PERSONAL AND INTERPERSONAL FACTORS IN THE PREDICTION AND UNDERSTANDING OF AGGRESSION IN INCARCERATED JUVENILE DELINQUENTS

by

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Personal and Interpersonal Factors in the Prediction and Understanding of Aggression in Incarcerated Juvenile Delinquents

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ABSTRACT

The prediction and description of criminal aggressiveness has been hampered by an over-reliance on self-report trait measurement techniques that possess only modest validity. Many of these measures fail to differentiate between aggressive and non-aggressive individuals. The current study explored the performance of two alternative measurement techniques, a Peer Evaluation Inventory (PEI) and the Situations-Reactions Inventory of Hostility (SR), along with a more traditional trait measure [the Buss-Durkee Inventory (BD)] with a group of incarcerated adolescents. While the BD was generally unrelated to measures of overt aggression, a number of the PEI and SR scales not only differentiated between aggressive and non-aggressive offenders, they also differentiated among types of aggressive offenders. On the PEI, individuals with a history of non-lethal Assault scored higher than other offenders on the Aggression scale. In contrast, Murderous Offenders scored higher than others on PEI Sociability. On the SR, Murderous Offenders differed significantly from other offenders in terms of there self-reported levels of anger and arousal in anger-provoking situations. Sexual Assaulters distinquished themselves on the SR by predicting the highest levels of Aggression in response to anger-provoking situations. The Assaulters in turn, had among the lowest scores on the SR. The pattern of results suggested that individuals with different types of criminal histories showed differences in their style of personal responsivity and

interpersonal demeanours. Murderous offenders, for example, may be most likely to exhibit 'overcontrolled' hostility, while Assaulter's aggression appears to be of a psychopathic type. These differences could have implications for the development of treatment modalities of aggressive young offenders. Contrary to expectation, the PEI was not an effective predictor of aggressive recidivism at one-year follow-up.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

The prediction of violent and seriously antisocial behaviour in juvenile delinquents is a matter of increasing social concern. The social and economic costs of aggression are prohibitive, and there is increasing public pressure on the legal system and the social sciences to produce effective interventions. Unfortunately, the effectiveness of interventions is limited by the lack of solid empirical and conceptual foundations to guide practitioners in their decision-making. Not only are the dynamics of aggressive behaviour poorly understood, but even such basic tasks as the ability of psychologists to predict future violence has been called into question (Monahan, 1981, Cocozza & Steadman 1978, Clanon & Jew, 1985). The prediction and understanding of aggression are primary tasks, necessary for the development of informed interventions.

There are a variety of practical and theoretical reasons that make prediction and description of violence for adolescent offenders of particular interest. First, their relative youth raises hopes that interventions can be designed that will prevent future difficulities. Knowing with whom to invest our efforts is a necessary first step in this process. Second, in the short term, it is of immediate interest to juvenile detention and legal authorities to be able to identify violent inmates, in order to protect the public and to minimize or

prevent aggressive episodes. Finally as Garrison (1984) points out, further research into the dynamics of aggression in delinquent adolescents is necessary for a better theoretical grasp of the problem of aggression.

A review of existing methods of measurement suggests that current strategies, which rely heavily on self-report of personality traits, may have to be combined or supplanted with newer approaches to enhance the utility of the enterprise of aggression measurement. The purpose of the present study is to investigate the predictive and descriptive usefulness of methods which attempt to broaden the scope of traditional trait methods by focusing on the personal and interpersonal processes involved in aggression.

In contrast to the rather limited trait approach to prediction that is typically used with adolescents and adults, research conducted with children has explored a variety of more process-oriented correlates of aggression. These include: 1) the analysis of specific environmental and social situations that lead to aggressive behaviour, 2) the assessment of peer evaluations of aggressors, and 3) the assessment of the perspective of aggressors themselves, particularly with respect to their sensitivity to potentially anger-provoking or hostile situations.

The present study attempted to adapt the latter two strategies, typically used with younger, normal subjects, to a

group of incarcerated adolescent offenders. In addition to the above-cited strategies, the present study also applied the more traditional trait measurement approach. Historically, trait measures have been used most frequently by psychologists researching and assessing both adolescent and adult incarcerates, so a representative measure was included as a standard of comparison against the other measures used.

Perhaps one of the reasons for the relatively poor record of predictive validity in aggression research is that aggression is often viewed as a unitary phenomenon. The view taken in the current study is that aggression is likely to be the end-product of a variety of different traits and processes. As Glover puts it, "delinquency comprises a number of clinical conditions of a widely different sort, having sometimes little in common except the fact that some of the behavioristic manifestations, or end products offend against the law" (Glover, 1960, p. 293). Glover is not unique in conceptualizing aggression as multiply determined. Megargee's (1966) notion of over-controlled aggression postulates a specific process leading to violence, and moreover, suggests that overcontrolled hostility results in more serious violence than other forms of aggression. Research in child psychology too, has suggested that children differ in aggressive styles, primarily in terms of the basic categories of provoked versus non-provoked (Garrison, 1984, Manning, 1978). Broad differences in the motivation for human aggression are also postulated by Attili and Hinde (1986), writing from an

ethological perspective. In the current study aggression was not construed as unitary, and both independent and dependent variables were chosen for their potential ability to discriminate among aggressive styles.

Unfortunately, traditional assessment approaches have not been particularly valid or reliable guides in differentiating between types of aggression. This study therefore set out to apply divergent assessment approaches with two basic goals in mind: 1) to evaluate the predictive efficacy of different assessment strategies, and 2) to enhance the understanding of the personal and interpersonal dynamics of aggression in adolescents.

The Traditional Self-report Approach

The most common research approach to the problem of the prediction of aggression employed by psychologists is the use of self-report trait measures. That is, aggression is seen as a characteristic residing within the individual, and it is assumed that this characteristic, or its correlates (such as hostility, or suspicion) can be measured by verbal or written self-reports.

This trait approach has been applied most frequently in studies of aggression in adult offenders. The most common objective test employed in this type of research is the MMPI. Researchers have employed several methods of application with this test. These methods include correlating single scales such as *Psychopathic Deviate* (Scale 4) with dependent measures such

as prison adjustment, or offense history (eg. Carbonell et al., 1984), creating special scales using selected MMPI questions (eg. Megargee et al., 1967, Foulds, 1965, Paton, 1958).

As a recent review by Carbonell et al. (1984) has shown, the use of single MMPI scales to predict prison adjustment yields modest results, particularly when applied to pertinent criteria such as rates of infractions committed during imprisonment.

Special scales derived from the MMPI also have not fared particularly well as predictors of both general dependent measures such as "prison adjustment," or of indices specific to aggression. For example, Megargee and Carbonell (1985) assessed the performance of eight MMPI 'correctional scales' including Paton's Adjustment to Prison (revised) (Paton, 1958), Prison Maladjustment, (Wattron, 1963), Religious Identification (Paton, 1979), Homosexuality, (Paton, 1960), Escape (Paton, 1958), Recidivism (Clark, 1948), Habitual Criminal (Paton, 1962a) and Parole Violation, (Paton, 1962b). Using standard administration procedures of the MMPI (ie. as part of intake) with a large population of male prisoners, (n > 1140), Megargee and Carbonell found that the correlations of any of the correctional scales did not exceed .15 on pertinent adjustment variables such as "rate of infractions" or "days in segregation." They concluded that "scoring these special correctional scales does not improve prediction and indeed is probably not worth the effort" (Megargee & Carbonell, 1985, p. 882). Although it seems possible that any of the scales assessed by Megargee and Carbonell could

be related to aggression, none of them were *specifically* designed for the measurement of aggression, nor did Megargee and Carbonell use aggressive incidents as a discrete dependent measure.

One MMPI-derived scale designed specifically to measure aggression is the Foulds Hostility and Direction of Hostility Questionnaire (Foulds, 1965). This test comprises five scales designed to measure both extrapunitive and intropunitive hostile attitudes. A number of studies have found that scores on one of the factors of this scale, "general hostility," could differentiate violent from non-violent offenders (Blackburn, 1968, Crawford, 1977, Gossop and Roy, 1977, Warder, 1969), although a study with incarcerated adolescents did not get this result (Romney & Syverson, 1984).

Another of the more commonly used MMPI-derived Hostility scales is the Over-controlled Hostility Scale (Megargee, Cook, & Mendelsohn, 1967). Megargee et al. devised this scale after noting differences in the behaviour and criminal histories of seriously aggressive versus less serious aggressors (Megargee, 1966). He also discovered that items related to the denial of hostile impulses and behaviours were more predictive of subsequent violence than items overtly referring to violent behaviour. Over-controlled Hostility did differentiate violent from non-violent offenders in several studies (Megargee et al., 1967, Deiker, 1972), but failed to do so in several others (Hoppe and Singer, 1976, Mallory and Walker, 1972).

Other MMPI-derived scales that have proven to be of limited value in the prediction of aggression are the Cook and Medley Hostility Scale (Cook & Medley, 1954) and Schultz's Hostility and Aggression Scales (Schultz, 1954). (See Edmunds and Kendrick, 1980, for a review).

Rather than deriving scales from the MMPI, some researchers have constructed scales specifically for the prediction of aggression. There are a variety of such scales specifically designed to measure hostility, including the Iowa Hostility Inventory (Moldawsky, 1953), the Manifest Hostility Scale, (Siegal, 1956), and the Zaks and Walters Aggressiveness Scale (Zaks and Walters, 1959). Again, the research evidence pertaining to these scales identifies them as, at best, modest predictors of aggression, and most are rarely used in contemporary aggression research.

One inventory which has enjoyed greater longevity and more consistent use is the Buss-Durkee Hostility Guilt Questionnaire (Buss & Durkee, 1957). There have been a variety of studies using this scale, ranging from assessments of its reliability (Buss & Durkee 1957) and factor structure (Edmunds & Kendrik, 1980), to its utility in the prediction of aggression in real life (Buss, Fischer & Simmons, 1962, Miller, Spilka & Pratt, 1960, Romney & Syverson, 1984) and in analogue situations (Lipetz & Ossorio, 1967, Knott, 1970). Again, the results of the predictive (more accurately, *postdictive)* validity studies have often been either modest and not clinically significant, or

contradictory.

Given the nature of these results with adults, it is not surprising that when the same measurement strategy has been applied to adolescent incarcerates, the outcome has not been much more encouraging. Investigators such as Romney and Syverson (1984) and Tyler and Kelly (1971) have found scales designed for use with adults (such as the Direction of Hostility Questionnaire and the Buss-Durkee) have failed to differentiate violent from non-violent adolescent incarcerates. Additionally, the use of scales specifically designed for adolescents also have yielded conflicting results. The most prominent example is the Jesness Inventory (Jesness, 1966). Again, most studies focus on the ability of the Jesness to differentiate delinquent from non-delinquent adolescents (rather than violent from non-violent). Even here, researchers report mixed or modest results. (Mott, 1969, Fisher, 1967, Bartollas, 1975, Saunders & Davies, 1976, Shark & Handel, 1977).

Another well-known and well-researched scale for adolescents is one based on an item pool originally written by Gough and Peterson (1952), and subsequently factor analysed, refined and validated by Quay and Peterson and their associates (Quay & Peterson, 1958, Peterson, Quay & Cameron, 1959, Quay, Peterson & Consalvi, 1960, Peterson, Quay, & Tiffany, 1961) and other researchers as well (Schuck et al., 1972, Genshaft, 1980). All versions of this instrument have consistently yielded two major factors, Psychopathy and Neuroticism, which correspond with the

Externalizing/Internalizing dimension commonly found in research with children and adolescents (Achenbach & Edelbrock, 1978). However, Quay et al. found that scores on these factors were only modestly related to critical dependent measures such as type of offense leading to commitment and problem behavior within the institution (Quay, Peterson & Consalvi, 1960).

Although this review of self-report delinquency and aggression measures is not exhaustive, the repetitive similarity of modest and contradictory results reported in series of studies on any particular measure of aggression suggest that there are limits to the predictive validity of the trait measurement approach. The reason for this shortcoming cannot only be attributed to lack of methodological rigour used in constructing such inventories. A wide variety of accepted (and recommended) techniques for test construction and administration have been carefully applied to the construction of self-report predictors of aggression with largely similar results (see reviews by Gearing, 1979, Edmunds & Kendrick, 1980, and Megargee & Carbonell, 1985). This suggests that there may be no magical combination of questionnaire items that will yield stronger and more consistent results for the understanding and prediction of aggressive behaviour.

Given the overall equivocal performance of virtually all paper and pencil tests reviewed here, there were only weak empirical guidelines for the selection of trait measures of aggression for this study. Therefore, a conceptual approach was

taken, and the self-report measures which promised maximum potential for discriminating among types of aggression, or processes involved in aggression were given preference. Perhaps one of the most comprehensive self-report aggression inventory is the Buss Durkee Hostility Guilt Inventory with its eight hostility subscales (Buss & Durkee, 1957). These subscales cover a variety of facets of hostility and aggression, ranging from assault to irritability. The relatively broad coverage of aggression and hostility made the Buss-Durkee the strongest candidate for use in the current study.

Although the Buss-Durkee appears to be comprehensive in its coverage of aggression, it does not include a measure related to aggressive dominance. Rather, most of the scales refer to angry and otherwise dysphoric aggressive and hostile states. Dominance, with its social focus, may involve aggression that is not based on such negative internal states. Instead, aggression in the service of dominance may best fit Garrison's (1984) notion of instrumental or purposive violence. Therefore, in an attempt to measure this potentially aggressive trait, the Dominance scale from the Personality Research Form (Jackson, 1974), was used in the current study.

Reactivity to Threatening and Anger-Provoking Situations

A potential contributor to aggressive behaviour is the aggressor's perception of the meaning of a variety of differing social events. Individuals who are highly reactive to

potentially threatening events may behave aggressively in the presence of minimally hostile cues, or they may interpret ambiguous cues as threatening. In either case, their behaviour is predicated on a misperception or exaggeration of the aggressive cues inherent in social events. Researchers interested in perceptions and attributions of aggressive events have established that young children are capable of differentiating intentionally aggressive from accidentally aggressive behaviours (Rule, Nesdale & McAra, 1974) and that they react with more aggression to situations involving hostile intent than to situations of benign intent (Dodge, 1980).

Aggressive children differ from non-aggressive children in their ability to interpret situational cues in several ways. First, it it appears that aggressive boys attribute hostile intent more readily than non-aggressive boys (Dodge, 1980, 1981, Dodge & Frame, 1983). Second, aggressive boys are less predictable in their reactions to situations which they themselves view as benign. In such situations, they are more likely to react aggressively than non-aggressive boys (Dodge & Somberg, 1987). Dodge and Somberg speculate that one possible reason for this deficit in linking behaviour with cognition is that aggressive boys may be responding to private changes in somatic arousal, and supplanting rational evaluation of a situation with primitive and impulsive behaviour. This speculation resembles closely the notion of 'aggression in response to internal state changes' put forward by Garrison (1984). The processes involved in this type of aggressive

behaviour have not been empirically delineated, but the finding of differences in the reactivity of aggressive children in both 'benign' and 'threatening' situations appears to be consistent across studies.

Although research in this area with adolescents and adults is sparse, a study by Tachibana and Hasegawa (1986) found that Japanese high school subjects rated high on aggression were more likely than low aggressors to predict that they would respond aggressively to a variety of frustrating situations. They made this self-appraisal regardless of the stated intentionality (accidental versus intentional) of the cause of frustration. These findings must be interpreted cautiously as aggressiveness was established on the basis of normal subject's scores on an aggression scale, and responses were projected, rather than actual behaviours.

A similar methodology was employed by Blackburn and Lee-Evans (1985) with seriously aggressive adult psychiatric patients in a secure facility. Blackburn and Lee-Evans, using the 'Situations-Reactions Inventory of Hostility' found that aggressive patients differed among themselves in their self predicted levels of reactivity to hypothetically frustrating and threatening situations. Specifically, Blackburn and Lee-Evans found these differences among patients classified on dimensions of Psychopathy and Withdrawal (withdrawal here was commensurate with neurotic, internalizing styles). Psychopaths with low withdrawal scores ('Primary Psychopaths') and withdrawn

psychopaths ('Secondary Psychopaths')[1] predicted higher levels of aggression, anger and somatic arousal in anger-provoking situations than did aggressive non-psychopaths. Further, Secondary psychopaths predicted significantly higher levels of somatic arousal than did Primary psychopaths.

Blackburn and Lee-Evan's research was centered around exploring the relationship between reactivity and diagnosis, and therefore they did not report results pertaining to the relationships between reactivity and offence types or other offender characteristics. Further, they did not investigate the utility of this procedure for differentiating aggressive from non-aggressive patients, nor did they investigate the predictive utility of this approach.

Despite some shortcomings in Blackburn and Lee-Evan's study, the use of the Situations-Reactions Inventory with a clinically defined population is an important step in the analysis of motivational pathways leading to aggression. Blackburn and Lee-Evan's study suggests that in older populations, not all aggressive individuals are similar in their reactivity, and therefore, it would probably be an error to see aggression as being uniquely determined by reactivity. The primary goal of the current study was to explore differences in reactivity among known offender types, and to assess the utility of measures in

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[1]Note that not all researchers agree with the practice of including neuroticism as part of the psychopathic dimension. For example, Hare and Cox (1978) suggest that secondary psychopathy is more appropriately termed 'acting-out neurotic' or 'neurotic delinquent'

the prediction of aggressive behaviour.

Peer Evaluation Research

Peer evaluations have been used with children by psychologists at least since Hartshorne and May (1929) devised the 'Guess Who' technique. This measure simply listed a variety of easily observable and socially important personality characteristics, and asked respondents to 'guess' who fitted a particular description. Since then, there has been a steady (if at times, small) stream of research reports regarding the technique. The systematic and quantitative development of this methodology appears to have taken root in the mid-1950s with the advent of the application of more sophisticated psychometric techniques. One of the earliest of these was a factor analysis by Mitchell (1956) on the 'Guess Who' questionnaire designed by Havighurst et al. (1952) for use in a community youth development program. Using a sample of 98 fourth graders, Mitchell found that the questionnaire yielded 3 factors, which he labelled 'social acceptability,' 'aggressive maladjustment' and 'social isolation.'

Lesser (1959) used a modified version of the Guess who technique designed specifically for the measurement of aggression and its relationship to popularity. Lesser generated items which he intended to cover 5 hypothetical aspects of aggression: provoked physical, outburst, unprovoked physical, verbal, and indirect. When used with a sample of 74 fifth and sixth graders, Lesser found that the correlation between

popularity and provoked aggression was significantly positive, while the correlations between popularity and all other forms of aggression were negative, suggesting that his subjects were differentiating between provoked and unprovoked aggression. He also found that peer evaluations of aggression were highly correlated with teacher evaluations - ranging from .72 to .80. However, he did not factor analize the inventory, so it is not clear whether the scales were empirically separable.

In 1961, two extensive reports on the development of peer evaluation inventories appeared in *Psychological Reports*. The first, by Walder et al. (Walder, Abelson, Eron, Banta, & Laulicht, 1961), concerned the development of an inventory specifically designed to measure peer evaluations of aggression, while the second, by Wiggins and Winder, was designed as a more general measure of psycho-social adjustment. The evidence presented for both of these measures showed them to offer promise as reliable instruments. For example, the test-retest and inter-rater reliabilities of items on Walder et al.'s inventory were typically in the high .80s, with a range of .70 to .92. Wiggins and Winder found similar results, reporting high internal and temporal reliability coefficients, as well as good concurrent validity with teacher ratings on dimensions measured by the test.

After an extensive process of item analyses and selection, both Walder et al. and Wiggins and Winder factor analysed their respective inventories. Walder et al.s Aggression instrument was

designed to measure five aspects of aggression: socially desirable aggression, socially undesirable aggression, socially undesirable non-aggression, aggression anxiety (unwillingness to aggress), as well as rejection and popularity. The factor analysis based on a sample of 158 elementary school chidren yielded two clearly interpretable factors, the first of which contained items from the aggression and rejection scales, and the second, items from aggression anxiety and popularity.

A further factor analysis of the Walder et al. inventory, which compared the performance of this instrument when used with elementary school chidren and with college students, was done by Minturn and Lewis (1968). The elementary school sample yielded three factors, the first two virtually identical with those found by Walder et al., (i.e., aggression/rejection and aggression anxiety/popularity), and a third factor which Minturn and Lewis termed 'socially undesirable non-aggressive.' The adult sample yielded identical aggression and non-aggressive factors, and two additional factors labelled rebellion/rejection and dominance by Minturn and Lewis.

The Guess Who questionnaire, the Walder et al. Aggression Inventory, and Wiggins and Winder's Peer Nomination Inventory have formed the basis for considerable subsequent research, and also have provided an item pool that has been incorporated into more recent peer evaluation instruments, notably the Pupil Evaluation Inventory (Pekarik et al., 1976). This instrument, based on 35 of the most reliable and consistent items from its

predecessors, was developed using a sample of 352 fourth to seventh graders. Factor analysis of the peer nomination items yielded three factors which Pekarik et al. termed aggression, withdrawal, and likeability.

Ledingham (1981), using the Pupil Evaluation Inventory, and Milich et al. (1984), using a short version of this instrument, found that different combinations of high and low scores on aggression and withdrawal were effective in identifying two distinct groups of aggressors; 'aggressive' and 'aggressive withdrawn'(A/W). Milich and Landau (1984) and Ledingham (1981) showed the aggressive - aggressive/withdrawn distinction to be a useful one. Aggressive/withdrawn boys were significantly less popular, less sociable, and more frequently rejected than aggressive, withdrawn, and control boys. Aggressive/withdrawn boys were also highest on teacher ratings of hyperactivity and aggression, even though behavioural ratings showed that A/W boys did not engage in more interpersonally negative behaviours than aggressive boys. Milich and Landau found that aggressive individuals enjoyed relatively high social status, while A/W boys were the least popular. Further, both Ledingham and Milich and Landau found that A/W also the most psychologically maladjusted group.

In general, all versions of the peer nomination techniques discussed here yield quite similar factors; especially so in the case of aggression. It appears that nominations for aggression almost invariably yield one factor, even if they are designed to

make finer discriminations among forms of aggressive behaviour. However, as the Ledingham (1981) and Milich et al. (1984) findings show, combinations of scores on separate factors indicate that various forms of aggressive behaviour, with different outcomes in terms of social status, are detected by children.

In general, researchers using peer evaluation instruments have found them to possess very desirable psychometric properties. For example, example, Olweus (1977) reported reliabilities of .81 and .79 for ratings of 85 boys by their classmates on variables of 'starts fights' and 'verbal protest' on one-year follow-up. With a sample of 201 boys, the three-year follow-up reliabilities were .65 and .70 for 'starts fights' and 'verbal protest.' Olweus (1977) comments that these coefficients are similar to IQ in their stability.

The concurrent validity of peer ratings of aggression (and other peer ratings in general) is also remarkable. Peer evaluations have been shown to be highly correlated with teacher's ratings (Pekarik, 1976, La Greca, 1981, Milich et al., 1982), as well as with systematic behavioural observation (Pekarik, 1976, Milich et al., 1982). Further, peer evaluations have been shown to reflect more than stereotyping and scapegoating activities within established groups. Putallez (1983) and Coie and Kupersmidt (1981) both were able to demonstrate that boys introduced to unfamiliar social groups quickly rose or fell to social positions they held in previous

groups. Additionally, they found that specific identifiable behaviour patterns were related to success or failure in breaking into a new group.

Perhaps most important for this study, peer evaluations also have been shown to have good predictive validity. For instance, Cowen et al. (1973) found peer evaluations made in the third grade to be the best predictor of *adult* adjustment. And most impressively, the evaluations were more accurate than teacher or clinician ratings, school records, intellectual performance, or self-report data. Other studies have found peer-ratings of similar predictive validity in a variety of domains, including psychiatric adjustment (Roff, 1963), and dropping out of school (Ullmann, 1957). With specific regard to delinquency and aggression, several studies have also shown that poor peer relations are useful predictors. West and Farrington (1973), and Janes et al. (1979) found that negative social status predicted juvenile delinquency, trouble with the law, and frequency of aggressive behaviours. Roff and Wirt (1985) reported that ratings of low peer status combined with peer ratings of high aggression made in the sixth grade were significant predictors of adolescent delinguency and adult criminality. The generally excellent reliability and validity of peer evaluation instruments has led some researchers to use them as preferred dependent measures of aggressive behaviour in theoretical studies (eg. Dodge et al. 1982), as well as in treatment studies (Bierman et al. 1987).

Despite the increasingly widespread use of peer evaluations with populations of normal elementary school children, this measurement technique has received only limited, if any applications with more specialized populations. Given the evident descriptive and predictive utility of using peer evaluations with younger groups of subjects, it could be fruitful to extend this methodology to groups of individuals who have a history of antisocial behaviour and whose future behaviour is a concern for society. However, the performance of peer evaluations with such groups is essentially unknown. Therefore, a basic issue in this study was the utility of a peer evaluation methodology with an older, incarcerated population. There was the possibility, for instance, that adolescent incarcerates, who generally represent the extreme end of the acting-out spectrum, would be a relatively homogeneous group on variables such as aggression (Loeber & Schmalling, 1985), and therefore would not make the expected discriminations on peer evaluation aggression scales. An important aspect of this study, in addition to assessing the predictive validity of peer evaluations, was to provide information on the descriptive validity of this technique when applied to adolescent offenders. In so doing, it was hoped that the understanding of interpersonal processes and social judgements made by young offenders would be enhanced.

In summary, this study attempted to describe processes and factors involved in aggressive behaviour among young offenders. It was hoped that more precise and reliable delineation of

hypothetical processes would enhance the predictability of aggression.

The current study was primarily exploratory, therefore a broad variety of measures was used to attempt to capture the dynamics of aggression with juvenile delinquents. However, it was expected, given the history of equivocal results obtained with the Buss-Durkee, that the Situations Reactions Inventory and Peer Evaluation measures would be more robustly and consistently related to aggression than the Buss-Durkee. Specifically, it was expected that aggressive individuals would predict greater personal reactivity to anger-provoking situations on the Situations Reactions Inventory than would non-aggressors. On the Peer evaluation measure, it was expected that individuals with aggressive criminal histories would be viewed as more aggressive and less socialized than those with no histories of violence. Peer evaluations of aggression were also expected to be a more robust predictor of aggression than the Buss-Durkee.

CHAPTER II

METHOD

Trait Measures

A. The Buss-Durkee Hostility Guilt Inventory(BD)

This measure, chosen because it attempts to distinguish among different types of aggression, consists of eight subscales: Resentment, Suspicion, Assault, Irritability, Indirect hostility, Negativism, Verbal hostility and Guilt. These scales are related to Buss' (1961) views on the components of aggressive response.He postulates three fundamental forms of response. These are:

1. physical versus verbal
2. direct versus indirect
3. active versus passive

Assault, and Verbal aggression represent direct, active modes of aggression, while Negativism is meant to be a measure of the direct passive mode. Indirect Hostility is meant to measure indirect active aggression but there is no measure of indirect passive aggression. Resentment and Suspicion are meant to measure 'Hostility.' Irritability, although not part of the classification scheme outlined above, was considered by Buss to be a form of aggression (Buss, (1961). The BD items are presented in Appendix A.

In a factor analysis, Buss and Durkee found that two factors, which they termed Motor Hostility and Attitudinal hostility best described the data. Motor Hostility includes the

Assault, Indirect Hostility, and Irritability subscales. Attitudinal Hostility, in turn, comprises Resentment and Suspicion. The naming of these factors was meant to indicate Buss and Durkee's belief that Motor Hostility measured active 'attacking responses,' while Attitudinal Hostility was related to cognitive/ affective aspects of hostility. Also they speculated that individuals with paranoia would score high on the Attitudinal factor, while hysterical persons would score high on the Motor factor. Subsequent factor analyses by Edmunds and Kendrick (1980) essentially confirmed the factor structure obtained by Buss and Durkee in 1957.

As indicated earlier, subsequent validity research with the BD has yielded a mixed picture. Studies using the BD will be reviewed in greater detail here. The first studies to be examined are analogue studies. Most of these used the Buss 'Aggression Machine' (a mock electric shock generator) as the measure of aggression. Subjects were invariably undergraduate males. Using this procedure, Lipetz and Ossorio (1967) failed to find any differences between low and high BD Total (collapsed across all scales) scorers in the intensity of duration of shock administered. Leibowitz (1968) found no significant correlations between any of the BD subscales and willingness to deliver electric shocks. Similarly Larsen et al (1972) found no differences in the amount of shock delivered by college students rated aggressive versus non-aggressive on the basis of a composite made up of the Motor Hostility subscales. In contrast to these findings, Knott (1970) found that when the 9 top and

bottom scorers on BD Total were selected from a sample of 110 college males, the BD 'did an excellent job of predicting which Ss would be hostile or aggressive....' In addition to the Total score, Knott found that assault, Indirect Hostility, Irritability, Suspicion, and Verbal Aggression could be used to differentiate 'aggressive' from non-aggressive subjects.

These studies, taken as a whole, suggest that the BD is not a reliable instrument in separating out aggressive versus non-aggressive college males. However, the problems of using non-clinical samples along with an analogue dependent measure of aggression of unknown validity must be taken into account before conclusions about the BD's ultimate merits in 'real-life' situations are formed.

Unfortunately, the results with clinical samples are also equivocal. For example, Miller et al (1960) using the BD with a sample of violent and non-violent paranoid schizophrenics found that violent patients did not differ significantly from non-violent patients on BD total. Miller et al did not report on the performance of individual scales in their study, which is surprising considering the hypothesized link between Suspicion and Paranoia. Buss, Fischer and Simmons (1962) using a sample of 96 psychiatric patients found significant correlations between BD Indirect Hostility, Irritability, Negativity, Resentment, Suspicion, and Total and psychiatrist's ratings of the same aspects of aggression. Psychologists only agreed with scores on Assault. Unfortunately, although Buss et al also report the

relationship between the BD and a variety of other psychological tests, they did not examine the relationships with 'hard' behavioural measures such as history of criminal aggressiveness or frequency of institutional aggression. The psychiatrist's and psychologist's ratings were based on interview and assessment materials.

Gunn and Gristwood (1975) using a sample of 86 prisoners, found a correlation of .45 between a 5-point rating of violence and BD Assault (the report fails to mention the statistical significance of this finding). The correlation between BD total and the violence rating was only .17. The criteria for ratings on the 5-point violence rating are not specified. In a study of violent and non-violent alcohol abusers, Renson et al (1978) found that BD Assault, Irritability, Verbal Hostility, Indirect Hostility and Total discriminated between violent and non-violent alcohol abusers. In this study, more stringent and realistic dependent measures were used, such as police documented histories of violence. Mullen et al (1978) found that Assault, Negativism, Resentment, Verbal Hostility and Guilt were significant discriminators between forensic patients and a college control group, but none of the scales were useful in identifying violent versus non-violent forensic patients. Similarly, Holland et al (1983) found that the BD was not effective in discriminating violent from non-violent criminals in a sample of 151 individuals undergoing presentence evaluation. Violence was defined by two measures, most recent offence and criminal history.

As mentioned in the introduction, the BD has also met with equivocal results when used with adolescents. On the one hand, Lothstein and Jones (1978) found that BD Irritability, Suspicion, Motor Hostility and Total could be used to discriminate between incarcerated adolescent males rated as high versus low assaultives. Contrary to this, Romney and Syverson (1984) using BD total found no significant differences between violent and non-violent adolescent incarcerates.

The aforementioned clinical studies vary in quality, primarily in terms of the dependent measures used. Many also fail to do justice to the specificity of the BD subscales by using the Total score only. All of these studies, however, fail to recognize that violence is not necessarily a unitary phenomenon, and instead, aggregate all aggressive individuals into one (often poorly defined) group. Given the findings of Blacburn and Lee-Evans (1985) on the Situations Reactions Inventory and the Peer evaluation studies that aggression may not be the result of a unitary process, it is highly likely that such homogenizing is a major methodological weakness in many studies of aggression. This study used the BD to asssess its usefulness in making finer discriminations among types of offenders, both in terms of criminal history and in terms of institutional adjustment.

Another major problem with the studies on the Buss-Durkee reviewed here, is that none of them use this instrument as a *predictor* of aggression. The current study also evaluated the

predictive validity of the BD at one year follow-up.

B. Dominance

In addition to the many varieties of hostile and negative responses putatively assessed by the BD, aggression no doubt also serves the social goal of establishing dominance. Therefore, a trait measure of dominance was included in this study. The measure used was the *Dominance* scale of the *Personality Research Form* (Jackson, 1974). The *Personality Research Form (PRF)* is a test devised using a construct-oriented approach, and has been extensively researched by its author. *Dominance,* according to the *PRF* manual describes an individual's propensity 'to control his environment, and to control or direct other people...' Although dominant individuals do not necessarily assert their control through violent means, it could well be that aggression is a primary means used by some juvenile delinquents to establish their position in a social heirarchy.

Reactivity to Threatening Situations

As mentioned in the introduction, the Blackburn and Lee-Evans (1985) adaptation of Endler and Hunt's *Situations-Reactions Inventory of Hostility* (Endler & Hunt, 1968) was used in the current study (Appendix B). This scale was originally designed to assess proportions of variance attributable to personsor situations and their interaction. However, it appears that it may be more appropriately used as a predictor of behaviour in particular situations, based on the

aggressor's perception of a situation as threatening or hostile (Goldfried & Kent, 1972, Blackburn & Lee-Evans, 1985).

Blackburn and Lee-Evans factor analysed the situations and the reponses presented in the S-R Inventory, and found two classes of situations they termed *Attack* and *Frustration. Attack* contains a number of situations that could be interpreted as physically or psychologically threatening. *Frustration* in turn, contains items referring to situations which would potentially tax one's patience, rather than constitute a direct challenge. Three factors accounted for responses. These factors were termed *Anger, Arousal,* and *Aggression* by Blackburn and Lee-Evans. Scores on each of these reactions are obtained for each factor, resulting in six scales: Attack/Aggression, Attack/Anger, Attack/Arousal, and Frustration/Aggression, Frustration/Anger, and Frustration/Arousal. The history of research on the version of the Situations Reactions Inventory used in this study is very brief, at point of writing limited to the study by Blackburn and Lee-Evans (1985). Their major findings have been presented in the introduction.

Peer Evaluation Measures

The primary peer evaluation measure to be used is the one developed and used by Milich et al (1982, 1984) (Appendix C). This scale is made up of twelve items, and measures Aggression (4 items), Social Withdrawal (three items), Sociability (three items), and Social Status (ie. rejected and accepted, two items). This scale was selected because of its brevity and

simplicity as well as its sound psychometric properties. Theoretically, it was also a desirable measure because of its ability to establish the Aggressive, Aggressive/Withdrawn distinction. Most of the items on this scale are derived from Pekarik et al's Pupil Evaluation Inventory (Pekarik et al, 1976), which, as discussed earlier, represents the culmination of about two decades of work with peer evaluation inventories. In the initial investigation of their adaptation of this instrument, Milich et al (1982) found the aggression and sociability scales to be cohesive (coefficient alpha was .89 for aggression and .86 for sociability), and all scales showed adequate test retest reliabilities (acceptance, r = .76, rejection r = .82, aggression, r = .92, and sociability, r = .84). It should be noted that these reliabilities were obtained with a group of *preschoolers*, and could be viewed as exceptional considering the age of the population. Teacher ratings of aggression and sociability were significantly related to peer ratings of aggression and sociability (r = .45 and r = -.33 respectively. (High scores on teacher ratings of sociability indicate greater social problems). However, in their initial study, somewhat surprisingly, Milich et al. found that not all aggressive/hyperactive boys were unpopular or rejected. Subsequent research indicated that social withdrawal, when combined with aggression, was a critical factor in determining peer rejection. This finding lends support to the findings of Ledingham (1981) cited earlier.

In addition to the Milich and Landau items, items thought to be relevant to a sample of incarcerated adolescents were added to the peer evaluation form. It was hoped that these items would be useful in obtaining a maximally differentiated picture of peer relations within the institution. Several items from Lesser's aggression inventory (1959) which were explicit in their descriptions of uncontrolled rage ('Gets so mad that he doesn't know what he's doing'), unprovoked aggression ('Those who start fights over nothing'), and in their identification of aggression in the service of dominance and controlling other residents ('Those who often threaten others'), were also selected. Also several items that are specific to a detention centre environment were included (Appendix C). Two of these items (''Who have you had a fight with', Who would you like to beat up') were meant to identify the participants and targets of aggression. 'Who is strange' and 'Who seems to be having a lot of problems' were included because it was thought that they would be useful in providing data on the relationship between peer evaluations and perceived psychopathology. A dominance item ('Who is the toughest resident') was included, as were two terms very commonly used by residents to summarize undesirable character traits in others ('Goof ' and 'Whiner').

Dependent Measures

The focus of the present study was the investigation of the relationships between a variety of measures of aggression and 'real-life' aggressive behaviour in adolescents. The dependent

measures chosen were therefore those that would reflect genuinely problematic aggressive behaviour. A natural candidate for the measurement of this type of behaviour is, of course, criminal history. Indices of criminal offences can reflect the seriousness of an individual's aggression, and are free from the biases associated with self-report. All charges and convictions, aggressive as well as non-aggressive were considered useful. For predictive purposes, records of offences committed within one year of the original study were used.

In addition to official criminal records, self-reported criminal history was also used as a dependent measure, primarily for the purpose of comparison. Staff notes of behaviour within the institution were also recorded.

Subjects

The project was carried out at at the Willingdon Youth Detention Centre (YDC), the largest correctional facility in the province of British Columbia. YDC holds both male and female adolescent offenders, and contains both sentenced and remanded youth. The male population at the time of the study fluctuated between 80 to 120 residents, while the female population averaged around 20 residents. Because the female population was too small for the nature of the study, females were excluded.

For reasons detailed below, sample sizes fluctuated across the measures used; the most complete data set obtained was for

the Peer Evaluation Inventory. On this measure, nominations for 125 subjects were obtained. The current criminal records for 121 of the subjects were available. The mean age of these subjects was 16 years, 9 months. Their current offences included property offences (n = 78), offences against persons (n = 25), sexual offences (n = 9), murderous offences (n = 8, and 'other' (n = 1). The modal current charges or convictions brought against YDC residents were for property related offences, primarily breaking and entering and possession of stolen property.

Procedures

At the time of the study, the YDC population fluctuated constantly; remanded youth made court appearances in distant communities, requiring their absence for days, convicted residents were often transferred to other facilities or released. Within the centre itself, all but high security risks were frequently transferred from unit to unit as space demands, disciplinary actions, and promotions for good behaviour dictated. YDC also promotes a busy daily activity program, which at the time of the study consisted of school, structured recreational activities, and social skills training, further reducing the time available for research.

The shifting population base and the relative inaccessabilty of subjects imposed limitations on the amount of time and number of research sessions that could be spent with any given subject. Because of these limitations, the administration of measures was arranged hiearchically, with the Peer Evaluation Inventory being

administered first, in an attempt to obtain a 'snapshot' of the milieu at the time of the study.

Peer evaluation techniques are usually employed with relatively stable groups, such as school classrooms. The procedures generally call for all chidren to nominate all their peers on the dimensions called for by the researcher. Unfortunately, in the YDC milieu, there was no possibility that all inmates incarcerated at a given time could participate in the research, nor was there even a remote possibility that all incarcerated youth would know each other. Therefore, the standard approach to peer evaluation was adapted to fit the nature of the YDC population.

The principle that guided the application of the Peer Evaluation aspect of the study was simply that the research should reflect, as accurately as possible, the nature of the social milieu within the institution. This meant that as many evaluations had to be obtained in the shortest possible period of time. To do this, a list of all the current inmates and their projected release date was made. Within the constraints of the vicissitudes of the institution, the order of subjects to be tested was priorized on the basis of their projected release or transfer dates. Although other research measures besides the Peer Evaluation Inventory were included in the research session, these were completed after the Peer Evaluation Inventory had been administered. Because completion of the entire battery of tests required more than one session, (a session that for

aforementioned reasons often did not materialize), there are considerable fluctuations in sample sizes among the various measures. Additionally, because institutional records had been transfered in a small number of cases, institutional adjustment scores for a number of residents could not be calculated.

Subjects were approached, and the purpose of the research was briefly explained to them. The independence of the study from required YDC activities was stressed, as was the voluntary nature of of participation. Confidentiality of the results within the limits of the law (i.e., results were not immune from subpeona) was assured. Subjects were then given the release form to read and sign (see Appendix D). Only 7 of the 100 subjects approached declined to participate. This allowed for a total of 93 subjects to evaluate the 125 residents who were on the original list.

To complete the PEI, subjects were shown a numbered list of residents in the institution at the time of the study, and told the following:

"I am going to ask you some questions about the residents on this list. These questions are about who you like or don't like, and what you think about them. Please look at the list and tell me the numbers of the people whom you know well enough to be able to answer my questions. I will make sure that no one else will get to know about your list of people and how you answered"

After the completion of the 23 peer evalution items, residents were briefly interviewed about their criminal

histories (see Appendix E). When this interview was completed, the residents were requested to fill out the Situation Reactions Inventory. As this is a rather lengthy test (14 situations, 12 responses given for each situation), the situations were read to the subject, who filled out a separate answer sheet which had the reactions printed on it. This procedure usually took upward of one hour, and most of the residents who agreed to be tested were able to complete all aspects of this first series of tests. However, eight residents either had to quit early because of scheduling conflicts, or became bored or uncomfortable with the criminal history interview, and were no longer accessible for completion of the research, leaving a sample size of 85 for the self-reported crime and Situations Reactions data. Once an attempt had been made to contact and interview all 125 boys on the original list, a second run through of the institution was made to administer the Buss-Durkee and PRF Dominance scales. The problems of shifting population and subject unavailability caused further attrition, and 52 subjects were able to complete these two measures.

Dependent Measures

Official criminal histories as recorded on B.C. Ministry of the Attorney General (Branch of Corrections) computer were available for 121 of the 125 residents. These were tabulated and categorized. Both charges and convictions were included, because the combined measures were felt to most accurately represent the troublesomeness of a particular individual to the criminal

system. Also, this procedure allowed for the inclusion of subjects on remand, who made up a considerable proportion of the sample. (Past research at YDC has shown that remanded youth are indistinguishable from convicted youth on a number of criminal indices and personality measures - see Wright, 1984).

The behaviour of residents while at YDC was assessed by reading staff's day shift logbook entries. Every entry (2 per day) for the entire period of a resident's stay was recorded. It was found that staff used a limited set of descriptors to summarize the highlights of a shift, making the organization of this data a matter of counting the frequencies of these typical phrases. These are shown in Appendix F. In addition to the daily behavioural records, incident reports were also tabulated. Incident reports were made by staff in response to acute crises or gross misbehaviour (eg. fights) as well as to persistent non-compliance to routine demands.

CHAPTER III

RESULTS

Data Description: Criminal Histories of YDC Residents

Scrutiny of the criminal histories of YDC residents showed that as a group, they had committed a wide variety of criminal offences. By far the most frequent types of offences were property offences such as Break and Enter and Theft (see Table 1). Additionally, YDC residents also committed a considerable number of non-lethal offences against persons such as Assault and Robbery (see Table 2). However, not surprisingly, the overall number of serious offences against persons (such as Murder) dropped precipitously.

Because the number of charges for serious assaultive offences was so small for each category of offence, Attempted murder, Manslaughter, and Murder were combined to form the category 'Murderous Offences.' This combination is justifiable on a number of counts, the primary one being the seriousness of the charge. These offences, including attempted murder, (which is differentiated from murder because the victim survives), are all considered in a class different from simple assaultiveness, not only in terms of informal social norms, but also in the formal expression of these norms as evidenced by the severity of the sentences meted out by the courts. A second justification for the combination of these offences is based on the fact that both of the manslaughter convictions were listed as second degree murders at remand, in all likelihood indicating that the

differentiation at time of sentencing could be based on the skills of legal counsel representing the offender, rather than any fundamental difference in the nature or seriousness of the offence.

As can be seen in Table 3, sexually assaultive crimes (sexual assault, indecent assault and statutory rape) were the most frequent sexual offences committed by YDC residents.

Finally, Table 4 presents a number of miscellaneous offences, included here for the sake of completeness in sample description. Note that over half of the residents had been charged with breach of probation, a charge that illustrates the problem of recidivism in this sample. In general, almost all YDC residents were repeat offenders, especially with regards to property offences (with the exception of Murderous Offenders, whose criminal records were remarkably sparse).

In addition to documenting officially recorded offences, a subsample of residents also filled out self-reported criminal history questionnaires. Descriptive tables of these indices of criminality can be found in Appendix F, Tables F1 to F3. In general, except for Sexual and Murderous Offenders, residents laid claim to committing far more offences than were noted in official records.

Table 1

Basic Descriptive Properties of Officially Recorded Property Offences

n = 121

	Number of offenders	Number of offences	Mean*	s.d.
Break and Enter	95	267	2.20	1.94
Theft	85	229	1.89	1.75
Possession of stolen property	69	105	.87	.99
Possession of B&E instrument	3	8	.03	.16

* The means and standard deviations in this and all the following criminal history tables are for Number of offences.

Table 2

Basic Descriptive Properties of Officially Recorded Offences Against Persons

n = 121

	Number of offenders	Number of offences	Mean	s.d.
Assault	37	51	.42	.78
Robbery	20	27	.22	.57
Kidnapping	4	4	.03	.18
Attempt Murder	4	5	.04	.24
Manslaughter	2	2	.02	.13
Murder	4	4	.03	.18

Table 3

Basic Descriptive Properties of Officially Recorded Sex Offences

n = 121

	Number of offenders	Number of offences	Mean	s.d.
Indecent assault	1	1	.01	.09
Indecent act	5	5	.04	.20
Gross Indecency	1	1	.01	.09
Statutory rape	1	1	.01	.09
Sexual assault	10	12	.10	.37

Table 4

Officially Recorded Miscellaneous Offences

n = 121

	Number of offenders	Number of offences	Mean	s.d.
Auto theft	11	12	.10	.33
Arson	5	5	.05	.22
Possession of narcotics	17	17	.14	.35
Causing a disturbance	2	4	.03	.29
Breach of probation	68	141	1.17	1.45
Escape lawful custody	37	61	.50	.91
Mischief	48	59	.49	.73

Offences Committed at One Year Follow-up

A total of 78 (64%) had new charges or convictions brought against them within a year of the initial data collection. Tables 5, 6, and 7 present basic descriptive statistics for new charges in the different offence categories upon one year follow-up. As can be seen, most of the new charges were for the property offences of Break and Enter (45 new charges or convictions) and Theft (38 new charges or convictions). There were no new charges of Murder, although one individual previously convicted of Attempted Murder was charged with a new Attempted Murder. There were no new Sex Offence charges. Two of the 4 individuals who committed a new Robbery had previous charges of Robbery. Ten of the 21 new Assaulters had previous charges of Assault.

The Behaviour of Residents while in the Institution

The examination of daily logs permitted for the classification of aggressive incidents into the following categories:

1. attacks on staff (no provocation by staff noted)
2. attacks on other resident (no provocation by resident noted)
3. physical resistance to staff directives
4. mutual physical combat (no instigator noted)
5. verbal threats against staff (in response to staff directives)
6. verbal threats against residents (no provocation noted)
7. aggressive verbal exchanges (instigator not noted)

Table 5

New Officially Recorded Property Offences

n = 121

	Number of offenders	Number of offences	Mean*	s.d.
Break and Enter	30	45	.372	.732
Theft	32	38	.314	.563
Possession of stolen property	16	16	.132	.340

Table 6

New Officially Recorded Offences Against Persons

n = 121

	Number of offenders	Number of offences	Mean	s.d.
Assault	21	28	.231	.629
Robbery	04	04	.033	.180

* Means and s.d.s are for Number of offences.

Table 7

New Miscellaneous Offences

n = 121

	Number of offenders	Number of offences	Mean	s.d.
Other	19	21	.174	.422
Breach of probation	22	29	.240	.592
Escape lawful custody	26	37	.306	.693
Mischief	10	14	.099	.351

8. dominance displays (eg. "tries to play the heavy")
9. bad temper
10. victim of aggression
11. attacks against self (eg. self mutilation)

In addition to allowing for a tabulation of aggressive behaviours, the staff logs proved to be a valuable data source of a variety of other problematic institutional behaviours (see Appendix G for a complete listing). The means and standard deviations of aggressive incidents, as well as other aspects of institutional behaviour are shown in Table 8. The institutional adjustment scores are based on the ratio of number of incidents over the number of shifts per resident, recorded in the staff logs (the average number of shifts per resident was 100.60 and the s.d. was 59.09). Also, in order to exclude the most temporary residents, on whom only a few behavioural observations were available, only those scores of individuals who were incarcerated for at least one week (14 shifts) are presented here and included in subsequent analyses. This decision is in keeping with the recommendations of authors such as Epstein (1979) who point out that too few observation points will result in low reliabilities.

As Table 8 indicates, the occurrences of overtly physical aggression were quite rare. This finding is similar to the one obtained by Megargee and Carbonell (1985). Much more common are generally loud (eg. Loud, foul language) and passive aggressive disruptive behaviours (eg. Slow to respond) and withdrawal. By

Table 8

Means and Standard Deviations of Aggressive Incidents Occurring Within the Institution

n = 97

	Mean*	s.d.
Good shifts	.74	.16
Attacks staff	.001	.005
Attacks residents	.005	.011
Resists staff	.001	.004
Mutual combat	.005	.009
Threatens staff	.002	.006
Threatens residents	.005	.010
Argues with residents	.004	.008
Mouths off at staff	.014	.021
Mouths off at residents	.006	.019
Loud, foul language	.037	.049
Dominates	.009	.017
Bad Temper	.014	.025
Scheming	.009	.014
Slow to respond	.060	.065
Immature demanding	.024	.032
Hyperactive	.046	.062
Withdrawn	.052	.168
Unusual, strange	.005	.013
Property infractions	.010	.020
Self-mutilates	.003	.010
Victimized	.017	.051
AWOL	.002	.008

* The means for each incident were calculated on ratio scores formed by dividing number of incidents by number of shifts for each resident.

far the highest mean score was Number of good shifts, suggesting that for the average resident, disruptive behaviour was a relatively rare or sparodic event.

To normalize the distribution of the institutional adjustment items, square root transformations were computed and employed in all subsequent analyses.

Table 9 shows the intercorrelations among the Institutional Adjustment items. The items referring to acts of physical aggression (1 through 4) are not related to one another. However the physical aggression items were more consistently (if modestly) related to the verbal aggression items (5 through 10). In addition to the correlations between physical and verbal aggression items, physical aggression items were correlated at .30 or greater with other Institutional Adjustment items as follows: Physical assaults on staff (Item 1) was related to Items 12 (Has a bad temper) and 19 (Property infractions and vandalism). Physical assaults on residents (Item 2) was related to Dominance (Item 11), Manipulative (13), Demanding, Immature (15), and Property Infractions (19). Physically resists staff (3) was related to Threatens staff (5) and Property infractions (19). Mutual physical combat with other residents (4) was related to Hyperactive, restless (16), and Property Infractions (19). Dominates (11) was related to Threatens staff (5), in addition to Physical assaults on other residents. Self-Inflicted injuries (20) was correlated with Hyperactive (15) and Unusual (18). Bad temper (12) was related to four of the Verbal

aggression items (7 - 10) and to Physical aggression against staff. The Victim items (21 to 23) were correlated positively with Verbal outbursts directed at other residents (9) and highly intercorrelated among each other. Note that Withdrawn (17) was consistently (but generally not significantly) negatively related to other Institutional adjustment items.

A Principal Components Analysis was performed to reduce the number of variables and to attempt to clarify the structure of the institutional data. Table 10 presents the results of the principal components analysis. Eight factors with eigen values greater than one were extracted. However, inspection of the scree plot, as well as the interpretability of the factors suggested that 3 factors be kept for varimax rotation. These three factors accounted for 41.8% of the variance.

Items with loadings of .40 or greater on Factor I included two Physical aggression items (Threatens residents and Resists staff), as well as all the Verbal aggression items save for Verbal outbursts directed at residents. Also loading on Factor I were Dominance, (the largest loading), Bad temper, and Property infractions. This factor, with its predominance of Aggression items was labelled 'Aggression.' Factor II is clearly a Victim factor. Note that Verbal outbursts directed at other residents and Demanding, immature also load on this factor. Items loading on Factor III included one Assault item (Assaults staff), the Self inflicted injury item, and a variety of items of troubled and troublesome behaviours that indicate disruptiveness,

Table 9

Intercorrelations of the Institutional Adjustment Items

n=97

Item	1	2	3	4	5	6	7	8	9	10	11	12
1	1.00											
2	.17	1.00										
3	.00	.09	1.00									
4	.11	.14	.01	1.00								
5	.23	.26	.32	.14	1.00							
6	.17	.31	.11	.05	.19	1.00						
7	.37	.19	.10	.39	.15	.23	1.00					
8	.27	.16	.23	.26	.44	.19	.30	1.00				
9	.20	.31	.16	.37	.22	.07	.21	.26	1.00			
10	.37	.31	.24	.30	.41	.39	.35	.49	.39	1.00		
11	.12	.41	.22	.05	.37	.28	.17	.21	.13	.24	1.00	
12	.36	.17	.03	.20	.26	.22	.31	.45	.31	.43	.23	1.00
13	.12	.30	.07	.17	.24	.22	.31	.32	.11	.52	.15	.13
14	.25	.17	.13	.20	.19	.17	.27	.33	.26	.51	.07	.31
15	.04	.34	.07	.19	.22	.07	.00	.21	.25	.37	.00	.28
16	.22	.28	.08	.33	.30	.24	.12	.29	.32	.52	-.04	.36
17	-.08	-.17	-.11	-.15	-.09	-.12	-.12	-.17	-.03	.-21	-.14	-.02
18	.28	.09	.16	.15	.19	.06	.13	.30	.37	.10	-.02	.10
19	.30	.37	.31	.31	.31	.18	.29	.21	.16	.37	.15	.32
20	.22	.11	-.01	.11	.01	.02	.02	.23	.10	.16	-.15	.09
21	.03	-.01	-.03	.22	-.03	-.13	.06	.00	.47	.15	-.12	.20
22	.11	-.01	-.06	.19	-.10	-.08	.10	.00	.38	.13	-.11	.14
23	.04	-.06	.05	.23	-.08	-.21	.03	-.07	.48	.03	-.18	.14
24	.19	-.15	.09	-.07	.00	.07	.01	-.04	-.12	.15	-.01	-.12

Table 9 continued

Table 9 continued

Item	13	14	15	16	17	18	19	20	21	22	23	24
13	1.00											
14	.44	1.00										
15	.26	.27	1.00									
16	.27	.30	.47	1.00								
17	-.21	-.21	-.22	-.18	1.00							
18	.06	.24	.27	.27	.02	1.00						
19	.32	.42	.26	.33	-.11	.07	1.00					
20	.04	.16	.29	.40	-.04	.34	.24	1.00				
21	-.06	.18	.29	.12	-.03	.05	.15	.09	1.00			
22	-.04	.05	.24	.02	-.10	.08	.03	.01	.74	1.00		
23	-.12	.17	.33	.16	-.01	.14	.10	.17	.78	.59	1.00	
24	.06	.20	-.17	-.10	-.02	-.03	.15	.14	-.12	-.07	-04	1.00

Table 10

Loadings of Institutional Adjustment Items on Varimax Rotated Principal Components

n = 97

	Factor I	Factor II	Factor III	*h*2
Attacks staff	.27	.03	.48	.30
Attacks residents	.62	.11	.01	.39
Resists staff	.35	-.01	.07	.13
Mutual combat	.30	.39	.20	.28
Threatens staff	.61	-.02	.16	.39
Threatens residents	.53	-.16	.09	.31
Argues with residents	.47	.12	.19	.27
Mouths off at staff	.53	.04	.39	.43
Mouths off (residents)	.31	.65	.18	.55
Loud, foul language	.65	.17	.43	.65
Dominates	.68	-.09	-.28	.55
Bad Temper	.47	.28	.25	.36
Scheming	.52	-.06	.28	.35
Slow to respond	.29	.12	.60	.46
Immature demanding	.26	.43	.32	.36
Hyperactive	.34	.23	.54	.46
Withdrawn	-.35	-.12	.12	.15
Unusual strange	.05	.15	.53	.30
Property infractions	.44	.12	.41	.30
Self mutilates	-.12	.06	.70	.51
Victim (physical)	-.10	.89	.04	.80
Victim (Verbal)	-.08	.80	-.04	.65
Victim (Unspecif)	-.21	.84	.15	.77
AWOL	-.11	-.29	.37	.38

obstinancy towards staff, and also suggest a high level of psychopathology. This factor was termed 'Disrupter.'

Basic Characteristics of the Peer Evaluation Measures

The Peer Evaluation measures used in this study included items used by Milich and Landau (1984) and a number of additional items obtained from the instrument described by Lesser (1959) as well as items specifically generated for the YDC sample. The Milich Landau items are termed the 'M/L PEI,' while the entire set of items, (which includes the M/L PEI items) is referred to as the YDC PEI. The performance of the PEI items are presented here in some detail, as peer evaluation methods have not been applied to incarcerated offenders, and their adaptabilty to such a population is unknown. The basic descriptive properties of the BD, Dominance and the SR are presented in Appendix H, Tables H1 and H2. Briefly, the means and standard deviations of the BD and Dominance were very close (at times identical) to those reported by their authors.

Table 11 presents the basic properties of all the Peer Evaluation Items. The average YDC resident was known by about 41 other residents (mean = 41.20, s.d. = 15.54). An individual's score on each PEI item was calculated by dividing the number of nominations on a particular item by the number of people who knew the resident. All scale items, except for 'Known' and 'Liked' had modal scores of zero, and possessed outliers. To normalize the distributions, square root transformations were applied to all the PEI items, and the resulting scores were

employed in all subsequent analyses.

The Milich Landau Peer Evaluation Items

Table 12 shows the intercorrelations of the 12 Milich and Landau PEI items. The first two items are the social status items, and are not included in the PEI scales by its users. They are presented here for completeness and their relationship with the PEI items proper will be examined after a presentation of the scale items.

As Table 12 shows, the items associated with the Aggression scale (Mean, Fights, Bossy and Gets mad easily are all correlated at .55 or greater. Coefficient Alpha for Aggression was .87. The Withdrawn scale items ('Keeps to self', 'Shy', and 'Always seems to be having a bad time' are less robustly related, with correlations ranging from r = .33 ('Keeps to self' with 'Always seems to be..') to r =.54 ('Shy' with 'Keeps to self'). This scale had the lowest coefficient Alpha (.70). The Sociability items ('Especially nice', 'Helps others' and 'Everybody likes') show correlations ranging from r = .45 ('Helps' with Everybody likes) to r = .65 ('Nice' with 'Helps'). Coefficient Alpha for this scale was .76.

An examination of the relationship between high social status and the scale items reveals that Liked is positively related with the Sociability items, but it is also moderately related to a number of the Aggression items. This finding is in keeping with that of other researchers (Coie, Dodge, &

Table 11

Means and Standard Deviations of all Peer Evaluation Items

n = 125

	Mean*	s.d.
Like	.125	.090
Dislike	.081	.196
Is mean	.018	.034
Keeps to self	.037	.047
Fights	.027	.048
Is Bossy	.035	.060
Gets mad easily	.032	.044
Is shy	.017	.028
Is especially nice	.037	.043
Helps others	.020	.033
Never has a good time	.026	.053
Everybody likes	.033	.017
Gets so mad...	.016	.032
Starts fights	.021	.042
Threatens	.026	.053
Goof	.062	.095
Whiner	.033	.058
Toughest	.025	.090
Had a fight with	.021	.029
Would like to beat up	.026	.040
Is strange	.025	.047
Has problems	.030	.055

* Means are calculated on ratio scores formed by dividing number of nominations for an item by the total number of persons who knew the resident.

Copotelli, 1982). Disliked is positively related with one Withdrawn item ('Has bad time') and also related to all the Aggression items. Save for the correlation between Disliked and 'Mean' (r = .55), the magnitude of these correlations is virtually identical to that of the Liked/Aggressive correlations.

A Principal Components Analysis was also carried out to clarify the structure of the PEI when it is used with an overtly criminal adolescent sample. This analysis yielded three factors with eigenvalues greater than one. These three factors accounted for 72.7% of the variance. The varimax rotated factors are presented in Table 13. All four Aggression items loaded strongly on Factor one, clearly making this the 'Aggressive' Factor. The Sociability items also produced an unequivocal 'Sociable' factor and the Withdrawn items loaded consistently on the third Factor, which naturally enough is labelled 'Withdrawn.'

For the interested reader, the correlations between the M/L PEI and the other predictors are shown in Appendix I.

The YDC Peer Evaluation Inventory

The analyses of the performance of the additional PEI items were conducted to explore the effect of adding such items to the basic Inventory. Establishing the validity of the resulting instrument was not a central goal of the current study, so studies of the performance of the YDC PEI as a predictor of aggression are not included here. (The correlations between the

Table 12

Correlation Matrix of the PEI Items

n=125

	L	D	M	K	F	B	GM	S	N	H	NGT	EL
Like (L)	1.00											
Dislike (D)	.02	1.00										
Mean (M)	.26	.55	1.00									
Keeps to self (K)	.03	.15	-.01	1.00								
Fights (F)	.43	.48	.60	.01	1.00							
Bossy (B)	.47	.43	.72	-.14	.67	1.00						
Gets mad (M)	.30	.44	.55	-.01	.64	.62	1.00					
Shy (S)	-.19	.06	-.12	.54	-.18	-.28	-.05	1.00				
Nice (N)	.60	-.16	.05	.12	.13	.18	.08	-.07	1.00			
Helps (H)	.56	.05	.22	.12	.25	.33	.15	-.11	.65	1.00		
Has bad time (BT)	-.09	.43	.13	.33	.08	.02	.19	.48	-.13	-.07	1.00	
Everyone Likes (EL)	.56	.03	.38	-.20	.41	.54	.36	.39	.45	.51	-.24	1.00

Table 13

Loadings of the Milich PEI Items on Varimax Rotated Principal Components

(n=125)

Item	Factor 1	Factor 2	Factor 3	h2
Mean	.84	.04	-.02	.70
Keeps to self	-.09	.23	.79	.68
Fights	.83	.13	-.01	.71
Bossy	.86	.21	-.17	.80
Gets mad	.83	.03	-.09	.69
Shy	-.16	-.09	.84	.75
Nice	.00	.89	.02	.80
Helps	.18	.87	.02	.79
Bad time	.23	-.21	.74	.64
Liked	.46	.59	-.39	.71

YDC PEI and the dependent variables are presented in Appendix J). The correlation matrix showing the relationships between the YDC PEI items and the Milich and Landau items is presented in Table 14. Also present in this table are intercorrelations of the YDC PEI items. The aggression items obtained from Lesser's (1959) scale ('Gets so mad he doesn't know what he's doing', 'Starts fights over nothing' and 'Threatens other residents') were consistently and strongly related to the Milich and Landau Aggression PEI items. They were also consistently correlated with one another. These Aggression items were also correlated in equivocal fashion with both the Liked and Disliked social status items, although the correlations with Disliked were marginally stronger than those between the Milich and Landau PEI Aggression items and Disliked.

The next two YDC PEI items, 'Goof' and 'Whiner' were both popular epithets in the institution at the time of the study. 'Goof', in particular, was reserved for strongly disliked residents. The correlation between 'Goof' and Disliked illustrates this (r = .83). 'Goof' was also strongly related to 'Whiner' (r =.73) From Table 14, it is also evident that high scores on 'Goof' were positively related to 'Had a fight with' and 'Would like to beat up.' In many respects, 'Goof' behaves similarly to Disliked and probably is simply a colloquial social status item.

Both 'Goof' and 'Whiner' were positively correlated with 'Never has a good time' at .50 or greater. 'Whiner' too, was

related to 'Had a fight with' and 'Would like to beat up', but in general, was not as consistently related to the other Aggression items. In this respect, 'Whiner' appears to refer more to Disliked, non-aggressive residents. Both 'Goof' and 'Whiner' were correlated with the psychopathology nominations 'Strange' and 'Has lots of Problems.'

Examination of the correlations of 'Had a fight with' and 'Would like to beat up' with other PEI items shows these items were most strongly related to Disliked and Goof and Whiner. Would like to beat up was also related at moderately high levels with the two 'temper' items, 'Gets mad easily' (r = .51) and 'Gets so mad he doesn't know what he's doing' (r = .59).

Principal Components analysis of all the PEI items (including Liked and Disliked) resulted in the extraction of four factors with eigenvalues greater than unity. These factors, which accounted for 69.6% of the variance. were retained for varimax rotation. The rotated factor loadings are presented in Table 15.

As in the Principal Components analysis of the Milich PEI items, the largest loadings on the first factor are all comprised of Aggression items. Note that even though the Lesser explicit aggression items have substantial loadings on this factor, one of the M/L PEI Sociable items ('Everybody likes') is nonetheless associated with Aggressive. This factor seems to denote unrestrained anger and dominance displays, and is termed 'Aggressive.' Items with sizable loadings on the second factor

Table 14
Correlation Matrix of the YDC PEI Items
n=125

	L	D	M	K	F	B	GM	S	H	N	NGT	EL
Gets so mad..	.26	.50	.53	.04	.59	.52	.68	-.03	.11	.23	.27	.29
Starts fights	.25	.54	.65	-.05	.69	.63	.54	-.10	.06	.18	.18	.31
Threatens	.37	.42	.68	-.11	.70	.80	.66	-.21	.16	.29	.06	.49
Goof	-.04	.83	.41	.15	.43	.32	.42	.16	-.22	-.04	.52	-.07
Whiner	-.11	.66	.21	.33	.18	.05	.19	.32	-.19	.-02	.55	-.16
Toughest	.49	.15	.42	-.09	.53	.56	.41	-.23	.33	.48	-.09	.72
Fought with	.22	.52	.39	.02	.44	.32	.40	.08	.02	.10	.36	.09
Would like to beat up	-.00	.64	.44	.15	.42	.39	.51	.16	-.18	-.01	.44	.05
Strange	-.14	.47	.21	.12	.17	.13	.34	.29	-.20	.15	.41	-.08
Problems	-.14	.53	.19	.29	.28	.14	.39	.43	-.23	-.17	.61	-.16

Table 14 continued

Table 14 continued

	GSM	SF	Th	Gf	Wh	To	FW	WL	St	Pr
Gets so mad..	1.00									
Starts fights	.49	1.00								
Threatens	.58	.81	1.00							
Goof	.47	.49	.41	1.00						
Whiner	.34	.25	.15	.73	1.00					
Toughest	.33	.48	.54	.44	.12	1.00				
Had fight	.29	.41	.37	.54	.44	.12	1.00			
Wld like to	.59	.52	.52	.68	.53	.20	.46	1.00		
Strange	.43	.13	.15	.50	.53	-.07	.26	.46	1.00	
Problems	.39	.25	.19	.58	.60	.01	.29	.54	.71	1.00

come from the Milich and Landau PEI Withdrawn scale, and also include the items 'Whiner,' 'Strange', and 'Has lots of problems.' Although the loadings are small in size (.21 and .33) two items indicating temper problems ('Gets mad easily' and 'Gets so mad he doesn't know what he's doing') were also related to this factor. The items in general, suggest an overt psychopathological element in addition to withdrawal. This factor is labelled 'Odd/Withdrawn.'

Factor III contains the items 'Disliked' and 'Goof,' and also has items from Aggressive and Withdrawn loading on it. The Aggression items include 'Starts Fights,' 'Had a fight with', and 'Would like to beat up.' The Withdrawn item is Never seems to be having a good time. This factor, with the large loadings from disliked/rejected items, and the mixture of aggressive and withdrawn items, seems to be measuring dysphoric or withdrawn aggression. It is tentatively labelled 'Disliked/Aggressive (D/A). The final factor, has all the Milich Landau PEI Sociable items loading on it, in addition to the YDC PEI 'Toughest' item. Liked (high social status) also loads on this factor. Note that one of the M/L PEI Withdrawn items, 'Keeps to himself' has a modest loading on this factor (.31). It is probably the case that 'Keeps to himself' has positive connotations on this factor. This factor is labelled 'Respected/Sociable' (R/S).

Table 15

Factor Loadings of All PEI Items on Varimax Rotated Principal Components

n=125

	Factor I	Factor II	Factor III	Factor IV	*h*2
Likes	.33	-.10	.03	.75	.68
Dislikes	.42	.27	.72	-.11	.78
Mean	.70	-.07	.37	.08	.64
Keeps to self	-.24	.65	.12	.31	.59
Fights	.74	-.01	.31	.20	.69
Bossy	.80	-.15	.21	.23	.76
Gets mad easily	.80	.21	.11	.04	.71
Shy	-.27	.75	.05	.01	.65
Especially nice	.05	.00	-.14	.85	.74
Helps others	.18	-.02	.05	.82	.71
Always has bad time	.01	.65	.43	-.07	.61
Everybody likes	.58	-.25	-.16	.52	.69
Gets so mad...	.74	.33	.13	.05	.68
Starts fights	.68	-.07	.46	.09	.69
Threatens others	.82	-.09	.28	.17	.79
Goof	.35	.34	.74	-.19	.82
Whiner	.06	.53	.66	-.12	.73
Toughest	.63	-.12	-.07	.47	.64
Had a fight with	.23	.07	.74	.11	.62
Would like to beat up	.52	.38	.47	-.17	.66
Strange	.35	.64	.11	-.33	.65
Has problems	.32	.75	.22	-.28	.79

Summary of the Factorial Studies of the PEI Items

Overall, the results of the exploratory analyses of the PEI items present a good case for the application of this methodology with an incarcerated offender group. The earlier stated concern that YDC residents could comprise too homogeneous a group to produce measurable distinctions on the PEI were not borne out by the factor analyses. Rather, the distinctions made by YDC residents resulted in virtually identical factorial dimensions as reported in previous studies of this instrument. Furthermore, resident's attidudes towards completing the PEI were as favourable (if not more so), as their attitudes towards other psychological tests.

A comparison of the factorial structures of the M/L and YDC PEIs suggests that the YDC PEI factors make some distinctions that are missed by the M/L PEI. Specifically, Withdrawn is divided into two factors, Odd/Withdrawn and Aggressive/Withdrawn. With the addition of Aggressive/Withdrawn, finer discriminations between 'Shy', 'Keeps to himself' and 'Never has a good time' are made. All three have their most substantial loadings on Odd/Withdrawn. However, 'Always has a bad time' also loads onto Aggressive/Withdrawn at .43, while 'Keeps to himself' loads onto Respected/Sociable (albeit modestly at .31).

This pattern of loadings suggests that there may be a gradient of noxiousness implicitly assigned to the PEI Withdrawal items by YDC residents, with 'Never has a good time'

denoting the most objectionable form of 'withdrawal.' It is not clear from the results in this study what determines objectionable withdrawal, or even more importantly, objectionable aggression. It appears that the M/L PEI, with its limited set of Withdrawal items forced the adolescents to constrain their nominations. The change in factor structure when the item selection for odd ways of behaving was enlarged in the YDC PEI suggests this may have been the case. The composite picture from the items loading onto Odd/Withdrawn suggests that overt psychopathology plays a role in determining objectionable withdrawal. The items on Disliked/Aggressive suggest a more active and provocative aggressive approach, leading to conflagrations. This factor may be measuring something similar to the Aggressive/Withdrawn construct proposed by Ledingham (1981). Overall, however, more research with different item pools related to the concept of withdrawal, aggression and disliked social status is necessary to clarify the kinds of distinctions delinquent adolescents make in their social evaluations. In particular, it would be useful to establish, through careful observation and exploratory interviews, a set of behaviours, both unusual and aggressive, that residents are likely to find most unacceptable, and that are most likely to lead to aggression.

Exploratory Analyses: Correlations between the Predictors and the Dependent Variables

This section is designed to provide a full descriptive picture of the relationships between the predictors and a variety of indices of aggression. The correlations that are presented here are meant to fulfil a descriptive purpose only, and are not meant to be generalizable to other populations. Therefore, no significance tests are included.

A. The Relationship Between the BD and Dominance and Aggression

Table 16 shows the correlations between the BD and the Institutional Adjustment (IA) factors. Of particular interest are the correlations between the BD and the IA Aggression factor. As can be seen from Table 16, these correlations were all uniformly trivial, hovering closely to zero. This was also generally true of the relationships between the BD scales and IA Victim, although BD Resentment and Suspicion were modestly correlated with this factor (r = -.34 and r = .29, respectively). There were several more sizable correlations between the BD and the Disrupter factor (r = .50 for Indirect Hostility, and r = .37 for Irritability and Motor Hostility. In sum, with the current sample, the BD subscales were essentially unrelated to Institutional Aggression, but several isolated subscales were related to Disruptiveness. The correlations between Dominance and the IA factors were uniformly close to zero.

Table 16

Correlations between the Buss Durkee Inventory and the Institutional Adjustment Factors

n = 48

	Aggression	Victim	Disrupter
Resentment	.03	-.34	-.11
Suspicion	.01	.29	.06
Assault	.08	-.08	.05
Indirect Hostility	.03	.03	.50
Irritability	.03	.06	.37
Negativity	-.01	-.13	-.07
Verbal Hostility	.16	.05	.22
Guilt	.04	-.21	.05
Attitudinal Hostility	.02	.02	-.02
Motor Hostility	.10	.12	.37
Total	.07	.01	.26

Table 17 presents the correlations between a variety of criminally aggressive offences and the BD. As in the case of the relationship between BD and IA Aggression, most of the correlations between the BD and aggressive offences were essentially unremarkable. This was especially true of the relationship between the BD and non-lethal assaultive crimes (Robbery and Assault) and Sexual Assault. However, the correlations between the BD subscales and Murderous Offences were somewhat more substantial, and their pattern showed some consistency. All were negatively related to Murderous Offences, and and several scales showed correlations of -.36 or greater.

B. The SR and Aggression

None of the SR scales showed correlations of noteworthy magnitude with the IA Aggression and Victim factors. There were only two negative correlations of modest size between Attack Anger and Attack Arousal and the IA Disrupter factor (r = -.31 and r = -.28 respectively). Like the BD, the SR was essentially unrelated to indices of institutional aggression.

The SR scales were not correlated with non-lethal aggressive crimes of Robbery and Assault (as can be seen in Table 18, all correlations are close to zero). However, the relationships between the SR scales and Murderous Offences and Sexual Assaults were generally more substantial, and also presented a distinctive pattern. On Sexual Assault, for both the SR Attack and Frustration scales, there was a stepwise decrease in the

Table 17

Correlations between the Buss Durkee Inventory and Official Records of Violent Crimes

n=51

	Assault	Robbery	Murderous Offences	Sexual Assault
Resentment	-.08	.03	-.24	-.01
Suspicion	-.13	-.21	-.09	.30
Assault	-.02	.09	-.09	.17
Indirect hostility	-.21	.14	-.14	.11
Irritability	-.10	.35	-.38	.13
Negativity	.05	.00	-.11	.04
Verbal hostility	.11	-.12	-.45	.11
Guilt	.00	.02	-.21	.03
Attitudinal Hostility	-.13	-.04	-.20	.20
Motor Hostility	-.06	-.15	-.36	.20
Total	-.10	.08	-.36	.17

size of correlations from Aggression to Arousal (i.e. .36, .30, .18 for Attack, and .32, .23, .08 for Frustration). The opposite was true for Murderous Offences, where the sequence of correlations from Aggression to Arousal increased steadily.

The finding that only a subset of aggressive crimes were related to the SR scales, and that the correlations within this subset follow a particular pattern suggests that in the current sample, aggressive crimes may be differentially related to self-reported reactivity.

C. The M/L PEI and Aggression

The correlations between the PEI and the IA factors are shown in Table 19. Several aspects of these correlations bear mention here. First, note that the PEI Aggression factor was correlated with only one IA factor, namely, Aggression. This correlation, which is moderately large in magnitude (.72), was the only substantial correlation between any of the predictors and IA Aggression. Additionally, the PEI Sociable factor was modestly and negatively related to both IA Victim and Disrupter. This suggests that resident's perceptions of non-problematic behaviour in their peers was to some extent corroborated by staff reports. PEI Withdrawn, in turn, was positively correlated with IA Victim.

The correlations between the PEI factors and the criminal aggression measures (shown in Table 20), further suggest that the relationship between predictors and 'aggression' in the

Table 18

Correlations between the Situations Reactions Inventory and Official Criminal History

n = 82

	Sexual Assault	Murderous Offences	Assault	Robbery
Attack/Aggression	.36	.22	.13	.19
Attack/Anger	.30	.34	.07	.04
Attack/Arousal	.18	.42	.05	.04
Frustration/Aggression	.32	.16	.08	.06
Frustration/Anger	.23	.22	.04	.02
Frustration/Arousal	.08	.25	.06	.07

current study depend on the nature of aggressive offences being considered. In the case of the PEI, peer nominations of Aggressive were modestly related to indices of Assault and Robbery, but were not related to Murderous or Sexual Offences. The opposite was true of the Sociable factor, which was positively correlated with Murderous Offences and negatively related to Sexual Assault, but essentially unrelated to Robbery or Assault. Finally, Withdrawn showed a modestly positive relationship with Sexual Assault.

Implications of the Correlational Analyses

The patterns of correlations found between the predictors and the dependent variables in the current study suggested that the predictors were differentially sensitive to different crimes. This was particularly true of the SR and PEI. One conclusion that can be tentatively drawn from this is that an aggregate measure of aggression would obscure relationships between the predictors and aggression. It was decided therefore, that the various measures of criminal aggression be kept separate in subsequent analyses. Several of the key hypotheses tests that follow are thus carried out with groups of Assaulters, Robbers, Murderous Offenders, and Sexual Assaulters, in addition to non-aggressive Property Offenders.

Some general comments about the relative merits of the various predictors, based on the results of the correlational analyses are perhaps also in order here. Because these analyses

Table 19

Correlations between the Milich and Landau PEI and Institutional Adjustment Factors

n = 97

	Aggressive	Victim	Disrupter
Aggressive	.72	.12	.04
Sociable	-.01	-.37	-.24
Withdrawn	-.22	.44	.12

Table 20

Correlations between the Milich and Landau PEI and Official Records of Violent Crimes

n=121

	Assault	Robbery	Murderous	Sex
Aggressive	.44	.32	.03	.17
Sociable	.02	.00	.33	-.22
Withdrawn	.03	-.07	.09	.30

were meant to be exploratory, the following comments are only a descriptive summary of the current study, and no claims of generalizability of the results are made. These comments are in part directed at the first 'expectation' cited in the Introduction ("the SR and the PEI will be more robustly and consistently related to aggression than the BD"). This 'expectation' was not operationalizable in testable hypotheses form in the current study, given the proliferation of variables (20 predictor scales and 5 dependent measures of aggression) combined with the relatively small sample size. However, some comments about 'robustness' (defined here as size of correlations) and 'consistency' (defined as the frequency and interpretability of correlational patterns) are presented here.

First, with regard to IA Aggression, only one scale from the predictor set -- PEI Aggression -- was correlated with this variable. All other subscales showed only trivial correlations with IA Aggression. This finding was also true for the relationships between the predictors and non-lethal aggressive crimes of Robbery and Assault. Here, again, only the PEI Aggressive factor was correlated (albeit at modest levels) with these crimes. These findings suggest that further research of the performance of peer evaluation techniques as correlates of non-lethal aggression could be worthwhile.

With regards to Murderous Offences, all three predictors demonstrated some relationships with these offences. In terms of magnitude of correlations, the SR, PEI, and BD were quite

similar, all showing at best only moderate correlations with Murderous Offences. However, each of the tests supplied potentially unique information about personality factors involved in this type of offence. The set of negative correlations between Murderous Offences and the BD scales suggest that Murderous Offenders tend to deny hostility. (If this is the case, then an omnibus inventory such as the BD is probably an inefficient way to access this variable). The positive correlations between the SR scales and Murderous Offences suggest a relationship between these offences and reactivity in the form of anger and arousal. The positive correlation between PEI Sociable and Murderous Offences also could imply that these offences are related to a particular form of prosocial interpersonal style.

Finally, the relationships between the predictors and Sexual Offences were approximately equal in magnitude, although in terms of relative frequency, only one of 11 BD scales (Suspicion) was correlated with this crime. The correlations between Sexual Assault and the SR scales of Aggression and Anger, and the relationship of this crime with PEI Withdrawn, tentatively suggests that this offence is related to isolated, withdrawn, and at times, aggressive behaviours.

Overall, the relative merits of any given predictor are difficult to discern, given the generally small magnitude of the correlations, and the differential correlational pattern produced by different measures of aggression. If one is

interested in the percentage of 'non-zero' correlations per test, then the first choice would be the PEI, as every scale on this measure was correlated with at least one type of aggressive offence. The last choice would be the BD, which showed only isolated correlations with all aggressive offences save for the Murderous Offences.

Finally, a word about the PRF Dominance scale. This scale failed on all counts to measure aggression, and for the current sample, proved to be an unsuitable measure of aggressive dominance.

Formal Tests of the Hypotheses

1) Aggressive individuals will predict greater personal reactivity to anger-provoking than non-aggressors on the SR.

A oneway MANOVA with 5 groups of offenders and 6 SR scales as dependent variables yielded a significant overall effect, $F(24, 278) = 2.01$, $p < .004$. (In this, and all subsequent analyses, the minimum acceptable alpha was set at .01). Univariate *F's* for all the individual scales except Frustration Aggression were significant at .01 (Mean scores for each offender group on each of the SR scales are shown in Table 21). Post-hoc comparisons on the scales that showed significance on the univariate *ANOVAS* were conducted, using the Tukey test with alpha set at .01. The post-hoc comparisons supported the hypothesis that aggressive offenders would score higher on the

SR for Sexual Assaulters, Murderous Offenders, and Robbers. Murderous Offenders scored significantly higher than non-aggressive Property Offenders and Assaulters on Attack Anger and Attack Arousal, and higher than Property Offenders on Frustration Arousal. Sexual Assaulters scored higher than Property Offenders and Assaulters on Attack Aggression and Attack Anger. Robbers scored higher than both Property Offenders and Assaulters on Frustration Arousal. Overall, the Assaulters and Property Offenders showed a similarity in their relatively low scores on any of the SR scales.

2) Individuals with aggressive criminal histories are viewed as more aggressive and less sociable by their peers than those with no history of violence.

A oneway MANOVA with the 5 offender groups serving as the grouping variable and the 3 PEI scales as dependent variables yielded a significant overall result $F(12, 299) = 6.29$, $p < .000$. Univariate analyses showed significant results for PEI Aggression, $F(4, 115) = 10.34$, $p < .0000$, and Sociable $F = 5.87$, $p < .0002$, but not for Withdrawn, $F = 2.68$, $p < .04$ (the Means for each group on these measures are shown in Table 22). Post-hoc analyses, using the Tukey test indicated that Assaulters and Sexual Assaulters had significantly higher scores on PEI Aggression than Property Offenders. Contrary to prediction, one group of aggressive offenders, namely Murderous Offenders, were regarded as *more*, rather than less Sociable than Property Offenders, Assaulters, and Sexual Assaulters.

Table 21

Comparisons of Offender Types on the SR

Scale	Prop	Asslt	Robb	Sex	Murd	
	n=36	*n*=23	*n*=7	*n*=9	*n*=6	
Att Agg	1.11	1.13	1.29	2.18	1.88	S > A, P
Att Ang	1.40	1.32	1.66	2.43	2.67	S, M > A, P
Att Aro	.38	.39	.86	.93	1.50	M > A, P
Fru Agg	.76	.86	1.19	1.72	1.55	
Fru Ang	1.19	1.22	1.71	2.19	2.05	
Fru Aro	.14	.20	.77	.41	.67	M > P
						R > A, P

Table 22

Comparisons of Offender Types on the PEI

Scale	Prop	Asslt	Robb	Sex	Murd	
	n=60	*n*=30	*n*=10	*n*=11	*n*=9	
Aggr	-.44	.74	.25	.53	-.02	A, S > P
Soc	.01	-.01	-.12	-.68	1.28	M > P, A, S
With	-.13	.01	-.13	-.68	.24	

3) Peer evaluations of aggression will be better predictors of aggression than the Buss-Durkee scales.

A preliminary correlational analysis showed that neither the BD scales nor PEI Aggression were significantly correlated with new non-lethal Assaultiveness (Robbery and Assault combined). The PEI Aggression scale correlation approached significance ($r = .21$, $p < .04$), but the minimal size of of this correlation suggested that multiple regression analyses were not warranted.

An Additional Analysis: The Aggressive/Withdrawn Offender

As noted earlier, a number of researchers (Ledingham, 1981, Milich and Landau, 1984) have found that classifying their subjects on the basis of simultaneously high scores on Aggressive and Withdrawn identified a group of children particularly prone to poor classroom and peer adjustments. Although specific hypotheses about Aggressive/Withdrawn offenders were not made in the current study, the prominence of this construct in recent peer evaluation literature suggested that an investigation of aggressive withdrawal in young offenders was warranted.

To establish the Aggressive/Withdrawn, Aggressive, Withdrawn or Control (C) status, Milich and Landau divided their sample into fifths, and created groupings on the basis of various configurations of scores within this division. In the current sample, establishing groups on the basis of quintiles was not

possible, as it resulted in empty cells. Therefore, the groups were created on the basis of median splits. The Aggressive group (A), was created by selecting youths with above-median scores on M/L PEI Aggressive, and below-median scores on PEI Withdrawn. The Withdrawn group (W), included individuals with-above median scores on PEI Withdrawn, and below-median scores on PEI Aggressive. The Aggressive/Withdrawn group (A/W) was made up of above-median scorers on both PEI Aggressive and Withdrawn, while the Controls (C), scored below the median on both of these scales.

Milich and Landau tested for group differences among A, W, A/W and C children on Accepted and Rejected social status (ie. M/L PEI 'Liked' and 'Disliked,') as well as on a variety of classroom adjustment variables. Similar comparisons were attempted in the current study, with Institutional Adjustment and Official criminal histories substituting for classroom adjustment.

Specifically, the scores of Social status groups (A, W, A/W and C) on PEI LIked and Disliked, Institutional Adjustment, and histories of criminal aggression were analyzed in a oneway MANOVA. The MANOVA revealed a significant main effect for Social Status, (ie. A, A/W, W, or C) F (24, 261) = 4.31, $p < .001$. Significant univariate Fs were found for PEI Accepted (Liked) $F(3, 92) = 4.48$, $p < .005$, PEI Rejected (Disliked) F (3, 92,) = 17.00, $p < .0000$, IA Aggression, $F(3, 92) = 21.85$, $p < .0000$, Assault $F(3, 92) = 6.00$, $p < .0009$, and Sexual Assault $F(3, 92)$

= 4.01, $p < .01$. There were no significant differences in social status on IA Victim, IA Disrupter, Murderous Offences, or Robbery.

Post-hoc multiple comparisons using Tukey's test for significance (at $p < .01$) were also conducted. The results of these comparisons are shown in Table 23. As can be seen from this table, both 'A' and 'A/W' youths showed considerable adjustment difficulties. Notably, both groups received high scores on Disliked and Aggression (although note that pure A's also were the most Liked of any of the groups). In addition, the Aggressive youth also had committed more Assaults than the Controls. These results suggest that A/W adolescent offenders are similar to younger samples in their Disliked status, and that Aggressive residents are also similar to aggressive children in their 'controversial' social status. (That is, they receive high scores in both Liked and Disliked). However, even though A/W youth are aggressive, they do not appear to be as aggressive as the 'pure' Aggressive group. Nonetheless, A/W residents are among the most disliked of any YDC incarcerates.

Table 23

Comparisons of Means of Aggressive, Withdrawn, Aggressive Withdrawn, and Control Residents on Instituional and Criminal Adjustment Measures

n=96

	A	W	AW	C	Significant Differences
Accepted	.40	.31	.33	.26	A>C
Rejected	.28	.19	.39	.11	A>C, A/W>A,C
IA Aggress.	.62	-.83	.53	-.58	A>W,C A/W>W,C
Assault	.68	.19	.52	.11	A>C
Sex. Asslt.	.68	.19	.55	.10	

CHAPTER IV

DISCUSSION

Overall, the findings of this study supported the notion that aggressive offenders differ from non-aggressors on measures of reactivity and interpersonal styles. Moreover, these differences were not based on a simple aggregate group of aggressors, but rather, several 'types' of aggressors showed different patterns of scores on different dependent measures.

On the SR, the prediction that aggressive offenders would be more reactive than non-aggressive offenders was supported primarily for Murderous Offenders. These offenders reported that they would be more angry in conditions of Attack than Assaulters and Property Offenders, and more somatically aroused than other offenders in both Attack and Frustration situations. Murderous Offenders, however, did not see themselves as responding more aggressively in these situations than other types of offenders. For aggressive responses in Attack situations, the hypothesis was supported only for Sexual Assaulters, who rated themselves more likely to react aggressively than Property Offenders and Assaulters. Sexual Assaulters also had higher scores on Attack/Anger than Property Offenders and Assaulters. Finally, and inexplicably, Robbers predicted high levels of Arousal on Frustration.

These results suggest that only a subclass of offenders are aware of 'internal state changes' when they find themselves in

aversive situations. Among these 'sensitized' offenders, there are differences in patterns of arousal. Sexual Assaulters, for instance with high scores on Aggression and Anger, could, (if their behaviour conforms to their self-reports), be prone to aggressive dyscontrol in the presence of aggravating stimuli. Murderous Offenders, on the other hand, despite experiencing high levels of anger and arousal, appear less likely to act upon these states. The self-admitted aggressive pattern of the Sexual Assaulters suggests a low threshold for anger and poor abilities to modulate this state. The Murderous Offender's SR responses indicate a similar low threshold for anger (as well as arousal), but Murderous Offenders appear to be better able to control these aversive states.

Past research has suggested that offenders similar to the Murderous Offenders in the current study, who commit few, but very serious aggressive offences, often deny hostility (Megargee, 1966, 1967). Such a tendency for denial was also suggested in the 'exploratory' portion of the current study by the negative correlations between the Murderous Offence variables and the BD. However, it appears that on the SR, Murderous Offenders respond in the opposite direction of denial, freely admitting to marked elevations (relatively speaking) of Arousal and Anger. This pattern of reponse could, of course, be due to the fact that the Murderous Offenders in the current study are actually not similar to those described by Megargee and others. However, it could be, too, that the nature of the 'hostility' items on the SR that are endorsed by Murderous

Offenders differ from those found on other hostility scales, making it more acceptable for the Murderous Offenders to positively endorse the SR items. In this regard, it seems that the items on the Anger and Arousal scales focus more on internal reactions that could lead to aggression, while the Aggression scale contains items referring to overt hostile responses. Note that Murderous Offenders did not have higher scores than other offenders on these overt aggression scales.

It is quite likely then, that the Murderous Offenders in the current study are similar to overcontrolled offenders in other studies, and that the SR Arousal and Anger scales give them an opportunity to positively endorse items that refer to potentially hostile internal states. If this is the case, then the SR may prove to be a useful measure in identifying processes that are believed to precede overcontrolled aggression. This is in contrast to other measures of overcontrol, which signal the presence of denial or control, but do not identify what is being controlled. Further studies that focus on the performance of the SR with identified overcontrolled offenders would be necessary to test this speculation.

The self-reported readiness of Sexual Assaulters to aggress in SR Attack situations could be due, in part, to an iatrogenic effect of incarceration. It is well known that sexual offenders are victimized in prisons. Perhaps the Sexual Assaulter's high scores on SR Aggression are determined by a vigilant and defensive stance held by the Sexual Assaulters. It could be too,

that the SR scores reflect interpersonal deficits on behalf of the Sexual Assaulters. Further research, investigating the behavioural styles of delineated offender types would be necessary to clarify these possibilities.

An interesting aspect of the performance of the SR is that Assaulters had among the lowest scores of any offender groups, scoring similarly to non-aggressors. Given the nature of the results of similar studies with school children, it was expected that these individuals would be among high scorers. However, it appears that with an incarcerated sample, non-lethal aggressors are not responding to strong internal state changes when they aggress.

On the PEI, one aspect of the predicted pattern of results (i.e. individuals with aggressive criminal histories would be seen as more aggressive by their peers than non-aggressive offenders) was supported for Assaulters and Sexual Assaulters, who had higher PEI Aggression scores than Property Offenders. However, contrary to prediction, the Assaulters did not score correspondingly lower on PEI Sociable. Rather, non-aggressive Property Offenders, as well as Assaulters and Sexual Assaulters were all seen as less Sociable than Murderous Offenders. Thus one of the Aggressive Offender groups in the institution was more sociable (as rated by peers) than non-aggressors.

Although the PEI Aggression and Sociability scales were useful in differentiating among types of offenders, PEI Withdrawal did not show similar results. This could in part be

due to the relative psychometric weakness of this three item scale. The ambiguity and variations in social desirability of these items may have been the cause of this weakness. Future studies of the applicability of peer evaluations with adolescent samples may require the development of a more definitive set of 'undesirable behaviour' items that cover withdrawal and other forms of unusual mannerisms.

Despite the relatively weak performance of the Withdrawal scale, the results yielded by the other PEI scales provide a variegated picture of the interpersonal functioning of aggressive offenders. Individuals with a history of Assault and Sexual Assault were seen as more aggressive than Property Offenders, whereas Murderous Offenders were not seen as aggressive. Despite their high peer-rated aggression, Assaulters and Sexual Assaulters were not viewed as significantly less sociable than Property Offenders (although the Sexual Assaulters had the lowest scores of any offender group on this scale). Because Sociablity and Withdrawal did not significantly discriminate between Assaulters and Sexual Assaulters, the PEI results do not speak to specific differences in the aggressive styles of these two offender groups. Speculatively, however, it could be that their aggression is related to different goals and circumstances. The SR results certainly point to differences in internal and external reactivity between Assaulters and Sexual Assaulters when they find themselves in situations that may act as cues for aggressive behaviour.

With regard to Murderous Offenders, the PEI did provide positive evidence of a unique interpersonal style that could be related to their aggressive outbursts. Specifically, an examination of the item content of the PEI Sociability scale suggests that Murderous Offenders are seen as *actively* more sociable and helpful than other youths. Howells (1983) has suggested that these behaviours may be anchored to a particular set of attitudes about interpersonal relationships that could be unique to seriously assaultive offenders. He found that seriously violent offenders used a preponderance of positive and overidealized attributions in their judgements of others. The aggressors in Howell's study were correspondingly reluctant to be extrapunitive, and rated their victims in a more positive and idealistic way than did less serious assaulters. This positive social bias was unusual even when compared with non-criminal populations. Conceivably, the Murderous Offenders in the current study held similar biases, which they conveyed to their peers, and which resulted in their high social status. It is also possible that strong conflicts between the need to maintain unrealistically positive images of others, while simultaneously experiencing high levels of anger and arousal, may be focal in the severe loss of control that these individuals ocassionally experience.

The PEI was also used to classify and study the social status and adjustment of Aggressive/Withdrawn residents. The general picture provided by this investigation was that both Aggressive and Aggressive/Withdrawn individuals showed problems

with aggression in the institution, and that for Aggressive residents, these problems extended to aggression in the community as well (in the form of Assault charges). Even though the Aggressive/Withdrawn youths did not commit more acts of aggression in the institution than Aggressive residents, they were clearly at a greater disadvantage in terms of social acceptance. The Aggressive youths, although receiving high disliked scores, were also the recipients of many 'Liked' nominations. Aggressive/Withdrawn residents were not so fortunate, in that they were unilaterally disliked. This finding replicates those of studies with younger non-offender groups (e.g. Milich and Landau, 1984). The reasons for this dislike were not evident from the data in the current study, again, due in part to the ambiguity of the Withdrawal items. In future research, it would be useful to establish, through careful observation and exploratory interviews, a set of behaviours, unusual, withdrawn, and aggressive, that adolescent incarcerates find most unacceptable in their peers. These items could be used in the construction of a scale (or scales) that identify behaviours significantly related to dislike and troublesome adjustment.

It appears that in an incarcerated sample, 'pure' aggression (i.e. not tinged by unpopular 'withdrawn' characteristics), receives many positive responses among residents. Possibly, individuals in the Aggressive category are adept at using aggression in the service of achieving dominance (in the form of high social status). In this regard, they could be viewed as

'successful' aggressors, in contrast with the Aggressive/Withdrawn youths, whose behaviour (aggressive or otherwise) tends not win approval from peers. Again, observational studies designed to determine the elements of 'successful' versus 'unsuccessful' aggression could be useful in determining the adolescent correlate of the 'Aggressive/Withdrawn' classification. Some of these elements could include the presence or absence of provocation, temper outbursts, and unusual or idiosyncratic behviours. The understanding of behavioural contributors to disliked social status may provide important clues about social deficits that go beyond institutional adjustment problems.

The hypothesis that the PEI would be a better predictor of aggression than the BD was not supported by the data. The number of new (non-lethal) Assaults at one year follow-up was not significantly correlated with either the PEI or BD scales. The prediction of assaultive behaviour among incarcerated adolescents remains an elusive goal.

Who is Psychopathic?

The Situations Reactions Inventory, one of the 'new' measures used in the current study, has been applied to a criminal population with the express purpose of identifying psychopaths (Blackburn & Lee-Evans, 1985). Therefore some tentative, speculative comments regarding psychopathy and the

measures employed in the current study are offerred here. The reader is cautioned that these comments are not based on hypothesis tests specific to this topic, but rather, on apparently convergent evidence derived from the results of the formal hypotheses. The speculative nature of the ensuing comments is therefore underlined.

Blackburn and Lee-Evan's secondary psychopaths were distinguished on the SR on the basis of high Anger and Arousal scores; their Aggression scores however, were not significantly elevated. In the current study, the closest comparable group on the basis of SR scores would be the Murderous Offenders. However, the Murderous Offenders do not fit Blackburn's secondary psychopathy category on a number of other critical personality dimensions. His secondary psychopaths, in addition to having elevated SR scores, are variously described as aggressive, neurotic, impulsive, and withdrawn (Blackburn, 1971, Blackburn & Lee-Evans, 1985). The composite picture of Murderous Offenders in the current study do not fit this description at all. The data from the PEI, for example, suggest that Murderous Offenders show relatively superior social functioning, and are seen as friendly and helpful by their peers. As suggested earlier, these offenders appear to be more like Megargee's overcontrolled offenders (Megargee, 1966, 1967). In terms of Blackburn's description of secondary psychopaths being more neurotic, impulsive, and aggressive, the closest parallel in the current study would be the Aggressive/Withdrawn residents, and perhaps Sexual Assaulters, not Murderous Offenders.

With regard to the SR, the Murderous Offender's pattern of scores could also fit the overcontrolled construct. That is, their high Anger and Arousal scores, without similarly elevated Aggression scores could be indicative of the Murderous Offender's hypothetical tendency to restrain themselves, even when they experience acute hostility or anger. Given the mismatch of personality description between Murderous Offenders and secondary psychopaths, it does not appear that the Murderous Offenders fit Blackburn's secondary psychopathy category.

Although the Assaulter's SR scores did not correspond to those of either of Blackburn's primary or secondary psychopaths, they appeared to bear similarities to other relatively common descriptions of psychopaths. The Assaulter's apparent high levels of aggression in the institution (as perceived by both staff and residents), and their checkered criminal careers, makes them appear similar to Hare's description of 'dangerous' psychopaths (Hare, 1981). The Assaulter's low SR scores could also be explained with reference to traditional views about the under-responsivity of psychopaths (see Hare, 1985, for a review). In general, Blackburn's findings that psychopaths show greater responsivity on a variety of measures have not been supported by other studies. (In part, this could be due to differences in samples -- see McGurk & McGurk, 1979, in this regard). The findings of the current study, showing low SR responsivity among a group of individuals who descriptively, bear some similarity to psychopaths, are more in line with more traditional views about psychopathy.

Implications for Intervention and Future Research

In the current study, several groups of individuals who showed distinctive patterns of scores on either the PEI or the SR were identified. The patterns of scores achieved by these individuals implied that they could differ significantly on a number of dimensions of psychological and interpersonal functioning. These differences could provide insights into potential treatment strategies. For example, given the Murderous Offenders relatively positive social demeanour and good social skills, it would probably be inappropriate to implement 'deficit-oriented' social skills training with these offenders. Rather, given their purported overcontrol, Murderous Offenders may benefit from interventions designed to help them identify and channel their anger and arousal in appropriate ways.

In contrast to the Murderous Offenders, it is possible that Sexual Assaulters and Aggressive/Withdrawn residents may suffer from social skills deficits. Identifying these deficits, and designing intervention strategies to remediate them may be of general benefit for this subset of incarcerated adolescents. There is some evidence that suggests that incarcerated Sexual Assaulters, in particular, suffer from deficits in interpreting social cues (Lipton et al., 1987). Intervention strategies focussing on improving the social skills of disliked children have been shown to be helpful in improving their social relationships (Bierman et al., 1984). It is not obvious that similar interventions with incarcerated Aggressive/Withdrawn

adolescents would have a similar effect, or that such interventions would serve to improve general social functioning. These questions require further investigation.

Finally, it appears that not all aggressive offenders are responding to internal distress or adverse social circumstances when they aggress. In particular, this appeared to be true of the Assaulters in the current study. It could be that the aggression of these individuals, unrelated as it is to 'internal state changes,' could be serving an instrumental function. The behaviour of instrumental aggressors has been shown exceptionally refractory to attempts at change, and has not been shown to be positively affected by social skills training, or by any other interventions, including punishment. Both the PEI and the SR were succesful in identifying Assaultive Offenders, and in differentiating elements of their personal and interpersonal styles from those of other aggressors. The ability of these scales to make such differentiations may eventually establish their usefulness in identifying individuals who will benefit most from particular intervention strategies.

APPENDIX A

BUSS-DURKEE HOSTILITY GUILT INVENTORY

ASSAULT

1 Once in a while I cannot control my urge to harm others. (T)

2 I can think of no good reason for ever hitting someone. (F)

3 If someone hits me first, I let him have it. (T)

4 Whoever insults me or my family is asking for a fight. (T)

5 People who continually pester you are asking for a punch in the nose. (T)

6 I seldom strike back, even if someone hits me first. (F)

7 When I really lose my temper, I am capable of slapping someone. (T)

8 I get into fights about as often as the next person. (T)

9 If I have to resort to physical violence to defend my rights, I will. (T)

10 I have known people who pushed me so far that we came to blows. (T)

INDIRECT

1 I sometimes spread gossip about people I don't like. (T)

2 I never get mad enough to throw things. (T)

3 When I am mad, I sometimes slam doors. (T)

4 I never play practical jokes. (F)

5 When I am angry, I sometimes sulk. (T)

6 I sometimes pout when I don't get my own way. (T)

7 Since the age of ten, I have never had a temper tantrum. (F)

8 I can remember being so angry that I picked up the nearest thing and broke it. (T)

9 I sometimes show my anger by banging on the table. (T)

IRRITABILITY

1 I lose my temper easily but get over it quickly. (T)

2 I am always patient with others. (F)

3 I am irritated a great deal more than people are aware of. (T)

4 It makes my blood boil to have somebody make fun of me. (T)

5 If someone doesn't treat me right, I don't let it annoy me. (F)

6 Sometimes people bother me just by being around. (T)

7 I often feel like a powder keg ready to explode. (T)

8 I sometimes carry a chip on my shoulder. (T)

9 I can't help being a little rude to people I don't like. (T)

10 I don't let a lot of unimportant things irritate me. (F)

11 Lately, I have been kind of grouchy.(T)

NEGATIVISM

1 Unless somebody asks me in a nice way, I won't do what they want. (T)

2 When someone makes a rule I don't like, I am tempted to break it. (T)

3 When someone is bossy, I do the opposite of what he asks. (T)

4 When people are bossy, I take my time just to show them. (T)

5 Occasionally when I am mad at someone, I will give him the 'silent treatment.' (T)

RESENTMENT

1 I don't seem to get what's coming to me. (T)

2 Other people always seem to get the breaks. (T)

3 When I look back at whats happened to me, I can't help but feel mildly resentful. (T)

4 Almost every week I see someone I dislike. (T)

5 Although I don't show it, I am sometimes eaten up with jealousy. (T)

6 I don't know any people that I downright hate. (F)

7 If I let people see the way I feel, I'd be considered a hard person to get along with. (T)

8 At times I feel I get a raw deal out of life. (T)

SUSPICION

1 I know that people tend to talk about me behind my back. (T)

2 I tend to be on my guard with people who are somewhat more friendly than I expected. (T)

3 There are a number of people who seem to dislike me very much. (T)

4 There are a number of people who seem to be jealous of me. (T)

5 I sometimes have the feeling that others are laughing at me. (T)

6 My motto is 'Never trust strangers.' (T)

7 I commonly wonder what hidden reason another person might have for doing something nice for me. (T)

8 I used to think that most people told the truth but now I know otherwise. (T)

9 I have no enemies who really wish to harm me. (F)

10 I seldom feel that people are trying to anger or insult me.

VERBAL

1 When I disapprove of my friend's behaviour, I let them know it. (T)

2 I often find myself disagreeing with people. (T)

3 I can't help getting into arguments when people

disagree with me. (T)

4 I demand that people respect my rights. (T)

5 Even when my anger is aroused, I don't use 'strong language.' (F)

6 If somebody annoys me, I am apt to tell him what I think of him. (T)

7 When people yell at me, I yell back. (T)

8 When I get mad I say nasty things. (T)

9 I could not 'put someone in his place,' even if he needed it. (F)

10 I often make threats I don't really mean to carry out. (T)

11 When arguing, I tend to raise my voice. (T)

12 I generally cover up my poor opinion of others. (F)

13 I would rather concede a point than get into an argument about it. (F)

GUILT

1 The few times I have cheated, I have suffered unbearable feelings of remorse. (T)

2 I sometimes have bad thoughts which make me feel ashamed of myself. (T)

3 People who shirk on the job must feel unbearably guilty. (T)

4 It depresses me that I did not do more for my parents. (T)

5 I am concerned about being forgiven for my sins. (T)

6 I do many things that make me feel remorseful afterwards. (T)

7 Failure gives me a feeling of remorse. (T)

8 When I do wrong, my conscience punishes me severely. (T)

9 I often feel that I have not lived the right kind of life. (T)

APPENDIX B

Situations-Reactions Inventory of Hostility

SITUATIONS

1 You have just been blamed for something you didn't do.

2 You are wearing a new jacket you have bought for yourself and someone burns it with a cigarette.

3 Someone threatens to beat you up.

4 Someone owes you money, but says he doesn't.

5 You accidentally spill coffee over yourself.

6 Someone is making fun of you.

7 Someone you don't like bumps into you on purpose when you are eating a meal.

8 You have just found out that someone has been telling lies about you.

9 Someone calls you a dirty name.

10 You are talking to someone who doesn't answer you.

11 You are trying to watch TV and someone next to you is talking loudly.

12 You are waiting in a line-up, and someone you know pushes ahead of you.

13 You have done your best at a job but are told it wasn't good enough.

14 You are watching an exciting show on TV and the set breaks down.

REACTIONS

	Not at all				Very much
You lash out	1	2	3	4	5
You want to hit someone or something	1	2	3	4	5
You want to get your own back	1	2	3	4	5
You want to shout	1	2	3	4	5
You lose your temper	1	2	3	4	5
You feel tense	1	2	3	4	5
You feel angry	1	2	3	4	5
You swear	1	2	3	4	5
You sweat	1	2	3	4	5
Your hands shake	1	2	3	4	5
You grind your teeth	1	2	3	4	5
Your heart beats faster	1	2	3	4	5

APPENDIX C

MILICH AND LANDAU PEER NOMINATION PROCEDURE

1 Those you like the most.

2 You don't like.

3 Who is mean.

4 Who seems to play by himself.

5 Who fights, punches, hits a lot.

6 Who seems too shy to make friends.

7 Who is bossy and tells the others what to do.

8 Who gets mad easily.

9 Who is especially nice.

10 Who helps other kids.

11 Who never seems to be having a good time.

12 Everybody likes.

PUPIL EVALUATION INVENTORY

1 Those who are taller than most.

2 Those who help others.

3 Those who can't sit still.

4 Those who try to get other people into trouble.

5 Those who's feeling are too easily hurt.

6 Those who are too shy to make friends easily.

7 Those who act stuck up and think they are better than everyone else.

8 Those who play the clown and get others to laugh.

9 Those who start a fight over nothing.

10 Those who never seem to be having a good time.

11 Those who are upset when called upon to answer questions in class.

12 Those who tell other kids what to do.

13 Those who are usually chosen last to join in group activities.

14 Those who are liked by everyone.

15 Those who always mess around and get into trouble.

16 Those who make fun of people.

17 Those who have very few friends.

18 Those who do strange things.

19 Those who are your best friends.

20 Those who bother people when they are trying to work.

21 Those who get mad when they don't get their way.

22 Those who don't pay attention to the teacher.

23 Those who are rude to the teacher.

24 Those who are unhappy or sad.

25 Those who are especially nice.

26 Those who act like a baby.

27 Those who are mean and cruel to other kids.

28 Those who often don't want to people.

29 Those who give dirty looks.

30 Those who want to show off in front of the class.

31 Those who say they can beat everybody up.

32 Those who exaggerate and make up stories.

33 Those who aren't noticed much.

34 Those who complain, nothing makes them happy.

35 Those who always seem to understand things.

YDC-Specific Peer-Evaluation Items

1 Who is a goof.

2 Who is the toughest resident at YDC.

3 Who is a whiner.

4 Who is strange.

5 Who seems to have a lot of problems.

6 Who have you had a fight with.

7 Who would you like to beat up.

YDC PEER EVALUATION INVENTORY

1 Who is the resident you like the most.

2 Who you don't like.

3 Who is mean.

4 Who seems to keep to himself.

5 Who fights, punches, or hits a lot.

6 Who is bossy and tells others what to do.

7 Who gets mad easily.

8 Who is too shy to make friends.

9 Who is especially nice.

10 Who helps other residents.

11 Who never seems to be having a good time.

12 Who everybody likes.

13 Who gets so mad at times that he doesn't know what he's doing.

14 Who starts fights over nothing, or is always looking for a fight.

15 Who threatens other residents.

16 Who is a goof.

17 Who is a whiner.

18 Who is the toughest.

19 Who you have had a fight with.

20 Who you would like to beat up.

21 Who is strange.

22 Who seems to be having a lot of problems.

APPENDIX D

CONSENT FORM

I agree to participate in the research project described to me by Walter Friesen. I realize that my participation is voluntary, and that I can withdraw from the research at any time. I also realize that the confidentiality of my responses will be protected by a coding system and by removal of the research materials from YDC at the end of each day.

Participants signature:

Date:

APPENDIX E

INTERVIEW

NAME SUBJECT ID

AGE LAST GRADE COMPLETED

HAVE YOU EVER COMMITTED ANY OF THE FOLLOWING? Frequency

B&E	Y	N
AUTO THEFT	Y	N
BREACH	Y	N
ASSAULT	Y	N
THEFT OVER	Y	N
THEFT UNDER	Y	N
OTHER PROPERTY	Y	N
OTHER PERSON	Y	N

TOTAL # OF CHARGES

TOTAL # OF CONVICTIONS

CURRENT OFFENCE:

APPENDIX F

Table F1

Basic Descriptive Properties of Self-reported Property Offences

n = 85

	Number of offenders	Number of offences	Mean	s.d.
Break and Enter	77	8665	101.94	188.78
Theft	78	7347	94.19	236.89
Theft over $200	62	3773	44.39	117.11
Possession of stolen property	3	4	.05	.26

* The means and standard deviations in this and all the following criminal history tables are for Number of offences.

Table F2

Basic Descriptive Properties of Self-Reported Offences Against Persons

n = 85

	Number of offenders	Number of offences	Mean	s.d.
Assault	42	178	2.09	3.45
Robbery	39	323	3.80	13.75
Attempt Murder	4	6	.07	.37
Murder	3	3	.04	.19

Table F3

Self-Reported Miscellaneous Offences

n = 85

	Number of offenders	Number of offences	Mean	s.d.
Auto theft	59	487	8.26	17.00
Arson	14	140	1.65	10.84
Possession of narcotics*	64			
Causing a disturbance	49	731	8.60	27.10
Breach of probation	51	281	3.31	8.13
Escape lawful custody	2	2	.04	.24
Mischief	12	113	1.33	8.30

* Based on 'Yes/No.'

APPENDIX G

INSTITUTIONAL ADJUSTMENT ITEMS

A) ASSAULT

1) against staff
2) against residents
3) physical resistance of staff (had to be escorted to his his room, forcibly restrained etc.)
4) mutual physical combat, instigator not noted

B) VERBAL AGGRESSION

5) threatens staff
6) threatens other resident (specific incident, other resident is usually named, also includes 'picks on..')
7) aggressive verbal exchanges (includes 'had words with' 'had a run-in with' 'almost in a fight with' etc.)
8) verbal outbursts or remarks to staff (swore at staff, verbal abuse of staff--threats are excluded, mouthy to staff
9) verbal outbursts directed at other residents
10) non-specific verbal outbursts (mouthy, loud, foul mouth)

C) DOMINANCE

11) 'plays the heavy' 'thinks he owns the place' 'unit heavy' 'picks on younger (smaller) residents (specific residents not mentioned, 'plays the role' etc.

D) IRRITABLE, BAD TEMPERED

12) bad temper, needs to learn to control his temper, short-fuse, irritable, got out of wrong side of bed, bothered by other residents etc.

E) MANIPULATIVE, SCHEMING

13) always scamming plays head games, instigates other residents, devious, sneaky

F) DISRUPTIVE OF ROUTINES (USUALLY PASSIVE AGGRESSIVE)

14) slow to respond (STR) fails to do chores, has to be told over and over, fails to cooperate, fails to attend programs or school, poor attitude

G) DEMANDING, IMMATURE

15) demanding at times, always bothering (or asking) staff for... a real pest at times, whiney, a whiner,

complains a lot etc.

H) RESTLESS, HYPERACTIVE

16) hyper, too much horseplay (HP) horseplay at times zeros for horseplay, wouldn't settle down etc.

I) WITHDRAWN

17) appears depressed. kept to himself (KTS) very quiet all shift etc.

J) UNUSUALNESS (USUALLY THE KINDS OF THINGS ASSOCIATED WITH MORE SEVERE PSYCHOPATHOLOGY)

18) bizarre at times, says odd things, strange, weird, inappropriate sexual behaviour, arson, flipped out pronounced problems with personal hygiene etc.

K) PROPERTY OFFENCES

19) damage to property, writing on walls or desks, in possession of contraband, arson, smoking when not allowed to (contraband includes drugs)

L) SELF-INFLICTED INJURY

20) slashing, head-banging, suicide attempt

M) VICTIM

21) victim of physical aggression
22) victim of verbal threats and verbal abuse
23) non-specific (victimized by... received peer pressure, poor peer relations-- where it is clear that poor peer relations refers to to victimization.

N) AWOL

24) AWOL, attempted AWOL

APPENDIX H

Table H1

Means and Standard Deviations of the Buss-Durkee Hostility Guilt Inventory

n = 52

	Mean	s.d.
Resentment	4.71	1.61
Suspicion	5.15	2.07
Assault	6.64	2.34
Indirect hostility	4.62	2.02
Irritability	6.48	2.31
Negativity	3.13	1.09
Verbal Hostility	8.09	2.40
Guilt	5.02	2.24
Attitudinal	9.87	2.94
Motor	25.86	6.82
Total	33.02	8.86

Table H2

Means and Standard Deviations of the Situations Reactions Inventory Scales

n = 85

	Mean	s.d.
Attack Aggression	1.31	.93
Attack Anger	1.61	.96
Attack Arousal	.57	.66
Frustration Aggression	.99	.90
Frustration Anger	1.42	.91
Frustration Arousal	.28	.45

APPENDIX I

Table I1

Correlations between the Buss Durkee Inventory and the Situations Reactions Inventory

n=50

	A/Ag	A/Ang	A/Aro	F/Ag	F/Ang	F/Aro
Resent	.14	.13	.14	.06	.23	.19
Susp	.16	.01	.15	.23	.15	.17
Asslt	.11	-.04	-.06	.10	-.07	-.08
Ind	.24	.19	.13	.29	.18	.16
Irrit	.26	.14	.05	.28	.26	.17
Neg	.14	.12	.06	.21	.21	.06
Verb	.16	.03	-.08	.11	.15	-.07
Guilt	-.05	.00	.02	.02	.16	.09
Att	.19	.08	.18	.20	.23	.22
Mot	.26	.10	.01	.26	.17	.05
Tot	.29	.14	.10	.30	.24	.14

Table I2

Correlations between the Buss Durkee Inventory and the Milich Landau PEI Factors

n = 52

	Aggressive	Sociable	Withdrawn
Resentment	-.12	.33	-.18
Suspicion	.12	-.02	.47
Assault	.07	.21	-.21
Indirect Hostility	.08	-.01	-.15
Irritability	.12	-.11	-.22
Negativity	.01	.00	-.11
Verbal Hostility	.17	.10	-.11
Guilt	-.09	.07	-.04
Attitudinal Hostility	.02	.17	.23
Motor Hostility	.15	.07	-.23
Total	.11	.10	-.12

Table I3

Correlations between the Milich and Landau PEI and the SR

n=82

	Aggressive	Sociable	Withdrawn
Att/Agg	.13	-.04	.00
Att/Ang	-.04	-.06	-.03
Att/Arou	-.05	.06	.19
Frus/Agg	.11	.01	.06
Frus/Ang	-.05	.02	.00
Frus/Arou	-.03	.04	-.06

APPENDIX J

Table J1
Correlations between the YDC PEI and the Institutional Adjustment Factors
n = 97

	Aggression	Victim	Disrupter
Aggressive	.68	.01	.04
Odd/Withdrawn	-.17	.55	.18
Disl/Agg	.31	.42	.07
Respected/Sociable	.00	-.34	-.21

Table J2

Correlations between the YDC PEI and Official Records of Violent Crimes

n=121

	Asslt	Rob	Murd	Sex
Aggr	.35	.28	.13	.09
O/W	.01	-.08	.19	.33
Disl/Agg	.21	.14	-.19	.13
Resp/Soc	.04	.00	.29	-.17

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