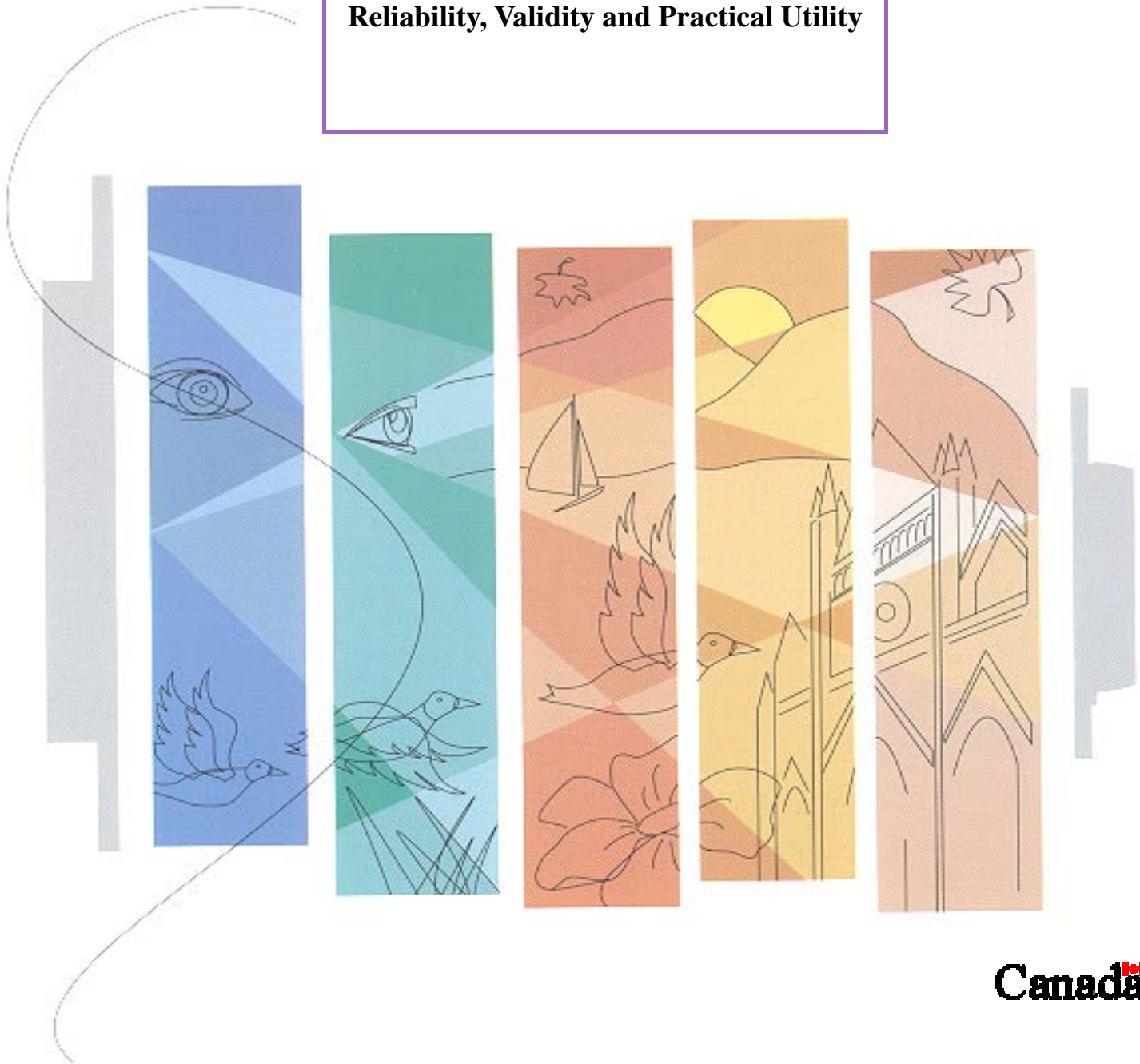




Research Branch
Direction de la recherche

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**An Operational Review of the
Custody Rating Scale:
Reliability, Validity and Practical Utility**



**AN OPERATIONAL REVIEW OF THE CUSTODY RATING SCALE:
RELIABILITY, VALIDITY AND PRACTICAL UTILITY**

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Executive Summary

Accurate inmate classification is critical to the effective management of prisons and prison populations, and to meeting Correctional Service of Canada's legislative and policy mandates. Objective classification methods are needed to ensure excessive controls are not imposed on offenders, help direct the use of limited resources and generate accurate offender information for long-term accommodation planning. The 1988 Service introduction of the Custody Rating Scale established objective, standardized criteria for the initial classification of federal offenders (an automated version of the Scale became a component of the penitentiary placement module in 1991). This study is the third examination of the Custody Rating Scale to assess its reliability, validity and practical utility.

A sample of 6,745 active offender files with complete and accurate Custody Rating Scale evaluations was drawn from the Offender Management System in March of 1995. Unlike previous pilot or field tests, this review used a large national sample and the data reflects the current prison environment.

This study indicates that the Custody Rating Scale continues to perform well as assessed by a variety of traditional psychometric and operational criteria. The introduction of the automated version ensures the Scale is applied to all offenders at admission and greatly reduces omissions, computational errors and irregularities in the application of the security classification protocols.

The Custody Rating Scale-penitentiary placement decision concordance rate reached 74%, which is an 11% gain over previous reviews. This gain was the result of an increase in agreement between cases rated as, and placed in, minimum-security and suggests a trend towards less conservative placement practices. The Scale was also shown to predict institutional incidents (such as violent, drug/alcohol and escape), discretionary release and conditional release adjustment.

Further, significant correlations between the Custody rating Scale and other Service risk indicators (such as the Statistical Information on Recidivism Scale and Offender Intake Assessment Process) suggest the convergent validity (the degree to which different measures are predictive of the same criteria) of the Scale. In fact, analyses comparing Custody Rating Scale security level designation and penitentiary placement decisions demonstrated that the Scale was effective in anticipating the security classification needs of offenders (based on a number of institutional adjustment indicators).

The impact of assessor overrides on the Custody Rating Scale was also examined. While the automation of the Scale eliminated many opportunities for inconsistent administration, internal consistency tests only provided modest confirmation of the Scale's reliability. Despite this, the Scale continued to produce discrete, mutually exclusive classification results.

A comparative analysis of the study results exposed a number of regional differences. The average institutional adjustment scores ranged from 31 to 47 across the five Service regions; concordance rates ranged from 66% to 77%, and differences were noted in the nature and frequency of overrides to the scale. These regional differences may be the result of differences in population profiles, documentation availability, accommodation pressures, penitentiary and classification practices, and/or regional perspectives. To ensure the uniform application of the Scale, it is recommended that:

- i. a policy statement be re-issued stressing the need for complete and accurate completion of the Scale, for all admitted offenders;
- ii. Custody Rating Scale training exercises be provided; and
- iii. the documentation availability and usage patterns of the five regions be reviewed based on a current sample of admissions.

Complete agreement with the Custody Rating Scale was not anticipated and it is not necessarily desirable. Scale results were overridden in about 26% of cases. Many of the overrides were for factors not considered by the Scale were therefore, legitimate. Given these realities, it is recommended that:

- iv. policy be adopted to acknowledge protection, medical condition, geographic location, violent sexual assault and deportation status as authorized reasons for overriding Scale results;
- v. Scale instructions be amended to include appropriate operational definitions and procedures for overrides; and
- vi. written reasons must be provided for overrides not specifically authorized.

Additional analyses were performed to determine the validity of the Custody Rating Scale for female, Aboriginal and sex offenders. The evidence from these analyses indicates that the Scale is also appropriate for use with these offenders. Tests with penitentiary placement decisions demonstrated that the Custody Rating Scale was more effective in classifying these groups of offenders in terms of institutional incidents, escapes and discretionary release.

An important advantage of this form of offender classification is that it allows management greater control over the distribution of offenders across security levels. Offender distribution can be modified and monitored with greater precision by adjusting the cut-off values of the Custody Rating Scale sub-scales or customizing security protocols to meet current realities. The original Scale cut-off values were developed in the mid-1980s from a sample that represented the population profile and management issues of that time. However, neither the security distribution resulting from the Custody Rating Scale (27% minimum-, 68% medium-, 5% maximum-security) nor actual placement (24% minimum-, 68% medium-, 8% maximum-security) reflect the designed distribution. Both the Custody Rating Scale and actual initial placement distributions assigned greater numbers of offenders to lower security levels. To promote a more appropriate distribution given current realities, a number of different cut-off values were explored. It is recommended that cut-off values that will achieve a 20% minimum-, 70% medium- and 10% maximum-security distribution be implemented.

The technology exists to model any changes to the Scale's cut-off values to determine their full impact prior to implementation.

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INTRODUCTION

Accurate inmate classification is critical to the effective management of prisons and prison populations, and to meeting Correctional Service of Canada's legislative and policy mandates. Objective classification methods are needed to ensure that excessive controls are not imposed on offenders, help direct the use of limited resources and generate accurate offender information for long-term accommodation planning.

The current security classification review was undertaken to examine the efficacy of offender classification practices, to re-validate the Custody Rating Scale and to develop an objective model for the reclassification of offenders. This is the third report examining the application, validity and impact of the Custody Rating Scale. In earlier studies, hand-generated, hard copy data was collected from the two Service regions that participated in pilot tests of the Scale. This study replicates and expands on many of the analyses of the earlier studies, but with a large sample drawn from all five Service regions and uses Offender Management System data which allows for an evaluation of both the impact of automation and of the data quality produced by the Offender Management System. Further, data was collected over a much longer time period, allowing for both retrospective and comparative analyses with earlier results.

BACKGROUND

Classification is the initial stage in the management of offender behaviour. It reflects the fundamental importance of learning about the similarities and differences among individuals, which in turn simplifies how we make decisions in the management and treatment of these individuals (Clements, 1982). Classification is indispensable to bringing order to complexity, communicating with others, measuring results of decisions and providing an understanding of the basic task at hand (Jesness, 1988).

Offender classification has played a central role in the evolution of perspectives on crime and offender treatment (Clements, 1981). The concept is grounded in the fact that measurable differences exist between individual offenders and that this has implications for treatment and management (Gottfredson & Tony, 1987; Andrews, Bonta & Hoge, 1990).

Objective classification schemes are based on actuarial models that adopt psychometric principles and rigorous validation standards (Austin, 1986) in contrast to more traditional procedures that rely on formalized clinical judgments and subjective impressions. Offender classification models based on psychological and behavioural variables (Quay, 1984; Jesness, 1988) and/or personality factors (Megargee, 1979) abound, as do models with direct implications for offender treatment and prison management (Bonta & Motiuk, 1985; 1987; 1990; Motiuk, Bonta & Andrews, 1986). Despite some criticisms of their predictive abilities (Gottfredson, 1986; Veneziano, and Veneziano, 1986; Carey, Garske & Ginsberg, 1986),

objective classification models have demonstrated many benefits --

particularly in their assessment of institutional security, custody and program potential; as well as in resource targeting and matching offender needs with available resources. These procedures are credited with increasing the proportion of offenders in lower security levels without adversely affecting prison misconduct, escape or fatality rates (Buchanan, Whitlow & Austin, 1986; Bonta & Motiuk, 1992; Van Voorhis, 1988).

A classification model should embrace the agency principles and provide a coherent theoretical framework consistent with classification practice. Most classification frameworks attempt to assess, manage and contain risk of escape, to public safety and of institutional maladjustment through the application of security ratings, program intervention and the gradual reduction of restrictions. Objective classification is often conceptualized as a two-tiered process within which initial classification is followed by regular reclassification. Reclassification acts as a check against mistakes during the initial classification phase. Without it, substantial amounts of over-classification inevitably occur (Austin, 1983; Walter, 1992). Whereas initial classification ratings are frequently based on static or historical factors (such as prior commitments and escapes), reclassification decisions are usually based on in-custody dynamic behaviour and the degree and direction of behavioural change. Reclassification instruments should, therefore, be independent of initial scoring criteria and rely heavily on measures of in-custody behaviour (Quay, 1984).

Most correctional agencies set out conditions that allow staff to override classification ratings. Available information suggests that the use of overrides is mostly driven by cell capacity, protection and program considerations (Buchanan, Whitlow & Austin, 1986), but it is also often the result of unspecified or vague generalizations about the inappropriateness of the instrument's rating (Solicitor General, Canada, 1987; Porporino, Luciani, Motiuk, Johnston & Mainwaring, 1989; Luciani, Motiuk & Mainwaring, 1995). Classification instruments should, therefore, be valid in the sense that its implications for treatment and management are meaningful and replicable (Gottfredson & Tonry, 1987; Kane, 1986). Accordingly, objective classification instruments should be designed to be consistent with four operational goals - prediction, management, treatment and understanding (MacKenzie, Posey & Rapaport, 1988; Brennan, 1987).

In a period of increasingly scarce resources and a heightened awareness of Charter rights, the trend toward greater utilization of objective classification methods is compelling. Objective classification provides correctional agencies with both a practical and legal framework to address problematic inmate behaviour, to establish intervention strategies and to maximize the management potential of correctional institutions.

PROCEDURE

Research Strategy

A number of sources recommend essential criteria against which classification systems and instruments should be measured (Clements, 1981; Megargee, 1979; Motiuk, 1986; Toch, 1981). It is generally accepted that classification systems must be complete in the sense that every offender is "given a label" and that assignment to various categories is supported by universally established operational definitions. Classification instruments should be sufficiently reliable that different staff members can apply the definitions and classification protocols in a manner that yields consistent outcomes. Validity criteria require that classification categories be meaningfully distinct from each other and that implicit predictions made by the scheme are confirmed. Additionally, classification schemes should account for changes in status and behavior, address treatment implications and be economical to operate. Finally, the environment within which the classification process takes place should be reviewed and its impact on the classification system be determined.

Many of these principles are equally relevant in meeting the Auditor General's required re-validation of the Custody Rating Scale. Accordingly, this report examines the performance of the Scale in terms of its application, validity and stability. National and regional completion rates are analyzed and application errors are evaluated. The relationship between Scale ratings, placement decisions and appropriate outcome criteria are used as the basis for a variety of validity assessments.

An item analysis assesses scale stability and population distribution patterns are examined to determine the potential impact of the Scale. Finally, retrospective and regional comparisons are explored and recommendations made as to classification practices or refinements.

Data Sources

All data presented in this report (including the Custody Rating Scale item scores and sub-scale totals, security classification ratings, initial placement decisions, institutional incident, risk/needs and related demographic data) are drawn from the Offender Management System. This system provides ready access to a wide range of standardized information, although the methods of accessing this data are relatively new and confirmation of the data quality is essential to any analysis or application. A number of data confirmation exercises were therefore used (including searches for out-of-range scores, missing scores, and archival, dormant or duplicate files). Checks were also made to confirm score computations and to ensure that security classification protocols were properly applied. When contaminants or irregularities were found, the file was removed from the sample.

Custody Rating Scale

The Custody Rating Scale (see Appendix 1) consists of two independently scored sub-scales: a five-item Institutional Adjustment scale and a seven-item Security Risk scale. In most cases, item scores increase according to the frequency of incidents and, as scores escalate on either sub-scale, higher security classification is predicted. Security classification is determined based on the total sub-scale scores, in accordance with predetermined protocols that specify cut-off values for minimum and maximum security. In the event of disagreement between the sub-scales, the Custody Rating Scale security level designation is determined by the Scale assigning the higher classification rating.

Potential scores range from 0 to 186 points on the Institutional Adjustment scale, and from 17 to 190 points (and higher when open-ended scores for release failures are considered) on the Security Risk scale. Item weight and classification cut-values are, for the most part, empirically derived from a 1987 sample of federal offenders. In some cases, item weights are defined by policy priorities. For example, Offence Severity is weighted to prevent the initial placement of an offender serving a life sentence in minimum-security. Cut-off values are designed to produce an offender distribution of 15% minimum-, 73% medium- and 12% maximum-security.

Sample

The sample was made up of all active offender files with a complete and accurate Custody Rating Scale assessment as of March 20, 1995. The total incarcerated population at that time was 14,114 offenders.

Completed scale assessments were found for 6,790 offenders, from which 45 files were removed due to error, duplication or dormancy. This resulted in a sample of 6,745 files or 48% of the incarcerated population, distributed among the Service regions according to the following chart:

Regional Breakdown of Sample

Region	Total Population #	Share of Total Population	Number of Scales	Share of Total Scales
Atlantic	1,425	10%	49	0.7%
Quebec	3,702	26%	3,213	47.6%
Ontario	3,792	27%	2,441	36.2%
Prairies	3,272	23%	692	10.3%
Pacific	1,923	14%	350	5.2%
Total	14,114	100%	6,745	100%

Custody Rating Scale completion rates varied among the regions, so regional representation within the sample does not necessarily reflect the region's proportional share of the national population. Completion rates of 100% were not expected for a number of reasons, including admissions that pre-date the implementation of the Offender Management System, transfers from other regions, and a less than enthusiastic implementation strategy. Scale instructions were also not specific as to which admissions were exempt from assessment, leaving application open to a variety of

interpretations. However, the inaccuracies in population representation were not a major concern, given that the examination of the Scale's performance relied largely on aggregate data results.

Under normal circumstances we would expect the penitentiary placement process to follow the admission of the offender. However, some admission dates followed placement, which suggests that the Custody Rating Scale was completed when the offender was reincarcerated for a conditional release violation. There were a total of 479 cases where admission dates followed penitentiary placement.

The average number of days taken to complete the Custody Rating Scale was 72 days ($SD=122$). The Quebec region managed to complete the placement process within 57 days of admission, while the average completion time ranged from 78 to 87 days in the other regions. In a number of cases, it was evident that the Custody Rating Scale was not being completed at the time of initial admission as hundreds of days passed before completion. These cases inflate the average days to completion results, so it may be more meaningful to note that the Scale was completed within 60 days of admission for 64% of the sample, while 16% of the sample exceeded 90 days to completion.

An analysis of total item scores and sub-scale totals provided a number of insights into the nature and profile of the sample. For example, the average Institutional Adjustment scale score was 37 ($SD=24.5$), suggesting an adjustment profile at the low end of the minimum-security range. The minimum potential score was awarded to 7%

of the sample, and 87% of offenders had adjustment scores of 60 or less. Eighty percent of the sample had no history of involvement in institutional incidents, 82% had no record of escape (or such an attempt), and just over 60% were judged to have no or moderate substance abuse histories.

“Age” and “street stability” are found on both sub-scales and, although the assigned weights vary, rating distributions were identical. The sample consisted largely of offenders either older than 35 (33%) or younger than 25 (30%). More than half of the sample were judged to have “average” or “below average” street stability. Overall, the average Institutional Adjustment scale scores were considerably lower than those anticipated in the original Custody Rating Scale design. These low scores have implications for the distribution of offenders.

average Security Risk score was 75 (SD=25.8), which suggests an overall security profile in the medium-security range. The minimum potential score was awarded to just 1% of the sample. The majority of the sample (83%) were admitted with no outstanding charges, 86% had current charges judged as “serious/major”, 58% were serving sentence lengths of 4 years or less, 63% had not been previously released on parole or statutory release, and 18% had no prior convictions, while another 20% had over 15 prior convictions.

RESULTS

Application - Update

In earlier reports, we expressed concerns about a number of operational factors that adversely impacted on the accurate application of the Scale. It was suggested that many errors in the computation of item scores, determination of offender age and application of security classification protocols could be eliminated with the introduction of an automated version of the Scale. This review found only 16 such contamination errors within the sample of 6,790, a rate that eliminates many of the previous concerns about careless errors. While we did not survey documentation availability, the Offender Management System also provides immediate on-site access to all demographic data such as age, criminal history and offence severity. It often provides derivative information related to previous incarceration, substance abuse and street stability (as drawn from previous Service progress summaries). The only areas where we continue to rely on offender-reported information is with respect to the provincial incarceration and street histories of first time offenders.

It is clear that the introduction of the automated Custody Rating Scale has made a significant contribution to the quality, accuracy and consistency with which the Scale is applied, and has eliminated many of the operational concerns identified in earlier reviews.

Regional Comparisons

Average Institutional Adjustment scores were uniformly low (relative to total potential scores) across all regions and well below the cut-off value for medium-security classification. The scores ranged from 31 in the Prairie region to 47 in the Pacific region. Average Security Risk scale scores were more mid-range and were above medium-security cut-off value (ranging from 72 in the Prairie region to 81 in the Atlantic region).

Table 1: Custody Rating Scale Scores by Region

Region	Institutional Adjustment Average (SD)	Security Risk Average (SD)
Atlantic (n=49)	42 (24)	81 (30)
Quebec (n=3,213)	37 (23)	74 (25)
Ontario (n=2,441)	38 (24)	77 (27)
Prairie (n=692)	31 (23)	72 (25)
Pacific (n=350)	47 (34)	76 (28)
Total (N=6,745)	37 (24)	75 (26)

The reasons for these regional disparities are not totally clear. Given that the introduction of the automated version of the Custody Rating Scale reduced computation and interpretation errors, it should also limit the potential for regional disparities. Differences in regional population profiles may be part of the cause. The administration of the Scale relies on the timely availability of information from a variety of criminal justice sources, so it is possible that access to this information may be uneven across the regions. The absence of information or reliance on self-reported information can result in deflated item scores

and, therefore,

lower classification ratings. The small samples in the Atlantic, Pacific and Prairie regions may also contribute to the variances in scores reported from these regions.

Distribution by Security Classification

Institutional Adjustment scores pointed largely to a minimum-security profile (94%). Security Risk scores produced a more balanced distribution, but still resulted in more minimum-security outcomes than anticipated in the original design of the Scale. The major source of disagreement between the sub-scales involved minimum- versus medium-security level ratings. The large majority of offenders rated as minimum-security by the Institutional Adjustment scale ended up as a medium-security outcome because of their medium-security rating on the Security Risk scale. In effect, the Custody Rating Scale distribution was largely determined by Security Risk scores. With the exception of increasing the Scale's maximum-security distribution, Institutional Adjustment scores appeared to contribute little to final classification outcomes.

Table 2: Sub-scale Distributions By Custody Rating Scale Designation

Sub-scale	Minimum-security	Medium-security	Maximum-security
Institutional Adjustment	94.3%	3.0%	2.7%
Security Risk	27.8%	69.5%	2.7%
Overall	27.3%	67.6%	5.1%

(N=6,745)

The Quebec and Prairie regions rated just over 3% of their population as maximum-security, while the Atlantic and Pacific place more than 14% in this group. All regions rated from 61% to 68% of their admissions as medium-security, except the Atlantic region (55%). There was less variability in minimum-security ratings, which ranged from 32.5% (Prairies) to 24% (Pacific).

Table 3: Regional Distribution of Custody Rating Scale Designation

Region (Number)	Minimum-security	Medium-security	Maximum-security
Atlantic (49)	30.6%	55.1%	14.3%
Quebec (3,231)	27.8%	68.6%	3.6%
Ontario (2,441)	25.7%	68.3%	6.1%
Prairie (692)	32.5%	64.3%	3.2%
Pacific (350)	24.0%	61.4%	14.6%
Total (6,745)	27.3%	67.6%	5.1%

Reliability

The Custody Rating Scale establishes national norms and procedures for security classification of offenders. These are applied across the five regions, which each possess unique classification traditions, local perspectives and accommodation options. It is important, therefore, to ensure that the Scale is consistently applied and meets acceptable reliability standards. Our experience suggests that the reliability of the Scale was greatly enhanced by its inclusion in the penitentiary placement module, its reliance on discrete hard data, and by the growing staff awareness and acceptance of objective classification techniques.

A coefficient alpha test, which measures the internal consistency among Scale items, was used to more accurately explore the Scale's reliability. Where alpha is high, it is assumed that the internal consistency of the Scale is also high. The Custody Rating Scale sub-scales were designed to measure distinct factors, so internal consistency tests were conducted separately for each sub-scale. The interrelations among sub-scale items and the correlation between items and composite total scores are set out in Appendix 2.

The overall reliability coefficient (alpha) was .39 and .10 for the Institutional Adjustment and Security Risk sub-scales, respectively. Institutional Adjustment item-to-total correlations and nearly all inter-correlations were significant ($p < .005$), with two exceptions (alcohol/drug usage and age at sentencing). Security Risk scale, outstanding charge, current offence severity and street stability were the only item-totals where correlations were significant ($p < .005$).

These results offer good support for the internal consistency of the Institutional Adjustment scale and fair support for the Security Risk scale. As a result, we further explored Scale item averages to evaluate the Scale's ability to yield discrete unique classification outcomes (see Table 4).

Table 4: Scale Item Averages and Custody Rating Scale Designation

Item	Total	Max	Med	Min	F Ratio
Institutional Incident Score	5.6	36.63	4.86	1.67	1241**
Escape History	1.92	5.59	2.13	0.73	135**
Street Stability Adjustment	20.39	26.65	22.28	14.56	437**
Alcohol\Drug	3.16	3.98	3.38	2.45	112**
Age at Sentencing	5.85	10.46	7.18	1.71	471**
Prior Convictions	7.62	9.18	8.24	5.18	171**
Outstanding Charge Severity	2.79	5.81	3.38	0.75	151**
Current Offence Severity	28.21	33.56	30.97	20.34	765**
Sentence Length	13.58	38.33	14.49	6.71	799**
Street Stability Security Risk	6.34	8.28	6.96	4.53	445**
Parole\M.S. Release Score	1.31	1.87	1.41	0.98	25**
Age at Admission	14.84	22.6	17.86	5.92	789**

(**p<.001)

The relationships between classification ratings and average item scores were uniformly linear across all items and in the expected direction. Maximum-security rated offenders received the highest average item scores, followed by medium- and minimum-security rated offenders. The differences between the item averages were significant ($p < 0.001$) in all cases and additional multiple group comparisons confirmed significant differences ($p < 0.05$) among all possible group comparisons. These results indicate that, despite modest internal consistency results, the Scale effectively discriminated between security classification outcomes. The results also suggest that, while it may be necessary to reconfirm Scale items and weights, improving Scale reliability may be better served by also focusing on operational conditions. The impact of factors such as documentation availability and application practices, should be explored and their contribution to consistent Scale application be determined.

Validity

a) Concurrent Validity

Concurrent validity assesses the extent to which there is agreement between the Custody Rating Scale security level designation and an alternate method of security classification, such as the actual placement decision. Concurrent validity can also have important implications for staff confidence in, and acceptance of, the Custody Rating Scale. The following analysis examines the concordance between Scale ratings and the actual penitentiary placement decision to assess the Scale's concurrent validity. Total sample concordance rates are presented in Table 5, although detailed regional rates can be found in Appendix 3.

The frequencies and percentages on the shaded diagonal represent cases where the Scale rating and the penitentiary placement decision agreed on the security classification. The cells above the diagonal represent instances where the Scale rating was overridden and the offender was placed in a higher security level. The cells below the diagonal represent disagreements where the Scale was overridden by a placement to a lower security level.

Penitentiary placement decisions were missing from 112 files, resulting in a sample of 6,633 cases. The overall concordance rate (represented by the sum of the diagonally shaded areas) was 74%. This is an 11% increase in agreement with Scale ratings over the two previous field tests and a 14% improvement over the original construction tests.

Table 5: Custody Rating Scale-Penitentiary Placement Decision Concordance

		Placement Decisions			Custody Rating Scale Total
		Minimum	Medium	Maximum	
Custody Rating Scale	Minimum (#)	16.3% (1078)	10.7% (707)	0.3% (21)	27.3% (1806)
	Medium (#)	7.7% (508)	54.7% (3629)	5.3% (349)	67.7% (4486)
	Maximum (#)	0.1% (4)	2.1% (142)	2.9% (195)	5.1% (341)
	Placement Decision Total (#)	24.1% (1590)	67.5% (4478)	8.5% (565)	

(Chi square=2,768; p<.001; n=6,633)

Based on previous reviews, accounting for the effects of legitimate Scale overrides could push the actual concordance rate as high as 84%. (In contrast there we found an 89% concordance rate between penitentiary placement decisions and case management officer placement recommendations - a situation where legitimate override factors are considered).

The largest source of disagreement between the Scale ratings and penitentiary placement decisions was offenders rated as minimum- or medium-security (16%), but placed in a higher security level. Two thirds of these overrides occurred where minimum-security rated offenders were placed in medium-security, while the remaining cases involved medium-

security rated cases that were overridden to maximum-security. This is a substantial reduction from previous studies that found that 32% of the Scale ratings were overridden to higher security levels. It is also interesting to note that overrides to lower security increased from 4% to 10% in this latest sample. The majority of overrides to lower security were medium-rated offenders being placed in minimum-security. While overall Scale ratings continue to be more liberal in assigning security classification, the gap between ratings and placement practice has clearly narrowed in the last five years.

The following table presents a summary of the regional concordance and override results.

Table 6. Regional Concordance and Override Results

Region (#)	Concordance	Overrides to Higher Security	Overrides to Lower Security
Atlantic (44)	66%	20%	14%
Quebec (3,202)	77%	11%	12%
Ontario (2,401)	71%	22%	7%
Prairie (638)	74%	17%	9%
Pacific (348)	70%	21%	9%
Total (6,633)	74%	16%	10%

Concordance rates range from 77% in the Quebec region to 66% in the Atlantic region. With the exception of Quebec, Scale overrides to higher security levels predominated in all regions, exceeding overrides to lower security levels by a 2 to 1 ratio in the Pacific (21% to 9%) and Prairie region (17% to 9%); 3 to 1 in the Ontario region (22% to 7%); and 5 to 3 in the Atlantic region (20% to 14%). In the Quebec region

overrides to lower security levels were slightly more frequent than overrides to higher security (12% to 11%). In the regions where overrides to higher security levels prevailed, offenders rated as minimum-security were most often placed up to medium-security, while the opposite occurred in Quebec.

These results confirm our earlier findings that found placement decisions tend to be more conservative in security classification than that predicted by the Scale. Despite this, it is significant that this study found that the concordance rate has increased by almost 11%, largely due to fewer overrides to higher security. During the 1991 to 1994 fiscal years, maximum-security placements consistently accounted for between 8% and 9% of admissions. On the other hand, minimum-security placements rose from 22% in 1991, to 26% in 1992, to 27% in 1993 and fell back to 21% in 1994. The introduction of the Scale, at least in the early years, coincided with a growing trend in placement practices that saw a larger number of offenders placed at lower security levels.

Complete agreement with the Scale was not anticipated, nor is it desirable. No actuarial method can completely address the myriad of factors surrounding a decision as complex as security classification. Some discretion is necessary in applying actuarial assessment. Based on our earlier calculations, 8% to 12% of the discordance may be attributed to legitimate override factors such as protection, medical condition, program availability, family proximity, and deportation status considerations. It is important to recognize these factors and to allow them to be formally entered into the classification equation, without

tampering with the Custody Rating Scale assessment procedure. Amending the Scale process by acknowledging legitimate overrides would allow for a better understanding of concordance and provide for more accurate population profiles, while preserving the integrity of the process.

b) Convergent Validity

Convergent validity reflects the relationship between factors that are measured differently but are expected to be significantly correlated and in the same direction. The correlation between Statistical Information on Recidivism scale scores, and Risk/Need level ratings drawn from the Offender Intake Assessment (OIA) process and the Custody Rating Scale sub-scale scores and overall security-level designation are set out below. The sample was made up of 3,656 files that contained a Statistical Information on Recidivism scale, 290 files with OIA Risk/Need level ratings and 309 files with individual Risk and Need level ratings. The overall average Statistical Information on Recidivism score was +0.47, ranging from +5.0 for minimum-security rated offenders to -.63 and -1.4 for medium- and maximum-security rated offenders, respectively. According to OIA, "High-risk/High-need" offenders were the most frequently identified group (33%), followed by "Medium-risk/Medium-need" (28%) and "Low-risk/Low-need (10%).

Table 7: Correlations Between Statistical Information on Recidivism, Risk/Needs and Institutional Adjustment, Security Risk and Custody Rating Scale Designations

Scale (#)	Institutional Adjustment	Security Risk	Custody Rating Scale
Statistical Information on Recidivism Scale (3,656)	-.53***	-.12***	-.39***
OIA Risk Level (309)	.35***	.43***	.46***
OIA Need Level (309)	.47***	.39***	.52***
OIA Risk/Need Level (290)	.43***	.46***	.52***

(***p<.0001)

Correlations between the Statistical Information on Recidivism scale scores, OIA Risk and Need level ratings and the Custody Rating Scale sub-scale and overall scores were all statistically significant (p<.0001) and linear in the anticipated direction. As the probability of recidivism or offender risk and need level increased, so did security classification. We also examined correlations between outcomes (as opposed to scores) and found significant, although somewhat weaker, correlations among all the above measures and sub-scales.

c) Predictive Validity

Implicit in actuarial assessments is an anticipation of future behaviour. Therefore, the extent to which the Custody Rating Scale is accurate in classifying offenders in terms of predicting relevant future behaviour provides a measure of the predictive validity of the Scale. We examined¹ the relationship between Scale outcomes and offender behaviour (as represented by institutional incident data, release type and interruption of conditional release) to assess the Scale's predictive validity.

1) It has been argued that incident rates are inappropriate criterion variables as they are often a reflection of the security environment as opposed to individual likelihood to engage in incidents. To test this theory, we examined the incident rates of offenders actually "placed" at security levels. If security environment did influence the incident rate we would expect that no rate differences would be found between scale security classifications among offenders placed at the same level. However, despite being placed at the same level the positive linear relationship between incident rates and scale outcomes was maintained. Offenders rated as maximum-security continued to incur significantly higher rates, followed by medium- and minimum-security rated offenders, regardless security placement (see Appendix 4).

i) Custody Rating Scale Designation and Incident Rates

Institutional incidents ranged from murder and assault to disobeying an order and being disrespectful to an officer. Incident data was collected following the administration of the Scale over a follow-up period from March 1991 to August 1995 (or up to four and half years in some cases). To examine the relationship between classification and behaviour, contingency table analyses of the frequency of offenders who incurred incidents (distributed across classification outcomes) were conducted for overall incidents and specifically for violent, drug/alcohol and escape incidents. Incident rates were also computed for each classification level based on the percentage of offenders involved in incidents within each level.

Table 8a: Distribution of Offenders With Incident(s) by Custody Rating Scale Designation

	Maximum	Medium	Minimum
Offenders without incidents(#)	168	2,961	1,556
Offenders with incidents(#)	175	1,597	288
Incident rate %	51	35	15.6

(Chi square=305; p<.001; N=6,745)

Table 8b: Distribution of Offenders With Violent Incident(s) by Custody Rating Scale Designation

	Maximum	Medium	Minimum
Offenders without violent incidents (#)	294	4,191	1,787
Offenders with violent incidents (#)	49	367	57
Violent incident rate %	14.3	8.1	3.1

(Chi square=77; $p < .001$; N=6,745)

Table 8c: Distribution of Offenders With Drug/Alcohol Incident(s) by Custody Rating Scale Designation

	Maximum	Medium	Minimum
Offenders without drug/alcohol incidents (#)	331	4,488	1,838
Offenders with drug/alcohol incidents (%)	12	70	6
Drug/alcohol incident rate %	3.5	1.5	.03

(Chi square=28; $p < .001$; N=6,745)

The incident base rate following penitentiary placement, ranged from 31% overall to 5% for violent incidents and 1% for drug and alcohol incidents. The rate of involvement in institutional incidents of all types was significantly different for each Custody Rating Scale designation, with offenders rated as maximum-security incurring the highest rates followed by the medium- and minimum-security rated groups. As expected, offender involvement in overall, violent, drug and alcohol incidents decreased as the Scale rating decreased, indicating a positive linear relationship between classification and institutional incidents.

Escapes are more likely to occur from minimum-security facilities, so it is necessary to control for the "opportunity" for escape available to those offenders rated and placed in minimum-security. To examine the relationship between the Custody Rating Scale and escape incidents, we identified the offenders "placed" in minimum-security and their escape rates by Scale designation. The overall escape rate (regardless of initial placement) is 5.2%, while the rate for offenders placed in minimum-security is 5.6%. The distribution and rates of escapes by Scale designation for offenders placed directly in minimum-security are illustrated in the following table.

Table 8d: Distribution of Offenders Placed in Minimum-security With Escape Incident(s) by Custody Rating Scale Designation

	Maximum	Medium	Minimum
Offenders without escape incident (#)	4	469	1,028
Offenders with escape incidents (#)	0	39	50
Escape incident rate %	0	7.7	4.6

(Maximum and medium cells combined. Chi square=5.8; $p < .05$; $n = 1,590$)

When given the opportunity, the rate of escape by the offenders rated higher than minimum-security (combining maximum- and medium-security rated offenders) was 7.6% -- 3% above the rate of escape for minimum-security rated offenders. Therefore, for every 10 of 100 offenders rated as minimum-security who escaped, 16.5 of 100 offenders rated higher than minimum-security escaped. It is also interesting to note that of the 707 offenders rated as minimum-security but placed in medium-security, 27 escaped (for a rate of 3.8%). This is below the escape base rate of 5.6% for all directly placed, minimum-security rated offenders, and substantially below the 7.7% escape rate of medium-security rated offenders (the question of how well this group would have performed had they been initially placed in minimum-security is examined in a latter analysis).

ii) Custody Rating Scale Designation and Release Type

Most releases from federal incarceration can be categorized as either “discretionary” or “non-discretionary”. Discretionary refers to day or full parole releases that require National Parole Board approval and are regarded as lower-risk, with favourable institutional adjustment and demonstrated potential for successful re-integration. Non-discretionary refers to mandatory and statutory releases, and sentence completion releases. These offenders are generally regarded as higher-risk offenders, whose street adjustment potential is suspect. Releases due to death or deportation were not considered in this sample. It was expected that a relationship would exist between the Scale outcome and release type, such that the frequency of discretionary releases would increase and non-discretionary releases decrease as lower security risk is predicted. The following table illustrates the distribution of release type by Custody Rating Scale security level designation.

A total of 3,919 offenders were released at some point following the administration of the Custody Rating Scale, of which 2,734 (70%) were released on some form of discretionary release, while the remaining 30% received some type of non-discretionary release. The discretionary release rate for maximum-security rated offenders was 34%, increasing to 65% for medium-security rated offenders and 80% for minimum-security rated offenders. These results indicate a significant relationship between the distribution of offenders by release type and Scale outcome. As the

Institutional Adjustment and Security Risk dimensions increase, the likelihood of discretionary release decreases.

Table 8e: Release Type by Custody Rating Scale Designations

Release Type	Maximum	Medium	Minimum
Offenders with a non-discretionary release (#)	39	858	288
Offenders with a discretionary release (#)	20	1,590	1,124
Discretionary Release Rate %	34	65	80

(Chi square=128; p<.001; n=3,919)

iii) Custody Rating Scale Designation and Interruption of Conditional Release

Finally, we explored the relationship between conditional release adjustment and Custody Rating Scale designation by examining release “interruptions”. An interruption is defined as an offender whose conditional release was either suspended or revoked, regardless of the resolution of the suspension. This broad definition of post-release failure was used for a couple of reasons. First, offender behaviour, actual or suspected, leading to the issuance and/or execution of a warrant of apprehension, implies a measure of public risk-realized or anticipated. Secondly, suspension records most often pre-date revocation records and provide a larger base rate for analytic purposes. Post-release “success” is defined as any conditionally released offender who completed their sentence to warrant expiry without suspension interruption or who is currently under supervision without having incurred an interruption. Deportation releases, sentence completion as a result of death and supervised temporary absences are removed from the analysis.

Table 8f: Conditional Release Adjustment by Custody Rating Scale Designations

Conditional Release Adjustment	Maximum	Medium	Minimum
Offenders without interruptions(#)	9	918	802
Offenders with interruptions (#)	48	1,443	554
Interruption Rate %	84	61	41

(Chi square=128; p<.001; n=3,774)

Post-release data were available on 3,774 offenders, 2,045 were suspended or revoked, for an overall interruption base rate of 54%. The conditional release interruption rate of maximum-security rated offenders was 84.2%, for medium-security rated offenders 61.2% and for minimum-security rated offenders the interruption rate improved to 40.9% (Chi-square=163; p < .001).

In the preceding analyses the predictive validity of the CRS was evaluated against a number of indices implicit in the design and application of the scale. These analyses were based on the expectation that the scale would yield “correct decisions” with respect to indices of institutional adjustment and public safety risk. In all tests the scale performed as expected. Offenders rated by the CRS as lower security risks were better adjusted (as indicated by of lower frequencies of incidents) and lower risk (as indicated by higher frequencies of discretionary release and post release success), than offenders rated as higher security risk. Incident rates fell, while discretionary release and

post release success rates increased as scale ratings decrease in security rating.

d) Completeness (Females, Aboriginals, Sex Offenders)

In the original construction sample, no distinction was made between non-aboriginal and Aboriginal offenders, female offenders were not included and sex offenders were not considered a major concern. As a result, the feasibility of applying the Custody Rating Scale to these groups was not established. The current sample contained 65 female, 470 Aboriginal and 1,089 sex offenders, and provided a opportunity to test the validity of the Scale with these groups. The following analyses replicate many of the above reliability and validity measures with these special groups. The Offender Management System data dealing with the penitentiary placement decisions for female offenders was unreliable, so an individual file search was undertaken to collect this information and conduct the concordance analyses.

The average scores obtained for each group on the Institutional Adjustment and Security Risk sub-scales as well as for the overall Custody Rating Scale security level designation are illustrated in the following table. Missing group designations resulted in less than expected overall frequencies.

There were no significant differences between male and female offenders in the average Institutional Adjustment, Security Risk and overall Custody Rating Scale security level designations. Aboriginal

offenders scored significantly higher than non-aboriginal on all three measures and scored the highest of all the groups. Sex offenders, on the other hand,

received significantly lower scores than non-sex offenders on all three measures and scored the lowest of all the groups.

Table 9a: Group Institutional Adjustment and Security Risk Average Scores

Group (Number)	Institutional Adjustment Average	Security Risk Average	Custody Rating Scale Total Average
Male (6,679)	36.9	74.7	111.6
Female (65)	37.7	73.9	111.6
Aboriginal (470)	41.6***	80.8***	122.4***
Non-Aboriginal (6,257)	36.5	74.3	110.8
Sex Offender (1,089)	27.9***	69.3***	97.3***
Non-sex Offender (5,656)	38.6	75.8	114.4
Total Sample (6,745)	37.0	75	111.6

(***p<.0001)

Substantially higher drug and alcohol, prior convictions, age at admission scores also distinguished Aboriginal from the non-aboriginal group. With the exception of a higher current offence severity score, sex offenders rated lower than the non-sex offenders on all other scale items.

i) Group Concordance and Overrides

Custody Rating Scale-penitentiary placement decision concordance rates ranged from 100% for the female offenders, (all female offenders were placed according to their Scale rating) to 66% for sex offenders. The male and Aboriginal offender groups had similar concordance results of 74% and 75%, respectively. An inspection of override patterns was revealing in terms of how risk was interpreted for the various groups.

Table 9b. Group Concordance and Overrides

Group (Number)	Concordance %	Overrides to Higher Security %	Overrides to Lower Security %
Male (6,612)	74	16	10
Females(65)	100	0	0
Aboriginal (464)	75	14	10
Sex Offender (1,080)	66	29	5
Total (6,745)	74	16	10

For example, sex offender placement was more often to security levels higher than that indicated by their Scale ratings. Sex offender ratings were overridden by placement to higher security (29%) at almost double the rate of male (16%) and Aboriginal (14%) offenders. In contrast, sex offender ratings were overridden by placement to lower security (5%) only half as often as for male (10%) and Aboriginal (10%) offenders.

The initial distribution of offenders and the extent to which Custody Ratings Scale security level designations and placement deviate among the four offender groups is highlighted in Table 9c. Detailed concordance results for each group are available in Appendix 5.

Table 9c: Distribution of Custody Rating Scale
Security Designation by Group

Group (Number)	Minimum-security Custody Rating Scale (Placed)	Medium-security Custody Rating Scale (Placed)	Maximum-security Custody Rating Scale (Placed)
Male (6,612)	27%(24%)	68%(68%)	5%(8%)
Female (65)	34%(34%)	61%(60%)	5%(4%)
Aboriginal (464)	19%(15%)	72%(77%)	8%(8%)
Sex Offender (1,080)	37%(20%)	60%(68%)	3%(11%)
Total (6,745)	27%(24%)	68%(68%)	5%(8%)

Table 9c again demonstrates the bias against the placement of sex offenders in minimum-security and the tendency to overclassify them into maximum-security. For example, sex offenders had the highest frequency of minimum-security ratings (37%), but only 20% of sex offenders were actually placed, compared to 27% of male offenders rated as minimum-security with 24% actually placed there. Conversely, while only 3% of the sex offender population were rated maximum over 11% were actually placed to maximum security. Female and Aboriginal offender placement closely matched their ratings.

ii) Custody Rating Scale Correlation with Statistical Information On Recidivism Scale and Offender Intake Assessment Risk/Need Rating

Both the Statistical Information on Recidivism Scale and the Offender Intake Assessment Risk/Need ratings were not available for female offenders. The correlations between Statistical Information on Recidivism scale scores, Intake Risk/Need levels and Custody Rating Scale designations for male, Aboriginal and sex offenders are, however, presented in the following Table 10c.

Table 9d: Correlation Between Statistical Information on Recidivism, Risk/Needs and Institutional Adjustment, Security Risk and Custody Rating Scale Designations for Special Groups

Group (Number)	Institutional Adjustment	Security Risk	Custody Rating Scale
Male			
SIR (4080)	-.55***	-.18***	-.43***
Risk (308)	.35***	.43***	.45***
Need (308)	.47***	.39***	.52***
Risk/Need (308)	.40***	.45***	.50***
Aboriginal			
SIR (58)	-.27*	-.26*	-.30*
Risk (72)	.05	.21	.22
Need (72)	.32*	.23*	.34*
Risk/Need (72)	.11	.23*	.20
Sex Offender			
SIR (653)	-.57***	-.53***	-.62***
Risk (65)	.21	.44**	.35*
Need (65)	.30*	.41**	.39*
Risk/Need (65)	.26*	.49***	.41**

(***p<.0001; **p<.001; *p<.05)

The correlations between the Custody Rating Scale, its sub-scales and Statistical Information on Recidivism and OIA Risk/Need and sub-scales were significant ($p < .05$) for the male and sex offender groups with one exception (Institutional Adjustment and OIA Risk for sex offenders). Male offenders had the strongest correlations ($p < .0001$) between the various measures. There was also strong correlations between the Custody Rating Scales and the SIR, OIA Risk/Need and OIA Need ratings for Aboriginal offenders ($p < .05$), and although the OIA Risk correlations fell short of significance, they were in the right direction.

iii) Group Incident and Release Type Distribution by Custody Rating Scale Designation

We further explored the predictive validity of the Custody Rating Scale by examining the relationship between security level designation and incident, discretionary release rates for male, female, Aboriginal and sex offenders.

Table 9e : Group Incident, Release Type and Conditional Release Adjustment Distribution by Custody Rating Scale Designations

Group (Number)	Maximum % (#)	Medium % (#)	Minimum % (#)	Chi- square
Male				
Incident Rate (6,679)	50 (171)	35 (1,587)	16 (287)	295***
Discretionary Release Rate (3,878)	34 (20)	65 (1,576)	79 (1,105)	122***
Conditional Release Interruption Rate (3,735)	84 (47)	61 (1,436)	41 (548)	162***
Female				
Incident Rate (65)	100 (4)	26 (10)	5 (1)	18***
Discretionary Release Rate (41)	0 (0)	70 (14)	95 (19)	8.2*
Conditional Release Interruption Rate (39)	100 (1)	37 (7)	32 (6)	1.9
Aboriginal				
Incident Rate (470)	58 (21)	38 (130)	8 (7)	39***
Discretionary Release Rate (209)	67 (2)	47 (71)	55 (31)	1.3
Conditional Release Interruption Rate (206)	67 (2)	73 (107)	43 (24)	15.8***
Sex Offender				
Incident Rate (1,089)	43 (12)	27 (178)	8 (32)	64***
Discretionary Release Rate (417)	40 (2)	42 (78)	58 (131)	11**
Conditional Release Interruption Rate (206)	80 (4)	43 (76)	19 (42)	31.9***

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

Table 9e demonstrates a significant relationship ($p < .05$) between incident distribution, discretionary release and conditional release adjustment across Custody Rating Scale designations. With the exception of Aboriginal offenders, the institutional incident rate decreases and discretionary release increases as Custody Rating Scale designations move from maximum- to minimum-security. The low release frequency of maximum-security rated Aboriginal ($n=3$) may explain this anomaly. In fact as a result of the low frequency of release of maximum-rated aboriginal (3) female (1) and sex (5) offenders we combined maximum and medium-rated offenders and replicated the contingency table analyses for both the discretionary and post release success. Once again the relationship between the distribution of incidents, discretionary release, post release success by security rating, is maintained ($p < .05$) in all situations with the exception of aboriginal discretionary releases.

In summary, female and Aboriginal offender Custody Rating Scale-penitentiary placement concordance rates are higher than those reported for male offenders or the total sample. Despite substantially lower Custody Rating Scale scores, there is a stronger tendency to place sex offenders at a level of security higher than that anticipated by the Scale, which explains their lower concordance rate. As a result, it may be necessary to establish override protocols or adjust item scores specifically for sex offenders to bring scale ratings more in line with current placement practices.

Convergent validity tests on sex offender scores are very positive and while somewhat weaker for Aboriginal offenders, there is no indication to prohibit the application of the Custody Rating Scale to either of these groups. Finally, and perhaps most important, the evidence from predictive validity tests indicate that the Scale assigns security classification ratings consistent with Institutional Adjustment and Security Risk for female, aboriginal and sex offenders.

Practical Utility

a) Designations and Penitentiary Placement Decisions

The Custody Rating Scale provides an objective standardized criterion against which to judge the efficacy of penitentiary placement decisions. The next analyses attempt to illustrate the efficacy and impact of classification decisions by comparing Custody Rating Scale-penitentiary placement decision rate differentials using post placement incident and release data. The following tables reproduce the three-by-three Custody Rating Scale-penitentiary placement decision table, but the concordance data is replaced with the incident, escape and discretionary release rates associated with each cell.

i) Institutional Incident Rates by Custody Rating Scale-Penitentiary Placement Concordance

earlier analyses demonstrated that the Custody Rating Scale was effective in predicting institutional incidents. In the following analyses we compare the effectiveness and impact of penitentiary placement decisions with Custody Rating Scale outcomes in terms of their effect on incident rates.

Table 10a: Incident Rates by Custody Rating Scale-Penitentiary Placement Decision Concordance

		Placement Decisions			
		Minimum %/(#)	Medium %/(#)	Maximum %/(#)	Total %/(#)
Custody Rating Scale	Minimum	14 (1,078)	18 (707)	10 (21)	16 (1,806)
	Medium	26 (508)	37 (3,629)	30 (349)	35 (4,486)
	Maximum	75 (4)	60 (142)	44 (195)	51 (341)
	Total	18 (1,590)	35 (4,478)	34 (565)	

(n=6,633)

If you read horizontally across the top row of the table, you can see that 16% (1,806) of offenders were rated as minimum-security. The incident rate of those classified and placed in minimum-security was 14%, the rate for those placed in medium-security was 18% and the rate for those placed in maximum-security was 10%. In contrast, medium-security rated offenders placed in minimum-security had nearly twice the incident rate of minimum-security rated offenders placed in minimum-security (26% vs. 14%) and an 8% higher incident rate than minimum-security rated but medium-security placed offenders (26% vs. 18%). Similarly, the maximum-security rated minimum-security placed offenders had substantially higher incident rates than minimum-security rated maximum-security placed offenders (75% vs. 10%). In effect, minimum-security placement of offenders not rated as minimum-security by the Custody Rating Scale increased the incident rate from 16% to 18%. Alternatively, had the Custody Rating Scale been followed, more offenders (1,806 as opposed to 1,590) could have been placed to minimum-security and the incident rate would have potentially been lowered by 2%.

ii) Escape Rates by Custody Rating Scale-Penitentiary Placement Decision Concordance

Similarly, the relative impact and effectiveness of Custody Rating Scale designations and penitentiary placement decisions are compared in Table 10b using escape rates as the outcome measure. (In contrast to Table 8d, the following table presents escapes regardless of initial placement).

Table 10b: Escape Rates by Custody Rating Scale-Penitentiary Placement Decision Concordance

		Placement Decisions			
		Minimum %/(#)	Medium %/(#)	Maximum %/(#)	Total %/(#)
Custody	Minimum	5 (1,078)	4 (707)	1 (21)	4 (1806)
	Rating	8 (508)	4 (3,629)	3 (349)	5 (4,486)
Scale	Maximum	0 (4)	11 (142)	7 (195)	9 (341)
	Total	6 (1,590)	5 (4,478)	4 (565)	

(n=6,633)

The escape rate of offenders rated as, and placed in, minimum-security was 5%, as opposed to 8% for those rated as medium-security but placed in minimum-security. Offenders rated as minimum-security but placed in medium-security (707) had a lower escape rate of 4% (although the opportunity to escape is lower for offenders initially placed in medium-security). It is interesting to note that the highest rate of escape (11%) was for offenders rated as maximum-security but placed in medium-security. It is possible that placing maximum-security rated cases in medium-security allowed quicker access to minimum-security, from which most escapes occur. Finally, the overall escape rate of offenders rated as minimum-security was 4% while the rate for those actually placed to minimum-security was 6%, suggesting that larger numbers of offenders

could have been placed in minimum-security with potentially no impact on escape rates, had the Custody Rating Scale designations been more closely followed.

iii) Discretionary Release Rates by Custody Rating Scale-Penitentiary Placement Decision Concordance

Effective classification should encourage the placement of offenders in the least restrictive confinement and, in so doing, maximize release potential. Where an offender is initially placed has an important bearing on if, and how quickly, the offender is released. Offenders placed in lower-risk institutions have better opportunities to establish their release credibility than offenders with similar classification ratings or risk potentials but placed in higher risk institutions. By the same token, lower risk-offenders who start their institutional placement at higher than necessary security levels could expect to experience lower and slower discretionary release rates than offenders with similar risk ratings but placed appropriately.

Tables 11a and 11b compares the impacts of Custody Rating Scale and penitentiary placement decisions by exploring discretionary release rates and incarceration periods. The tables present discretionary release rates and the average number of days of incarceration from admission to the first release date associated with each cell.

Table 11a: Discretionary Release Rates by Custody Rating Scale-
Penitentiary Placement Decision Concordance

Placement Decisions

		Minimum (n)	Medium (n)	Maximum (n)	Total (n)
Custody	Minimum	85 (795)	68 (297)	64 (7)	80 (1,099)
	Rating	78 (335)	63 (1,210)	36 (18)	65 (1,563)
Scale	Maximum	50 (1)	39 (13)	25 (6)	34 (20)
	Total	83 (1,131)	63 (1,520)	36 (31)	(2682)

(n=2,682)

Table 11b: Average Days to Release by Custody Rating Scale-
Penitentiary Placement Decision Concordance

Placement Decisions

		Minimum (n)	Medium (n)	Maximum (n)	Total (n)
Custody	Minimum	421 (932)	499 (431)	413 (11)	445 (1,374)
	Rating	471 (424)	574 (1,918)	699 (50)	558 (2,392)
Scale	Maximum	1,327 (2)	570 (32)	658 (24)	633 (58)
	Total	438 (1,358)	560 (2,381)	650 (85)	(3824)

(n=3,825)

The discretionary release rate of offenders rated as, and placed in, minimum-security was 86%, and they were released after having served an average of 421 days of incarceration. In contrast, similarly rated offenders placed in medium-security experienced a lower release rate of 68% and served a higher average incarceration period of 498 days. However, despite higher classification ratings, the release rate of offenders rated as medium-security but placed in minimum-security was 78%, and they served an average incarcerated period of 471 days.

It is also interesting to note that risk, as measured by the Statistical Information on Recidivism scale, does not explain the differentials in release rates or incarceration periods. Offenders rated as minimum-security by the Custody Rating Scale obtained lower average recidivism risk scores, regardless of whether they were placed to minimum- (average SIR = 6.2) or medium- (average SIR = 4.3) security, than offenders rated as medium-security but placed in minimum-security (average SIR = -1.1). In effect, when risk to recidivate is controlled, lower-risk offenders placed in higher security had lower release rates and longer incarceration periods than higher-risk offenders placed in lower security. While it can be argued that a 78% release rate attest to the merit of placing selected medium-security rated offenders directly in minimum-security, the inefficiencies in inhibiting and prolonging the release of minimum-security rated offenders placed in higher security levels remains. As previous tables demonstrate however, there costs in terms of increased incident and escape rates associated with the placement of medium-rated offenders in minimum security.

The three above analyses show the Custody Rating Scale to be more efficient and effective than penitentiary placement decisions in terms of incidents, escape and discretionary release rates, and the assignment of security classification. It is evident from these results that overriding the Custody Rating Scale to higher security levels is not without associated costs and that additional potential exists for improving efficiencies at initial placement. The results offer additional support for creating a more prominent role for the Custody Rating Scale in initial placement practices.

c) Exploring New Cut-off Values

The original security classification cut-off values were designed to achieve a 15% minimum-, 73% medium- and 12% maximum-security offender distribution at initial penitentiary placement. In the current and two previous applications of the Custody Rating Scale, the design distribution was not achieved for reasons which may include differences between the population profiles of the construction and the applied samples, disparities in the availability of documentation and differences in application procedures.

While individual case concordance is high, current Custody Rating Scale and placement distributions remain at odds with the targets. Scale amendments are, therefore, required to strike a more favourable balance between design, Scale and placement distributions. The two options available are to either adjust individual item scores or identify cut-off values appropriate to the current population. We chose to examine adjustments to the cut-off values because it would better preserve the integrity of the scale and the effects on adjustment and risk could be more accurately tracked.

To achieve the distribution for which the Custody Rating Scale was designed, the number of offenders rated as minimum-security had to be decreased, and an increase the number of offender rated medium-security and maximum-security. This required a reduction in the medium- and maximum-security cut-off values. To identify security classification cut-off values that would produce the targeted distribution, the medium- and maximum-security cut-off values were moved incrementally (while maintaining the relative sub-scale cut-off values) until the targeted distribution was achieved. To obtain a 15% minimum-security distribution, the Institutional Adjustment and Security Risk medium-security cut-off values were reduced by 14 and 10 points respectively. Similarly, to obtain a 12% maximum-security distribution required a reduction in the Institutional Adjustment and Security Risk maximum, cut-off values by 15 and 20 points respectively. The net effect of reducing the minimum-security distribution and increasing the maximum-security distribution was a 5% increase in the distribution to medium-security.

The classification practices of the last four years clearly indicate that considerable changes have occurred in the distribution of offenders across security levels. In response to an increase in available minimum-security cells, a decrease in maximum-security cells and an emphasis on placement to the least restrictive level of confinement, a greater number of offenders are being placed in lower security levels. We therefore also explored cut-off values that would result in distribution patterns more in line with current placement and accommodation realities. The recommended distribution that emerged from these considerations was 20% minimum-security, 70% medium-security and 10% maximum-security.

The cut-off values required to produce this distribution are illustrated in Table 12.

Table 12: New Cut-Off values

Distribution	Minimum 15%	Medium 73%	Maximum 12%
Designed Cut-off	Inst. Adj.<79.5 and Sec. Risk<58.5	Inst. Adj.79.5 to 94.5 or Sec. Risk 58.5 to 133.5	Inst. Adj.>94.5 or Sec. Risk>133.5
Distribution	Minimum 20%	Medium 70%	Maximum 10%
Recommended Cut-off	Inst. Adj.<72.5 and Sec. Risk<53.5	Inst. Adj.72.5 to 81.5 or Sec. Risk 53.5 to 117.5	Inst. Adj.>81.5 or Sec. Risk>117.5

To obtain a 20% minimum-security distribution, the medium-security cut-off values of the Institutional Adjustment and Security Risk scales were reduced by 7 and 6 points respectively, resulting in a 7% reduction in the distribution of minimum-security rated cases. To obtain a 10% maximum-security distribution, the maximum-security cut-off values of the Institutional Adjustment and Security Risk scales were reduced by 13 and 16 points, respectively, resulting in a 5% increase in the maximum-security distribution. The net effect of reducing the minimum- and increasing the maximum-security distributions was a 3% increase in the medium-security distribution.

Reducing the cut-off values on both scales effectively raises the standards for a minimum- and medium-security rating, by reducing the security risk while raising the adjustment potential of the offenders. However, the Institutional Adjustment scale continues to rate a larger than anticipated number of offenders as minimum-security . Despite this, the

Security Risk scale continues to make the major contribution to Custody Rating Scale designation, particularly as it relates to offenders it rates as medium security. The recommended cut-off values are modest adjustments, but yield a distribution based on an operational application of the scale that better represents current practice and accommodations realities.

SUMMARY AND CONCLUSIONS

A re-validation of the Custody Rating Scale was undertaken in accordance with recommendation of the Auditor General's report of 1994. This study is the third review of the Scale but, unlike earlier reviews, the sample was substantially enlarged to represent all Service regions and post-dates the implementation of the automated version of the Scale. Files were reviewed for errors, scoring defects, irregularities and incomplete administration of the Scale. In sharp contrast to previous studies, the frequency of detected errors was insignificant and confirmed that the implementation of the automated version of the Custody Rating Scale has all but eliminated application error as a source of concern. The Offender Management System has also improved access to the documents required for a competent and accurate administration of the Scale, although it is not certain that documentation availability is uniform across the regions or that it has reached a status that ensures optimal application of the Scale.

The national Custody Rating Scale completion rate was 48%, but rates varied sharply among the regions. The average Institutional Adjustment score was 37, (well below the medium-security cut-off value) and resulted in an almost exclusively minimum-security distribution (94%). The average Security Risk score was 74, (mid-range between the medium- and maximum-security cut-off values), which resulted in a more balanced distribution. The Custody Rating Scale security level designation was determined largely on the basis of the Security Risk scale which overrode the predominantly minimum-security ratings of the Institutional Adjustment scale.

Internal consistency tests suggested a modest degree of scale reliability although the contribution of some of the scale items was uncertain. Nonetheless, the Scale yielded discrete mutually exclusive classification outcomes, and effectively predicted offenders who would engage in institutional, violence, drug/alcohol and escape incidents, as well as discretionary release and conditional release adjustment. The Custody Rating Scale was also found to correlate significantly with the Statistical Information on Recidivism scale and the OIA Risk/Need level ratings. Item confirmation and recalibration of weights was not deemed necessary until the effects of operational conditions (such as documentation availability), were better understood. Overall, the Custody Rating Scale proved to be an effective and valid classification tool when measured against a variety of psychometric and operational criteria, in meeting the demands of the Auditor General and in providing the Service with a system-wide method of objective classification.

Custody Rating Scale-penitentiary placement decision concordance rates rose 11% over previous studies to 74%, while regional rates varied from the Atlantic (66%) to the Quebec (77%) regions. The improvement in concordance rates was the result of a sharp reduction in Scale overrides to higher security placement that more than offset an increase in Scale overrides to lower security. The net effect of these changes in override patterns resulted in an increase in the number of offenders placed directly in minimum-security since the earlier studies. This pattern was particularly evident from 1991-to-1993, when initial placements to minimum-security rose from 22% to 27%.

Based on the findings of earlier studies, it estimated that a concordance rate of almost 85% would be achieved if legitimate overrides were considered. Legitimate overrides include those based on protection, medical, and geographic concerns. In addition, deportation status, sex offence history and the effects of new legislation should also be considered as potential criteria for overriding the scale. Finally, cell availability and the restriction, imposed by recent double bunking policy must be monitored for their impact on future placement practice. Recognizing legitimate overrides and placing an offender in a security level other than that prescribed by the Scale would not invalidate the Custody Rating Scale, but might increase staff confidence in the Scale. Amending the Custody Rating Scale to allow for authorized overrides and to include a provision to justify overrides in unauthorized cases would provide valuable information and should alleviate attempts to manipulate the Scale outcome to support placement decisions.

A number of analyses were undertaken to determine the validity of the Scale for female, Aboriginal and sex offenders. Concordance rates remained high for both female and Aboriginal offenders but were lower for sex offenders as a result of increased overrides to higher security levels. Tests for convergent and predictive validity remained favourable and no evidence was observed that would prohibit the application of the Scale to female, Aboriginal or sex offenders.

Institutional incidents, escape and discretionary release rates were used along with incarceration periods to conduct a comparative analysis of the impact of Custody Rating Scale and penitentiary placement decisions. The results suggests that greater attention to the Custody Rating Scale would increase lower security level placements, while potentially reducing the rates of incident and escape. It is also possible that discretionary release rates would be increased and incarceration period reduced by greater reliance on Scale.

The security level distribution of offenders in the current application did not conform with the Scale's designed distribution. New security level cut-off values that would produce the distribution for which the Scale was designed were, therefore, explored. However, given recent trends in placement decisions and the current accommodation profile, cut-off values that would produce a 20% minimum-, 70% medium- and 10% maximum-security distribution were deemed more appropriate. The necessary cut-off values required to achieve the recommended distribution were identified.

Classification patterns are often regionally specific, conditioned by accommodation realities, local traditions and the infinite variability in security regimens and risk containment potential of available programs. While efforts to encourage greater consistency in the application of the scale and to ensure documentation availability may serve to reduce regional disparities, they may have only limited impact on local placement decisions and overrides. As a result, while national cut-offs are necessary, some provision for customizing cut-offs to meet regional contingencies should also be explored. As long as a national standard with measurable benchmarks is maintained and accurate application of the scale is encouraged, deviations resulting from cut-offs customized to meet regional conditions can be monitored and their impacts assessed.

References

- Alexander, J. (1986). Classification objectives and practices, Crime and Delinquency, 32, 323-338.
- Andrews, D.A., Bonta, J. & Hoge, R.D. (1990). Classification for effective rehabilitation: Rediscovering psychology, Criminal Justice and Behavior, 17, 19-52.
- Austin, J. (1986). Evaluating how well your classification system is operating: A practical approach, Crime & Delinquency, 32, 302-322.
- Austin, J. (1983). Assessing the new generation of prison classification models. Crime and Delinquency, 29, 561- 576.
- Baird, S. C. & Austin, J. (1985). Current state of the art in prison classification models. San Francisco: NCCD.
- Bonta, J. & Motiuk, L.L. (1985). Utilization of an interview-based classification instrument: A study of correctional halfway houses. Criminal Justice & Behavior, 12, 333-352.
- Bonta, J. & Motiuk, L.L. (1987). The diversion of incarcerated offenders to correctional halfway houses. Journal of Research in Crime and Delinquency, 24, 302-323.
- Bonta, J. & Motiuk, L.L. (1990). Classification to correctional halfway houses: A quasi-experimental evaluation. Criminology, 28, 497-506.
- Buchanan, R. A., Whitlow, K.L. & Austin, J. (1986). National Evaluation of Objective Prison Classification System: The Current State of the Art. Crime and Delinquency, 32, 3, 272-290.
- Carey, R. J., Garske, J.P. & Ginsberg, J. (1986). The prediction of adjustment to prison by means of an MMPI-based classification system. Criminal Justice and Behavior, 13, 347-365.
- Clements, C.B. (1996). Offender classification: Two decades of progress. Criminal Justice and Behavior, 23, 21-143.

- Glaser, D. (1987). Classification for Risk. In D.M. Gottfredson & M.H. Tonry (eds.): Prediction and Classification: Criminal Justice Decision Making, Chicago University of Chicago : Press.
- Gottfredson, D. M. & Tonry, M.H. (1987). Prediction and Classification: Criminal Justice Decision Making, Chicago University of Chicago Press.
- Gottfredson, S. (1986). The accuracy of prediction models. In A. Blumstein, J. Cohen, J. Roth, and C. Visher (eds.). Research in criminal careers and career criminals, V.2, Washington, D.C., National Academy Press.
- Jesness, C.F. (1988). The Jesness inventory classification system. Criminal Justice and Behavior, 15, 78-91.
- Kane, T.R. (1986). The validity of Prison Classification: An Introduction to Practical Considerations and Research Issues. Crime & Delinquency, 32, 367-390.
- Lerner, K. Arling, G. & Baird, S.C. (1986). Client Management Classification Strategies for case supervision. Crime & Delinquency, 32, 254-271.
- Levinson, R. B. (1988). Development in the classification process: Quay's AIMS approach. Criminal Justice and Behavior, 24-38.
- Luciani, F.P., Motiuk, L.L. & Mainwaring, B. Field Tests of the Custody Rating Scale. Solicitor General, Canada. (In press)
- MacKenzie, D. L., Posey, C. D., & Rapaport, K.R. (1988). A theoretical revolution in corrections: Varied purposes for classification, Criminal Justice and Behavior, 15, 125-136.
- Megargee, E. I., & Bohn, M. J. (1979). Classifying Criminal Offenders. Beverly Hills, C.A., Sage.
- Motiuk, L.L. (1986). Offender classification systems: Psychometric properties. Carleton University: Ottawa.

- Motiuk, L.L., Bonta, J. & Andrews D. A. (1986). Classification in correctional half-way houses: The relative and incremental predictive validities of the Megargee-MMPI and LSI systems. Criminal Justice and Behavior, 13, 33-46.
- Porporino, F. Luciani, F.P., Motiuk, L., Johnston, M., & Mainwaring, B. (1989). Pilot Implementation of a Custody Rating Scale, Solicitor General, Canada.
- Quay, H.C., (1984). Managing adult inmates. College Park , MD: American Correctional Association.
- Report of the Auditor General, Canada (1994).
- Report of the Canadian Committee on Corrections (1969). Toward unity: Criminal justice and corrections. Queen's Printer, Ottawa, Ontario
- Report of the Royal Commission to investigate the Penal System of Canada (1938). Queen's Printer, Ottawa, Ontario.
- Sechrest, L. (1987). Classification for treatment. In D.M. Gottfredson & M.H.Tonry (eds): Prediction and classification: Criminal Justice decision making, 293-322, Chicago: University of Chicago.
- Solicitor General, Canada. (1987). Development of a security Classification model for Canadian federal offenders. Ottawa, Correctional Service of Canada.
- Toch, H. (1981). Inmate classification as transaction. Criminal Justice and Behavior, 8, 3-14.
- Van Voorhis, P. (1988). A cross classification of five offender typologies: Issues of construct and predictive validity. Criminal Justice and Behavior, 15, 1, 109-124.
- Veneziano, C, and Veneziano, L. (1986). Classification of adolescent offenders with the MMPI: An extension and cross-validation of the Megargee typology. International Journal of Offender Therapy and Comparative Criminology, 30, 11-23.

Appendix 1: Custody Rating Scale - Instructions

MINIMUM-SECURITY

Inmates with scores less than 79.5 on the INSTITUTIONAL ADJUSTMENT dimension, and/or less than 58.5 on the SECURITY RISK dimension are recommended as minimum- security candidates.

MEDIUM-SECURITY

Inmates with scores between 79.5 and 94.5 on the INSTITUTIONAL ADJUSTMENT dimension, and/or between 58.5 and 133.5 on the SECURITY RISK dimension are recommended as medium-security candidates.

MAXIMUM-SECURITY

Inmates with scores greater than 94.5 on the INSTITUTIONAL ADJUSTMENT dimension, and/or greater than 133.5 on the SECURITY RISK dimension are recommended as maximum-security candidates.

CUSTODY RATING SCALE

FPS:		NAME:	DATE COMPLETED:
INSTITUTIONAL ADJUSTMENT SCORE			TOTAL SCORE
1. History of Involvement in Institutional Incidents	a. no prior involvement	0	
	b. any prior involvement	2	
	c. prior involvement in one or more incidents in "greatest" or "high" severity categories	2	
	d. prior involvement during last five years of incarceration;		
	- in an assault (no weapon or serious injury)	1	
	- in a riot or major disturbance	2	
	- in an assault (using a weapon or causing serious injury)	2	
	e. involvement in one or more serious incidents prior to sentencing and/or pending placement for current commitment	5	
	8 X TOTAL of a to e		
2. Escape History	a. no escape or attempts	0	
	b. an escape or attempt from minimum or community custody with no actual or threatened violence:		
	- over two years ago	4	
	- in last two years	12	
	c. an escape or attempt from medium or maximum custody or an escape from minimum or community custody with actual or threatened violence:		
	- over two years ago	20	
	- in the last two years	28	
	d. two or more escapes from any level within the last five years	28	
3. Street Stability	a. above average	0	
	b. average	16	
	c. below average	32	
4. Alcohol/Drug Use	a. no identifiable problems	0	
	b. abuse affecting one or more life areas	3	
	c. serious abuse affecting several life areas	6	

5. Age (At time of sentencing)	a. 18 years or less 24 b. 19 32 c. 20 30 d. 21 18 e. 22 16 f. 23 14 g. 24 12 h. 25 10 i. 26 08 j. 27 06 k. 28 04 l. 29 02 m. 30 years or more 00	
TOTAL INSTITUTIONAL ADJUSTMENT SCORE		

SECURITY RISK SCORE			TOTAL SCORE
1. Number of prior convictions	a. none	0	
	b. one	3	
	c. 2 to 4	6	
	d. 5 to 9	9	
	e. 10 to 14	12	
	f. over 15	15	
2. Most serious outstanding charge	a. no outstanding charges	0	
	b. minor	2	
	c. moderate	5	
	d. serious	5	
	e. major	35	
3. Severity of current offence	a. minor or moderate	12	
	b. serious or major	36	
4. Sentence length	a. 1 day to 4 years	5	
	b. 5 to 9 years	20	
	c. 10 to 24 years	45	
	d. over 24 years	65	
5. Street stability	a. above average	0	
	b. average	5	
	c. below average	10	
6. Prior Parole and/or statutory Release	a. none	0	
	b. 1 point for each prior parole release	-----	
	c. 2 points for each prior statutory release	-----	
	TOTAL	-----	
7. Age (at time of admission)	a. 25 years or less	30	
	b. 26	27	
	c. 27	24	
	d. 28	21	
	e. 29	18	
	f. 30	15	
	g. 31	12	
	h. 32	09	
	i. 33	06	
	j. 34	03	
	k. 35 years or more	00	

TOTAL SECURITY RISK SCORE	
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Appendix 2:Institutional Adjustment Item Inter and Item-Total Correlation

Item	A	B	C	D	E
A. Institutional Incidents					
B. Escapes	.17**				
C. Street Stability	.21**	.17**			
D. Alcohol/Drugs	.15**	.12**	.40**		
E. Age at Sentence	.03**	.13**	.15**	.006	
Item-to-Total Correlation	.22**	.24**	.32**	.30**	.13**
Mean	5.6	1.9**	20.4	3.2	5.8
S.D.	14.5	5.3	10.9	2.5	7.5

(**p<0.005; N=6,745)

Security Risk Item Inter and Item-Total Correlation.

Item	A	B	C	D	E	F	G	H
A. Prior Convictions								
B. Outstanding Charge	.10**							
C. Offence Severity	-.15**	-.02						
D. Sentence Length	-.15**	-.03	.28**					
E. Street Stability	.40**	.07**	-.02	-.04**				
F. Parole Releases	.34**	.04**	-.11**	-.04**	.16**			
G. Mandatory Supervision Releases	.38**	.03	-.09**	-.04**	.18**	.29**		
H. Age at Admission	.001	.06**	-.03	-.06**	.19**	-.09**	-.13**	
Item-to-Total Correlation	-.03	.04**	.12**	.06**	.19**	-.004	-.01	-.03
Mean	7.6	2.8	28.2	13.6	6.4	.49	.82	14.8
S.D.	5.1	6.6	11.2	15.3	3.4	1.1	2.1	12.8

(**p<0.005 N=6,745)

Appendix 3: Regional Custody Rating Scale-Penitentiary Placement Decision Concordance.

Atlantic

		Placement Decision		
		Min	Med	Max
Custody Rating Scale	Min	11	9	6
	%/(#)	(5)	(4)	(2)
	Med	7	45	7
	%/(#)	(3)	(20)	(3)
	Max	0	7	10
	%/(#)	(0)	(3)	(4)

n=44

Quebec

		Placement Decision		
		Min	Med	Max
	Min	20	7	.1
	%/(#)	(650)	(237)	(3)
	Med	11	54	4
	%/(#)	(343)	(1,732)	(122)
	Max	.1	1	3
	%/(#)	(3)	(32)	(80)

n=3,202

Ontario

		Placement Decision		
		Min	Med	Max
Custody Rating Scale	Min	12	13	1
	%/(#)	(283)	(317)	(16)
	Med	5	56	8
	%/(#)	(109)	(1,336)	(194)
	Max	0	3	3
	%/(#)	(1)	(69)	(76)

n=2,401

Prairie

		Placement Decision		
		Min	Med	Max
	Min	17	15	0
	%/(#)	(109)	(97)	(0)
	Med	7	56	2
	%/(#)	(44)	(356)	(10)
	Max	0	3	1
	%/(#)	(0)	(16)	(6)

n=638

Pacific

		Placement Decision		
		Min	Med	Max
Custody Rating Scale	Min	9	15	0
	%/(#)	(31)	(52)	(0)
	Med	3	53	6
	%/(#)	(9)	(185)	(20)
	Max	0	6	8
	%/(#)	(0)	(22)	(29)

n=348

Appendix 4: Incident Rates by Custody Rating Scale by Actual Placement.

Offenders Placed in Minimum-security

	Maximum	Medium	Minimum
Offenders without Incident (#)	1	375	927
Offenders with Incidents (#)	3	133	151
Incident Rate %	75	26	14

(Chi square=43; p<.001; n=1,590)

Offenders Placed in Medium-security

	Maximum	Medium	Minimum
Offenders without Incident (#)	57	2,295	575
Offenders with Incidents (#)	85	1,334	132
Incident Rate %	60	37	19

(Chi square=126; p<.001; n=4,478)

Offenders Placed in Maximum-security

	Maximum	Medium	Minimum
Offenders without Incident (#)	110	243	19
Offenders with Incidents (#)	85	106	2
Incident Rate %	44	30	10

(Chi square=17; p<.001; n=565)

Appendix 5: Special Group Custody Rating Scale-Penitentiary Placement Decision Concordance.

Males

Placement Decision

	Min	Med	Max
Custody Rating Scale			
Min %/ (#)	16 (1,077)	11 (707)	.2 (14)
Med %/ (#)	8 (508)	56 (3,628)	5 (339)
Max %/ (#)	.1 (4)	2 (142)	3 (193)

n=6,612

Females

Placement Decision

Min	Med	Max
34 (22)	0 (0)	0 (0)
0 (0)	60 (40)	0 (0)
0 (0)	0 (0)	4 (3)

n=65

Aboriginals

Placement Decision

	Min	Med	Max
Custody Rating Scale			
Min %/ (#)	10 (45)	9 (41)	.4 (2)
Med %/ (#)	5 (23)	62 (282)	5 (22)
Max %/ (#)	0 (0)	5 (24)	3 (13)

n=452

Sex Offenders

Placement Decision

Min	Med	Max
17 (179)	20 (212)	1 (8)
4 (40)	48 (516)	9 (97)
0 (0)	1 (9)	12 (19)

n=1,080