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**ANTECEDENTS AND CONSEQUENCES OF PRISON ADJUSTMENT:
A SYSTEMATIC ASSESSMENT AND REASSESSMENT APPROACH**

Laurence L. Motiuk

A dissertation submitted to the Faculty of Graduate Studies
of Carleton University in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy in Psychology

Ottawa, June, 1991

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The undersigned hereby recommend to
the Faculty of Graduate Studies and Research
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Larry Motiuk
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy

Chairman, Department of Psychology

Thesis Supervisor

External Examiner

Carleton University
June, 1991

ABSTRACT

A longitudinal multi-wave data set was compiled on a sample of 510 adult male inmates in order to explore the relative efficacy of using simple predictors, classification methods and combinations of assessment procedures (i.e., test-retest) for improving actuarial predictions regarding important correctional outcomes. Four waves of offender data were gathered to allow for separation of the effects of pre-admission, incarceration and post-release. Overall, the results indicated that a wide variety of pre-prison case-based variables, attributes of the broader prison community, and events while in prison have considerable predictive value. In addition, intake assessment and post-release reassessment procedures were found to have predictive merit in relation to criminal recidivism. Although analysis of variance revealed that treatment in prison was associated with decreased recidivism among higher risk cases, a risk-by-service (i.e., office visits) interaction on the general recidivism outcome measure was found to be non-significant in the community. It would appear that simply increasing frequency of contact between professionals and high risk offenders, without targeting and servicing relevant criminogenic needs, is not sufficient enough to bring about significant reductions in post-release recidivism.

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INTRODUCTION

The empirical investigation of persistent criminal behavior occupies an important status in the field of corrections. Many researchers, as well as practitioners in the field, understand that criminal recidivism is an important problem because it reflects criminal futures and thereby provides an indication of the effectiveness of correctional interventions (Lipton, Martinson, & Wilkes, 1975; Greenberg, 1977; Sechrest, White, & Brown, 1979).

Notwithstanding the empirical evidence which has accumulated on the prediction of correctional outcomes (Andrews, 1983; Andrews & Friesen, 1987), the prediction of prison adjustment and criminal recidivism with intake assessments of offender characteristics has been largely focused on pre-service or pre-prison case-based variables (Andrews & Kiessling, 1980). In developing a model for conceptualizing interventions in social service agencies, Hoge and Andrews (1986) postulated that outcomes of an intervention process are a function of at least five other analytically distinct classes of variables. These included: 1) attributes of the broader community and agency within which a program is located, 2) the social structure and organizational characteristics of programs themselves, 3) particulars of the content and process of service, 4) the

specific intermediate changes which occur in the client and his/her circumstances, and 5) interactions among the preceding sets of variables.

A great deal is known about the personal characteristics of offenders (Carbonell, Megargee, & Moorehead, 1984; Mackenzie, Goodstein, & Blouin, 1987; Andrews & Wormith, 1989), inter-personal influences (Henderson & Hewstone, 1984), situational determinants (Flanagan, 1980; Goodstein, 1980; Holley & Mabli, 1978) and environmental conditions (Clayton & Carr, 1984; Gaes & McGuire, 1985; Wright, 1985) which presumably shape the prison adjustment process but these have not led to a coherent model of adjustment in prison and/or community. Increasingly, it seems that prison adjustment involves more than one factor; personal, interpersonal, situational, and environmental factors interact in a complex chain of causation that can be modeled only when all of these sets of variables are integrated. To date, the insularity of research in each area has been a hindrance to the development of an integrative approach to offender assessment.

The principal focus of the present investigation is to determine those aspects of prison experience and community release which modify the predictive validity of intake assessments. Moreover, this study also attempts to identify those aspects of community release which modify the

predictive validity of prison variables. Presently, the reasons for a lack of understanding in this area appears to be twofold. First, most correctional research has focused on average effect size rather than magnitude of offender-by-treatment interactions on important correctional outcomes. It is here, perhaps, that new research should make its start and not view correctional interventions as simply ineffectual but as hampered by implementation.

The second difficulty is seen in terms of measurement. Prison adjustment appears to be a construct that is so multi-faceted, complex, and elusive over time that measurement is made extremely difficult. It is suggested that new techniques (i.e., multimethod-multipredictor assessment and the employment of systematic reassessment) may be required to understand prison adjustment. Therefore, new research would be beneficial if the focus was on the simultaneous examination of both the antecedents and consequences of prisoner adjustment. Furthermore, the development of new methods of identifying and analyzing prison adjustment would facilitate the task of assessing and influencing the direction and impact of prison adjustment.

In sum, it appears that those factors most influential in mediating prison adjustment are not fully understood enough to give a clear conception of the processes of post-release outcome. Given a prisoner's potential for improvement during incarceration, then empirical invest-

igation of the sources of adjustment is the task at hand. The following review of the literature examines the relative efficacy of selected variables in identifying adjustment patterns among prisoners and ex-prisoners in the community. First, the predictive value of both intake (i.e., admission) and institutional variables are explored with respect to a variety of selected criterion measures of prison adjustment. Then, both intake/release and institutional variables are examined in relation to selected post-release outcome criteria. An in-depth review of the empirical literature on each of these sets of variables follows.

REVIEW OF THE LITERATURE

Criterion Measures of Prison Adjustment

Most investigations exploring the issue of prison adjustment have evaluated inmates in terms of disruptive or rule-breaking behavior (Bonta & Kiem, 1978). So far, attention has focused on riots (Moss, Hosford, Anderson, & Petraca, 1977; Moss, Johnson, & Hosford, 1984), assaults (Atlas, 1982; Gaes & McGuire, 1985; McGurk, Davis, & Grehan, 1981), homicides (Akman, 1966; Porporino, Doherty, & Sawatsky, 1987), rule infractions (Adams, 1977; Booth & Howell, 1980; Clayton & Carr, 1984), incident reports (Louscher, Hosford, & Moss, 1983), misconducts (Bonta &

Nanckivell, 1980; Flanagan, 1980, 1983), drug abuse (Panton & Brisson, 1971), escapes (Anson & Hartnett, 1983; Beall & Panton, 1956; Duncan & Ellis, 1973; Holland & Holt, 1980; Jan, 1980; White, 1979), transfers (Toch, 1982; White, 1981), self-mutilations (Jones, 1986; Panton, 1962) and suicides (deHeer & Schweitzer, 1985; Hayes, 1983; Miller, Chiles, & Barnes, 1982).

Another large collection of investigations examining the topic of prison adjustment have assessed inmates with respect to illness behavior (Motiuk, 1986). For these studies, adjustment criteria have included illness complaints (Agus & Allen, 1968; McCain, Cox, & Paulus, 1976; Porporino & Zamble, 1984), sick call attendance (Engebretsen & Olson, 1975; Jones, 1976; Megargee & Bohn, 1979; Twaddle, 1976), medical diagnoses (Froom, Howe, Mangone, Swearingen, & Warren, 1977; Novick, Della Penna, Schwartz, Remlinger, & Lowenstein, 1977), medication line attendance (Botterell, 1975; Motiuk & Giesebrecht, 1986; Waitzkin, 1971), and hospitalizations (Goldsmith, 1975; Whalen & Lyons, 1962).

A number of investigative efforts have also focused on the psychophysiological responses which occur among prisoners. These include: blood pressure (Culpepper & Froom, 1980; D'Atri, Fitzgerald, Kasl, & Ostfeld, 1981; D'Atri & Ostfeld, 1975); EEG alpha frequency (Gendreau, Freedman, Wilde, & Scott, 1972); adrenocortical activity (Ecclestone, Gendreau, & Knox, 1974); and sleep disruption

(Goldsmith, 1972; Toler, 1978; Zil, 1983).

As yet, there has been relatively little research investigating prison adjustment in terms of prosocial behavior. Typically, educational evaluations (Megargee & Bohn, 1979); work performance ratings (Driscoll, 1952; Megargee, 1972; Wolfgang, 1961); and attitudinal changes (Brown, 1976; Mylonas & Reckless, 1963; Rosenfeld & Linn, 1976) have been utilized in this regard.

Factors Linked with Prison Adjustment

The emphasis in this section is on identifying those variables that are at least minimally predictive of prison adjustment. The list of predictor variables generated by this review was essentially guided by their availability in the published literature. However, as will be discovered, the list reflects some of the best-known correlates and predictors of delinquency, criminality, and recidivism, in criminal behavior theory and research.

Two major theoretical perspectives on prison adjustment can be found in the literature. First, the 'deprivation model' (Clemmer, 1940; Sykes, 1958) emphasizes the prison environment itself as the principal determinant of inmate responses. Secondly, 'importation theory' (Irwin & Cressey, 1962), focuses on the pre- and extra-prison influences as the major factors related to prison adjustment. While both models can be said to have merit, Hawkins (1976) found that the empirical evidence tends to support the 'importation model'. More recently, however, an elaborate model of coping, behavior, and adaptation among prison inmates has been developed by Zamble and Porporino (1988). Essentially, it posits that the determination of prisoner behavior lies in the "interaction of external and internal factors" (p. 145). In this regard, a systematic review of both prison intake and institutional variables follows.

Intake Variables and Prison Adjustment

A systematic review of the penological literature revealed a considerable amount of research activity regarding both personal and situational variations upon admission as important determinants of prison adjustment phenomena. The studies reviewed in this section are appended (see Appendix A) and summarized below under the following headings: 1) race, 2) age, 3) admission status, 4) criminal history, 5) education level, 6) employment record, 7) financial status 8) family/marital situation, 9) living arrangement, 10) criminal associations, 11) substance use/abuse, 12) emotional/personal, and 13) attitude.

Table 1

Prison Adjustment Studies: Intake Variables

Factors	Studies	Predictive	
	#	#	%
1. Race	12	8	(66.7)
2. Age	16	14	(87.5)
3. Admission Status	3	3	(100.0)
4. Criminal History:			
a) prior convictions	3	2	(66.7)
b) juvenile criminal history	3	2	(66.7)
c) prior prison	6	3	(50.0)
d) prior misconducts	4	4	(100.0)
e) previous supervision	4	2	(50.0)
f) offence type	11	7	(63.6)
g) sentence length	4	4	(100.0)
subtotal:	35	24	(68.6)
5. Education Level	7	5	(71.4)
6. Employment Record	5	5	(100.0)
7. Financial Status	2	1	(50.0)
8. Family/marital Situation	7	5	(71.4)
9. Living Arrangement	2	2	(100.0)
10. Criminal Associations	4	4	(100.0)
11. Substance Use/abuse	6	4	(66.7)
12. Emotional/personal	4	1	(25.0)
13. Attitude	2	2	(100.0)
Total	105	78	(74.3)

1. Race

The over-representation of various racial minorities among prison populations has been sometimes so strong that a minority outside can sometimes become a majority inside institutions (Goodstein & Mackenzie, 1984). North American natives have been found to be over-represented in many Canadian prisons (Irvine, 1978; Schmeiser, 1974) while blacks have been reported to be over-represented in many United States prisons (Christianson, 1981). Consequently, inside many institutions a wide variety of informal organizations based solely on ethnic group identification have been found to exist. Jacobs (1976) described these groups in terms of being either political (e.g., Black Panthers), religious (e.g., Muslims), or social (e.g., Mexican Mafia). Irwin and Cressey (1962) have pointed to the importation of preprison cultural and social experiences of these racial groups as being important factors affecting their adjustment to prison.

A considerable number of investigations have examined the predictive validity of the variable race in relation to a variety of prison adjustment criteria. Coe (1961) reported that better adjusted inmates tended to be white. Similarly, Flanagan (1983) also found that race was significantly correlated with infraction rates. More specifically, white inmates had substantially lower infraction rates than black inmates or others. In another

sample Holland and Holt (1980) found that white prisoners were significantly more likely to be excluded from disciplinary actions, and being non-white was significantly related to escape ratings and actual escapes. Finally, Goetting and Howsen (1986) found that being black was again significantly associated with a higher likelihood of engaging in rule-breaking behavior.

Results from other studies, however, have been contradictory. Schnur (1949) found no significant relationship between either race and birthplace of parents or race and birthplace of inmate with misconduct citations. Wolfgang (1961) also reported that no racial differences of any kind emerged in an exploration of prison adjustment. Fagan and Lira (1978) found that whites reported higher levels of mood disturbance, more depression, and higher levels of tension-anxiety than blacks. Similarly, Oldroyd and Howell (1977) found in a Utah State prison that white inmates reported higher levels of depression than Blacks. Adams (1977), however, found no significant racial differences between inmates in terms of rule infractions.

In five United States prisons, Goodstein and MacKenzie (1984) compared 842 white and 776 black inmates on a situational stress questionnaire. Results indicated no racial differences in anxiety levels either before or after controlling for sociocultural and criminal justice system experience factors. Although significant differences were

found on depression scales with blacks reporting higher levels of depression than whites, Goodstein and MacKenzie (1984) concluded, as Carroll (1974) had suggested, that these inconsistent results may be due to the influence of the racial group's relative dominance within the inmate population.

Reports on racial variations in relation to illness behavior among prisoners have been more consistent. Jones (1976) found that with regards to race, black inmates had a higher incidence of reported illness than white inmates. McCain, Cox, and Paulus (1980) also examined the illness complaint rates and found that Black inmates had higher illness complaint rates than White inmates. In addition, it was discovered that Anglo Americans identified more symptoms than Mexican Americans.

In sum, the available data suggests that racial variations may have at least some minimal predictive validity in relation to a variety of adjustment criteria in correctional settings. In particular, the data points towards the notion that racial minorities in prison are more likely to engage in rule-breaking behavior than their Caucasian counterparts.

2. Age

A large body of data has accumulated regarding age variations in adjustment criteria among prisoners. For the

most part, the data relating age homogeneity to disruptive behavior in prison has remained consistent over the years. Schnur (1949) found that the older an offender was upon entering prison then the less likely they were to receive misconduct citations. Moreover, he reported that the older the inmates were when they quit school and were arrested for their first crime, then the less disruptive they were in prison. Similarly, Coe (1961) found that well adjusted inmates tended to be older at time of admission as well as time of first arrest.

Wolfgang (1961) reported that there was a "great divide" at 35 years of age whereupon better adjusted prisoners were likely to be fall in this higher age bracket. In addition, the older the inmate was upon release from prison then the less likely they were to have been cited for misconducts. Wolf, Freinek, and Shaffer (1966) also addressed the relationship between age and number of rule infractions committed and a strongly significant inverse relationship was found. Moreover, these researchers noted a significant tendency for older inmates to break less serious prison rules (e.g.'s. malingering, out of bounds, failure to obey) than younger inmates.

In a study of Canadian penitentiary assaultive events, Akman (1966) found that younger inmates accounted for the highest percentage of assaults. At a Canadian maximum security detention centre, Bonta and Nanckivell (1980)

compared 52 male inmates who had committed misconducts with 134 inmates who had no history of misconducts on several demographic measures. Younger inmates were found to be significantly more likely to commit misconducts than older inmates. Flanagan (1983) reported that age at commitment, particularly with respect to those under 25 years of age, was the strongest correlate of infraction rate status. In another study, Holland and Holt (1980) found that age was significantly correlated with disciplinary ratings and escape ratings. Again, as the age of a prisoner increased then the less disruptive they were while in custody. Similarly, Goetting and Howsen (1986) found that younger inmates were more likely to be involved in assaults with other inmates. In another sample of Canadian penitentiary inmates, Porporino and Zamble (1984) reported that older prisoners were involved in less disciplinary infractions than their younger counterparts. In four U.S. Prisons, MacKenzie (1987) explored age and adjustment to prison. It was found that conflicts with other prisoners, conflicts with guards, assertive interactions, and fear of victimization peaked in the early twenties and showed a steady decline thereafter. Hence, the data relating age homogeneity with disruptive behavior in prison has remained constant across many diverse settings as well as over time.

Some examples of age variations in illness behavior patterns among imprisoned offenders can be found in the

health care literature. Twaddle (1976) reported that the use of sick call in prison was inversely related to age. That is, the youngest age group was responsible for the highest proportion of inmates making sick calls. In the State of Tennessee, Jones (1976) found that inmates between 17 and 24 years reported the highest incidence of illnesses, followed by 45 years or over, between 25 and 34 years, and between 35 and 45 years. Inmates over 45 years old reported the lowest number of injuries. However, Porporino and Zamble (1984) reported that number of physician visits in a Canadian Federal penitentiary was unrelated to age. Similarly, in their 28 day post admission follow-up study, Motiuk and Giesebrecht (1987) found that age was also unrelated to sick call returns.

While the above studies have raised support for the predictive validity of age in relation to disruptive and maladaptive behavior, few investigators have reported on age variations with respect to prosocial behavior. In a sample of 608 inmates at the Wisconsin State Prison, Schnur (1948) addressed age factors in association with participation in a prison day school program. Schnur (1948) found that age at release on parole, age at leaving school, age at first arrest, and age at entering Wisconsin State Prison were inversely related to school participation. Presently, the lack of research relating age to prosocial behavior in prison hampers any conclusions that can be drawn about the

predictive validity of age in this regard.

Overall, the predictive validity of age with respect to disruptive behaviors in prison has been consistent across studies. These findings substantiate Mabli, Holley, Patrick and Walls' (1979) contention that increasing age heterogeneity inside prisons may be a useful violence-reducing strategy. As yet, the relative value of age variations in identifying illness and prosocial behavior patterns among prisoners remains unclear.

3. Admission Status

Explorations of commitment type in relation to prison adjustment have been a much neglected topic in the penological literature. Whether an offender has been remanded, sentenced, or parole revoked into custody could possibly influence their respective responses to imprisonment. Coe (1961) reported that a statistically significant difference between well adjusted and poorly adjusted inmates with respect to type of commitment but did not delineate the actual types of commitment. Bonta and Kiem (1978) reported that inmates who were remanded into custody to await their trials had fewer misconducts than sentenced offenders. Similarly, Flanagan (1983) found that inmates serving indeterminate or indefinite sentences had significantly higher infraction rates than inmates serving reformatory time. In sum, the paucity of research in this

area points to a need for further investigations which encompass admission types while controlling for other factors such as age, criminal history, and duration of incarceration.

4. Criminal History

Traditionally, criminal history has been the most widely researched topic in the penological literature. Notwithstanding the important contribution that criminal history makes to the prediction of criminal behavior, it remains yet to be demonstrated whether these same historically set items are efficient predictors of adjustment to prison. The review that follows is meant to provide a synopsis of the criminal history variables that have been examined previously in the literature on prison adjustment. These include prior convictions, juvenile criminal history, number of prior prison terms, prior misconducts, previous supervision, offence type, and sentence length.

Prior convictions. Some explorations of the predictive validity of prior criminal record with regards to prison adjustment have been conducted. Schnur (1949) reported that having prior convictions was significantly associated with the number of misconducts cited in prison. Coe (1961), however, found no significant difference between well adjusted inmates and poorly adjusted inmates in terms of

either number of prior arrests or number of prior convictions. More recently, Goetting and Howsen (1986) presented evidence that rule-breaking behavior in prison was significantly correlated with a high number of prior convictions.

Juvenile criminal history. Reports on the predictive validity of a juvenile criminal history in relation to prison adjustment are also available. Although Coe (1961) reported that there was no significant difference between well adjusted and poorly adjusted inmates in terms of the number of commitments to juvenile institutions, Adams (1977) found that having a prior training school record was significantly related to infractions in prison. Similarly, Porporino and Zamble (1984) reported that having a juvenile criminal history was correlated significantly with disciplinary infractions.

Number of prior prison terms. A number of investigations have explored the predictive validity of prior prison experience with respect to prison adjustment. Wolfgang (1961) found a significant positive relationship between previous penal experience and prison adjustment. As Wolfgang (1961) noted, prisoners who have had prior experience with incarceration are better equipped to acclimatize themselves to the routines of prison life. Similarly, Holland and Holt (1980) reported that prior prison experience was significantly correlated with

disciplinary ratings and escape ratings. The direction of these correlations would seem to indicate that prisoners become less disruptive with increased custodial experience. Contrary to the aforementioned findings, Coe (1961) reported that there was no significant difference between well adjusted and poorly adjusted inmates with respect to the number of previous commitments to adult institutions. In keeping with this finding, Porporino and Zamble (1984) found that number of prior prison terms was also not significantly correlated with depression, anxiety, disciplinary infractions, or stress complaints.

Prior misconducts. Several research efforts have addressed prior misconducts in association with prison adjustment criteria. In American prisons, Fox (1958) estimated that approximately four out of every five inmates placed in solitary confinement had been in solitary confinement or on punishment status previously. Wolf, Freinek, and Shaffer (1966) found that inmates who have a history of violating prison rules were more likely to be involved in serious rule violations (e.g.'s., assault with weapon on officer, escape-breakout, sexual perversion-sodomy by force). Bonta and Kiem (1978) reported that there was a significant relationship between prior misconducts and being involved in current misconducts. Similarly, Bonta and Nanckivell (1980) found that inmates who committed a misconduct during a previous incarceration were more likely

to commit a misconduct during another term. With respect to prosocial behavior in prison, Schnur (1948) found that number of misconduct citations excluding commitments to solitary confinement as well as the number of commitments to solitary confinement were significantly related (negatively) to day school participation.

Previous supervision. A few investigations have focused on previous supervision as a predictor of prison adjustment. Schnur (1949) found that the total time spent under legal supervision from birth up to release was significantly related to misconduct citations. However, Coe (1961) reported that there was no significant difference between well adjusted and poorly adjusted inmates in terms of either the number of times parole was granted or the number of times parole was violated. In another study, Schnur (1948) addressed prosocial adjustment concerns and found that the total time spent under legal supervision during a prisoner's life was related to participation in day school. Finally, Adams (1977) reported that previous suspended sentences were unrelated to prison adjustment. It would appear that the predictive validity of prior supervision in identifying adjustment patterns among prisoners remains unclear at this time. More research on the predictive validity of prior supervision with respect to prison adjustment is warranted.

Offence type. A considerable amount of evidence has been gathered on the predictive validity of offence type in relation to prison adjustment. In a Wisconsin State Penitentiary sample, Schnur (1949) reported that admission offence was significantly associated with conduct in prison. For example, offenders admitted to prison for crimes of abandonment, non-support, desertion, embezzlement, and forgery were likely to incur fewer misconduct citations than those committed for arson, breaking and entering, burglary, larceny, assault with intent to rob, robbery, and operating a vehicle without an owners consent. Coe (1961) found that poorly adjusted inmates were involved in more violent offenses than well adjusted inmates. Among Canadian penitentiary inmates, Akman (1966) reported that prisoners serving time for robbery counted for approximately the same number of assaults on staff as those serving time for theft. Together, Akman (1966) noted that these two offence types accounted for over seventy per cent of all assaults in prison. Adams (1977) reported that murder-manslaughter offenses versus property theft yielded no significant differences with respect to infractions in prison. Although Bonta and Kiem (1978) also found that inmates charged with assault related crimes were over-represented in misconduct groups, one wonders whether these individuals come under closer scrutiny of custodial personnel by mere virtue of the nature of their crimes. It is suggested by Waitzkin (1971)

and Twaddle (1976) that such a situation necessarily places such prisoners at greater risk for being cited.

Nevertheless, Holland and Holt (1980) found that offence severity (using a modification of the Legal Offence Severity scale) was significantly correlated with escapes. Finally, Schnur (1948) noted that the crime type for which an offender was committed was significantly associated with school participation in prison.

Some contradictory evidence regarding the relationship between offence type and prison conduct has been reported as well. Although Twaddle (1976) found no relationship between type of crime for which an inmate was arrested and appearance at sick call, Jones (1976) reported that for offence category, inmates serving sentences for sexual assault had the highest incidence of illness complaints followed by assaults, property offenses, public order offenses, homicide and robbery. Furthermore, prisoners serving sentences for sexual assault were reported to have the lowest incidence of injuries while in prison. These findings, however, were more likely a direct result of the extra security afforded to most sex offenders in prison rather than membership in a particular offence category. It is also important to note, however, that the findings presented by Twaddle (1976) and Jones (1976) provided neither statistical significance nor magnitudes of association. Thus, these studies are seriously limited

insofar as drawing any conclusions. Nevertheless, Porporino and Zamble (1984) found that offence type was not significantly related to depression, anxiety, disciplinary infractions, or stress complaints among penitentiary inmates. Once again, it is suggested that the longer term prisoners in the Porporino and Zamble (1984) study may have adjusted prior to their penitentiary placements which delimits the predictive validity of this measure with this type of population. Overall, offence type has been found to have substantial support as a predictive measure of prison adjustment phenomena.

Sentence length. Some explorations of sentence length in relation to prison adjustment have been conducted. Coe (1961) found that well adjusted inmates had longer sentences than poorly adjusted inmates. In a Canadian penitentiary sample, Akman (1966) reported that the majority of assaults were committed by prisoners who were serving relatively short Federal sentences (two to three years). Similarly, Porporino and Zamble (1984) reported that among penitentiary inmates (sentences greater than 24 months) sentence length was negatively correlated with disciplinary infractions. That is, inmates with longer sentences were less likely to be disruptive in prison. In another study, however, Bonta and Kiem (1978) found that inmates with longer sentences were more likely to commit misconducts than inmates with relatively short sentences. Of special note, Bonta and Kiem

(1978) obtained their sample from a correctional facility which houses remanded or recently sentenced offenders. Notwithstanding the fact that most offenders sentenced to penitentiary terms have been remanded into custody or awaited transfer for substantial lengths of time, it necessarily raises the possibility that these longer term inmates may have experienced some degree of adjustment before they reached a penitentiary. This, in part, may account for the discrepancy in results between the latter and aforementioned studies. Presently, it is suggested that the predictive validity of sentence length in relation to prison adjustment is generally supportive.

5. Education Level

Data has been gathered with respect to educational variations in adjustment among imprisoned offenders. Although Coe (1961) found no relationship between education level and prison adjustment, a number of other investigators have reported otherwise. In a sample of 100 male inmates in North Carolina, Adams (1977) found that inmates who dropped out or were expelled from school tended to be involved in more infractions than inmates who had completed high school or were enrolled at the time of their offenses. Similarly, Porporino and Zamble (1984) found that education level in a Canadian Penitentiary was significantly related to depression, anxiety, and disciplinary infractions but

unrelated to stress complaints.

A number of studies have also examined the way in which education is related to sick call utilization in prison. Both Jones (1976) and Twaddle (1976) reported that sick call attendance varied with education. For example, inmates with 12 years or more education reported the highest incidence of illness complaints, followed by those with less than seven years, between seven and eight years, and between nine and eleven years. Moreover, inmates with between seven and eight years of education reported the highest incidence of injuries. Although neither statistical significance nor magnitude of association were presented for the aforementioned studies, Mabli, Glick, Hilborn, Kastler, Pillow, Karlson, and Barber (1985) reported the same pattern of results wherein significant proportions in the explained variance in sick call utilization were accounted for by education level.

Similarly, Motiuk and Giesebrecht (1987) found that inmates who utilized health care services were more likely to report having more education. Finally, Schnur (1949) linked prior educational attainment to school participation in prison. Overall, the available data indicate that educational variations upon admission have some predictive validity in relation to a variety of prison adjustment criteria.

6. Employment Record

Reports on the predictive validity of employment record in relation to prison adjustment are also positive. At time of admission to prison, Coe (1961) found that well adjusted inmates had good employment records, typically as labourers. Adams (1977) reported that inmates with histories of employment instability incurred significantly more rule infractions than inmates with stable employment records. Flanagan (1983) also found that pre-commitment employment status was significantly related to infraction rates. Toch and Adams (1986) reported that pre-prison employment showed a substantial relationship to prison rule violations. For example, inmates who had been unemployed at the time of conviction had twice the violation rate as the inmates who were employed. Similarly, Goetting and Howsen (1986) found that rule breaking behavior in prison was also associated with having been unemployed prior to incarceration.

7. Financial Status

To date, there is little evidence linking financial status upon admission with prison adjustment. Only one investigator, Coe (1961) found that well adjusted inmates had a higher economic status prior to admission than poorly adjusted inmates. Bonta (1989), however, reported that financial status was unrelated to misconducts. Presently, the relative value of financial status upon admission in

making valid predictions about the adjustment of prisoners remains unclear.

8. Family/marital Situation

There are a number of empirical studies in which family/marital variation upon admission is related to behavior in prison. Coe (1961) reported that well adjusted inmates came from homes which could be described as "average" or "superior". Moreover, well adjusted inmates tended to have been raised by both parents in economic situations which could be described at least as "marginal" or "comfortable". Of special note, no significant differences between well adjusted and poorly adjusted inmates were found with respect to number of children in the family of origin and sibling rank.

With respect to marital status, Schnur (1949) found a significant association between marital status upon admission and misconduct in prison. Single inmates were involved in more misconduct citations followed by those who were married, divorced, and widowed. Similarly, Coe (1961) reported that well adjusted inmates were very often married as compared to poorly adjusted inmates who were more often single. In this study, however, there were no significant differences between well adjusted and poorly adjusted inmates with respect to number of times married, and number of children. In a study of imprisoned murderers, Wolfgang

(1961) found that while there was no relationship between present marital status and prison adjustment there was, however, a relationship between "ever having been married" and prison adjustment. In another study, Flanagan (1983) reported that marital status upon admission was significantly related to infraction rates. Jones (1976) reported that on marital status, single inmates had the highest incidence of illness complaints, followed by those separated, married, divorced, and widowed. However, Motiuk and Giesebrecht (1987) found that marital status was unrelated to sick call returns in prison. In relation to prosocial behavior, Schnur (1948) demonstrated that being married upon admission was associated with school participation in prison. Hence, the available data suggest that family/marital variations may have some predictive validity in relation to a variety of prison adjustment criteria.

9. Living Arrangement

Relatively few studies have explored variations in living arrangement prior to imprisonment in relation to prison adjustment. Coe (1961) reported that well adjusted inmates were more likely to have resided within the same community for most of their lives than poorly adjusted inmates. Similarly, Bonta (1989) found that having had poor accommodation prior to admission was significantly related

to misconducts in prison. The relative scarcity of research in this regard points to the need for further examinations.

10. Criminal Associations

Several investigations have examined the way in which having had accomplices during the commission of the admission offence is related to prison adjustment. Schnur (1949) reported that having had criminal accomplices prior to imprisonment was significantly associated with prison conduct. However, Coe (1961) reported that there was no significant difference between well adjusted and poorly adjusted inmates with respect to the number of associates in current offence. In an earlier study, Schnur (1948) found that having criminal accomplices was related to school participation in prison. Bonta (1989) also reported that having criminal companions was predictive of misconducts. At present, criminal associations appears to have some predictive value.

11. Substance Use/abuse

Only a few studies have focused on whether a history of substance use/abuse was related to adjustment in prison. Coe (1961) found there was no significant difference between well adjusted and poorly adjusted inmates with respect to drinking habits. Similarly, Toch and Adams (1986) also reported relatively low rates of rule violation for

prisoners who had substance abuse disorders. However, Thomas and Cage (1977) examined questionnaire data on a sample of 273 medium security inmates and found that inmates who reported drug use prior to their admission were considerably more likely to report drug use while in prison. In a sample of 375 inmates, Workman and Cunningham (1975) found that inmates who had been on psychotropic medication were involved in significantly more violent incidents than inmates who had not been on psychotropic drugs. In a survey of 14 correctional facilities in a North-western state, Flanagan (1983) also found that a history of alcohol and drug abuse was strongly correlated with infraction rates. Moreover, Bonta (1989) found a history of alcohol and drug problems was significantly related to misconducts. Hence, substance use/abuse may have some predictive utility with respect to behavior in prison.

12. Emotional/personal

A number of investigative efforts have addressed the issue of emotional stability in relation to prison adjustment (Zamble & Porporino, 1990). Wolfgang (1961) reported that there was no significant difference between adjusted and maladjusted prisoners in terms of intelligence, personality and achievement. Coe (1961) also found no significant differences between well adjusted and poorly adjusted inmates with respect to either intelligence ratings

or emotional stability.

With regard to disciplinary infractions the results are mixed. Bonta (1989) reported that emotional/personal problems were unrelated to misconducts in prison. However, and perhaps not so surprising, Toch and Adams (1986) reported that emotionally disturbed inmates had substantially higher rule infraction rates that included violent infractions than inmates who were not diagnosed as emotionally disturbed. In addition, Toch and Adams (1986) found that among disturbed inmates those diagnosed as schizophrenic had violation rates higher than average for the disturbed inmates. Moreover, when taking into account primary diagnoses, those with conduct disorders as well as antisocial personality disorders were also found to have higher than average violation rates of prison rules.

13. Attitude

Surprisingly, there has been little investigation into the relationship between variation in attitude upon intake or admission and acclimation to prison. Rosenfield and Linn (1976) examined the attitudes of 37 first time inmates at the Dade County (Miami) Training and Treatment Center in Florida and found that a non-authoritarian attitude correlated significantly with vocational school attendance. Meanwhile, higher degrees of authoritarianism were found to correlate significantly with work-release (i.e., work detail

on and/or off prison grounds). Finally, Bonta (1989) found that having a poor attitude towards supervision and sentence was significantly related to misconducts. These results seem to indicate that prisoner attitude may be a useful predictor of prison adjustment. As yet, this area remains relatively unexplored.

The preceding section has provided empirical evidence that both personal and situational factors upon intake have predictive value for behavior inside prison. A substantial number of statistically significant relationships were discovered to exist between a wide variety of measures taken at intake and selected prison adjustment criteria. Given that these studies spanned several decades, it is important to investigate the extent to which these predictor variables mediate prison adjustment in a more recent sample. It is also important to try and establish how these same variables may lead to a clearer conception of the processes of post-release outcome.

Institutional Variables and Prison Adjustment

This section reviews the empirical literature that relates institutional variables to prison adjustment. These variables include: 1) court appearances, 2) institutional programs, 3) parole notifications, 4) crowding, 5) time served and 6) protective custody. The investigations examined in this section are appended (see Appendix B) and summarized below.

Table 2

Prison Adjustment Studies: Institutional Variables

Factors	Studies #	Predictive # %
1. Court Appearances	1	0 (00.0)
2. Institutional Programs	7	1 (14.3)
3. Parole Notifications	1	0 (00.0)
4. Crowding	11	10 (90.9)
5. Time Served	11	8 (72.7)
6. Protective Custody	1	1 (100.0)
Total	32	20 (62.5)

1. Court Appearances

To date, only one investigation has addressed the relationship between court appearances while in custody and prison adjustment. Bonta and Nanckivell (1980) found a non-significant relationship between court appearances and institutional misconducts.

2. Institutional Programs

The notion of visitation from the outside, whether familial or otherwise, facilitating adjustment while in prison is widespread throughout the penological literature (Brodsky, 1975). However, there are only three published studies which have empirically tested this idea. First, Lembo (1969) found no statistically significant relationship between an inmate's personal contact with the outside community and the amount of disciplinary infractions. In another study, Howser, Grossman, and MacDonald (1983) compared the disciplinary rates of inmates participating in a visitation program with non-participants. Although inmates who received visits had significantly lower infractions than those who did not, this difference may be attributed to their selection for having exhibited good institutional adjustment rather than the fact that they were receiving visits. Finally, in a maximum-security setting, Davis (1988) reported that participation in a family visiting program was unrelated to disciplinary infractions over a three month period. As yet, the predictive validity of visits in relation to institutional adjustment has not been established.

Davis (1988) also examined participation in a education program while in prison and found no relationship between participants and non-participants with respect to disciplinary infractions. In addition, Davis (1988) found

that participation in prison industry was unrelated to disciplinary infractions.

Another institutional program, 'AA' (i.e., Alcoholics Anonymous) has been examined for possible relationships with disciplinary infractions. Similarly, no significant differences in prison adjustment could be found by Davis (1988) between 'AA' program participants and non-participants.

With respect to participation in an institutional drug program, Davis (1988) discovered participation to be unrelated to prison adjustment in terms of rule-breaking behavior.

3. Parole Notifications

Agus and Allen (1968) examined the effect of parole notification on sick call rates in a Federal Youth Center and found that 50 percent never returned to sick call once notified about parole. Although Agus and Allen (1968) reported that the overall pre-notification sick call rate did not significantly differ from the overall post-notification sick call rate, they found that there was a significantly higher post-notification sick call rate among those who return to sick call than those who did not return.

4. Crowding

A number of investigative efforts have focused on the environmental conditions under which adjustment responses occur among imprisoned offenders. So far, attention has focused on crowding as one of the major limiting conditions of custodial settings (Walker & Gordon, 1980). Megargee (1977) found that the size of the daily inmate population at a Federal Correctional Institution in Florida was positively related to the daily number of institutional misconducts. Notwithstanding the serious constraints placed on generalizability when one considers crowding in only one institution, Nacci, Teitlebaum, and Prather (1977) also found a significant association between density (average daily population for any institution by year end physical capacity) and total assaults and assaults on inmates in particular. Jan (1980) also showed a positive relationship between population increase and number of assaults. Similarly, Clayton and Carr (1984) reported that prison crowding was a strong predictor of infraction rates. Although Clayton and Carr (1984) found that a statistically significant contribution was made by crowding to the prediction of infractions, it was extremely small (less than 1%). In a survey of 19 Federal prisons, Gaes and McGuire (1985) found that as prisons became more crowded then inmate-to-inmate as well as inmate-to-staff assaults increased. However, Farrington and Nuttall (1980) as well

as Ekland-Olson, Barrich, and Cohen (1983) found that no significant relationship exists between prison crowding measures and incident or assault rates. Similarly, in a Canadian sample, Bonta and Kiem (1978) reported that there was no significant relationship between inmate population size and the daily number of institutional misconducts.

The predictive ability of prison crowding in relation to illness behavior has been more positive. McCain, Cox, and Paulus (1976) investigated the relationship between illness complaints and housing mode in both a prison setting and a county jail. From the written requests submitted by inmates for health care services, McCain et al. (1976) found that the illness complaint rate of inmates housed in dormitories was significantly greater than those placed in single or double cells. In order to explore the possibility that length of imprisonment might have accounted for this difference, McCain et al. (1976) compared the illness complaint rate of 64 dormitory-housed inmates during an initial four week period with the last two to four weeks of imprisonment and found no significant differences. McCain, Cox, and Paulus (1980) also examined illness complaint rates in relation to different housing modes. Increased illness complaints were found among inmates placed in open dormitories, as opposed to segmented dormitories, cubicles, double cells, and one-man units. In addition, illness complaint rates were higher among inmates housed in small

multiple occupant cells and double cells rather than in single units. Moreover, McCain et al. (1980) provided data which suggest that social density (number of occupants in housing quarters) and spatial density (space per occupant) contribute to higher levels of illness complaints among imprisoned offenders. Similarly, D'Atri, Fitzgerald, Kasl, and Ostfeld (1981) as well as D'Atri and Ostfeld (1975) found that crowding in prison was related to blood pressure elevations among inmates. Overall, the available data indicate that crowding has considerable predictive validity in relation to symptom identification among incarcerates.

5. Time Served

Schnur (1949) reported that the length of time served in prison was closely associated with misconduct citations. In another investigation, Wolfgang (1961) found that the amount of time served had no relationship to adjustment patterns in prison. However, Wolfgang's study was based on a relatively small sample of specialized offenders (i.e., murderers) which limits the generalizability of his finding. Nevertheless, Coe (1961) also found that there were no meaningful differences between well adjusted inmates and poorly adjusted inmates in terms of total amount of time served. Similarly, Clark (1976) found an inverted U-shaped trend of serious rule infractions with time served. In another study, Flanagan (1980) showed that the infraction

rate of short-term prisoners (less than five years) was significantly greater than the rate for long-term prisoners. More important, however, was the finding that this difference could not be accounted for by the older age structure of long-term inmates. So far, there is a lack of predictive validity for length of time served with respect to disruptive behavior in prison.

Twaddle (1976) reported that the proportion of inmates appearing at sick call was highest during the first year of imprisonment and then fell with length of sentence. Jones (1976) found that inmates who had served less than one year reported the highest incidence of illness followed by those who had served 10 years or more, 24 to 35 months, five to nine years, 36 to 47 months, 12 to 17 months, 18 to 23 months, and 48 to 59 months. Again, it should be noted that Jones (1976) presented neither statistical significance nor magnitude of association with their results. Nevertheless, McCain, Cox, and Paulus (1980) found that inmate illness complaint rates increased for about six weeks upon entering housing units, then declined, and eventually leveled off. Similarly, Motiuk and Giesebrecht (1986) examined the relative distributions of attendance at sick call in a sample of 207 inmates, over four weekly time periods. Results indicated that sick call utilization diminished with each weekly time period, and this was found to be statistically reliable after each week of incarceration.

Finally, Mabli et al. (1985) compared the sick call rate of inmates who had less than three months to serve and those who had at least a year to serve, and the results were not statistically significant. This finding suggests that the relationship between time remaining on sentence and sick call attendance is negligible. Although this result fails to replicate Porporino and Zamble's (1984) finding that release expectancy was related to the number of stress-related physician visits, a possible explanation may lie in the pre-selection of inmates based on the time remaining on their sentence as opposed to their sentence length. Overall, the predictive validity of time served in relation to adjustment among is limited.

6. Protective Custody

Wormith, Tellier, and Gendreau (1988) examined whether protective custody status inmates (i.e., isolated from the general inmate population for personal safety reasons) were involved in more infractions while they were in general population than their regular population counterparts. Although results indicated that protective custody inmates were significantly more threatened and attacked while they were in general population than their non-protective custody counterparts, Wormith et al. (1988) did not provide any data on their adjustment while in protective custody.

Summary

This section has reviewed the empirical evidence linking both personal and situational factors with behavior during imprisonment. Relatively few factors were uncovered which provide at least minimal predictive criterion validity with respect to prison adjustment phenomena. Most surprising was the lack of empirical investigations and narrow focus. Apart from the crowding and time served literature, there were scarcely any other studies relating institutional variables to prison adjustment. While the literature indicates that both crowding and amount of time served may have some limited predictive validity with respect to a variety of prison adjustment criteria, it remains to be seen whether these same relationships will hold true for post-release outcomes.

Criterion Measures of Post-release Outcome

Traditionally, studies addressing the topic of post-release outcome have evaluated ex-prisoners in terms of recidivism measures (Maltz, 1984). Among the most significant of these criterion measures have been those that concern arrest (e.g., Blumstein & Larson, 1971), reconviction (e.g., Gendreau, Madden, & Leipziger, 1980), parole violation (e.g., Glaser, 1964), and return to prison (e.g., Clayton & Carr, 1987).

An extensive review of the literature would reveal a host of other recidivism measures. These include: new offenses (Duggan & Dean, 1969), offence severity (Sellin & Wolfgang, 1964; Friedman & Mann, 1976), disposition (Gendreau & Leipziger, 1978, 1980), self-reported offence (Austin, 1976), death during the commission of offence (Gottfredson & Gottfredson, 1980), absconding Beck & Hoffman, 1976), length of time on parole (Anderson, 1982), various probation violations (Vito, 1986), and length of time to recommitment (Carney, 1967).

To date, there have been very few attempts to investigate post-release outcome in terms of criterion other than recidivism. So far, the scope has been limited to only one aspect of a prosocial lifestyle - specifically, post-release employment (Beck, 1981; Dale, 1976; Glaser, 1964; Knox, 1981; Liker, 1982; Soothill, 1974; Waller, 1974).

Factors Linked with Post-release Outcome

In this section, those variables providing at least minimal predictive criterion validity in relation to post-release outcome are reviewed. Again, the resultant list of factors will be dependent on availability in the published literature.

Intake/Release Variables and Post-release Outcome

An expanded review of the penological literature would also indicate that there has been a considerable amount of research effort directed towards both personal and situational variations upon release as salient determinants of post-release outcome. Of special note, the list of predictor variables generated by this review are also representative of the well-established predictors of recidivism for delinquents and probationers. The studies reviewed in this section are appended (see Appendix C) and summarized below for the following factors: 1) race, 2) age, 3) release type, 4) criminal history, 5) education, 6) employment record, 7) financial status 8) family/marital situation, 9) living arrangement, 10) criminal associations, 11) substance use/abuse, and 12) emotional/personal problems.

Table 3

Post-release Outcome Studies: Intake/Release Variables

Factors	Studies #	Predictive #	%
1. Race	10	4	(40.0)
2. Age	22	17	(73.3)
3. Release Status	4	2	(50.0)
4. Criminal History:			
a) prior convictions	9	6	(66.7)
b) juvenile criminal history	5	2	(40.0)
c) prior prison	8	7	(87.5)
d) prior misconducts	5	3	(60.0)
e) previous supervision	5	4	(80.0)
f) offence type	11	10	(90.9)
g) sentence length	<u>5</u>	<u>2</u>	(40.0)
subtotal:	48	34	(70.8)
5. Education Level	11	5	(45.5)
6. Employment Record	12	11	(91.7)
7. Financial Status	7	4	(57.1)
8. Family/marital Situation	12	8	(66.7)
9. Living Arrangement	7	5	(71.4)
10. Criminal Associations	6	6	(100.0)
11. Substance Use/abuse	11	7	(63.6)
12. Emotional/personal	6	4	(66.6)
Total	156	107	(68.6)

1. Race

While the available data indicates that there are racial links with prison adjustment, it remains to be seen whether the same relationship remains valid post-release. In this regard, several investigations have examined the predictive ability of race in relation to post-release outcome criteria. So far, few studies have shown any racial links to recidivism. For example, Guze (1964) reported that blacks were more likely than Whites to be arrested. In another study, Wormith and Goldstone (1984) reported that being a North American Native was significantly related to rearrest. Other studies, however, do not support this finding. Schnur (1948; 1949) found no significant relationship between either race (non-white) and birthplace of parents or race and birthplace of inmate with either arrest and conviction within two years after release. Similarly, Carney (1967) also reported no significant differences between white and non-white released prisoners in terms of recidivism (i.e., reincarceration). Pallone and Hennessey (1977a) reported no significant relationship between race-ethnicity and post-release outcome (i.e., reconvicted/violated parole within 22 months of release). In another study, Pallone and Hennessey (1977b) also found that race or ethnicity was unrelated to recidivism (i.e., subsequent conviction within 12 months after release). Gendreau et al. (1979) found race to be non-predictive of

reconviction upon release. Rossi et al. (1980) found that race was non-predictive of number of weeks employed on release. Finally, Bonta (1989) also reported that race (native) was unrelated to any of a number of measures of recidivism (reincarceration, parole violation, length of new sentence imposed, days in the community before reincarcerated). In sum, the data suggest that race has little predictive validity in relation to post-release outcome.

2. Age

In keeping with the finding that age is a strong predictor of rule-breaking behavior in prison, it stands to reason that one would expect that this relationship would remain stable upon release into the community. Not so surprising, the data relating age homogeneity to post-release recidivism have also been consistent. Schnur (1949) found that the older an offender was at first arrest then the less likely they were to be arrested or convicted within two years of release. He also reported that the older the inmates were when they left school, admitted to prison, or released from prison, then the less likely they were to recidivate. Similarly, numerous investigators have found that age was a strong predictor of recidivism (Carney, 1967; Glaser, 1964; Guze, 1964; Nuffield, 1982; Pritchard, 1979; Waller, 1974; Wormith & Goldstone, 1984).

Some contradictory evidence with regards to the predictive validity of age in relation to recidivism is available. For example, Pallone and Hennessey (1977a) found no significant bivariate relationships between either age at first arrest or age at admission and post-release recidivism. In another study, Pallone and Hennessey (1977b) reported that age at first recorded arrest was unrelated to subsequent recidivism, however, age at admission was significantly related to reconviction ($p < .05$). That is, the older an offender was upon admission the less likely they were to recidivate. Gendreau, et al. (1979) also found no significant relationship between age at admission and re-conviction two years after release. Nevertheless, the majority of the research conducted on this issue supports the predictive validity of age with respect to post-release outcome.

3. Release Status

A number of studies have addressed the issue of release type in relation to post-release outcome. Whether an offender has been paroled, released onto probation, or with an expiration of sentence (i.e., flat-timers) could possibly influence their respective responses to community release. Guze (1964) as well as Wormith and Goldstone (1984) reported that release status (i.e., parole or regular) was predictive of outcome on release. However, Carney (1967) reported that

type of release (parole versus simply discharged) was unrelated to post-release outcome. Similarly, Carlson (1973) found no significant differences between type of discharge (i.e., parole, expiration of sentence, supreme court order release, deportation) in terms of recidivism.

4. Criminal History

Given that criminal history was shown to make a significant contribution to the prediction of prison adjustment, it should also be expected that, in general, many of these same variables would also be efficient predictors of post-release outcome. As previously undertaken, the following review is intended to provide an overview of the criminal history variables that have been investigated in the recidivism literature. These entail: prior convictions, juvenile criminal history, number of prior prison terms, prior misconducts, previous supervision, offence type, and sentence length.

Prior convictions. A number of studies have examined the predictive validity of prior criminal record in relation to post-release outcome. Schnur (1949) reported that having prior convictions was significantly associated with the number of arrests and convictions within two years of release. In another study, Carney (1967) found that the number of prior arrests (i.e., 6 or more) significantly differentiated between recidivists and non-recidivists.

Carlson (1973) also reported that a previous criminal record was an important factor in predicting recidivism. For example, the reconviction rate for releases with no previous record was 47.1% whereas for those with an adult record was 64.9%. Similarly, Glaser (1964), Vichert and Zahnd (1965), Pritchard (1977), Gendreau et al. (1979), Nuffield (1982), Wormith and Goldstone (1984) also discovered that prior convictions were predictive of post-release recidivism.

Contrary to the aforementioned findings, Pallone and Hennessey (1977a) found no significant relationship between either number of charges/counts or previous arrest history and post-release recidivism. Again, in another sample, Pallone and Hennessey (1977b) reported that number of prior convictions was unrelated to recidivism. However, in this case, Pallone and Hennessey (1977b) did find that number of arrests prior to target confinement was predictive of reconviction. In general, the available data supports the predictive ability of prior convictions in relation to post-release outcome.

Juvenile criminal history. Several investigations have examined the predictive validity of a juvenile criminal history in relation to post-release outcome. Carlson (1973) reported that a significantly high proportion of offenders with a training school record recidivated (78.1%). On the other hand, Pallone and Hennessey (1977a) discovered that prior institutionalization as a juvenile was unrelated to

post-release outcome. Similarly, Gendreau et al. (1980) found that having a prior training school record was not significantly related to reconviction two years after release. However, Gendreau et al. (1980) did find that court appearance prior to age 16 was highly predictive of recidivism. As yet, the predictive value of juvenile criminal history remains in question.

Number of prior prison terms. Reports on the predictive validity of prior prison experience with respect to post-release outcome are also positive. Glueck and Glueck (1930) found that having a prior prison record was predictive of rearrest as did Carney (1967). Similarly, Pallone and Hennessey (1977a) reported that the number of prior sentences was predictive of post-release outcome. In addition, Vichert and Zahnd (1965), Waller (1974), and Gendreau et al. (1980), all report that prior prison experience is significantly related to rearrest. Only Nuffield (1982) reports a weak relationship between prior prison and outcome on release.

Prior misconducts. Only a few research efforts have addressed prior misconducts in relation to post-release outcome. Glueck and Glueck (1930) found prior misconducts to be predictive of rearrest on release. Schnur (1949) reported that inmates who had a history of solitary confinement in prison were more likely to be involved in arrests and convictions within two years of release. Carney

(1967) discovered that offenders who had some "good time" withheld were more likely to be reincarcerated than those who had no "good time" withheld. Pallone and Hennessey (1977b) reported a significant bivariate relationship between rule-breaking behavior during confinement (i.e., breach of peace, disorderly conduct, violation of institution laws) and subsequent recidivism. So far, Vichert and Zahnd (1965) and Carlson (1973) are the only investigators to find prior misconducts unrelated to post-release outcome.

Previous supervision. A few studies have explored previous supervision as a predictor of post-release outcome. Schnur (1948; 1949) discovered that the total time spent under legal supervision from birth up to release was significantly related to arrests or convictions within two years of release. Gendreau et al. (1979) found a history of previous supervision (probation) predictive of outcome on release from prison. Similarly, Wormith and Goldstone (1984) reported that breaches of supervision were predictive of rearrest.

Offence type. There has been substantial evidence gathered on the predictive validity of offence type in relation to post-release outcome. Schnur (1949) found that admission offence was significantly associated with outcome on release. More specifically, those offenders who were admitted for crimes of abandonment, non-support, desertion,

embezzlement, and forgery were less likely to be arrested or convicted within two years of release than those committed for arson, breaking and entering, burglary, larceny, assault with intent to rob, robbery, and operating a vehicle without an owners consent. Guze (1964) reported that offence type (i.e., fraud) was predictive of arrest on release. Most of the evidence indicates that property offenders as a group have higher rates of recidivism than other types of offenders (Carlson, 1973; Carney, 1967; Glaser, 1964; Pallone & Hennessey, 1977a; 1977b; Wormith & Goldstone, 1984).

In an elaborate study on offence history and recidivism, Austin (1976) noted that investigations which utilized official records showed property offenders with higher rates of recidivism than offenders with crimes against persons. However, when type of offence is measured by self-reports then person offenders (with the same frequency of offenses) had a higher rate of recidivism than property offenders. Austin (1976) suggested that the relatively low recidivism rates exhibited by the person offence category is largely due to the over-inclusion of many sexual offenses and other crimes of passion that are often isolated events and not likely to reoccur. Finally, Pallone and Hennessey (1977b) reported that number of drug-related charges was predictive of recidivism. Similarly, Gendreau et al. (1980) noted that a current drug

offence was significantly related to reconviction.

Sentence length. There is mixed evidence linking sentence length to post-release outcome. So far, Vichert and Zahnd (1965) and Pallone and Hennessey (1977a) were able to find a significant relationship between sentence length and post-release outcome. Carney (1967) and Nuffield (1982), however, found no significant relationship between sentence length and recidivism.

5. Education Level

Reports on the predictive validity of education level in relation to post-release outcome are also available. Guze (1964) reported that education level was not significantly related to outcome on release. Carlson (1973) found no support for the relationship between educational attainment and recidivism. Moreover, the data indicated that offenders with 0-5 grade level had the second lowest recidivism rate (52.5%). Although offenders with over grade 11 (45.8%) had the lowest recidivism rate, the difference was non-significant. Moreover, those with grade 9 (70.1%), grade 10 (60.6%), and grade 11 (61.1%) had higher recidivism rates. Pallone and Hennessey (1977a) found a non-significant bivariate relationship between education level and recidivism on release. Similarly, in another study, Pallone and Hennessey (1977b) found that level of formal education was unrelated to post-release behavior. In

addition, Rossi et al. (1980) reported that education level was unrelated to the number of weeks employed post-release. Only Schnur (1949), Vichert and Zahnd (1985), and Bonta (1989) were able to show significant relationships between education level and outcome on release. It would appear that education level may not be a very reliable predictor of post-release recidivism.

6. Employment Record

A considerable amount of correctional research effort has been directed towards the relationship between employment and post-release behavior. Glueck and Glueck (1930) reported a significant relationship between employment and post-release outcome. In another study, Waller (1984) also found a positive relationship between employment record and success upon release. Pritchard (1979) noted that income on release was predictive of post-release recidivism. In addition, Pritchard (1979) also reported that stability of employment was strongly associated with outcome on release. Gendreau et al. (1980) reported that never having held a job for more than two years was significantly related to reconviction two years after release.

In one study, Pallone and Hennessey (1977a) found a non-significant bivariate relationship between employment status and post-release outcome. However, in another

investigation, Pallone and Hennessey (1977b) reported that employment status upon admission was significantly related to post-release recidivism. That is, offenders who were fully employed were less likely to recidivate than those unemployed, employed part-time, or employed irregularly. More recently, Gendreau et al. (1980), Wormith and Goldstone (1984), Motiuk and Porporino (1989), Bonta (1989) and Motiuk and Porporino (1990) have established employment as a predictor of post-release outcome. In sum, the data supports the predictive validity of employment and post-release recidivism.

7. Financial Status

There is some evidence to suggest that financial status upon release is predictive of recidivism. Pritchard (1979), Motiuk and Porporino (1989), Bonta (1989) and Motiuk and Porporino (1990) have reported that financial status was significantly related to post-release behavior.

8. Family/marital Situation

Some explorations of family/marital variations in relation to post-release behavior have been conducted. Schnur (1949) reported a significant association between marital status upon admission and arrest and conviction within two years of release. Single inmates were involved in more arrests and convictions followed by those who were

married, divorced, and widowed. Similarly, Pallone and Hennessey (1977a) reported that marital status was predictive of post-release outcome. In another study, Pallone and Hennessey (1977b) also found that marital status was significantly related to reconviction. In both of these studies, released offenders who were married fared better than single, divorced, or widowed in terms of post-release outcome. More recently, Wormith and Goldstone (1984), as well as Bonta (1989), have showed predictive links between being single and rearrest.

Reports on the predictive validity of other family variables have not been so positive. For example, Guze (1964) reported that a family history of incarceration, parental divorce or separation, parental desertion, and raised by friends, relatives or in institutions were unrelated to recidivism. In another study, Gendreau et al. (1980) found that parental stability was unrelated to recidivism. While it appears consistent that marital status is predictive of post-release success, it remains to be seen whether other family-related measures show any links with outcome.

9. Living Arrangement

Several studies have explored the relationship between living arrangement and post-release outcome. Carney (1967) reported that type of home (family or relative versus alone

or with friend) was unrelated to post-release outcome. Moreover, Pallone and Hennessey (1977a) found that the area of residence was unrelated to outcome on release. Although Pritchard (1979) reported that living arrangement upon release was significantly related to post-release recidivism, the exact nature of this predictor variable remains unclear. Nevertheless, Glaser (1964), Motiuk and Porporino (1989), Bonta (1989) and Motiuk and Porporino (1990) provide ample support for the predictive ability of living arrangement in relation to post-release outcome.

10. Criminal Associations

So far, only a few investigations can be found that report on the predictive validity of criminal associations in relation to post-release outcome. Schnur (1949) found that having accomplices prior to imprisonment was significantly associated with arrest and conviction within two years of release. Glaser (1964), Waller (1974), Motiuk and Porporino (1989), Bonta (1989) and Motiuk and Porporino (1990) report significant relationships between criminal companions and post-release recidivism.

11. Substance Use/abuse

The links between substance use/abuse history and post-release outcome have well documented in the literature. Guze (1964) found that alcoholics were more likely to be

arrested on release than non-alcoholics. Carney (1967) reported that alcohol/drug problems were significantly related to post-release recidivism. Similarly, Pritchard (1979) found that a history of either alcohol or opiate use were significantly related to outcome on release. In another study, however, Pallone and Hennessey (1977a) found that both alcohol and drug usage were unrelated to post-release outcome. Finally, Vichert and Zahnd (1965), Waller (1974) Gendreau et al. (1979), Motiuk and Porporino (1989), Bonta (1989) and Motiuk and Porporino (1990) also report strong links between substance use and post-release outcome.

Although, in another investigation, Pallone and Hennessey (1977b) reported that alcohol use history was unrelated to outcome on release, drug use history was predictive of recidivism. Overall, the available data indicates that substance abuse/use is a good predictor of post-release outcome.

12. Emotional/personal

A number of studies can be found which focus on the predictive validity of emotional stability in relation to post-release outcome. Gendreau et al. (1980) reported that previous psychiatric treatment was unrelated to reconviction two years after release. Similarly, Bonta (1989) reported that emotional/personal problems was unrelated to post-release recidivism. However, Adams (1983) reported that

ex-prisoners who were former mental patients were more likely to recidivate than other ex-inmates. Wormith and Goldstone (1984) found that inmates who scored higher on the Pd (psychopathic deviate) scale of the MMPI were more likely to be rearrested than others who scored lower. Similarly, Bayer, Bonta and Motiuk (1985) found that inmates who scored higher on the Pd scale of the MMPI were more likely to be reincarcerated. In a follow-up study of released Federal prisoners, Motiuk and Porporino (1990) found a statistically significant relationship between emotional and behavioral stability and conditional release outcome.

In concluding this section, there is empirical evidence to suggest that both personal and situational factors upon release can also predict behavior after prison. While a considerable number of significant relationships were uncovered by reviewing the relevant literature, it remains to be demonstrated whether these same variables can be combined to yield improved release risk predictions. With respect to combining potential predictors, investigators have explored the utility of entering a number of these variables into statistical equations (i.e., regression analysis, predictive-attribute analysis and simple summation) and determining their efficiency as an overall predictor of recidivism.

Gendreau and Leipziger (1980) set forth results of a regression analysis performed on 10 predictor variables

using reconviction at 24 months as the criterion measure of recidivism. Results indicated that this combination of predictors explained 20% of the variance ($MR = .45$) in post-release outcome. Wormith and Goldstone (1980) conducted a number of regression analyses on two separate sets of variables: 1) age at release, frequency of previous convictions, and marital status and 2) prognosis at release, police recommendation, employment plans, as well as both sets combined for rearrest upon follow-up. As a result of these prediction strategies about 27% ($MR = .52$), 30% ($MR = .55$), and 40% ($MR = .63$) of the explained variance in post-release outcome was obtained respectively. Hence, it would appear from the foregoing studies that there is some merit to combining variables into an overall predictor of post-release outcome.

Institutional Variables and Post-release Outcome

The prediction post-release outcome with institutional measures has also been well-documented in the literature (Hill, 1985). In this section the empirical literature that relates institutional variables to post-release outcome will be reviewed. These include: 1) visits, 2) crowding, 3) time served and 4) educational/vocational program participation. The studies examined, depending on their availability in the published literature, are appended (see Appendix D) and summarized below.

Table 4

Post-release Outcome Studies: Institutional Variables

Factors	Studies #	Predictive # %
1. Visits	2	0 (00.0)
2. Crowding	2	0 (00.0)
3. Time Served	5	2 (40.0)
4. Education/Vocational Training	13	7 (55.0)
Total	22	9 (40.9)

1. Visits

In keeping with the view that contact with the outside, whether familial or otherwise, facilitates prison adjustment, there has also been research conducted in relation to post-release outcome. Carney (1967) reported that the number of home contacts (i.e., regular or frequent versus none or occasional) while in prison was not significantly associated with post-release outcome. Adams and Fischer (1976) explored the relationship between number of letters and visits one year prior to parole. Results also indicated that there were no significant differences between recidivists (i.e., return to prison within 24 months) and non-recidivists in terms of community contacts. Overall, the available data would suggest that the predictive validity of an inmate's personal contact with the outside community in relation to post-release outcome is negligible.

2. Crowding

There is relatively little research addressing the predictive validity of prison crowding in relation to post-release outcome. Clayton and Carr (1984) reported that prison density was a poor predictor of recidivism. In another study, Farrington and Nuttall (1980) also found that prison crowding was unrelated to post-release outcome. In light of the available evidence, it appears that the predictive ability of prison crowding on subsequent post-release behavior lacks empirical support.

3. Time Served

Reports on the links between time served in prison and post-release outcome are more substantial. Schnur (1949) found that the length of time served in prison was significantly associated with arrest and conviction within two years after release. In a sample of 5,349 males paroled in Ohio, Gottfredson et al. (1977) showed a significant decrease in parole success rates with increasing time served.

There is, however, some contradictory evidence regarding the predictive validity of time served. Babst et al. (1976) reported that the number of months served in prison had no consistent relationship to parole outcome. Carlson (1973) also found no relationship between length of sentence served and subsequent recidivism. Interestingly,

there was little difference between those incarcerated for one month (65.1%) and over 18 months (62.5%). Similarly, Pallone and Hennessey (1977a) found a non-significant bivariate relationship between time served and post-release outcome (i.e., reconvicted/violated parole within 22 months of release). Moreover, Pallone and Hennessey (1977a) also reported a non-significant bivariate relationship between a ratio of time served to maximum sentence and post-release outcome. So far, the available evidence does not support a significant relationship between time served and post-release outcome.

4. Educational/Vocational Program Participation

A commonly held notion in corrections has been that inmate participation in educational and vocational training will have some impact on post-release recidivism. For example, Glueck and Glueck (1930) reported that the number of jobs held while in prison was significantly related to success within five years after expiry of parole. Schnur (1948) reported that educational treatment in prison was significantly associated with reductions in recidivism after at least six months of schooling had taken place since admission. Similarly, Glaser (1964) reported that prison education was significantly associated with post-release outcome. However, as a caveat to this finding, it was also noted that this was true only when the educational training

was extensive and taken over a prolonged period of time. Seashore, Haberfield, Irwin, and Baker (1976), Urner (1976), Walton (1978) and Stevens (1986) found that completion of a prison education program was also predictive of post-release performance. However, Maciekowich (1976) and Linden, Perry, Ayers, and Parlett (1984) reported no significant difference regarding any effect of educational/training programs on recidivism. Anderson (1982) has noted that parolees who had no vocational training or lower levels of training were more likely to have their parole revoked. One wonders, however, if by virtue of their being low-risk to begin with, whether selection has more to do with their outcomes than participation in the training program.

Markely, Flynn, and Bercaw-Dooen (1983) compared inmates who participated in a vocational training program with a matched group (i.e., age, race, education, skill level prior to training) who did not participate and found no significant difference between the two groups in terms of recidivism. Finally, Maguire, Flanagan, and Thornberry (1988) found that the recidivism rates of prison industry participants and non-participants were the same. It would appear that participation in educational/vocational training programs in prison may have only minimal predictive ability in relation to outcome on release.

In sum, substantive links are to be found in the penological literature between a variety of factors and

criterion measures. It remains, however, to be seen how these factors are functionally applied in the assessment of offenders.

OFFENDER ASSESSMENT METHODOLOGIES

Objective assessment procedures for classifying criminal offenders have been well documented in the correctional literature (Gearing, 1979; Megargee & Bohn, 1979). A general scheme for categorizing these techniques has been into indirect (i.e., file-review) or direct (i.e., self-report, interview-based) assessment methods (Cone, 1977). Although many classification instruments have been abandoned over time, a re-examination of some of them may prove beneficial to the development of new assessment techniques. In this regard, the criminological and psychological literature was surveyed for classification instruments deemed representative of each approach to offender assessment.

First, the 'self-report' method will encompass the MMPI-based Typology (Megargee & Bohn, 1979), the Prison Adjustment Scale (Panton, 1958a, 1958b) and the Prison Maladjustment Scale (Wattron, 1963). Secondly, the 'interview-based' method will include the State of Wisconsin's Assessment of Client Risk Scale (Baird, Heinz, & Bemus, 1979). In addition, the Illinois Initial Risk Evaluation Scale (Gulley, 1986) and the Level of Supervision Inventory (Andrews, 1982) will be examined in this regard. Finally, the 'file-review' method will entail the Salient

Factor Score (Hoffman & Beck, 1974), Statistical Information on Recidivism Scale (Nuffield, 1982), Oregon Parole Prognosis Scale and Pennsylvania Parole Prognosis Assessment Scale. It should be mentioned that there is sometimes overlap between these methods whenever information is verified.

Self-report Method

In this section, three assessment devices which employ offender self-reports administrations to derive offender information will be reviewed. These are: the Megargee MMPI-based Typology, the Prison Maladjustment Scale, and the Prison Adjustment Scale.

Megargee MMPI-based Typology

The Megargee Minnesota Multiphasic Personality Inventory (MMPI)-based Classification System was designed primarily as an empirically-derived typology for the classification of offenders in correctional settings. The Megargee system utilizes the MMPI (Hathaway & McKinley, 1967) and a complex set of rules for classifying offender MMPI profiles (Megargee & Dorhout, 1977).

The Megargee MMPI-based Typology represents a delineation of an established research program at the Federal Correctional Institution (FCI), in Tallahassee, Florida (Megargee, 1977b). This adult offender

classification system was based upon initial research at FCI which derived a typology for youthful offenders from the hierarchical profile analysis of MMPI profiles (Meyer & Megargee, 1977). The MMPI is a standardized self-report inventory which was originally developed for the differential diagnosis of psychiatric patients (Hathaway & McKinley, 1943). Respondents simply answer "true", "false", or "cannot say" to 566 self-referent statements as an objective method of personality assessment. Subsequent scoring of the responses yields a profile consisting of four validity measures and ten clinical or personality scales (Hathaway & McKinley, 1951). In general, the MMPI has been used to generate descriptions and inferences regarding personality status and emotional adjustment for a variety of clinical populations (Graham, 1979). Of special interest, however, has been the large amount of published literature exploring the utilization of the MMPI with correctional populations (Gearing, 1979).

The Megargee MMPI-based Typology was developed from a large data base of MMPI protocols administered to adult male inmates at the medium security FCI at Tallahassee, Florida (Meyer & Megargee, 1972). From a subject pool comprised of 2,500 youthful (ages 18-27) incarcerated offenders, Meyer and Megargee (1972) developed an initial set of classificatory rules. Three samples, consisting of 100 protocols each, were drawn from the large data pool.

Utilizing Veldman's (1967) hierarchical profile analysis, an optimal number of protocol subgroupings (14, 11, and 10) were derived for each of the respective samples.

Elimination of subgroupings comprised of five subjects or less resulted in two samples of eight subgroupings and one sample of nine subgroupings of offender profiles.

Meyer and Megargee (1972) independently matched similar subgroups across samples and found nine reliably occurring profile types. A set of preliminary rules were then applied on a sample of 85 inmate protocols and Meyer and Megargee (1972) were found to agree on the typing of 74 (87%) cases. A revised set of the rules for computerized classification was subsequently applied to a sample of 50 inmate protocols and found to reliably classify 35 (70%) profiles (Megargee & Dorhout, 1977). Although preliminary analyses of the data revealed nine reliably occurring MMPI profile configurations, subsequent refinements and revisions of the classificatory rules yielded an additional profile type for a total of 10 offender groups in the typology (Megargee & Dorhout, 1977).

From a new sample of 1,214 MMPI protocols, an extensive study was conducted in order to empirically investigate differences among the 10 types (Megargee & Dorhout, 1977). Of the research sample, 770 (63.4%) profiles were found to be uniquely classifiable by Megargee and Dorhout's (1977) computerized system. The remaining protocols which had

either excessive scores on MMPI validity scales "Qu" (cannot say) or "F" (test-taking approach), or fit the criteria equally well for two groups were then clinically classified by Megargee (1977). For the 79 (6.5% of the total sample) protocols which had excessive scores on the validity scales, 30 were judged to be clinically invalid and 49 were deemed to have adequate validity and therefore grouped. Of the 117 (9.6%) profiles which did not meet the minimal criteria for inclusion into any grouping, 99 were assigned to groups and 18 remained unclassified. In all, 96% of the protocols were classified.

In the present use of the system, offenders are administered the MMPI and the profiles are then classified into the 10 groups following validity screening to eliminate deviant response sets. Although clinicians utilize somewhat conservative criteria (either scale "Qu" raw scores ≥ 30 or scale "F" raw scores ≥ 15) for establishing profile invalidity (Graham, 1979), Megargee and Bohn (1979) contend that in classifying offenders the concern is with the relationship between individual profiles and overt behavior rather than the manner in which the profiles were obtained. Therefore, the Megargee system screens for profile invalidity by discarding those protocols which exhibit either scale "Qu" raw scores ≥ 110 or scale "F" raw scores ≥ 25 (T-scores ≥ 100). Of special note, Megargee's criteria for establishing profile validity raises the possibility

that up to 28% of the scored items in the Form R version of the MMPI (used to facilitate machine scoring with only the first 399 items appearing in this version being scored) may be omitted by respondents.

Two sets of rules as well as the guidelines for classifying offender MMPI profiles have been thoroughly documented by Megargee and Bohn (1979). Set I rules comprise the minimal criteria for assigning MMPI protocols to types and include the noteworthy scale elevations. Similarly, the Set II rules also include prominent configuration codes, however, points are allocated when profiles meet these criteria (Megargee & Dorhout, 1977). Once profile validity has been established the Megargee and Dorhout (1977) Set I rules are sequentially applied to offender MMPI protocols. Profiles which meet the minimal criteria for typing by the Set I rules are then referred to the accessory Set II rules. The fit of an offender protocol into a grouping is accomplished by taking the number of Set II rules which apply, the respective points allotted for meeting these rules, and calculating a level of membership (high, medium, low, or minimum). For those profiles which meet both Set I and II rules equivocally, the following guideline is used in order to resolve ties.

"The basic principle in breaking ties is that the more closely the profile resembles the typical profile and statistical characteristics of a given group, the more likely it should be classified therein."

(Megargee & Bohn, 1979, p. 116)

The Megargee system provides ten MMPI profile types for offenders, which are labelled with nondescriptive titles (Able, Baker, Charlie, Delta, Easy, Foxtrot, George, How, Item, Jupiter). Descriptions of the 10 offender groups are presented in Appendix E. The ordering of these offender types may be presented according to the deviance of the profiles from the most benign to the most deviant: Item, Easy, Baker, Able, George, Delta, Jupiter, Foxtrot, Charlie and How (Megargee & Bohn, 1979). Furthermore, Megargee's system reassigns these profile types into three groups. The names of these three groups: "Predatory" (Charlie, Delta, Foxtrot); "Prey" (Baker, George, Jupiter, How); and "Average" (Able, Easy, Item).

Upon being classified into types and re-grouped into "predator", "prey", and "average", it is suggested that offenders be assigned into different living units within their respective correctional settings. Although treatment recommendations for the 10 offender groups have been outlined, the relative efficacy of these suggestions have not as yet been empirically verified (Megargee & Bohn, 1979).

A substantial amount of research on the reliability of the MMPI-based typology has been conducted (Megargee, 1977; Megargee & Bohn, 1979; Megargee & Dorhout, 1977; Meyer & Megargee, 1972). For example, investigations have revealed 10 reliably occurring MMPI profile configurations and

inter-rater reliability estimates ranging from 76% to 90% (Dahlstrom, Pantan, Bain, & Dahlstrom, 1986; Van Voorhis, 1986). Moreover, temporal stability estimates have ranged from 60% to 93% for under four months (Nelson, 1981; Simmons, Johnson, Gouvier, & Muzyka, 1981; Johnson, Simmons, & Gordon, 1983), from 69% to 81% for between four and 10 months (Nichols, 1979; Johnson et al., 1983), and from 72% to 73% for more than 10 months (Doren & Megargee, 1980; Simmons et al., 1981).

Validity estimates for the MMPI-based typology are also available. In their seminal study, Megargee and Bohn (1979) examined both the institutional performance and recidivism of over 1,000 inmates at the FCI at Tallahassee, Florida. Results revealed that the MMPI-based types were related to number of days confined to cell house, work performance ratings, educational evaluations, and reincarceration at 18 month follow-up. However, the MMPI-based system was also found to be unrelated to number of disciplinary write-ups, attendance at sick call, quality of work, quantity of work, initiative, overall job proficiency, achievement in education and reconviction at follow-up. In another study, Bohn (1980) reported that the overall rates of violence within the institution had decreased significantly using the MMPI-based system. However, on closer inspection of the data the reported decrease also varied with respect to dormitory assignments

as a considerable increases in assault rates were observed in other units. In addition, the assault rates returned to pre-implementation levels within the institution after two years.

There have been a number of cross-validation studies conducted on the MMPI-based typology across a variety of correctional settings. For example, Edinger (1979) found significant differences between MMPI-based types on measures of verbal aggression, group defiance, and total number of rule infractions in a sample of 2,063 FCI inmates at Petersburg, Virginia. In another study, Booth and Howell (1980) examined the predictive validity of the MMPI-based system by exploring the institutional adjustment of 641 inmates at Utah State Prison. Results showed significant differences for major write-ups, minor write-ups and likelihood of placement in a protection unit. However, non-significant results were reported for very minor write-ups, maximum custody placement, and psychiatric hospitalization. In a penitentiary sample, Hanson, Moss, Hosford and Johnson (1983) examined the predictive validity of the MMPI-based typology on 337 inmates at the U. S. Penitentiary at Lompoc. It was found that the MMPI-based typology was not predictive of institutional performance.

In another penitentiary setting, Louscher, Hosford, and Moss (1983) reported on the ability of the MMPI-based typology to predict dangerous behavior in a sample of 520

inmates. Significant differences were found among MMPI-based types for number of incident reports and type of infractions. However, Louscher et al. (1983) found no significant differences for number of admissions to the administrative detention unit, number/type of administrative remedies, and antisocial or aggressive behavior. In a Canadian Penitentiary setting, Wormith, Borzecki, and Black (1984) attempted to validate the MMPI-based typology on a sample of 276 maximum-security psychiatric inmates. Wormith et al. (1984) found that three of the MMPI-based types (Baker, Foxtrot, and Jupiter) were so low in frequency that they were omitted from their analyses causing some constraints regarding the generalizability of the MMPI-based system to Canadian mentally disordered penitentiary inmates.

In a sample of 96 black inmates at the FCI in Lompoc, California, Moss, Johnson, and Hosford (1984) explored the predictive validity of the MMPI-based typology with respect to both institutional performance and recidivism. Moss et al. (1984) found that the MMPI-based types were unrelated to both institutional violence and violent recidivism. In a similar study, Carey, Garske, and Ginsberg (1986) reported on the predictive validity of the MMPI-based typology at the Chillicothe Correctional Institute in Ohio. Results indicated that the MMPI-based Typology had predictive validity only with relation to Caucasian inmates. In this respect, there were significant differences for write-ups,

nights spent in a correctional cell, and utilization of mental health services. Hanson et al. (1983) compared the predictive validity of the MMPI-based typology to that of demographic variables, security designation, and custody classification. Apart from age, the MMPI-based typology was found to be the best predictor of disciplinary reports, days spent in segregation, loss of earned remission, and work performance ratings. Overall, the MMPI-based typology has some predictive validity in relation to several indices of prison adjustment.

Aside from Megargee and Bohn's (1979) data, estimates of post-release recidivism are lacking. In a correctional halfway house setting, Motiuk, Bonta, and Andrews (1986) explored halfway house outcome and post-program recidivism (i.e., reincarceration within one year) using the Megargee MMPI-based typology. While only a small proportion of the variance in halfway house outcome could be accounted for by the Megargee typology (when delineating predator and nonpredator offender types), there was no predictive validity found for the MMPI-based typology with respect to recidivism.

Prison Maladjustment Scale

The Prison Maladjustment Scale (Wattron, 1963) is an empirically derived scale for the evaluation of maladjusted inmates in correctional settings. The Prison Maladjustment

Scale was developed from a data base of MMPI protocols administered to 150 parolees who had served relatively short sentences and had been successful on their parole (adjusted group) and 200 refractory inmates serving sentences on disciplinary units with the Texas Department of Corrections (maladjusted group). Chi-square analyses of the 566 item MMPI data base resulted in a 72 item scale which significantly differentiated between the maladjusted and the parolees (see Appendix F). A cutting score between 18 and 19 was established as the point of greatest dichotomy for identifying maladjusted prisoners. More specifically, maladjusted prisoners will score higher on the Prison Maladjustment Scale than adjusted prisoners.

There is only one published study on that scale and it has failed to report at least some data in support of the predictive criterion validity of the Prison Maladjustment Scale. White (1981) found that the Prison Maladjustment Scale was not predictive of disciplinary transfers. Thus, apart from this study, estimates of the magnitude of overall predictive accuracy with the Prison Maladjustment Scale are lacking.

Prison Adjustment Scale

The Prison Adjustment Scale (Ap) is an empirically derived scale for the prediction of adjustment in correctional settings. The Ap scale was developed from a

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data base of MMPI protocols administered to 56 non-adjusted inmates in a North Carolina prison (i.e., who had committed two or more rule infractions) and 72 adjusted inmates (i.e., who were free of rule infractions) (Panton, 1958b).

Although preliminary chi-square analyses of the 566 item MMPI resulted in a 42 item scale which significantly differentiated the infraction group from the non-infraction group, subsequent cross-validations and refinements yielded a 36 item Ap scale (see Appendix G). In addition, a cutting score of 13 was established as the point of greatest dichotomy for identifying adjusted prisoners. More specifically, adjusted prisoners score lower on the Ap scale than non-adjusted prisoners.

Reports on the validity of the Ap scale in relation to institutional adjustment are in general positive. Panton (1958a) found that the Ap scale was related to being placed in an area designated for housing problematic inmates. Analyses revealed that these inmates scored significantly higher on the Ap scale than the general prison population.

Using multiple discriminant analysis, Christensen and Le Unes (1974) reported on the ability of the Ap scale to discriminate among six criminal subtypes (i.e., burglar, forger, narcotics offender, theft offender, robber, murderer) in a sample of 147 Texas State prisoners. Although Panton (1958a) had been unable to demonstrate whether the Ap scale could successfully differentiate

between various crime classifications, Christensen and Le Unes (1974) reported that the Ap scale clearly distinguished murderers and narcotic offenders from the others. That is, these two groups ranked the highest in adjustment while in prison.

In a longitudinal post-validation study, Panton (1979) examined the predictive validity of the Ap scale in a sample of 301 inmates serving more than five years in the North Carolina Correctional system. Panton (1979) reported that Ap scale scores initially derived within two weeks of admission were highly predictive of rule infractions over a three-year period.

There is some contradictory evidence with regards to the predictive validity of the Ap scale. In doubting whether any meaningful differences existed between Panton's (1958b) criterion groups, Pierce (1971) attempted to cross-validate the Ap scale on a sample of inmates at an Iowa State Reformatory. Inmates (N=32) who had two or more disciplinary actions were compared with inmates who had five or more infractions (N=12) on the Ap scale. Pierce (1971) reported that the Ap scale did not significantly differentiate between the two groups. However, the relative merit in cross-validating an instrument by constructing criterion groups that are mutually inclusive is questionable.

For a sample of inmates at the Ohio State Penitentiary,

Stump and Gilbert (1972) investigated the predictive validity of the Ap scale. Correlational analyses revealed that the Ap scale was not predictive of the number of nights spent in a disciplinary cell. Similarly, White (1980) examined the ability of the Ap scale to differentiate between 25 randomly selected adjusted prisoners (i.e., no disciplinary infractions) and 25 rebellious Federal prisoners. No significant differences were found between the criterion groups in terms of institutional maladjustment. Although Stump and Gilbert (1972) and White (1980) found no significant relationships between Ap scores and prison adjustment measures, their findings may, in part, be explained by the fact that neither of these studies controlled for age, time-in-institution, or time-to-release.

In sum, the available data suggest that the Ap scale may have at least minimal predictive validity in relation to several indices of prison adjustment. As yet, there are no published studies showing links with recidivism. Moreover, there is no evidence regarding the predictive validity of the Ap scale relative to other instruments or prediction strategies.

Interview-based Method

This section will focus on assessment tools which derive from offender information through interviews and reviews of case files. In this regard, the Wisconsin Assessment of Client Risk Scale, Illinois Initial Risk Evaluation Scale and Level of Supervision Inventory will be systematically reviewed.

Wisconsin Assessment of Client Risk Scale

The Wisconsin Classification and Case Management System was designed primarily as a comprehensive set of risk and needs assessment procedures for the classification of offenders while on probation and parole. The Wisconsin System consists of three parts: the Assessment of Client Risk Scale, the Reassessment of Client Risk Scale, and the Assessment of Client Needs Scale (Baird, Heinz, & Bemus, 1979).

The Wisconsin classification system reflects an amalgamation of research activities on probationers and parolees (Baird et al., 1979). This classification system for adult and juvenile offenders represents four years of research identifying probationers and parolees who are at risk for recidivism and thereby require different levels of supervision. It is particularly concerned with predicting future convictions, rules violations, absconsions, and revocations.

The Assessment of Client Risk Scale, which is used in this study, was developed in order to establish an offender's probability for inprogram failure (absconded, arrested, convicted, revoked, or violated rules) while on probation or parole. Baird et al. (1979) obtained background information from a subject pool comprised of adult probationers and both juvenile and adult parolees in the State of Wisconsin. In order to develop the items in the Assessment of Client Risk Scale, 250 discharged or revoked probation and parole cases were drawn from the files and formed the random sample.

Utilizing archival records to obtain criminal history, socioeconomic, and outcome data, a stepwise multiple linear regression analysis was conducted on a list of 22 items. A total of seven variables were entered into the equation before the standardized error of the estimate was minimized. Results indicated that the factors which best predicted unlawful, or rule-violating, behavior included: attitude, age at first conviction, prior revocations, alcohol usage/problems, number of address changes, felony convictions and prior periods of probation/parole. Furthermore, the resultant regression equation accounted for 58% of the variance in offender behavior (Baird et al., 1979). However, it is important to note that this percentage was based on the construction sample and has not been cross-validated.

Baird et al. (1979) used this regression equation to identify low, medium, and high risks of criminal behavior. Furthermore, the resultant regression equation was able to correctly place 72% of offenders into low versus high risk for inprogram recidivism (revocation or new conviction). In order to improve upon prediction, the group means were re-examined for all of the variables that had been originally entered into the regression equation. Further analyses added three new items to the risk assessment instrument. These factors were specific offenses, percentage of time employed, and drug usage/problems (Baird et al., 1979). The final ten factors were subsequently weighted in order to reflect the level of supervision required while on probation or parole. In addition, an item which indicated conviction or juvenile adjudication for an assault offence (an offence which involves the use of weapons, physical force, or threats of force) within the last five years was weighted (15 points) and included in the Assessment of Client Risk Scale (see Appendix H). Endorsement of this item automatically placed an offender into the maximum level of supervision. This was done at the request of the Wisconsin Division of Corrections, in the interest of the community at large (Baird et al., 1979).

Based on a sample of 4,231 termination documents collected over a two year period, initial risk scores were aggregated as to produce significant increases in revocation

rates with each increment in risk scores. From a total of 479 (11% of the total) offenders who received revocations, 7% had scores of seven or less (low risk), 25% fell in the range of eight to 14 (moderate risk), and 68% obtained scores of 15 or higher (high risk) (Baird et al., 1979).

Given the wide acceptance of the Wisconsin instrument by other U.S. jurisdictions, it is surprising to find only a few studies which offer validity estimation. Although Baird et al. (1979) reported decreasing proportions of offenders from low to high supervision levels, Wright, Clear, and Dickson (1984) found the distribution of probationers in their New York sample to be equal (approximately 25%) across the four levels of supervision. Notwithstanding the fact that Wright et al.'s (1984) findings fail to replicate the percentage distributions of Baird et al., (1979), it is suggested that perhaps a relatively higher proportion of offenders allocated to maximal controls would be expected in a New York City sample when compared to offenders in the mid-west. Nevertheless, a more important implication of this finding is the need to develop new norms for classifying offenders in other samples.

Baird et al. (1979) examined the inprogram performance of 4,231 termination cases collected over a two year period. In this study, the Wisconsin system was found to predict 720 or 66.6% of 1,081 revoked cases. In a sample of 124 probationers, Andrews, Kiessling, Mickus, and Robinson

(1985) reported predictive links between the Wisconsin risk scale and recidivism ($r = .31$). However, Wright et al. (1984) found the scale unrelated to outcome on probation/parole. Their results may have been due to a wider sampling of outcome criteria (i.e., any new arrests for nontrivial offenses, absconder warrants, technical violations as opposed to technical violations).

Illinois Initial Risk Evaluation Scale

The Illinois Initial Risk Level Evaluation Scale was modeled after the risk and needs assessment instruments used by the State of Wisconsin (Gulley, 1986). As in other U. S. jurisdictions, the instrument is designed to be used statewide, however, in Illinois it is only used in the supervision of adult probationers. Given that the Illinois Initial Risk Evaluation Scale and Wisconsin instruments essentially parallel one another in substance (see Appendix I), Illinois has relied on Wisconsin's validation efforts to support its use. These instruments differ, however, in that Illinois combined factors into one scale and changed the weightings. As yet, there have been no evaluations of the impact of implementing this instrument in the State of Illinois.

Level of Supervision Inventory

The Level of Supervision Inventory (LSI) was designed primarily as a standardized interview schedule for the classification of adult probationers. The LSI, now in its sixth revision, is a comprehensive survey instrument which assesses both offender risk and need based upon reviews of official records, and interviews with probationers and collaterals. The items in the LSI and the constructs they purport to measure were developed by Andrews (1982b) with the collaboration of probation staff.

The LSI was initially developed as one part of a larger Assessment and Evaluation System Project in Ontario Probation and Parole (Andrews, 1982c). It was first introduced during the summer of 1980 at the Ottawa offices of Probation and Parole (Andrews, 1982d) and it is a product of five years of development and research.

The LSI includes components which are intended to help identify offenders requiring different levels of supervision. It also was based upon a broad social-learning perspective of deviant behavior called the Personal, Interpersonal, and Community-Reinforcement (PIC-R) theory (Andrews, 1982e). PIC-R attempts to both summarize existing empirical facts and suggest new directions for research on criminal behavior (Andrews, 1982d). The LSI items were selected on the basis of their relevancy to both program performance and outcome, during community-based supervision.

An initial interview schedule of some 30 pages in length was derived from consultations with probation officers, as well as extracted from a comprehensive review of recidivism studies (Andrews, 1982b). Subsequently, revisions and refinements of the first three versions resulted in a 62-item checklist (LSI-IV) which was first used in the Ottawa offices of Probation and Parole.

Probation/parole officers completed LSI-IV's for 598 probation cases and these subjects provided the primary validation sample for the instrument (Andrews, 1982d). This sample was viewed as being representative of provincial offenders with respect to age, sex, and education. Utilizing item-by-item analyses, both age and sex items of LSI-IV were dropped as it was felt that the other items in the inventory carried the relevant information. This modification of the instrument resulted in LSI-V. The data obtained from the LSI-IV's were rescored into LSI-V's and subtotal intercorrelations computed for all the subscales. For the most part, inter-correlations among the subscales were positive, moderate in strength, and statistically significant (Andrews, 1982d). However, five items on LSI-V which focused on marital status were found to be troublesome both among probation/parole officers and with respect to internal consistency. Furthermore, three of the five items were not predictive of early termination and recidivism. As a result of these concerns, marital status was deleted from

the inventory and an item reflecting satisfaction with marital or equivalent situation was added and combined with family-related items to form a new category of Family/marital.

Additional revisions of the LSI included the deletion of items which were rarely checked off or found to be too complicated. The resultant interview schedule was a 58-item quantitative survey instrument (see Appendix J). Cutoff points for the LSI were derived from probation/parole officer's accounts of the proportion of probationer caseloads assigned to minimum, medium, and maximum levels of supervision. These proportions were applied to the frequency distributions of LSI total scores (Andrews, 1982d) and this resulted in the criterion cutoff points for the LSI. In addition, indicators of the levels of supervision were also obtained from correlations of LSI totals with recordings of actual supervision activity, cases still in progress, evidence of new charges, offenders reaching regular termination, instances of early termination, and recidivism (Andrews, 1982d).

In Ontario, Probation/Parole officers conduct intake interviews with offenders and complete the 58-item survey. Items are scored in a binary format ("0" if not applicable and "1" if applicable). The total LSI score is the summation of only those items which are checked. Once the LSI total score has been computed, offenders are allocated

correctional controls and services according to their level of supervision. Negative and/or positive circumstances not given sufficient attention in the LSI-VI items are indicated on the instrument in order to over-ride any classification. Guidelines for the scoring of items contained in LSI-VI are reported by Andrews, Kiessling, and Komisar (1983). The supervision levels generated by the LSI are designed to reflect both risk of recidivism and need for services. Offenders are assigned to three groups ("Low", "Moderate", and "High") to facilitate administration in the field. Thus far, the LSI system has been used to identify appropriate cases who are at risk to recidivate and appropriate levels of supervision and services are provided.

Research conducted on the LSI with over 561 probationers has shown that the LSI demonstrates internal consistency, inter-rater reliability, and temporal stability ($r = .80$, over several months) (Andrews, 1982d). In addition, LSI subcomponent scores demonstrated convergent validity with alternative measures of the same construct (Andrews, Kiessling, Mickus, & Robinson, 1986). Moreover, Andrews et al., (1986) reported that LSI total scores were predictive of staff evaluations of case progress, recidivism while on probation, post-program recidivism, and severity of re-offence. Finally, in a study with 57 adult probationers, Andrews and Robinson (1984) reported on the differential impact of the LSI on supervision and found that changes in

LSI scores were related to progress during treatment. To date, the available evidence would suggest that the LSI has undergone considerable empirical validation with respect to probation samples.

In extending the use of the LSI, a series of validation studies were undertaken with incarcerated offenders placed into correctional halfway houses. In this regard, Bonta and Motiuk (1985) reconfirmed the internal reliability and convergent validity of the LSI for a sample of 164 halfway house candidates. In addition, intake LSI scores were found to be significantly correlated both to adjustment in a community-based residential centre and reincarceration during a one year postprogram follow-up. In a comparison study, the LSI showed improved predictive accuracy over the Megargee MMPI-based Typology (Motiuk, Bonta, & Andrews, 1986).

In exploring the applicability of the LSI with prison samples, Bonta and Motiuk (1986a) reported on the institutional performance of 152 incarcerated offenders. In this study it was found that intake LSI scores were significantly related to security classification, misconducts, assaults, days in segregation, and occurrence reports. Moreover, significant relationships were also found between LSI scores and early release, temporary absence deferrals, ratings by incentive review committees, and reincarceration at one year follow-up.

In a large study of 270 prisoners, Bonta and Motiuk (1987a) investigated the results of classification decisions taken as a function of LSI scores. Incarcerated offenders with LSI scores less than or equal to 14 were diverted from their designated institutional placements and placed into correctional halfway houses. Results indicated that there was no significant increase in the number of transfers to halfway houses. However, there was a significant increase in terms of length of stay with no increased risk to the community. In a study involving 580 inmates at three large Detention Centres, Bonta and Motiuk (1987b, 1990) once again found LSI scores significantly related to misconducts, assaults, and halfway house outcome. In another study, Bonta (1989) administered the LSI to Native inmates and the LSI was predictive of misconducts and reincarceration. In sum, the available data clearly demonstrates that the LSI yields reliability, predictive validity and incremental validity across a variety of correctional settings.

File-review Method

The first two approaches to offender assessment obtains relevant information directly from the offender. In contrast, this section reviews instrumentation used by jurisdictions that employ an indirect approach. More specifically, these tools extract data (e.g., age, criminal history, education level) from archival records. The most

representative of these devices are reviewed for the following: Salient Factor Score, Statistical Information on Recidivism Scale, Oregon Parole Prognosis Scale, and Pennsylvania Parole Prognosis Assessment Scale.

Salient Factor Score

The Salient Factor Score, or SFS (see Appendix K) was constructed on the basis of its relevance to the prediction of parole outcome. The main focus of the instrument was the identification of "salient factors" that would predict outcome for all cases on parole (Hoffman & Beck, 1974). Sixty-six predictor variables were cross-tabulated with parole success or failure within two years of release from prison. After eliminating a number of items on ethical grounds, chi-square analyses revealed nine variables that were found to be predictive of favorable (or unfavorable) outcome. These items were: prior convictions, prior incarcerations, age at first commitment, auto theft, parole revoked, drug history, grade claimed, employment, and living arrangement.

For a construction sample (N=902), Hoffman and Beck (1974) reported a point biserial correlation of .32 between the new instrument and outcome. Then, on a validation sample (N=919), Hoffman and Beck (1974) found a point biserial correlation of .27 between the SFS and outcome. Although the SFS was deemed to be effective as an actuarial

device for parole decision-making, Hoffman and Beck (1974) noted several limitations. For example, the instrument did not take into account such factors as attitude or prison adjustment which have been found predictive of parole outcome in other studies. Moreover, the instrument was very dependent upon the accuracy and integrity of an inmates' institutional file. In any case, there exists the possibility for an over-ride if clinical judgments can be justified.

Guidelines for scoring the salient factors are available and parole prognosis (SFS) categories have been derived from inprogram (parole) recidivism rates (Hoffman & Adelberg, 1980). Cut-off scores for the SFS include: "Poor" (0 to 3), "Fair" (4 to 5), "Good" (6 to 8), and "Very Good" (9 to 11).

A number of predictive validity studies have been conducted with the SFS. In a sample of 1,546 released Federal prisoners, Beck and Hoffman (1976) examined the relationship between length of time served in prison post-release outcome over a two year follow-up period. Beck and Hoffman (1976) found that the association between length of time served and post-release outcome was not significant when prior criminal history (i.e., as measured by the SFS) is taken into account. In another study, Hoffman, Stone-Meierhoefer, and Beck (1978) examined the SFS and releasee behavior for three separate validation samples of

over 1,000 cases. A 3-year follow-up period was chosen along with three criterion measures of favorable/unfavorable outcome: 1) recommitments, 2) reconvictions, and 3) arrests. Point-biserial correlation coefficients for the SFS ranged between .32 and .38 for each of the criterion measures.

Hoffman and Stone-Meierhoefer (1979) also investigated the predictive validity of the SFS with respect to the post-release arrest experiences of 1,806 randomly selected released Federal prisoners. Analyses revealed that knowledge of SFS substantially improved the ability to estimate the likelihood of arrest in each year of a six-year follow-up period. Finally, six years after the SFS was originally constructed, Hoffman and Beck (1980) revalidated the instrument on a sample of 1,260 released Federal prisoners. Results indicated that the SFS retained its predictive validity with respect to arrest during a one-year follow-up period.

Hoffman (1983) examined a revised Salient Factor Score (SFS81) and compared it to the previously used SFS76 with respect to reliability, validity, and practical utility. A sample of 3,955 released Federal prisoners served as the data base for constructing the revised scale. An additional, 2,289 released Federal prisoners served as the validation sample. Modifications of the original SFS76 include a number of minor modifications (e.g., "age at first commitment" to "age at current offense/prior commitment").

The revised SFS81, a six-item predictive device was found to have predictive validity and stability equivalent to that of the previously used SFS76.

Several additional investigative efforts have addressed the predictive validity of SFS81. In a large sample of 6,287 released Federal prisoners, Hoffman and Beck (1984) examined the relationship between age at release and post-release outcome over a two year follow-up period. Using analysis of covariance, Hoffman and Beck (1984) found that the association between age at release and post-release outcome increased when prior criminal history, as measured by the SFS81, was taken into account. Hoffman and Beck (1985) also reported on the predictive validity of the SFS81 with respect to serious new criminal conduct, a new sentence of imprisonment. A total of 1,806 released Federal prisoners were investigated for post-release recidivism during a five year follow-up period. Results indicated that the SFS81 retained predictive power when the follow-up period is extended to five years. Finally, Andrews et al. (1985) found predictive links between Salient Factor scores and recidivism among probationers.

Statistical Information on Recidivism Scale

The Statistical Information on Recidivism Scale (SIR) (see Appendix L) for adult offenders was designed primarily for parole decision-making in Canada. The SIR Scale

consists of two parts: General Recidivism and Violent Recidivism. The items in the SIR Scale and the constructs they purport to measure were developed by Nuffield and her colleagues (1982). Based on a sample of 2,500 randomly selected Canadian Federal Penitentiary inmates, information was gathered on each offender's index offence, prior criminal history, social history characteristics and parole board decision. From regression and predictive attribute analysis, a list of 15 risk-related factors were found significantly associated with the decision to grant or refuse parole. Subsequently, two statistical instruments were compiled. First, in practice, the SIR Scale is used to predict any re-arrest for an indictable offence within three years. Although a second instrument is used to predict any re-arrest for a violent offence, it essentially replicates the SIR Scale in terms of item content.

The SIR Scale reflects relative occurrence weightings assigned to current parole decision outcome-related items. SIR Scale total scores are simply the summation of items corresponding to the following levels of risk: "Poor" (-27 to -6), "Fair to Poor" (-5 to -1), "Fair" (0 to +4), "Good" (+5 to +8), and "Very Good" (+9 to +30).

For a sample of 825 Canadian Penitentiary inmates, Hann and Harman (1988) revalidated the SIR Scale with respect to conditional release outcome and the statistically derived scoring system was found to be an accurate predictor of

release outcome. In another study, Motiuk and Porporino (1989) reconfirmed the ability of the SIR Scale to predict outcome on parole.

Oregon Parole Prognosis Scale

The Oregon Parole Prognosis Scale (see Appendix M) was designed primarily as a formal risk assessment instrument for making parole release decisions. The scale consists of six items and the items are scored in a weighted format. The total score is the summation of checked items. The higher the score on the Oregon Parole Prognosis Scale the better the prognosis on parole. Although most instruments used for this purpose are made up of traditional criminal history type variables, the Oregon Parole Prognosis Scale has one item which reflects admitted or documented substance abuse. Interestingly, the scale also contains one item which reflects community-based performance prior to the present offence. Hence, an offender can improve or worsen their risk ratings during subsequent sentences.

Notwithstanding the widening of the behavioral domain being sampled by the Oregon Parole Prognosis Scale, reports on the reliability and validity of the instrument are lacking. Given the relative merits of this scale for assessing offenders, the question necessarily arises whether there is empirical support for the instrument.

Pennsylvania Parole Prognosis Assessment Scale

The Pennsylvania Parole Prognosis Assessment Scale (see Appendix N) was developed as a formalized risk assessment for parole release decision-making in the State of Pennsylvania. This scale includes components which can identify offenders having differing levels of parole prognosis. This scale is unique in that it is comprised of only three variables: number of prior convictions, type of offence, and age at minimum sentence. Items are scored in a weighted format and the total score is the summation of those items which are checked. The higher the score on the Pennsylvania Parole Prognosis Scale the better the prognosis on parole. On the other hand, the lower the score on the scale the greater the likelihood of recidivism while on parole. Three classification ranges (above average, average, and below average) are derived from the scale.

Information concerning the reliability and validity of the scale are not available. Insofar as the other instruments have accumulated an extensive body of validity information, the Pennsylvania Parole Prognosis Assessment Scale appears to be lacking considerable empirical support. Moreover, a scale which assesses an offender based on such a limited amount of information (i.e., three items) points to a need for empirical validation.

PREDICTIVE CRITERION VALIDITIES OF OFFENDER ASSESSMENTS

Actuarial predictions of prison adjustment and/or post-release outcome may be empirically evaluated with respect to three issues: (1) absolute and relative predictive validity, (2) incremental, and (3) dynamic predictive validity.

Although absolute and relative predictive validity has been widely used for evaluating offender assessment procedures (Gottfredson, 1970), there has been very little emphasis on either incremental or dynamic validity. This may be due in part for the need to make comparisons among instruments and conducting longitudinal research which are expensive and complex from a methodological perspective. These three major types of predictive criterion validity will each be discussed in turn.

Absolute and Relative Predictive Validity

Absolute and relative predictive validity becomes an important issue whenever an individual's performance in a specified situation is in need of estimation (Anastasi, 1982). For example, an assessment procedure would be deemed valid if it made accurate forecasts of behavior.

Traditionally, the focus of most correctional research has been the linkage between offender attributes and criminal behavior (Loeber & Dishion, 1983; Reiss, 1951). Utilizing various indices of predictive accuracy such as tests of

independence and correlational analysis, these studies identify those variables which are reliably associated with target behaviors (i.e., adjustment).

Incremental Predictive Validity

Incremental predictive validity becomes an issue of focused concern whenever an assessment instruments' unique contribution to prediction is in question (Sechrest, 1963). For example, an assessment tool would be deemed valid if it produced an increment in predictive accuracy and efficiency in comparison to an alternative assessment. So far, only a few studies have examined offender assessment procedures with regards to incremental validity (Andrews et al., 1985; Andrews, Robinson, & Beha, 1986; Hanson et al., 1983; Motiuk et al., 1986). By utilizing multiple regression and canonical correlation analysis these investigations were able to establish which assessment procedure contributed the most to the prediction of a specified criterion. For example, in predicting recidivism, Andrews et al. (1985) reported that SFS and Wisconsin Risk Scale contributed no incremental validity relative to the LSI.

It should be pointed out, however, that a lack of incremental validity should not be interpreted as meaning that the other instruments in themselves were not valid. Instead, in relation to other assessment devices, no noteworthy increments in prediction were obtained.

Dynamic Predictive Validity

Dynamic predictive validity becomes an issue of special interest whenever an assessment tool's ability to reflect change is desired (Megargee, 1977). In outlining criteria for evaluating classification systems, Megargee (1977) first put forward the notion that an assessment procedure should be "dynamic". That is, "changes in an individual, such as improvement as a result of correctional treatment, will be reflected by a change in his or her classification" (1977: 108).

Andrews (1982) noted that assessment instruments exhibit dynamic predictive criterion validity if upon reassessment the instrument itself is capable of reflecting change in relation to the criterion. To date, there have been only a few published studies demonstrating dynamic validity (Andrews & Robinson, 1984; Andrews et al., 1986).

PRESENT STUDY

The present study is an investigation of the relationships between antecedents (e.g., criminal history) and consequences (e.g., recidivism) of prison adjustment. As an integral part of a multi-wave, multi-cohort study, it seems clear that a substantial amount of data would have to be gathered prospectively (i.e., intake assessment, institutional performance, post-release reassessment, community-based supervision performance, and post-program follow-up) in order to allow for the separation of the effects of pre-admission, incarceration, and post-release into the community. In working towards the development of an improved offender assessment technology, it is expected that the potential usefulness of a systematic assessment and reassessment approach would be realized.

Major Aims of the Study

The present study has a number of related aims. First, to explore the variation in the criminal conduct of incarcerated offenders through a variety of pre-admission, in-prison, and post-release outcome variables. Second, to examine the predictive validity of pre-prison, admission, prison, release and post-release case-based variables. Third, to assess the ability of three different assessment methodologies (i.e., self-report, interview-based, file-

review) to predict a variety of in-prison and post-release measures. Fourth, to compare the predictive accuracy and efficiency of a variety of objective assessment procedures used for criminal justice decisions. Fifth, to explore the relative and incremental predictive criterion validities of simple predictors and classification methods in relation to selected criterion measures of prison process, prison adjustment, prison release, post-release outcome and recidivism severity. Sixth, to investigate the magnitude of offender-by-treatment interactions on important correctional outcomes. Seventh, to determine whether scores derived from subsequent reassessments can enhance the predictability of future outcomes. Eighth, to examine the dynamic predictive criterion validity of the LSI in relation to post-release outcome and recidivism severity. Finally, to discuss a possible underlying 'psychology of criminal conduct' (Andrews, Bonta, & Hoge, 1990) for effective correctional interventions with offenders.

METHOD

Settings

A multi-wave data set was compiled for a multi-cohort sample consisting of three groups of Provincially sentenced offenders (Ontario). All offenders selected for this study were initially classified at the maximum security Ottawa-Carleton Detention Centre (OCDC). Although most offenders classified at OCDC are likely to be transferred to longer term Provincial Correctional Centres, some offenders can remain within the regional municipality of Ottawa-Carleton by successful application to OCDC programming (i.e., Community Resource Centres, Community Work Programs). The three Ottawa offices of Probation and Parole served as the data gathering sites for those offenders released into the community under supervision.

Sampling Criteria

Only adult male offenders eligible for classification served as subjects. This involved offenders with sentences between 124 days and two years less a day. It should be noted that offenders with sentences of two years and more become a Federal responsibility. A total of 510 offenders were derived from three separate samples of subjects who had participated in previous studies on classification at the OCDC.

Only offenders being classified and assessed with the LSI for the first time were selected as subjects in this study. The first cohort consisted of 69 (13.5%) offenders (Bonta & Motiuk, 1982), the second cohort was comprised of 375 (73.5%) offenders (Bonta & Motiuk, 1986), and finally, a third cohort consisted of 66 (13.0%) offenders (Bonta & Motiuk, 1987).

Data Gathering Process

Overall, the research strategy for this prospective longitudinal study proceeded in four separate waves of data collection.

1. Intake Assessment. Three separate cohorts of consecutively sentenced admissions to OCDC were interviewed by classification staff and intake LSI's were completed and scored. Furthermore, recommendations were made regarding institutional custody and transfer. Then, the LSI record form along with classification recommendations were forwarded to research staff in the OCDC Psychology Department. Upon receipt of this documentation, an Adult Information System (AIS) card was obtained for each subject to provide relevant demographic information.

In addition to the LSI which was administered to all three cohorts, a psychometric test battery was administered to subjects in the second cohort who had consented to

participate (see Appendix O). A coding manual detailing the various demographic and psychometric measures gathered was constructed (see Appendix P).

In exploring the various methods of offender assessment (i.e., self-report, interview-based, and file-review), nine other classification schemes were chosen from a review of the offender assessment literature. These included:

Megargee MMPI-based Typology (MEG), Prison Maladjustment Scale (PMA) and Prison Adjustment Scale (PAD) (i.e., self-report methods); Wisconsin Assessment of Client Risk Scale (WIS), and Illinois Initial Risk Evaluation Scale (ILL) (i.e., interview-based methods); and Salient Factor Score (SFS), Statistical Information on Recidivism Scale (SIR), Oregon Parole Prognosis Scale (ORE) and Pennsylvania Parole Prognosis Assessment Scale (PEN) (i.e., file-review methods).

Only those offenders in the second cohort who had a reading grade level above six, as measured by the Wide Range Achievement Test (Jastak, Bijou, & Jastak, 1978), were administered the MMPI. Offenders possessing valid MMPI protocols were selected and uniquely classified into one of the ten typologies according to the Megargee and Dorhout (1977) rules. Then, Megargee and Bohn's (1979) rank-ordering of MMPI types were applied from the most benign to the most deviant. This resulted in a distribution of Megargee type scores which were then split at the median

into "low" and "high" risk groups.

Utilizing the same MMPI protocols used to derive Megargee MMPI types, scores on both the Prison Adjustment Scale and Prison Maladjustment Scale were derived. Similarly, distributions of classification scores for these two scales were compiled and the median splits provided "low" and "high" risk groupings.

In order to arrive at classification scores for the various interview-based methods, the LSI items were used to compile (i.e., different combinations and weighting) scores for the Wisconsin and Illinois scales. Once again, distributions of the various classification method scores and resultant median-splits established the "low" and "high" risk groups required for analyses.

Finally, the relevant information required to derive classification scores for the various file-review methods was extracted from available official records. Although it was more the exception than the rule, whenever information was unavailable to complete a particular scale item, the benefit of the doubt was attributed to the offender in the direction of "low" risk. In conducting a series of univariate, bivariate and multivariate analyses on the various assessment methods, the sample was unique in that scores were available for all ten classification instruments. A detailed distribution of the classification scores obtained for the various assessment instruments is

tabled and appended including the median split cut-off points used to generate the "low" and "high" risk groupings (see Appendix W).

2. Institutional Performance. Upon expiration of sentence, a comprehensive review of institutional files (i.e., main, medical, and psychology) was conducted at all of the releasing institutions. From these files were extracted accumulated data on cohorts regarding movement while in custody, activity during incarceration and movement out of custody. These extensive file reviews were completed by a variety of research assistants using a standardized data collection form (see Appendix Q). A set of guidelines for completion of these file reviews was also compiled (see Appendix R).

3. Post-release Reassessment and Community Performance. For those offenders released with community-based supervision following incarceration (N = 310), a review of their respective Probation/Parole files was conducted at each of the three Ottawa offices of Probation and Parole. At time of follow-up, file access was limited to only those cases who were considered to be closed (i.e., either due to termination or return to prison). While this represented the major proportion of the cohort available for follow-up in the community, it would

necessarily result in a reduction in the size of the community supervision follow-up subsample (N = 142).

This file review yielded, in the majority of cases, both the Probation/Parole LSI's and the initial interview narratives of Probation/Parole officers (N = 86). However, only those LSI's (i.e., retests) which were completed within three months of release were included as retests (N = 55). In addition, all retest LSI's were adjusted using the scores obtained for the institution intake LSI's criminal history subcomponent. That is, there were retest criminal history items that were not endorsed as was in the intake LSI assessment then the retest criminal history subcomponent score would be adjusted. This was done for several reasons. First, the criminal history subcomponent of the LSI is a 'static' factor and as such does not change upon release. Secondly, the institution intake LSI's were thoroughly verified using official records by both classification and research staff. Given the aforementioned quality control checks, it was deemed appropriate to systematically use the verified criminal history subcomponent scores and thereby adjust the retest LSI accordingly. From this documentation was also obtained the relevant demographic measures (i.e., marital status, etc.). Moreover, the Client Information Sheet provided pertinent information regarding disposition, community service orders, restitution, control dates and other demographic measures.

From the detailed narrative accounts of Probation/Parole officers' encounters with the offender in the community was extracted performance measures. These files were reviewed by two separate coders (i.e., with systematic checks for intercoder reliability) using a standardized data gathering sheet (see Appendix S) and a coding manual (see Appendix T).

4. Recidivism Follow-up. Finally, recidivism data was collected by means of a computerized search on each offender using the Adult Information System, an automated database, of the Ministry of Correctional Services (Ontario). Insofar as this official source was used for recidivism follow-up it limits the generalizability of post-release outcome data to within the Province of Ontario. Available for follow-up were offenders who were released for at least one year. These "hard copy" files were also reviewed using a standardized data collection form (see Appendix U) and a set of guidelines (see Appendix V).

Analyses: Classification Methods

In order to explore the absolute, relative, incremental, and dynamic predictive criterion validities of a large number of predictors and three separate offender assessment methodologies, a series of univariate, bivariate and multivariate analyses were conducted with respect to a

selected number of criterion measures. More specifically, these criterion measures included: prison process, prison adjustment, prison release, post-release outcome and recidivism severity.

Analytic Techniques

The absolute, relative and incremental predictive criterion validities of the various simple predictors (intake age, LSI items, etc.) and classification methods were explored through correlational, contingency table and stepwise multiple regression analyses, with selected prison process, adjustment and post-release outcome measures as separate criterion variables.

First, correlational analyses were conducted using the various intake correlates and classification instruments selected for examination.

Secondly, a series of stepwise multiple regression analyses were conducted using 1) age and intake LSI subcomponents and 2) classification scores. These variables were allowed to enter into a regression equation, and the relative contribution of each predictor was established. Subsequently, higher order regression models were established by combinations (i.e., best two or three) of various intake correlates, prison adjustment, and retest correlates which accounted for the most significant explained variance in the selected criterion variables.

Thirdly, two-by-two prediction tables were also constructed for the various classification instruments. These contingency table analyses allowed for a variety of predictive accuracy statistics to be derived for each classification instrument. In addition, Relative Improvements Over Chance (RIOCI), a predictive accuracy statistic developed by Loeber and Dishion (1983), are presented for each classification device.

Fourthly, contingency table examinations of intake LSI risk level groupings were conducted in relation to selected criterion variables. These intake LSI risk level groupings were established by using LSI total scores proportionally distributed across 'low', 'moderate' and 'high' risk groups. Similarly, contingency table analyses were used to explore the outcomes for combinations of intake/retest risk levels. In addition, analysis of variance was conducted in order to examine the main effects of LSI risk level (at intake and retest) and correctional intervention (general treatment participation while in prison and office visits while under community supervision) as well as the magnitude of risk-by-treatment interactions on general recidivism.

Finally, dynamic predictive criterion validity estimates for selected post-release outcome criteria were explored by means of a series of correlational and stepwise regression analyses.

RESULTS

Sample Characteristics

The total sample consisted of 510 adult male offenders who were assessed by nine classification staff at the Ottawa-Carleton Detention Centre. As mentioned previously, subjects for this study were derived from three separate cohorts of offenders who had participated in a series of LSI classification studies (Cohort #1 - May 1982 to August, 1982; Cohort #2 - October, 1983 to December 1984; and Cohort #3 - June, 1985 to October, 1985). Table 5 provides the mean admission age, education level, sentence length and LSI total score for each of the three cohorts that were drawn from the total sample. As Table 5 indicates, the total sample is largely represented by subjects from the second cohort (73.5%), a group of offenders who were also administered an extensive psychometric test battery.

As expected, the mean admission age of the first cohort was found to be significantly lower than for the other two cohorts. This was due to the fact that the Young Offenders Act had come into effect after the first cohort had been constructed and thereby excluded those under 18 years age from future sample selection. Apart from age, there were no significant differences between the three cohorts in terms of education level, sentence length and LSI score.

Table 5

Means and Standard Deviations of Selected Cohort Characteristics

Variable	Cohort #1 (n = 69)		Cohort #2 (n = 375)		Cohort #3 (n = 66)		p
	Mean	SD	Mean	SD	Mean	SD	
Age (yrs.)	23.5	7.2	25.1	8.6	27.2	8.3	*
Education (grade)	9.9	1.8	10.0	1.9	10.0	2.7	ns
Sentence (days)	367.3	190.9	340.3	181.6	326.0	180.0	ns
LSI (score)	22.2	8.7	25.0	9.0	23.9	11.1	ns

Note: * $p < .01$; ns = nonsignificant.

Offenders in the total sample were primarily Caucasian and the average admission age was 25.1 years (SD = 8.4). While the sample ranged in age from 16 to 62 years, the majority were between 20 and 25 years of age (32.5%).

The average self-reported education of the sample was grade 10.0 (SD = 2.0). Approximately 18% of the sample had completed at least grade 12 and roughly 3% had some post-secondary education.

Nearly 70% of the offenders reported that they were unemployed upon admission, 47.8% claimed they had never been employed a full year. Over 70% of the sample indicated that they were labourers, 10.8% were craftsman and 5.7% were

students.

While 20.8% of the inmates stated that they were either married or living common law, 69.6% reported they were single. The majority of offenders had been initially remanded into custody (63.5%). The remainder of the sample consisted of sentenced admissions (35.7%), parole revocations (0.4%) and transfers from other institutions prior to classification (0.4%).

First incarcerates made up 24.1% of the sample. While 25.4% had only one previous incarceration, 17.7% had at least two previous terms and 32.3% had three or more prior incarcerations. Those in the sample who had an escape history accounted for 10% and those with a history of institutional misconducts comprised 40.2%.

Approximately 15% of the sample had no prior convictions, 73.7% had two or more prior convictions and 59.6% had three or more prior convictions. Those offenders who had a history of arrest prior to the age of 16 accounted for 52.7% of the sample. With respect to type of previous convictions, 42.7% had an official record of assault/violence.

Although 61.5% of the sample had previously been on probation at one time or another, 35.9% were actually serving a probation term when they had re-offended and subsequently admitted to custody. Notwithstanding the 7.1% of the sample that also had been on parole at one time or

another, 51% of the offenders were found to have had a charge laid or probation/parole suspended during previous periods of community supervision.

Of those studied, 52.7% had three or more offences for which they were serving a sentence. Using the offence with the longest sentence, the most frequent major offenses were property-related offenses (53.7%); 28.4% were sentenced for person-related offenses; and 7.5% had been sentenced for drug-related crimes.

Offenders in the sample were serving an average sentence of 342.1 days (SD = 182.6). The average length of sentence actually served was 152.3 days (SD = 77.8).

Upon release, 35.3% of offenders were released without a period of community-based supervision to follow incarceration, 34.7% were released on parole and 30% were released with a period of probation either to continue or to begin. Of those released on parole, 41.1% also had a period of probation to follow.

Retest Subsample Characteristics

Post-release community supervision file reviews of the total sample were used to construct a reassessment (i.e., retest) subsample. Attempts were made to gather information on all available case files in the regional municipality of Ottawa-Carleton. These file reviews yielded documentation on 142 closed parole and/or probation cases. Of the closed

community case files that were reviewed, 86 (60.6%) were found to have potential reassessment information (i.e., LSI's). A closer examination of the retest LSI's, however, resulted in a retest subsample of 54 cases. This was due to there being LSI's on file which either predated admission to incarceration (i.e., earlier LSI's, Presentence Report LSI's) or had been completed after the three month post-release period. The retest subsample consisted of 54 adult male offenders who were released from a correctional facility onto parole and/or probation in the Ottawa area. The majority of retest cases were derived from Ottawa West Probation and Parole Office (49.0%), while the remainder were drawn from the Ottawa Central (36.4%) and Ottawa East (14.6%) offices.

Table 6 presents the mean admission age, education level, sentence length and intake LSI score for offenders in the retest subsample as well as those who were not retested but also had a period of community supervision to follow. As expected, the mean intake LSI score of offenders in the retest subsample was found to be significantly lower than those under community supervision who were not reassessed with the LSI. This was due to the fact that the retest subsample had a substantially higher proportion of cases that were granted parole (74.1%) than the non-retest subsample and thereby were more likely to have had lower LSI risk scores. In examining further intake LSI risk scores of

those released on parole, the mean LSI scores were 18.3 and 20.6 for the retest and non-retest groups respectively ($p < .18$).

Apart from the LSI score, there were no significant differences between the retest and non-retest subsample in terms of admission age, education level and sentence length.

Table 6

Means and Standard Deviations of Selected Retest and Non-retest Subsample Characteristics

Variable	Retest (n = 54)		Non-retest (n = 258)		p
	Mean	SD	Mean	SD	
Admission Age (yrs.)	26.2	9.2	24.7	8.2	ns
Education (grade)	10.2	1.9	10.1	2.2	ns
Sentence (days)	313.5	152.6	336.6	185.1	ns
Intake LSI (score)	20.3	10.7	23.6	9.4	*
Intake LSI parolees	(n = 40) 18.3	9.5	(n = 131) 20.6	10.2	ns

Note: * $p < .05$; ns = nonsignificant.

A: Descriptive StatisticsOffender Intake Variables

Table 7 provides the percentage of cases with identified intake variables (i.e., selected LSI items and other variables) who were assessed upon admission to prison. As Table 7 shows, all of the variables that were covered by the intake LSI's were evidenced in the sample. Notably, the majority of the sample had a previous criminal history. Other noteworthy intake variables included the percentage of cases who reported alcohol (59.0%) and drug problems (52.8%) in the past, and indicated current alcohol problems (51.2%). While 5.3% of the sample were assessed by classification staff as demonstrating severe emotional/personal interference upon intake, 25% had received psychiatric treatment in the past.

Table 7

Percentage Distribution of Intake
LSI and Other Variables Assessed
(N = 510)

Variable	%
Criminal history:	
Prior convictions	85.1
2+ prior convictions	73.7
3+ prior convictions	59.6
Arrested under 16	44.3
Prior prison terms	75.9
Escape history	10.0
Prior misconduct	40.2
Previous supervision	51.0
Violent record	42.8
Education:	
Less than grade 10	48.2
Less than grade 12	83.3
Suspended/expelled	52.4
Employment:	
Currently unemployed	69.4
Frequently unemployed	67.1
Never fully employed	47.8
Ever fired	24.1
Financial status:	
Financial problems	73.5
Social assistance	44.1
Family/marital:	
Married/Common Law	20.8
Dependents	21.4
Dissatis., marital	48.8
Nonrewarding, parental	50.8
Nonrewarding, other	44.1
Criminal family	21.6

cont'd

Table 7 (cont'd)

Variable	%
Living arrangements:	
Unsatisfactory	34.9
3+ address changes	30.8
Crime neighbourhood	16.7
Criminal associations:	
Social isolate	14.1
Criminal acquaintances	77.5
Criminal friends	57.5
Few noncrim. acquaint.	28.2
Few noncrim. friends	29.8
Substance use/abuse:	
Alcohol problem, ever	59.0
Drug problem, ever	52.8
Alcohol, current	51.2
Drug problem, current	44.7
Emotional/personal:	
Moderate interference	46.9
Severe interference	5.3
Psych. treatment, past	28.6
Psych. treatment, now	10.8
Psych. assessment	32.8
Attitude:	
Supportive, crime	25.1
Unfavourable convention	29.0
Poor, sentence	22.8
Poor, supervision	17.8

Prison Classification Methods

Table 8 shows the means, standard deviations and ranges of scores obtained for the various classification methods selected for examination. It should be noted that the sample of cases used for conducting analyses on these classification instruments was reduced to 215 cases from the

main sample (i.e., cohort #2). This was done in order to facilitate any comparative analyses that could be made between the other assessment methodologies (i.e., interview-based and record-retrieval) and the self-report instruments (i.e., Megargee MMPI-based Typology, Prison Maladjustment Scale and Prison Adjustment Scales) which were only available from the second cohort.

Table 8

Means and Standard Deviations of Classification Method Scores (N = 215)

Method	Mean	SD	Range
Self-report Method:			
Megargee MMPI-based Typology*	5.1	3.1	1 - 10
Prison Maladjustment Scale	30.8	12.6	5 - 58
Prison Adjustment Scale	15.1	3.3	7 - 23
Interview-based Method:			
Wisconsin Assessment of Client Risk	19.7	9.5	0 - 39
Illinois Initial Risk Evaluation	14.9	6.6	0 - 28
Level of Supervision Inventory	24.6	9.4	0 - 42
File-review Method:			
Salient Factor Score	4.8	1.9	1 - 9
Statistical Information on Recidivism	-6.9	5.2	-19 - 10
Oregon Parole Prognosis Scale	5.1	2.1	2 - 11
Pennsylvania Parole Prognosis Scale	31.6	20.2	0 - 79

Note: * Megargee MMPI-based types were ranked-ordered in terms of deviancy.

In moving towards a more meaningful understanding of the relationships between the various classification methods, Table 9 presents the intercorrelations among the selected assessment instruments. Presented in this fashion, it can be seen that most of the classification tools were significantly correlated with one another. The only exception being the correlation between the rank-ordered Megargee Typologies and the Pennsylvania Parole Prognosis Scale.

Also noted in Table 9 are the very high correlations obtained between the Oregon Parole Prognosis Scale and the SFS ($r = .80, p < .001$) and the Illinois Risk Evaluation Scale ($r = -.79, p < .001$), and the LSI and the Illinois Risk Evaluation Scale ($r = .73, p < .001$).

Table 9

Intercorrelations Among Classification Methods (N=215)

	MEG	PMA	PAD	WIS	ILL	LSI	SFS	SIR	ORE
Self-report Method:									
MEG	-								
PMA	.59 (***)	-							
PAD	.20 (**)	.14 (*)	-						
Interview-based Method:									
WIS	.25 (***)	.37 (***)	.22 (**)	-					
ILL	.34 (***)	.32 (***)	.39 (***)	.60 (***)	-				
LSI	.31 (***)	.41 (***)	.33 (***)	.65 (***)	.73 (***)	-			
File-review Method:									
SFS	-.22 (**)	-.32 (***)	-.36 (***)	-.51 (***)	-.73 (***)	-.65 (***)	-		
SIR	-.20 (**)	-.25 (***)	-.34 (***)	-.58 (***)	-.71 (***)	-.60 (***)	.69 (***)	-	
ORE	-.22 (**)	-.25 (***)	-.32 (***)	-.51 (***)	-.79 (***)	-.64 (***)	.80 (***)	.70 (***)	-
PEN	-.08 (ns)	-.15 (*)	-.15 (*)	-.30 (***)	-.39 (***)	-.52 (***)	.49 (***)	.57 (***)	.48 (***)

Note: MEG = Megargee MMPI-based Typology
PMA = Prison Maladjustment Scale
PAD = Prison Adjustment Scale
WIS = Wisconsin Assessment of Client Risk
ILL = Illinois Initial Risk Evaluation
LSI = Level of Supervision Inventory
SFS = Salient Factor Score
SIR = Statistical Information on Recidivism Scale
ORE = Oregon Parole Prognosis Scale
PEN = Pennsylvania Parole Prognosis Scale
* p < .05; ** p < .01; *** p < .001.

Prison Process Measures

With respect to the various prison process measures assessed, Table 10 presents the percentage distribution of these measures for the total sample. As noted in Table 10, 57.6% of the subjects were initially placed in medium/maximum security level institutions.

Table 10

Percentage Distributions of Prison Process Measures (N = 510)

<u>Measure</u>	<u>%</u>
Custody Level Recommendations (Med/Max)	50.0
Custody Level Placements (Med/Max)	57.6
Protective Custody Placements	12.9
Treatment Institution Placements	10.8
Halfway House Placements	20.0

Prison Adjustment Measures

Table 11 summarizes the percentage distribution of the various prison adjustment measures. With respect to institutional rule-breaking measures, 47.8% of the sample had incurred at least one misconduct during their incarceration. While the number of misconducts per offender ranged from one to 38 for the sample, 31.2% had more than one misconduct. The most frequent misconduct types were:

disobeying a lawful order (27.2%), assault (21.8%), gross language (14.6%), "breaks any rule" (14.0%), contraband (8.8%) and causing a disturbance (7.0%). In addition, nearly one out of every five halfway house placements were returned to prison.

In order to generate program participation measures, it was decided to explore three major areas of treatment service delivered in prison. These included medical, psychological and general treatment.

With respect to medical services, 48.0% had contacted a physician subsequent to their initial health care assessment. The number of medical contacts ranged from one to 33, however, the majority of cases saw the physician more than once (84.2%). For those cases where complete medical records were accessible, it was found that the majority of cases were not suffering from any form of major illness (89.7%). Of those with a major illness, 1.1% had epilepsy and 2.2% had a psychiatric disorder. Interestingly, 68.0% had been administered medication during their incarceration. Of the major drug categories, 5.8% were administered anti-depressants, 5.1% minor tranquillizers and 1.8% anti-psychotics.

In examining psychological services, 30.6% had contacted a psychology department at least once subsequent to admission. While the number of psychology contacts ranged from one to 50, the majority of cases had contacted

psychology more than once (66.7%).

For the 26.5% who received general treatment services (i.e., excludes medical contacts) during their incarceration, 50.0% were for psychological reasons, 20.7% for alcohol abuse, 5.9% for alcohol/drug abuse, and 3.0% for drug treatment only.

Table 11

Percentage Distributions of Prison Adjustment Measures (N = 510)

<u>Measure</u>	<u>%</u>
Institutional Rule-breaking:	
Misconducts	47.8
Assaults	22.0
Escapes	4.9
Halfway House Failure (n = 102)	22.5
Program Participation:	
Medical	48.0
Psychological	30.6
General Treatment	26.5

Prison Release Measures

In regards to prison release measures, the majority of subjects (60.8%) had been released on some form of community-based supervision (i.e., parole and/or probation).

Post-release Outcome Measures

Table 12 presents the percentage distribution for various post-release outcome measures. Follow-up information was made available for 96.9% of the total sample. Subjects that had no follow-up information were due largely to there being retrieval problems with the automated information system (i.e., lost records, unrecorded/changed personal identifiers). Three subjects were unavailable for post-release follow-up because they had escaped during their incarceration and received Federal sentences upon their recapture and two cases had died while in prison. In attempting to circumvent data retrieval problems with the automated offender database, considerable efforts were made to access institutional and/or community files whenever possible for relevant information. In any event, whenever follow-up information was unavailable, the subject was given the benefit of the doubt and coded in the direction of non-recidivism.

In constructing a general recidivism variable, whether or not a subject had been given a new period of community-based supervision (i.e., probation), remanded into custody but not convicted or reincarcerated within one year of release was coded in a binary format (i.e., 0 being "no" and 1 being "yes"). Overall, 42.7% of the sample evidenced general recidivism during the one year post-release follow-up period.

Table 12

Percentage Distributions of Post-release Outcome Measures

<u>Measure</u>	<u>N</u>	<u>%</u>
Remands	510	28.8
Incarceration	510	38.8
General Recidivism	510	42.7
Parole Violation	170	28.2

Recidivism Severity Measures

In a closer examination of post-release recidivism from a severity perspective (see Table 13), three additional post-release outcome measures were constructed. The first, 'violent recidivism' identifies only those cases who had a violent offence (i.e., homicide, sexual assault, assault, robbery, etc.) within one year of post-release. Those with non-violent offenses and no offenses were coded as 'non-recidivists'. The second measure, 'violent re-offence' was derived from only the recidivists. Those cases with violent offenses were coded as 'violent offenders' and those with non-violent offenses as 'non-violent offenders'. For the total sample, 15.3% were found to be violent recidivists. Amongst recidivists in the sample, 29.5% were violent re-offenders.

The final severity measure, 'Federal sentence' was coded for a subject who received a sentence of two years or

more and was transferred to a Federal Penitentiary. Interestingly, 9.0% of the sample had received a Federal sentence upon follow-up.

Table 13

Percentage Distributions of Recidivism Severity Measures

Measure	N	%
Violent Recidivism	510	15.3
Violent Re-offence	264	29.5
Federal Sentence	510	9.0

B. Correlational Analyses of Prison Intake Variables

In order to assess the predictive value of the intake variables, a series of correlational analyses were conducted between each variable assessed at intake and selected prison process, prison adjustment, prison release, post-release outcome and recidivism severity measures.

Intake Variable Correlations: Prison Process

As shown in Table 14, the majority of variables assessed at prison intake (i.e., 42/47) were significantly correlated with medium/maximum custody level recommendations. A similar pattern of significant correlations was found for medium/maximum custody placements.

With respect to protective custody placements (PC), the most noticeable finding was that while there were only nine significant correlations, all of the variables which addressed emotional/personal problems were significantly correlated with protective custody placement. Similarly, there were only 11 significant correlations between the various intake variables assessed and transfers to a treatment-oriented institution. Again, the most noteworthy finding was the preponderance of emotional/personal problem variables that were significantly correlated with placement in a treatment institution.

For halfway house or community resource centre (CRC) placement, correlational analyses revealed that the majority of variables assessed at intake were significantly correlated with halfway house placement. While being married and having dependents were significantly correlated with halfway house placement in the positive direction, the remaining significant correlations were in the negative direction.

Table 14

Intake Correlations: Custody Classification Measures
(N = 510)

Variable	Custody Rec.	Custody Placement	PC	Treatment	CRC
Admission Age:	-.16***	-.13**	-.06	-.06	.15***
Admission status: sentenced	.31***	.27***	.07	.04	-.29***
Criminal history:					
Prior convictions	.18***	.14**	-.02	-.05	-.22***
2+ prior convictions	.18***	.15***	.03	-.05	-.20***
3+ prior convictions	.15***	.14**	-.03	-.06	-.19***
Arrested under 16	.18***	.16***	.01	.01	-.17***
Prior prison terms	.25***	.22***	.03	-.03	-.27***
Escape history	.22***	.17***	-.01	-.07	-.15***
Prior misconduct	.33***	.28***	-.02	-.04	-.25***
Previous supervision	.19***	.14**	.03	-.00	-.25***
Violent record	.22***	.24***	.00	.12**	-.10*
Education:					
Less than grade 10	.13**	.09**	.10**	.07	-.11*
Less than grade 12	.16***	.13**	.05	.07	-.21***
Suspended/expelled	.22***	.17***	-.01	-.02	-.21***
Employment:					
Currently unemployed	.28***	.22***	.12**	.08	-.34***
Frequently unemployed	.27***	.16***	.06	.03	-.28***
Never fully employed	.23***	.18***	.06	.08	-.25***
Ever fired	.13**	.11*	.06	.03	-.05
Financial status:					
Financial problems	.19***	.18***	-.02	.01	-.27***
Social assistance	.14**	.09*	-.03	.02	-.17***
Family/marital:					
Married/Common Law	-.08	-.01	-.04	-.05	.15***
Dependents	-.16***	-.06	-.12**	-.01	.16***
Dissatis., marital	.19***	.13**	-.03	.10*	-.20***
Nonrewarding, parenta	.27***	.23***	.05	.04	-.20***
Nonrewarding, other	.19***	.16***	.01	.01	-.17***
Criminal family	.06	.04	-.06	.02	-.03

cont'd

2

PM-1 3½"x4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT

Intake Variable Correlations: Prison Adjustment

Table 15 presents the various intake correlations for the selected institutional rule-breaking measures. For misconducts and assaults, the majority of intake variables assessed were found to be significantly correlated with these two measures of prison adjustment.

As for escapes, there were only seven intake variables that were significantly correlated with this prison adjustment measure with prior misconduct demonstrating the highest predictive value ($r = .15$).

For halfway house (CRC) outcome, 21 of the 47 intake variables assessed showed predictive value. The major correlates of halfway house failure were criminal friends ($r = .37$), frequently unemployed ($r = .36$), nonrewarding parental interactions ($r = .36$) and suspended/expelled when in school ($r = .34$).

Table 15

Intake Correlations: Institutional Rule-breaking Measures

Variable	Misconduct (n=510)	Assault (n=510)	Escape (n=510)	CRC Outcome (n=102)
Admission Age:	-.37***	-.27***	-.11*	-.26**
Admission status:				
sentenced	.31***	.19***	.12**	.29**
Criminal history:				
Prior convictions	.09*	.02	.09*	.22*
2+ prior convictions	.09*	.03	.11*	.24*
3+ prior convictions	.02	.02	.08	.26**
Arrested under 16	.17***	.09*	.07	.19
Prior prison terms	.17***	.11*	.08	.27**
Escape history	.01	-.02	.02	.18
Prior misconduct	.28***	.27***	.15***	.22*
Previous supervision	.18***	.15***	.06	.21*
Violent record	.10*	.07	-.07	.07
Education:				
Less than grade 10	.16***	.10*	.05	.31***
Less than grade 12	.23***	.12**	.08	.32***
Suspended/expelled	.27***	.19***	.07	.34***
Employment:				
Currently unemployed	.19***	.17***	.07	.25**
Frequently unemployed	.24***	.10*	.08	.36***
Never fully employed	.29***	.22***	.09*	.21*
Ever fired	.06	.07	.00	.27**
Financial status:				
Financial problems	.15***	.07	.05	.16
Social assistance	-.03	-.05	.00	.14
Family/marital:				
Married/Common Law	-.22***	-.15***	-.05	-.13
Dependents	-.19***	-.16***	-.05	-.05
Dissatis., marital	.10*	.11*	.00	.17
Nonrewarding parental	.21***	.13**	.01	.36***
Nonrewarding other	.14**	.10*	-.04	.25*
Criminal family	.10*	.09*	-.01	.04

cont'd

Table 15 (cont'd)

Variable	Misconduct (n=510)	Assault (n=510)	Escape (n=510)	CRC Outcome (n=102)
Living arrangements:				
Unsatisfactory	.15***	.11*	.00	.10
3+ address changes	.13**	.06	.01	.14
Crime neighbourhood	.09*	.07	.00	.00
Criminal associations:				
Social isolate	.08	-.10*	-.04	.00
Criminal acquaint.	.29***	.21***	.06	.24*
Criminal friends	.23***	.20***	.07	.37***
Few noncrim. acquaint.	.16***	.12**	.08	.16
Few noncrim. friends	.17***	.11*	.07	.22*
Substance use/abuse:				
Alcohol problem, ever	.07	.04	-.05	.15
Drug problem, ever	.23***	.17***	.05	.09
Alcohol, current	.07	-.03	-.05	.17
Drug problem, current	.18***	.11*	.03	.00
Emotional/personal:				
Moderate interference	.02	.05	.02	-.03
Severe interference	.11*	.07	-.01	-.05
Psych. treatment past	.06	.08	-.02	.16
Psych. treatment now	-.07	-.05	-.08	-.09
Psych. assessment	.13**	.09*	.05	-.10
Attitude:				
Supportive, crime	.19***	.12**	.10*	.16
Unfavourable convict.	.10*	.03	.03	-.15
Poor, sentence	.03	.03	-.06	.02
Poor, supervision	.15***	.15***	.04	.22*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

CRC = Halfway House.

In Table 16, correlations between the various intake variables assessed and the selected program participation measures are presented. For medical, psychological and general treatment services only a small number of the intake variables assessed had any predictive value. As Table 16 shows, the most significant correlates of medical contacts were in the negative direction, escape history ($r = - .14$) and social isolate ($r = - .13$). Similarly, having had no previous escapes was amongst the major correlates of psychological contacts ($r = -.12$). Other significant correlates were psychiatric treatment in the past ($r = .12$) and psychiatric treatment at intake ($r = .14, p < .01$). With respect to general treatment services received while in prison, the most significant correlates included psychiatric treatment in the past ($r = .19$) and psychiatric treatment at intake ($r = .17$).

Table 16

Intake Correlations: Program Participation Measures
(N = 510)

Variable	Medical	Psychological	General Treatment
Admission Age:	-.03	.00	.02
Admission status:			
sentenced	.02	.03	.04
Criminal history:			
Prior convictions	.06	.02	-.05
2+ prior convictions	.06	-.04	-.02
3+ prior convictions	.06	-.02	-.03
Arrested under 16	.10*	-.08	-.03
Prior prison terms	.05	.01	-.03
Escape history	-.14**	-.12**	-.05
Prior misconduct	.04	-.04	-.05
Previous supervision	.00	-.08	-.09*
Violent record	.10*	.03	.02
Education:			
Less than grade 10	.05	-.06	.03
Less than grade 12	.09*	-.05	.04
Suspended/expelled	.06	-.03	-.01
Employment:			
Currently unemployed	.04	-.04	-.06
Frequently unemployed	-.03	.01	-.02
Never fully employed	.01	.00	-.09*
Ever fired	-.05	-.09*	.01
Financial status:			
Financial problems	-.03	-.01	.01
Social assistance	-.02	-.02	-.05
Family/marital:			
Married/Common Law	-.01	.05	.05
Dependents	-.04	-.01	.00
Dissatis., marital	.02	.00	.01
Nonrewarding parental	.08	.00	.03
Nonrewarding other	.08	.00	.01
Criminal family	.02	-.08	-.11*

cont'd

Table 16 (cont'd)

Variable	Medical	Psychological	General Treatment
Living arrangements:			
Unsatisfactory	-.01	-.03	-.03
3+ address changes	-.01	-.01	-.02
Crime neighbourhood	-.01	.05	-.01
Criminal associations:			
Social isolate	-.13**	.02	.04
Criminal acquaintances	.07	-.02	-.07
Criminal friends	.04	-.08	-.07
Few noncrim. acquaint.	.04	-.09*	-.06
Few noncrim. friends	.04	-.10*	-.07
Substance use/abuse:			
Alcohol problem, ever	.00	.03	.11*
Drug problem, ever	.00	-.02	-.01
Alcohol, current	-.03	.03	.10*
Drug problem, current	-.03	-.02	-.01
Emotional/personal:			
Moderate interference	.00	.02	.10*
Severe interference	-.01	.08	.10*
Psych. treatment, past	.11*	.12**	.19***
Psych. treatment, now	.02	.14**	.17***
Psych. assessment	.08	.03	.07
Attitude:			
Supportive, crime	.04	-.08	-.07
Unfavourable convention	.00	-.11*	-.11*
Poor, sentence	-.01	.04	.10*
Poor, supervision	-.04	-.11*	-.08

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Intake Variable Correlations: Prison Release

Table 17 shows the various intake correlations for the selected institutional release measures. With respect to parole releases, the majority of intake variables assessed (i.e., 31/47) were significantly correlated with being granted parole. Of special note, none of the emotional/personal variables assessed at intake were significantly correlated with parole release. With regards to post-release supervision (i.e., parole and/or probation), a similar pattern of significant correlations was found. However, it is noteworthy that psychiatric treatment at intake was found to be significantly correlated with post-release supervision ($r = .10$).

Table 17

Intake Correlations: Prison Release (n = 510)

Variable	Parole	Supervised
Admission Age:	.05	-.06
Admission status: sentenced	-.23***	-.16***
Criminal history:		
Prior convictions	-.21***	-.13**
2+ prior convictions	-.24***	-.16***
3+ prior convictions	-.21***	-.21***
Arrested under 16	-.15***	-.05
Prior prison terms	-.19***	-.15***
Escape history	-.06	-.06
Prior misconduct	-.22***	-.14**
Previous supervision	-.24***	-.09*
Violent record	-.06	-.04
Education:		
Less than grade 10	-.09*	.00
Less than grade 12	-.12*	-.05
Suspended/expelled	-.14**	-.10*
Employment:		
Currently unemployed	-.24***	-.14**
Frequently unemployed	-.24***	-.20***
Never fully employed	-.18***	-.15***
Ever fired	-.10*	.00
Financial status:		
Financial problems	-.21***	-.14**
Social assistance	-.14**	-.07
Family/marital:		
Married/Common Law	.16***	.05
Dependents	.17***	.06
Dissatis., marital	-.20***	-.10*
Nonrewarding, parental	-.13**	-.05
Nonrewarding, other	-.05	-.06
Criminal family	-.03	-.05

cont'd

Table 17 (cont'd)

Variable	Parole	Supervised
Living arrangements:		
Unsatisfactory	-.17***	-.11*
3+ address changes	-.11*	-.07
Crime neighbourhood	-.08	-.02
Criminal associations:		
Social isolate	-.06	.01
Criminal acquaintances	-.10*	-.10*
Criminal friends	-.14**	-.08
Few noncrim. acquaint.	-.11*	-.10*
Few noncrim. friends	-.11*	-.10*
Substance use/abuse:		
Alcohol problem, ever	-.10*	-.09*
Drug problem, ever	-.03	.00
Alcohol, current	-.14**	-.14**
Drug problem, current	-.08	-.03
Emotional/personal:		
Moderate interference	-.05	.00
Severe interference	-.05	-.03
Psych. treatment, past	-.02	.04
Psych. treatment, now	.08	.10*
Psych. assessment	-.06	-.02
Attitude:		
Supportive, crime	-.19***	-.14**
Unfavourable convention	-.13**	-.07
Poor, sentence	.04	.03
Poor, supervision	-.12**	.02

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Intake Variable Correlations: Post-release Outcome

In exploring further the predictive validity of the intake variables, a series of correlational analyses were also conducted between each prison intake variable assessed and selected post-release adjustment measures.

As shown in Table 18, the majority of variables assessed at prison intake were significantly correlated with post-release remands, incarceration, general recidivism and parole violation. While a similar pattern of significant correlations was found for each of the post-release outcome measures, it is interesting that none of the five emotional/personal variables assessed at intake were significantly correlated with any of the four post-release outcome measures.

Table 18

Intake Correlations: Post-release Outcome

Variable	Remands (n=510)	Incar. (n=510)	General Recidivism (n=510)	Parole Violation (n=170)
Admission Age:	-.22***	-.23***	-.26***	-.30***
Admission status: sentenced	.20***	.22***	.20***	.26***
Criminal history:				
Prior convictions	.13**	.15***	.15***	.12
2+ prior convictions	.18***	.19***	.18***	.18*
3+ prior convictions	.14***	.14***	.13**	.12
Arrested under 16	.20***	.17***	.19***	.26***
Prior prison terms	.14**	.11**	.12**	.12
Escape history	.08	.10*	.08	.08
Prior misconduct	.28***	.23***	.24***	.14
Previous supervision	.24***	.20***	.21***	.18*
Violent record	.03	.00	.01	.08
Education:				
Less than grade 10	.12*	.14**	.17***	.19*
Less than grade 12	.18***	.16***	.18***	.24**
Suspended/expelled	.23***	.19***	.21***	.26***
Employment:				
Currently unemployed	.20***	.20***	.21***	.20**
Frequently unemployed	.20***	.21***	.23***	.26***
Never fully employed	.18***	.19***	.21***	.32***
Ever fired	.10*	.09*	.09*	.05
Financial status:				
Financial problems	.17***	.10*	.11**	.16*
Social assistance	.08	.08	.07	.14
Family/marital:				
Married/Common Law	-.17***	-.16***	-.18***	-.16*
Dependents	-.12**	-.15***	-.16***	-.23**
Dissatis., marital	.15***	.10**	.11*	.24**
Nonrewarding parental	.11*	.10*	.11*	.18*
Nonrewarding other	.10*	.09*	.09*	.18*
Criminal family	.09	.09*	.10*	.09

cont'd

Table 18 (cont'd)

Variable	Remands (n=510)	Incar. (n=510)	General Recidivism (n=510)	Parole Violation (n=170)
Living arrangements:				
Unsatisfactory	.12**	.12**	.11*	.23**
3+ address changes	.05	.07	.06	.18*
Crime neighbourhood	.09	.11*	.11*	.24**
Criminal associations:				
Social isolate	.00	.04	.05	.03
Criminal acquaint.	.18***	.17***	.19***	.20**
Criminal friends	.21***	.21***	.22***	.27***
Few noncrim. acquaint.	.20***	.19***	.21***	.22**
Few noncrim. friends	.20***	.19***	.22***	.25***
Substance use/abuse:				
Alcohol problem, ever	.03	.01	.03	.02
Drug problem, ever	.15***	.14**	.16***	.20**
Alcohol, current	.06	.03	.03	.08
Drug problem, current	.17***	.17***	.18***	.23**
Emotional/personal:				
Moderate interfer.	.04	.04	.02	-.01
Severe interfer.	-.03	.02	.02	.02
Psych. treatment past	.02	-.02	-.02	.02
Psych. treatment, now	-.06	-.04	-.03	.01
Psych. assessment	.08	.07	.05	.00
Attitude:				
Supportive, crime	.18***	.12**	.15***	.07
Unfavourable convent.	.12**	.10*	.10*	-.03
Poor, sentence	-.04	-.05	-.03	.10
Poor, supervision	.21***	.19***	.19***	.15*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Incar. = Incarceration.

Intake Variable Correlations: Recidivism Severity

Insofar as violent recidivism was concerned (see Table 19), 16 of the 47 of the prison intake variables assessed were significantly correlated with violent recidivism at follow-up. As expected, the major correlates of violent recidivism were a violent record ($r = .16$), prior misconducts ($r = .17$) and a history of disruptive behavior in school ($r = .18$).

For violent re-offence, there were only five variables assessed at intake that were significantly correlated with this post-release adjustment measure. Again, as expected the major correlate of violent re-offence was a violent record ($r = .22$).

With respect to Federal sentences at follow-up, 20 of the 47 intake variables assessed at intake were predictive of this outcome at follow-up. Amongst the major correlates of Federal sentence were a poor attitude towards supervision ($r = .19$), prior misconduct ($r = .19$), and criminal friends ($r = .16$).

Table 19

Intake Correlations: Recidivism Severity

Variable	Violent Recid. (n=510)	Violent Re-offence (n=264)	Federal Sentence (n=510)
Admission Age:	-.11*	.00	-.12**
Admission status:			
Sentenced	.08	.02	.11**
Criminal history:			
Prior convictions	.10*	.08	.07
2+ prior convictions	.11**	.07	.09*
3+ prior convictions	.07	.02	.11*
Arrested under 16	.09	.01	.10*
Prior prison terms	.07	.04	.05
Escape history	.09*	.08	.15***
Prior misconduct	.17***	.12*	.19***
Previous supervision	.04	-.05	.05
Violent record	.16***	.22***	.06
Education:			
Less than grade 10	.11*	.07	.02
Less than grade 12	.17***	.01	.05
Suspended/expelled	.18***	.02	.10*
Employment:			
Currently unemployed	.10*	.07	.09*
Frequently unemployed	.10*	.04	.10*
Never fully employed	.09*	.02	.10*
Ever fired	.10*	.13*	.05
Financial status:			
Financial problems	.05	.03	.06
Social assistance	.01	.01	.00
Family/marital:			
Married/Common Law	-.03	.06	-.06
Dependents	-.03	.07	-.08
Dissatis., marital	.10*	.07	.03
Nonrewarding parental	.08	.06	.02
Nonrewarding other	.00	-.04	.05
Criminal family	.04	-.01	.07

cont'd

Table 19 (cont'd)

Variable	Violent Recid. (n=510)	Violent Re-offence (n=264)	Federal Sentence (n=510)
Living arrangements:			
Unsatisfactory	.02	-.03	.03
3+ address changes	.00	-.03	.03
Crime neighbourhood	.04	-.01	.06
Criminal associations:			
Social isolate	.00	-.01	-.07
Criminal acquaintances	.11*	.06	.12**
Criminal friends	.07	-.05	.16***
Few noncrim. acquaint.	-.01	-.15*	.15***
Few noncrim. friends	-.03	-.18**	.12**
Substance use/abuse:			
Alcohol problem, ever	.05	.06	.01
Drug problem, ever	.10*	.07	.09*
Alcohol, current	.02	.02	-.01
Drug problem, current	.06	-.02	.13**
Emotional/personal:			
Moderate interference	.00	-.01	.03
Severe interference	-.02	-.03	-.04
Psych. treatment past	.07	.11	.04
Psych. treatment, now	-.04	-.02	-.04
Psych. assessment	.06	.07	.11*
Attitude:			
Supportive, crime	.01	-.07	.15**
Unfavourable convent.	-.02	-.11	.12**
Poor, sentence	.06	.10	.07
Poor, supervision	.03	-.07	.19***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Recid. = Recidivism.

C: Correlational Analyses of Prison Classification Methods

Classification Method Correlations: Prison Process

In Table 20, a series of correlational analyses between the selected classification methods and five custody classification measures are presented. For medium/maximum custody level recommendations, all of the ten classification methods examined were significantly correlated with this measure. With respect to custody level placement, only the rank-ordered Megargee MMPI-based Typology was found to be unrelated.

Interestingly, none of the ten classification instruments that were examined demonstrated any predictive value with respect to protective custody placement.

In examining treatment institution placements, only three of the ten classification instruments were correlated significantly with placements. These were the rank-ordered Megargee MMPI-based Typology ($r = .17$), the Prison Maladjustment Scale ($r = .29$), and the LSI ($r = .15$).

As for halfway house placements (CRC), all of the classification instruments examined were found to be predictive.

Table 20

Correlations Between Classification Method Scores and
Custody Classification Measures (N = 215)

Method	Custody Rec.	Custody Placement	PC	Treatment Institution	CRC
Self-report:					
Megargee MMPI-based	.21**	.09	.03	.17*	-.19**
Prison Maladjustment	.29***	.15*	.10	.29***	-.37***
Prison Adjustment	.16*	.16*	-.10	-.07	-.17*
Interview-based:					
Wisconsin	.39***	.25***	-.04	.14	-.35***
Illinois	.33***	.25***	-.09	.11	-.39***
LSI	.48***	.31***	-.04	.15*	-.48***
File-review:					
SFS	-.34***	.27***	.08	-.07	.32***
SIR	-.33***	-.34***	.03	.01	.31***
Oregon	-.35***	-.26***	.12	-.05	.38***
Pennsylvania	-.21**	-.15*	.09	.03	.17*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Custody Rec. = Custody Recommendation (Medium/Maximum)

PC = Protective Custody.

CRC = Halfway House.

Treatment = Treatment Institution.

Classification Method Correlations: Prison Adjustment

Table 21 presents the various classification method correlations for the selected institutional rule-breaking measures. With respect to misconducts, only the Pennsylvania Parole Prognosis Scale was found not to be predictive. As for assaults specifically, six of the ten classification instruments examined were found to be significantly correlated with this measure of prison adjustment.

In regards to escapes, there was only one classification instrument that was significantly correlated with this prison adjustment measure. For escapes, only the Prison Adjustment Scale, a self-report method, had any predictive value ($r = .16$).

For halfway house failure, none of the classification instruments were found to be significantly correlated with that outcome measure.

Table 21

Correlations Between Classification Method Scores and
Institutional Rule-breaking Measures

Method	Misconducts (n=215)	Assaults (n=215)	Escapes (n=215)	CRC Failure (n=43)
Self-report:				
Megargee MMPI-based	.20**	.14*	.09	.03
Prison Maladjustment	.32***	.14*	.08	.06
Prison Adjustment	.17*	.04	.16*	.17
Interview-based:				
Wisconsin	.27***	.10	.05	.17
Illinois	.27***	.19**	.11	.25
LSI	.26***	.18**	.04	.19
File-review:				
SFS	-.18**	-.18**	-.13	-.23
SIR	-.22**	-.08	-.10	-.25
Oregon	-.19**	-.16*	-.09	-.11
Pennsylvania	-.01	.03	-.05	-.05

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Correlational analyses revealed that none of the classification instruments were significantly correlated with either medical or psychological contacts while in prison. However, with respect to general treatment services received in prison there were three classification instruments correlated with this prison adjustment measure.

Although the Prison Maladjustment Scale and Oregon Parole Prognosis Scale were significantly correlated in the positive direction with general treatment ($r = .18$ and $r = .14$, respectively), the Illinois Initial Risk Evaluation Scale was found to be correlated in the negative direction with general treatment ($r = -.18$, $p < .01$). Of particular note, the later two classification tools were correlated in such a manner as to reflect lower risk cases being more likely to have participated in treatment while in prison.

Classification Method Correlations: Prison Release

In Table 22, the classification method correlations are shown for the two institutional release measures. With respect to parole releases, the majority of the classification instruments examined were significantly correlated with being granted a parole and in the expected direction. However, only one self-report method, the Prison Adjustment Scale, was predictive of parole release.

For post-release supervision, none of the classification instruments were found to be predictive.

Table 22

Correlations Between Classification Method Scores and
Institutional Release Measures (N = 215)

Method	Parole	Supervised
Self-report:		
Megargee MMPI-based	-.08	.00
Prison Maladjustment	-.11	.05
Prison Adjustment	-.14*	-.02
Interview-based:		
Wisconsin	-.15*	-.02
Illinois	-.29***	-.06
LSI	-.31***	-.12
File-review:		
SFS	.25***	.02
SIR	.21**	.04
Oregon	.30***	.08
Pennsylvania	.17*	.13

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Classification Method Correlations: Post-release
Outcome

In examining the predictive validity of the various classification methods, correlational analyses were also conducted between each classification instrument and the selected post-release adjustment measures.

As Table 23 shows, the majority of classification instruments were significantly correlated with post-release

remands, incarceration, general recidivism and parole violation. While a similar pattern of significant correlations was found for each of the aforementioned post-release outcome measures, it is interesting to note that both the rank-ordered Megargee MMPI-based and Prison Maladjustment Scale were not significantly related to any of the four post-release outcome measures.

Table 23

Correlations Between Classification Method Scores and Post-release Outcome Measures

Method	Remands (n=215)	Incar. (n=215)	General Recidivism (n=215)	Parole Violation (n=81)
Self-report:				
Megargee MMPI-based	.09	.06	.07	.09
Prison Maladjustment	.11	.10	.10	.13
Prison Adjustment	.15*	.17*	.16*	.12
Interview-based:				
Wisconsin	.17*	.15*	.14*	.29**
Illinois	.34***	.29***	.30***	.26*
LSI	.34***	.29***	.29***	.27*
File-review:				
SFS	-.33***	-.33***	-.34***	-.33**
SIR	-.28***	-.23***	-.22**	-.28*
Oregon	-.31***	-.28***	-.28***	-.23*
Pennsylvania	-.21**	-.16*	-.15*	-.15

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Classification Method Correlations: Recidivism Severity

Table 24 also presents the various classification method correlations for the selected recidivism severity measures. It is noteworthy that none of the self-report method classification instruments were predictive of violent recidivism, violent re-offence and Federal sentence.

With regards to violent recidivism, two of the 10 classification instruments were predictive, namely the LSI ($r = .17$) and the SFS ($r = -.16$). With respect to violent re-offence, none of the classification tools were significantly correlated with this post-release adjustment measure.

As for Federal sentences, five of the 10 assessment tools were predictive. The major correlates of Federal sentence were the SFS, the Oregon Parole Prognosis Scale, the Illinois Initial Risk Evaluation Scale, the LSI, and the SIR Scale.

Table 24

Correlations Between Classification Method Scores and
Recidivism Severity Measures

Method	Violent Recid. (n=215)	Violent Re-offence (n=109)	Federal Sentence (n=215)
Self-report:			
Megargee MMPI-based	.02	-.07	.05
Prison Maladjustment	.06	-.03	.07
Prison Adjustment	-.06	-.18	.01
Interview-based:			
Wisconsin	.13	.10	.10
Illinois	.08	-.03	.15*
LSI	.17*	.11	.16*
File-review:			
SFS	-.16*	-.08	-.18**
SIR	-.08	.03	-.14*
Oregon	-.12	-.04	-.17**
Pennsylvania	-.09	-.02	-.12

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
Recid. = Recidivism.

D: Correlational Analyses: Process, Adjustment and Release Measures with Post-release Outcome

In examining the predictive validity of the various prison process, adjustment and release measures, correlational analyses were conducted with each of the post-release outcome measures.

Custody Classification Links with Post-release Outcome

As Table 25 shows, a number of custody classification measures were significantly correlated with the selected post-release outcome measures. Medium/maximum security custody recommendations were found to be significantly correlated with post-release remands and general recidivism. A similar pattern in results was found for initial medium/maximum security placements, however, these security level placements were also significantly correlated with post-release incarceration.

Interestingly, protective custody placement was predictive of parole violation. Also noteworthy, treatment institution placement was not significantly correlated with any of the four post-release outcome measures. In contrast, halfway house placement was significantly associated with post-release remands, incarceration, general recidivism and parole violation.

Table 25

Custody Classification Links with Post-release Outcome Measures

Predictor	Remands (n=510)	Incar. (n=510)	General Recidivism (n=510)	Parole Violation (n=170)
Med/Max Recommendation	.11*	.08	.10*	.08
Med/Max Placement	.15***	.11*	.12**	.14
Protective Custody	-.05	-.08	-.09	-.17*
Treatment	-.05	-.07	-.07	.03
Halfway House	-.18***	-.16***	-.18***	-.18*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Incar. = Incarceration.

Custody Classification Links with Recidivism Severity

In Table 26, the relationship between the various prison process measures and recidivism severity measures is shown. There were relatively few custody classification measures that were significantly correlated with recidivism severity.

Table 26

Custody Classification Links with Post-release Recidivism Severity

Predictor	Violent Recid. (n=510)	Violent Re-offence (n=264)	Federal Sentence (n=510)
Med/Max Recommendation	.08	.07	.15***
Med/Max Placement	.10*	.07	.17***
Protective Custody	.03	.12	-.02
Treatment Institution	.03	.08	-.02
Halfway House	-.08	-.01	-.09*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Recid. = Recidivism.

Institutional Rule-breaking Links with Post-release Outcome

Table 27 presents the various institutional rule-breaking measure correlations for the selected post-release outcome measures. While institutional misconducts and assaults were predictive of all four post-release outcome measures, an escape history was significantly correlated with only new remands. Halfway house outcome was significantly correlated with post-release remands and incarceration.

Table 27

Institutional Rule-breaking Links with Post-release Outcome Measures

Predictor	Remands (n=510)	Incar. (n=510)	General Recidivism (n=510)	Parole Violation (n=170)
Misconducts	.23***	.18***	.20***	.24***
Assaults	.20***	.16***	.16***	.23**
Escapes	.10*	.06	.06	.05
Halfway House Outcome	(n=102) .29**	(n=102) .20***	(n=102) .18	(n=54) -.06

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Incar. = Incarceration.

Institutional Rule-breaking Links with Recidivism Severity

In Table 28, the relationship between the institutional rule-breaking measures and recidivism severity is given. As Table 28 shows, committing an institutional assault was significantly correlated with all three measures of recidivism severity.

Table 28

Institutional Rule-breaking Links with Post-release
Recidivism Severity

Predictor	Violent Recid. (n=510)	Violent Re-offence (n=264)	Federal Sentence (n=510)
Misconducts	.16***	.10	.12**
Assaults	.16***	.13*	.13**
Escapes	.03	.01	.02
Halfway House Outcome	(n=102) .21*	(n=35) .17	(n=102) .13

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
Incar. = Incarceration.

Program Participation Links with Post-release Outcome

There was only one significant relationship between the program participation measures (medical, psychological, general treatment) and post-release outcome. Only medical contacts were predictive of less parole violation.

Program Participation Links with Recidivism Severity

No significant correlations were found between any of the program participation measures and recidivism severity.

Institutional Release Links with Post-release Outcome

Table 29 shows the institutional release measure correlations for the selected post-release outcome measures. As expected, parole release was found to be predictive of

fewer remands, incarceration and general recidivism upon follow-up. However, community-based supervision release (i.e., parole and/or probation) was not significantly correlated with any of the measures of post-release outcome.

Table 29

Institutional Release Links with Post-release Outcome Measures

Predictor	Remands (n=510)	Incar. (n=510)	General Recidivism (n=510)
Parole	-.25***	-.12**	-.14**
Community Supervision	-.07	.00	-.01

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
Incar. = Incarceration.

Institutional Release Links with Recidivism Severity

In Table 30, the institutional release correlations for the selected recidivism severity measures are shown. Again, as expected, parole release was found to be predictive of less violent recidivism and fewer violent offenders amongst recidivists. However, community-based supervision release (i.e., parole and/or probation) was not significantly correlated with recidivism severity.

Table 30

Institutional Release Links with Post-release Recidivism Severity

Predictor	Violent Recid. (n=510)	Violent Re-offence (n=264)	Federal Sentence (n=510)
Parole	-.14**	-.13*	-.08
Community Supervision	-.02	.00	-.04

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
Recid. = Recidivism.

E: Incremental Prediction Using Admission Age and LSI Subcomponents:

The absolute, relative and incremental predictive criterion validities of the various intake variables assessed at intake were explored through multiple regression analyses, with the selected prison process, adjustment, release, post-release outcome and recidivism severity measures as separate criterion variables.

Stepwise multiple regression analyses were conducted and the absolute and relative contribution of each predictor variable was explored, then the incremental contributions of the other predictor variables were established.

In order to conduct the multiple regression analyses of the various intake variables assessed, the ten subcomponents of the Level of Supervision Inventory (LSI) were used as the predictor variables. These included: criminal history,

employment/education, financial, family/marital, accommodations, leisure, companions, alcohol/drug problems, emotional/personal problems and attitude. In addition, admission age, which had been incorporated into earlier versions of the LSI, was also included in the regression analyses.

In Table 31, the means, standard deviations and ranges of the various intake variables regressed are presented.

Table 31

Means and Standard Deviations for Intake LSI Subcomponents Assessed (N = 510)

Variable	Mean	SD	Range
Static:			
Admission Age	25.13	8.44	16 - 62
Criminal History	5.37	2.45	0 - 10
Dynamic:			
Employment/Education	6.06	2.96	0 - 10
Financial	1.17	0.75	0 - 2
Family/Marital	1.65	1.16	0 - 4
Accommodations	0.82	0.95	0 - 3
Leisure	1.66	0.65	0 - 2
Companions	2.07	1.36	0 - 4
Alcohol/Drug	3.51	2.33	0 - 9
Emotional/Personal	1.23	1.27	0 - 5
Attitude	0.93	1.11	0 - 4

SD = Standard deviation

Prison Process

In Table 32, the summary of stepwise selection procedures for the various prison process measures are presented. As Table 32 shows, for custody classification measures (i.e., medium/maximum security recommendations and placements, protective custody, treatment institution), the LSI subcomponent of 'emotional/personal problems' consistently entered into the stepwise regression model as the first variable. As expected, the LSI subcomponent of 'employment/education' entered first into the stepwise regression equation for halfway house placement.

An inspection of Table 32 also reveals that substantial increments in explained variance in medium/maximum custody level recommendations and placements as well as halfway house placements can be achieved by adding other LSI subcomponents to the regression model. While increments in explained variance can similarly be achieved for protective custody and treatment institution placements, the amount of explained variance that was achieved by the addition of other LSI subcomponents to the regression model was very small (i.e., < 2%).

Table 32

Incremental Predictive Criterion Validity Estimates for
Admission Age and LSI Subcomponents: Prison Process

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Med/Max Recommend. (n=510)	1	Emotional/Personal	1	.13	.13	***
	2	Criminal History	2	.09	.22	***
	3	Companions	3	.03	.25	***
	4	Family/Marital	4	.02	.27	***
	5	Attitude	5	.01	.28	*
	6	Employ./Educ.	6	.01	.29	*
Med/Max Placement (n=510)	1	Emotional/Personal	1	.10	.10	***
	2	Criminal History	2	.06	.17	***
	3	Family/Marital	3	.01	.18	**
	4	Attitude	4	.01	.19	*
Protective Custody (n=510)	1	Emotional/Personal	1	.07	.07	***
	2	Alcohol/Drug	2	.01	.08	*
	3	Employ./Educ.	3	.01	.09	*
	4	Leisure	4	.01	.09	*
Treatment Institution (n=510)	1	Emotional/Personal	1	.08	.08	***
	2	Criminal History	2	.01	.09	*
	3	Alcohol/Drug	3	.01	.09	*
Halfway House (n=510)	1	Employ./Educ.	1	.14	.14	***
	2	Criminal History	2	.04	.18	***
	3	Leisure	3	.01	.20	**
	4	Attitude	4	.01	.21	*
	5	Family/Marital	5	.01	.22	*

Note: * p < .05; ** p < .01; *** p < .001.

Prison Adjustment

Table 33 presents the summary of stepwise selection procedures for the various prison adjustment measures. For institutional misconducts and assaults, 'admission age' entered into the stepwise regression model as the first

variable. However, a substantial increase in explained variance in these criterion measures was made by the LSI subcomponent of 'employment/education' in the second step of the regression model. With respect to escapes, a stepwise regression procedure revealed that only a very small portion of the explained variance in this criterion measure could be explained by any of the selected predictor variables. Again, the LSI subcomponent of 'employment/education' entered first into the stepwise regression equation for halfway house outcome with increments in explained variance gained by adding the LSI subcomponents of 'family/marital relations' and 'criminal history'.

Table 33

Incremental Predictive Criterion Validity Estimates for
Admission Age and LSI Subcomponents: Prison Adjustment

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
<hr/>						
Misconducts (n=510)	1	Admission Age	1	.14	.14	***
	2	Employ./Educ.	2	.04	.28	***
	3	Criminal History	3	.02	.20	**
	4	Family/Marital	4	.01	.20	*
	5	Financial	5	.01	.21	*
<hr/>						
Assaults (n=510)	1	Admission Age	1	.08	.08	***
	2	Employ./Educ.	2	.02	.10	***
	3	Family/Marital	3	.01	.10	**
	4	Financial	4	.01	.19	*
<hr/>						
Escapes (n=510)	1	Criminal History	1	.02	.02	**
	2	Admission Age	2	.01	.03	*
<hr/>						
Halfway House Outcome (n=102)	1	Employ./Educ.	1	.21	.21	***
	2	Family/Marital	2	.05	.26	*
	3	Criminal History	3	.02	.29	*

Note: * p < .05; ** p < .01; *** p < .001.

Prison Release

In Table 34, a summary of the stepwise selection procedures conducted for the various prison release measures is presented. As Table 34 shows, for parole and community-based supervision the criminal history subcomponent entered into the stepwise regression model as the first variable. While the results indicated that a substantial portion of explained variance in parole release can be explained by entering a number of the LSI subcomponents into a stepwise

regression equation, it should be noted that only a small portion of explained variance accounted for community-based supervision.

Table 34

Incremental Predictive Criterion Validity Estimates for Admission Age and LSI Subcomponents: Prison Release

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Parole (n=510)	1	Criminal History	1	.11	.11	***
	2	Financial	2	.03	.13	***
	3	Leisure	3	.01	.14	*
Community Supervision (n=510)	1	Criminal History	1	.04	.04	***
	2	Employ./Educ.	2	.01	.05	*
	3	Admission Age	3	.01	.06	*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Post-release Outcome

A summary of stepwise selection procedures for the various post-release outcome measures is presented in Table 35. For post-release remands, incarceration, and general recidivism, the variables which entered consistently into a stepwise regression model included: 'admission age' and the LSI subcomponents of 'criminal history' and 'education/employment'. For post-release incarceration and general recidivism the LSI subcomponent of 'companions' also made a significant contribution to the overall explained variance in this criterion measure. With respect to parole

violation, the stepwise regression procedure revealed that incremental contributions to the explained variance in this criterion measure could be made by the LSI subcomponents of 'employment/education', 'family/marital problems', 'emotional/personal problems', and 'accommodations'.

Table 35

Incremental Predictive Criterion Validity Estimates for Admission Age and LSI Subcomponents: Post-release Outcome

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
<hr/>						
Remands (n=510)	1	Criminal History	1	.09	.09	***
	2	Employ./Educ.	2	.03	.12	***
	3	Admission Age	3	.02	.14	**
<hr/>						
Incarceration (n=510)	1	Employ./Educ.	1	.08	.08	***
	2	Criminal History	2	.03	.11	***
	3	Admission Age	3	.02	.13	**
	4	Companions	4	.01	.14	*
<hr/>						
General Recidivism (n=510)	1	Employ./Educ.	1	.10	.10	***
	2	Companions	2	.03	.13	***
	3	Criminal History	3	.01	.14	**
	4	Admission Age	4	.01	.16	**
<hr/>						
Parole Violation (n=170)	1	Employ./Educ.	1	.12	.12	***
	2	Family/Marital	2	.03	.15	*
	3	Emotional/Personal	3	.02	.17	*
	4	Accommodations	4	.02	.19	*

Note: * p < .05; ** p < .01; *** p < .001.

Recidivism Severity

In Table 36, a summary of the stepwise selection procedures conducted for the various recidivism severity measures is presented. Very small amounts of explained variance could be accounted for by the variables entered into the regression model with the LSI subcomponent 'criminal history' as the first variable to have entered into the prediction model. Only very small increments in explained variance were gained by adding other LSI subcomponents beyond the first variable entered into the regression models.

Table 36

Incremental Predictive Criterion Validity Estimates for Admission Age and LSI Subcomponents: Recidivism Severity

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Violent Recidivism (n=510)	1	Criminal History	1	.04	.04	***
	2	Employ/Educ	2	.01	.05	*
Violent Re-offence (n=264)	1	Criminal History	1	.02	.02	*
	2	Companions	2	.02	.04	*
	3	Employ/Educ	3	.01	.05	*
Federal Sentence (n=510)	1	Criminal History	1	.03	.03	***
	2	Attitude	2	.02	.05	**

Note: * p < .05; ** p < .01; *** p < .001.
Employ/Educ = Employment/Education.

F: Incremental Prediction Using Prison Classification Methods

Absolute, relative and incremental predictive criterion validities of the various classification methods were explored through multiple regression analyses after intake LSI risk had been forced first into a prediction model, with the prison process, adjustment, release, post-release outcome and recidivism severity measures as separate criterion variables.

In order to conduct the stepwise multiple regression analyses, the nine other classification instruments, as previously described in the literature review, were used as the predictor variables. These included: the Mega gee MMPI-based Typology (rank-ordered in terms of pathology or deviancy), the Prison Maladjustment Scale, the Prison Adjustment Scale, the Wisconsin Assessment of Client Risk Scale, the Illinois Initial Risk Evaluation Scale, the Salient Factor Score, the SIR scale, the Oregon Parole Prognosis Scale, and the Pennsylvania Parole Prognosis Scale.

Prison Process

In Table 37, a summary of the stepwise selection procedures conducted for the various prison process measures are presented. For custody level recommendations and placements, the LSI was forced first into the regression

equation and accounted for a substantial portion of the explained variance in the criterion measures (25% and 15%, respectively). Although a stepwise regression procedure was conducted for protective custody placements, none of classification instruments after the LSI was entered met the .05 significance level for entry into the model. While the Prison Maladjustment Scale entered into the stepwise regression model for treatment institution placement as the first variable after the LSI had been forced in before, it accounted for only a small amount of explained variance in the criterion. As expected, the LSI entered first into the stepwise regression equation for halfway house placement and accounted for a substantial portion of explained variance (23%).

Intake Variable Correlations: Prison Adjustment

Table 15 presents the various intake correlations for the selected institutional rule-breaking measures. For misconducts and assaults, the majority of intake variables assessed were found to be significantly correlated with these two measures of prison adjustment.

As for escapes, there were only seven intake variables that were significantly correlated with this prison adjustment measure with prior misconduct demonstrating the highest predictive value ($r = .15$).

For halfway house (CRC) outcome, 21 of the 47 intake variables assessed showed predictive value. The major correlates of halfway house failure were criminal friends ($r = .37$), frequently unemployed ($r = .36$), nonrewarding parental interactions ($r = .36$) and suspended/expelled when in school ($r = .34$).

3

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Table 37

Incremental Predictive Criterion Validity Estimates for
Classification Method Scores: Prison Process

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Med/Max Recommend. (n=215)	0	LSI	1	.25	.25	***
	1	Prison Maladj.	2	.02	.27	**
Med/Max Placement (n=215)	0	LSI	1	.15	.15	***
Treatment Institution (n=215)	0	LSI	1	.01	.01	ns
	2	SIR	2	.04	.05	**
	3	Prison Maladj.	3	.03	.08	**
Halfway House (n=215)	0	LSI	1	.23	.23	***
	1	Prison Maladj.	2	.02	.26	*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
ns = nonsignificant.

Prison Adjustment

Table 38 presents the summary of stepwise selection procedures for misconducts, assaults and escapes. As Table 38 shows, for institutional misconducts, the Prison Maladjustment Scale entered into the stepwise regression model after the LSI had been forced in first, and explained a major portion of variance in that criterion measure (6%). For assaults and escapes, only a small proportion of variance in these criterion measures could be added by the other classification devices.

Table 38

Incremental Predictive Criterion Validity Estimates for
Classification Method Scores: Prison Adjustment

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Misconducts (n=510)	0	LSI	1	.07	.07	***
	1	Prison Maladj.	2	.06	.12	***
Assaults (n=510)	0	LSI	1	.03	.03	**
	1	Pennsylvania	2	.02	.05	*
Escapes (n=510)	0	LSI	1	.00	.00	ns
	1	Prison Adj.	2	.03	.03	*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
ns = nonsignificant.

Prison Release

Stepwise selection procedures for parole release revealed that 9% of the explained variance in parole release was accounted for by the LSI after being forced first into a stepwise regression equation (partial $R^2 = .09$, $p < .001$). Only a small gain in explained variance (2%) could be achieved by adding the Oregon Parole Prognosis Scale (partial $R^2 = .02$, $p < .05$) to the regression model. Of special note, none of classification instruments met the .05 level significance level for entry into the model for community-based supervision.

Post-release Outcome

A series of stepwise selection procedures were conducted for the various post-release outcome measures. For remands, stepwise regression analysis revealed that, after the LSI instrument was the first variable forced to enter into the regression model, the LSI accounted for 11% of the explained variance in remands (partial $R^2 = .11$, $p < .001$). However, only a relatively small increment in explained variance (2%) could be achieved by adding the SFS (partial $R^2 = .02$, $p < .05$). Of special note, after the LSI was forced first into the prediction model, only the SFS met the .05 significance level for entry into the models of post-release incarceration (partial $R^2 = .03$, $p < .001$) and general recidivism (partial $R^2 = .04$, $p < .001$). There were no significant increments in explained variance for parole violations.

Recidivism Severity

A series of stepwise selection procedures were also conducted for the violent recidivism and Federal sentence measures. No significant increments in explained variance could be achieved over and above the LSI after it had been forced as the first variable into the regression model. While the regression analyses indicated that only small amounts of variance in these two recidivism severity measures could be explained by the LSI entering first

(< 3%), there was a non-significant amount of explained variance by the LSI (<1%) for violent re-offence. However, a significant increment in variance (5%) could be achieved for violent re-offence by the Prison Adjustment Scale (partial $R^2 = .05$, $p < .01$).

G: Predictive Accuracy Statistics for Prison Classification Methods

Predictive accuracy becomes an important issue whenever classification instruments are utilized for making decisions regarding future outcomes (Nunnally, 1978). In order to establish the comparability of predictive accuracy and efficiency with respect to different classification methods, a series of two-by-two prediction tables were constructed for the various classification instruments in relation to the selected prison process, prison adjustment, prison release, post-release outcome and recidivism severity measures.

Prison Process

The predictive accuracy statistics of the various classification methods for medium/maximum security level recommendations (base rate = 50.7%, medium/maximum) are presented in Table 39. In correctly classifying offenders, the LSI was found to be accurate in identifying 70.2% of medium/maximum security recommendations. Moreover, the LSI had the lowest false negative rate of 15.3%. Relative Improvement Over Chance (RIOC) comparisons amongst the ten classification instruments revealed that the interview-based classification method, and in particular the LSI, demonstrated considerably more improvement in predictive accuracy (RIOC = 39.7%) than the other assessment methods.

Table 39

Predictive Accuracy Statistics for Classification Methods
(Custody Level Recommendations)

BR=50.7		Valid		False		Valid		False		C	CIR	RIOC
SR		Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	61	28.4	38	17.7	68	31.6	48	22.3	60.0	56.0	18.4
PMA	47.9	66	30.7	37	17.2	69	32.1	43	20.0	62.8	60.6	24.3
PAD	49.3	58	27.0	48	22.3	58	27.0	51	23.7	54.0	53.2	7.7
Interview-based:												
WIS	51.2	75	34.9	35	16.3	71	33.0	34	15.8	67.9	68.8	36.1
ILL	46.5	70	32.6	30	14.0	76	35.3	39	18.1	67.9	64.2	33.1
LSI	49.8	76	35.3	31	14.4	75	34.9	33	15.3	70.2	69.7	39.7
File-review:												
SFS	48.8	67	31.2	38	17.7	68	31.6	42	19.5	62.8	61.5	24.7
SIR	52.6	73	34.0	40	18.6	66	30.7	36	16.7	64.7	67.0	30.4
ORE	42.3	58	27.0	33	15.3	73	34.0	51	23.7	60.9	53.2	18.9
PEN	54.9	74	34.4	44	20.5	62	28.8	35	16.3	63.3	67.9	28.8

BR = Base Rate; overall medium/maximum recommendation rates.

SR = Selection Rate; predicted medium/maximum custody rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Recommendations.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to be recommended medium/maximum custody.

Table 40 presents the two-by-two prediction tables for the various classification methods in relation to initial medium/maximum security placements (base rate = 61.9%, medium/maximum placement). With a selection ratio of approximately 50%, the SIR Scale was the most accurate in identifying medium/maximum security placements (65.6%). Although the LSI was also fairly accurate (64.7%), the SIR Scale demonstrated the most improvement in predictive accuracy relative to the other classification tools (RIOC = 25.5%).

Table 40

Predictive Accuracy Statistics for Classification Methods
(Custody Level Placements)

BR=61.9		Valid		False		Valid		False		C		CIP		RIOC	
SR		Pos.		Pos.		Neg.		Neg.							
Method	%	N	%	N	%	N	%	N	%	%	%	%	%	%	%
Self-report:															
MEG	46.0	69	32.1	30	14.0	52	24.2	64	29.8	56.3	51.9	10.8			
PMA	47.9	72	33.5	31	14.4	51	23.7	61	28.4	57.2	54.1	12.0			
PAD	49.3	71	33.0	35	16.3	47	21.9	62	28.8	54.9	53.4	8.0			
Interview-based:															
WIS	51.2	84	39.1	26	12.1	56	26.0	49	22.8	65.1	63.2	24.6			
ILL	46.5	74	34.4	26	12.1	56	26.0	59	27.4	60.5	55.6	17.1			
LSI	49.8	82	38.1	25	11.6	57	26.5	51	23.7	64.7	61.7	23.7			
File-review:															
SFS	48.8	75	34.9	30	14.0	52	24.2	58	27.0	59.1	56.4	14.8			
SIR	52.6	86	40.0	27	12.6	55	25.6	47	21.9	65.6	64.7	25.5			
ORE	42.3	62	28.8	29	13.5	53	24.7	71	33.0	53.5	46.6	7.4			
PEN	54.9	86	40.0	32	14.9	50	23.2	47	21.9	63.3	64.7	21.7			

BR = Base Rate; overall medium/maximum custody placement rates.

SR = Selection Rate; predicted medium/maximum custody rate.

C = Correct; proportion of valid positives and valid negatives.

CIP = Correctly Identified Placements.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" predicted to be recommended medium/maximum custody.

In Table 41, the two-by-two prediction tables for the various classification methods in relation to protective custody placements (base rate = 14.0%, protective custody placement) are presented. With a selection ratio approaching 50%, the Oregon Parole Prognosis Scale was the most accurate in identifying protective custody placements (55.8%). Although the Oregon Parole Prognosis Scale had the best overall accuracy, it also had the highest false negative rate (7.9%). Hence, the Prison Maladjustment Scale demonstrated the most improvement in predictive accuracy relative to the other classification tools (RIOC = 16.0%).

Table 41

Predictive Accuracy Statistics for Classification Methods
(Protective Custody Placements)

BR=14.0		Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIR	RIOC
SR												
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	14	6.5	85	39.5	100	46.5	16	7.4	53.0	46.7	1.1
PMA	47.9	17	7.9	86	40.0	99	46.0	13	6.0	53.9	56.7	16.8
PAD	49.3	15	7.0	91	42.3	94	43.7	15	7.0	50.7	50.0	1.4
Interview-based:												
WIS	51.1	16	7.4	94	43.7	91	42.3	14	6.5	49.8	53.3	4.4
ILL	46.5	13	6.0	87	40.5	98	45.6	17	7.9	51.6	43.3	-
LSI	49.8	14	6.5	93	43.3	92	42.8	16	7.4	49.3	46.7	-
File-review:												
SFS	48.8	14	6.5	91	42.3	94	43.7	16	7.4	50.2	46.7	-
SIR	52.6	17	7.9	96	44.7	89	41.4	13	6.0	49.3	56.7	8.7
ORE	42.3	13	6.0	78	36.3	107	49.8	17	7.9	55.8	43.3	1.7
PEN	54.9	15	7.0	103	47.9	82	38.1	15	7.0	45.1	50.0	-

BR = Base Rate; overall protective custody placement rates.

SR = Selection Rate; predicted protective custody rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Placements.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to be placed protective custody.

- = no relative improvement over chance.

Two-by-two prediction tables for the various classification methods in relation to treatment institution placements (base rate = 12.1%) are shown in Table 42. With a selection ratio of nearly 50%, the Prison Maladjustment Scale was clearly the most accurate in identifying treatment institution placements (60.5%). Moreover, the Prison Maladjustment Scale demonstrated by far the most improvement in predictive accuracy relative to the other classification devices (RIOC = 70.5%).

Table 42

Predictive Accuracy Statistics for Classification Methods
(Treatment Institution Placements)

BR=12.1	SR		Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIF	RIOC
Method	%	N	%	N	%	N	%	N	%	%	%	%	
MEG	46.0	15	7.0	84	39.1	105	48.8	11	5.1	55.8	57.7	21.6	
PMA	47.9	22	10.2	81	37.7	108	50.2	4	1.9	60.5	84.6	70.5	
PAD	49.3	10	4.7	96	44.7	93	43.3	16	7.4	47.9	38.5	-	
Interview-based:													
WIS	51.1	18	8.4	92	42.8	97	45.1	8	3.7	53.5	69.2	37.0	
ILL	46.5	16	7.4	84	39.1	105	48.8	10	4.7	56.2	61.5	28.1	
LSI	49.8	18	8.4	89	41.4	100	46.5	8	3.7	54.9	69.2	38.7	
File-review:													
SFS	48.8	14	6.5	91	42.3	98	45.6	12	5.6	52.1	53.8	9.8	
SIR	52.6	15	7.0	98	45.6	91	42.3	11	5.1	49.3	57.7	10.8	
ORE	42.3	13	6.0	78	36.3	111	51.6	13	6.0	57.7	50.0	13.3	
PEN	54.9	14	6.5	104	48.4	85	39.5	12	5.5	46.0	53.8	-	

BR = Base Rate; overall treatment institution placement rates.

SR = Selection Rate; predicted treatment institution placement rate.

C = Correct; proportion of valid positives and valid negatives.

CIP = Correctly Identified Placements.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).
 "Positives" are those predicted to be placed in treatment institution.

- = no relative improvement over chance.

Table 43 presents the two-by-two prediction tables for the various classification methods in relation to halfway house placements (base rate = 19.5%, halfway placement). With a selection ratio of 50%, the LSI was the most accurate in identifying halfway house placements (63.7%). In addition, the LSI also had the lowest false negative rate (33.5%). Relative to the other classification instruments, the LSI also demonstrated the most improvement in predictive accuracy (RIOCI = 17.1%). In general, the interview-based method showed improved predictive efficiency for halfway house placement relative to the other two assessment methods.

Table 43

Predictive Accuracy Statistics for Classification Methods
(Halfway House Placements)

BR=19.5	SR	Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIN	RIOCI
		%	N	%	N	%	N	%	N			
Method	%	N	%	N	%	N	%	N	%	%	%	%
MEG	46.0	85	39.5	14	6.5	28	13.0	88	40.9	52.6	49.1	5.7
PMA	47.9	94	43.7	9	4.2	33	15.3	79	36.7	59.1	54.3	12.3
PAD	49.3	92	42.7	14	6.5	28	13.0	81	37.7	55.8	53.2	7.6
Interview-based:												
WIS	51.1	100	46.5	10	4.7	32	14.9	73	34.0	61.4	57.8	13.6
ILLL	46.5	94	43.7	6	2.8	36	16.7	79	36.7	60.4	54.3	14.6
LSI	49.8	101	47.0	6	2.8	36	16.7	72	33.5	63.7	58.4	17.1
File-review:												
SFS	48.8	96	44.7	9	4.2	33	15.3	77	35.8	60.0	55.5	13.0
SIR	52.6	101	47.0	12	5.6	30	14.0	72	33.5	60.9	58.4	12.3
ORE	42.3	83	38.6	8	3.7	34	15.8	90	41.9	54.4	48.0	9.8
PEN	54.9	104	48.4	14	6.5	28	13.0	69	32.1	61.4	60.1	11.6

BR = Base Rate; overall halfway house placement rates.

SR = Selection Rate; predicted non-halfway house placement rate.

C = Correct; proportion of valid positives and valid negatives.

CIN = Correctly Identified Non-placements.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to be not placed in a halfway house.

Prison Adjustment

Two-by-two prediction tables for the various classification methods in relation to institutional misconducts (base rate = 43.7) are shown in Table 44. For this prison adjustment measure the Prison Maladjustment Scale was found to be the most accurate in identifying institutional misconducts (63.3%). Moreover, the Prison Maladjustment Scale showed the most improvement in predictive accuracy relative to the other classification tools (RIOC = 28.5%).

Table 44

Predictive Accuracy Statistics for Classification Methods
(Institutional Misconducts)

BR=43.7		Valid		False		Valid		False		C	CIM	RIOC
SR		Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	50	23.3	49	22.8	72	33.5	44	20.5	56.7	53.1	13.2
PMA	47.9	59	27.4	44	20.5	77	35.8	35	16.3	63.3	62.8	28.5
PAD	49.3	57	26.5	49	22.8	72	33.5	37	17.2	60.0	60.6	22.4
Interview-based:												
WIS	51.2	58	27.0	52	24.2	69	32.1	36	16.7	59.0	61.7	21.6
ILL	46.5	55	25.6	45	20.9	76	35.3	39	18.1	60.9	58.5	22.4
LSI	49.8	57	26.5	50	23.3	71	33.0	37	17.2	59.5	60.6	21.6
File-review:												
SFS	48.8	52	24.1	53	24.7	68	31.6	42	19.5	55.8	55.3	12.7
SIR	52.6	56	26.0	57	26.5	64	29.8	38	17.7	55.8	59.6	14.8
ORE	42.3	48	22.3	43	20.0	78	36.3	46	21.4	58.6	51.1	15.2
PEN	54.9	51	23.7	67	31.1	54	25.1	43	20.0	48.8	54.2	-

BR = Base Rate; overall institutional misconduct rates.

SR = Selection Rate; predicted institutional misconduct rate.

C = Correct; proportion of valid positives and valid negatives.

CIM = Correctly Identified Misconducts.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to have institutional misconducts.

- = no relative improvement over chance.

Table 45 presents the two-by-two prediction tables for the various classification methods in relation to institutional assaults (base rate = 46.1%). With a selection ratio of approximately 50%, the Wisconsin Assessment of Client Risk Scale was clearly the most accurate in identifying institutional assaults (71.0%) and evidenced the most improvement in predictive accuracy relative to the other classification instruments (RIOC = 35.7%).

Table 45

Predictive Accuracy Statistics for Classification Methods
(Institutional Assaults)

BR=46.1	SR	Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIA	RIOC
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	23	10.7	76	35.3	100	46.5	16	7.4	57.2	59.0	24.0
PMA	47.9	21	9.8	82	38.1	94	43.7	18	8.4	53.5	53.8	11.4
PAD	49.3	23	10.7	83	38.6	93	43.3	16	7.4	54.0	59.0	19.1
Interview-based:												
WIS	51.2	22	14.2	28	18.1	88	56.8	17	11.0	71.0	56.4	35.7
ILL	46.5	24	11.2	76	35.3	100	46.5	15	7.0	57.7	61.5	28.1
LSI	49.8	24	11.2	81	37.7	95	44.2	15	7.0	55.3	61.5	24.8
File-review:												
SFS	48.8	22	10.2	91	42.3	85	39.5	17	7.9	49.7	56.4	8.1
SIR	52.6	25	11.6	82	38.1	94	43.7	14	6.5	55.3	64.1	28.5
ORE	42.3	21	9.8	70	32.6	106	49.3	18	8.4	59.1	53.8	20.0
PEN	54.9	21	9.8	97	45.1	79	36.7	18	8.4	46.5	53.8	-

BR = Base Rate; overall institutional assault rates.

SR = Selection Rate; predicted institutional assault rate.

C = Correct; proportion of valid positives and valid negatives.

CIA = Correctly Identified Assaults.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to have institutional assaults.

- = no relative improvement over chance.

As Table 46 shows, two-by-two prediction tables are presented for the various classification instruments with respect to halfway house failures (base rate = 20.9%). For this measure of prison adjustment, the three interviewed-based classification instruments were found to be the most accurate in identifying those who had failures while in halfway houses (i.e., greater than 70%). Notwithstanding the marginally higher false negative rates for the interview-based devices, the Prison Adjustment Scale showed the most improvement in predictive accuracy and efficiency relative to the other assessment devices (RIOCI = 31.7%).

Table 46

Predictive Accuracy Statistics for Classification Methods
(Halfway House Failure)

BR=20.9	SR	Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIF	RIOC
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	32.6	2	4.7	12	27.9	22	51.2	7	16.3	55.8	22.2	-
PMA	20.9	2	4.7	7	16.3	27	62.8	7	16.3	67.4	22.2	1.6
PAD	34.9	5	11.6	10	23.3	24	55.8	4	9.3	67.4	55.6	31.7
Interview-based:												
WIS	25.6	4	9.3	7	16.3	27	62.8	5	11.6	72.0	44.4	25.3
Ill	16.3	3	7.0	4	9.3	30	69.8	6	14.0	76.7	33.3	20.4
LSI	16.2	2	4.7	5	11.6	29	67.4	7	16.3	72.1	22.2	7.1
File-review:												
SFS	23.3	3	7.0	7	16.3	27	62.8	6	14.0	69.8	33.3	13.1
SIR	27.9	4	9.3	8	18.6	26	60.5	5	11.6	69.8	44.4	22.9
ORE	20.9	3	7.0	6	14.9	28	65.1	6	14.0	72.1	33.3	15.7
PEN	34.8	3	7.0	12	27.9	22	51.1	6	14.0	58.0	33.3	-

BR = Base Rate; overall halfway house failure rates.

SR = Selection Rate; predicted halfway house failure rate.

C = Correct; proportion of valid positives and valid negatives.

CIF = Correctly Identified Failures.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to fail within their placement.

- = no relative improvement over chance.

Prison Release

Two-by-two prediction tables for the various classification methods in relation to parole releases (base rate = 39.1, parole release) are shown in Table 57. For this prison adjustment measure the LSI, was found to be the most accurate in identifying parole releases (62.8%). Moreover, the LSI showed the most improvement in predictive accuracy relative to the other classification tools (RIOC = 20.7%).

Table 47

Predictive Accuracy Statistics for Classification Methods
(Parole Releases)

BR=39.1		Valid		False		Valid		False		C	CIN	RIOCI
SR		Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	64	29.8	35	16.3	47	21.9	69	32.1	51.6	48.1	3.8
PMA	47.9	71	33.0	32	14.9	50	23.3	62	28.8	56.3	53.3	10.5
PAD	49.3	71	33.0	35	16.3	47	21.9	62	28.8	54.9	53.3	8.0
Interview-based:												
WIS	51.2	73	34.0	37	17.2	45	20.9	60	27.9	54.9	54.9	7.6
ILL	46.5	70	32.6	30	14.0	52	24.2	63	29.3	56.7	52.6	11.4
LSI	49.8	80	37.2	27	12.6	55	25.6	53	24.7	62.8	60.2	20.7
File-review:												
SFS	48.8	75	34.9	30	14.0	52	24.1	58	27.0	49.7	56.4	14.8
SIR	52.6	77	35.8	36	16.7	46	21.4	56	26.0	57.2	57.9	11.2
ORE	42.3	66	30.7	25	11.6	57	26.5	67	31.2	57.2	49.6	12.7
PEN	54.9	81	37.7	37	17.2	45	20.9	52	24.2	58.6	60.9	13.3

BR = Base Rate; overall parole release rates.

SR = Selection Rate; predicted non-parole release rate.

C = Correct; proportion of valid positives and valid negatives.

CIN = Correctly Identified Non-parole releases.

RIOCI = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted not to be paroled.

Post-release Outcome

In Table 48, the two-by-two prediction tables for the various classification methods in relation to post-release remands (base rate = 31.0%) are presented. With a selection ratio approaching 50%, the LSI was the second most accurate instrument in identifying remands (65.2%). Although the Illinois Initial Risk Evaluation Scale had the best overall accuracy (66.7%), it also had a higher false negative rate (9.0%) than the LSI. Hence, the LSI demonstrated the most improvement in predictive accuracy relative to the other classification tools (RIOC = 48.2%).

Table 48

Predictive Accuracy Statistics for Classification Methods
(Remands)

BR=31.0		Valid		False		Valid		False		C	CIR	RIOC
	SR	Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	45.7	33	15.7	63	30.0	82	39.0	32	15.2	54.8	50.8	9.3
PMA	48.7	37	17.6	65	30.9	80	38.1	28	13.3	55.7	56.9	16.2
PAD	49.0	35	16.7	68	32.4	77	36.7	30	14.3	53.3	53.8	9.4
Interview-based:												
WIS	50.5	39	18.6	67	31.9	78	37.1	26	12.4	55.7	60.0	19.2
ILL	46.2	46	21.9	51	24.3	94	44.8	19	9.0	66.7	70.8	45.7
LSI	49.5	48	22.9	56	26.7	89	42.3	17	8.1	65.2	73.8	48.2
File-review:												
SFS	48.6	46	21.9	56	26.7	89	42.4	19	9.0	64.2	70.8	43.2
SIR	52.4	46	21.9	64	30.5	81	38.6	19	9.0	60.5	70.8	38.6
ORE	41.9	39	18.6	49	23.3	96	45.7	26	12.4	64.3	60.0	31.1
PEN	54.8	45	21.4	70	33.3	75	35.7	20	9.5	57.1	69.2	32.0

BR = Base Rate; overall remand rates.

SR = Selection Rate; predicted remand rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Remands.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to be remanded into custody within one year of their release.

Two-by-two prediction tables for the various classification methods in relation to post-release incarceration (base rate = 41.1%) are shown in Table 49. For incarceration, both the Illinois Initial Risk Evaluation Scale and the LSI, interview-based methods, were the most accurate in identifying reincarcerates (64.6% and 63.2, respectively). Moreover, the SFS, a file-review assessment method, was just as accurate (63.1%) as the two interview-based methods. The RIOCs for the Illinois Initial Risk Evaluation Scale, LSI and SFS were 31.7%, 31.2% and 30.2%, respectively.

Table 49

Predictive Accuracy Statistics for Classification Methods
(Incarceration)

BR=41.1				Valid		False		Valid		False							
		SR		Pos.		Pos.		Neg.		Neg.		C		CIR		RIOCI	
Method		%		N		%		N		%		N		%		%	
Self-report:																	
MEG		45.5		42		20.1		65		25.4		70		33.5		44 21.0 53.6 48.8 6.2	
PMA		48.3		48		22.9		53		25.4		70		33.5		38 18.2 56.5 55.8 14.5	
PAD		49.3		46		22.0		57		27.3		66		31.6		40 19.1 53.6 53.5 8.3	
Interview-based:																	
WIS		50.7		50		23.9		56		26.8		67		32.1		36 17.2 55.9 58.1 15.1	
ILL		45.9		54		25.8		42		20.0		81		38.7		32 15.3 64.6 62.8 31.2	
LSI		49.3		56		26.8		47		22.5		76		36.4		30 14.4 63.2 65.1 31.2	
File-review:																	
SFS		48.3		55		26.3		46		22.0		77		36.8		31 14.8 63.1 63.9 30.2	
SIR		52.1		56		26.8		53		25.4		70		33.5		30 14.4 60.3 65.1 27.1	
ORE		41.6		47		22.5		40		19.1		83		39.7		39 18.7 62.2 54.7 22.3	
PEN		54.5		54		25.8		60		28.7		63		30.0		32 15.3 55.9 62.3 18.1	

BR = Base Rate; overall reincarceration rates.

SR = Selection Rate; predicted reincarceration rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Recarcerated.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to be reincarcerated within one year of their release.

Table 50 presents the two-by-two prediction tables for the various classification methods in relation to general recidivism (base rate = 42.8%). With respect to general recidivism, both the Illinois Initial Risk Evaluation Scale and the LSI were again the most accurate in identifying reincarcerates (64.7% and 63.3, respectively). The RIOC's for the Illinois and the LSI were 30.9% and 30.8%, respectively.

Table 50

Predictive Accuracy Statistics for Classification Methods
(General Recidivism)

BR=42.8		Valid		False		Valid		False		C	CIR	RIOC
	SR	Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	45	20.9	54	25.1	69	32.1	47	21.9	53.0	48.9	5.3
PMA	47.9	51	23.7	52	24.2	71	33.0	41	19.1	56.7	55.4	14.5
PAD	49.3	48	22.3	58	26.9	65	30.2	44	20.5	52.6	53.2	5.7
Interview-based:												
WIS	51.2	52	24.2	58	26.9	65	30.2	40	18.6	54.4	56.5	11.0
ILL	46.5	58	27.0	42	19.5	81	37.7	34	15.8	64.7	63.0	30.9
LSI	49.8	60	27.9	47	21.9	76	35.3	32	14.9	63.3	65.2	30.8
File-review:												
SFS	48.8	59	27.4	46	21.4	77	35.8	33	15.3	63.3	64.1	29.9
SIR	52.6	60	27.9	53	24.7	70	32.6	32	14.9	60.5	65.2	26.7
ORE	42.3	51	23.7	40	18.6	83	38.6	41	19.1	62.3	55.4	22.7
PEN	54.9	58	27.0	60	27.9	63	29.3	34	15.8	56.3	63.0	18.1

BR = Base Rate; overall general recidivism rates.

SR = Selection Rate; predicted general recidivism rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Recidivists.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to recidivate within one year of their release.

In Table 51, the two-by-two prediction tables for the various classification methods in relation to parole violations (base rate = 28.8%) are presented. The LSI was the most accurate in identifying cases who had violated parole (68.8%). In terms of RIOC, however, the SIR Scale with a lower false negative rate than the LSI (10.0% versus 13.8%) showed the most improvement in predictive accuracy relative to the other classification tools (RIOC = 36.8%).

Table 51

Predictive Accuracy Statistics for Classification Methods
(Parole Violation)

BR=28.8		Valid		False		Valid		False		C	CIP	RIOC
SR		Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	41.3	12	15.0	21	26.3	36	45.0	11	13.8	60.0	52.2	18.6
PMA	38.8	11	13.8	20	25.0	37	46.3	12	15.0	60.0	47.8	14.8
PAD	42.5	11	13.8	23	28.8	34	42.5	12	15.0	56.3	47.8	9.3
Interview-based:												
WIS	42.5	14	17.5	20	25.0	37	46.3	9	11.3	63.8	60.8	31.9
ILL	37.5	11	13.8	19	23.8	38	47.5	12	15.0	61.3	47.8	16.5
LSI	32.5	12	15.0	14	17.5	43	53.8	11	13.8	68.8	52.2	29.1
File-review:												
SFS	37.5	13	16.3	17	21.3	40	50.0	10	12.5	66.3	56.5	30.4
SIR	45.0	15	18.8	21	26.3	36	45.0	8	10.0	63.8	65.2	36.8
ORE	31.2	10	12.5	15	18.8	42	52.5	13	16.3	65.0	43.5	17.8
PEN	43.8	13	16.3	22	27.5	35	43.8	10	12.5	60.0	56.5	22.7

BR = Base Rate; overall parole violation rates.

SR = Selection Rate; predicted parole violation rate.

C = Correct; proportion of valid positives and valid negatives.

CIP = Correctly Identified Parole Violators.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to recidivate within one year of their release.

Recidivism Severity

In Table 52, the two-by-two prediction tables for the various classification methods in relation to violent recidivism (base rate = 14.0%) are presented. Although the Oregon Parole Prognosis Scale was revealed to be the most accurate in identifying violent recidivists (62.3%), the LSI was found to demonstrate the most improvement in predictive accuracy relative to the other classification devices (46.9%). This was largely due to the correspondingly low false negative rate that was attributable to the LSI (RIOC = 3.7%).

Table 52

Predictive Accuracy Statistics for Classification Methods
(Violent Recidivism)

BR=14.0	SR	Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIR	RIOC
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	15	7.0	84	39.1	101	47.0	15	7.0	54.0	50.0	7.3
PMA	47.9	15	7.0	88	40.9	97	45.1	15	7.0	52.1	50.0	4.0
PAD	49.3	10	4.7	96	44.7	89	41.3	20	9.3	46.0	33.3	-
Interview-based:												
WIS	51.2	18	8.3	92	42.8	93	43.3	12	5.6	51.6	60.0	18.1
ILL	46.5	18	8.4	82	38.1	103	47.9	12	5.6	56.3	55.8	25.2
LSI	49.8	22	10.2	85	39.5	100	46.5	8	3.7	56.7	73.3	46.9
File-review:												
SFS	48.8	20	9.3	85	39.5	100	46.5	10	4.7	55.8	66.7	34.8
SIR	52.6	18	8.4	95	44.2	90	41.8	12	5.6	50.2	60.0	15.7
ORE	42.3	20	9.3	71	33.0	114	53.0	10	4.7	62.3	66.7	42.2
PEN	54.9	19	8.8	99	46.0	86	40.0	11	5.1	48.8	63.3	18.7

BR = Base Rate; overall violent recidivism.

SR = Selection Rate; predicted violent recidivism rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Recidivists.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).
 "Positives" are those predicted to recidivate violently within one year.

- = no relative improvement over chance.

Two-by-two prediction tables for the various classification methods in relation to violent re-offences (base rate = 27.5) are shown in Table 53. For this outcome measure both the LSI, an interview-based assessment method, and the Oregon Parole Prognosis Scale, a file-review assessment method, were found to be the most accurate in identifying violent re-offenders (51.4% and 56.9%, respectively). Moreover, the LSI and Oregon Parole Prognosis Scale showed the most improvement in predictive accuracy relative to the other classification tools (RIOCs = 30.8% and 30.1%, respectively).

Table 53

Predictive Accuracy Statistics for Classification Methods
(Violent Re-offenses)

BR=27.5		Valid Pos.		False Pos.		Valid Neg.		False Neg.		C	CIN	RIOC
SR												
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	51.4	15	13.8	41	37.6	38	34.8	15	13.8	48.6	50.0	-
PMA	58.7	15	13.8	49	45.0	30	27.5	15	13.8	41.3	50.0	-
PAD	51.4	10	9.2	46	42.2	33	30.3	20	18.3	39.5	33.3	-
Interview-based:												
WIS	56.9	18	16.5	44	40.4	35	32.1	12	11.0	48.6	60.0	7.2
ILL	59.6	18	16.5	47	43.1	32	29.4	12	11.0	45.9	60.0	0.9
LSI	61.4	22	20.2	45	41.3	34	31.1	8	7.3	51.4	73.3	30.8
File-review:												
SFS	60.6	20	18.3	46	42.2	33	30.3	10	9.2	48.6	66.7	15.5
SIR	65.1	18	16.5	53	48.6	26	23.9	12	11.0	40.4	60.0	-
ORE	52.3	20	18.3	37	33.9	42	38.5	10	9.2	56.9	66.7	30.1
PEN	64.2	19	17.4	51	46.8	28	25.7	11	10.1	43.1	63.3	-

BR = Base Rate; overall violent re-offenses.

SR = Selection Rate; predicted violent re-offenses rate.

C = Correct; proportion of valid positives and valid negatives.

CIR = Correctly Identified Recidivists.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).

"Positives" are those predicted to have a violent re-offense within one year.

- = no relative improvement over chance.

Table 54 presents the two-by-two prediction tables for the various classification methods in relation to receiving a Federal sentence post-release (base rate = 10.2%). While the Oregon Parole Prognosis Scale was clearly the most accurate in identifying those who received Federal sentences (61.4%) the corresponding false negative rate associated with this instrument resulted in the Pennsylvania Parole Prognosis Scale showing the most improvement in predictive accuracy relative to the other classification instruments (59.8%). Also noteworthy, the LSI demonstrated a RIOC of 54.8%.

Table 54

Predictive Accuracy Statistics for Classification Methods
(Federal Sentence)

BR=10.2		Valid		False		Valid		False		C	CIF	RIOC
SR		Pos.		Pos.		Neg.		Neg.				
Method	%	N	%	N	%	N	%	N	%	%	%	%
Self-report:												
MEG	46.0	12	5.6	87	40.5	106	49.3	10	4.7	54.9	54.5	15.8
PMA	47.9	13	6.0	90	41.9	103	47.9	9	4.2	54.0	59.1	21.5
PAD	49.3	8	3.7	98	45.6	95	44.2	14	6.5	47.9	36.3	-
Interview-based:												
WIS	51.2	14	6.5	96	44.7	97	45.1	8	3.7	51.6	63.6	25.5
ILL	46.5	15	7.0	85	39.5	108	50.2	7	3.3	57.2	68.2	40.5
LSI	49.8	17	7.9	90	41.9	103	47.9	5	2.3	55.8	77.3	54.8
File-review:												
SFS	48.8	16	7.4	89	41.4	104	48.4	6	2.8	55.8	72.3	46.7
SIR	52.6	16	7.4	97	45.1	96	44.7	6	2.8	52.1	72.7	42.5
ORE	42.3	15	7.0	76	35.3	117	54.4	7	3.3	61.4	68.2	44.8
PEN	54.9	18	8.4	100	46.5	93	43.3	4	1.9	51.6	81.8	59.7

BR = Base Rate; overall federal sentences.

SR = Selection Rate; predicted federal sentence rate.

C = Correct; proportion of valid positives and valid negatives.

CIF = Correctly Identified Federal Sentences.

RIOC = Relative Improvement Over Chance (Loeber & Dishion, 1983).
 "Positives" are those predicted to have a federal sentence within one year.

- = no relative improvement over chance.

H: Contingency Table Analysis of Intake LSI Risk Level**Prison Process**

Table 55 presents the relationship between three separate levels of intake risk, as measured by the LSI, and five selected custody classification measures. LSI risk level groupings were constructed by taking the distribution of LSI total scores obtained for the total sample ($N = 510$) and dividing cases into three approximately equal proportional groups; 'low' (0 - 20), 'medium' (21 - 29) and 'high' (30+).

As can be seen from the results of chi-square analyses, significant differences were found between intake LSI risk level and medium/maximum security recommendations ($X^2 = 115.5$, $df = 2$), medium/maximum security placement ($X^2 = 77.9$, $df = 2$), initial treatment institution placement ($X^2 = 6.7$, $df = 2$) and halfway house placement ($X^2 = 84.0$, $df = 2$). As expected, a proportionately higher number of cases in the 'high' risk group were recommended and placed in medium/ maximum secure settings relative to the 'low' and 'moderate' risk groups.

Table 55

Intake LSI Risk Level: Custody Classification

Measure	LSI Risk Level			p
	Low	Moderate	High	
Med/Max Recommend. (BR=50.0%)	21.1% (35/166)	48.2% (82/170)	79.3% (138/174)	***
Med/Max Placement (BR=57.6%)	33.7% (56/166)	57.1% (97/170)	81.0% (141/174)	***
Protective Custody (BR=12.9%)	9.6% (16/166)	11.2% (19/170)	17.8% (31/174)	ns
Treatment Institution (BR=10.8%)	9.6% (16/166)	7.1% (12/170)	15.5% (27/174)	*
Halfway House (BR=20.2%)	42.8% (71/166)	13.5% (23/170)	4.6% (8/174)	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
 ns = nonsignificant; BR = base rate.

Prison Adjustment

In Table 56, the relationship between intake LSI risk level and the four selected institutional rule-breaking measures is presented. Chi-square analyses revealed significant differences between intake LSI risk level and misconducts ($X^2 = 59.2$, $df = 2$), assaults ($X^2 = 25.6$, $df = 2$) and halfway house outcome ($X^2 = 18.3$, $df = 2$). Only for escapes were there no significant differences found between the LSI risk levels.

Table 56

Intake LSI Risk Level: Institutional Rule-breaking

Measure	LSI Risk Level			p
	Low	Moderate	High	
Misconducts (BR=47.8%)	24.1% (40/166)	54.1% (92/170)	64.4% (112/174)	***
Assaults (BR=22.0%)	9.6% (16/166)	23.5% (40/170)	32.2% (56/174)	***
Escapes (BR=4.9%)	2.4% (4/166)	5.9% (10/170)	6.3% (11/174)	ns
Halfway House Outcome (BR=22.6%; n=102)	11.3% (8/71)	43.5% (10/23)	62.5% (5/8)	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
 ns = nonsignificant; BR = base rate.

Prison Release

Table 57 presents the relationship between intake LSI risk level and two prison release measures. Chi-square analyses revealed significant differences between intake LSI risk level and parole release ($X^2 = 51.9$, $df = 2$) and community supervision ($X^2 = 19.8$, $df = 2$).

Table 57

Intake LSI Risk Level: Institutional Release

Measure	LSI Risk Level			p
	Low	Moderate	High	
Parole (BR=33.1%)	54.2% (90/166)	27.1% (46/170)	19.0% (33/174)	***
Community Supervision (BR=60.8)	74.1% (123/166)	56.7% (98/170)	51.2% (89/174)	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
 ns = nonsignificant; BR = base rate.

Post-release Outcome

Table 58 presents the relationship between the three levels of intake LSI risk and four post-release outcome measures. As can be seen from the results of chi-square analyses, significant differences were found between intake risk level and new remands ($X^2 = 47.8$, $df = 2$), incarceration ($X^2 = 36.2$, $df = 2$), general recidivism ($X^2 = 42.5$, $df = 2$) and parole violations ($X^2 = 23.2$, $df = 2$).

Table 58

Intake LSI Risk Level: Post-release Outcome

Measure	LSI Risk Level			p
	Low	Moderate	High	
Remands (BR=28.8%)	12.1% (20/166)	27.7% (47/170)	46.0% (80/174)	***
Incarceration (BR=38.8%)	21.1% (35/166)	42.4% (72/170)	52.3% (91/174)	***
General Recidivism (BR=42.7)	23.5% (39/166)	45.9% (78/170)	58.1% (101/174)	***
Parole Violation (BR=28.2; n=170)	12.4% (11/89)	45.8% (22/48)	45.5% (15/33)	***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
 ns = nonsignificant; BR = base rate.

Recidivism Severity

In Table 59, the relationship between intake LSI risk level and the three selected recidivism severity measures is presented. Chi-square analyses revealed significant differences between intake LSI risk level and violent recidivism ($X^2 = 10.0$, $df = 2$) and Federal sentence ($X^2 = 13.5$, $df = 2$). Only for violent re-offence were there no significant differences found between the LSI risk levels.

Table 59

Intake LSI Risk Level: Recidivism Severity

Measure	LSI Risk Level			p
	Low	Moderate	High	
Violent Recidivism (BR=15.3%)	9.6% (16/166)	14.1% (24/170)	21.8% (38/174)	**
Violent Re-offence (BR=29.5%, n=264)	28.6% (16/56)	25.5% (24/94)	33.3% (38/114)	ns
Federal Sentence (BR=9.0%)	3.6% (6/166)	8.2% (14/170)	14.9% (26/174)	**

Note: * $p < .05$; ** $p < .01$; *** $p < .001$;
 ns = nonsignificant; BR = base rate.

I: Incremental Prediction Using Admission Age, Intake LSI Risk and Various Prison Adjustment Measures

Incremental predictive criterion validities of admission age and LSI risk as well as various prison adjustment variables were explored through multiple regression analyses, with the selected post-release outcome and recidivism severity measures as separate criterion variables.

A series of stepwise multiple regression analysis were conducted with the intake LSI risk score having been forced first into the regression model. Then, the absolute, relative and incremental contributions of the other predictor variables were established.

In order to conduct the stepwise multiple regression

analyses; admission age, intake LSI scores, rank-ordered Megargee MMPI-based types, misconducts and treatment participation were used as the predictor variables. These predictor variables were chosen because they provided intake assessments of offender characteristics (i.e., the age, LSI, MMPI-based Types) and reflected a variety of circumstances over the course of imprisonment (i.e., misconducts, treatment participation). It should be noted that this set of predictor variables was not modelled for the dependent measures of parole violation and violent re-offence given the number of variables that were to be entered into the equation and the number of cases available for these criterion measures.

Post-release Outcome

Table 60 presents the absolute, relative and incremental predictive criterion validity estimates for the admission age and risk (i.e., LSI and MMPI administered at intake) and various prison adjustment measures (i.e., misconducts, treatment) assessed in relation to four post-release outcome measures.

For post-release remands, incarceration, general recidivism and parole violation, the stepwise regression analyses revealed that after intake LSI risk had been forced into a model, the treatment variable (i.e., participation in treatment while in prison) successfully entered into the

regression model and made a significant contribution to explained variance. For the post-release outcome measures of general recidivism and parole violation, there were significant increments in variance which could be explained by admission age. Of special note, misconducts and rank-ordered MMPI-based variables did not enter into any of the regression models.

Table 60

Incremental Predictive Criterion Validity Estimates for Admission Age and LSI, Rank-ordered MMPI-based Types, Misconducts and Treatment: Post-release Outcome

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Remand (n=215)	0	Intake LSI (.02)	0	.09	.09	***
	1	Treatment (-.20)	1	.03	.12	**
Incarceration (n=215)	0	Intake LSI (.01)	0	.09	.09	***
	1	Treatment (-.18)	1	.03	.12	**
General Recidivism (n=215)	0	Intake LSI (.01)	0	.08	.08	***
	1	Treatment (-.21)	1	.04	.13	**
	2	Admiss. Age(-.01)	2	.02	.14	*
Parole Violation (n=80)	0	Intake LSI (.01)	0	.08	.08	***
	1	Treatment (-.21)	1	.04	.13	**
	2	Admiss. Age(-.01)	2	.02	.14	*

Note: (parameter estimates)

* p < .05; ** p < .01; *** p < .001

Admiss. = Admission.

Recidivism Severity

Although a series of stepwise selection procedures were also conducted for the three recidivism severity measures, the results showed that no significant increments in explained variance could be achieved over and above the LSI when it had been forced as the first variable to enter into the regression model. Furthermore, the regression analyses revealed that only small amounts of variance could be explained by the LSI (violent recidivism, $R^2 = .03$; violent re-offence, $R^2 = .03$; Federal sentence, $R^2 = .03$).

J: Intake LSI Risk, Treatment, and General Recidivism

In extending the analysis of the incremental contribution of treatment participation to intake risk (i.e., LSI) with respect to the prediction of general recidivism, the 'risk principle' (Andrews et al., 1986) or the interaction between risk and level of treatment across various measures of risk was examined. In this regard, intake LSI risk levels were established according to a median split of a frequency distribution of the LSI total scores; the lower risk cases presented LSI scores less than 26 and the higher risk cases presented scores equal to or greater than 26. The mean LSI scores were 23.9 and 25.1 for the treated and non-treated groups respectively ($p < .37$). An analysis of variance revealed that there were statistically significant main effects of intake LSI risk

level ($F(1/214) = 7.5, p < .001$) and treatment participation ($F(1/214) = 9.9, p < .01$), and there was a significant risk-by-treatment interaction ($F(1/214) = 4.0, p < .05$) on the general recidivism outcome measure. As Table 61 reveals, participation in treatment while in prison was found to be associated with significantly reduced recidivism among the higher risk cases and unrelated to the recidivism of lower risk cases.

Table 61

Recidivism Rates by LSI Risk Level and Treatment

Intake Risk Level	Participation in Treatment		F	p
	No	Yes		
High	.65 (n=78)	.30 (n=30)	12.0	.001
Low	.33 (n=67)	.25 (n=40)	< 1	ns

Note: ns = nonsignificant.

K: Intake/Retest LSI Risk Level Assessment

In Table 62, the retest LSI risk levels are examined in relation to the LSI risk level assessed at prison intake. In order to facilitate comparative analyses, a medium split of the intake LSI total scores was used to delineate 'low' (0 - 19) and 'high' (20+) risk groups. The resultant intake/retest combinations of risk level are shown below. Noteworthy, is the 16.7% shift in classification for the sample.

Table 62

Percentage Distribution of Combined
Intake/Retest Risk Levels (N = 54)

Risk Level At Intake	Retest Risk Level	n	%
High	High	23	42.6
	Low	5	9.3
Low	High	4	7.4
	Low	22	40.7

Post-release Outcome

Table 63 presents the relationship between LSI intake/ retest risk levels and post-release outcome. It can be seen from the results that in every instance where retest risk level increases then the likelihood of post-release remands, incarceration, general recidivism and parole violation also increases. Correspondingly, whenever retest risk level decreased, then so did the likelihood of recidivism no matter how it was measured.

Table 63

Intake/Retest Risk Levels: Post-release Outcome**Remands:**

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	0.0 (0/5)	13.0 (3/23)	10.7 (3/28)
Low	9.1 (2/22)	25.0 (1/4)	11.5 (3/26)
Overall	7.4 (2/27)	14.8 (4/27)	11.1 (6/54)

Incarceration:

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	20.0 (1/5)	47.8 (11/23)	47.2 (12/28)
Low	18.2 (4/22)	25.0 (1/4)	19.2 (5/26)
Overall	18.5 (5/27)	44.4 (12/27)	31.5 (17/54)

General Recidivism:

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	20.0 (1/5)	52.2 (12/23)	46.4 (13/28)
Low	18.2 (4/22)	25.0 (1/4)	19.2 (5/26)
Overall	18.5 (5/27)	48.1 (13/27)	33.3 (18/54)

Parole Violations:

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	33.3 (1/3)	51.5 (7/14)	47.1 (8/17)
Low	15.8 (3/19)	50.0 (0/3)	13.6 (3/22)
Overall	18.2 (4/22)	41.2 (7/17)	28.2 (11/39)

Recidivism Severity

In Table 64, the relationship between combined LSI intake/retest risk levels and recidivism severity is presented. As expected, whenever LSI risk level decreased upon retest then the likelihood of violent recidivism, violent re-offence and Federal sentence also decreased. However, as LSI risk level increased there was no corresponding increase in the rate of violent recidivism.

Table 64

Intake/Retest Risk Levels: Recidivism Severity**Violent Recidivism:**

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	0.0 (0/5)	17.4 (4/23)	14.3 (4/28)
Low	9.1 (2/22)	0.0 (0/4)	7.7 (2/26)
Overall	7.4 (2/27)	14.8 (4/27)	11.1 (6/54)

Violent Re-offenses:

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	0.0 (0/1)	30.8 (4/13)	28.6 (4/14)
Low	40.0 (2/5)	0.0 (0/1)	33.3 (2/6)
Overall	33.3 (2/6)	28.6 (4/14)	30.0 (6/20)

Federal Sentence:

Risk Level At Intake	Retest Risk Level		Overall
	Low	High	
High	0.0 (0/5)	17.4 (4/23)	14.3 (4/28)
Low	4.5 (1/22)	0.0 (0/4)	3.7 (1/26)
Overall	3.7 (1/27)	14.8 (4/27)	9.3 (5/54)

L: Dynamic Prediction of Post-release Outcome and Recidivism Severity

In Table 65, regression analysis of intake, retest, and intake/retest scores combined are presented for the selected post-release outcome and recidivism severity measures.

Moreover, the percentage gain in explained variance (PGV) upon retest is also given for each outcome. As inspection

of Table 65 reveals, there is a substantial gain in explained variance for post-release remands (43.5%), incarceration (36.4%) and general recidivism (12.4%) by using retests at post-release.

Table 65

Incremental Predictive Criterion Validity Estimates for
Intake/Retest LSI Risk Level and Various Outcome Measures

Post-release Outcome Measure(s)	Intake R^2	Retest R^2	Combined R^2	PGV
Remands	.023	.033	.033	43.5
Incarceration	.110	.150	.148	36.4
General Recidivism	.145	.163	.170	12.4
Parole Violation	.173	.125	.173	0.0
Violent Recidivism	.041	.040	.044	0.0
Violent Re-offence	.010	.007	.010	0.0
Federal Sentence	.057	.028	.061	0.0

Note: PGV = Percentage gain in explained variance with retest.

**M: Incremental Prediction Using Intake LSI Risk, Various
Prison Adjustment Measures, and Retest LSI Risk**

The incremental predictive criterion validities of intake, adjustment and retest variables were explored through multiple regression analyses, with the selected post-release outcome and recidivism severity measures as separate criterion variables.

By means of stepwise multiple regression analysis and forcing the intake LSI risk score to enter first into the prediction models, the absolute and relative contribution of each predictor variable was explored and the incremental contributions of the other predictor variables were established.

In order to conduct the stepwise multiple regression analyses, intake LSI risk scores, admission age, misconducts, treatment participation and retest LSI scores were used as the predictor variables. It should be noted that this set of predictor variables was not modelled for the dependent measures of parole violation and violent re-offence. Given that five variables were to be entered into the equation and the number of cases available for these criterion measures, it was deemed appropriate that these analyses should be dropped so as not to violate some of the statistical assumptions which underly multiple regression procedures.

Post-release Outcome

In Table 66, the absolute, relative, and incremental predictive criterion validity estimates for the intake LSI risk score, admission age, various prison adjustment measures (i.e., misconducts, treatment) and retest risk score were assessed in relation to three post-release outcome measures (remands, incarceration and general recidivism).

For incarceration and general recidivism, the stepwise regression analyses revealed that after intake LSI risk was forced first into the regression model, age successfully entered the prediction model and made a significant contribution to explained variance. Of special note, none of the predictor variables including the LSI met the .05 significance level for entry into the models of post-release remands.

Table 66

Incremental Predictive Criterion Validity Estimates for
Admission Age and LSI, Misconducts, Treatment and Retest
LSI: Post-release Outcome

Criterion	Step	Variable Entered	# in	Partial R ²	Model R ²	p
Remands (n=54)	0	Intake LSI (.005)	1	.02	.02	ns
Incarceration (n=54)	0	Intake LSI (.01)	1	.11	.11	**
	1	Admission Age (-.02)	2	.10	.21	*
General Recidivism (n=54)	0	Intake LSI (.01)	1	.14	.18	**
	1	Admission Age (-.02)	2	.10	.25	*

Note: (parameter estimates)

* $p < .05$; ** $p < .01$; *** $p < .001$;

ns = nonsignificant.

Recidivism Severity

The stepwise selection procedures were conducted for only violent recidivism and Federal sentence. Results of the regression analyses revealed that none of the variables met the .05 level of significance for entry into the regression model.

N: Static and Dynamic LSI Risk Factors

Table 67 presents univariate statistics for the various "static" and "dynamic" factors assessed using the LSI at intake and retest. In addition, the net change score (i.e., d) for each factor is presented with an accompanying hypothesis test (i.e., p or the probability of a greater absolute value for the Student's t value). Notably, statistically significant differences in change scores were found for the following: leisure, companions, alcohol/drug, emotional/personal, attitude, total need, and total LSI. Interestingly, scores on the alcohol/drug subcomponent of the LSI worsened at retest whereas scores for the other LSI subcomponents showed improvement.

Table 67

Means and Standard Deviations of LSI Intake/Retest
Subcomponents Assessed (N = 54)

Factor Assessed	Intake LSI		Retest LSI		d	p
	Mean	SD	Mean	SD		
Static:						
Criminal History	4.57	2.6	-	-	-	-
Dynamic:						
Employment/Educ.	5.02	3.4	4.67	3.0	-.35	ns
Financial	0.93	0.8	0.87	0.7	-.06	ns
Family/Marital	1.17	1.1	1.09	1.0	-.08	ns
Accommodations	0.69	0.9	0.52	0.7	-.17	ns
Leisure	1.46	0.7	0.57	0.8	-.88	***
Companions	1.98	1.3	1.44	1.3	-.54	*
Alcohol/Drug	2.80	2.5	3.46	2.6	.66	**
Emotional/Personal	1.00	1.1	0.69	1.0	-.31	**
Attitude	0.69	1.0	0.15	0.6	-.54	**
Total Need	15.7	8.7	13.5	7.1	-2.2	**
Total LSI	20.3	10.7	18.0	9.2	-2.3	**

Notes:

SD = Standard deviation

d = change score

p = probability of a greater absolute value for Student's T

* p < .05; ** p < .01; *** p < .001.

An important question that remains is the relationship between the various factors assessed at intake and retest and subsequent post-release outcome. Statistical analyses (Tables 68 through 73) revealed that the "static" factor (i.e., criminal history) was significantly related to only the general recidivism outcome measure whereas substantial gains in strength of association were achieved at retest between "dynamic" factors (i.e., employment/education) and post-release incarceration, general recidivism, and violent recidivism.

Post-release Outcome

Table 68 presents the predictive validity estimates for intake, retest and change scores for the various LSI subcomponents and post-release remands. Simple correlational analyses revealed that only the retest dynamic factors employment/education and attitude were predictive. In addition, a change in emotional/personal problems was also found to be significantly correlated with remands. However, in exploring whether retesting actually added to the prediction of remands (i.e., holding intake constant), the significant partial correlations were for employment/education and attitude.

Table 68

Predictive Criterion Validity Estimates for LSI
Subcomponents Assessed (Remands)

Factor Assessed	Remands			
	Intake	Retest	Change Score	Partial r
Static:				
Criminal History	.15	-	-	-
Dynamic:				
Employment/Education	.16	.34*	-.19	-.33*
Financial	.24	.06	.19	.06
Family/Marital	.16	.14	.03	-.08
Accommodations	.00	-.01	.00	.01
Leisure	.18	.26	-.08	-.23
Companions	.23	-.03	.23	.13
Alcohol/Drug	-.04	-.13	.15	.17
Emotional/Personal	-.16	.05	-.29*	-.23
Attitude	.18	.30*	-.01	-.29*
Total Need	.14	.17	.01	-.11
Total LSI	.15	.18	.01	-.10

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Partial r controlling for intake LSI risk.

In Table 69, the predictive validity estimates for the intake, retest and change scores of the various factors assessed and post-release incarceration are presented. While the intake dynamic factors of employment/education, financial, and companions were significantly correlated with

post-release incarceration, only the retest dynamic factor of education/employment was predictive of post-release incarceration. In examining whether retesting added to the prediction of post-release incarceration, the only significant partial correlation was for employment/education.

Table 69

Predictive Criterion Validity Estimates for LSI
Subcomponents Assessed (Incarceration)

Factor Assessed	Incarceration			
	Intake	Retest	Change Score	Partial r
Static:				
Criminal History	.23	-	-	-
Dynamic:				
Employment/Education	.40**	.54***	-.09	-.40**
Financial	.30*	.17	.15	-.04
Family/Marital	.23	.21	.03	-.13
Accommodations	.02	.12	-.08	-.12
Leisure	.23	.26	-.05	-.22
Companions	.40**	.16	.21	-.01
Alcohol/Drug	.10	.11	-.02	-.05
Emotional/Personal	-.14	.06	-.26	-.21
Attitude	.26	.16	.14	-.14
Total Need	.34*	.41**	.00	-.25
Total LSI	.33*	.38**	.00	-.21

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.

Partial r controlling for intake LSI risk.

Table 70 shows the predictive validity estimates for the intake, retest and change scores of the various factors assessed in relation to general recidivism. While the intake dynamic factors of employment/education, financial, companions, and attitude were significantly correlated with general recidivism, again the only retest dynamic factor predictive of general recidivism was employment/education. As for whether retesting actually adds something to the prediction of post-release general recidivism (i.e., holding intake constant), the only significant partial correlation was employment/education.

Table 70

Predictive Criterion Validity Estimates for LSI
Subcomponents Assessed (General Recidivism)

Factor Assessed	General Recidivism			
	Intake	Retest	Change Score	Partial r
Static:				
Criminal History	.28*	-	-	-
Dynamic:				
Employment/Education	.44**	.59***	-.10	-.44**
Financial	.34*	.18	.19	-.02
Family/Marital	.22	.20	.02	-.12
Accommodations	.03	.09	-.04	-.08
Leisure	.26	.23	.00	-.18
Companions	.46**	.18	.25	-.01
Alcohol/Drug	.12	.10	-.02	-.01
Emotional/Personal	-.14	.03	-.22	-.17
Attitude	.35**	.15	.22	-.13
Total Need	.38**	.44**	.06	-.21
Total LSI	.38**	.40**	.06	-.17

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Partial r controlling for intake LSI risk.

Table 71 presents the predictive validity estimates for the intake, retest, and change scores of the various factors assessed with respect to parole violation. While the intake dynamic factors of employment/education, financial, companions, and attitude were again significantly correlated

with parole violation, only employment/education was predictive at retest. Interestingly, the change score for the dynamic factor of attitude was also predictive of parole violation. With respect to the incremental validity of retest there were no significant partial correlations.

Table 71

Predictive Criterion Validity Estimates for LSI
Subcomponents Assessed (Parole Violation) (n = 39)

Factor Assessed	Parole Violation			
	Intake	Retest	Change Score	Partial r
Static:				
Criminal History	.17	-	-	-
Dynamic:				
Employment/Education	.54***	.50**	.11	-.23
Financial	.35*	.13	.23	.03
Family/Marital	.19	.18	-.01	-.10
Accommodations	.05	.29	-.13	-.31
Leisure	.25	.18	.07	-.14
Companions	.56***	.24	.21	-.09
Alcohol/Drug	.18	.18	-.03	-.06
Emotional/Personal	-.17	-.05	-.20	-.14
Attitude	.38*	.11	.33*	-.18
Total Need	.45**	.39*	.16	-.10
Total LSI	.42**	.35*	.16	-.03

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Partial r controlling for intake LSI risk.

Recidivism Severity

In Table 72, the predictive validity estimates for the intake, retest and change scores of the various factors assessed in relation to violent recidivism are presented. Correlational analyses revealed the intake factors of employment/employment and family/marital were significantly correlated with violent recidivism. The only retest factor predictive of violent recidivism was employment/education. However, there were no significant partial correlations between any of the factors assessed and violent recidivism.

Table 72

Predictive Criterion Validity Estimates for LSI
Subcomponents Assessed (Violent Recidivism)

Factor Assessed	Violent Recidivism			
	Intake	Retest	Change Score	Partial r
Static:				
Criminal History	.19	-	-	-
Dynamic:				
Employment/Education	.30*	.38**	-.05	-.26
Financial	.24	.14	.12	-.03
Family/Marital	.34*	.03	.30*	.14
Accommodations	-.07	-.01	-.07	-.02
Leisure	.18	.19	-.02	-.15
Companions	.05	-.07	.11	.10
Alcohol/Drug	.01	-.02	.04	.04
Emotional/Personal	-.05	.12	-.20	-.21
Attitude	.01	-.08	.04	-.08
Total Need	.19	.19	.06	-.07
Total LSI	.20	.20	.06	-.06

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Partial r controlling for intake LSI risk.

There were no significant correlations between the intake, retest, or change scores with violent re-offence. Moreover, there were no significant partial correlations between any of the factors assessed and violent re-offence.

Table 73 illustrates the predictive validity estimates for the intake, retest, and change scores of the various factors assessed in relation to Federal sentence at follow-up. Correlational analyses revealed the intake factors of companions and attitude were significantly correlated with Federal sentence. There were no retest factors predictive of Federal sentence. Interestingly, change scores in the companions and attitude subcomponents were predictive of Federal sentence. After holding intake scores constant, however, there were no significant partial correlations between any of the factors assessed and Federal sentence.

Table 73

Predictive Criterion Validity Estimates for LSI
Subcomponents Assessed (Federal Sentence)

Factor Assessed	Federal Sentence			
	Intake	Retest	Change Score	Partial r
Static:				
Criminal History	.15	-	-	-
Dynamic:				
Employment/Education	.26*	.25	.06	-.10
Financial	.26	.14	.13	-.03
Family/Marital	.13	.16	-.02	-.11
Accommodations	-.03	-.05	.01	.04
Leisure	.15	.09	.04	-.06
Companions	.39**	.01	.36**	.18
Alcohol/Drug	.03	.09	-.11	-.12
Emotional/Personal	-.06	-.10	.03	.08
Attitude	.30*	-.07	.31*	.10
Total Need	.25	.16	.17	.03
Total LSI	.24	.17	.17	.06

Note: * $p < .05$; ** $p < .01$; *** $p < .001$.
 Partial r controlling for intake LSI risk.

O: Retest LSI Risk, Service, and General Recidivism

In another examination of the 'risk principle' (Andrews et al., 1986), the interaction between retest LSI risk and level of service post-release was explored. In this regard, retest LSI risk levels were established following a median split of a frequency distribution of the retest LSI total scores; the lower risk cases presented retest LSI scores less than 20 and the higher risk cases presented retest LSI scores of 20 or greater. Levels of service delivery were established according to a median split of a frequency distribution of the total number of office visits made by each offender within the first three months of post-release supervision; the lower service cases presented zero to three office visits and the higher service cases presented four or more office visits. The mean retest LSI scores were 16.9 and 19.0 for the low and high service groups respectively ($p < .41$).

Analysis of variance revealed that there was a statistically significant main effect of retest LSI risk level ($F(1/54) = 5.29$, $p < .05$) on the general recidivism outcome measure. However, there was neither a statistically significant main effect of service nor a significant risk-by-service interaction with respect to general recidivism.

As Table 74 shows, the number of office visits made by an offender within the first three months of post-release

supervision was found to be unrelated to the recidivism among higher and lower risk cases.

Table 74

Recidivism Rates by Retest LSI Risk Level and Service

Retest Risk Level	Level of Service		F	p
	Low	High		
High	.45 (n=11)	.50 (n=16)	< 1	ns
Low	.21 (n=14)	.15 (n=13)	< 1	ns

Note: ns = nonsignificant.

DISCUSSION

The present investigation is an account of the variation in criminal conduct for a sample of adult incarcerated offenders. The personal, interpersonal and community-reinforcement perspective that was adopted in the present research was derived from contemporary social learning theories (Andrews, 1982e). Specifically, the research was based on an approach which searches for those factors responsible for variation in offender behavior, encourages the development of classification systems that survey the differing antecedents and consequences for law-abiding behavior, and seeks to alter those conditions that govern criminal conduct (Andrews, Bonta & Wormith, 1990).

Within a psychological framework, the present research was primarily concerned with variation in criminal conduct through multimethod-multipredictor assessments and reassessments of offenders. In addition, the 'risk principle' of case classification which specifically addresses the assessment of risk, the prediction of recidivism, and the matching of levels of treatment service to the risk level of the offender (Andrews, Bonta & Hoge, 1990). While there is considerable empirical evidence to support the 'risk principle', it has been validated mainly on samples of juvenile delinquents and to some extent on adult

probationers. Therefore, this research was regarded as an extension and validation of the 'risk principle' with a sample of incarcerated offenders.

Keeping in mind that the results of the present research have been outlined in considerable detail, it was clear that any discussion which followed would have to be structured in such a manner as to highlight the major findings, limitations, and practical implications. In this regard, the discussion was organized into three separate parts.

First, there are specific considerations of the variability in criminal conduct through an examination of simple predictors and classification methods. By means of a longitudinal design, these predictor variables were examined in relation to a variety of relevant criterion measures. These included: prison process, prison adjustment, prison release, and post-release outcome.

Second, there are general considerations of the absolute, relative, incremental, and dynamic predictive criterion validities of the various predictor variables as well as several tests of the 'risk principle' of case classification. More precisely, when higher levels of service are delivered to higher risk offenders, it is expected that there will be a significant reduction in the probability of recidivism.

Then, in a final section, an underlying 'psychology of

criminal conduct' for effective correctional interventions is discussed along with some suggested directions for future research.

Specific Considerations for the Understanding of Criminal Conduct

A: Simple Predictors

Generally, this research showed that information derived from systematic intake assessments and post-release reassessments can have considerable predictive validity with respect to a variety of criterion measures. Of particular interest was the finding that a wide variety of pre-prison or intake variables (e.g., age, criminal history, education level, etc.) were efficient predictors of a variety of correctional outcomes.

This study found that the younger an offender was upon admission and the more extensive his criminal history, the more likely he would be recommended and placed in higher levels of custody, involved in institutional infractions and encounter failure upon post-release follow-up. The study replicates other research which has found age to be a potent predictor of both in-prison behaviors (Flanagan, 1983; Goetting & Howsen, 1986; MacKenzie, 1987) and post-release recidivism (Carlson, 1973; Pritchard, 1979; Wormith & Goldstone, 1984).

Furthermore, the results replicate a large body of research (Carlson, 1974; Gendreau et al., 1979; Glaser,

1964; Porporino & Zamble, 1984; Pritchard, 1979; Wormith & Goldstone, 1984), which have found that offenders with extensive criminal histories were likely to engage in a wide range of antisocial behavior.

As Bonta and Kiem (1978) had reported for a sample of Canadian Detention Centre inmates, this study also found that a history of assaultive type offences was predictive of prison misconduct. However, upon closer examination, this predictor variable was unrelated to institutional assaults when considered separately from other types of misconduct (e.g., disobeying rules). This finding suggests, as Poole and Regoli (1980) have shown, that line-level custodial staff may simply be more apt to invoke official sanctions of a formal and informal (i.e., warnings, counsel) nature for inmates who have histories of violence. Moreover, this result is also consistent with Flanagan's study (1980) showing that the primary agent of social control within the prison was the correctional officer.

Despite the potential sources of measurement error (i.e., definition, detection, participant status characteristics, temporality, jurisdiction) which are likely to occur in the gathering of any prison rule infraction data (Light, 1990) or even recidivism data (Maltz, 1984), such information points towards variation in activity whether it be the offender's own or the justice system's reaction to that offender. In any event, there is abundant empirical

support that a criminal history is positively correlated with a criminal future.

The results of this study found that inmates assessed at intake with educational, employment, and financial difficulties were more likely to be recommended and placed in higher levels of custody, be involved in institutional infractions, and evidence higher recidivism rates. The meaningfulness of these predictors is clearly dependent upon the outcome criterion. For example, the fact that education, employment, and financial variables predicted security custody may simply be an "illusionary correlate". That is, these variables are probably highly correlated with other factors that require differing levels of security (e.g., criminal companions, drug abuse). The same may also be true in the prediction of institutional misconduct.

The importance of education, employment, and financial support is more directly relevant to post-release adjustment. A number of investigations (Adams, 1977; Flanagan, 1983; Porporino & Zamble, 1984) have reported similar findings. The inter-dependence of these variables and their predictive validity suggest an area for program delivery. Yet, the empirical evidence for providing offenders with educational and employment programs are mixed. While a number of investigators have found that educational/vocational training in prison to be predictive of post-release outcome (Anderson, 1982; Glaser, 1964;

Glueck & Glueck, 1930; Seashore et al., 1976; Schnur, 1948), others have found these programs unrelated to post-release recidivism (Maguire et al., 1988; Markley et al., 1982; Waller, 1974). These mixed results remind the reader that the identification of simple predictors do not necessarily imply functional significance.

Family/marital problems upon intake in this study were predictive of higher levels of custody placement as well as disruptive behavior in-prison and post-release. Although previous research with adult inmates has linked marital status to prison adjustment (Coe, 1961,; Flanagan, 1983; Jones, 1976; Schnur, 1949) and post-release recidivism (Bonta, 1989; Gendreau et al. 1980; Pallone & Hennessey, 1977b; Wormith & Goldstone, 1984), reports on the predictive validity of other family measures have been limited. However, the results of this study also found that a history of non-rewarding parental interactions were more likely to be disruptive in prison and more likely to recidivate. Such a finding is consistent with longitudinal studies on juveniles which has linked prior problems with parents (Mitchell & Rosa, 1981), absent fathers (Robbins & Hill, 1966), parental separation through extended hospitalization (Farrington & West, 1971), separation from parent by death or divorce (Gregory, 1965), parental disharmony (Farrington & West, 1971), and poor parental supervision (Farrington, 1979) with future adult criminal behavior.

This study also found that inmates who were assessed at intake as having a criminal family were more likely to be involved in institutional misconducts and post-release recidivism. This finding is also consistent with extended follow-ups of juveniles that found variables such as parental arrest (Robbins, West, & Herjanic, 1975), parental and/or sibling conviction (Farrington, 1979; Osborn & West, 1979), and criminal biological/adoptive fathers (Hutchings & Mednick, 1975) predictive of reinvolvement in crime.

Upon intake, offenders assessed as having criminal associations were more likely to be recommended and placed in higher levels of custody, have partaken in more rule-breaking behavior, and have recidivated. These findings are consistent with previous research (Brownfield & Thompson, 1991; Conger, 1976; Megargee, 1982) and with social learning theory (Bandura, 1973). In particular, this finding fits well within 'differential association' theory (Sutherland, 1939) which basically describes a set of conditions (i.e., exposure, affective ties to criminals) conducive for criminal activity. Hence, the positive relationship between peer attachment and delinquent behavior appears to be well-established in the 'psychology of criminal conduct'.

Substance abuse problems (both alcohol and/or drug) were predictive of security level placements. However, the results from this study indicated that only inmates with drug problems were more likely to receive citations for

breaking institutional rules (misconduct, assaults) and replicates previous findings in the area (Thomas & Cage, 1977). On the other hand, alcohol-related problems were not predictive of any of the institutional rule-breaking measures.

While a more detailed examination of this finding lies beyond the scope of the present research, it may be that inmates with previous drug problems come under closer scrutiny by correctional officers and are thereby detected more readily (Flanagan, 1980). Inmates with alcohol problems were less likely to be released on parole whereas those with drug problems were largely unaffected by parole release decisions. This finding is noteworthy in light of the fact that drug problems were the only substance abuse variables associated with post-release recidivism. While the finding that alcohol abuse history was unrelated to post-release outcome is consistent with several other investigations (Pallone & Hennessey, 1977a; 1977b), it is difficult to link the findings of other investigators due the frequent use of a composite variable of alcohol/drug abuse (Bonta, 1989; Carney, 1967). The results of this study encourage future prediction studies to separate alcohol and drug abuse and treat them as independent variables. More important, however, the present research recognizes substance abuse as an important source of variation in criminal recidivism.

As expected, offenders assessed upon intake as experiencing emotional/personal problems were more likely to be recommended and placed in higher levels of custody. However, the results of the present study indicated that only inmates with severe emotional/personal problems or assessed as requiring a psychological intervention were more likely to receive citations for breaking institutional rules. Toch and Adams (1986) also found that after controlling for differences in social and criminal history, mentally ill inmates have a higher rate of disciplinary infractions than other inmates. Similarly, Porporino and Zamble (1984) as well as MacKenzie and Goodstein (1985) suggested that inmates who have problems adjusting to prison life are more likely to manifest a range of anxiety and depression symptoms and thereby be involved disproportionately in violating institutional rules.

Having emotional/personal problems at intake was unrelated to post-release recidivism in this study. Although this finding is consistent with that of Bonta (1989), it is perhaps the variation in these cases which had provided the focus of attention for the provision of correctional treatment services. As the present research had indicated, emotional/personal problems were highly correlated with protective custody and treatment institution recommendations and placements, and participation in treatment programs while in prison. Thus, it seems that

appropriate correctional programming may have had positive effects with respect to variation in recidivism for these cases (Andrews, Zinger, Hoge, Bonta, Gendreau & Cullen, 1990). Nevertheless, the positive relationship between emotional/personal problems and prison adjustment points towards individual differences in criminal conduct.

The present research showed that offenders assessed as having antisocial attitudes upon intake were more likely to be recommended and placed in higher levels of custody, to receive citations for breaking institutional rules, and post-release recidivism. This finding replicates other studies which have found that assessments of attitudes predict criminal behavior (Andrews, Wormith & Kiessling, 1985, Bonta, 1990; Mylonas & Reckless; 1963). As Andrews (1985) has pointed out, "virtually all criminological theories assign criminal sentiments a central causal role". Whether they be theories of 'differential association' (Sutherland, 1939), 'differential identification' (Glaser, 1956), or 'neutralization' (Sykes & Matza, 1957), procriminal attitudes, values, and beliefs are deemed to be consistent correlates of criminal propensity (Andrews, 1985). In moving towards a 'psychology of criminal conduct', it is clear that variation in attitudes may play a major role in criminal futures.

Overall, the present research provides empirical support for multiple sources of variation in criminal

conduct. These major sources of variation were found through an extensive analysis of a wide variety of pre-prison or intake variables which are characteristic of offenders. While the focus in this section has been upon variations in age, criminal history, level of education, employment, family/marital relations, financial status, living arrangement, criminal associations, substance abuse, emotional/personal problems and attitude, the predictive validity of these sources of variation reflect individual differences in law-abiding behavior or a 'psychology of criminal conduct'. Moreover, the relative value of these different sources of variation in criminal conduct were provided through comparisons of the magnitudes of association for the various offender characteristics on important corectional outcomes.

B: Classification Methods

Self-report. Offender self-reports have been used extensively for research in crime and delinquency (Lab & Allen, 1984). Furthermore, self-report paper-and-pencil questionnaires such as the MMPI have been used in the psychological assessment of criminal offenders (Brodsky & Smitherman, 1983). For the most part, this study found that offender assessments accomplished through self-report paper-and-pencil techniques do have some predictive merit. The discussion which follows will comment on the Megargee MMPI-

based Typology, the Prison Maladjustment Scale, and the Prison Adjustment Scale.

Rank-ordering the Megargee MMPI-based types in terms of deviancy was found in this study to be positively correlated with rule-breaking behavior in prison. In two large samples of U.S. Federal and State prisoners, Edinger (1979) had similarly found that the more deviant MMPI-based types (Charlie, Delta, and Foxtrot) were more likely to engage in rule violations while in prison.

Although Megargee and Bohn (1979) reported that the MMPI-based types were mildly related to return to prison, the present study found the MMPI-based classification system unrelated to post-release outcome and recidivism severity. This finding is consistent with earlier reports on the lack of predictive validity for the Megargee MMPI-based typology in relation to recidivism (Moss et al., 1984; Motiuk et al., 1986). Perhaps, the different results may be attributed to differences in sample characteristics. In Megargee and Bohn's (1979) study the racial composition was mixed (64.7% white, 34.4% black) whereas for Moss et al. (1984), the sample was all black and in Motiuk et al. (1986), the sample was all white. Mack (1969) also found the MMPI, when considered alone, was not useful in identifying recidivists in relatively homogenous criminal populations. He suggested that the use of the MMPI should be restricted to the exploration of small differences between groups and more

importantly, argued that the combined use of historical information and the MMPI would be the best approach in prediction studies of recidivism.

After LSI risk had been considered in a stepwise regression analysis, there was no incremental contribution to prediction by the rank-ordering of the Megargee MMPI-based types. These findings echo those reported by Louscher et al. (1983) and Moss et al. (1984) who similarly found the Megargee MMPI-based classifications to be of limited practical utility in predicting offender behavior. Indeed, it is clear that variations in an offender's background, as measured by intake LSI's, can prove to be extremely beneficial in predicting criminal futures.

At best, the results of this research suggest that the Megargee MMPI-based Typology which was correlated with custody level and treatment institution placement should be limited to the initial placement of offenders into differential security/custody levels and treatment institutions. Given that the aforementioned results essentially provide a measure of both predictor and criterion taken at approximately the same time, it may serve to illustrate concurrent validity (Ghiselli, Campbell, & Zadek, 1981) for the MMPI-based Typology rather than predictive validity (Anastasi, 1982). Further support for this limited application of the Megargee MMPI-based Typology is derived from explorations of temporal stability. Simons

et al. (1981) in a short-term (less than four months) and a long-term (i.e., more than 10 months) MMPI-based Typology reclassification study observed considerable change (73% and 72%, respectively) in typological designation. They concluded that the Megargee Typology was too unstable in the short-term and too dynamic in the long-run to be of much use in classifying criminal offenders. According to Simmons et al. (1981), ideal classification systems are those which from test to retest combine features of an inmate's personality that are in fact stable and constant with those that are sensitive to change.

The Prison Maladjustment Scale, an MMPI-derived subscale was significantly correlated with a variety of prison processes (e.g., custody placement, halfway house placement), prison adjustment (e.g., misconduct) and prison release (i.e., parole). This suggests that the Scale could possibly have some merit in relation to operational concerns in prison.

Indeed, in reviewing the test construction of the Prison Maladjustment Scale (Wattron, 1963), there appears to have been considerable attention paid to behaviors that may pose management difficulties. Content analysis of the items revealed both behavioral descriptions (e.g., "at times I feel like smashing things") and situational factors (e.g., "someone has it in for me") pertinent to the classification of offenders. This notion was reinforced by the fact that,

after having considered intake LSI risk level, there remained significant gains (>70%) in explained variance to be achieved by adding the Prison Maladjustment Scale to the prediction model for misconducts.

Of particular note, the Prison Maladjustment Scale was found to be actually superior to the other assessment tools with regards to the prediction of treatment institution placement (RIOCI = 70.5%). This finding is important because it demonstrates quite clearly that observed improvements in prediction can be achieved by means of multiple methods and can then be attributed to clinically relevant factors, namely maladjustment. However, the finding that the Prison Maladjustment Scale was unrelated to any of the post-release recidivism measures necessarily limits the overall utility of the instrument. Nevertheless, the administration of the 72 item Prison Maladjustment Scale as opposed to an instrument which requires all 566 MMPI items and a complex set of scoring rules, raises the issue whether the Megargee MMPI-based Typology has any practical utility when one is concerned with maximum predictive efficiency and minimum effort.

With respect to the 36 item MMPI-derived Prison Adjustment Scale, satisfactory predictive validity was demonstrated in relation to security/custody level recommendations and placements, transfers to a correctional halfway house, misconduct, and parole releases. Once again

yet another MMPI-derived classification device, with half as many items as the Prison Maladjustment Scale and approximately 5% of those required by the Megargee MMPI-based Typology was shown to have considerable predictive value. More importantly, the Prison Adjustment Scale was also significantly correlated with a variety of post-release outcome measures. Thus, the scale is necessarily set apart from the other two MMPI-based assessment tools with respect to overall predictive merit.

Although all the self-report assessment instruments used in this study evidenced some degree of predictive validity, the data were not convincing enough to support adoption of these classification tools and the exclusion of others. The rank-ordered Megargee MMPI-based Typology, Prison Maladjustment Scale and Prison Adjustment Scale were validated with a single cohort of Provincially incarcerated offenders and only literate inmates had participated in this study.

Interview-based. Face-to-face interviews with offenders and reviews of their official records have been used extensively for criminal justice decision-making (Clements, 1986). Moreover, empirical investigations of interview-based schedules for classifying offenders have been well-documented in the literature (Andrews, 1983; Baird, 1981; Gulley, 1986). It should be mentioned that

interview-based classification methods also rely on reviews of official records and contacts with other collateral sources. Insofar as this assessment approach begins with an interview with the offender, it is set apart from the self-report and file-review methods.

In general, the results of this study found that information derived through offender interviews can be reliably quantified in ways which accurately reflect in-prison and post-release outcome. In addition, assessments with interview schedules were among the strongest predictors of in-prison and post-release performance. Furthermore, the utilization of an interview-based format significantly improved the ability of assessment tools to identify targets of intervention (e.g., substance abuse), thereby guiding treatment.

With reference to predictive accuracy considerations, the LSI was amongst the most accurate of the interview-based instruments in relation to the criterion measures of treatment institution placement (RIOCI = 38.7%), parole release (RIOCI = 20.7%), reincarceration (RIOCI = 31.2%) and violent recidivism (RIOCI = 46.9%). Insofar as the Wisconsin Assessment of Client Risk Scale and the Illinois Initial Risk Evaluation Scale also depend on interview-based information, the slightly lower RIOCI's found for these instruments and the selected binary criterion measures could possibly be attributed to the LSI's overall wider sampling

of an offender's behavioral domain (Bonta & Motiuk, 1985).

When examining the predictive validity of the various interview-based classification instruments in the present research, it was found that these tools were not significantly correlated with halfway house outcome. Previous research has shown the LSI to be a consistent predictor of halfway house success (Bonta & Motiuk, 1985; 1987; 1990). However, explorations of predictive criterion validity for halfway house outcome in this study may have been limited by the fact that only the second cohort was used to make comparisons between the various classification instruments. At the time when the second cohort was being gathered a parallel project was being conducted wherein inmates with low LSI scores were referred to halfway house review boards for consideration and placement. Thus, the composition of inmates in the halfway houses was significantly altered. Additionally, in order to facilitate the comparative analyses among the various selected classification instruments, only offenders who had completed MMPI's were used to construct a subsample and this possibly narrowed the range of available variance in halfway house outcome. In any event, further explorations of the full sample yielded a significant relationship between intake LSI risk level and halfway house outcome.

Finally, the three interview-based instruments yielded moderate to high convergent validity estimates, and the

magnitudes of their intercorrelations suggests that minimal residual variance would be available for purposes of establishing incremental predictive criterion validity. After having considered intake LSI risk level, there were no significant gains in explained variance achieved by adding any of the other interview-based classification instruments to the prediction model. While there is shared method variance amongst the three interview-based instruments, a content analysis of each instrument reveals that an offender's behavioral domain is more broadly covered by the LSI (54 items) in comparison to the Wisconsin Assessment of Client Risk Scale (11 items) and the Illinois Initial Risk Evaluation Scale (10 items). Moreover, the LSI was theoretically derived from a broad-based, social learning perspective that assumes behavior is learned through the interaction of the person with the environment (Andrews, 1982).

File-review. The systematic review of an offender's official records has been used widely in criminal justice research. More often, however, this file information has been applied as part of an objective assessment process for criminal justice decision-making. As was found for the interview-based method, results of this research suggest that offender assessments that are accomplished by means of file-reviews can also have predictive value.

The finding that the three of the four file-review assessment devices selected for examination in this study (i.e., SFS, SIR, Oregon) were significantly correlated with a variety of prison process (e.g., custody placement), prison adjustment (e.g., misconduct) and prison release (e.g., parole) measures, suggests that these instruments may have some practical utility in relation to operational concerns in prison.

Interestingly, the Pennsylvania Parole Prognosis Scale was unrelated to rule-breaking behavior in prison. Given that this instrument samples only three aspects of an offenders behavioral domain (i.e., number of prior convictions, age, offence type), it is not surprising to find that this instrument was outperformed by the other file-review instruments.

The finding that the SFS, SIR, Oregon Parole Prognosis Scale, and Pennsylvania Parole Prognosis Scale were predictive of parole releases and post-release outcome replicates previous research with the SFS (Hoffman, 1983; Hoffman & Beck, 1974; Hoffman et al., 1978), the SIR (Nuffield, 1982; Hann & Harman, 1988) and serves to provide the only known validation of the Oregon Parole Prognosis Scale and Pennsylvania Parole Prognosis Scale.

Wolf (1978) suggested that systems and measures should be validated on the significance of their goals, appropriateness of their procedures, and importance of their

effects. While Wolf (1978) referred to these as judgements of social validity, offender classification systems are deemed to have social validity if they: 1) are needed by criminal justice agencies, 2) are acceptable to both offenders and correctional administrators, and 3) provide consumer satisfaction. In this study, each of the file-review instruments selected for examination were developed solely for parole selection purposes and the results of this study clearly indicate that should remain as such.

So far, the LSI classification system appears to be the only instrument which has been utilized on a systemwide basis for institutional custody and transfer (Bonta & Motiuk, 1985; 1986; 1987; 1990) and probation/parole supervision (Andrews et al. 1986; Andrews & Robinson, 1984). Insofar as the other file-review instruments were developed for specialized purposes (i.e., parole selection), any system which assesses an offender at any point in corrections is viewed with more social relevance. Indeed, after having considered intake LSI risk level, there were only small gains in explained variance to be achieved by adding file-review assessments to the prediction model. The only contributions made by the file-review methods were by the SIR Scale to the prediction of treatment institution placements, the Pennsylvania Parole Prognosis Scale to the prediction of assaults, and the SFS to the prediction of post-release remands, incarceration and general recidivism.

Again, the results of this study serve to demonstrate how a multimethod-multipredictor assessment approach can improve the actuarial prediction of important correctional outcomes.

General Considerations

While the various attributes of the broader prison community or process variables (e.g., security level, parole release) demonstrated considerable predictive value, so also were specific intermediate changes (e.g., rule-breaking, program participation) found to be efficient predictors of post-release outcome. Moreover, the finding that there was a considerable number of significant interactions between the preceeding sets of variables supports Hoge and Andrews' (1986) contention that the various outcomes of a process such as correctional intervention would be a function of a variety of analytically distinct classes of variables.

The finding that a variety of classification instruments or objective assessment procedures, developed and applied in other jurisdictions, had some predictive merit when utilized elsewhere replicates previous research in this area (c.f., Gottfredson & Tonry, 1987). More specifically, this study established that information derived from self-report, interview-based and file-review classification systems can be reliably quantified in ways which accurately reflect in-prison performance and post-release behavior in the community. Apart from the self-

report paper-and-pencil personality-based assessments, a content analysis of the other classification method would reveal that the reason that some these instruments generalize so well is the considerable overlap in the predictor variables used to construct the instruments. In general, the interview-based and file-review instruments examined in this study yield combinations of predictor variables which reflect many of the best-known correlates and predictors of delinquency, criminality, and recidivism, in criminal behavior theory and research.

Although offender assessments with interview schedules (i.e., Wisconsin, LSI, Illinois) were found to be among the most consistent predictors of a variety of prison and post-release criterion measures, classifications generated by the self-report method and file-review method demonstrated in many cases equivalent and even sometimes greater magnitudes of association as well as predictive accuracy with selected outcomes (e.g., parole release).

As mentioned previously, a content analysis of the interview-based instruments revealed that there is considerable overlap in both the representativeness among predictor variables in the instruments and procedures used in test construction. Interestingly, item content in the Wisconsin, LSI and Illinois classification systems are, for the most part, dynamic in the sense that items are amenable to change. Conversely, the file-review methods are

principally static in nature due to the high percentage of "tombstone" variables in the risk assessment device. Subsequently, offenders classified by these instruments cannot change their risk ratings or alter their classifications appreciably while serving a sentence. Keeping in mind the findings of this study that a variety of prison adjustment measures (e.g., rule violation and treatment participation) were predictive of post-release outcome, prison release decision-making procedures should also prison adjustment information in addition to file-review risk classification.

The remainder of the discussion on general considerations will focus only on the LSI as a means of establishing offender risk level. After having considered intake LSI risk level, this study found relatively small gains in explained variance to be achieved by adding any of the other assessment devices (Megargee, SFS, etc.) to the prediction models. Such findings are consistent with Hanson et al. (1983), Andrews and Robinson (1984), Andrews et al. (1986), and by Motiuk et al. (1986), who similarly found that paper-and-pencil personality-based classifications yielded small increments in proportion of explained variance in outcome measures. Moreover, a review of the simple correlations between the various classification scores and institutional rule-breaking measures revealed that personality-based assessments (e.g., Prison Maladjustment

Scale) were among the highest correlates of institutional misconducts. These findings suggest, as Motiuk et al. (1986) found in another inmate sample, that paper-and-pencil personality-based classifications should be viewed as adjunct rather than a standard in offender risk classification.

A stepwise regression analysis of the various LSI subcomponents demonstrated the ability of classification tools which sample a wide range of information (i.e., criminal history, employment, associates, and so on) to identify important targets of intervention for offenders (i.e., employment/education). More important, however, the findings of these analyses also suggest that the assessment of risk based solely on criminal history is insufficient to determine who is likely to succeed while in prison and then subsequently on post-release. It is clear from this study that consideration of an offender's criminogenic needs is also of critical importance when intervening with incarcerated offenders (Motiuk & Porporino, 1989).

With intake LSI risk level controlled, having participated in general treatment services (e.g., drug, vocational) while in prison accounted for some of the incremental proportion of variance in post-release outcome. Although such a finding is consistent with other studies which have found validity estimates for offender-by-treatment interactions (Andrews, Zinger et al., 1990), the

majority of previous studies were conducted with samples of juvenile delinquents. For this sample of incarcerated adult offenders, however, a detailed analysis of variance yielded not only significant main effects of intake LSI risk level and treatment participation, but also a significant risk-by-treatment interaction on general recidivism. As Andrews et al. (1986) had found in testing the 'risk principle' with adult probationers, this study showed that higher levels of treatment service while in prison was associated with significantly reduced recidivism among the higher risk cases and unrelated to the recidivism of lower risk cases.

The significant risk-by-treatment interaction on general recidivism does not mean to imply that this explains variation in the chances of recidivism with treatment in all contexts. First, the effects of other potentially relevant variables such as treatment setting and treatment type were not examined in this study. In an extensive meta-analysis of the adult correctional treatment literature, Andrews, Zinger et al. (1990) found considerable empirical support for the relative predictive potential of setting and type of correctional treatment. Second, the analysis in this study is restricted to an examination of caucasian adult male prisoners. Toch, Adams, and Greene (1987) found in a sample of over 10,000 male inmates that ethnicity interacted with pathology to affect behavior. Such a finding suggests that ethnic variation may play some role in disruptivess

among prison inmates. Thirdly, there may be important differences in risk-by-treatment interactions among females, aboriginals, mentally disordered, sex offenders, substance abusers, and long-term offenders (Andrews, Zinger et al., 1990). Finally, a measure of treatment was employed which includes a wide range of services (i.e., alcohol, drugs, academic, vocational, life skills, emotional, medical). The results might be quite different if a more stringent definition of treatment had been applied.

Although the observed improvement in the predictive efficiency of the LSI administered upon admission to prison could possibly be attributed to the overall wider sampling of an offender's behavioral domain (Bonta & Motiuk, 1985), it is important to note that predictive efficiency was maintained and, in some cases, even enhanced by re-administering the same interview schedule post-release. Again, these results are consistent with the earlier probation studies by Andrews, Kiessling, Mickus, and Robinson (1986) which showed that LSI retest scores were more strongly correlated with recidivism than LSI intake scores. Cone (1977) has suggested that traditional psychometric considerations may be applied to a variety of behavioral assessment techniques. The results of this study are consistent with psychometric theory in that correlations derived from a retest LSI's, taken closer in time to the target behavior in question (i.e., recidivism), were higher

than correlations obtained from intake LSI's. Moreover, many of the factors in the LSI are "dynamic" and sensitive to changes in the offender's status during the test-retest interval. Hence, it is clear that reassessments of LSI risk will provide improvements in predictive efficiency.

By extending further the validity of the LSI with respect to the assessment of change in prisoners, this study showed that it is possible to use objective classification procedures, such as the LSI, to successfully monitor changes in the offender's behavior, attitudes and circumstances which are clearly related to release outcome. In fact, offenders in the present research showed significant improvements at retest on the LSI subcomponent measures of leisure, companions, emotional/personal problems, attitude and total need score.

It was interesting to find, however, that alcohol/drug problems appear to have worsened upon release. There are a number of possible explanations for this result. First of all, it may be that upon admission, alcohol/drug problems do not take on the same level of importance during intake assessments as they might for offenders being assessed for release or while under supervision in the community. Prison-based classification staff may be less sensitive than their counterparts in the community simply by virtue of an assumed lack of availability in prison or the notion that the best time to assess and treat such problems is closer to

the end of an offender's sentence. On the other hand, community-based staff are often required to enforce special conditions of release or supervision (i.e., abstinence, addictions treatment) and thereby are more sensitized to issues surrounding substance abuse. As Flanagan (1980) had noted, the correctional officer is often the primary agent of social control within the prison (Sykes, 1958; Glaser & Lincoln, 1987; Owen, 1988), it stands to reason then that the same situation would hold true for parole/probation officers working in the community.

Finally of course, there exists the possibility that, for this sample, alcohol/drug problems could have remained untreated while in prison or their problems were simply exacerbated by the experience of prison itself. However, a review of the simple correlations presented in Tables 14 and 16 would indicate that inmates exhibiting alcohol/drug problems at intake were likely to receive treatment in this study. Moreover, the recent empirical evidence pertaining to the destructive effects of psychological and emotional well-being while imprisoned remains inconclusive (Bonta & Gendreau, 1990). In any case, a more detailed analysis is certainly required and lies well beyond the scope of this study.

An important question that remains is the relationship between the various factors assessed at intake and retest and subsequent post-release outcome. In referring to Table

70, both "static" and "dynamic" factors were related to the general recidivism outcome measure. However, substantial gains in strength of association were achieved at retest with several "dynamic" factors. These findings clearly suggest that systematic assessment at intake and reassessment of offenders can be used to effectively focus correctional intervention resources at various points along the criminal justice system.

With respect to the validities of simple quantification of risk factors such as the LSI subcomponents, the result that a number of significant partial correlations (i.e., holding intake assessments constant) were found to be significantly related to various measures of post-release outcome indicates that the post-release reassessment of an offender's needs actually does add something beyond prison intake assessments to the prediction of correctional outcomes. In particular, employment/education appeared to be an important predictor of post-release outcome. Therefore, it is suggested that the systematic reassessment of offenders post-release can also provide some potentially useful information (i.e., targets) for effectively intervening with offenders.

Finally, in testing the 'risk principle' with a subsample of released offenders, there was only a significant main effect of retest LSI risk level. Both the main effect of service (i.e., office visits) and the risk-

by-service interaction on the general recidivism outcome measure were found to be nonsignificant. Although Andrews et al. (1986) found a significant risk-by-service interaction with a sample of probationers, they used a service variable that incorporated more than just face-to-face contacts with professionals at the office. More specifically, Andrews et al. (1986) provided augmented service delivery by forming an intensive community supervision program with citizen volunteers. Thus, it would appear that simply increasing the frequency of contact between professionals and offenders under community supervision, without identifying and servicing relevant offender needs, is not sufficient enough to bring about any significant reductions in post-release recidivism.

Theoretical Considerations and Future Research

Given that offender information derived from self-reports, interviews and file-reviews can be reliably quantified in ways which accurately reflect both in-prison performance and post-prison recidivism, what accounts for their efficacy? Andrews, Bonta, and Wormith (1990) posited that there exists a 'psychology of criminal conduct' wherein resides three inter-related sets of understanding - empirical, theoretical and practical. According to these authors the focus of a 'psychology of criminal conduct' is the multiple sources of variation in criminal conduct and

individual differences in law-abiding behavior; empirical understanding searches for correlates, predictors and functional variables; theoretical understanding searches for explanations; and practical understanding searches for predictive accuracy and the ability to target relevant variables for intervention.

In order to assess offenders for effective rehabilitation, Andrews, Bonta, and Hoge (1990) have described four principles of case classification: 'risk of recidivism', 'criminogenic need', 'responsivity of offenders to different service options' and 'professional discretion'. While these four principles are placed firmly within the 'psychology of criminal conduct', it is the 'risk principle' which specifically addresses the assessment of risk, the prediction of recidivism and the matching of treatment service to offender risk.

Other investigators (Glaser, 1974; Hoge & Andrews, 1986, Palmer, 1974) have suggested that the cornerstone of planning effective interventions with offenders is case classification. More specifically, identifying and influencing variables that do make a difference becomes the task at hand (Andrews, 1982).

Results from the present investigation showed that a wide variety of pre-prison or intake case-based variables are efficient predictors of prison process, adjustment, release, post-release recidivism. Additionally, the various

attributes of the broader prison community within which the offenders found themselves and events while in prison showed predictive value. Finally, the interactions between the preceding sets of variables supports the notion that the various outcomes of a correctional process are a function of a variety of distinct classes of variables (Hoge & Andrews, 1986). More importantly, proponents of the 'risk principle' have suggested that higher risk offenders will respond better to more intensive service than less intensive service. This study provided further confirmation by extending validity information on the 'risk principle' to a sample of incarcerated offenders.

Thus, the present research provides considerable support for a 'psychology of criminal conduct' among incarcerated offenders. While there is empirical support for the 'risk principle', it appears that if the predictive validities of offender assessments are to reach their upper limits of prediction then multimethod-multipredictor assessments and reassessments may be necessary. In this regard, it seems that the development of efficient predictors of the personality type as an adjunct to standard classification procedures such as the interview-based LSI may prove beneficial.

Finally, it is suggested that before a comprehensive assessment and reassessment strategy with offenders can be fully realized, then the remaining principles of case

classification for effective rehabilitation are left open to empirical investigation: 'criminogenic need', 'responsivity' and 'professional override'.

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Appendix A:

Prison Adjustment Studies: Admission Variables

Key (Factors)

1. Race
2. Age
3. Admission Status
4. Criminal History - a) prior convictions, b) juvenile criminal history, c) prior prison, d) prior misconducts, e) previous supervision, f) offence type, g) sentence length
5. Education Level
6. Employment Record
7. Financial Status
8. Family/marital Situation
9. Living Arrangement
10. Criminal Associations
11. Substance Use/abuse
12. Personality and Emotional Stability
13. Attitude

Study	(N)	Criteria	Factor	Predictive
Adams (1977)	100	Rule infractions	1. Race (black)	No
			4.-Previous Supervision	No
			-Offence Type	No
			5. Education Level (expelled)	Yes
			6. Employment	Yes
Akman (1966)	90	Assaults	2. Age (20-29)	Yes
			4.-Offence (robbery/theft)	Yes
			-Sentence Length (short)	Yes
			8. Family/marital	Yes
Andrews & Young (1974)	47	Misconduct reports	2. Age (younger)	Yes

Appendix A. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Bonta (1989)	127	Misconduct rates	1. Race (native)	No
			7. Financial	No
			8. Family/Marital	Yes
			9. Living Arr.	No
			10. Criminal Assoc.	No
			11. Substance use	Yes
			12. Emotional	No
			13. Attitude	Yes
Bonta & Kiem (1978)	75	Misconducts	3. Admission Status (sentenced)	Yes
			4.-Prior Misconducts	Yes
			-Offence Type (assaultive)	Yes
			-Sentence Length (long)	Yes
Bonta & Nanckivell (1980)	186	Misconducts	2. Age (younger)	Yes
			4.-Prior Misconducts	Yes
Coe (1961)	200	Adjustment ratings (> better)	1. Race (non-white)	Yes
			2. Age (older at admission)	Yes
			3. Admission Status	Yes
			4.-Prior Convictions	Yes
			-Juvenile History	No
			-Prior prison	No
			-Previous Supervision	No
			-Offence Type (non-violent)	No
			-Sentence Length (long)	Yes
			5. Education Level	No

Appendix A. (cont'd)

Study	(N)	Criteria	Factor	Predictive
			6. Employment Record (good)	Yes
			7. Financial Status (higher)	Yes
			8. Family/ marital (married)	Yes
			9. Living Arrangement (same area)	Yes
			10. Criminal Associations	Yes
			11. Substance use	Yes
Fagan & Lira (1978)	44	Depression	1. Race (white)	Yes
Flanagan (1983)	758	Infraction rates	1. Race (black)	Yes
			2. Age (under 25)	Yes
			3. Admission	Yes
			6. Employment Record (poor)	Yes
			8. Family/ marital (single)	Yes
			11. Substance use	Yes
Goetting & Howsen (1986)	5,586	Rule breaking	1. Race (black)	Yes
			4. Prior Convictions	Yes
			6. Employment Record (poor)	Yes
Goodstein & Mackenzie (1984)	1,618	Depression	1. Race (white)	Yes
Holland & Holt (1980)	293	Escape ratings (> better)	1. Race (non-white)	Yes
			2. Age (older)	Yes

Appendix A. (cont'd)

Study	(N)	Criteria	Factor	Predictive
			4.-Prior Prison (less)	Yes
			-Offence Type (less severe)	Yes
		Disciplinary ratings	4.-Prior Prison (less) (> better)	Yes
Jones (1976)	786	Illness	1. Race (black)	Yes
			2. Age (younger)	Yes
			4.-Offence Type (sexual)	Yes
			5. Education Level (12+)	Yes
			8. Family/ marital (single)	Yes
Mackenzie (1987)	755	Conflicts	2. Age (younger)	Yes
McCain, Cox, & Paulus (1980)	1,400	Illness complaints	1. Race (black)	Yes
Motiuk & Giesebrecht (1987)	75	Sick call returns	2. Age	No
			5. Education Level (more)	Yes
Porporino & Zamble (1984)	300	Disciplinary infractions	2. Age (younger)	Yes
			4.-Juvenile History	Yes
			-Prior Prison	No
			-Offence Type	No
			-Sentence Length (long)	Yes
			5. Education Level (less)	Yes

Appendix A. (cont'd)

Study	(N)	Criteria	Factor	Predictive
		Physician visits	2. Age	No
			4.-Prior Prison	No
			-Offence Type	No
			5. Education Level	No
Rosenfield & Linn (1976)	37	School attendance	13. Attitude (non-authoritarian)	Yes
Schnur (1948)	608	Attendance at prison day school	2. Age	Yes
			4.-Prior Misconducts	Yes
			-Previous Supervision	Yes
			-Offence Type	Yes
			5. Education Level (higher)	Yes
			8. Family/ marital (married)	Yes
			10. Criminal Associations	Yes
Schnur (1949)	1,762	Misconduct citations	1. Race (non-white)	No
			2. Age (older admissions)	Yes
			4.-Prior Convictions	Yes
			-Previous Supervision	Yes
			-Offence Type (property)	Yes
			8. Family/ marital (single)	Yes
			10. Criminal Associations	Yes
Thomas & Cage (1977)	273	Drug Use	11. Substance use	Yes

Appendix A. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Toch & Adams (1986)	9,103	Rule Violations	6. Employment Record (poor) 11. Substance use 12. Personality (disturbed)	Yes No Yes
Twaddle (1976)	300	Sick call	2. Age (younger) 4.-Offence Type 5. Education Level (12+)	Yes No Yes
Wolf, Freinek, & Shaffer (1966)	309	Rule infractions	1. Age (younger) 4.-Prior Misconducts	Yes Yes
Wolfgang (1961)	44	Adjustment ratings	1. Race (non-white) 2. Age (over 35) 4.-Prior Prison 8. Family/ marital (status) 12. Personality	No Yes Yes No Yes
Workman & Cunnigham (1975)	375	Violent incidents	11. Substance use (psychotropic)	Yes

Appendix B:

Prison Adjustment Studies: Institutional Variables

Key (Factors)

1. Court Appearances
2. Institution Programs
 - Education Program
 - Industry Program
 - Alcohol Program
 - Drug Program
3. Parole Notifications
4. Crowding
5. Time Served
6. Protective Custody

Study	(N)	Criteria	Factor	Predictive
Agus & Allen (1968)	18	Sick call attendance	3. Parole notification	No
Bonta & Kiem (1978)	75	Misconducts	4. Crowding	No
Bonta & Nanckivell (1980)	52	Misconducts	1. Court appearances	No
Coe (1961)	200	Adjustment ratings (> better)	5. Time served	No
Clayton & Carr (1984)	21,500	Infractions	4. Crowding	Yes
Davis (1985)	346	Disciplinary Infractions	2. Visits 2. Education 2. Industry 2. Alcohol Prog. 2. Drug Prog.	No No No No No
D'Atri et al. (1981)	568	Blood Pressure	4. Crowding	Yes
D'Atri & Ostfeld (1975)	412	Blood Pressure	4. Crowding	Yes

Appendix B. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Farrington & Nuttall (1980)	27,394	Assaults	8. Crowding	Yes
Flanagan (1980)	1,466	Infraction rates	9. Time served (shorter)	Yes
Gaes & McGuire (1985)	627	Assaults	8. Crowding	Yes
Howser, Grossman, & MacDonald (1983)	73	Infractions	2. Visits	Yes
Jan (1980)	4,115	Assaults	8. Crowding	Yes
Jones (1976)	786	Illness	9. Time served (shorter)	Yes
Lembo (1969)	100	Infractions	2. Visits	No
Mabli et al. (1985)	120	Sick Call Disciplinary reports	9. Time served	No
Megargee (1977)	628	Misconducts	8. Crowding	Yes
McCain, Cox, & Paulus (1976)	885	Illness complaints	8. Crowding	Yes
McCain, Cox, & Paulus (1980)	1,400	Illness complaints	8. Crowding 9. Time served (shorter)	Yes Yes
Motiuk & Giesebrecht (1987)	75	Sick call returns	9. Time served (shorter)	Yes
Nacci, Teittlebaum, & Prather (1977)	37*	Assaults	8. Crowding	Yes
* penal facilities				

Appendix B. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Porporino & Zamble (1984)	300	Physician visits	9. Time served	Yes
Schnur (1949)	1,762	Misconduct citations	9. Time served	Yes
Twaddle (1976)	300	Sick call	9. Time served	Yes
Wolfgang (1961)	44	Adjustment ratings	9. Time served	No
Wormith, Tellier, & Gendreau (1988)	80	Fights	10. Protective Custody	No
		Threats		Yes
		Attacked (Physically or sexually)		Yes

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Appendix C:

Post-release Adjustment Studies: Intake/Release Variables

Key (Factors)

1. Race
2. Age
3. Release Status
4. Criminal History - a) prior convictions, b) juvenile criminal history, c) prior prison, d) prior misconducts, e) previous supervision, f) offence type, g) sentence length
5. Education Level
6. Employment Record
7. Financial Status
8. Family/marital Situation
9. Living Arrangement
10. Criminal Associations
11. Substance Use/abuse
12. Personality and Emotional Stability

Study	(N)	Criteria	Factor	Predictive
Adams (1983)	603	Absconders Technical violators Recommitted Reconvicted (12 mos)	12. Emotional stability (former mental patients)	Yes
Bonta (1989)	119	Return to prison (12 mos)	1. Race (native) 5. Education 6. Employment 7. Financial 8. Family/ marital 9. Living Arrangement 10. Criminal Associations 11. Substance Use 12. Emotional Stability	No Yes Yes Yes No Yes Yes No
Carlson (1973)	1,070	Convictions	2. Age (< 19) 3. Release Status 4.-Prior Convictions	Yes No Yes

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
			-Juvenile Criminal History	Yes
			-Prior Misconducts	No
			-Sentence Length	No
			6. Education Level	No
Carney (1967)	363	Return to prison (48 mos)	1. Race (non-white)	No
			2. Age (admission < 29) (1st arrest < 19)	Yes
			3. Release Status (discharged)	No
			4.-Prior Arrests	No
			-Prior Prison	Yes
			-Prior Misconducts	Yes
			-Offence Type	Yes
			-Sentence Length	No
			9. Living Arrangement	No
			11. Substance Use (alcohol & drug)	Yes
Gendreau, & Leipziger (1980)	802	Reconviction (24 mos)	2. Age (admission)	No
			4.-Juvenile History (training)	No
			-Offence Type (drug-related)	Yes
			6. Employment	No
			8. Family/ marital	No

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Gendreau, Madden, & Leipziger (1980)	802	Reconviction (24 mos)	1. Race	No
			2. Age (< 20)	Yes
			4.-Prior Convictions	Yes
			-Prior Prison	Yes
			-Juvenile (training school)	Yes
			(time in training school)	No
			-Previous Supervision (probation)	Yes
			-Offence Type (property)	Yes
			5. Education Level (< 10)	Yes
			6. Employment (time since) (duration)	Yes Yes
			7. Financial	No
			8. Family/ marital (single)	Yes
			11. Substance Use (alcohol) (drug)	Yes Yes
Glaser (1964)	1,015	Return to prison	2. Age (1st arrest) (release) (left home)	Yes Yes Yes
			4.-Prior Convictions	Yes
			-Offence type (property)	Yes
			6. Employment (release)	No
			9. Living Arrangement (alone)	Yes
			10. Criminal Associations	Yes

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Glueck & Glueck (1930)	510	Arrested	4.-Prior Arrests	Yes
			-Prior Prison	Yes
			-Prior Misconducts	Yes
			6. Employment (admission) (release)	Yes
			8. Family/ marital	Yes
			9. Living Arrangement	Yes
			12. Emotional Stability	Yes
Guze (1964)	218	Arrested	1. Race (black)	Yes
			2. Age (< 40)	Yes
			3. Release Status (flat-timers)	Yes
			4.-Offence Type (fraud)	Yes
			6. Education	No
			8. Family/ marital situation (history of prison, divorce, desertion)	No
			11. Substance use (alcoholics)	Yes
Nuffield (1982)	1,238	Rearrest (36 mos)	2. Age (< 23)	No
			4.-Prior Convictions	No
			-Prior Prison (3 or more)	No
			-Previous Supervision	No
			-Sentence Length	No
			5. Education	No
			6. Employment	No
			8. Family/Marit.	No

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
			11. Substance Use (alcohol)	No
Pallone & Hennessey (1977a)	105	Conviction/ violation (22 mos)	1. Race	No
			2. Age	No
			(admission)	No
			(1st arrest)	No
			4.-Prior	No
			Convictions	Yes
			-Prior Prison	Yes
			-Juvenile	No
			History	
			-Offence Type	Yes
			-No. offences	No
			-Sentence	Yes
			Length	
			5. Education	No
			6. Employment	Yes
Pallone & Hennessey (1977b)	160	Return to prison (12 mos)	7. Financial	No
			8. Family/ marital	Yes
			(single)	
			9. Living	No
			Arrangement	
			11. Substance Use	
			(alcohol)	No
			(drug)	No
			1. Race	No
			2. Age	
			(admission)	Yes
			(1st arrest)	No
			4.-Prior	No
			Convictions	
			-Prior Prison	Yes
			-Offence Type	Yes
			(property)	
			5. Education	No
			6. Employment	Yes
			8. Family/ marital	Yes
			(single)	
			11. Substance Use	
			(alcohol)	No
			(drug)	Yes

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Rossi, Berk, & Lenihan (1980)	4,000	Weeks employed	1. Race 5. Education Level	No No
Schnur (1948)	608	Arrest and conviction (24 mos)	1. Race (non-white) 2. Age (arrest) (left school) (release) 4.-Prior Misconducts -Previous Supervision -Offence Type 5. Education Level (prior) (attained) 8. Family/ marital (married) 9. Living Arrangement 10. Criminal Associations 11. Substance use (alcohol)	Yes Yes Yes Yes Yes Yes Yes No Yes No
Schnur (1949)	1,762	Arrest and conviction (24 mos)	1. Race (non-white) 2. Age (admission) (release) 4.-Prior Convictions -Previous Supervision -Offence Type (property) 8. Family/ marital (single) 10. Criminal Ass.	Yes Yes Yes Yes Yes Yes Yes

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Vichert & Zahnd (1965)	200	Parole violation	2. Age (1st arrest) (offence)	Yes
			4.-Prior Convictions	Yes
			-Prior Prison	Yes
			-Prior Misconducts	No
			-Offence type	No
			-Sentence Length	Yes
			5. Education Level	Yes
			11. Substance use	No
Waller (1974)	423	Arrest (6, 12, 24 mos)	2. Age (< 25)	Yes
			4.-Prior Prison	Yes
			6. Employment Status (1st arrest)	Yes
			11. Substance Use	Yes
		Arrest (6 mos)	12. Emotional Stability	Yes
		Arrest (12 mos)	6. Employment	Yes
		Arrest (24 mos)	8. Family/ marital	Yes
			11. Substance Use	Yes
Wormith & Goldstone (1984)	1,200	Arrest (12 mos)	10. Criminal Associations	Yes
			1. Race (Native)	Yes
			2. Age (at release)	Yes
			3. Release type	Yes
			4.-Prior Convictions	Yes
			-Previous Supervision (breach)	Yes
			-Offence Type (property)	Yes
			6. Employment (none)	Yes

Appendix C. (cont'd)

Study	(N)	Criteria	Factor	Predictive
			8. Family/Marit. (single)	Yes
			9. Personality (Pd scale)	Yes

Appendix D:

Post-release Adjustment Studies: Institutional Variables

Key (Factors)

1. Visits
2. Crowding
3. Time Served
4. Educational/Vocational Program Participation

Study	(N)	Criteria	Factor	Predictive
Adams & Fischer (1976)	125	Return to prison (24 mos)	1. Visits & Letters	No
Anderson (1982)		Return to prison	4. Education training	Yes
Babst et al. (1976)	929	Parole Violation (24 mos)	3. Time served	No
Carney (1967)	363	Return to prison (48 mos)	1. Visits	No
Carlson (1973)	1,070	Conviction	3. Time served	No
Clayton & Carr (1984)	21,500	Return to prison (24 mos)	2. Crowding	No
Farrington & Nuttall (1980)	2,000	Reconvicted (24 mos)	2. Crowding	No
Glaser (1964)	1,015	Return to prison	4. Education training	Yes
Glueck & Glueck (1930)	510	Arrested	4. Jobs held in prison	Yes
Gottfredson et al. (1977)	5,349	Return to prison (12 mos)	3. Time served	Yes

Appendix D. (cont'd)

Study	(N)	Criteria	Factor	Predictive
Markley et al. (1983)	101	Return to prison	4. Vocational training	No
Maguire, Flanagan, & Thornberry (1988)	896	Arrest	4. Vocational	No
Pallone & Hennessey (1977a)	160	Return to prison (12 mos)	3. Time served	No
Seashore et al. (1976)	995	Reconvicted	4. Education training	Yes
Schnur (1948)	608	Arrest & conviction (24 mos)	4. Education training	Yes
Schnur (1949)	608	Arrest & conviction (24 mos)	3. Time served	Yes
Waller (1974)	423	Arrest (6, 12, & 24 mos)	4. Vocational training	No

Appendix E:

A Description of Megargee MMPI-based Types

- Able:** hedonistic, outgoing, dominant, happy-go-lucky, active, forceful, self-assured, sociable, self-acceptant, charming, popular, manipulative
- Baker:** neurotic, underachiever, constricted, withdrawn, passive, unassertive, lacking in spontaneity, sociability, and dominance, apathetic, lacking in drive or ascendancy, anxious, socially isolated, intro-punitive
- Charlie:** misanthropic, antisocial, bitter, hostile, sensitive to perceived insults, socially and emotionally constricted, withdrawn, aggressive, anxious, stereotypic, egocentric, preoccupied with problems, lacking in ambition, vigour, and self-discipline, unconventional, rigid, dogmatic, alienated, resentful
- Delta:** hedonistic, amoral, manipulative, charming, intelligent, difficulties in interpersonal relations and adjustment, articulate, ambitious, assertive, morally myopic
- Easy:** well-adjusted, smooth, gets along well with others, controlled, intelligent, outgoing, sociable
- Foxtrot:** antisocial, egocentric, dominant and assertive, abrasive, bossy, pushy, tough, streetwise, obnoxious, unpopular, dishonest, deceitful, self-centered, hostile, suspicious
- George:** adjusted, bright, socialized, able to form lasting relationships, passive, gets along well with others
- How:** withdrawn, introverted, passive, constricted, isolated, difficulties in relating with others, preoccupied with personal problems, upset, irritable, deficient in ego strength, frustrated, stressed, anxious, agitated, unstable
- Item:** well-adjusted, outgoing, friendly, non-aggressive, adaptable
- Jupiter:** passive, avoidant, anxious, lacking in societal values, low motivation, dull, conventional, stereotypic, internally tense and conflicted

(Source: Megargee & Bohn, 1977, pp. 169-208)

Appendix F:

Prison Maladjustment Scale

<u>MMPI Item</u>	<u>Key</u>	
13. I work under a great deal of tension.	T	F
21. At times I have fits of laughing and crying that I cannot control.	T	F
24. No one seems to understand me.	T	F
31. I have nightmares every few nights.	T	F
32. I find it hard to keep my mind on a task or job.	T	F
38. During one period when I was a youngster I engaged in petty thievery.	T	F
39. At times I feel like smashing things.	T	F
52. I prefer to pass by school friends, or people I know but have not seen for a long time, unless they speak to me first.	T	F
55. I am almost never bothered by pains over the heart or in my chest.	T	F
56. As a youngster I was suspended from school one or more times for cutting up.	T	F
61. I have not lived the right kind of life.	T	F
76. Most of the time I feel blue.	T	F
84. These days I find it hard not to give up hope of amounting to something.	T	F
85. Sometimes I am strongly attracted by the personal articles of others such as shoes, gloves, etc., so that I want to handle or steal them though I have no use for them.	T	F
96. I have very few quarrels with members of my family.	T	F
107. I am happy most of the time.	T	F
110. Someone has it in for me.	T	F
118. In school I was sometimes sent to the principal for cutting up.	T	F

Appendix F. (cont'd)

Key

137. I believe that my home life is as pleasant as that of most people I know.	T	F
146. I have the wanderlust and am never happy unless I am roaming or traveling about.	T	F
168. There is something wrong with my mind.	T	F
173. I liked school.	T	F
182. I am afraid of losing my mind.	T	F
202. I believe I am a condemned person.	T	F
205. At times it has been impossible for me to keep from stealing or shoplifting something.	T	F
216. There is very little love and companionship in my family as compared to other homes.	T	F
224. My parents have often objected to the kind of people I went around with.	T	F
236. I brood a great deal.	T	F
238. I have periods of such great restlessness that I cannot sit long in a chair.	T	F
277. At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it.	T	F
290. I work under a great deal of tension.	T	F
294. I have never been in trouble with the law.	T	F
301. Life is a strain for me much of the time.	T	F
303. I am so touchy on some subjects that I can't talk about them.	T	F
305. Even when I am with people I feel lonely much of the time.	T	F
308. At times I have very much wanted to leave home.	T	F
311. During one period when I was a youngster I engaged in petty thievery.	T	F

Appendix F. (cont'd)

Key

318. My daily life is full of things that keep me interested.	T	F
326. At times I have fits of laughing and crying that I cannot control.	T	F
328. I find it hard to keep my mind on a task or job.	T	F
329. I almost never dream.	T	F
332. Sometimes my voice leaves me or changes even though I have no cold.	T	F
333. No one seems to understand me.	T	F
338. I have certainly had more than my share of of things to worry about.	T	F
345. I often feel as if things were not real.	T	F
347. I have no enemies who really wish to harm me.	T	F
349. I have strange and peculiar thoughts.	T	F
366. Even when I am with people I feel lonely much of the time.	T	F
376. Policemen are usually honest.	T	F
379. I very seldom have spells of the blues.	T	F
395. The future is too uncertain for a person to make serious plans.	T	F
397. I have sometimes felt that difficulties were piling up so high that I could not overcome them.	T	F
403. It is great to be living in these times when so much is going on.	T	F
406. I have often met people who were supposed to be experts who were no better than I am.	T	F
418. At times I think I am no good at all.	T	F
419. I played hooky from school quite often as a youngster.	T	F
425. I dream frequently.	T	F

Appendix F. (cont'd)

Key

436. People generally demand more respect for their own rights than they are willing to allow for others.	T	F
448. I am bothered by people outside, on streetcars, in stores, etc., watching me.	T	F
458. The man who had most to do with me when I was a child (such as my father, stepfather, etc.) was very strict with me.	T	F
465. I have several times had a change of heart about my life work.	T	F
469. I have often found people jealous of my good ideas, just because they had not thought of them first.	T	F
471. In school my marks in deportment were quite regularly bad.	T	F
477. If I were in trouble with several friends who were equally to blame, I would rather take the whole blame than give them away.	T	F
494. I am afraid of finding myself in a closet or small closed place.	T	F
505. I have had periods when I felt so full of pep that sleep did not seem necessary for days at a time.	T	F
526. The future seems hopeless to me.	T	F
529. I would like to wear expensive clothes.	T	F
543. Several times a week I feel as if something dreadful is about to happen.	T	F
545. Sometimes I have the same dream over and over.	T	F
555. I sometimes feel that I am about to go to pieces.	T	F
562. The one to whom I am most attached and whom I most admired as a child was a woman. (Mother, sister, aunt, or other woman.)	T	F

(Source: Wattson, 1963, pp. 109)

Appendix G:

Prison Adjustment ScaleMMPI ItemKey

5. I am easily awakened by noise.	T	F
20. My sex life is satisfactory.	T	F
26. I feel that it is certainly best to keep my mouth shut when I'm in trouble.	T	F
43. My sleep is fitful and disturbed.	T	F
49. It would be better if almost all laws were thrown away.	T	F
56. As a youngster I was suspended from school one or more times for cutting up.	T	F
73. I am an important person.	T	F
106. Much of the time I feel as if I have done something wrong or evil.	T	F
109. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.	T	F
116. I enjoy a race or game better when I bet on it.	T	F
131. I do not worry about catching diseases.	T	F
134. At times my thoughts have raced ahead faster than I could speak them.	T	F
143. When I was a child, I belonged to a crowd or gang that tried to stick together through thick and thin.	T	F
146. I have the wanderlust and am never happy unless I am roaming or travelling about.	T	F
161. The top of my head sometimes feels tender.	T	F
173. I liked school.	T	F
192. I have had no difficulty in keeping my balance in walking.	T	F
216. There is very little love and companionship in my family as compared to other homes.	T	F
267. When in a group of people I have trouble thinking of the right things to talk about.	T	F

Appendix G. (cont'd)

	<u>Key</u>	
	T	F
284. I am sure I am being talked about.	T	F
307. I refuse to play some games because I am not good at them.	T	F
328. I find it hard to keep my mind on a task or job.	T	F
367. I am not afraid of fire.	T	F
378. I do not like to see women smoke.	T	F
385. Lightning is one of my fears.	T	F
390. I have often felt badly over being misunderstood when trying to keep someone from making a mistake	T	F
408. I am apt to hide my feelings in some things, to the point that people may hurt me without their knowing about it.	T	F
436. People generally demand more respect for their own rights than they are willing to allow for others.	T	F
447. I am often inclined to go out of my way to win a point with someone who has opposed me.	T	F
466. Except by a doctor's orders I never take drugs or sleeping powders.	T	F
485. When a man is with a woman he is usually thinking about things related to her sex.	T	F
493. I prefer work which requires close attention, to work which allows me to be careless.	T	F
514. I like mannish women.	T	F
525. I am made nervous by certain animals.	T	F
553. I am afraid of being alone in a wide-open place.	T	F

(Source: Pantan, 1958, pp. 309)

Appendix H:

Wisconsin Assessment of Client Risk Scale

	SCORE
Number of Address Changes in Last 12 Months:...	0 None
(Prior to incarceration for parolees)	2 One
	3 Two or more

Percentage of Time Employed in Last 12 Months:..	0 60% or more
(Prior to incarceration for parolees)	1 40%-59%
	2 Under 40%
	0 Not applicable

Alcohol Usage Problems:.....	0 No interference with functioning
(Prior to incarceration for parolees)	2 Occasional abuse; some disruption with functioning
	4 Frequent abuse; serious disruption; needs treatment

Other Drug Usage Problems:.....	0 No interference with functioning
(Prior to incarceration for parolees)	1 Occasional abuse; some disruption of functioning
	2 Frequent abuse; serious abuse; needs treatment

Attitude:.....	0 Motivated to change; receptive to assistance
	3 Dependent or unwilling to accept responsibility
	5 Rationalizes behavior; not motivated to change

Appendix H. (cont'd)

Age at First Conviction:.....	0 24 or older
(or Juvenile Adjudication)	2 20-23
	4 19 or younger
<hr/>	
Number of Prior Periods of	
Probation/Parole Supervision:.....	0 None
(Adult or Juvenile)	4 One or more
<hr/>	
Number of Prior Probation/Parole Revocations:..	0 None
(Adult or Juvenile)	4 One or more
<hr/>	
Number of Prior Felony Convictions:.....	0 None
(or Juvenile Adjudications)	2 One
	4 Two or more
<hr/>	
Convictions or Juvenile Adjudications for:....	2 Burglary, theft,
(Select applicable and add for score. Do	or robbery
not exceed a total of 5. Include current	3 Worthless checks
offense)	or forgery
<hr/>	
Conviction or Juvenile Adjudication for	
Assaultive Offense within Last Five Years:....	15 Yes
(An offense which involves the use of a	0 No
weapon, physical force or the threat of force)	
<hr/>	
TOTAL	
<hr/>	

(Source: Baird et al., 1979)

Appendix I:

Illinois Initial Risk Level Evaluation Scale

EVALUATION:	SCORE
A. Total number of prior felony convictions and juvenile adjudications	
a. None	Enter 0
b. One	Enter 2
c. Two or more	Enter 4
<hr/>	
B. Total number of prior periods of probation/parole/release supervision (Adult & Juvenile)	
a. None	Enter 0
b. One or more	Enter 4
<hr/>	
C. Total number of prior probation/parole/release revocations	
a. None	Enter 0
b. One or more	Enter 4
<hr/>	
D. Age at first conviction or adjudication	
a. 24 years or more	Enter 0
b. 20-23 years	Enter 2
c. 19 years or less	Enter 4
<hr/>	
E. History of alcohol abuse (prior to incarceration)	
a. No history of abuse	Enter 0
b. Occasional abuse	Enter 2
c. Frequent abuse	Enter 4
<hr/>	
F. History of other substance abuse (prior to incarceration)	
a. No history of abuse	Enter 0
b. Occasional abuse	Enter 1
c. Frequent abuse	Enter 2
<hr/>	
G. Percent of time employed in 12 months prior to incarceration (Base estimate on 40 hours/week for full year = 100%)	
a. 60% or more	Enter 0
b. 40-59%	Enter 1
c. Under 40%	Enter 2
d. Unemployable and/or supported by other means.....	Enter 0
<hr/>	
H. Number of address changes in year prior to incarceration	
a. None	Enter 0
b. One	Enter 2
c. Two or more	Enter 3
<hr/>	

Appendix I. (cont'd)

- I. Agent's subjective appraisal of client's attitude
- a. Sincere desire to behave responsibly Enter 0
 - b. Dependent or irresponsible Enter 3
 - c. No indication of motivation to behave responsibly Enter 5
- J. Record of convictions or adjudications for selected offenses (include current offense) (If multiple offenses select the offense category with the highest value),
- a. None of the below Enter 0
 - b. Forgery, deceptive practices .. Enter 1
 - c. Assaultive and/or weapon offense Enter 2
 - d. Other property, theft or robbery Enter 3
 - e. Burglary Enter 4
- TOTAL RISK SCORE

(Source: Gulley, 1986)

Appendix J:

Level of Supervision Inventory (LSI)-VI**CRIMINAL HISTORY**

___ 1 Any prior convictions, adult/number ()

___ 2 Two or more prior convictions

___ 3 Three or more prior convictions

___ 4 Three or more present offences/number ()

___ 5 Arrested under age 16

___ 6 Ever incarcerated upon conviction

___ 7 Escape history - institution

___ 8 Ever punished for institutional misconduct/number ()

___ 9 Charge laid or parole suspended during prior community supervision

___ 10 Official record of assault/violence

EDUCATION/EMPLOYMENT

When in labour market:

___ 11 Currently unemployed

___ 12 Frequently unemployed

___ 13 Never employed for full year

___ 14 Ever fired

School or when in school:

___ 15 Less than grade 10

___ 16 Less than grade 12

___ 17 Suspended or expelled at least once

When homemaker, pensioner: #18 only
When school, work, unemployed #18, #19, #20 apply.

___ 18 Participation/Performance ()

___ 19 Peer interactions ()

___ 20 Authority interactions ()

FINANCIAL

___ 21 Problems ()

___ 22 Reliance upon social assistance

FAMILY/MARITAL

___ 23 Dissatisfaction with marital or equivalent situation ()

___ 24 Nonrewarding, parental ()

___ 25 Nonrewarding, other relatives ()

___ 26 Criminal - Family/Spouse

ACCOMMODATION

___ 27 Unsatisfactory ()

___ 28 3 or more address changes last year/number ()

___ 29 High crime neighbourhood

LEISURE/RECREATION

___ 30 No recent participation in an organized activity

___ 31 Could make better use of time ()

Appendix J. (cont'd)

COMPANIONS☐ 32 A social isolate☐ 33 Some criminal acquaintances☐ 34 Some criminal friends☐ 35 Few anti-criminal acquaintances☐ 36 Few anti-criminal friends**ALCOHOL/DRUG PROBLEMS**☐ 37 Alcohol problem, ever☐ 38 Drug problem, ever☐ 39 Alcohol problem, currently ()☐ 40 Drug problem, currently ()
Specify drug _____☐ 41 Law violations☐ 42 Marital/Family☐ 43 School/Work☐ 44 Medical☐ 45 Other Clinical Indicators
Specify: _____**EMOTIONAL/PERSONAL**☐ 46 Moderate interference☐ 47 Severe interference☐ 48 Psychiatric treatment, past☐ 49 Psychiatric treatment, current☐ 50 Psychological assessment
indicated Area: _____**ATTITUDE/ORIENTATION**☐ 51 Supportive of crime☐ 52 Unfavorable toward convention☐ 53 Poor, toward sentence☐ 54 Poor, toward supervision☐ **TOTAL LSI SCORE****INSTITUTIONAL VARIABLES**☐ 59 Co-accused☐ 60 Offence planned☐ 61 Organized crime☐ 62 Sentence☐ 63 Crime within year☐ 64 In custody charges☐ 65 Out of custody☐ 66 Absence of plans☐ 67 Specialized Instit.☐ 68 Remanded☐ 69 Present misc. ()☐ 70 Present fam/instab.☐ 71 Previous maximum☐ 72 Pen time☐ 73 Unsuccessful TAP.☐ 74 U. A. L.☐ 75 Institutional tran.
disruptive behav.☐ 76 P.C. ()

Appendix K:

Salient Factor Score (SFS 81)

ITEM A. PRIOR CONVICTIONS/ADJUDICATIONS (ADULT OR JUVENILE).....

None = 3; One = 2; Two or three = 1; Four or more = 0

ITEM B. PRIOR COMMITMENT(S) OF MORE THAN THIRTY DAYS (ADULT OR JUVENILE).....

None = 2; One or two = 1; Three or more = 0

ITEM C. AGE AT CURRENT OFFENSE/PRIOR COMMITMENTS.....

Age at commencement of the current offense:

26 years of age or more = 2***; 20-25 years of age = 1***;

19 years of age or less = 0

***EXCEPTION: If five or more prior commitments of more than thirty days, (adult or juvenile), place an "x" here () and score this item = 0.

ITEM D. RECENT COMMITMENT FREE PERIOD (THREE YEARS)...

No prior commitment of more than thirty days (adult or juvenile), or released to the community from last such commitment at least three years prior to the commencement of the current offense = 1; Otherwise = 0

ITEM E. PROBATION/PAROLE/CONFINEMENT/ESCAPE STATUS VIOLATOR THIS TIME.....

Neither on probation, parole, confinement, or escape status at the time of the current offense; nor committed as a probation, parole, confinement, or escape status violator this time = 1; Otherwise = 0

ITEM F. HISTORY OF HEROIN/OPIATE DEPENDENCE.....

No history of heroin or opiate dependence = 1; Otherwise = 0

TOTAL SCORE.....

(Source, Hoffman & Beck, 1986)

Appendix L:

Statistical Information on Recidivism Scale

ITEM	DESCRIPTOR	SCORE (+) (-)	
1. CURRENT OFFENCE	+4 Incest/sexual intercourse with underage/seduction gross indecency +3 Homicide +3 Narcotics offences (Food & Drugs Act/ Narcotic Control Act +2 Unarmed robbery (Armed robbery has a score of 0) +2 Arson, kidnapping, highjacking, abduction criminal negligence in operation of motor vehicle, dangerous driving, or obstructing peace officer -1 Receiving or possession of stolen goods -1 Theft -2 Break and enter, forcible entry, unlawfully in dwelling, illegal possession of firearm -4 Escape		
2. AGE AT ADMISSION	+2 Over 39 -2 Under 21		
3. PREVIOUS INCARCERATION	+4 First time incarcerated -1 Has served sentences in jail, prison, or penitentiary 3-4 times -2 Has served sentences in jail, prison, or penitentiary 5 or more		
4. PREVIOUS REVOCATION OR FORFEITURE	-2 Has previously had a term of day parole, full parole or MS revoked or forfeited		
5. PREVIOUS ESCAPE	-3 Has been convicted of escape or attempted escape on one or more previous occasions		
6. SECURITY CLASSIFICATION (OF INMATE)	-1 Is in maximum security at time of parole hearing		

Appendix L. (cont'd)

7. AGE AT FIRST ADULT CONVICTION	+7 Was over 49 +6 Was 41-49 inclusive +3 Was 31-40 inclusive +2 Was 23-30 inclusive -2 Was under 19		
8. PREVIOUS CONVICTIONS FOR ASSAULT (DOES NOT INCLUDE SEXUAL ASSAULT)	-2 Has 1 previous conviction for assault -3 Has two or more previous convictions for assault		
9. CURRENT MARITAL STATUS	+1 Is married or has common-law spouse at time of incarceration		
10. INTERVAL AT RISK	+2 2 years or more between current conviction/reincarceration and last release -1 Less than 6 months between current conviction/reincarceration and last release		
11. NUMBER OF DEPENDENTS (UNDER ONE ROOF)	+2 Had 3 or more dependents (including dependents from common-law marriage)		
12. AGGREGATE SENTENCE (FROM DATE OF ORIGINAL SENTENCE)	+3 Aggregate sentence is 5 years and up to 6 years +2 Aggregate sentence is 6 years or more		
13. PREVIOUS CONVICTION FOR VIOLENT SEX OFFENCE	-4 Had only 1 previous conviction for any of rape or indecent assault or sexual aggravated sexual assault		
14. PREVIOUS CONVICTIONS FOR BREAK AND ENTER (INCLUDES WITH INTENT, THEFT)	+2 Had no previous conviction for break and enter -2 Has 1-2 previous convictions for break and enter -3 Has 3-4 previous convictions for break and enter -6 Has 5 or more previous convictions for break and enter		

Appendix L. (cont'd)

15. EMPLOYMENT STATUS AT ARREST	+1 Was employed at time of arrest for current offence (full time or part time)		
		TOTAL SCORE	

(Source: Nuffield, 1982)

Appendix M:

Oregon Parole Prognosis Scale

A. No prior felony or misdemeanor convictions as an adult or juvenile:*	3
One prior conviction:	2
Two or three prior convictions:	1
Four or more prior convictions:	0 _____
B. No prior incarcerations (i.e. executed sentence of 90 days or more) as an adult or juvenile:	2
One or two prior incarcerations:	1
Three or more prior incarcerations:	0 _____
C. Age at first commitment of 90 days or more:**	
26 or older:	2
21 to under 26:	1
Under 21:	0 _____
D. Never escaped, failed parole or probation:***	2
One incident of the above:	1
Any two or more incidents of the above:	0 _____
E. Has no admitted or documented heroin or opiate derivative abuse problem, or has no admitted or documented alcohol problem:	1
One or more of the above:	0 _____
F. Verified period of 3 years conviction free in the community prior to present offense:	1
Otherwise:	0 _____

TOTAL HISTORY/RISK ASSESSMENT SCORE: _____

- * Do not count convictions over 20 years old, convictions that have been pardoned, or juvenile or adult "status offenses" (runaway, truancy, incorrigibility, drunk in public).
- ** If no prior commitment, use age at present conviction.
- *** Count probation failure only if it resulted from an executed sentence of 90 days or more; count any parole failure, including parole reinstatement.

Appendix N:

Pennsylvania Parole Prognosis Assessment Scale

I PAROLE PROGNOSIS ASSESSMENT

INSTRUCTIONS: Identify the information requested in column 1 for the variables of prior record, offense and age. The risk classification variable should be classified by the risk score shown in column 2 and the appropriate risk score should be listed in column 3. The higher score categories represent above average parole prognosis because the offender has a low probability of being involved in new crime. The lower score categories represent below average prognosis because the offender has a relatively high likelihood of recidivism. For the offense variable: clients with multiple offenses should be classified by score and then ranked in ascending score order in column 1. The lowest score offense is listed first: the lowest offense score is then written in column 3. This process results in an assessment that is sensitive to potential risk in classification. All risk classification scores in column 3 should be added: the total score is then entered in the appropriate parole prognosis assessment category according to the risk classification ranges below. Column 4 may be used to reassess a case if the interview suggests assessment information was incorrect.

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
Prior Convictions:	39 if "zero" convictions;		
	24 if "1-2" convictions;		
Number _____	0 if "3 or more" convictions	_____	
Instant Offense(s) (ranked according to index)	35 if Manslaughter;		
	32 if Murder;		
	28 if Drug Laws;		
	23 if Aggravated Assault;		
1) _____	19 if Sex Offenses;		
2) _____	14 if Miscellaneous and Arson;		
3) _____	9 if Simple Assault and		
4) _____	Kidnapping;		
	5 if Robbery;		
	4 if Theft and Fraud;		
	0 if Burglary	_____	
Age at Minimum:	26 if 46 years or older;		
Minimum Sentence	12 if 15-21 years or 34-45 years;		
_____/_____/_____	0 if 22-33 years		
Age: _____	Years old		
TOTAL P.P.A. SCORE			
Prognosis Assessment Score Category			
CHECK ONE:	0-11 Below _____	12-59 Average _____	60-100 Above _____
	Average		Average

Appendix O:

Classification Research Program

This is to note that the classification research program has been explained to me. I understand that I will be asked to complete some confidential research forms and I agree to these conditions. I also recognize that participating in the research is not a condition of my sentence and that my participation in the research project is in addition to the requirements of the Ministry's rules and regulations.

Signature of Inmate

Signature of Research Staff

Date: _____

Appendix P:

Coding Manual for Demographic and Psychometric Measures

Record #1: Demographic Variables

Record #2: Level of Supervision Inventory (Items, Ratings,
Totals)

Record #3: Prison LSI (Items, Ratings, Totals), LSI
Subcomponents

Record #4: Minnesota Multiphasic Personality Inventory
(Raw & T-scores)

Record #5: MMPI cont'd, WRAT

- Record #1 -

Column	Key Word	Descriptors
1-3	ID	Identification #
4-5	RN	Record #
6	LANG	(Language) 1. Anglophone 2. Francophone 3. Bilingual
7-8	COUNTS	# of present convictions
9-11	SENT	Aggregate days sentenced
12-13	AGE	Age in years
14-15	GRADE	Last grade completed
16	EMPLOY	(Employment status) 1. Employed 2. Unemployed 3. Student/Homemaker
17-18	OCCUP	(Occupation) 00. None 01. Managerial 02. Profess/Technical 03. Clerical/Sales 04. Craftsman 05. Protective Services 06. Personal Service 07. Labourer 08. Student/Homemaker 09. Other
19	MARIT	(Marital status) 1. Single 2. Married/Common Law 3. Separated/Divorced 4. Widowed
20	DEPEND	# of dependents

Column	Key Word	Descriptors
21	REL	(Religion) 0. None 1. R. C. 2. Protestant 3. Anglican 4. Presbyterian 5. Mormon 6. Pentacostal/Baptist 7. Jewish/Moslem 8. Orthodox
22	LOC	(Location) 1. Minimum 2. Maximum 3. Old Seg. 4. Female 5. 4 Wing Seg. 6. P. C. Dorm 7. 4 Wing 8. 2 Wing (A)
23	ADMIT	(Reason admitted) 1. Remanded 2. Sentenced 3. Parole Revocation 4. Transferred
24	TYPEOFF	(Type of offence) 1. Person 2. Property 3. Public morals 4. Narcotics 5. Property violence 6. Liquor/traffic 7. Public order 8. P/P violation
25-27	OFFENCE	Enter code # of offence
28	COURTAP	(Court recommended T.A.) 0. No 1. Yes
29-30	CONVICT	# FPS conviction (A.I.S.)
31-32	SELFCONV	# of self-reported convictions (A.I.S.)

Column	Key Word	Descriptors
33-34	OCDCREC	(OCDC recommend.) 01. Rideau CC (1) 02. Guelph CC (2) 03. G.A.T.U.(2) 04. O.C.I.(2) 05. Millbrook CC (3) 06. Maplehurst CC (2) 07. C.R.C.(1) 08. C.W.P.(1) 09. Mimico C.C.(1) 10. Burtch C.C.(1) 11. Other D.C.(3) 12. Hold (OCDC programs) 13. Hold CRC/CWP(3) 14. Monteith C.C.(1) 15. Transfer O/C's(3) 16. TX at O.C.D.C.(3) 17. Release to appear(3) 18. Paroled at OCDC(3) 19. Thunderbay C.C.(1) 20. Released on appeal(3)
35-36	BALIFF	Transferred by Baliff to: same code as above
37	TREATREC	(Treatment recommended) 0. No 1. Yes
38	COURTREC	(Court recommends treatment) 0. No 1. Yes
39-41	DAYSMOVE	# days from LSI to transfer

Column	Key Word	Descriptor
42	TYPETR	(Type of treatment) 0. None 1. Alcohol 2. Alcohol & Drugs 3. Drug only 4. Academic 5. Vocational 6. Life skills 7. Emotional 8. Medical 9. Combination of above
43	OCDSEC	(Security level in OCD's classification) 1. Minimum 2. Medium 3. Maximum
44	BALSEC	(Security level of institution transferred) 1. Minimum 2. Medium 3. Maximum
45	SEXOFF	Sex Offender 0. No 1. Yes
46	HOUSE	(Name of C.R.C.) 1. Riverside House 2. Decision House 3. Other
47-49	TIME	# of days between sentencing and transfer
50	CLASSIFY	(Classification officer) 1. Tony Hayes 2. Pat Bednarz 3. Brian Christianson 4. Janet McGrath 5. Khalid Ahmed 6. Steve Small 7. Pat Vivian 8. Linda Delicelli 9. Other

Column	Key Word	Descriptors
51-52	CLASSB	(Main office classific.) same as ODCREC
53	CLASSBEC	(Main office security level)
61-68	BIRTHDATE	Birth date (ddmmyyyy)
73-80	LSIDATE	LSI date (ddmmyyyy)
- Record #2 -		
1-3	ID	Identification #
4-5	RN	Record #
		(LSI Items) 0. No 1. Yes
6	L1	Any prior convictions
7	L2	Two or more prior conv.
8	L3	Three or more prior conv.
9	L4	Three or more present off.
10	L5	Arrested under 16
11	L6	Ever incarcerated
12	L7	Escape history
13	L8	Institutional misconduct
14	L9	Community supervision
15	L10	Official record violence
16	L11	Currently unemployed

Column	Key Word	Descriptors
17	L12	Frequently unemployed
18	L13	Never employed full year
19	L14	Ever fired
20	L15	Less than grade 10
21	L16	Less than grade 12
22	L17	Ever suspended/ expelled
23	L18	Participation/ performance
24	L19	Peer interactions
25	L20	Authority interactions
26	L21	Financial problems
27	L22	Reliance on social assist.
28	L23	Dissatisfaction with marital/equivalent
29	L24	Nonrewarding, parental
30	L25	Nonrewarding, other relatives
31	L26	Criminal - family/spouse
32	L27	Unsatisfactory accommod.
33	L28	Three or more address changes
34	L29	High crime neighbourhood
35	L30	No organized particip.

Column	Key Word	Descriptors
36	L31	Could make better use
37	L32	A social isolate
38	L33	Some criminal acquaintances
39	L34	Some criminal friends
40	L35	Few anti-criminal acquaintances
41	L36	Few anti-criminal friends
42	L37	Alcohol problem, ever
43	L38	Drug problem, ever
44	L39	Alcohol problem currently
45	L40	Drug problem currently
46	L41	Law violations
47	L42	Marital/family
48	L43	School/work
49	L44	Medical
50	L45	Other clinical indicators
51	L46	Moderate interference
52	L47	Severe interference
53	L48	Psychiatric treatment past
54	L49	Psychiatric treatment now
55	L50	Psychological assessment

Column	Key Word	Descriptors
56	L51	Supportive of crime
57	L52	Unfavorable toward conven.
58	L53	Poor, toward sentence
59	L54	Poor, toward supervision
60-61	LR1	LSI item #1 rating
62-63	LR4	" " #4 "
64	LR8	" " #8 "
65	LR18	" " #18 "
66	LR19	" " #19 "
67	LR20	" " #20 "
68	LR21	" " #21 "
69	LR23	" " #23 "
70	LR24	" " #24 "
71	LR25	" " #25 "
72	LR27	" " #27 "
73	LR28	" " #28 "
74	LR31	" " #31 "
75	LR39	" " #39 "
76	LR40	" " #40 "

- Record #3 -

77-78	LSITOT	LSI total score
1-3	ID	Identification #
4-5	RN	Record #

Column	Key Word	Descriptors
		(Prison items) 0. No 1. Yes
6	L59	Co-accused
7	L60	Offence planned
8	L61	Organized crime
9	L62	Sentence over one year
10	L63	Crime within year
11	L64	In custody charges
12	L65	Outstanding charges
13	L66	Absence of plans
14	L67	Special institution
15	L68	Remanded
16	L69	Present misconduct
17	L70	Present family instab.
18	L71	Previous maximum
19	L72	Pen time
20	L73	Unsuccessful TAP
21	L74	U.A.L.
22	L75	Transferred/ disruptive
23	L76	P.C.
24-25	LR59	Item #59. # of months
26	LR60	Rating - #60
27	LR64	# of misconducts -item 64
28-29	PRISLSI	Prison LSI total score

Column	Key Word	Descriptors
30-31	LSIGRAND	LSITOT + PRISLSI
32-33	SUMLA	Criminal History
34-35	SUMLB	Education/employment
36	SUMLC	Financial
37	SUMLD	Family/marital
38	SUMLE	Accommodation
39	SUMLF	Leisure/recreation
40	SUMLG	Companions
41	SUMLH	Alcohol/drug problems
42	SUMLI	Emotional/personal
43	SUMLJ	Attitude/orientation
44	PCREAS	Reason for PC status: 1. Drug informer 2. General informer 3. Homosexual 4. Child-sexual 5. Sexual assault 6. Inadequate 7. Policeman 8. Other (explain)
73-80	LASTDATE	Last release date (ddmmyyyy)

- Record #4 -

Column	Key Word	Descriptors
1-3	ID	Identification #
4-5	RN	Record #
6	R?	Raw score for ?
7-8	RL	" " L
9-10	RF	" " F
11-12	RK	" " K
13-14	RHS (corrected)	" " Hs
15-16	RD	" " D
17-18	RHY	" " Hy
19-20	RPD	" " Pd
21-22	RMF	" " Mf
23-24	RPA	" " Pa
25-26	RPT	" " Pt
27-28	RSC	" " Sc
29-30	RMA	" " Ma
31-32	RSI	" " Si
33-34	RA	" " A
35-36	RR	" " R
37-38	RES	" " Es
39-40	RMAC	" " Mac
41-43	TL	T - score for L
44-46	TF	" " F
47-49	TK	" " K

Column	Key Word	Descriptors		
50-52	THS	"	"	Hs
53-55	TD	"	"	D
56-58	THY	"	"	Hy
59-61	TPD	"	"	Pd
62-64	TMF	"	"	Mf
65-67	TPA	"	"	Pa
68-70	TPT	"	"	Pt
71-73	TSC	"	"	Sc
74-76	TMA	"	"	Ma
77-79	TSI	"	"	Si

- Record #5 -

Column	Key Word	Descriptors
1-3	ID	Identification #
4-5	RN	Record #
6-8	TA	T - score for A
9-11	TR	" " R
12-14	TES	" " Es
15-17	TMAC	" " Mac
18-19	MEGTYPE	(Megargee Types) 01. Able 02. Baker 03. Charlie 04. Delta 05. Easy 06. Foxtrot 07. George 08. How 09. Item 10. Jupiter 11. Unclass.
		(Wide Range Achievement Test)
20-22	RGL(1)	Reading grade level

Appendix Q:

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of/de

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PM-1 3½"x4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT

PRECISIONSM RESOLUTION TARGETS

PIONEERS IN METHYLENE BLUE TESTING SINCE 1974

MicroD
SINCE 1974

15000 COUNTY ROAD 8, BURNISVILLE, KY 40301, USA
TEL 512 435 7867 FAX 512 435 7867 Tlx 5100029488

Institution Follow-up Sheet

Name: _____ Research#: _____

OCDC #: _____

Date of LSI: / /

Receiving Institution: _____ Date: / /

Releasing Institution: _____ Date: / /

Date Follow-up: / /

(LEAVE BLANK IF MISSING DATA)

A. Segregation

Column	Key Word	Descriptors
6-7	FUTMIS	# (_____) of institutional misconducts
8	ADSEG	# (_____) of administrative segregations
		Code first misconduct
9-10	MISTYPE	1. disobeys _____ (28a) 2. assaults other/ threatens _____ (b) 3. gross language _____ (c) 4. stealing _____ (d) 5. damage _____ (e) 6. contraband _____ (f) 7. disturbance _____ (g) 8. escape/ual _____ (h) 9. absent without permission _____ (i) 10. bribery _____ (j) 11. counsels _____ (k) 12. refuses to pay _____ (l) 13. obstructs investigation _____ (m) 14. breaks any rule _____ (n) 15. breaks TAP rule _____ (o)

Column	Key Word	Descriptors
11	MSASS	If misconduct assaultive 1. aggressor _____ 2. victim _____ 3. both _____
12	INJURY	Degree of injury. Circle most serious incident 1 2 3 4 5
13-14	PUNISH	Punishment for first misconduct 1. not guilty _____ 2. loss of privileges _____ 3. program/work change _____ 4. incentive change _____ 5. security change _____ 6. warned and counsel _____ 7. revoke T.A.P. _____ 8. close confinement _____ 9. close confinement and special diet _____ 10. loss of remission _____ 11. suspension of eligibility _____
15-16	FUTAS	# (_____) of future assaults (b and g)
17	WEAPON	0. Has misconducts, but no weapon _____ 1. Use of dangerous weapon _____ (gun, knife) 2. Weapon, nonlethal _____ (cup)
18	HOSTAGE	0. Misconduct. no hostage _____ 1. Hostage _____
19-20	DAYSEG	# (_____) of days in segregation for misconducts
21-22	DAYAD	# (_____) of days in administrative segregation

Column	Key Word	Descriptors
23-24	OCUR	# (____) of occurrence reports
25	TYADSEG	Type of administrative segregation (first) <ol style="list-style-type: none"> 1. suicidal precautions _____ 2. medical _____ 3. await P.C. _____ 4. hunger strike _____ 5. homosexual _____ 6. other _____ 7. combination of above _____
26	SUICIDE (code most serious)	<ol style="list-style-type: none"> 1. Suicide successful _____ 2. Attempt suicide, no medical _____ 3. Attempt, institutional medical _____ 4. Attempt, community medical _____
27	MISCHARG	<ol style="list-style-type: none"> 0. Misconduct, but no criminal charges _____ 1. Criminal charges result _____ (priority)
B. Segregation History (prior to LSI date)		
28-29	PASTMIS	# (____) of past misconducts
30	PASTAD	<ol style="list-style-type: none"> 0. No _____ 1. Yes _____
31	PASTAS	# (____) of past assaults, threats, riots, and cause disturbances
C. Institutional Outcome		
36	RELEASE	Reason for release <ol style="list-style-type: none"> 1. time expired _____ 2. pre-release _____ 3. parole _____ 4. appeal _____ 5. t.x. from C.R.C. _____ 6. pre-release from C.R.C. _____ 7. parole from C.R.C. _____ 8. appeal from C.R.C. _____

Column	Key Word	Descriptors
37-39	DAYREL	# (_____) of days before released
40	PAROLE	0. Not eligible for parole _____ 1. Parole hearing waived _____ 2. Parole denied _____ 3. Parole granted after previous denial _____ 4. Parole granted _____ 5. Parole granted but cancelled before release _____ 6. Parole deferred, not reviewed _____ 7. Eligible but not seen _____
D. T.A.P. Outcome		
41	TYPETAP	0. Never applied for T.A.P. _____ 1. T.A.P. denied _____ 2. Education/employment _____ 3. C.W.P. _____ 4. Medical (escorted) _____ 5. Medical (unescorted) _____ 6. Recreation (escorted) _____ 7. Recreation (unescorted) _____ 8. General (escorted) _____ 9. General (unescorted) _____
	(Priority)	
	2	
	3	
	9	
42-43	TAPDEF	# (_____) of times T.A.P. deferred/denied
44	TAPOUT	0. No T.A.P. _____ 1. Successful _____ 2. Failed _____ 3. Mixed _____

Column	Key Word	Descriptors
45	CRCOUT	Outcome for a C.R.C. placement 1. Successful _____ 2. Returned to institution but returned to C.R.C. and successful _____ 3. Successful but poor staff rating _____ 4. Returned, T.A.P. violation _____ 5. Returned, new charges _____ 6. Escape/AWOL _____
45-48	DAYSCRC	# (_____) of days in C.R.C.
49-51	WAITCRC	# (_____) of days before transferred to C.R.C. (from date of LSI)
E. T.A.P. History		
52	PASTTAP	0. Prior incarcerations but no C.R.C. or T.A.P. _____ 1. Successful T.A.P. prior _____ 2. Unsuccessful T.A.P. prior _____
F. Health Care		
53-54	MEDCON	# (_____) of physician contacts
55	MEDS	Type of medication prescribed 0. None _____ 1. Anti-psychotics _____ 2. Minor tranquilizers _____ 3. Anti-depressants _____ 4. Mixture of above _____ 5. Antibiotics/general medicine _____ 6. Aspirin/tylenol _____ 7. Barbiturates _____ 8. Pain killers _____ 9. Other. _____ Mixture of 5 thru 8 _____

Column	Key Word	Descriptors
56	MAJILL	Type of major illness 0. None _____ 1. Epilepsy _____ 2. Psychiatric _____ 3. Cardiac _____ 4. Contagion _____ 5. Other _____
57	DRUGS	0. No _____ 1. Yes _____
58	BREW	0. No _____ 1. Yes _____
G. Treatment		
59	RECVDT	Treatment program outcome 0. No treatment _____ 1. Received treatment _____
60	TRTYPE	Type of treatment received 1. Alcohol _____ 2. Drug and alcohol _____ 3. Drug only _____ 4. Academic _____ 5. Vocational _____ 6. Life skills _____ 7. Psychological _____ 8. Medical _____ 9. Combination _____
61-62	PSYCH	# (_____) of contacts, Psychology
63-64	SHRINK	# (_____) of contacts, Psychiatry
65-66	MCA	# (_____) of contacts, Social Services
67-68	CHAPLAIN	# (_____) of contacts, Chaplaincy

Column	Key Word	Descriptors
H. Academic/Vocational		
69	WORK	0. Did not work _____ 1. Worked, but removed from program _____ 2. Worked, but dropped out _____ 3. Worked, but just barely _____ 4. Worked, good performance _____ 5. Received welding ticket, etc. _____
70	ACAD	0. No academic _____ 1. Yes _____
71	LIFERATE	1. Poor institutional performance _____ 2. Satisfactory _____ 3. Good _____
72	INCENT	Most recent incentive level 1. _____ 2. _____ 3. _____ 4. _____
73	JOBCH	0. No job changes _____ 1. Job change, personal request _____ *2. Job change, staff request _____
74	PAY	0. Working, but no extra pay _____ 1. Receiving extra pay _____
75	OUTWORK	Working outside of institution 0. No _____ 1. C.W.P. _____ 2. Grounds _____ 3. Volunteer Programs _____

Column	Key Word	Descriptors
I. Classification Changes		
6	CHCLASS	Change of classification after LSI 0. No change 1. Increase security _____ 2. Decrease security _____ 3. To P.C. 4. P.C. to regular _____ 5. Increase security and to P.C. 6. Decrease security and P.C. to regular _____
7	RUN	0. None _____ 1. Escape and captured _____ 2. Escape and not captured _____ 3. Attempt escape _____
8	SMALLRUN	0. None _____ 1. U.A.L. and captured _____ 2. U.A.L. and not captured _____ 3. Attempt U.A.L. _____
9-10	LAWYER	# (_____) of lawyer requests
11	BEDCH	# (_____) of bed changes
12	TRANSOUT	0. No _____ 1. Transferred, poor behavior _____ 2. Transferred, good behavior _____ 3. Both _____ 4. Court _____ 5. Other _____ (note: _____)
13	PC	P.C. at time of LSI 0. No _____ 1. Yes _____

Column	Key Word	Descriptors
14	INSTSEC	Institutional security if applicable 1. Minimum ____ 2. Maximum ____
15-16	RECREAT	# (____) of requests to recreation
J. MISCELLANEOUS		
17	PASTIN	# (____) of prior incarcerations
18	PASTPC	0. No ____ 1. P.C. during prior incarceration ____
19	OFFWEAP	0. No ____ 1. Use of weapon at offence ____
20	INTOX	0. No ____ 1. Intoxicated at time of offence ____
21	REMAIN	0. No ____ 1. Request to remain granted ____
22-23	SECMIS	If more than one misconduct, the second misconduct is coded here ____
24-25	THIRDMIS	Third misconduct, if applicable ____
26-27	SECPUN	Punishment for second misconduct ____
28-29	THIRDPUN	Punishment for third misconduct ____
30-31	DAYSEG1	# (____) of days in segregation for first misconduct
32-33	DAYSEG2	# (____) for second
34-35	DAYSEG3	# (____) for third

Column	Key Word	Descriptors
36-37	DAYAD1	# (____) of days in first administrative segregation
38-39	DAYAD2	# (____) for second
40-41	DAYAD3	# (____) for third
42	DETAIN	0. No _____ 1. Yes _____
43	CRCDEF	0. No _____ 1. Yes _____
44	PSUICIDE	0. No _____ 1. Yes _____
45	PASTESC	0. No _____ 1. Yes _____
46	PASTPROB	0. No _____ 1. Yes _____
47	PREPROB	0. No _____ 1. Yes _____
48	PASTPAR	0. No _____ 1. Yes _____
49	CHANGE2	Classification changes a second time _____
50	CHANGE3	Classification changes a third time _____
51-52	RECINST1	Code first receiving institution _____
53-55	DAYINST1	# (____) of days in first institution
56-57	RECINST2	Code second placement _____
58-60	DAYINST2	# (____) of days in second institution
61-62	RECINST3	Code third placement _____

Column	Key Word	Descriptors
63-65	DAYINST3	# (____) of days in third institution
66	TREAINST	0. No _____ 1. Yes _____
67	TRNAME	Treatment institution 0. O.C.I. _____ 1. G.A.T.U. _____
68-69	RELINST	Code releasing institution _____
70-72	DAYRELIN	# (____) of days in third institution
73	NUMCC	# (____) correctional centres
74	NUMDC	# (____) detention centres
75	NUMJAIL	# (____) jails
76	TOTINST	# (____) institutions
77	COMREL	Type of community-based supervision 0. None _____ 1. Parole _____ 2. Probation _____ 3. Parole and Probation _____

Appendix R:

Coding Manual for Institution Follow-up

Record #9 Segregation, Segregation History,
Institutional Outcome, T.A.P. Outcome,
T.A.P. History, Health Care, Treatment,
Academic/Vocational

Record #10 Classification Changes, Miscellaneous

- Record #9 -

Column	Key Word	Descriptors
1-3	ID	Identification #
4-5	RN	Record #
6-7	FUTMIS	# of future misconducts after date of LSI
8	ADSEG	# of future administrative segregations
9-10	MISTYPE	For the first future misconduct, code type 01. Sec. 28(a), disobey 02. (b), assault/ threaten 03. (c), gross language 04. (d), stealing 05. (e), damage 06. (f), contraband 07. (g), disturbance 08. (h), escape/ UAL 09. (i), absent no permit 10. (j), bribery 11. (k), counsel I/M 12. (l), refuse to pay 13. (m), obstruct investig. 14. (n), breaks any rule 15. (o), breaks TAP rule

Column	Key Word	Descriptors
11	MSASS	If misconduct is assaultive 1. Aggressor 2. Victim 3. Both/unclear
12	INJUR	Degree of injury. Circle most serious incident 1. No injury 2. Minor injury 3. Institution provides medical services 4. Serious medical attention (stitches) 5. Hospital-ization
13-14	PUN	Punishment for first misconduct (future) 01. Not guilty 02. Loss of priveleges 03. Program/work change 04. Incentive change 05. Security change 06. Warned & counselled 07. Revoke TAP 08. Close confinement 09. C.C. & Special diet 10. Loss of remission 11. Suspension of eligib. 12. Combination of 7 - 11 13. Combin. 8-11

Column	Key Word	Descriptors
15-16	FUTAS	# of future assaults
17	WEP	0. Misconduct, no weapon 1. Dangerous weapon (shiv) 2. Nonlethal weapon (cup)
18	HOS	0. Misconduct, no hostage 1. hostage
19-20	DAYSEG	# of days in segregation for all future seg.
21-22	DAYAD	# of days in seg. for all future admin. seg.
23-24	OCUR	# of occurrence reports (future)
25	TYPADSEG	Type of first admin. seg. 1. Suicidal precautions 2. Medical 3. Await PC bed 4. Hunger strike 5. Homosexual 6. Psychiatric/psycholog. 7. Other 8. Combination of above

Column	Key Word	Descriptors
26	SUICIDE	<ol style="list-style-type: none"> 1. Successful suicide attempt 2. Attempt, no medical attention 3. Attempt with institution M.D. 4. Attempt with community M.D.
27	MISCHARG	(code most serious) <ol style="list-style-type: none"> 0. Misconduct, but no criminal charges 1. Misconduct with criminal charges
28-29	PASTMIS	# of past misconducts
30	PASTAD	# of past admin. seg.
31	PASTAS	# of past assaults
32	PASTW	In past misconducts <ol style="list-style-type: none"> 0. No weapon 1. Lethal weapon 2. Nonlethal weapon
33	PASTHOST	<ol style="list-style-type: none"> 0. Misconduct, no hostage 1. Misconduct, hostage
34-35	PASTDAYS	# total days in seg. on past misconducts

Column	Key Word	Descriptors
36	RELEASE	Reason for release 1. TX 2. Pre-release 3. Parole 4. Appeal/bail 5. TX from CRC 6. Pre-release from CRC 7. Parole from CRC 8. Appeal release from CRC 9. Fine paid pro rata
37-39	DAYREL	# of days before release from date of LSI
40	PAROLE	0. Not eligible for parole 1. Parole waived 2. Denied 3. Granted after previous denial 4. Granted 5. Granted but cancelled before release 6. Deferred, not reviewed 7. Eligible but not seen
41	TYPETAP (Priority) 2 3 9	Choose one with most freedom 0. Never applied for TAP 1. TAP denied 2. Ed./empl. (eg. Abatoir) 3. CWP and volunteer prog. 4. Escorted medical

Column	Key Word	Descriptors
		5. Unescorted medical 6. Recreation (escorted) 7. Recreation (unescorted) 8. General (escorted) 9. General (unescorted)
42-43	TAPDEF	# of TAP deferrals and denials
44	TAPOUT	0. No TAP 1. Successful 2. Failed 3. Mixed
45	CRCOUT	Outcome of CRC placement 1. Successful 2. Returned to institution and then returned to CRC and successful 3. Successful, poor staff rating 4. Fail, TAP violation 5. Fail, O/C 6. Escape/UAL
46-48	DAYSCRC	# of days CRC
49-51	WAITCRC	# of days between LSI and transfer to CRC
52	PASTTAP	0. Prior incar., no TAP 1. Successful prior TAP 2. Unsuccessful

Column	Key Word	Descriptors
53-54	MEDCON	# of physician contacts
55	MEDS	0. None 1. Anti-psychotics 2. Minor tranquilizers 3. Anti-depressants 4. Mixture above 5. General/Anti-biotics 6. Aspirin/Tylenol 7. Barbituates 8. Pain killers 9. Mix 5-8
56	MAJILL	0. None 1. Epilepsy 2. Psychiatric 3. Cardiac 4. Contagion 5. Other
57	DRUGS	0. No 1. Yes
58	BREW	0. No 1. Yes
59	RECDTR	0. No 1. Yes
60	TRTYPE	1. Alcohol 2. Alcohol & Drug 3. Drug 4. Academic 5. Vocational 6. Lifeskills 7. Psychological 8. Medical 9. Combination
61-62	PSYCH	# Psychology contacts
63-64	SHRINK	# Psychiatrist contacts

Column	Key Word	Descriptors
65-66	MCA	# Social service contacts
67-68	CHAPLAIN	# Clergy contacts
69	WORK	0. No work 1. Removed from work 2. Dropped out 3. Barely worked 4. Good performance 5. Received ticket
70	ACAD	0. No 1. Yes
71	LIFERATE	1. Poor 2. Satisfactory 3. Good
72	INCENT	Incentive level rating
73	JOBCH	0. No 1. Personal request 2. Staff
74	PAY	0. No extra pay 1. Extra pay
75	OUTWORK	0. No 1. CWP 2. Grounds 3. Volunteer
- Record # 10 -		
1-3	ID	Identification #
4-5	RN	Record #

Column	Key Word	Descriptors
6	CHCLASS	0. No change 1. Increase security 2. Decrease security 3. To PC 4. PC to regular 5. Increase & to PC 6. Decrease & PC to reg.
7	RUN	0. None 1. Escape & captured 2. Escape & not captured 3. Attempt escape
8	SMALLRUN	0. None 1. UAL & captured 2. UAL & not captured
9-10	LAWYER	# of lawyer requests (from LSI date)
11	BEDCH	# of bed/form/wing changes for safety
12	TRANSOUT	0. No 1. Transferred because of poor behavior 2. Transferred, good ehavior 3. Both 4. Court 5. Other
13	PC	0. No 1. Yes, at time of LSI
14	INSTSEC	1. Minimum 2. Maximum

Column	Key Word	Descriptors
15-16	RECREAT	# of requests to recreation
17	PASTIN	# of prior incarcerations (provincial only)
18	PASTPC	0. No 1. PC during prior incarceration
19	OFFWEAP	0. No 1. Use of weapon at offence
20	INTOX	0. No 1. Intoxicated at time of offence
21	REMAIN	0. No 1. Request to remain granted
22-23	SECMIS	If more than one misconduct, the second misconduct is coded here using the guide
24-25	THIRDMIS	Third misconduct if applicable
26-27	SECPUN	Punishment for second misconduct
28-29	THPUNISH	Third punishment
30-31	DAYSEG1	# of days in segregation for first misconduct
32-33	DAYSEG2	# for second

Column	Key Word	Descriptors
34-35	DAYSEG3	# for third
36-37	DAYAD1	# of days in first administrative segregation
38-39	DAYAD2	# for second
40-41	DAYAD3	# for third
42	DETAIN	0. No 1. Yes
43	CRCDEF	0. No 1. Yes
44	PSUICIDE	0. No 1. Yes
45	PASTESC	0. No 1. Yes
46	PASTPROB	0. No 1. Yes
47	PREPROB	0. No 1. Yes
48	PASTPAR	0. No 1. Yes
49	CHANGE2	Classification changes a second time (code as in CHCLASS)
50	CHANGE3	Classification change for third
51-52	RECINST1	Code first receiving institution
53-55	DAYINST1	# of days in first institution

Column	Key Word	Descriptors
56-57	RECINST2	Code second placement
58-60	DAYINST2	# of days in second institution
61-62	RECINST3	Code third placement
63-65	DAYINST3	# of days in third institution
66	TREAINST	0. No 1. Yes
67	TRNAME	Treatment institution 0. O. C. I. 1. G.A.T.U.
68-69	RELINST	Code releasing institution
70-72	DAYRELIN	# of days in releasing institution
73	NUMCC	# of correctional centres
74	NUMDC	# of detention centres
75	NUMJAIL	# of jails
76	TOTINST	Total # of institutions
77	COMREL	Type of community-based supervision 0. None 1. Parole 2. Probation 3. Parole and Probation

Appendix S:

Community-based Supervision Follow-up

Subject # _____ Name: _____

Date Released from Institution: / /

Type of Community-based Supervision: _____

Employed _____ Occupation _____

Marital Status _____ Dependents _____

Treatment Order _____ Type _____

Special Conditions: Restitution _____ Amount _____

Community Service Order _____ # Hours _____

Report _____

Support (Financial) _____

Abstain (Alcohol/Drugs) _____

Abstain Owning or Carrying Weapon _____

Remain Within Jurisdiction _____

Find and Maintain Work/School _____

Curfew _____

Not Enter Premise _____

Not Associate _____

Reside _____

Accept/Continue Counselling _____

Victim Offender Restitution Project _____

Reduce Impaired Driving in Ottawa _____

Not Own or Operate Vehicle _____

Other _____

Variation(s) _____ Date / /

Date of 1st Contact with Office: / /
days _____

Charges Pending Initial Interview _____

Transfer of Supervision _____

Office: _____

Probation/Parole Officer(s): _____

Parole

Board _____

Date Onset Parole: / /

Final Warrant Expiry Date: / /

Date of Suspension: / /

Date of Revocation: / /

Date of Completion: / /

Total Days Parole In-program: _____

Probation

Date Onset Probation: / /

Forecasted Termination Date: / /

Date of Breach: / /

Actual Date of Termination: / /

Total Days Probation In-program: _____

Parole/Probation Progress Ratings	Intervals (in months)							
	3	6	9	12	15	18	21	24
Education	—	—	—	—	—	—	—	—
Employment	—	—	—	—	—	—	—	—
Financial	—	—	—	—	—	—	—	—
Family	—	—	—	—	—	—	—	—
Marital	—	—	—	—	—	—	—	—
Accommodation	—	—	—	—	—	—	—	—
Leisure	—	—	—	—	—	—	—	—
Companions	—	—	—	—	—	—	—	—
Alcohol	—	—	—	—	—	—	—	—
Drugs	—	—	—	—	—	—	—	—
Emotional	—	—	—	—	—	—	—	—
Personal	—	—	—	—	—	—	—	—
Attitude Criminal	—	—	—	—	—	—	—	—
Attitude Supervision	—	—	—	—	—	—	—	—

[illegible]

Appendix T:

Coding Manual For Community Follow-up

Record #11: Parole/Probation LSI items
Record #12: Parole/Probation LSI cont'd
Record #13: Community-based Demographics
Record #17: Performance on Post-release Supervision
Record #18: Performance cont'd
Record #19: Performance cont'd
Record #20: Performance cont'd
Record #22: Post-release Recidivism

Record #11

COLUMN	KEYWORD	DESCRIPTORS
1-3	ID	Identification #
4-5	RN	Record # (LSI Items) 0. No 1. Yes
6	PPL1	Any prior convictions
7	PPL2	Two or more prior conv.
8	PPL3	Three or more prior conv.
9	PPL4	Three or more present off.
10	PPL5	Arrested under 16
11	PPL6	Ever incarcerated
12	PPL7	Escape history
13	PPL8	Institutional misconduct
14	PPL9	Community supervision prob.
15	PPL10	Official record violence
16	PPL11	Currently unemployed
17	PPL12	Frequently unemployed
18	PPL13	Never employed full year
19	PPL14	Ever fired
20	PPL15	Less than grade 10
21	PPL16	Less than grade 12
22	PPL17	Ever suspended or expelled

COLUMN	KEYWORD	DESCRIPTORS
23	PPL18	Participation/ performance
24	PPL19	Peer interactions
25	PPL20	Authority interactions
26	PPL21	Financial problems
27	PPL22	Reliance on social assist.
28	PPL23	Dissatisfaction with marit.
29	PPL24	Nonrewarding, parental
30	PPL25	Nonrewarding, other relat.
31	PPL26	Criminal - family/spouse
32	PPL27	Unsatisfactory accommod.
33	PPL28	Three or more addr. changes
34	PPL29	High crime neighbourhood
35	PPL30	No organized participation
36	PPL31	Could make better use
37	PPL32	A social isolate
38	PPL33	Some criminal acquaintances
39	PPL34	Some criminal friends
40	PPL35	Few anti-criminal acquaint.
41	PPL36	Few anti-criminal friends

COLUMN	KEYWORD	DESCRIPTORS
42	PPL37	Alcohol problem, ever
43	PPL38	Drug problem, ever
44	PPL39	Alcohol problem, currently
45	PPL40	Drug problem, currently
46	PPL41	Law violations
47	PPL42	Marital/family
48	PPL43	School/work
49	PPL44	Medical
50	PPL45	Other clinical indicators
51	PPL46	Moderate interference
52	PPL47	Severe interference
53	PPL48	Psychiatric treatment past
54	PPL49	Psychiatric treatment now
55	PPL50	Psychological assessment
56	PPL51	Supportive of crime
57	PPL52	Unfavorable toward conven.
58	PPL53	Poor, toward sentence
59	PPL54	Poor, toward supervision
60-61	PPLR1	LSI item #1 rating
62-63	PPLR4	" " #4 "
64	PPLR8	" " #8 "

COLUMN	KEYWORD	DESCRIPTORS			
65	PPLR18	"	"	#18	"
66	PPLR19	"	"	#19	"
67	PPLR20	"	"	#20	"
68	PPLR21	"	"	#21	"
69	PPLR23	"	"	#23	"
70	PPLR24	"	"	#24	"
71	PPLR25	"	"	#25	"
72	PPLR27	"	"	#27	"
73	PPLR31	"	"	#31	"
74	PPLR39	"	"	#39	"
75	PPLR40	"	"	#40	"
76-77	PPLTOTA	LSI total score (old)			
78-79	PPLTOTB	LSI total score (new)			
80	VERSION	1. PSR-LSI			

COLUMN	KEYWORD	DESCRIPTORS
	Record #12	
1-3	ID	Identification #
4-5	RN	Record #
31-32	PPSUMLA	Criminal History
33-34	PPSUMLB	Education/employment
35	PPSUMLC	Financial
36	PPSUMLD	Family/marital
37	PPSUMLE	Accommodation
38	PPSUMLF	Leisure/recreation
39	PPSUMLG	Companions
40	PPSUMLH	Alcohol/drug problems
41	PPSUMLI	Emotional/personal
42	PPSUMLJ	Attitude/orientation

Record #13

COLUMN	KEYWORD	DESCRIPTORS
<u>Community Follow-up:</u>		
1-3	ID	Identification #
4-5	RN	Record #
8	NEMPLY	(Employment status) 1. Employed 2. Unemployed 3. Student/ Homemaker
9-10	NOCCUP	(Occupation) 00. None 01. Managerial 02. Professional/ Technical 03. Clerical/Sales 04. Craftsman 05. Protective Services 06. Personal Service 07. Labourer 08. Student/ Homemaker 09. Other
11	NMARIT	(Marital status) 1. Single 2. Married/ Common Law 3. Separated/ Divorced 4. Widowed
12	NDEPEND	# of dependents
13	NTREAT	(Treatment recommended) 0. No 1. Yes

COLUMN	KEYWORD	DESCRIPTORS
14	NTYPETR	(Type of treatment) 0. None 1. Alcohol 2. Alcohol & Drugs 3. Drug only 4. Academic 5. Vocational 6. Life skills 7. Emotional 8. Medical 9. Combination of above
Record #14		
1-3	ID	Identification #
4-5	RN	Record #
6	BOARD	1. Western Regional 2. West-Central Regional 3. East-Central Regional 4. Northern Regional 5. Eastern Regional
7	POFFICE	1. Ottawa Central 2. Ottawa West 3. Ottawa East
8-15	REPDAT	Date of first report
16	PTRANS	1. Transfer of parole supervision within Ontario 2. Transfer of parole supervision outside Ontario Supervision Conditions
17	CHARGES	Charges outstanding 0. No 1. Yes

COLUMN	KEYWORD	DESCRIPTORS
18	RESTIT	Restitution order 0. No 1. Yes
19-22	AMOUNT	Amount of restitution
23	CSO	Community service order 0. No 1. Yes
24-26	HOURS	Amount of community service
27	CURFEW	Curfew 0. No 1. Yes
28	FIND	Find/maintain work/school 0. No 1. Yes
29	ASSOC	Not associate 0. No 1. Yes (general) 2. Yes (specific) 3. Combination
30	WEAPON	Abstain owning or carrying weapons 0. No 1. Yes
31	ABSTAIN	Abstain (alcohol/drugs) 0. No 1. Yes, alcohol 2. Yes, drugs 3. Yes, both
32	REMAIN	Remain within jurisdiction 0. No 1. Yes

COLUMN	KEYWORD	DESCRIPTORS
33	RESIDE	Reside with P.O. approval 0. No 1. Yes, parents/relatives 2. Yes, approved by P.O. 3. Yes, other 4. Yes, combination
34	NOTOWN	Not own or operate vehicle 0. No 1. Yes
35	ACCEPT	Accept/continue counselling 0. No 1. Yes, alcohol 2. Yes, drug 3. Yes, psychological 4. Yes, vocational 5. Yes, psychiatric 6. Yes, other
36	VORP	Victim Offender Restitution Project 0. No 1. Yes
37	RIDO	Reduce Impaired Driving in Ottawa 0. No 1. Yes
38	REQUEST	Request for variation in conditions 0. No 1. Yes

COLUMN	KEYWORD	DESCRIPTORS
39-40	VARTYPE	Type of variation 00. None 01. Fine payment 02. Restitution payment 03. CSO 04. Report 05. Support 06. Abstain 07. Weapons 08. Remain 09. Find & maintain 10. Curfew 11. Not enter premises 12. Not associate 13. Reside 14. Counselling 15. VORP 16. RIDO 17. No drive 18. Other
41-48	VARDATE	Date of variation
Record #17		
1-3	ID	Identification #
4-5	RN	Record #
6-7	CONT1	# contacts with P. O. within 3 months
8-9	CONT2	" 6 "
10-11	CONT3	" 9 "
12-13	CONT4	" 12 "
14-15	CONT5	" 15 "
16-17	CONT6	" 18 "
18-19	CONT7	" 21 "
20-21	CONT8	" 24 "

COLUMN	KEYWORD	DESCRIPTORS
22-23	CONTOT	Total # of contacts
24-25	OVS1	# office visits within 3 months
26-27	OVS2	" 6 "
28-29	OVS3	" 9 "
30-31	OVS4	" 12 "
32-33	OVS5	" 15 "
34-35	OVS6	" 18 "
36-37	OVS7	" 21 "
38-39	OVS8	" 24 "
40-41	OVSTOT	Total # of visits
42-43	TEL1	# telephone calls within 3 months
44-45	TEL2	" 6 "
46-47	TEL3	" 9 "
48-49	TEL4	" 12 "
50-51	TEL5	" 15 "
52-53	TEL6	" 18 "
54-55	TEL7	" 21 "
56-57	TEL8	" 24 "
58-59	TELTOT	Total # of visits
60-61	LET1	# letters sent within 3 months
62-63	LET2	" 6 "
64-65	LET3	" 9 "
66-67	LET4	" 12 "

COLUMN	KEYWORD	DESCRIPTORS
68-69	LET5	" 15 "
70-71	LET6	" 18 "
72-73	LET7	" 21 "
74-75	LET8	" 24 "
76-77	LETTOT	Total # of letters

Record #18

1-3	ID	Identification #
4-5	RN	Record #
6-7	REF1	# of referrals within 3 months
8-9	REF2	" 6 "
10-11	REF3	" 9 "
12-13	REF4	" 12 "
14-15	REF5	" 15 "
16-17	REF6	" 18 "
18-19	REF7	" 21 "
20-21	REF8	" 24 "
22-23	REFTOT	Total # of referrals
24-25	HVS1	# home visits within 3 months
26-27	HVS2	" 6 "
28-29	HVS3	" 9 "
30-31	HVS4	" 12 "
32-33	HVS5	" 15 "

COLUMN	KEYWORD	DESCRIPTORS
34-35	HVS6	" 18 "
36-37	HVS7	" 21 "
38-39	HVS8	" 24 "
40-41	HVSTOT	Total # of visits
42-43	WSV1	# work site visits within 3 months
44-45	WSV2	" 6 "
46-47	WSV3	" 9 "
48-49	WSV4	" 12 "
50-51	WSV5	" 15 "
52-53	WSV6	" 18 "
54-55	WSV7	" 21 "
56-57	WSV8	" 24 "
58-59	WSVTOT	Total # of visits
60-61	FTR1	# fail to report within 3 months
62-63	FTR2	" 6 "
64-65	FTR3	" 9 "
66-67	FTR4	" 12 "
68-69	FTR5	" 15 "
70-71	FTR6	" 18 "
72-73	FTR7	" 21 "
74-75	FTR8	" 24 "
76-77	FTRTOT	Total # of fail to report

Record #19

COLUMN	KEYWORD	DESCRIPTORS
1-3	ID	Identification #
4-5	RN	Record #
6-7	LTR1	# of late to report within 3 months
8-9	LTR2	" 6 "
10-11	LTR3	" 9 "
12-13	LTR4	" 12 "
14-15	LTR5	" 15 "
16-17	LTR6	" 18 "
18-19	LTR7	" 21 "
20-21	LTR8	" 24 "
22-23	LTRTOT	Total # of lates
24-25	CHG1	# change appointments within 3 months
26-27	CHG2	" 6 "
28-29	CHG3	" 9 "
30-31	CHG4	" 12 "
32-33	CHG5	" 15 "
34-35	CHG6	" 18 "
36-37	CHG7	" 21 "
38-39	CHG8	" 24 "
40-41	CHGTOT	Total # of changes

COLUMN	KEYWORD	DESCRIPTORS
42-43	OTH1	# other contacts within 3 months
44-45	OTH2	" 6 "
46-47	OTH3	" 9 "
48-49	OTH4	" 12 "
50-51	OTH5	" 15 "
52-53	OTH6	" 18 "
54-55	OTH7	" 21 "
56-57	OTH8	" 24 "
58-59	OTHTOT	Total # of visits
60-61	POL1	# police contacts within 3 months
62-63	POL2	" 6 "
64-65	POL3	" 9 "
66-67	POL4	" 12 "
68-69	POL5	" 15 "
70-71	POL6	" 18 "
72-73	POL7	" 21 "
74-75	POL8	" 24 "
76-77	POLTOT	Total # police contacts

Record #20

COLUMN	KEYWORD	DESCRIPTORS
1-3	ID	Identification #
4-5	RN	Record #
6-7	ARR1	# of arrests within 3 months
8-9	ARR2	" 6 "
10-11	ARR3	" 9 "
12-13	ARR4	" 12 "
14-15	ARR5	" 15 "
16-17	ARR6	" 18 "
18-19	ARR7	" 21 "
20-21	ARR8	" 24 "
22-23	ARRTOT	Total # of arrests
24-25	CHR1	# charges within 3 months
26-27	CHR2	" 6 "
28-29	CHR3	" 9 "
30-31	CHR4	" 12 "
32-33	CHR5	" 15 "
34-35	CHR6	" 18 "
36-37	CHR7	" 21 "
38-39	CHR8	" 24 "
40-41	CHRTOT	Total # of charges

COLUMN	KEYWORD	DESCRIPTORS
42-43	CRT1	# court appearances within 3 months
44-45	CRT2	" 6 "
46-47	CRT3	" 9 "
48-49	CRT4	" 12 "
50-51	CRT5	" 15 "
52-53	CRT6	" 18 "
54-55	CRT7	" 21 "
56-57	CRT8	" 24 "
58-59	CRTTOT	Total # of courts
60-61	RCV1	# reconvictions within 3 months
62-63	RCV2	" 6 "
64-65	RCV3	" 9 "
66-67	RCV4	" 12 "
68-69	RCV5	" 15 "
70-71	RCV6	" 18 "
72-73	RCV7	" 21 "
74-75	RCV8	" 24 "
76-77	RCVTOT	Total # of reconvictions report

Appendix U:

Recidivism Follow-up Sheet

Name: _____ Research #: _____

OCDC #: _____

Date of LSI: / /

Receiving Institution: _____ Date: / /

Releasing Institution: _____ Date: / /

Date of Follow-up: / /

(LEAVE BLANK IF MISSING)

Column	Key Word	Descriptors
6	CBS1	Community-based supervision within first year 0. No _____ 1. Yes _____
7	CBS2	Community-based supervision within second year 0. No _____ 1. Yes _____
8	REM1	Remanded into custody within first year 0. No _____ 1. Yes _____
9	REM2	Remanded into custody within second year 0. No _____ 1. Yes _____
10	INCAR1	Incarcerated within first year 0. No _____ 1. Yes _____

Column	Key Word	Descriptors
11	INCAR2	Incarcerated within second year 0. No _____ 1. Yes _____
12-13	NCBS	# (_____) of community-based supervisions
14-15	NREM	# (_____) of remands into custody
16-17	NINCAR	# (_____) of incarcerations
18-19	NEWPROB	# (_____) of months probation
20-22	NEWREM	# (_____) of days remanded into custody
23-25	NEWSENT	# (_____) of days incarceration
26	PEN	Penitentiary term 0. No _____ 1. Yes _____
27	NEWOFF	Offence same as previous 0. No _____ 1. Yes _____
28	NEWTYP	Type of new offence (Code first) 0. None _____ 1. Against person _____ 2. Against property _____ 3. Against public morals and decency _____ 4. Against public order and peace _____ 5. Drug offences _____ 6. Liquor offences _____ 7. Traffic offences other than C.C. _____ 8. Miscellaneous under C.C. _____ 9. Traffic offences under C.C. _____
29-31	DAYOKPR	# (_____) of days in community before returned to prison

Column	Key Word	Descriptors
32-33	NEWCOUNT	# (_____) of offences at end of follow-up
34-35	NEWCONV	# (_____) of convictions at end of follow-up
36	LMINDEX	0. No A.I.S. available _____ 1. 2 years or more _____ 2. 124 days to 2 years less a day _____ 3. Less than 124 days _____ 4. Technical parole violation which has no conviction _____ 5. Technical breach of probation which has no conviction _____ 6. Wanted/absconder _____ 7. Probation/CSO/Fine over \$100.00 _____ 8. Fine up to \$100.00 _____ 9. No illegal activities recorded on A.I.S. _____
37	SEVERE	0. Less severe _____ 1. Same _____ 2. More severe _____
38	VIOL	0. Non-violent _____ 1. Violent _____
39	PV	0. Parole completed _____ 1. Parole violated _____
40	NEWESC	0. No escape custody _____ 1. Escape custody _____

Appendix V:

Coding Manual for Recidivism Follow-up

Record #22		
COLUMN	KEYWORD	DESCRIPTORS
1-3	ID	Identification #
4-5	RN	Record #
6	CBS1	Community-based supervision within first year 0. No 1. Yes
7	CBS2	Community-based supervision within second year 0. No 1. Yes
8	REM1	Remanded into custody within first year 0. No 1. Yes
9	REM2	Remanded into custody within second year 0. No 1. Yes
10	INCAR1	Incarcerated within first year 0. No 1. Yes
11	INCAR2	Incarcerated within second year 0. No 1. Yes
12-13	NCBS	# of community-based supervisions
14-15	NREM	# of remands into custody
16-17	NINCAR	# of incarcerations
18-19	NEWPROB	# of months probation

COLUMN	KEYWORD	DESCRIPTORS
20-22	NEWREM	# of days on remand
23-25	NEWSENT	# of days incarceration
26	PEN	Penitentiary term 0. No 1. Yes
27	NEWOFF	Offence same as previous 0. No 1. Yes
28	NEWTYP	Type of new offence (code most serious) 0. None 1. Against the person 2. Against property 3. Against public morals and decency 4. Against public order and peace 5. Drug offences 6. Liquor offences 7. Traffic offences other than C.C. 8. Miscellaneous under CC 9. Traffic offences under CC
29-31	DAYOKPR	# of days in community before returned to prison
32-33	NEWCOUNT	# of offences at end of follow-up
34-35	NEWCONV	# of convictions at end of follow-up
36	LMINDEX	0. No AIS available 1. 2 yrs or more 2. 124 days to 2 yrs less a day 3. Less than 124 days 4. Technical parole violation with no conv. 5. Technical breach of probation with no conviction 6. Wanted/absconder

COLUMN	KEYWORD	DESCRIPTORS
		7. Probation/CS0/Fine +100 8. Fine under \$100 9. No illegal activities recorded on AIS
37	SEVERE	0. Less severe 1. Same 2. More severe
38	VIOL	0. Non-violent 1. Violent
39	PV	0. Parole completed 1. Parole violated
40	NEWESC	0. No escape custody 1. Escape custody
41-48	ADMDATE	Admission date (yymmdd8.)
49-56	SENTDATE	Sentence date (yymmdd8.)
57-64	WEXDATE	Warrant Expiry date (yymmdd8.)
65-72	RELDATE	Release date (yymmdd8.)
73-80	FAILDATE	Readmission date (yymmdd8.)

Appendix W:

Distributions of Classification Method Scores (N = 215)

#1 Megargee MMPI-based Typology (*rank-ordered)

	Rank	# of Cases	Percent	Cumulative
'Low'	1 (Item)	36	16.7	16.7
	2 (Easy,	16	7.4	24.2
	3 (Baker)	16	7.4	31.6
	4 (Able)	48	22.3	54.0
'High'	5 (George)	12	5.6	59.5
	6 (Delta)	20	9.3	68.8
	7 (Jupiter)	4	1.9	70.7
	8 (Foxtrot)	19	8.8	79.5
	9 (Charlie)	10	4.7	84.2
	10 (How)	34	15.8	100.0

#2 Prison Adjustment Scale

	Score	# of Cases	Percent	Cumulative
'Low'	7	1	0.5	0.5
	8	2	0.9	1.4
	9	4	1.9	3.3
	10	11	5.1	8.4
	11	19	8.8	17.2
	12	15	7.0	24.2
	13	21	9.8	34.0
	14	21	9.8	43.7
	15	15	7.0	50.7
'High'	16	36	16.7	67.4
	17	13	6.0	73.5
	18	24	11.2	84.7
	19	13	6.0	90.7
	20	11	5.1	95.8
	21	5	2.3	98.1
	22	1	0.5	98.6
	23	3	1.4	100.0

#3 Prison Maladjustment Scale

	Score	# of Cases	Percent	Cumulative
'Low'	5	1	0.5	0.5
	6	1	0.5	0.9
	7	2	0.9	1.9
	9	1	0.5	2.3
	10	3	1.4	3.7
	11	4	1.9	5.6
	12	3	1.4	7.0
	13	6	2.8	9.8
	14	5	2.3	12.1
	15	5	2.3	14.4
	16	7	3.3	17.7
	17	2	0.9	18.6
	18	4	1.9	20.5
	19	5	2.3	22.8
	20	4	1.9	24.7
	21	4	1.9	26.5
	22	5	2.3	28.8
	23	2	0.9	29.8
	24	7	3.3	33.0
	25	8	3.7	36.7
	26	4	1.9	38.6
	27	5	2.3	40.9
'High'	28	4	1.9	42.8
	29	2	0.9	43.7
	30	8	3.7	47.4
	31	10	4.7	52.1
	32	8	3.7	55.8
	33	7	3.3	59.1
	34	6	2.8	61.9
	35	2	0.9	62.8
	36	7	3.3	66.0
	37	6	2.8	68.8
	38	6	2.8	71.6
	39	4	1.9	73.5
	40	5	2.3	75.8
	41	7	3.3	79.1
	42	4	1.9	80.9
	43	2	0.9	81.9
	44	4	1.9	83.7
	45	5	2.3	86.0
	46	4	1.9	87.9
	47	2	0.9	88.8
	48	3	1.4	90.2
	49	3	1.4	91.6
	50	4	1.9	93.5

#3 Prison Maladjustment Scale cont'd

Score	# of Cases	Percent	Cumulative
51	2	0.9	94.4
52	2	0.9	95.3
53	3	1.4	96.7
54	1	0.5	97.2
55	1	0.5	97.7
56	2	0.9	98.6
57	2	0.9	99.5
58	1	0.5	100.0

#4 Wisconsin Assessment of Client Risk Scale

Score	# of Cases	Percent	Cumulative
0	3	1.4	1.4
1	2	0.9	2.3
2	3	1.4	3.7
3	1	0.5	4.2
4	4	1.9	6.0
5	2	0.9	7.0
6	3	1.4	8.4
7	7	3.3	11.6
8	4	1.9	13.5
'Low' 9	5	2.3	15.8
10	8	3.7	19.5
11	6	2.8	22.3
12	9	4.2	26.5
13	5	2.3	28.8
14	4	1.9	30.7
15	7	3.3	34.0
16	8	3.7	37.7
17	7	3.3	40.9
18	9	4.2	45.1
19	8	3.7	48.8

20	12	5.6	54.4
21	6	2.8	57.2
22	13	6.0	63.3
23	5	2.3	65.6
24	4	1.9	67.4
25	6	2.8	70.2
'High' 26	7	3.3	73.5
27	5	2.3	75.8
28	4	1.9	77.7
29	8	3.7	81.4
30	4	1.9	83.4

#4 Wisconsin Assessment of Client Risk Scale cont'd

Score	# of Cases	Percent	Cumulative
31	8	3.7	87.0
32	7	3.3	90.2
33	4	1.9	92.1
34	5	2.3	94.4
35	4	1.9	96.3
36	2	0.9	97.2
37	4	1.9	99.1
38	1	0.5	99.5
39	1	0.5	100.0

#5 Illinois Risk Evaluation Scale

Score	# of Cases	Percent	Cumulative
0	3	1.4	1.4
1	2	0.9	2.3
2	4	1.9	4.2
3	4	1.9	6.0
4	4	1.9	7.9
5	5	2.3	10.2
6	4	1.9	12.1
7	9	4.2	16.3
8	6	2.8	19.1
'Low' 9	10	4.7	23.7
10	7	3.3	27.0
11	4	1.9	28.8
12	7	3.3	32.1
13	13	6.0	38.1
14	12	5.6	43.7
15	9	4.2	47.9
16	12	5.6	53.5

17	22	10.2	63.7
18	10	4.7	68.4
19	14	6.5	74.9
20	7	3.3	78.1
21	8	3.7	81.9
22	8	3.7	85.6
'High' 23	13	6.0	91.6
24	8	3.7	95.3
25	4	1.9	97.2
26	3	1.4	98.6
27	1	0.5	99.1
28	2	0.9	100.0

#6 Level of Supervision Inventory

	Score	# of Cases	Percent	Cumulative
'Low'	0	1	0.5	0.5
	2	1	0.5	0.9
	3	1	0.5	1.4
	4	1	0.5	1.9
	5	5	2.3	4.2
	7	1	0.5	4.7
	8	3	1.4	6.0
	9	1	0.5	6.5
	10	3	1.4	7.9
	11	4	1.9	9.8
	12	3	1.4	11.2
	13	3	1.4	12.6
	14	4	1.9	14.4
	15	3	1.4	15.8
	16	8	3.7	19.5
	17	9	4.2	23.7
	18	6	2.8	26.5
	19	6	2.8	29.3
	20	9	4.2	33.5
	21	8	3.7	37.2
	22	4	1.9	39.1
	23	7	3.3	42.3
	24	5	2.3	44.7
	25	11	5.1	49.8
'High'	26	12	5.6	55.3
	27	3	1.4	56.7
	28	6	2.8	59.5
	29	10	4.7	64.2
	30	8	3.7	67.9
	31	12	5.6	73.5
	32	6	2.8	76.3
	33	9	4.2	80.5
	34	9	4.2	84.7
	35	6	2.8	87.4
	36	4	1.9	89.3
	37	7	3.3	92.6
	38	3	1.4	94.0
	39	6	2.8	96.7
	40	4	1.9	98.6
	42	3	1.4	100.0

#7 Salient Factor Score

	Score	# of Cases	Percent	Cumulative
'High'	1	4	1.9	1.9
	2	21	9.8	11.6
	3	29	13.5	25.1
	4	51	23.7	48.8

'Low'	5	45	20.9	69.8
	6	26	12.1	81.9
	7	16	7.4	89.3
	8	12	5.6	94.9
	9	11	5.1	100.0

#8 Statistical Information on Recidivism Scale

	Score	# of Cases	Percent	Cumulative
'High'	-19	1	0.5	0.5
	-18	3	1.4	1.9
	-17	2	0.9	2.8
	-16	3	1.4	4.2
	-15	3	1.4	5.6
	-14	7	3.3	8.8
	-13	3	1.4	10.2
	-12	10	4.7	14.9
	-11	15	7.0	21.9
	-10	23	10.7	32.6
	-9	24	11.2	43.7
'Low'	-8	19	8.8	52.6
	-7	13	6.0	58.6
	-6	13	6.0	64.7
	-5	17	7.9	72.6
	-4	9	4.2	76.7
	-3	9	4.2	80.9
	-2	9	4.2	85.1
	-1	9	4.2	89.3
	0	2	0.9	90.2
	1	7	3.3	93.5
	2	3	1.4	94.9
	3	1	0.5	95.3
	4	5	2.3	97.7
	5	2	0.9	98.6
	6	1	0.5	99.1
	9	1	0.5	99.5
	10	1	0.5	99.1

#9 Oregon Parole Prognosis Scale

	Score	# of Cases	Percent	Cumulative
'High'	2	12	5.6	5.6
	3	35	16.3	21.9
	4	44	20.5	42.3

	5	51	23.7	66.0
	6	31	14.4	80.0
	7	15	7.0	87.4
'Low'	8	8	3.7	91.2
	9	8	3.7	94.9
	10	4	1.9	96.7
	11	7	3.3	100.0

#10 Pennsylvania Parole Prognosis Assessment Scale

	Score	# of Cases	Percent	Cumulative
'High'	0	6	2.8	2.8
	4	8	3.7	6.5
	5	4	1.9	8.4
	9	1	0.5	8.8
	12	20	9.3	18.1
	14	32	14.9	33.0
	16	7	3.3	36.3
	17	2	0.9	37.2
	19	2	0.9	38.1
	21	1	0.5	38.6
	24	2	0.9	39.5
	26	33	15.3	54.9

'Low'	28	1	0.5	55.3
	29	2	0.9	56.3
	30	1	0.5	56.7
	31	2	0.9	57.7
	35	1	0.5	58.1
	36	8	3.7	61.9
	38	7	3.3	65.1
	39	1	0.5	65.6
	40	8	3.7	69.3
	41	1	0.5	69.8
	47	1	0.5	70.2
	50	12	5.6	75.8
	51	7	3.3	79.1
	52	1	0.5	79.5
	53	11	5.1	84.7
	55	2	0.9	85.6

#10 Pennsylvania Parole Prognosis Assessment Scale cont'd

Score	# of Cases	Percent	Cumulative
56	5	2.3	87.9
58	1	0.5	88.4
64	2	0.9	89.3
65	15	7.0	96.3
67	3	1.4	97.7
69	1	0.5	98.1
70	1	0.5	98.6
79	3	1.4	100.0

END

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FIN