6175** (0.2498)	0.5789** (0.2517)	0.3399 (0.2590)	0.5278** (0.2545)

* P≤.10. **P≤.05. ***P≤.01 (Standard error in parenthesis.)

Table 26 Continued.

Independent Variable	Model 1.	Model 2.	Model 3.	Model 4.
X_{10} Barbiturate Abuse (Yes=1, No=0).	0.0697 (0.3227)	0.0890 (0.3214)	-0.0217 (0.3240)	0.0752 (0.3228)
X_{11} Alcohol Abuse (Yes=1, No=0).	0.6652*** (0.1953)	0.7419*** (0.1926)	0.6742*** (0.1943)	0.7322*** (0.1935)
X_{12} Stimulant Abuse (Yes=1, No=0).	0.3674 (0.3568)	0.3355 (0.3563)	0.4075 (0.3568)	0.3360 (0.3587)
X_{13} Hallucinogen Abuse (Yes=1, No=0).	-0.3141 (0.3201)	-0.2914 (0.3185)	-0.3759 (0.3194)	-0.2741 (0.3201)
X_{14} Other Drug Abuse (Yes=1, No=0).	0.1646 (0.5101)	0.1879 (0.5032)	0.1971 (0.4994)	0.1462 (0.5038)
X_{15} Years of Schooling Completed When Admitted.	-0.0544 (0.0367)	-0.0633* (0.0364)	-0.0584 (0.0365)	-0.0590 (0.0366)
X_{16} 6 Months Full Employment or Student (Yes=1, No=0).	-0.5531*** (0.2006)	-0.5648*** (0.2009)	-0.5064** (0.2014)	-0.4973** (0.2036)
X_{17} Under CJS Supervision at Time Committed Offense (Yes=1, No=0).	0.4591** (0.2074)	0.4399** (0.2096)	0.0240 (0.2402)	0.1293 (0.2324)
X_{18} Number of Prison Misconduct Incidents.	0.0056 (0.0521	0.0076 (0.0530)	0.00313 (0.0521)	0.0079 (0.0531)
X_{19} Educational Programs Completed Each 6 Months of Prison Term.	-0.1890* (0.1029)	-0.1884* (0.1029)	-0.1995* (0.1055)	-0.1948* (0.1046)
X_{20} Social Furlough (Yes=1, No=0).	-0.7156*** (0.2488)	-0.6687*** (0.2492)	-0.6794*** (0.2479)	-0.6508*** (0.2501)

* P≤.10. **P≤.05. ***P≤.01 (Standard Error in parenthesis.)

Table 26 Continued.

Independent Variable	Model 1.	Model 2.	Model 3.	Model 4.
X_{21} Prison Term in Months.	0.0053 (0.0095)	0.0049 (0.0098)	0.00555 (0.00950)	0.00599 (0.00984)
X_{22} Released Through a Halfway House (Yes=1, No=0).	0.3031 (0.2127)	0.2982 (0.2108)	0.2946 (0.2123)	0.2791 (0.2114)
X_{23} Employed upon Release (Yes=1, No=0).	-0.5793)** (0.2040)	-0.4386** (0.2030)	-0.4468** (0.2044)	-0.4605** (0.2042)
X_{24} Age at Release.	-0.0477*** (0.0111)	-0.0503*** (0.0114)	-0.0400*** (0.0108)	-0.0491*** (0.0112)
X_{25} Living with Spouse Upon Release.	-0.5763*** (0.2148)	-0.5594*** (0.2142)	-0.5657*** (0.2153)	-0.5605*** (0.2147)
X_{26} Resident ZIP 1988 Population (Nat. Log).	0.2843*** (0.0935)	0.2808*** (0.0930)	0.2676*** (0.0923)	0.2822*** (0.0933)
X_{27} Resident ZIP 1980 Percent Families in Poverty.	0.0184* (0.0110)	0.0158 (0.0110)	0.0174 (0.0110)	0.0188* (0.0110)
X_{28} Resident ZIP 1980 Percent Unemployed.	-0.0839*** (0.0284)	-0.0811*** (0.0284)	-0.0832*** (0.0282)	-0.0825*** (0.0284)
Intercept	-1.2963 (1.1162)	-0.9975 (1.1116)	0.1835 (1.1330)	-1.1869 (1.1138)
-2 Log Likelihood	810.55	814.03	807.77	807.34
Hosmer & Lemeshow Goodness of Fit Statistic Based on Deciles of Observations.	14.928 p=0.0606	22.975 p=0.0034	11.458 p=0.1771	15.716 p=0.0466

* P≤.10. **P≤.05. ***P≤.01 (Standard Error in parenthesis.)

the less likely they were to recidivate. We interpret this result, which is independent of pre-prison educational attainment, pre-prison employment, and post-release employment, as strong evidence that this "normalizing" prison program reduces recidivism because it attenuates prisonization and reinforces law abiding norms.

We can estimate the impact of prison education program participation on the recidivism rate independent of the other variables in a model. We choose Model 3, which uses the Salient Factor Score, to control for criminal momentum. If we set all the variables to their sample means (other than X_{19}), the probability of recidivating is 0.328 for a person taking no courses and 0.286 for a person taking one course for each 6 months of his or her prison term. That is, 4.2 percent fewer persons recidivate who successfully participate in at least one education course per each 6 months of their prison term compared to those who did not.

Next, we look at the effect of receiving a social furlough (X_{20}). We see that in all four models, receiving a social furlough is significantly related, at the .01 level or less, to a reduction in recidivism. We interpret this result, which is independent of family ties as represented by the variable for post-release living arrangements (X_{25}), as further support for the effectiveness of prison programs aimed at normalizing the prison experience.

As we did for prison education program participation, we can estimate the impact of social furloughs on the recidivism rate independent of the other variables in a model. Again, we choose Model 3. Setting all the variables to their sample means (other than X_{20}) the probability of recidivating for a person receiving no social furloughs is 0.346 and 0.212 for a person receiving at least one social furlough. That is, 13.4 percent fewer persons recidivate who receive a social furlough compared to those who receive no social furloughs, with all the other variables in Model 3 set at their sample means.

Results For Post-Release Employment and Living Arrangements

Looking at the effect of post-release employment (X_{23}) and post-release living arrangements (X_{25}), we see that coefficients for both variables are statistically significant. Also, the coefficients have negative signs, indicating that persons who arrange for post-release employment and those who live with a spouse after release have lower likelihoods of recidivating.

As we observed in Part I of this report, the majority of incarcerating offenses and the recidivating offenses can be categorized as economic crimes (e.g., drug trafficking, larceny

theft, bank robbery, burglary), that is, crimes committed to obtain money or things.[13] Therefore, it is not difficult to understand why post-release employment is related to reduced recidivism for the study group. Any policy, operation, or program such as prison industries, education programs, and halfway house release that promotes post-release employment will reduce recidivism among Federal prison releasees. We shall see in Part V that halfway house release, controlling for background, prison, and release variables, is a program that significantly increases post-release employment and, therefore, reduces recidivism.

Release to an intact family means the releasee has a stake in conformity. A new offense means an almost certain return to prison and, again, removal from the family. Also, releasees returning to a spouse are rooted in a social institution providing economic and emotional support and which is responsible for socializing both adult and young alike.

These two findings indicate that prison programs, operations, or policies that increase a releasee's likelihood of post-release employment (e.g., education programs, prison work including prison industries or UNICOR, and halfway house release) or foster family stability (e.g., visitation, social furloughs, halfway house release, or even perhaps, and where appropriate given the competing demands of punishment and rehabilitation, a shortened prison term) will contribute to a reduction in recidivism.

Results For Control Variables

The effects of the control variables in the model are of great interest. Their observed effects tell us what pre-prison characteristics, prison experiences, and post-release conditions are predictive of a higher or lower likelihood of recidivating.

Each of the criminal momentum measures (X_1 - X_4) are highly predictive of recidivism. The more involved in crime a person is when admitted to prison, as indicated by these official measures, the more involved this individual will be in crime after release from prison.

Black releasees (X_5) are more likely to recidivate than white releases, net of the other variables. It is possible that

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[13] In this regard, Federal prison releasees differ from State prison releasees. Among State prison releasees, a much larger percent had been incarcerated for a violent offense than among Federal prison releasees (Beck and Hester 1986).

the race variable here is, in part, acting as a proxy for juvenile offending. The official measures of criminal momentum used are limited to releasees' adult records.

Males are no more likely to recidivate than females. This result differs from that reported by Beck and Shipley (1989) who examined recidivism among State prison releasees. They found that males had higher recidivism rates than females. Why Federal and State prison releasees differ in this regard is not clear.

Of eight drug abuse types, only heroin abusers (X_9), for three of the four models, and alcohol abusers (X_{11}), in all four models, are more likely to recidivate than non-abusers of each drug.[14] That the variable measuring heroin abuse is not predictive of recidivism in Model 3 is no doubt because the SFS incorporates a measure of heroin abuse. Despite media concern about the effects of cocaine use on crime, cocaine abuse (X_8) is not significantly related to recidivism risk in our analysis. However, the cocaine abusers examined here, as discussed above, are more likely powder cocaine abusers, not abusers of crack cocaine. It is possible that abuse of crack cocaine is significantly related to recidivism risk. However, our data do not allow us to address that issue. Also, recall the discussion of Table 6 in Part I above, where we note that because very few drug abusers abuse only one drug, these drug abuse measures index a particular pattern of drug abuse not the abuse of one drug only (see Appendix E). Also, the dummy variables for drug abuse compare those who use the drug indicated by the dummy variable name with those who either abuse no drugs, or who abuse other drugs but do not abuse the drug represented by the dummy variable.

Years of schooling when admitted to prison (X_{15}) appears to have a weak effect on recidivism, when controlling for the other variables in the models. We find only one significant coefficient, in Model 1. (However, see results for this variable in Appendix A.)

Stable employment or student status (X_{16}) prior to confinement is strongly related to a lower likelihood of recidivating.

Being under criminal justice supervision when committing the current incarcerating offense (X_{17}) is significantly related to

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[14] In additional analysis, not presented in this report, we observed that persons who had alcohol abuse problems and who had a prior criminal record had a disproportionate number of violent offenses (e.g., assault) as part of that record, when compared to non-alcohol abusers.

recidivating in Models 1 and 2, but not in Models 3 and 4. This is, no doubt, because both the Salient Factor Score and the Criminal History Score, used in Models 3 and 4 respectively, incorporate a measure of this variable in their makeup.

The number of prison misconduct incidents (X_{18}) is not related to the likelihood of recidivating. We should add that this variable was replaced in other analyses that we conducted with a variable measuring the rate of misconduct for each 6 months of incarceration. This rate variable was also not significant. Therefore, despite the fairly strong bivariate relation between prison misconduct and recidivism displayed in Table 11, once other variables predicting recidivism are controlled, prison misconduct has no effect on recidivism. That is, the same variables predicting prison misconduct appear also to predict recidivism.

We suspect that the variables in the four models measuring prior criminal record are highly correlated with prison misconduct, suggesting that the prior criminal record of inmates predicts both prison misconduct and recidivism. Indeed, the Pearson Correlation between the frequency of prison misconduct variable (X_{18}) and each of the criminal momentum measures (X_1-X_4) is statistically significant: 0.24 with Prior Convictions; 0.25 with Prior Incarcerations; -0.26 with the Salient Factor Score; and 0.23 with the Criminal History Score. In sum, the same background characteristics that predict recidivism, also, predict prison misconduct. This finding contradicts the argument that prison misconduct should be used in addition to prior criminal record when making parole decisions based on risk of recidivating (Gottfredson and Adams 1982). This finding also contradicts the argument that "rebellious" inmates do better after release than inmates who comply with institution rules (Goodstein 1979).

Length of prison term (X_{21}), as in the bivariate analysis displayed in Table 15, appears to have no effect on recidivism risk. In short, there appears to be no specific deterrent effect of long prison terms.

Release from prison through a halfway house (X_{22}) has no normalizing effect on recidivism. This result differs from the strong bivariate association of halfway house release with recidivism seen in Table 16. No doubt, inmates who are released through a halfway house are chosen because they are inmates with low recidivism risk. Therefore, once controls are introduced that capture recidivism risk, the bivariate effect disappears. However, in Part V of this report, which examines the effect of halfway house release on post-release employment, halfway house release is found to significantly increase the likelihood of employment and, therefore, in this indirect way, reduces recidivism. Why halfway house release has no direct normalizing

effect is conceptually understandable given the definition of normalization used which is always in the context of the prison environment. Because the halfway house experience is independent of prison, no direct normalizing effect on prison life should be expected. The possibility remains that halfway house release may, however, have an indirect, or anticipatory effect, (i.e., persons hoping for a halfway house release may be less inclined to participate in the inmate subculture, or violate institutional rules and more inclined to participate in work and educational programs to show social responsibility). An adequate assessment of this indirect normalizing effect is beyond the scope of the present analysis.

Age (X_{24}) at release is strongly related to recidivism risk. The younger the releasee, the more likely he or she is to recidivate.

The population size of the community (X_{26}) in which the person resides after release is strongly related to an increased risk of recidivating. This result seems to support theories of crime which hypothesize higher crime rates with higher population size of cities as a result of a multiplicative increase of criminal peers, criminal opportunities (e.g., theft; selling illicit drugs), and increased stress, perhaps leading to violent behavior and substance abuse.

The poverty rate (X_{27}) in the releasee's resident community is significantly related, at the .10 level or less, to a higher risk of recidivating in Models 1 and 4. This result is supported by a large body of criminological theory and research relating structural, or aggregate levels, of poverty to increased crime rates.

That higher population size (or urbanism) and poverty rates increase the likelihood of recidivating may be explained similarly to the way prisonization is used to explain high rates of inmate misconduct, especially violent misconduct. Criminologists explain why poor urban neighborhoods have high crime rates, especially for violent crime, by pointing to the social and economic deprivation and isolation, stress, and criminal subcultures found in these poor, urban neighborhoods (Bernard 1990; Stark 1987; Suttles 1968). In these neighborhoods, the releasee finds peers and associates supporting criminal attitudes and norms. It is not surprising, therefore, that many persons released to these community environments have higher likelihoods of recidivating.

Finally, the unemployment rate (X_{28}) in the releasees' community is strongly related to recidivism risk, although not in the way that most people would expect. The higher the unemployment rate, the lower the risk of recidivating. This

result appears to provide support for the theory of crime which posits that high unemployment rates will be associated with low crime rates due to the greater presence of unemployed persons in their homes and neighborhoods during the day to observe and prevent criminal activity. We further note that the unemployment rate measures the percentage of the working age population who are not working and are actively looking for work, as opposed to the percentage simply not working for an extended period. Therefore, we speculate that the unemployment rate used may serve to measure what we will call community "work ethic." This interpretation is bolstered by the inclusion of the measure for the percentage of families living in poverty in the releasee's resident ZIP Code (X_{27}) as a control in the model. The poverty rate may measure, in part, the percent of the population unwilling to seek employment. We would expect that a high community work ethic would correspond with a lower likelihood of recidivating. A more adequate assessment of any possible community "work ethic" effects might use community survey data tapping into attitudes about work, or measures of the proportion of the working age population that is simply idle. None of these alternative measures were available to us. We hasten to add that while the aggregate unemployment rate is inversely related to recidivism, unemployment of the individual releasee is highly predictive of post-release criminal involvement.

Discussion

We found that two normalizing programs contribute to a reduction in recidivism when other influences are controlled. Participation in furlough or education programs appears to divert inmates from the forces of prisonization and serves to reinforce law-abiding norms. These results are even more impressive when we consider that program participants are convicted felons, many with extensive criminal records and drug abuse histories.

Some may contend that selection criteria for program participation favoring low-risk inmates have not been adequately controlled and, therefore, our results say nothing about the effectiveness of education and furlough programs for reducing recidivism. It may also be argued that some inmates are more "motivated" both to participate in prison programs and to live a life free of criminal behavior after release from prison, and that we have not controlled for motivation. In response, we assert that because of the large number of carefully chosen control variables, we interpret the positive results as reflecting real and independent effects of program participation. Evidence for the adequacy of the controls is found by observing how halfway house release, which has a strong bivariate association with low recidivism as seen in Table 16, had no effect on recidivism in the multivariate model. This indicates

to us that selection criteria favoring low-risk inmates for release to halfway houses, and for participation in education and furlough programs, have been adequately controlled.[15]

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[15] Theoretically, one could argue that prison release through a halfway house in which the person spends as much as 100 days or more in, or near, their home community and is free to work and spend time with family and friends is equivalent to a nearly full-time prison furlough. And, as such, release through a halfway house hypothetically should have a greater normalizing effect in reducing recidivism than a brief furlough from prison. One could further argue that the controls in our logistic equations for recidivism propensity such as the Salient Factor Score, drug dependency, and prison misconduct are adequate controls for recidivism propensity when examining the independent (normalizing) effect of halfway house release, but not for examining the normalizing effect of a prison furlough. Why? Because, one could argue, persons receiving a prison furlough are the best of the best, so to speak. In other words, while only low-risk persons receive a halfway house release near the end of their term, only extremely low-risk persons are granted a social furlough. This could be because slightly greater risk is tolerated for a person who will be released to the street within 1 to 3 months than for a person who may have a fair amount of prison time left to serve. Therefore, extreme care is given in choosing persons to receive a prison furlough where the decision to grant a furlough is based not only on the objective risk predicting devices such as Salient Factor Score, etc., but also on specific information about the inmate's behavior gained through observation by case managers, wardens, and other prison staff, information of a kind not included as a control in our statistical model. In short, that prison staff use additional information available to them about the inmate, to clinically override the statistical measures or predictors of risk used as predictor variables in our logistic analysis. However, because of the large number of such variables used in our models and because of their statistical significance, we are inclined to reject the clinical override explanation in favor of a normalizing program effect explanation. Why furloughs would have a normalizing effect while halfway house release does not goes logically to the heart of the normalization concept: that furloughs reduce the deprivations of imprisonment in the context of imprisonment. Before and after the furlough, the prison environment, no matter how humane, provides a stark contrast with those things that may be of deep and true meaning to the inmate: family, friends, and community, in short, life out side the prison. It is from this stark contrast that a furlough from prison may reinforce law-abiding norms and associated behavior. No such stark contrast is present in the halfway house where restriction to a residential house environment is for a relatively few hours each day during which the person is either sleeping, or preparing to return to work

Some may also argue that our findings are not generalizable because only low-risk inmates participated in education or furlough programs. However, an examination of cross tabulations of the furlough variable and the Salient Factor Score (see Appendix B) suggests that while inmates with high Salient Factor Scores (i.e., low-risk inmates) were more likely to receive a furlough than those with low scores, a substantial number of high-risk inmates did receive furloughs. Of the 865 persons examined in the logistic analysis 237 received furloughs; of this latter group, 57, or 24 percent, had Salient Factor Scores of five or lower. For this reason, we interpret the result for the furlough variable as showing a normalizing, recidivism-reducing, effect independent of other risk factors. Similarly for prison education program participation, an examination of education program participation and Salient Factor Scores (not shown, but available from the author) shows that the distribution of SFS's among those who successfully completed any education courses during their prison term is the same as the SFS distribution for the entire sample. This is further substantiated by the nonsignificant correlation of .03 between the Salient Factor Score (X_3) and the Prison Education Program variable (X_{19}).

However, even if these criticisms were correct, it would stand to reason that if programs were not available to inmates, many of those who currently participate would fall prey to prisonization. The very fact that correctional administrators so strongly and vociferously argue and lobby for continued work, education, and other programs for inmates tells us that they think if not for programs, prisonization would be a greater problem than it is, with a consequent rise in serious inmate misconduct (Dilulio 1991, Chapter 3) and, by implication, a possible rise in recidivism rates as well.

The instruments used to predict recidivism, the Salient Factor Score and the Criminal History Score, are shown to be significantly related to recidivism risk.

Employment and living with a spouse on release significantly improve post-release success. Why this is so can, no doubt, be explained, in part, because participating in these institutions reinforces socially acceptable norms and weakens socially unacceptable norms.

The significant effects of the three structural variables (population size, poverty, and unemployment) call attention to the familiar assertion that the criminal justice system cannot do everything when it comes to reducing recidivism or crime. The social and economic conditions of communities in which releasees

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and family.

reside affect recidivism rates (as do the individual attributes, norms, and propensities of the releasees). This is most likely so because of the criminal subcultures these structural conditions bring about. By itself, the criminal justice system can do only part of the job needed to change social and economic conditions that give rise to these criminal subcultures.

Part III. Prison and Post-Release Drug/Alcohol Treatment And Recidivism

Introduction

In this part of the report we discuss our use of multivariate procedures (logistic regression) to test the effectiveness of prison and post-release drug and alcohol treatment programs for reducing recidivism. We need to note that the treatment programs assessed here are those in place prior to July 1987. Since that time, the Bureau of Prisons has considerably enlarged the availability, variety, and intensity of its drug and alcohol treatment programs (Federal Bureau of Prisons 1992). A massive research project is currently under way to evaluate the effectiveness of these new programs.

Of the 799 releasees in our sample who had a history of drug or alcohol abuse, 208, or 26.1 percent, participated in a BOP-operated drug treatment program. The recidivism rate for these participants was the same as for non-participants. This bivariate lack of association between drug treatment and recidivism should not be taken as evidence that treatment had no positive effects for those receiving it. First, there is reason to believe that the inmates who received treatment had the most serious drug dependency problems and, therefore, were likely to recidivate at a higher rate than inmates with a less serious problem who, disproportionately, did not receive treatment. Therefore, the lack of any bivariate treatment effects may be partially because persons with more serious drug dependency problems are more likely to receive treatment. Second, treatment may have had an effect on the time until return to drug use, or the extent of subsequent use -- outcomes that were not assessed by this study. Third, drug-dependent persons who received treatment, especially post-release treatment, may have been subjected to closer post-release surveillance, including urinalysis, which meant higher rates of parole revocation, a possibility we will explore in further analyses.

The multivariate analysis that follows addresses the first of the three possibilities listed, that drug abusers who receive treatment have a greater drug abuse problem than those not receiving treatment.

Analysis of Drug and Alcohol Treatment Effectiveness

In order to investigate further the possible effects of drug abuse treatment programs on recidivism, we used a logistic regression model into which we incorporated a variable measuring the seriousness of the person's drug abuse problem. For this seriousness-of-abuse measure, we used an interaction term measuring whether the person received drug/alcohol treatment both in prison

and after release. We assume if the person received treatment both inside prison and after release, that the person's drug/alcohol problem was more severe than another person who received treatment in only one setting. An analogy with this measure of drug/alcohol abuse severity is the use of incarceration frequency to measure criminal momentum. Criminologists argue that the worst criminals go to prison often, making the frequency of prior incarcerations a predictor of recidivism as opposed to a measure of the amount of corrective imprisonment (specific deterrence) administered. Similarly, we argue that persons with the most severe drug/alcohol abuse problems, those most likely to return to abuse after treatment, get more frequent treatment.

Results

Table 27 presents the results of this multivariate analysis. Only persons defined as having a drug or alcohol dependency are included in the analysis. Two models are presented. Model 1 uses the two drug treatment variables without the interaction term. Model 2 adds the interaction term. The Salient Factor Score is included in each model as a control for criminal momentum. Again, the dependent variable is the log odds of recidivating.

We see in Model 1 that both drug treatment in prison (X_8) and drug treatment after release (X_9) have positive signs indicating they increase the likelihood of recidivating, however, neither coefficient is statistically significant. In Model 2, which includes the interaction term (X_{10}) controlling for severity of drug dependency, we see that although drug treatment either in prison or after release is not statistically significant, the coefficients for these two variables have negative signs, indicating a reduction in recidivism for program participants. The lack of significance could be due to poor specification of the model, or to poor measurement of the drug treatment variables. We add that the measure of drug dependency severity (X_{10}) is significant and has a positive sign, as we would expect if it is an adequate measure of drug/alcohol abuse severity.

The pattern of effects for the other variables in the models parallel results for the same variables in the logistic models presented in Table 26 above.

Discussion

While we did not find strong evidence that drug treatment reduced recidivism among drug abusers, we can at least take encouragement that the effects of drug treatment, if any, appear to be toward a reduction of recidivism. A more valid measure of drug abuse/dependency severity than is available to us would be needed to adequately test the effectiveness of BOP drug treatment.

Table 27. Logistic Regression Coefficients for Recidivism Among Releases Identified as Drug Abusers. N=601.

Independent Variable	Model 1.	Model 2.
X_1 Salient Factor Score.	-0.2192*** (0.0449)	-0.2206*** (0.0452)
X_2 Race (Black=1, Other=0).	0.3856* (0.2282)	0.3982* (0.2292)
X_3 Gender (Male=1, Female=0).	0.2565 (0.3294)	0.2130 (0.3338)
X_4 Years of Schooling Completed When Admitted.	-0.0401 (0.0412)	-0.0388 (0.0412)
X_5 6 Months Full Employment Prior to Imprisonment. (Yes=1, No=0)	-0.5323** (0.2211)	-0.5120** (0.2222)
X_6 Under CJS Supervision At Time Offense Was Committed. (Yes=1, No=0)	-0.0698 (0.2541)	-0.0687 (0.2547)
X_7 On Drugs at Time of Arrest (Yes=1, No=0).	0.1093 (0.2098)	0.1374 (0.2112)
X_8 Drug Program Participation in BOP. (Yes=1, No=0)	0.2183 (0.2299)	-0.3394 (0.3391)
X_9 Drug Program Participation After Release (Yes=1, No=0).	0.1255 (0.2011)	-0.1526 (0.2358)
X_{10} Interaction of Drug Treatment in BOP with Treatment After Release.	———	1.0123** (0.4466)
X_{11} Number of Misconduct Charges.	0.0183 (0.0541)	0.0174 (0.0540)
X_{12} Educational Programs Completed Each 6 Months of Prison Term.	-0.2078* (0.1103)	-0.2105* (0.1108)

* P≤.10. **P≤.05. ***P≤.01 (Standard error in Parenthesis.)

Table 27. Continued.

Independent Variable	Model 1.	Model 2.
X_{13} Social Furlough (Yes=1, No=0).	-0.6326** (0.2794)	-0.6769** (0.2820)
X_{14} Prison Term in Months.	0.00260 (0.0104)	0.0030 (0.0106)
X_{15} Released Through a Halfway House. (Yes=1, No=0).	0.3381 (0.2377)	0.3782 (0.2403)
X_{16} Employed Upon Release. (Yes=1, No=0).	-0.5136** (0.2254)	-0.5420** (0.2275)
X_{17} Age at Release.	-0.0243** (0.0122)	-0.0251** (0.0123)
X_{18} Living With Spouse Upon Release.	-0.6780*** (0.2457)	-0.6825*** (0.2457)
X_{19} Resident ZIP 1988 Population (Nat. Log).	0.1454 (0.0953)	0.1579* (0.0960)
X_{20} Resident ZIP 1980 Percent Families in Poverty.	0.0102 (0.0117)	0.0093 (0.0117)
X_{21} Resident ZIP 1980 Percent Unemployed.	-0.0650** (0.0296)	-0.0644** (0.0298)
Intercept	1.3234 (1.2079)	1.3573 (1.2069)
-2 Log Likelihood	648.404	643.178

* P≤.10. **P≤.05. ***P≤.01 (Standard error in parenthesis.)

Part IV. Predictors of Recidivating Frequency

Introduction

In our study, we also used ordinary least squares (OLS) or multiple regression to examine the variables predicting recidivating frequency among releasees who recidivated at least once. In Part I, Table 23, we saw that nearly half (49.7 percent) of the recidivists were rearrested or had parole revoked more than once during the 3-year followup period. It seems instructive, therefore, to examine which, if any, of the background (pre-prison), prison experience, and post-release measures predict recidivism frequency. Even a cursory analysis, as provided here, may shed light on the ability of recidivism risk predicting instruments to predict recidivating frequency (here we use the Salient Factor Score) and shed light on which programs and policies addressing what specific inmate needs may reduce recidivism frequency.

Methods

The analysis was limited to the 490 persons in the sample who recidivated at least once during the 3 years following release from Federal prison.

The dependent variable is the natural log of the number of recidivating events (arrests or parole revocations) during the 3-year followup period. The log is used to transform the highly skewed distribution of recidivating events to a more normal distribution (i.e., a distribution with equal numbers on either side of the mean). Multiple regression results are more reliable when the dependent and independent (predictor) variables have normal distributions.

With two exceptions, the predictor variables used were those used in the logistic analysis of Part II, Table 26. The exceptions are that the Salient Factor Score (SFS) was the only criminal momentum, or risk, measure used and the addition of a dummy variable measuring whether the first recidivating event was an arrest for a violent or sex crime. We limited the risk measures to the SFS because it was found, in Parts I and II, to be the best risk-predicting device examined in terms of predictive power. The reasoning for adding the violence variable is that a first rearrest for a violent or sex crime may, if it results in a conviction, lead to a substantial jail or prison sentence removing the offender from the street during which time they could have committed additional crimes and, therefore, would have higher recidivism frequency during the study period.

A shortcoming is that we had no variable measuring length of parole supervision. Persons while on parole presumably have a greater likelihood of arrest and, obviously, have a greater

likelihood of parole revocation than persons not on parole (Petersilia and Turner 1993).

Three different logistic models are estimated. This is to provide opportunity to observe results for different model specifications and numbers of observations (recall from Part II that because of the way missing variable values are handled in the logistic regression, there is an inverse relation between the number of predictors used and the number of observations available to estimate the model). Model 1 includes as predictors all the variables used in Model 3 in Part II, Table 26. Model 2, excludes from Model 1 the ZIP Code variables. Model 3, excludes from Model 2 the drug dependency variables.

Results

Multiple regression results are presented in Table 28. Model 1 contains all the predictors. Model 2 excludes the community structural variables measuring ZIP Code population size, poverty rate, and unemployment rate. This is done because including these variables results in the loss of a large number of observations because these variables have missing values for many observations. Model 3 excludes the ZIP Code variables and variables measuring drug and alcohol dependence.

The significant effects are the following: the higher the SFS, the lower the frequency of recidivating; both pre-prison and post-release employment reduces the frequency of recidivating; males recidivate more frequently than females; and the longer the person's Federal prison term, the less frequent is recidivism. However, the prison term variable has the least significant coefficient of the statistically significant coefficients (never with a p value less than .07 and only significant at the .1 level in each of the three models).

Discussion

To our mind, the most important implications of this, admittedly preliminary, analysis are, first, that the SFS is a powerful predictor of both recidivism likelihood and frequency and, second, the importance of employment for reducing both recidivism and its frequency. This last finding reinforces the need for prison programs, policies, and operations such as prison industry and education programs that improve inmates' employment prospects.

Table 28. OLS Regressions of The Log of Recidivism Frequency on Predictor Variables for Those Releasees Who Recidivated.

Independent Variable	Model 1.	Model 2.	Model 3.
X_1 Intercept	0.5187 (0.4457)	0.5997 (0.2555)	0.5912 (0.2232)
X_2 Salient Factor Score.	-0.0425*** (0.0162)	-0.0337** (0.0150)	-0.0336*** (0.0127)
X_3 Race (Black=1, Other=0).	-0.0445 (0.0750)	-0.0270 (0.0649)	-0.0476 (0.0594)
X_4 Male (Male=1, Female=0).	0.1754 (0.1120)	0.1958* (0.1040)	0.2012** (0.0986)
X_5 First Rearrest For Violent Offense.	-0.0768 (0.0971)	-0.1080 (0.0878)	-0.0836 (0.0810)
X_6 Marijuana Abuse (Yes=1, No=0).	-0.0609 (0.0771)	-0.0489 (0.0693)	———
X_7 Cocaine Abuse (Yes=1, No=0).	0.0415 (0.0813)	0.0182 (0.0725)	———
X_8 Heroin Abuse (Yes=1, No=0).	-0.0284 (0.0913)	0.0409 (0.0804)	———
X_9 Barbiturate Abuse (Yes=1, No=0).	0.0145 (0.1050)	-0.0052 (0.0992)	———
X_{10} Alcohol Abuse (Yes=1, No=0).	-0.0992 (0.0710)	-0.0274 (0.0638)	———
X_{11} Stimulant Abuse (Yes=1, No=0).	0.0784 (0.1139)	0.0657 (0.1020)	———
X_{12} Hallucinogen Abuse (Yes=1, No=0).	-0.0043 (0.1069)	-0.0483 (0.0994)	———
X_{13} Other Drug Abuse (Yes=1, No=0).	0.0454 (0.1653)	-0.0400 (0.1527)	———
X_{14} Years of Schooling Completed When Admitt.	-0.0031 (0.0147)	0.0133 (0.0129)	0.0055 (0.0122)

* P≤.10. **P≤.05. ***P≤.01 (Standard error in Parenthesis.)

Table 28 continued.

Independent Variable	Model 1.	Model 2.	Model 3.
X_{15} 6 Months Full Employment or Student (Yes=1, No=0).	-0.1217 (0.0802)	-0.1657** (0.0726)	-0.1949*** (0.0666)
X_{16} Under CJS Supervision at Time Committed Offense (Yes=1, No=0)	-0.0140 (0.0913)	0.0080 (0.0826)	0.0359 (0.0730)
X_{17} Number of Prison Misconduct Incidents.	0.0155 (0.0157)	0.0052 (0.0144)	0.0169 (0.0133)
X_{18} Educational Programs Completed Each 6 Months of Prison Term	-0.0381 (0.0424)	-0.0272 (0.0403)	-0.0517 (0.0392)
X_{19} Social Furlough (Yes=1, No=0).	0.0808 (0.1058)	0.0017 (0.0968)	0.0155 (0.0907)
X_{20} Prison Term in Months	-0.0051* (0.0027)	-0.0043* (0.0026)	-0.0044* (0.0025)
X_{21} Released Through a Halfway House. (Yes=1, No=0).	0.0401 (0.0781)	0.0725 (0.0719)	0.0987 (0.0674)
X_{22} Employed upon Release (Yes=1, No=0).	-0.1388* (0.0797)	-0.1384* (0.0723)	-0.1372** (0.0679)
X_{23} Age at Release.	-0.0030 (0.0044)	-0.0035 (0.0040)	-0.0013 (0.0036)
X_{24} Living with Spouse Upon Release.	0.0133 (0.0912)	-0.0062 (0.0853)	-0.0001 (0.0813)
X_{25} Resident ZIP 1988 Population (Nat. Log)	0.0331 (0.0377)	———	———
X_{26} Resident ZIP 1980 Per Families in Poverty.	0.0016 (0.0040)	———	———
X_{27} Resident ZIP 1980 Percent Unemployed.	-0.0032 (0.0106)	———	———
R-Square	0.1206	0.1060	0.1022
N	315	378	440

* P≤.10. **P≤.05. ***P≤.01 (Standard error in Parenthesis.)

Part V. Halfway House Release and Post-Release Employment

Introduction

While halfway house release was not found to reduce recidivism through normalization (see Part II), it may affect other aspects of the person's post-release experience related to recidivism, such as post-release employment. In this part of the report, we examine whether halfway house release increases the likelihood of post-release employment and in that way decreases recidivism.

Because Bureau of Prisons policy strongly encourages employment for halfway house releasees, it is reasonable to expect that halfway house release will increase post-release employment. Of the 614 persons in our study group who were released through a halfway house, 68.1 percent were employed when released to the community, compared to 22.2 percent of those who were released directly from prison.[16] These differences can be explained in two ways. The first explanation is that halfway house releasees are selected because they are more employable and motivated to work.[17] The second explanation for the higher post-release employment of halfway house releasees can be explained by the strong expectation that halfway house residents will find and keep a job, a strong expectation that is backed up by a set of rewards and sanctions. For example, halfway house residents are likely to be denied weekend passes and social leave, and may even be returned to an institution for failing to obtain a job. Therefore, a large percentage of halfway house releasees find employment.

Methods

To assess the effect of halfway house release on employment independent of the selection process favoring persons more likely to find and maintain a job, we conducted a logistic analysis

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[16] These percentages may be lower than the actual figures because information on post-release employment may not have been recorded in some inmates' prison files. This possibility means, of course, that any interpretation of the effect of halfway house release on post-release employment must be tempered by the possibility of measurement error in the dependent variable.

[17] Because halfway house release depends on both Bureau policy and the inmate's volunteering to go, halfway house release is filtered by two selection criteria, policy selection and self-selection. Both selection processes might be expected to result in more employable inmates with a greater motivation to work going to a halfway house.

assessing the effect of halfway house release on the likelihood of post-release employment while controlling for those characteristics that measure employability and work ethic (i.e., pre-prison job stability, drug-dependence, prison education program participation, post-release living arrangements, criminal record, prison misconduct, as well as the socioeconomic conditions in the post-release resident ZIP CODE). Three different logistic models were estimated. This was done to provide opportunity to observe results for different model specifications and numbers of observations (recall from Part II that because of the way missing values are handled in the logistic regression, there is an inverse relation between the number of predictors used and the number of observations available to estimate the model).

Results

Results of the logistic analysis are presented in Table 29. We see that the coefficient for halfway house release (X_{29}) is highly significant (at a less than a .05 significance level) in all three models. We, therefore, conclude that halfway house release increases the likelihood of post-release employment. Because post-release employment is associated with a reduced likelihood of recidivating (see Part II) halfway house release, by increasing post-release employment, also increases post-release success.

Other significant results are that males (X_4) are more likely to be employed at release than females; pre-prison employment stability (X_{14}) increases post-release employment;[18] users of "other drugs" (X_{12}) have a lower likelihood of employment; and having been under criminal justice supervision (probation, parole,) at the time the person committed his or her current offense (X_{15}) decreases post-release employment.

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[18] This finding supports those sentencing judges who look at employment stability as one measure of an offender's risk of recidivating.

Discussion

Apparently, the strong encouragement to work given to halfway house releasees reduces recidivism. This result supports the halfway house release program and the strong encouragement to work that is given to participants. That strong encouragement to work, bordering on coercion, may actually reduce recidivism has implications beyond halfway house release. It suggests that strong encouragement for inmates to participate in prison education, work, and drug treatment may reduce recidivism.[19]

[19] That coercion of halfway house releases to find and keep a job appears to increase post-release employment and in this way reduce recidivism has implications beyond recidivism. If public assistance to able bodied men and women were combined with strong incentives to work, perhaps welfare programs might actually be able to reduce many of the social problems (including crime) found in communities with high proportions of welfare recipients (Mead 1993).

Table 29. Logistic Regressions of Post-Release Employment on Halfway House Release and Control Variables.

Independent Variable	Model 1.	Model 2.	Model 3.
X_1 Intercept	-2.8241*** (1.0339)	-2.0514*** (0.5878)	-2.0292*** (0.5062)
X_2 Salient Factor Score.	0.0755* (0.0415)	0.0496 (0.0385)	0.0169 (0.0329)
X_3 Race (Black=1, Other=0).	-0.3431 (0.2121)	-0.1701 (0.1826)	-0.1922 (0.1674)
X_4 Male (Male=1, Female=0).	1.2424** (0.2879)	1.0254*** (0.2639)	0.9950*** (0.2479)
X_5 Marijuana Abuse (Yes=1, No=0).	0.0495 (0.2085)	-0.1124 (0.1888)	———
X_6 Cocaine Abuse (Yes=1, No=0).	0.2059 (0.2097)	0.2114 (0.1910)	———
X_7 Heroin Abuse (Yes=1, No=0).	0.5268* (0.2703)	0.2832 (0.2386)	———
X_8 Barbiturate Abuse (Yes=1, No=0).	-0.0768 (0.3319)	-0.0816 (0.3025)	———
X_9 Alcohol Abuse (Yes=1, No=0).	0.0748 (0.1879)	0.1336 (0.1722)	———
X_{10} Stimulant Abuse (Yes=1, No=0).	0.0992 (0.3496)	0.0957 (0.3122)	———
X_{11} Hallucinogen Abuse (Yes=1, No=0).	0.2754 (0.3311)	0.1559 (0.3006)	———
X_{12} Other Drug Abuse (Yes=1, No=0).	-1.1431** (0.5222)	-0.9134* (0.4732)	———
X_{13} Years of Schooling Completed When Admitt.	-0.0129 (0.0321)	-0.0052 (0.0288)	-0.0029 (0.0274)
X_{14} 6 Months Full Employment or Student (Yes=1, No=0).	0.6809** (0.1921)	0.7991*** (0.1745)	0.8145*** (0.1607)

* P≤.10. **P≤.05. ***P≤.01 (Standard error in Parenthesis.)

Table 29 continued

X_{15} Under CJS Supervision at Time Committed Offense (Yes=1, No=0)	-0.4330* (0.2395)	-0.3751* (0.2151)	-0.3109 (0.1958)
X_{16} Number of Prison Misconduct Incidents.	-0.0309 (0.0569)	-0.0379 (0.0503)	0.0141 (0.0439)
X_{17} Educational Programs Completed Each 6 Months of Prison Term	-0.1111 (0.0936)	-0.1019 (0.0863)	-0.0550 (0.0762)
X_{18} Social Furlough (Yes=1, No=0).	0.5680** (0.2161)	0.3590* (0.1958)	0.3700** (0.1835)
X_{19} Prison Term in Months	-0.0154* (0.0092)	-0.0043 (0.0074)	-0.0101 (0.0071)
X_{20} Released Through a Halfway House (Yes=1, No=0).	1.7075** (0.1829)	1.6896*** (0.1665)	1.6860*** (0.1559)
X_{21} Age at Release.	-0.0132 (0.0092)	-0.0111 (0.0086)	-0.0060 (0.0076)
X_{22} Living with Spouse Upon Release.	0.2752 (0.1946)	0.1816 (0.1788)	0.2844* (0.1657)
X_{23} Resident ZIP 1988 Population (Nat. Log)	0.0449 (0.0795)	———	———
X_{24} Resident ZIP 1980 Per Families in Poverty.	0.0095 (0.0108)	———	———
X_{25} Resident ZIP 1980 Percent Unemployed.	0.0085 (0.0274)	———	———
-2 Log Likelihood	919.357	1081.508	1214.863
Hosmer & Lemeshow Goodness of Fit Statistic Based on Deciles of Observations.	14.085 p=0.0796	5.9233 p=0.6558	3.4068 p=0.9063
Observations	865	1005	1119

* P≤.10. **P≤.05. ***P≤.01 (Standard error in Parenthesis.)

Part VI. Policy Implications, Future Recidivsm Research, and Conclusion

Implications of This Study for BOP Operations and Future Research

A major finding of this study is that social furloughs contribute to reduced recidivism. Since 1988, a shift in BOP furlough policy and practices has resulted in the granting of substantially fewer social furloughs. Results of the current study suggest that this shift in furlough policy may have made successful release to the community more difficult for a large number of BOP releasees. Therefore, we suggest that current BOP furlough policy be reexamined. Future research should attempt to identify those inmates who could most benefit from a social furlough, but who would at the same time pose little or no risk to the public while on furlough.[20]

This study also found support for the normalization hypothesis that education program participation counters the forces of prisonization and inculcates law-abiding norms. This result provides support for the continuance and possible expansion of education programs as a way of increasing post-release success.

Future research also needs to assess more than just the normalizing effect of program participation on post-release success. Research is needed that identifies the gains in skills/knowledge acquisition or human capital (e.g., increased reading and math ability; job search skills; and vocational skills) resulting from program participation and link these gains to post-release success, possibly expanding the definition of post-release success to include employment and other positive outcomes that may be affected by prison programs. This type of analysis would benefit greatly by including normative measures of commitment to education, work, family, and crime both at admission at or near release. These measures would assist in gauging change in normative orientation toward education, work, family, and criminal involvement that occur while in prison and would allow that change to be associated with recidivism.

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[20] Obviously, social furloughs are not appropriate for high security inmates, especially those found in the supermax institution Marion. However, a program to provide visits for these high security inmates who currently receive none (i.e., from family, friends, or other community groups) and who are desirous of such visits, can be imagined, even for inmates in the Marion H unit. The Bureau could facilitate, perhaps the formation of legitimate, volunteer community groups to sponsor visits. Such a program would have guidelines that specify the objectives of such a program and the conditions under which visits would occur.

Furthermore, measures pertaining to educational staff and program operation would be useful in identifying the most appropriate staff and program format for bringing about the desired change in educational ability and attitudes about work and crime.

Given the effectiveness of normalizing operations and the programs examined in this study for reducing recidivism, the BOP should continually explore ways to improve existing operations and programs and look for new or additional, normalizing operations, policies, and programs. For example, making it more explicit that prison operations should support normative change might intensify and focus the effort.

Future research should attempt to describe more clearly the processes through which normalization may work to reduce both inmate misconduct and recidivism. Specific prison normalizing policies, operations, and programs need to be identified and the process through which they operate on prisonization and cognitive resocialization needs to be traced.

Generally the research results support the conceptual division of variables predicting recidivism into a set of fixed "Risk" variables and "Need" variables. "Risk" variables are variables that predict recidivism and measure characteristics of the person that are fixed and not directly amenable to change, such as prior criminal behavior. "Need" variables are variables that predict recidivism and measure dynamic characteristics of the individual which, because they are dynamic, are amenable to change, such as educational attainment, employability, drug or alcohol dependency, family stability, and commitment to prosocial norms. Further research needs to be conducted on methods for identifying the specific "needs" people have, which have been shown to be related to recidivism risk, and on programs (e.g., education, furloughs, work, halfway house release) that work to meet those "needs" in ways that will reduce recidivism.

To better understand the community or structural conditions affecting individual recidivism and the processes through which they operate, future research should first develop a fuller theoretical specification of how community structural conditions (e.g., population size, poverty, income inequality, unemployment) affect individual recidivism and, second, obtain measures of those structural conditions for appropriate geographical areas (e.g., Metropolitan Areas, ZIP Codes, Census Tracts).

The tradeoffs, or tensions, between the apparently conflicting demands of normalization and custody concerns need to be laid out conceptually and explored empirically. To better gauge correctional staffs' perspective on normalizing operations and to better understand the tension they see between normalization, on one hand, and custody and punishment, on the other, questions related to this issue should be asked in future

staff Prison Social Climate Surveys.

With uniform and valid measures of both operations and outcomes (e.g., measures of humane treatment, number of female corrections officers, visitation, misconduct, recidivism) over time, future research examining the effects of normalizing prison operations or programs should take a longitudinal approach by noting the introduction of normalizing operations and subsequent outcomes such as change in misconduct and recidivism rates.

The analysis of treatment program effectiveness for persons with a drug or alcohol dependency (Part III) is preliminary, but suggestive. Results indicate that persons receiving treatment are those with the most severe dependency. More adequately specified models using a larger range of accurate measures for individuals, treatments, and environments are needed to allow researchers to better isolate treatment effects. The current drug treatment evaluation project is a big step toward filling these needs (Federal Bureau of Prisons 1992).

Analysis of recidivism frequency (Part IV) yielded two useful, albeit preliminary, findings. First, the Salient Factor Score (SFS), which is a powerful predictor of recidivism risk, is also a predictor of recidivism frequency for those who recidivate, making it an even more attractive statistical risk-predicting device. Second, steady employment both before prison admission and after release from prison, reduces recidivism frequency among those who recidivate. Again, as in Part II, we find a need for any correctional policy, operation, or program (e.g., education programs, prison industries) that might increase post-release employment.

In Part V, we discussed the effect of halfway house release on post-release employment. Results support an hypothesized link between halfway house release and a higher likelihood of post-release employment. Therefore, while halfway house release may not reduce recidivism through normalization (Part II), it appears to reduce recidivism by increasing post-release employment.

Since one rationale for a correctional system to conduct recidivism studies is to evaluate the effects of correctional operations, including programs, on post-release success, it is important that complete and accurate data be collected on inmates' prison experiences, including program participation, drug use history, family visits, and misconduct. These data are also needed to evaluate the effectiveness of operations, including programs, on measures/indicators of operational effectiveness (e.g., assault rates, suicide rates, group disturbances, and management indexes created from items in Social Climate surveys of staff and inmates).

In light of this study's findings, we **STRONGLY** recommend that the BOP's Office of Research and Evaluation, in conjunction with other appropriate, BOP departments, develop items for addition to each inmate's SENTRY record, capturing the following information:

(1) Drug abuse history, including type(s) of drug(s) and a measure of abuse severity.

(2) Pre-prison years of schooling and degrees earned.

(3) Employment stability.

(4) Marital status.

(5) Visits received while in custody (dates and the visitor's relation to the inmate).

(6) Salient Factor Score and/or Criminal History Score.

(7) Program participation (e.g., drug and alcohol treatment, education, prison industry).

This information would be extremely useful for research and, more importantly, for assessing each individual inmate's programming and custody needs, and for making decisions about his or her release requirements. Furthermore, these inmate data can be aggregated for the entire BOP population, allowing BOP managers to assess the appropriate policies, operations, and programs needed to achieve the Bureau's mission.

Finally, similar to the institution Social Climate surveys annually administered to staff in all BOP institutions, an inmate Social Climate survey should be administered annually to a sample of inmates in each institution. As noted above, inmate "climate" surveys would help management spot ineffective policies, operations, and programs (whether aimed at normalization, custody, or security) and assist in identifying the reasons for the ineffectiveness so that appropriate changes can be made. Survey responses also allow identification of inmate needs and concerns that are not being addressed with current practice and, therefore, indicate new policies, operations, or programs that may be warranted. Finally, climate surveys are an additional means of building lines of communication between institution management and inmates.

One impediment to administering inmate climate surveys is logistical. The BOP Office of Research does not have the resources to send a researcher to every institution each year to conduct the survey. One way around this problem might be to designate an inmate survey administrator at each institution who would have responsibility for administering the instrument

developed by the Office of Research to a sample of inmates chosen by the Office of Research. Initially, the institution representatives could be trained at the regional offices by Office of Research staff.

Conclusion

Despite the current emphasis on punishment, or just deserts, when sentencing Federal law violators to prison, studies show that both the public and correctional workers expect prison operations and programs to reduce recidivism or, at a minimum, not to increase it (Innes 1993; Cullen et al. 1993). Among the public and among correctional workers there remains a desire to know the rate of recidivism; how existing correctional policies and operations affect recidivism; and, by identifying offender needs, what new or improved operations and programs might reduce recidivism. As long as these demands exist in the community and among correctional workers, recidivism studies will be needed, despite the current emphisis on just deserts.

Additionally, recidivism studies provide essential information in guiding sentencing policy that focuses on risk, in addition to punishment. A prudent sentencing policy might be defined as one that, after considering the severity of the offender's offense, also considers his or her likelihood of returning to crime after imprisonment, especially a return to serious violent crime. Only sound recidivism research can provide the needed risk-predicting devices to guide such a sentencing policy.

In this recidivism study, we examined how correctional operations affect recidivism and examined background characteristics, prison experiences, and release conditions that predict recidivism. We argued that Federal prison operations attempt to normalize the prison environment and, thereby, simultaneously reduce prisonization and improve the inmates' post-release chances. We tried, albeit in a minimal way, to test the effectiveness of these normalizing operations on post-release success, and found some modest, but encouraging, results such as the positive effects of social furloughs and education programs. We provided information about those characteristics and experiences of inmates that predict recidivism, such as prior criminal record, age, substance abuse, family stability, post-release employment, and community socioeconomic characteristics. We believe that this study's findings inform Federal correctional managers about which prison polices, operations, and programs currently work for reducing recidivism; provide information for improving existing programs and formulating new programs that might change, in positive ways, inmate characteristics associated with recidivism; and can be used by Federal criminal justice policy makers for improving sentencing to achieve goals in

addition to punishment.

We end by expressing our hope that this study proves useful to Federal criminal justice personnel responsible for managing a rapidly growing Federal prison population (which, over the last year, has been growing at a rate sufficient to require a new Federal prison each month) in ways that create a safe, secure, and humane prison environment, protect the public, and improve chances that persons released from Federal prison will live a law-abiding and productive life.

Appendix A: Logistic Regression Coefficients for Recidivism Within 3 Years After Release From the Federal Bureau of Prisons on Background, Prison, and Community Behavior and Experience Variables. N=1005

Independent Variable	Model 1.	Model 2.	Model 3.	Model 4.
X_1 Number of Prior Convictions.	0.0738*** (0.0191)	_____	_____	_____
X_2 Number of Prior Incarcerations.	_____	0.1001*** (0.0314)	_____	_____
X_3 Salient Factor Score.	_____	_____	-0.2024*** (0.0396)	_____
X_4 Criminal History Score.	_____	_____	_____	0.0745*** (0.0180)
X_5 Race (Black=1, Other=0).	0.4627** (0.1811)	0.4716*** (0.1810)	0.4153** (0.1826)	0.4453** (0.1818)
X_6 Male (Male=1, Female=0).	0.3579 (0.2561)	0.3673 (0.2554)	0.3077 (0.2581)	0.3120 (0.2564)
X_7 Marijuana Abuse (Yes=1, No=0).	0.1929 (0.1874)	0.1831 (0.1870)	0.1968 (0.1886)	0.1884 (0.1881)
X_8 Cocaine Abuse (Yes=1, No=0).	0.1450 (0.1896)	0.1175 (0.1896)	0.1830 (0.1907)	0.1225 (0.1903)
X_9 Heroin Abuse (Yes=1, No=0).	0.6898** (0.2192)	0.6468** (0.2202)	0.3753 (0.2282)	0.6057** (0.2219)

* P≤.10. **P≤.05. ***P≤.01 (Standard error in parenthesis.)

Appendix A. Continued.

Independent Variable	Model 1.	Model 2.	Model 3.	Model 4.
X_{10} Barbiturate Abuse (Yes=1, No=0).	-0.0953 (0.2943)	-0.0729 (0.2927)	-0.1690 (0.2962)	-0.0658 (0.2934)
X_{11} Alcohol Abuse (Yes=1, No=0).	0.4866*** (0.1759)	0.5821*** (0.1720)	0.4832*** (0.1745)	0.5540*** (0.1730)
X_{12} Stimulant Abuse (Yes=1, No=0).	0.3697 (0.3134)	0.3701 (0.3126)	0.3853 (0.3130)	0.3578 (0.3144)
X_{13} Hallucinogen Abuse (Yes=1, No=0).	-0.4960 (0.2890)	-0.4800* (0.2870)	-0.5606* (0.2897)	-0.4700 (0.2881)
X_{14} Other Drug Abuse (Yes=1, No=0).	-0.0200 (0.4690)	0.0045 (0.4632)	0.0291 (0.4565)	0.0165 (0.4623)
X_{15} Years of Schooling Completed When Admitted.	-0.0542* (0.0320)	-0.0627** (0.0317)	-0.0537* (0.0320)	-0.0595* (0.031966)
X_{16} 6 Months Full-Time Employment or Student (Yes=1, No=0).	-0.4021*** (0.1787)	-0.4169** (0.1788)	-0.3294* (0.1807)	-0.3573** (0.1811)
X_{17} Under CJS Supervision at Time Committed Offense (Yes=1, No=0).	0.4736*** (0.1828)	0.4700** (0.1846)	0.0093 (0.2131)	0.2125 (0.2030)
X_{18} Number of Prison Misconduct Incidents.	0.0354 (0.0481)	0.0360 (0.0485)	0.0314 (0.0478)	0.0369 (0.0482)
X_{19} Educational Programs Completed Each 6 Months of Prison Term.	-0.1461* (0.0879)	-0.1491* (0.0869)	-0.1557* (0.0923)	-0.1568* (0.0893)

* P≤.10. **P≤.05. ***P≤.01 (Standard error in parenthesis.)

Appendix A. Continued.

Independent Variable	Model 1.	Model 2.	Model 3.	Model 4.
X_{20} Social Furlough (Yes=1, No=0).	-0.5529** (0.2220)	-0.5144** (0.2223)	-0.4922** (0.2225)	-0.4949** (0.2227)
X_{21} Prison Term in Months.	0.0003 (0.0077)	0.0001 (0.0079)	0.00147 (0.00762)	0.00028 (0.00786)
X_{22} Released Through a Halfway House (Yes=1, No=0).	0.1676 (0.1894)	0.1556 (0.1878)	0.1960 (0.1902)	0.1612 (0.1885)
X_{23} Employed upon Release (Yes=1, No=0).	-0.4902** (0.1814)	-0.4596** (0.1804)	-0.4771*** (0.1823)	-0.4774*** (0.1812)
X_{24} Age at Release.	-0.0432*** (0.0100)	-0.0447*** (0.0102)	-0.0363*** (0.0098)	-0.0436*** (0.0101)
X_{25} Living With Spouse Upon Release.	-0.5251*** (0.1930)	-0.5162*** (0.1925)	-0.5155*** (0.1945)	-0.5403*** (0.1930)
Intercept	1.0197* (0.0191)	1.2374* (0.5793)	2.4187*** (0.6367)	-1.1175** (0.5813)
-2 Log Likelihood	987.585	993.166	977.64	985.73
Hosmer & Lemeshow Goodness of Fit Statistic Based on Deciles of Observations.	12.904 p=0.1152	11.357 p=0.1823	4.93 p=0.7650	7.56 p=0.4778

* P≤.10. **P≤.05. ***P≤.01 (Standard error in parenthesis.)

Appendix B. Tables Showing Recidivism Rates by Salient Factor Score for Releasees Receiving No Social Furloughs and Those Receiving at Least One Social Furlough for the Sample and for the Subset Used in Logistic Analysis In Part II, Table 26.

For The Total Sample:

Received No Social Furloughs	Salient Factor Score				
	Poor Risk 0-3	Fair Risk 4-5	Very Good Risk 6-7	Good Risk 8-10	Row Total
Recidivated Number	224	98	38	52	412
Percent	71.34	51.31	31.15	18.84	45.63
Did Not Recidivate Number	90	93	84	224	491
Percent	28.66	48.69	68.85	81.16	54.37
Subtotal	314	191	122	276	903

Received at Least One Social Furlough	Salient Factor Score				
	Poor Risk 0-3	Fair Risk 4-5	Very Good Risk 6-7	Good Risk 8-10	Row Total
Recidivated Number	16	13	7	21	57
Percent	50.00	28.89	14.58	11.86	18.87
Did Not Recidivate Number	16	32	41	156	245
Percent	50.00	71.11	85.42	88.14	81.13
Subtotal	32	45	48	177	302

Total	346	236	170	453	1205

Appendix B. continued.

For Observations Used in the Logistic Analysis in Table 21:

Received No Social Furloughs	Salient Factor Score				
	Poor Risk 0-3	Fair Risk 4-5	Very Good Risk 6-7	Good Risk 8-10	Row Total
Recidivated Number	154	60	26	39	279
Percent	73.68	46.51	32.50	18.57	44.43
Did Not Recidivate Number	55	69	54	171	349
Percent	26.32	53.49	67.50	81.43	55.57
Subtotal	209	129	80	210	628

Received at Least One Social Furlough	Salient Factor Score				
	Poor Risk 0-3	Fair Risk 4-5	Very Good Risk 6-7	Good Risk 8-10	Row Total
Recidivated Number	7	12	5	16	40
Percent	38.89	30.77	12.82	11.35	16.88
Did Not Recidivate Number	11	27	34	125	245
Percent	61.11	69.23	87.18	88.65	83.12
Subtotal	18	39	39	141	237

Total	227	168	119	351	865

Appendix C. Normalizing Policies, Operations, and Programs in The Federal Bureau of Prisons.

In this Appendix we describe in more detail the normalizing policies, operations, and programs that have been put into place and emphasized over the last several decades, which are listed in Part II of the main report.

Regarding a human relations approach to handling inmates, one feature of this approach is open communication between staff and inmates. Traditionally run prisons limited staff-inmate communication to orders given by staff. Communication can help reduce the alienation of inmates from staff and can, as some research has shown, lower levels of prisonization (McCleary 1960, 1961). The human relations approach recognizes that alienation can be overcome to some extent if staff can communicate to inmates as persons with specific needs. Open lines of communication means staff can offer law/rule abiding ways for inmates to meet their needs. Finally, it is hoped that the concept of reciprocity will come into play in that persons treated humanely will respond in kind.

The unit management style of operations used by the Bureau of Prisons facilitates communication by providing opportunities for staff to become familiar with the particular personalities, needs, and concerns of inmates in the unit to which these staff are assigned. Under the unit management approach, staff are assigned to a specific housing unit on a permanent basis rather than being continually shifted from unit to unit in the institution. Through repeated contact, staff members can obtain a better understanding of the personalities, needs, and concerns of each inmate in that unit.

Inmate classification insures that inmates are assigned to institutions appropriate for them, given their commitment to criminal norms and behavior (Kane 1986; Ingram 1987). Segregating the more from the less criminally committed inmates helps to prevent the spread of criminal norms and growth of inmate subcultures and prison gangs.

Research evidence suggests that employing female correctional officers in all-male institutions produces a number of normalizing effects. Because the all-male environment is not reflective of the real world, female correctional officers introduce some normalcy into the setting (Etheridge, Hale, and Hambrick 1984). Female officers have been found to communicate more openly with male inmates than male officers, which has led to lower violence rates in the living quarters (Owen 1985). Male inmates reported that they watched their manners and appearance more closely after female officers began working in their institution (Graham 1981; Peterson 1982).

The Discipline Hearing Officer (DHO) program places determination of guilt and sanctioning of inmates for violation of institution rules in the hands of a trained, independent, discipline hearing officer. The DHO program helps to insure that standard rules of evidence are followed for determining guilt or innocence, disparity is removed from the sanctioning process, and possible conflicts of interest are removed that may arise when correctional officers adjudicate misconduct as members of an institution disciplinary committee. The inmate can also appeal the DHO's decision to the prison warden and to regional or central office quasi-judicial authorities. In sum, the DHO process helps to introduce fairness and equality of justice into the handling of inmate misconduct.

The inmate grievance program facilitates communication by providing a mechanism for inmates to have their problems addressed by organizational managers both inside and outside the institution in which they are held. Therefore, inmate grievance procedures help to overcome the inmate's potential sense of isolation and helplessness in dealing with perceived wrongful treatment.

Visitation and social furloughs help moderate what is, for most inmates, one of the most painful aspects of imprisonment: the lack of close contact with family, friends, and home community.

Work and education programs provide inmates with opportunities to minimize, for a time, the pains of imprisonment (e.g., separation from family) through conventional activities which, in addition to any skills they impart, serve the socializing function of imparting law-abiding norms as industrial and educational institutions do in the larger society (Weir 1973).

Strategic particularism (e.g., case management, psychological, medical, and chaplaincy services) is referred to as such because it provides opportunities for staff to learn about the particular needs and characteristics of inmates and provides a venue for inmates to express their needs and, if possible, to have those needs met. Furthermore, the staff filling in these specific categories provide role models of law-abiding behavior.[21]

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[21] It is of note that the staff social climate surveys, administered to representative samples of institutional staff each year since 1989, show that staff filling service positions (e.g., teachers, chaplaincy, case managers, psychological services, health services) more so than staff in any other job category, feel that they can deal most effectively with inmates and that they can make

A system of sanctions and rewards provides incentive to participate in institutional programs in addition to the general incentive of escaping the pains of imprisonment (Johnson 1987).

Staff and inmate "climate" surveys serve several management and normalizing purposes. They provide management with insight into staff and inmate perceptions about the effectiveness of polices, operations, and programs. They help management identify ineffective practices (in terms of normalization, custody, and security), underlying causes, and corrective measures that are needed to alleviate these problems. Survey responses also help identify staff and inmate needs and concerns that are not being addressed and, therefore, can indicate new policies, operations, or programs that are needed. Finally, climate surveys also serve to build lines of communication between institution management and inmates (Saylor 1984; Dillingham and Montgomary 1983).

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a positive change in inmates' lives.

Appendix D. Do Guideline Sentences Achieve Their Stated Purposes When Applied to Low-Risk Drug Traffickers? *

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The stated purposes of the Federal Sentencing Guidelines enacted by Congress in 1984, and placed into effect in 1987, are to further the goals of incapacitation, deterrence, just punishment (i.e., retribution without disparity) and rehabilitation (U.S. Sentencing Commission 1992a., p. 1). Whether the Sentencing Guidelines have in fact achieved any of these purposes has not, as yet, been established. Well established, however, is that the Guidelines have resulted in much longer prison terms for drug traffickers. In this article, I use data collected as part of a recidivism study of persons released from Federal prison to examine the incapacitation achieved from the longer Guideline prison terms for low-risk (i.e., of recidivating) drug traffickers. I also briefly discuss the deterrent, retribution, rehabilitating, and sentencing disparity effects of guideline sentences.

I use data sets for two groups of persons released from Federal prison in the period January through June 1987 to study recidivism. The first group is a sample of U.S. citizens. The second group is composed of non-citizens, approximately 50 percent of whom were deported to their home country at, or near, release. I separate these two groups, first because non-citizens who account for such a large proportion of the drug traffickers in Federal Prison, are of interest as a separate group (approximately 25 percent of all Federal prisoners and 30 percent of all Federal prisoners convicted of drug law violations are non-citizens) and, second, because so many of the non-citizens are deported and, therefore, are less likely to recidivate in the U.S. than citizens.

The citizens and non-citizens were all sentenced under the old law (pre-Guideline sentencing law) and, therefore, served shorter prison terms than if they had been sentenced under the Guidelines. By observing the crimes committed by these 1987 releasees during the time they would be in prison had they been sentenced under the Guidelines, I was able to estimate the Guidelines' incapacitation effect. The offender group I examined was composed of low-risk drug traffickers, with low-risk defined as those falling into Category I of the United States Sentencing

* The views expressed in this article are those of the author and do not represent policies of the Federal Bureau of Prisons or the U.S. Department of Justice.

Commission's Criminal History scoring system. The Criminal History scoring system is a statistical risk-predicting device developed by the Sentencing Commission with scores grouped into six risk categories. Category I represents a very low risk of recidivating and Category VI a very high risk (U.S. Sentencing Commission 1992a, Chapter 4). I examined drug traffickers because they compose the largest single Federal prison offense group, both among admissions and population on hand -- as of June 1, 1993, 61 percent of all Federal prisoners were drug traffickers. Of the 27,525 persons sentenced to Federal prison in 1992, 14,293, or 52 percent, were convicted of drug trafficking and, of these, 9,007 persons, or 62.3 percent, fell into Criminal History Category I (U.S. Sentencing Commission 1992b).

To measure change in time served from old law to new law sentences, I compared the median time served for the 1987 release group with the median for low-risk drug traffickers sentenced to prison under the Guidelines in Fiscal Year 1992. By doing this, we are assuming that the two groups are more or less similar in criminal orientation.[22]

Table 1, Part I, presents recidivism rate information for each criminal history category for citizens. Part II of Table 1 shows the median prison time for citizens in each Criminal History Category. Part III of Table 1, shows the estimated median time served for drug traffickers sentenced to prison under the guidelines in Fiscal Year 1992 in each Criminal History Category. Part III also shows the additional median months to be

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[22] The analysis explicitly controls for Criminal History Category and, therefore, prior criminal record. However, we must assume that for this low-risk group, the current offense severity composition is similar between the 1987 study group and the cohort of Federal offenders sentenced in FY 1992. One potential reason for non-comparability is that the 1987 study group excludes persons with less than a 3-month sentence and persons with a State detainer. By excluding persons with a sentence of 3 months or less, the offense severity composition for the 1987 study group may be higher, on average, than for the 1992 comparison group. The exclusion of releasees with State detainers from the 1987 study group may, on the other hand, decrease the overall offense severity among that group relative to all low-risk drug traffickers sentenced in 1992. A remaining source of potential non-comparable offense severity is that new sentencing laws may result in prison sentences for persons who, under the old law, would have received probation. For this reason, the 1992 sentenced cohort may include offenders with lower offense severity, on average, than the 1987 study group.

served by the 1992 group over and above the median time served by the 1987 group. Also shown are the number and percent of all drug traffickers sentenced in FY 1992 in each Criminal History Category.

As we can see in Table 1, Part I, among low-risk drug traffickers (those in Criminal History Category I), 19.5 percent recidivated and 80.5 percent did not. The 51 recidivists accumulated a total of 72 arrests or parole revocations during the 3-year followup period. Moreover, additional analysis shows that when reason for failure is considered, none of the 51 low-risk drug traffickers who recidivated were charged with more serious crimes of violence such as found in the FBI UCR Violent crime index (i.e., homicide, rape, aggravated assault, or robbery). Instead, half of the failures were rearrested for drug sales or possession, 14 percent for theft or fraud, 12 percent for DWI, 6 percent for simple assault, and 19 percent had technical parole violations or arrests for miscellaneous non-violent offenses.[23]

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[23] The claim is sometimes made that official arrest records underestimate the actual rate of reoffending. Therefore, it can be argued that the recidivism rates reported for the 1987 study group under represent the rate of actual criminal behavior among this group. While this is no-doubt true, several factors should be considered when trying to assess unmeasured recidivism for this group. First, the majority of the low-risk drug traffickers in the 1987 study group were released on parole supervision, increasing the likelihood that any new offenses and any parole violations will be officially recorded (Petersilia and Turner 1993). Second, rearrest is used here as a measure of reoffending, not reconviction, where reconviction presumably would be a better measure of the actual offending or, at least; a better measure of the person's criminal culpability. In many State systems, less than 54 percent of all felony arrests result in a conviction (Rosen 1984). In other words, an arrest charge does not necessarily mean a conviction will occur and, therefore, that the person charged actually committed the offense. Third, and finally, probability theory tells us that many, if not most, undetected re-offending is committed by the same releasees who are rearrested and, therefore, the CHS which is used to predict those who recidivate, also predicts those who will commit undetected offenses. To summarize, while it is possible that our measure of recidivism underestimates the actual rate of reoffending by study group members, we should remember that: (1) the majority of the study group members were placed on parole supervision, increasing the likelihood of detecting any new offense; (2) rearrest and parole revocations are used to measure re-offending, not reconviction, therefore, the recidivism measure used may actually inflate the rate of criminal involvement; and (3) probability theory tells us that the

A group of low-risk drug offenders not included in the analysis just presented are the low-risk, non-citizen drug offenders. Today, non-citizens, the majority of whom have been convicted of a drug offense, compose 25 percent of the Federal prison population. In a separate analysis, we queried the NCIC system, an automated criminal history records system, for recidivism information on all non-citizen drug offenders released from BOP custody during the first 6 months of 1987 who had no prior incarcerations in the United States and whose incarcerating offense involved no weapons or violence. This group of 574 non-citizens is essentially identical with regard to Federal offense and criminal history score to the citizen group of low-risk drug offenders.[24] Within 3 years of release, 61 persons, or 10.4 percent, of these low-risk, non-citizens recidivated and 89.6 percent did not. This is a substantially lower recidivism rate than for the comparable group of citizens. One reason for this

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recidivists will account for the majority of any undetected reoffending among these releasees.

[24] Some may argue that because offenses committed overseas by non-citizens are either unknown or, if known, are not used to compute Sentencing Guideline Criminal History Scores, that the non-citizens used in this analysis may have substantial criminal records not reflected by their Guideline CHS. To check this, I used self reported prior record data from a 1991 survey of Federal prisoners to compare the criminal records reported by first time (in the United States) drug offenders who were citizens, with those reported by non-citizens. Almost no prior convictions, and very few prior arrests were reported by either group. That is, self reported prior records were the same for citizens and non-citizens. To check the veracity of these self reports, for citizens only, I compared the inmate's version of their criminal record with official records in prison files. I found few discrepancies between the inmate's self reports and the official records. To further estimate the "true" Criminal History Scores of the low-risk non-citizens, I used data for substance abuse, prison behavior, marital status, and work history, among other variables, to estimate a regression equation predicting the criminal history scores for non-citizen drug offenders released from prison in 1987. The resulting equation had an R-Square of .64 indicating a fairly high ability to predict. I then used coefficients from this model to predict Criminal History Scores with data for a representative sample of low-risk non-citizen drug offenders in the Federal prison population during July 1993. The Criminal History Scores estimated for low-risk non-citizens were essentially no different from those for low-risk citizens, even correcting for error. In sum, there is little evidence that the low-risk non-citizens have more serious criminal histories than low-risk citizens.

lower recidivism rate, as indicated by prison release records, is that approximately 50 percent were deported to their home country after release from BOP custody. Therefore, the deportees could not recidivate in the United States unless they returned and, apparently, few did, or if they did, they were not rearrested.

Based on the recidivism information for both citizens and non-citizens, it appears that low-risk drug traffickers are truly a low-risk failure group when released from prison who, when they do fail, typically commit non-violent offenses. This suggests that these low-risk drug traffickers would be an appropriate group to consider for diversionary programs from prison, all the more so since drug law violators, many of whom are first-offenders, currently constitute a sizable number of all Federal prison admissions. Among new admissions to Federal prison in FY 1992, 14,293, or 52 percent were convicted of drug trafficking and 9,007, or 62.3 percent of all drug trafficking admissions, were Criminal History Category I offenders (U.S. Sentencing Commission 1992b).

In light of the low recidivism rate among low-risk drug traffickers and their seeming appropriateness for prison diversion, when we compare the prison terms of the 1992 group of low risk drug traffickers with the 1987 group, a startling picture emerges. We find that while the citizens served a median time of 16.8 months in prison prior to release (see Table 1, Part II) and non-citizens 17.3 months, the 1992 sentenced group will spend a median 51 months in prison (see Table 1, Part III).[25] In other words, the indication is that the 1992 admissions will serve almost 3 years longer in prison than their 1987 counterparts.

The question is: Why should this difference exist? What is causing a group of inmates who served a median of 16.8 months in prison in 1987 to now be serving almost 3 years longer? The answer, very simply, is the Sentencing Guidelines. The 1987 study group members were all old law cases who were parole eligible upon one-third completion of sentence. The 1992 admissions, however, are guideline cases, whose sentences may be shorter than they would have been under the old law, but contain no provision for parole. Instead, guideline cases must serve at

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[25] I use the median prison term throughout this article to present a conservative estimate of the impact Guideline sentences have on low-risk drug traffickers. I could have used the mean prison term which would have shown an even greater impact than the median. The mean prison term (prison sentence adjusted for the 15 percent goodtime allowance) for low-risk drug traffickers sentenced in FY 1992 was 65.8 months, 14.8 months or 1.2 years longer than represented by the median prison term for this group.

least 85 percent of their sentence in prison before they are eligible for release.

We need to ask what is accomplished by confining low-risk drug traffickers in prison for almost 3 years longer now than in 1987. If the intention is to incapacitate this group for a longer period of time to keep them from committing more crimes in this time, we gain very little since our analyses show that 80 percent of the citizens and 90 percent of the non-citizens did not recidivate. Therefore, no crimes are incapacitated for the overwhelming majority of these persons during the additional 3 years in prison under the Guidelines. Furthermore, it appears from the rearrest data that few, if any, serious (FBI UCR Index) violent crimes, the types of crimes about which everybody is most concerned, are committed by those releasees who did recidivate. If the intention is to deter these individuals from further law violations upon release from prison, it is unlikely that more time in prison will further reduce the already very low recidivism rate for this group.[26] If rehabilitation is the intention then, given the low recidivism rates for the low-risk drug traffickers, the maximum rehabilitation achievable was, most likely, achieved under the much shorter old law sentences. In fact, logic suggests that the alienation, deteriorated family relations, and reduced employment prospects resulting from the extremely long removal from family and regular employment may actually increase recidivism. If reducing sentencing disparity is the objective, longer prison terms do nothing by themselves to reduce disparity. Furthermore, there is scant evidence of serious sentencing disparity under the old law as actually practiced and growing evidence that the Guidelines have tacitly increased Federal prosecutors' discretion in plea bargaining, resulting potentially in sentencing disparity arising from new prosecutorial plea bargaining practices (Freed 1992; Heaney 1991). If the intention is to deter others in society from dealing in illegal drugs, we need only note that the real price (i.e., adjusted for inflation) of these drugs is lower today and the supply more plentiful than at any time since information on street price has been collected (NCJA Justice Bulletin 1993).[27]

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[26] Prison time served has never been found to reduce recidivism in any of the recidivism studies conducted on Federal prison releasees (Harer 1993; Beck and Hoffman 1976).

[27] The claim that illicit drugs would be even more plentiful and at lower prices than presently if it were not for the deterrent effect of the long prison sentences given under the guidelines finds no support in the theoretical or empirical literature on drug trafficking. Drug trafficking is a demand-driven economic crime (Reuter and Kleinman 1986; Kleinman 1993). The research evidence also suggests that in the drug-producing countries there is a

The answer to the question, "What is being accomplished," it would appear, is more punishment, or more retribution imposed on these individuals for their violations of Federal drug laws, in which case, we can legitimately ask: But at what price?

Currently, it costs around $20,000 per year to house an inmate in a Bureau of Prisons facility. If we apply this figure to the 9,007 low-risk drug traffickers sentenced to prison in FY 92, the additional 34.2 months that they will spend in prison under the new sentencing law will cost the Federal Prison System approximately $515 million. If we extend this amount over the 3 additional years that each of 3 admission cohorts of 9,007 low-risk drug offenders will spend in prison, the total added Federal prison cost, resulting from the guidelines, amounts to more than $1.5 billion. This is taxpayers' money that otherwise could be spent to improve the nation's physical or human capital, or reduce the demand side of the illicit drug economy. Furthermore, this estimate does not include any additional costs associated with keeping individuals confined in prison for an extra 3 years, such as welfare costs and lost taxes.

This analysis is preliminary and in need of further refinement, but it does seem clear that by imposing longer sentences on low-risk drug traffickers, there has been a substantial increase in retribution with little, if any, reduced sentencing disparity, or increased incapacitation, deterrent, or rehabilitation value and a huge increase in taxpayer dollars spent. Perhaps the time has come to step back and consider the wisdom of the Sentencing Guidelines, especially as they apply to low-risk drug traffickers. An alternative to long prison terms for this group of offenders may be more appropriate and less costly to society.

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nearly endless queue of persons willing to replace the drug producers and transporters now serving long terms in a Federal prison. Research also suggests that the solution to the nation's illicit drug problem lies on the demand side (through drug education and drug rehabilitation). Long prison terms for drug traffickers do not attack the demand side of the illicit drug economy. Furthermore, the extraordinarily long determinate sentences many low-risk drug offenders are now receiving, rather than sending a strong symbolic message to the public and to would-be drug offenders may, because of their very extremeness relative to the offender's real risk to society, actually undermine the implicit and explicit social function of the criminal justice system, weakening the power of the message to the public and would-be drug offenders. More importantly, these extreme sentences for low-risk drug offenders which, in several instances, equal, or even rival, sentences given repeat violent and sex offenders, may weaken the power of the symbolic message sent to would-be violent or sex offenders.

Table 1, Part I. Recidivism Rates by Criminal History Category for Drug Traffickers in the 1987 Release Study Group Released in the United States.

Criminal History Category (Scores in Parentheses)

	I (0-1)	II (2-3)	III (4-6)	IV (7-9)	V (10-12)	VI (13+)	Total
Failed	45	17	22	23	12	19	138
Percent	19.07	35.42	40.00	51.11	80.00	73.08	32.71
Successful	191	31	33	22	3	7	287
Percent	80.93	64.58	60.00	48.89	20.00	26.92	67.53
Total	236	48	55	45	15	26	425
Percent	55.53	11.29	12.94	10.59	3.53	6.12	100.00

Part II. Median Time Served in Months for Citizen Drug Traffickers in the 1987 Release Study Group by Criminal History Category. (All persons in the 1987 Study Group were Sentenced Under The Old Law).

Criminal History Category

	I	II	III	IV	V	VI	Total
Median Months Served	16.8	18.7	16.3	12.4	12.7	12.6	16.4

Part III. Median Time Served in Months for Drug Traffickers Sentenced Under the Guidelines in Fiscal Year 1992 -- Additional Months They Will Serve Compared to Old Law Offenders, and Number and Percent Sentenced, by Criminal History Category.

Criminal History Category

	I	II	III	IV	V	VI	
Median Months They Will Serve*	51.0	51.9	61.2	74.0	81.2	138.4	
Additional Months Under New Law.	34.2	33.2	44.9	61.6	68.5	125.8	
Number Sentenced in FY 1992.	9,007	1,937	1,819	732	350	614	Total 14,459
Percent	62.3%	13.4%	12.5%	5.1%	2.4%	4.3%	

*Estimated by reducing the median sentence by 15 percent, the maximum available good time; because some inmates may have good time taken away because of prison misconduct, this will slightly underestimate the actual median time served.

Appendix E. Drug Abuse Profile Among 1987 Study Group Releasees Who Abuse Each Drug.

	Number	Percent
Opiate (Heroin) Users	246	100.0
Opiate only	21	8.5
Hallucinogens also	55	22.4
Stimulants also	45	18.3
Barbiturates also	58	23.6
Marijuana also	174	70.7
Alcohol also	107	43.5
Cocaine also	139	56.5
Other Drugs also	19	7.2

	Number	Percent
Hallucinogen Users	108	100.0
Hallucinogens only	2	1.9
Opiates also	55	50.9
Stimulants also	34	31.5
Barbiturates also	43	39.8
Marijuana also	95	88.0
Alcohol also	54	50.0
Cocaine also	79	73.1
Other Drugs also	16	14.8

	Number	Percent
Stimulant Users	96	100.0
Stimulants only	2	2.1
Opiates also	45	46.9
Hallucinogens also	34	35.4
Barbiturates also	41	42.7
Marijuana also	80	83.3
Alcohol also	55	57.3
Cocaine also	59	61.5
Other Drugs also	23	24.0

	Number	Percent
Cocaine Users	384	100.0
Cocaine only	30	7.8
Opiates also	139	36.2
Hallucinogens also	79	20.6
Stimulants also	59	15.4
Barbituates also	63	16.4
Marijuana also	297	77.3
Alcohol also	147	38.3
Other Drugs also	26	6.8

	Number	Percent
Barbiturate Users	112	100.0
Barbiturates only	2	1.8
Opiates also	58	51.8
Hallucinogens also	43	38.4
Stimulants also	41	36.6
Marijuana also	95	84.8
Alcohol also	71	63.4
Cocaine also	63	56.2
Other Drugs also	23	20.5

	Number	Percent
Marijuana Users	527	100.0
Marijuana only	64	12.1
Opiates also	174	33.0
Hallucinogens also	95	18.0
Stimulants also	80	15.2
Barbiturates also	95	18.0
Alcohol also	228	43.3
Cocaine also	297	56.4
Other Drugs also	35	6.6

Appendix E. Continued.

	Number	Percent		Number	Percent
Alcohol Users	408	100.0	Other Drug Users	40	100.0
Alcohol only	107	26.2	Other Drugs only	1	2.5
Opiates also	107	26.2	Opiates also	19	47.5
Hallucinogens also	54	13.2	Hallucinogens also	16	40.0
Stimulants also	55	13.5	Stimulants also	23	57.5
Marijuana also	228	55.9	Barbiturates also	23	57.5
Barbiturates only	71	17.4	Marijuana also	35	87.5
Cocaine also	147	36.0	Alcohol also	25	62.5
Other Drugs also	25	6.1	Cocaine only	26	65.0

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