A Personality Profile Comparison of Intimate- and Stranger-Violent Convicts

By

Marc Nesca

60

A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfilment of the Requirements
for the Degree of

Doctor of Philosophy
in Psychology

Department of Psychology
University of Manitoba
Winnipeg, Manitoba

ISBN 0-612-13397-4

Name Marc Nesca

Dissertation Abstracts International and *Masters Abstracts International* are arranged by broad, general subject categories. Please select the one subject which most nearly describes the content of your dissertation or thesis. Enter the corresponding four-digit code in the spaces provided.

Psychology - Clinical
SUBJECT TERM

0622
SUBJECT CODE

UMI

Subject Categories

THE HUMANITIES AND SOCIAL SCIENCES

COMMUNICATIONS AND THE ARTS
Architecture 0729
Art History 0377
Cinema 0900
Dance 0378
Fine Arts 0357
Information Science 0723
Journalism 0391
Library Science 0399
Mass Communications 0708
Music 0413
Speech Communication 0459
Theater 0465

EDUCATION
General 0515
Administration 0514
Adult and Continuing 0516
Agricultural 0517
Art 0273
Bilingual and Multicultural 0282
Business 0688
Community College 0275
Curriculum and Instruction 0727
Early Childhood 0518
Elementary 0524
Finance 0277
Guidance and Counseling 0519
Health 0680
Higher 0745
History of 0520
Home Economics 0278
Industrial 0521
Language and Literature 0279
Mathematics 0280
Music 0522
Philosophy of 0998
Physical 0523
Psychology 0525
Reading 0535
Religious 0527
Sciences 0714
Secondary 0533
Social Sciences 0534
Sociology of 0340
Special 0529
Teacher Training 0530
Technology 0710
Tests and Measurements 0288
Vocational 0747

LANGUAGE, LITERATURE AND LINGUISTICS
Language
- General 0679
- Ancient 0289
- Linguistics 0290
- Modern 0291

Literature
- General 0401
- Classical 0294
- Comparative 0295
- Medieval 0297
- Modern 0298
- African 0316
- American 0591
- Asian 0305
- Canadian (English) 0352
- Canadian (French) 0355
- English 0593
- Germanic 0311
- Latin American 0312
- Middle Eastern 0315
- Romance 0313
- Slavic and East European 0314

PHILOSOPHY, RELIGION AND THEOLOGY
Philosophy 0422
Religion
- General 0318
- Biblical Studies 0321
- Clergy 0319
- History of 0320
- Philosophy of 0322

Theology 0469

SOCIAL SCIENCES
American Studies 0323
Anthropology
- Archaeology 0324
- Cultural 0326
- Physical 0327

Business Administration
- General 0310
- Accounting 0272
- Banking 0770
- Management 0454
- Marketing 0338

Canadian Studies 0385
Economics
- General 0501
- Agricultural 0503
- Commerce-Business 0505
- Finance 0508
- History 0509
- Labor 0510
- Theory 0511

Folklore 0358
Geography 0366
Gerontology 0351
History
- General 0578
- Ancient 0579
- Medieval 0581
- Modern 0582
- Black 0328
- African 0331
- Asia, Australia and Oceania 0332
- Canadian 0334
- European 0335
- Latin American 0336
- Middle Eastern 0333
- United States 0337

History of Science 0585
Law 0398
Political Science
- General 0615
- International Law and Relations 0616
- Public Administration 0617

Recreation 0814
Social Work 0452
Sociology
- General 0626
- Criminology and Penology 0627
- Demography 0938
- Ethnic and Racial Studies 0631
- Individual and Family Studies 0628
- Industrial and Labor Relations 0629
- Public and Social Welfare 0630
- Social Structure and Development 0700
- Theory and Methods 0344

Transportation 0709
Urban and Regional Planning 0999
Women's Studies 0453

THE SCIENCES AND ENGINEERING

BIOLOGICAL SCIENCES
Agriculture
- General 0473
- Agronomy 0285
- Animal Culture and Nutrition 0475
- Animal Pathology 0476
- Food Science and Technology 0359
- Forestry and Wildlife 0478
- Plant Culture 0479
- Plant Pathology 0480
- Plant Physiology 0817
- Range Management 0777
- Wood Technology 0746

Biology
- General 0306
- Anatomy 0287
- Biostatistics 0308
- Botany 0309
- Cell 0379
- Ecology 0329
- Entomology 0353
- Genetics 0369
- Limnology 0793
- Microbiology 0410
- Molecular 0307
- Neuroscience 0317
- Oceanography 0416
- Physiology 0433
- Radiation 0821
- Veterinary Science 0778
- Zoology 0472

Biophysics
- General 0786
- Medical 0760

EARTH SCIENCES
Biogeochemistry 0425
Geochemistry 0996
Geodesy 0370
Geology 0372
Geophysics 0373
Hydrology 0388
Mineralogy 0411
Paleobotany 0345
Paleoecology 0426
Paleontology 0418
Paleozoology 0985
Palynology 0427
Physical Geography 0368
Physical Oceanography 0415

HEALTH AND ENVIRONMENTAL SCIENCES
Environmental Sciences 0768
Health Sciences
- General 0566
- Audiology 0300
- Chemotherapy 0992
- Dentistry 0567
- Education 0350
- Hospital Management 0769
- Human Development 0758
- Immunology 0982
- Medicine and Surgery 0564
- Mental Health 0347
- Nursing 0569
- Nutrition 0570
- Obstetrics and Gynecology 0380
- Occupational Health and Therapy 0354
- Ophthalmology 0381
- Pathology 0571
- Pharmacology 0419
- Pharmacy 0572
- Physical Therapy 0382
- Public Health 0573
- Radiology 0574
- Recreation 0575
- Speech Pathology 0460
- Toxicology 0383

Home Economics 0386

PHYSICAL SCIENCES
Pure Sciences
Chemistry
- General 0485
- Agricultural 0749
- Analytical 0486
- Biochemistry 0487
- Inorganic 0488
- Nuclear 0738
- Organic 0490
- Pharmaceutical 0491
- Physical 0494
- Polymer 0495
- Radiation 0754

Mathematics 0405
Physics
- General 0605
- Acoustics 0986
- Astronomy and Astrophysics 0606
- Atmospheric Science 0608
- Atomic 0748
- Electronics and Electricity 0607
- Elementary Particles and High Energy 0798
- Fluid and Plasma 0759
- Molecular 0609
- Nuclear 0610
- Optics 0752
- Radiation 0756
- Solid State 0611

Statistics 0463

Applied Sciences
Applied Mechanics 0346
Computer Science 0984
Engineering
- General 0537
- Aerospace 0538
- Agricultural 0539
- Automotive 0540
- Biomedical 0541
- Chemical 0542
- Civil 0543
- Electronics and Electrical 0544
- Heat and Thermodynamics 0348
- Hydraulic 0545
- Industrial 0546
- Marine 0547
- Materials Science 0794
- Mechanical 0548
- Metallurgy 0743
- Mining 0551
- Nuclear 0552
- Packaging 0549
- Petroleum 0765
- Sanitary and Municipal 0554
- System Science 0790

Geotechnology 0428
Operations Research 0796
Plastics Technology 0795
Textile Technology 0994

PSYCHOLOGY
General 0621
Behavioral 0384
Clinical 0622
Developmental 0620
Experimental 0623
Industrial 0624
Personality 0625
Physiological 0989
Psychobiology 0349
Psychometrics 0632
Social 0451

THE UNIVERSITY OF MANITOBA

FACULTY OF GRADUATE STUDIES

COPYRIGHT PERMISSION

A PERSONALITY PROFILE COMPARISON OF INTIMATE- AND STRANGER-VIOLENT CONVICTS

BY

MARC NESCA

A Thesis/Practicum submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

I hereby declare that I am the sole author of this thesis.

I authorize the University of Manitoba to lend this thesis to other institutions or individuals for the purpose of scholarly research.

Marc Nesca

I further authorize the University of Manitoba to reproduce this thesis by photocopying or other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

Marc Nesca

To Michael Anthony Nesca,

"gone but not forgotten"

and to Tess Elizabeth Nesca and David Anthony Nesca,

"Cent' Anni".

Abstract

This study was designed to investigate personality differences between two groups of federal inmates: One group (grp. IA) was composed of individuals incarcerated for assaulting an intimate, the other (grp. SA) was composed of individuals incarcerated for assaulting a stranger. A control group (grp. CO) composed of non-violent offenders was also included. Potential participants were identified by reviewing all inmate files at a Canadian Federal Penitentiary. Ultimately 119 inmates participated and contributed a mix of archival and directly collected data. The resulting pattern of data indicated that: a) control subjects were older and better educated that the target groups, b) intimate-violent subjects were more depressed and reported a higher number of suicide attempts, and c) stranger-violent individuals were more anxious interpersonally. Additionally, all three groups produced attachment profiles indicative of an anxious-avoidant attachment style. These results are discussed with reference to the extant literature and the need to explore alternative research paradigms. Suggestions for future research and treatment implications are also discussed.

Contents

List of Tables

List of Figures

Introduction

Interpersonal aggression has been the subject of scientific scrutiny for some time. However, a clear understanding of the factors which perpetuate these behaviours has eluded us (Megargee, 1982). Criminal violence, as a subcategory of aggression, is especially difficult to understand scientifically because its very nature virtually precludes the use of laboratory procedures designed to isolate causal variables. As a result, researchers intent on understanding criminal violence typically rely on correlational, case studies, or naturalistic designs.

These limitations have by and large prevented the growth of an extensive experimentally based body of literature on criminal violence. This is not to say that research on criminal violence has been fruitless. On the contrary, much knowledge has been gained by studies hoping to generate typologies of criminal violence by investigating its correlates (Buss, 1961; Maiuro et al., 1988; Megargee, 1982; Megargee, Cook & Mendelsohn, 1967; Russell & Henderson, 1992).

Recently, some interest has been generated by the question of how intimate-violent individuals differ from stranger-violent ones. This interest emerged out of the common observation that some individuals are quite violent and assaultive toward strangers but not toward intimates, while others exhibit the reverse pattern of violent behaviour. This observation has recently been bolstered by more systematic data. Dutton and Hart (1993), for instance, reviewed the institutional files of approximately 600 male offenders from seven federal correctional facilities in Canada and found that

the offenders could be divided into three main groups: Stranger violent, family violent and non-violent.

Although the stranger vs. intimate-violent dichotomy is a fairly recent one, some attempts to delineate differences between each of these groups and the non-violent population have been made (e.g. Megargee, 1982; Hamberger & Hastings, 1991). However, with very few exceptions, incarcerated populations have not been studied. This is regrettable since it is believed that imprisonment changes one considerably (Megargee, 1982). There is thus reason to question whether existing data generalize to the groups identified by Dutton and Hart. Moreover the extant research, especially that dealing with family violence, has tended to focus on sociological variables. These two factors have led to a call for research examining "... the personality and behavioral characteristics of the primary treatment recipient ... " (Flournay & Wilson, 1991; p. 309). The need to more closely examine personality variables of specific target groups is deemed crucial because personality assessment "... is regarded as a crucial first step to aid the clinician in the identification of individual differences, personality processes and psychopathology." (Flournay & Wilson, 1991; p. 310). Other researchers have also suggested the existing literature should be supplemented by research on psychological variables (e.g. Bland & Orn, 1986; Hale, Duckworth, Zimostrad, & Nicholas, 1988; Hamberger & Hastings, 1991; Hotaling & Sugarman, 1986) .

In response to the recent call for research investigating personality variables of specific treatment populations, this investigation compared the personality profiles of

federal inmates convicted of assaulting a relative stranger to those of inmates convicted of assaulting an intimate. Preliminary evidence suggests these groups may differ in significant ways (Dutton & Hart, 1993). To set the stage for this investigation the general issue of criminal violence is first considered. Next the literature dealing with the more specific area of violence against intimates is surveyed. Finally, the few studies which are specifically concerned with delineating the differences between intimate- and stranger-violent offenders are examined.

Criminal Violence and Personality

This section will survey the literature examining the psychological characteristics of criminally assaultive individuals. Within the context of a general overview of existing research, two relatively focused areas of enquiry will be examined. First, the question of whether formal intelligence testing is of value in the quest to understand criminal violence will be addressed. This question remains controversial despite consistent findings of lower than average IQ scores among convicted criminals. Next, studies primarily concerned with evaluating Minnesota Multiphasic Personality Inventory (MMPI) based profiles for violent offenders will be reviewed. This grouping of studies seems reasonable since the MMPI is the most widely employed forensic assessment instrument (Greene, 1991; Quinsey, Arnold & Pruesse, 1980), and much effort has been expended to derive an MMPI profile for violent criminals. Before proceeding however, it is worth noting that, as is the case for individuals with a history of assaulting intimates, individuals with a history of criminal violence also tend to

evince a history of conflictual family relations (e.g. Bartol, 1991; Fiqia et al., 1987; Shoham et al., 1986).

Extant Research. Research examining the personality correlates of criminal behaviour has often attempted to link interpersonal violence with psychopathology. For instance, previous research has found that criminally dangerous behaviour is positively correlated with mental illness (Quinsey, 1975). There also exists considerable evidence indicating criminally violent individuals experience substantial difficulties with impulse control (e.g., Holland, Beckett & Levy, 1981; Lion, Madden & Christopher, 1976; Shah, 1975).

To further examine the link between violent behaviour and psychopathology, Valliant et al. (1984) compared the personality profiles of dangerous (crimes against people) and non-dangerous (crimes against property) offenders drawn from a Northern Ontario psychiatric hospital. A control group of introductory psychology students from Laurentian University was also included. All three groups completed the MMPI, the WAIS-R, and social history questionnaires. A broad comparison of offender versus control groups subjects revealed lower mean IQ's and more elevated MMPI profiles for the offender groups. While the MMPI data are in general accordance with the notion that criminals are more pathological than non-criminals, the dangerous versus non-dangerous split failed to reveal any evidence of greater pathology among dangerous offenders. In fact, the reverse was true: non-dangerous subjects reported higher elevations on all clinical scales when compared to their dangerous counterparts. In other

words, when criminals are split into these two broad categories, it appears that non-dangerous individuals are the more pathological ones.

However, the nature of the samples employed in this study require that the resulting data be evaluated with caution. More specifically, offenders in this study were deemed "... unique to a Northern Ontario population." (p.417). Although racial variables were not reported, the demographic characteristics of this area suggest the "offender" groups were comprised mainly of Native Canadians drawn from local reserves. This possibility raises a host of language and cultural issues which may potentially undermine the value of this study. Moreover, if the offenders were indeed Native Canadians the appropriateness of employing a control group of university students seems questionable. Speculation concerning the racial makeup of the samples aside, the net result of employing a "unique" sample is that the findings do not usually generalize.

In a well designed and relatively comprehensive study, Syverson and Romney (1985) examined the personality and cognitive profiles of violent and non-violent inmates from two Canadian correctional centres. Sixty subjects were randomly selected to participate in the study: Thirty had been convicted of violent offenses, and 30 of non-violent offenses. Criteria for inclusion in the study included WAIS IQ's of at least 80, a reading age of at least 11, and, for the non-violent subjects, no prior history of violence. Each subject was first administered the WAIS and then asked to complete a reading test, two hostility questionnaires, and the Eysenck Personality Questionnaire. The results from this study revealed significant group differences only with regard to five WAIS

scales and one hostility scale. More specifically, the violent offenders were found to score higher on an assault scale and lower on the Information, Comprehension, Object Assembly, Verbal IQ, and Full Scale IQ scales of the WAIS.

The results on the assaultiveness scale are not, in and of themselves, surprising since the violent inmates had been incarcerated for some form of assault. The researchers themselves question the value of this finding since the "assaultiveness" of this group had already been established by the courts. The WAIS results are interesting in that they are consistent with previous research (e.g. Wagner & Klein, 1977). However, there is some question regarding the utility of IQ testing with prison populations since it is widely accepted that less intelligent individuals are over-represented in prison (e.g. Valliant, 1984). In other words, low intelligence is expected in prison populations since high intelligence criminals are less likely to be caught and convicted. This issue will be addressed in greater detail below.

A later study (Fiqia et al., 1987) also examined personality differences between two groups of offenders: One group had committed a violent offense, the other had engaged in "sexually anomalous behavior" but had "no history of violent crimes". Both groups were drawn from an Alberta forensic unit and asked to complete a battery of psychometric instruments. A regression analysis revealed that hostility, fear of criticism, and social skills deficit could predict total violent crimes. However, total sex crimes could not be predicted. Parenthetically, although informative, this study is somewhat

peculiar in its contention that sex crimes, especially those committed against children, are not violent acts.

Jackson, Hope, and Glass (1987) conducted an investigation designed to examine the possibility that arson reflects a displacement of aggression from person targets to property ones. To this end, a group of arsonist was compared to a group of violent offenders. Both groups were drawn from a maximum security hospital. The same hospital also contributed a control group composed mainly of nursing staff. In accordance with earlier work comparing arsonists and violent offenders (Hill et al, 1982), the latter group reported more incidents of interpersonal violence and were found to be more assertive. Moreover, both offender groups were described as more depressed than the controls.

Lang et al. (1987) conducted a very interesting study comparing four groups of offenders each convicted of crimes involving increasing levels of interpersonal violence. The most violent group was composed exclusively of murderers. The next level of violence was represented by a group of inmates convicted of assault. This was followed by a group of armed robbers who did not use their weapons. Finally, the study employed a control group of inmates convicted for property offenses. Comparing these groups revealed a number of interesting demographic differences. However, only two personality differences emerged. Most surprisingly, murderers emerged as less hostile and violent than all other groups -- a finding which was attributed to their increased defensiveness and tendency to minimize the magnitude of their offenses. The group of

assaulters on the other hand, were found to be more Interpersonally suspicious than all other groups. This finding of increased interpersonal suspiciousness among assaultive individuals is consistent with data reported by a study conducted in India (Sinha, Senn, & Sinha, 1988), suggesting some cross-cultural generality.

The Question of IQ Testing. A relatively large number of studies have specifically attempted to link low IQ either on its own, or in association with other factors such as impulsivity or antisociality, to violent crime. Although there is some inconsistency, the general pattern of results is positive in that low IQ is consistently found among violent inmates (e.g. Heilbrun, 1982, Holland, Beckett & Levy, 1981; Heilbrun & Heilbrun, 1985; Heilbrun, 1990). The general assumption underlying this research is that antisocial behaviour occurs when impulse control is lacking in a poorly socialized individual. Low intelligence is then implicated in that it interferes with the formulation of alternative plans and/or the anticipation of consequences.

The inclusion of low intelligence is the most controversial element in this line of reasoning. The argument against its inclusion is simple. Low intelligence, it is argued, may simply be the factor which, more than anything else, results in capture. In other words, high IQ, impulsive, antisocial individuals may simply be intelligent enough to elude capture and/or conviction. Consequently, low intelligence individuals are over-represented in our court system (Valliant, 1984) giving the impression that low IQ is associated with criminal behaviour.

There appears to be at least one more logical challenge to the utility of IQ scores in the understanding of criminally violent behaviour. Namely, the tendency to forget that the notion of an "intelligence quotient" is not isomorphic with the broader and essentially undefinable concept of "intelligence" (Bartol, 1991). More specifically, the term "IQ" simply, and only, refers to a summary statistic gleaned from so-called intelligence tests. Such tests are universally acknowledged to depend heavily on language acquisition and the conventional usage of verbal concepts (Kaufman, 1990). Moreover, they all appear to measure some aspect of academic achievement. In short, all intelligence tests are culturally and socially biased in favour of the Caucasian middle class (Bartol, 1991; Kaufman, 1990). Given this bias, and the under-representation of the Caucasian middle class in our court system, it seems unreasonable to believe that standard intelligence tests provide anything more than a very rough estimate of intelligence among forensic populations.

Beyond these logical arguments, there exist empirical data which argue against the notion that low intelligence per se is part of the causal path leading to criminally violent behaviour. For example, psychopaths are consistently found to have above average intelligence (Hare, 1970; Bartol, 1991). Yet these individuals are often associated with extremely violent behaviour. Interestingly, Hare (1970) cautioned that studies of intelligence among psychopaths probably underestimate it since the "bright" ones are unlikely to be captured and convicted. These data, along with the aforementioned logical arguments, seem to undermine the importance of "low IQ" for

the understanding of criminally violent behaviour. Conversely, the importance of low impulse control remains unchallenged and heavily documented (e.g. Holland, Beckett & Levy, 1981; Mischel, 1961; Quay, 1965; Ross, 1974; Wilson & Hernstein, 1985).

MMPI Studies. The MMPI is the most widely employed personality assessment instrument (Greene, 1991). Not surprisingly, a great deal of information regarding the MMPI profiles of various forensic groups is available. Unfortunately, the data is highly inconsistent, especially concerning two-point codetypes. Nonetheless, the notion of an MMPI-based profile of criminally violent individuals remains both a theoretical viable and a highly desirable goal (Megargee, 1982; Megargee, Cook & Mendelsohn, 1967; McCreary, 1976). Consequently, the available data deserve some attention.

Early studies tended to focus on "trait" differences, meaning they were largely concerned with comparing violent and non-violent offenders on individual MMPI scales. Data emerging from "trait" studies suggested that violent individuals evinced less guilt (Mosher, 1965; Persons, 1968), more psychopathology (Yablonsky, 1962), and higher levels of social alienation and aggression than non-violent individuals (Sarbin, Wenk & Sherwood, 1968).

Later studies adopted a "type" approach. The goal here was to generate MMPI two-point codetypes for assaultive individuals. In essence, the goal was to discover the "violent personality type". These attempts produced two main codetypes -- the 4-3 and the 4-8 -- neither of which has received consistent support. Studies finding evidence of a 4-3 codetype described violent offenders as highly assaultive, impulsive individuals

with poorly controlled hostility (Carson, 1969; Gilberstadt & Duker, 1965; Persons and Marks, 1971). Davis and Sines (1971) later added hypersensitivity to rejection and argued that the trigger for aggression in these men was social criticism. It is interesting to note that Davis and Sines cross-validated their findings in three different settings: a state hospital, a University medical Centre, and a state prison.

Meanwhile studies finding evidence of a 4-8 codetype were also being published (e.g., Armentrout & Hauer, 1978; Bauer & Clark, 1976; Lothstein & Jones, 1978; Panton, 1962). These studies generated personality profiles suggesting marked social alienation, difficulty with the modulation of affect, low impulse control, and some evidence of paranoid ideation. Clearly, the two codetypes are quite similar, differing mainly in that the 4-3's tend to evince cyclical patterns of aggression and withdrawal, while 4-8's tend to be more chronically maladjusted (Greene, 1991). Despite this similarity, or perhaps because of it, later studies evaluating both codetypes have failed to support either (e.g. Buck & Graham, 1978; Fraboni et al., 1990; Johnson, 1971; Quinsey, Arnold, & Pruesse, 1980).

Megargee's notion of Overcontrolled-Hostility also emerged from this "type" approach to the study of criminally violent individuals. More specifically, Megargee, Cook, and Mendelsohn (1967) argued for a distinction between "overcontrolled" and "undercontrolled" assaultive individuals. Briefly, overcontrolled persons are said to be characterized by excessive inhibitions against all expressions of aggressions. This powerful inhibition is believed to vitiate most socially sanctioned outlets for aggression

and thus result in a massive build-up of aggressive energy. Consequently, when overcontrolled types aggress they typically do so in an unpredictable and explosive manner. In contrast, undercontrolled individuals are characterized by a general lack of inhibition regarding the expression of aggression. Thus, these persons tend to be quicker to aggress but generally do so in a less extreme manner. Ultimately, this work led to the development and validation of an MMPI scale designed to distinguish between different types of violent individuals (Megargee, Cook, & Mendelsohn). Despite some inconsistency, the general pattern of results does appear to support the use of this scale (e.g. Deiker, 1974; Truscott, 1990). However, and perhaps this is where the inconsistency arises, the Overcontrolled-Hostility (O-H) scale appears to measure something other than that intended by its originators (Greene, 1991).

As previously mentioned, the notion of an MMPI profile for violent individuals is theoretically viable and desirable. However, the fact remains that a plethora of research has been unable to produce consistent results. One possible explanation for this inconsistency is that most of the available research has tended to work with very broadly defined groups of "violent" individuals. Thus, for example, studies investigating the MMPI codetypes for violent individuals have included rapists (Armentrout & Hauer, 1978), violent adolescents (Truscott, 1990), psychiatrically referred criminals (Quinsey, Arnold, & Pruesse, 1980), urban gang members (Yablonsky, 1962), pedophiles (Johnson, 1971), and various assorted other target groups. In addition, other studies have simply labelled their sample violent and included, for example, offenders

"...charged with assault, robbery, sexual assault, and all degrees of homicide." (Fraboni et al., 1990; p. 775).

Thus, much of the existing literature appears to have either focused on different classes of offenders or simply grouped them together under the heading of "violent". Unless one assumes that all violent acts are psychologically equivalent, it does not seem reasonable to expect such a situation to produce a single personality profile. At the very least, averaging together different groups of subjects would obscure intergroup differences by producing a single heterogeneous population. Since it seems highly unlikely that all violent acts are associated with a single personality profile (Heilbrun, 1990; Megargee, 1982), the next logical step would be to focus on subgroups of violent offenders. In fact, Megargee (1982) suggested this course of action more than a decade ago when he called for a "sharpening and levelling" of our research focus.

Summary

Although the literature is far from settled regarding a personality profile for "violent" criminals, some summary statements are possible. There is considerable evidence of psychopathology among violent criminals (Armentrout & Hauer, 1978; Bauer & Clark, 1976; Lothstein & Jones, 1978; Panton, 1962; Quinsey, 1975; Yablonsky, 1962). However, much of the data is open to criticism, especially that involving the 4-8 MMPI codetype (e.g., Armentrout & Hauer, 1978; Bauer & Clark, 1976; Lothstein & Jones, 1978; Panton, 1962). Moreover, there exists data indicating that violent and non-violent offenders do not differ in terms of psychopathology

(Valliant et al., 1984). Consequently, it is unclear whether violent offenders are more pathological than non-violent offenders in the strict sense of the term. Somewhat more consistent is the finding that violent offenders tend to be aggressive/assertive (Hill et al., 1982; Jackson, Hope, & Glass, 1987; Sarbin, Wenk, & Sherwood, 1968).

Research examining the interpersonal styles/perception of violent offenders has produced some reasonably consistent findings. Thus, violent offenders have been found to exhibit social skills deficits and be sensitive to criticism (Fiqia et al., 1987; Davis & Sines, 1971). Moreover, they tend to be interpersonally guarded and suspicious (Lang et al., 1987). Interestingly, this last finding has been replicated cross-culturally (Sinha, Senn, & Sinha, 1988). Also, although the link between MMPI codetypes and violent behaviour is controversial, both the 4-3 and the 4-8 codetypes are associated with interpersonal suspicion and social skills deficit. Thus, data suggesting social skills deficits and a guarded interpersonal style appear to be relatively common.

Relatively low impulse control and IQ are the only variables which have been unequivocally linked with criminal violence. Although the IQ data is marred by controversy surrounding its interpretation (e.g., Valliant et al., 1984; Bartol, 1991), the finding of low IQ among convicted violent offenders is nonetheless very robust (e.g. Heilbrun, 1982, Holland, Beckett, & Levy, 1981; Heilbrun & Heilbrun, 1985; Heilbrun, 1990). While controversy precludes the drawing of definitive conclusions from the IQ data, evidence revealing low impulse control among criminally violent individuals appears quite compelling (e.g., Armentrout & Hauer, 1978; Bauer & Clark, 1976;

Carson, 1969; Davis & Sines 1971; Gilberstadt & Duker, 1965; Heilbrun, 1982; Heilbrun, 1990; Heilbrun & Heilbrun, 1985; Holland, Beckett, & Levy, 1981; Lion, Madden, & Christopher, 1976; Lothstein & Jones, 1978; Persons and Marks, 1971; Shah, 1975; Syverson & Romney, 1985; Wagner & Klein, 1977).

Violence Against Intimates

The following section will provide an overview of research examining the characteristics of men who assault their "intimate". For the purposes of this investigation, "intimate" will be operationally defined as an individual with whom the offender had, or continues to have, an emotional tie (Edwall et al. , 1989). Insofar as previous research is mostly concerned with violence between legally married persons, it should be noted that this definition is somewhat broader than that typically employed by virtue of including common-law relationships.

Extant Research. Until quite recently, researchers in this area considered psychological factors unimportant (e.g., Gelles & Strauss, 1979; Strauss et al., 1980). Consequently, early reports of the psychological characteristics of intimate-assaultive males were based largely on clinical observations rather than controlled studies. Despite the largely uncontrolled nature of these early reports, they clearly suggested that men who assaulted their intimates differed psychologically from men who did not. Faulk (1974), for instance, reported high levels of obsessional jealousy and clinical depression among spouse abusers. Two later reports (Elbow, 1977; Symonds, 1978) both described men who assault their intimates as having difficulties with control issues. While

acknowledging the methodological flaws inherent in reports of this nature, as a whole they clearly suggest the presence of psychopathology among men who assault their intimates.

Some later studies appear to confirm these early reports of psychopathology among male batterers. For example, Stewart and deBlois (1981) conducted a series of structured interviews with a group of spouse abusers. A rater, who was not blind to the general aim of the study, was asked to compare the resulting transcripts to those obtained from a non-battering sample of men. This comparison revealed significantly more psychopathology, especially in the area of personality disorders, among abuserÿ.

Similarly, Bland and Orn (1986) examined the relation between family violence and psychiatric disorder by conducting diagnostic interviews with 1200 randomly selected Edmonton residents. Their results revealed a strong association between intrafamilial violence and psychiatric diagnoses of antisocial personality disorder, alcoholism, and/or recurrent depression. More specifically, the researchers found that over half (54.5%) of those receiving one of the aforementioned diagnoses were involved in violent behaviour with an intimate. Conversely, only 15.5% of those not diagnosed reported any violent behaviour toward family members. Moreover, a calculation of the odds ratio involving all three diagnostic categories revealed that respondents with "... one or more of the diagnoses are 6.5 times more likely to be involved in violence than those without... " (p. 132).

In 1986 Hamberger and Hastings sought to replicate an earlier unpublished study which also found evidence of psychopathology among intimate-violent men. Their sample consisted of 99 men arrested for domestic violence and ordered to attend a treatment program. Each man was asked to complete a test battery which included a personality inventory, an anger scale, and a depression inventory. The results revealed these men ÿo be depressed, anxious, prone to alcoholism, rigid, and suffering from low self-esteem. Moreover, their interpersonal style was described as withdrawn, passive, and ingratiating. Overall, the researchers concluded their results "... revealed a nearly identical replication of the initial findings." (p. 323).

To be sure, all these studies are flawed in some manner. For instance, all except one (Stewart & deBlois, 1981) lacked an appropriate control group. Although employing a control, the Stewart and deBlois study is itself marred by the use of a rater who was aware of the differential history of the study's subjects. Moreover, the Bland and Orn study can be criticized on the basis that their sample was not demographically consistent with the general population of Edmonton. Despite these flaws, when taken together these studies provide relatively compelling evidence of psychopathology among intimate-violent men. Moreover, subsequent, more tightly designed studies have also reported evidence of significant psychopathology among batterers (e.g., Hamberger & Hastings, 1991). However, the combined effect of these studies must be weighed against evidence indicating that intimate-violent men are not typically pathological (e.g.

Flournay & Wilson, 1991; Hale et al., 1988; Schuerger & Reigle, 1988). Clearly the literature is inconsistent in this regard.

In another early study, Rosenbaum and O'Leary (1981) sought to evaluate the characteristics most frequently thought to be associated with wife abuse. Subjects for this study were drawn from a New York based clinic specializing in marital violence. This study is noteworthy in that it included two control groups: a group of non-violent maritally discordant couples to control for the effects of non-violent discord and a group of satisfactorily married couples drawn from the community. The groups were compared with regard to three main variables: attitudes toward women, alcoholism, and assertiveness. The overall pattern of results indicated that abusive males were more likely to report problems with alcohol and were more conservative in their attitudes toward women. In addition, abusive males were found to be less assertive in general and, more specifically, with their wives. This last point is generally consistent with the Hamberger and Hastings (1986) finding that intimate-violent males tend to be passive in their interpersonal relations. Parenthetically, Rosenbaum and O'Leary also reported that abusive males were more likely to have been abused as children and/or have witnessed spouse abuse in their family of origin. This finding is extremely robust, suggesting that an early experience of interpersonal violence in the home is common to most abusive males (e.g., Breiner, 1992; Carlson, 1984; Giles-Sims, 1983; Hamberger & Hastings, 1991; Roberts, 1981; Schuerger & Reigle, 1988; Walker, 1984).

Results indicating that abusive males tend to be less assertive and more passive than their non-abusive counterparts (i.e., Hamberger and Hastings, 1986; Rosenbaum & O'Leary, 1981) suggest these individuals may be "overcontrolled" in the sense described by Megargee and his associÿtes. However, other studies have reported that intimate violent men are characterized by a lack of impulse control. Schuerger and Reigle (1988), for example, investigated personality variables in 250 men enrolled in a group treatment program for abusive husbands. Results from this investigation indicated these men were withdrawn, assertive, compulsive, and compliant. The mix of "assertive" and "compliant" tendencies is especially interesting since these traits are typically seen as polar opposites. Unfortunately, the researchers did not elaborate on this peculiar juxtaposition of traits. Nor did they present any information regarding the type of situations which tend to be associated with assertive or compliant behaviour. Nonetheless, data indicating that abusive males suffer from poor impulse control has been reported by other investigators (e.g., Breiner, 1992; Flournay & Wilson, 1991; Hale et al., 1988).

The extant literature, therefore, once again appears inconsistent. Some studies report data portraying intimate-violent men as overcontrolled, others portray them as undercontrolled. While it is difficult to accept that the battering male is both under- and overcontrolled, it does seem possible that some batterers are overcontrolled while others are undercontrolled. In other words, the general category of intimate-violent males may

profitably be subdivided into over-and undercontrolled types. If validated, such a distinction is likely to have profound implications for treatment planning.

A number of studies have reported that intimate-violent men tend to be highly conservative or "traditional" in their attitudes, especially with regard to women. Hamberger and Hastings (1991), for instance, compared groups of domestically violent males to matched samples of non-violent males. Compared to their non-violent counterparts, violent men tended to be more conservative and rigid in their thinking. These findings are consistent with earlier reports of conservative and rigid attitudes among battering males (e.g., Davidson, 1978; Rosenbaum and O'Leary, 1981; Hamberger & Hastings, 1986).

However, Neidig, Friedman, and Collins (1986) reported data inconsistent with the notion that intimate-violent males are overly conservative or rigid in their thinking. More specifically, after comparing the "attitudinal characteristics" of domestically violent males, and matched groups of non-violent males, Neidig et al. found no difference in terms of dogmatism, cognitive rigidity, attitude toward others, and attitude toward women. In fact, domestically violent men were found to differ from their non-violent counterparts only in that they reported significantly lower self-esteem. Thus, this study appears to contradict the previously cited work examining the attitudes of batterers. However, it should be noted that only military personnel were employed in this study, and the literature clearly indicates that the family life of military personnel is quite different from that of the general public (Frances & Gale, 1973; Lagrone, 1978;

Jensen, Lewis, & Xenakis, 1986). Consequently, the results of the Neidig et al. study may simply indicate that the attitudinal characteristics of military men differ from those of non-military men. Or, alternatively, it may simply be a matter of differences in self-presentation. At any rate, the generalizability of these data is questionable.

A relatively large number of studies have reported that abusive men tend to have difficulty with interpersonal intimacy (e.g., Breiner, 1992; Dutton, 1984) and/or are extremely jealous (e.g., Adams, 1990; Giles-Sims, 1983; Flournay & Wilson, 1991; Schuerger & Reigle, 1988; Walker, 1984). Viewed in light of the plethora of data indicating that abusive males are very likely to report early experience with conflictual and/or violent intrafamilial relationships, these findings raise the possibility that abusive males may suffer from some form of attachment pathology. Briefly, it is believed that early experience with inconsistent, conflictual and/or abusive interpersonal relations gives rise to a perceived inability to obtain and/or maintain secure attachments (Bowlby, 1979). This perceived inability to form secure attachments often generates internal working models which identify the self as unlovable/inadequate, and others as rejecting/unreliable. From this perspective, the jealousy commonly observed among abusive males stems from their inability to perceive their current relationship as stable. Similarly, the observed difficulty with interpersonal intimacy is readily ascribed to their belief that such intimacy is actually impossible. The possibility that intimate-violent males may suffer from some form of attachment pathology is consistent with studies indicating that abusive individuals tend to report: a) disrupted early relations in the

home (e.g., Walker, 1984), b) feelings of inadequacy (Flournay & Wilson, 1991), c) fear of abandonment/rejection (Dutton, 1984), and d) a tendency to feel threatened by their wives actions (Goldstein & Rosenbaum, 1985). The contention that attachment issues are central for abusive males is further supported by a recent study of abusive Israeli men which found a strong negative correlation between attachment to family of origin and impulsive violence (Shoham et al., 1987).

The aforementioned data are highly consistent with the notion that intimate-violent men may be characterized by some form of an attachment pathology. Insofar as a perceived inability to form secure attachments is typically accompanied by low self-esteem and depression (Gilbert, 1992), evidence indicating that abusive males are depressed and suffer from low self-esteem would further support this contention. In fact, reports of low self-esteem and depression among abusive males are almost as common as those of early experience with conflictual family relations (e.g., Breiner, 1992; Flournay & Wilson, 1991; Hamberger & Hastings, 1986; 1991; Neidig, Friedman & Collins, 1986; Goldstein & Rosenbaum, 1985; Rosen, 1991; Russell & Hulson, 1992; Walker, 1984). Such data bolsters the belief that attachment issues are somehow involved in the problem of violence among intimates. Unfortunately, despite the numerous treatment implications to be derived from this perspective, researchers have generally ignored the potential link between attachment theory and violence among intimates.

Summary. Until quite recently, researchers examining the problem of violence among intimates tended to deny or minimize the importance of psychological factors (e.g., Strauss et al., 1980). As a consequence, early psychological data consisted largely of uncontrolled clinical reports. Despite some inconsistency regarding specific findings, these early reports clearly argued for the presence of significant psychopathology among intimate-violent men (e.g., Elbow, 1977; Faulk, 1974; Symonds, 1978). Subsequent attempts to replicate these early findings have proven largely inconsistent with some studies finding evidence of psychopathology among intimate-violent men (e.g., Bland & Orn 1986; Hamberger & Hastings, 1986; Stewart & deBlois 1981) and others finding none (e.g., Flournay & Wilson, 1991; Hale et al., 1988; Schuerger & Reigle, 1988). Similarly inconsistent data have been reported regarding the question of whether intimate-violent males are generally passive (Hamberger & Hastings, 1986; Rosenbaum & O'Leary, 1981) or non-passive interpersonally (Breiner, 1992; Flournay & Wilson, 1991; Hale et al., 1988; Schuerger & Reigle, 1988).

Fortunately, the literature is somewhat more consistent regarding other characteristics of intimate-violent men. Thus, these individuals are portrayed as: a) having difficulty with intimacy (Breiner, 1992; Dutton, 1984), b) being extremely jealous (Adams, 1990; Giles-Sims, 1983; Faulk, 1974; Flournay & Wilson, 1991; Schuerger & Reigle, 1988; Walker, 1984), and c) rigid and conservative in their beliefs (Davidson, 1978; Rosenbaum and O'Leary, 1981; Hamberger & Hastings, 1986; 1991).

However, it should be noted that this last finding has not generalized to a military population (Neidig, Friedman & Collins, 1986).

Finally, the literature suggests intimate-violent males tend to suffer from low self-esteem and be clinically depressed (Bland & Orn, 1986; Breiner, 1992; Faulk, 1974; Flournay & Wilson, 1991; Hamberger & Hastings, 1986; 1991; Neidig, Friedman & Collins, 1986; Goldstein & Rosenbaum, 1985; Rosen, 1991; Russell & Hulson, 1992; Walker, 1984). It is interesting to note that these data have been collected in England (Rosen 1991), Canada (Bland & Orn, 1986), the United States (Goldstein & Rosenbaum, 1985), and in a military setting (Neidig, Friedman, & Collins, 1986). In short, results indicating low self-esteem and depression among intimate-violent males have proven to be remarkably robust.

Stranger vs. Intimate Violence

In an earlier section, the literature examining the personality organization of violent criminals was surveyed. This survey revealed relatively good evidence of social skills deficits and heightened sensitivity to criticism among this population. Evidence of a guarded and suspicious interpersonal style was somewhat stronger, having been replicated cross-culturally. Although difficult to interpret, there also appears to be ample evidence of low IQ among criminally violent offenders. Most compelling, however, is the evidence of low impulse control among violent criminals.

The next section examined the link between personality and violence against intimates. This survey revealed that intimate-violent men have difficulty forming

affectional bonds, are extremely jealous, and tend to be rigid and conservative in their beliefs. In addition, data revealing low self-esteem and depression among this population appear quite robust, having been replicated in three different countries and in a military setting.

In this section, the few studies which have examined the stranger vs. intimate dichotomy among violent offenders will be reviewed. As mentioned earlier, this is a fairly recent dichotomy. Consequently, a review of the literature revealed only five empirical comparisons of these two subgroups of violent offenders.

Extant Research. In 1985 Daniel and Holcomb published a study examining the characteristics of domestic and non-domestic homicide offenders. Subjects in this study were 213 males charged with murder in the state of Missouri: 169 of these men fell into the "non-domestic" category, the remaining 44 were "domestic" murderers. Although both groups evinced a somewhat conflicted developmental history, they were also found to differ in some significant ways. More specifically, the domestic homicide group was found to be a) older, b) more likely to have experienced a recent stressor, c) more likely to attempt suicide after the offense, and d) more likely to be diagnosed psychotic.

This pattern of results led to the conclusion that the domestic homicide offender is "... a person who has a propensity toward violence which episodically erupts throughout the history but who nevertheless is able to adjust marginally and establish relationships with others,..." (Daniel & Holcomb, 1985; p. 239). This conclusion is quite interesting in light of Greene's (1991) description of the 4-3 MMPI-2 codetype:

> They display poor judgement under stress, ... The cyclic pattern of violent outbursts with intermittent periods of appropriate behavior represents a chronic and stable personality disorder that is extremely difficult to change. (pp. 272-273)

The overlap between this description of 4-3 individuals and the profile generated by the Daniel and Holcomb (1985) study -- including the link to stress -- is intriguing in that it raises the possibility of a link between domestic violence and the MMPI 4-3 codetype. Empirical verification of this link could potentially contribute to the clarification of the 4-3/4-8 MMPI codetype controversy by ascribing much of the existing confusion to the common tendency to simply combine different classes of offenders into a single "violent" category. More specifically, it may be that the confusion surrounding the 4-3/4-8 codetypes for violent offenders results from the grouping together of intimate- and stranger-violent individuals. Perhaps if the two groups were isolated each would cluster around one of the codetypes.

Also interesting is the finding of a higher frequency of suicide attempts among the domestic homicide group. Although the authors interpreted this finding as reflecting intense feelings of guilt, the very close link between suicide and depression also suggests these men were quite depressed. Thus, this finding is consistent with a host of previous studies documenting high levels of depression among intimate-violent men (Bland & Orn, 1986; Breiner, 1992; Faulk, 1974; Flournay & Wilson, 1991; Hamberger

& Hastings, 1986; 1991; Neidig, Friedman, & Collins, 1986; Goldstein & Rosenbaum, 1985; Rosen, 1991; Russell & Hulson, 1992; Walker, 1984).

Kalichman (1988) compared the personality profiles of men and women convicted of domestic homicide. Although not directly relevant to the purposes of this paper, his study did include a group of males convicted of murdering a stranger. Thus, a stranger- versus intimate-violent profile comparison is possible. This comparison revealed a greater tendency toward psychopathic characteristics and high levels of social extraversion and impulsivity among men convicted of murdering strangers. With regard to the more specific question of an MMPI profile, Kalichman found some evidence of a 4-9 codetype among the stranger-violent men, while the profile for intimate-violent men appears to be best described as a spike 4.

Rather than focus on the more global issue of personality, Maiuro et al (1988) examined the role played by anger, hostility and depression in interpersonal violence. One hundred and twenty nine male patients in a Seattle area facility served as subjects in this study. One hundred of these individuals had sought treatment for anger and violence related problems. These subjects were divided into three groups: a) domestically violent, b) generally assaultive, c) mixed assaulters (i.e., both intimate- and stranger-violent). The remaining 29 subjects were receiving treatment at the centre's dental clinic and thus served as controls. Generally, all three assaultive groups were more hostile, angry, and depressed than the control group. However, the assaultive

groups differed from each other only in that the domestically violent subjects were more depressed than the other groups.

Interestingly, the authors interpret their finding regarding depression from the standpoint of attachment theory. More specifically, they argue that evidence of higher depression rates among intimate-violent males is consistent with clinical observations suggesting the domestic violence cycle is often linked to "... low self-esteem and the psychological themes of abandonment, loss, and helplessness." (Maiuro et al 1988, p.21). The basic idea here is that anger and violence among intimates is often employed as a means of forcibly maintaining emotional bonds. In other words, the aggressing male is insecure regarding the stability of an important affectional bond and, as a consequence, uses aggression to discourage separation (Bowlby, 1984). Ironically, behaviour which was originally intended to maintain emotional bonds ultimately traps the participants in a downward spiral of escalating violence which eventually breaks the bond between them. If verified, this observation promises to have profound treatment implications.

Based on their observation that domestically violent men are often "... ineffectual and even pathetic figures ..." (p.21), Maiuro et al (1988) made another interesting point: Namely, they offerred the possibility that aggression against a physically weaker target may serve to compensate for a general sense of powerlessness. Thus, aggression in the home may serve the dual purpose of securing attachments and boosting self-esteem. This line of reasoning is consistent with evidence of low self-

esteem among intimate-violent males (Hamberger & Hastings, 1986; 1991; Neidig, Friedman, & Collins, 1986; Goldstein & Rosenbaum, 1985; Rosen, 1991; Russell & Hulson, 1992; Walker, 1984).

In an attempt to improve treatment planning within the Texas Department of Corrections, Edwall et al. (1989) attempted to delineate differences between females who assault significant others and those who assault relative strangers. In all, 53 inmates referred for assessment by the Texas Department of Corrections participated in this study. The results of this comparison revealed four variables which, when weighted, classified the offenders correctly 75% of the time: MMPI scales 4 and 0, level of education, and history of juvenile delinquency. With regard to the MMPI results, those who assaulted a relative stranger were more likely to elevate scale 4, while those who assaulted a significant other evinced a tendency to elevate scale 0. Insofar as an earlier study revealed a spike 4 profile for intimate-violent inmates and a 4-9 profile for stranger-violent ones, these results are not in harmony with previously published data (Kalichman, 1988). However, insofar as the earlier study focused on differences between subcategories of male murderers while Edwall et al. (1989) compared female assaulters, it seems reasonable to suggest that population differences may have contributed to the observed discrepancy. In other words, the different results may be due to the nature of the offense being examined or even sex differences.

More recently, Dutton and Hart (1993) reviewed the institutional files of approximately 600 male offenders from seven federal correctional facilities in Canada

and found that the offenders could be divided into three main groups: stranger violent, family violent, and non-violent. Moreover, the groups were found to differ in terms of family history of abuse victimization and types of psychiatric disorders they experienced. Specifically, family violent offenders were more likely to have been abused by their families of origins and were more likely to display evidence of narcissistic and borderline personality disorders.

Summary. Five studies have generated empirical data concerning differences between people who aggress against relative strangers and those who aggress against intimates. Two of these studies have employed murderers as their subjects (Daniel & Holcomb, 1985; Kalichman, 1988). The Daniel and Holcomb (1985) study generated a personality profile for domestic murderers which appears quite similar to the controversial 4-3 MMPI codetype. The latter study found greater evidence of psychopathology, impulsivity, and extraversion among subjects who murdered relative strangers (Kalichman, 1988). With regard to the question of MMPI profile, this study found evidence of a 4-9 codetype among subjects who murdered strangers, but the profile for subjects who murdered an intimate was best described as a spike 4.

The Daniel and Holcomb study also found that men guilty of killing an intimate were more likely to attempt suicide after the offense. This suggests the presence of post-offense guilt and depression. While admittedly speculative, the possibility of significant post-offense guilt among this population does make intuitive sense. Moreover, evidence of significant depression among intimate-violent males appears consistently in the

existing literature (e.g., Breiner, 1992; Faulk, 1974; Flournay & Wilson, 1991; Rosen, 1991). Additionally, in a direct comparison of intimate-and stranger-violent men, Maiuro et al. (1988) also found evidence of greater depression among intimate-violent males.

The remaining two studies (Dutton & Hart, 1993; Edwall et al. 1989) are most relevant to the purpose of this paper for two reasons. First, the main goal of each study was to compare stranger- and intimate-violent inmates. Second, each study sought to generate data which could then be used to help tailor a treatment program for each group of inmates. Although both studies found significant differences between these groups of inmates, they require follow up for a number of reasons. For instance, the Dutton and Hart study provided good information on family history and other demographic variables but included comparatively little information about personality variables. In contrast, the Edwall et al. study focused on personality variables but suffered from a relatively small sample size and the absence of a non-violent control group. Moreover, it is questionable whether personality data gathered from female offenders in Texas can profitably be used to complement data gathered from male offenders in Canada.

Rationale

Despite a plethora of research examining the personality of criminally violent individuals a single "violent" personality profile has not emerged. This inconsistency has led to a call for research examining the personality organization of more specific

subgroups of violent criminals ((Flournay & Wilson, 1991; Megargee, 1982). Very recently a specific interest in the stranger- vs. intimate-violent dichotomy among incarcerated samples has emerged (Edwall et al., 1989; Dutton & Hart, 1993). Researchers investigating this dichotomy have done so in the hope of generating knowledge which could then be used to help develop more effective treatment programs for each group of inmates.

This investigation was designed to extend this line of research by including an appropriate control group and providing a more comprehensive personality portrait of inmates incarcerated for either assaulting an intimate or a relative stranger. Moreover, the focus of this study was sharpened considerably through the use of strict subject selection criteria and a relatively narrow operational definition of violence. In keeping with previous work in this nascent area, however, this study did not seek to address the causal/developmental path which leads a person to become differentially violent toward strangers or intimates. Rather, the goal was to delineate differences in current patterns of personality organization between the two target groups of inmates. This focus on existing group differences was believed to be more immediately relevant to treatment planning than a post hoc search for causal factors.

Overview and Predictions

This investigation was designed to explore personality differences between subgroups of individuals incarcerated for assaultive crimes. To this end, three groups of federal inmates were compared with regard to basic personality structure, interpersonal

style, and attachment style. The intimate-assault group (Grp. IA) was composed of individuals incarcerated for assaulting an intimate. Similarly, the stranger-assault group (Grp. SA) was composed of individuals incarcerated for assaulting a relative stranger. Finally, a group of inmates incarcerated for non-violent crimes functioned as a control group (Grp. CO).

In accordance with previous research (e.g., Davis & Sines, 1971; Edwall et al., 1989, Fraboni et al., 1990; McCreary, 1976; Persons, 1968), the MMPI served as the focus of this study. Additionally however, the MMPI was supplemented by an instrument specifically designed to assess aggressive and assertive behaviours, and one designed to assess attachment style. The decision to supplement the MMPI with instruments designed to assess interpersonal and attachment styles was made in response to data indicating the relevance of these measures to the issue at hand (e.g., Flournay & Wilson, 1991; Hamberger & Hastings, 1986; Hill et al., 1982; Maiuro et al., 1988; Shoham et al., 1987).

Despite a high degree of variability, a review of the literature revealed fairly consistent trends. For instance, the finding of low self-esteem and depression among intimate violent males is quite consistent (Bland & Orn, 1986; Breiner, 1992; Faulk, 1974; Flournay & Wilson, 1991; Hamberger & Hastings, 1986; 1991; Neidig, Friedman & Collins, 1986; Goldstein & Rosenbaum, 1985; Rosen, 1991; Russell & Hulson, 1992; Walker, 1984). Similarly, evidence of highly conservative beliefs among this population

is also quite consistent (e.g., Davidson, 1978; Rosenbaum and O'Leary, 1981; Hamberger & Hastings, 1986; 1991).

In terms of the literature concerning generally violent individuals, only findings of low impulse control and low IQ emerged with compelling regularity. For reasons mentioned earlier, conclusions based on the IQ data were not drawn. Evidence of low impulse control, however, appeared quite clear (e.g., Armentrout & Hauer, 1978; Bauer & Clark, 1976; Carson, 1969; Davis & Sines 1971; Gilberstadt & Duker, 1965; Heilbrun, 1982; Heilbrun & Heilbrun, 1985; Heilbrun, 1990; Holland, Beckett, & Levy, 1981; Lion, Madden, & Christopher, 1976; Lothstein & Jones, 1978; Persons and Marks, 1971; Shah, 1975; Syverson & Romney, 1985; Wagner & Klein, 1977). Although not as well documented, evidence of a guarded and suspicious interpersonal style (Lang et al., 1987) also appeared relatively solid by virtue of being replicated cross-culturally (Sinha, Senn, & Sines, 1988), and being associated with both the 4-3 and 4-8 MMPI codetypes (e.g., Carson, 1969; Davis & Sines, 1971; Fraboni et al., 1990; Quinsey, Arnold, & Pruesse, 1980).

Studies which directly compared stranger- and intimate-violent individuals reported evidence of higher levels of guilt and depression (Daniel & Holcomb, 1985; Maiuro, 1988), and relatively low self-esteem (Edwall et al., 1989) among the intimate-violent group. Overall, these findings impressed as generally consistent with data emerging from earlier work examining the characteristics of intimate-violent men alone. Also, evidence of impulsivity (Edwall et al., 1989; Kalichman, 1988) among stranger-

violent individuals seemed to dovetail nicely with similar data emerging from studies examining generally violent individuals.

Although the basic goal of this investigation was to generate a relatively comprehensive personality profile for both target groups, the existence of fairly consistent trends in the literature suggested the following specific predictions:

1. Inmates incarcerated for assaulting a relative stranger will evince lower impulse control than those incarcerated for assaulting an intimate. This impulsivity will manifest as significantly higher elevations on scale 4 of the MMPI-2.

2. Inmates incarcerated for asÿaulting a relative stranger will evince a more guarded and suspicious interpersonal style than those incarcerated for intimate-assault. This interpersonal suspiciousness will manifest as significantly higher elevations on scale 6 of the MMPI-2.

3. Inmates incarcerated for assaulting an intimate will evince higher levels of depression than those incarcerated for stranger-assault. These higher levels of depression will manifest as significantly higher elevations on scale 2 of the MMPI-2.

4. Inmates incarcerated for assaulting an intimate will report more conservative beliefs than those incarcerated for stranger-assault. This attitudinal characteristic will manifest as significantly lower elevations on scale 5 of the MMPI-2.

5. Inmates incarcerated for assaulting an intimate will report lower self-esteem than those incarcerated for assaulting a relative stranger. This lower self-esteem will manifest as lower elevations on the self-confidence scale of the Interpersonal Behavior Survey.

The preceding predictions were gleaned from the most robust trends in the literature. To be sure, previous research would have supported other predictions. However, given the high degree of variability and controversy which characterizes the literature in question, it seemed desirable to adopt a conservative stance regarding the testing of specific hypotheses.

Method

Subjects

The goal of this investigation was to compare the personality profiles of three separate groups of male convicts. To this end, the files of all inmates currently incarcerated at Stony Mountain Institution (SMI) were reviewed to identify potential participants. New arrivals on the SMI intake assessment unit were also screened for inclusion in this study.

Group IA consisted of inmates incarcerated for assaulting an intimate. For the purposes of this investigation, "intimate" was defined as an individual with whom the inmate had an emotional attachment. Additionally, for the purposes of this investigation, assault was defined to include one of the following criminal code offences: a) assault level 1 (no physical injury), b) assault with weapon or causing

bodily harm level 2, c) aggravated assault level 3, and d) unlawfully causing bodily harm. In accordance with previous work in this area (e.g., Edwall et al., 1989), sexual offenders were not included in this study. To further sharpen the focus of this study, individuals currently incarcerated for murder or acts of verbal aggression (e.g., uttering threats) were not considered for inclusion in this study.

Group SA included inmates incarcerated for assaulting a relative stranger. "Relative stranger" was here defined as an individual with whom the inmate had no prior emotional ties. The third group (group CO) served as a control group and as such was composed entirely of inmates incarcerated for non-violent crimes.

With the exception of the specific hypotheses to be tested, all participants were fully informed as to the true nature of the study. More specifically, all potential participants were asked to participate in a study examining the personality of various offender subgroups. All participants were also given the option of obtaining a copy of the final results should they so desire. No one availed themselves of this option.

Finally, while acknowledging that perfect exemplars of any offence group are extremely difficult to find (Megargee, 1982), this investigation endeavoured to obtain relatively pure samples of each assault type. To do so, only inmates whose record contained no more than one stranger assault were allowed to participate in group IA. Similarly, only those inmates whose record contained no more than one intimate assault were allowed to participate in group SA. Finally, the control group consisted exclusively of inmates who evinced no prior history of criminal violence.

To summarize, SMI files were reviewed to identify potential participants for a study investigating personality differences among individuals incarcerated for different types of assault. In total, 166 inmates were identified as meeting the relevant criteria and contacted. Ultimately, 119 participated in the study. The remainder either declined to participate, could not participate due to illiteracy, or were disqualified for providing invalid or incomplete data. Table 1 provides a summary of the subject selection procedure and the final group sizes. Table 2 provides information regarding the mix of archival and directly collected data employed by this study.

Table 1

Summary of subject selection

		deletions			
GRP.	Contacted	Declined	Illiterate	Disqualified	N
IA	52	6	1	4	41
SA	65	9	3	11	43
CO	49	6	0	7	35
Total:	166	21	4	22	119

Note. IA= Intimate-Assault; SA= Stranger-Assault; CO= Control

Table 2

Source of data

	MMPI-2		IBS	
GRP.	File	New	File	New
IA	29	12	29	12
SA	25	18	26	17
CO	20	15	20	15

Note. All participants directly contributed attachment data. IA= Intimate-Assault; SA= Stranger-Assault; CO= Control

Materials

Minnesota Multiphasic Personality Inventory-2. The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) consists of 567 items which are sorted into 3 categories: true, false, cannot say. Its predecessor, the MMPI (Hathaway & McKinley, 1940), was the most widely used and researched personality inventory (Greene, 1991). Restandardization of the original instrument was undertaken to update item content and to delete sexist and out of date language (Butcher et al., 1989).

The MMPI-2 was standardized on a sample of 2600 individuals chosen from 7 U.S. states to reflect national census parameters on a host of demographic variables (Butcher et al., 1989). Like its predecessor, The MMPI-2 consists of 10 basic clinical scales, 3 validity scales, 1 "cannot say" scale, and a number of supplementary scales. In order to remain consistent with previous research (e.g., Edwall et al., 1989), and because virtually all of the supplementary scales suffer from inadequate reliability and validity (Greene, 1991), this investigation focused exclusively on the basic clinical scales once the validity of each profile had been ascertained.

The restandardization committee (Butcher et al., 1989) reported test-retest coefficients for the MMPI-2 clinical scales which ranged from .58 to .91 for women and .67 to .92 for men over a two week interval. Additionally, the MMPI-2 correlated significantly with a number of other personality inventories including, for example, the Millon Clinical Multiaxial Inventory-II and the original MMPI (Greene, 1991). For the

purposes of this study, an MMPI-2 profile was deemed valid to the extent it was characterized by F lower than T90 and Cannot say lower than 15 (Edwall et al. 1989).

Interpersonal Behavior Survey (IBS). The IBS (Mauger & Adkinson, 1980) was specifically designed to distinguish aggressive and assertive behaviours and to sample their subclasses. The IBS contains 272 items which are sorted into true or false categories. The 21 scales of the IBS are grouped into four categories: a) validity (3 scales), b) aggressiveness (7 scales), c) assertiveness (8 scales), and d) relationship (3 scales).

The IBS was standardized on a sample of 800 individuals chosen to approximate U.S. demographic distributions. Reliability characteristics of the IBS were determined using a test-retest format over a 10 week period. The resulting coefficients range from .33 to .90 (Mauger & Adkinson, 1980).

Near zero correlations between the IBS aggressiveness and assertiveness scales (Mauger & Adkinson, 1980) indicate these categories represent essentially independent response classes, and thus support the construct validity of the IBS. Discriminate validity is indicated by the nonsignificant correlations between IBS assertiveness scales and the aggressiveness scales of the Edwards Personal Preference Schedule (Edwards, 1959) and the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957). Finally, convergent validity is indicated by the significant correlations between the IBS aggressiveness scales and the aggressiveness scales of the Interpersonal Check List (Leary, 1957) and the Buss-Durkee Hostility Inventory. Following the

recommendations of Mauger and Adkinson (1980), an IBS profile was deemed valid only to the extent that the Denial, Infrequency, and Impression Management scores fell below T70.

Revised Adult Attachment Scale (RAAS: Appendix A). The RAAS (Collins & Read, 1990) is designed to assess attachment style. It is composed of 18 statements which are rated on a 5-point scale ranging from very true of me (1) to very untrue of me (5). The individual statements load on three factors which Collins and Read labelled Depend, Close, and Anxiety. The first factor contains items concerning the extent to which the respondent perceives others to be trustworthy and dependable. The Close factor is composed of items concerned with the extent to which the respondent is comfortable with closeness and intimacy. Finally, the Anxiety factor consists of items reflecting anxiety in relationships.

Internal consistency for the RAAS is reasonable with Cronbach's Alpha for Depend, Close, and Anxiety items of .75, .69, and .72, respectively. Collins and Read also reported test-retest correlations for the three factors of .71, .68, and .52, respectively over a two month period.

Individual scores on each RAAS factor are employed to assign an individual to one of the previously identified attachment styles (i.e., secure, avoidant, anxious). Specifically, a securely attached individual typically scores high on the Depend and Close factors, and low on the Anxiety factor. Similarly, high scores on the Anxiety factor, coupled with moderate to low scores on the remaining factors, are consistent

with an anxious pattern of attachment, while low scores on all three factors indicate an avoidant attachment style. Only fully completed RAAS forms were accepted as valid for the purposes of this study.

Procedure

Once approval to initiate data collection procedures was obtained from the department of Psychology Ethical Review Committee and the SMI Research Committee, a review of all inmate files was initiated to identify potential participants from the SMI general population. Additionally, an informal screening procedure was implemented on the SMI intake assessment unit to identify potential participants as they first entered SMI. Thus, subjects for this study were recruited both from the SMI general population and the SMI intake unit.

As is customary for research conducted at SMI, verbal consent was obtained from each individual prior to the collection of any data. To minimize the danger of history effects (e.g., lockdowns), subjects were run in mixed groups (approximately 5 to 7 subjects) so that each data collection session included members from different groups.

All data was collected in one of the institution's testing or group meeting rooms. These rooms are relatively comfortable and routinely employed for data collection purposes. Insofar as prior experience suggested the issue of consent is best handled on an individual basis at SMI, participants were provided with staggered arrival times (approximately 10 minutes) to allow for the individual collection of verbal consent.

As a matter of convenience, all subjects were asked to complete the instruments in the same order, beginning with the MMPI-2 and ending with the attachment questionnaire. No instructions other than a request for thoroughness was added to those on the cover page of each instrument (see Appendices A to C for these cover pages). Once the completed instruments were returned to the experimenter, the respective inmate was allowed to return to his cell or place of employment.

All subjects were required to contribute MMPI-2, IBS, and attachment data. Those subjects who had previously completed any of the aforementioned instruments were required only to complete the remaining ones. Thus, for example, if subject A had a valid MMPI-2 profile on file then he was only asked to complete the IBS and the attachment questionnaire.

Whenever possible, subgroups of subjects were formed and run together on the basis of which instruments had to be completed. Subjects whose case file included an invalid IBS or MMPI-2 profile were asked to once again complete the respective instrument. Subjects who provided invalid information on this occasion were deleted from the study, as were subjects who directly contributed invalid IBS or MMPI-2 profiles (i.e., those who did not have pre-existing profiles). Ultimately, only those inmates who contributed valid MMPI-2, IBS, and attachment profiles were included in the final results.

Results

Sample Characteristics

Information regarding a number of demographic variables was collected as part of this study. For ease of presentation, this data is divided into two categories: general and forensic. Table 3 contains information regarding general demographic data, while information regarding forensic variables is presented in Table 4.

Potential differences in mean age were examined by one-way ANOVA. The results of this procedure revealed the groups did not differ in terms of mean age [$F(2,116) = 2.89$, $p.<.06$)]. Potential differences in group composition with regard to education and cultural background were explored by calculating chi-square probabilities in a four (education level) by three (group) matrix for education, and a two (aboriginal and European) by three (group) matrix for cultural background. Parenthetically, insofar as SMI population demographics indicate only a very small number of individuals fit the "other" category for cultural background, this category was deleted from the chi-square analysis to avoid difficulties associated with small expected cell frequencies (Howell, 1987). These analyses produced a chi-square value of 24.7 for education which, on 6 df, is significant at the $p< .0003$. In terms of the cultural background matrix, a chi-square value of 15.5 emerged which, on 2 df, is significant at $p<. 0004$. Given the potentially significant impact of these demographic differences on both the MMPI-2 and the IBS (Greene, 1991; Mauger & Adkinson, 1987), it was decided to empirically

evaluate their effect, particularly their possible interaction with group membership, in the main body of analysis following the discussion of remaining demographic variables.

Table 3

General Demographic Data

	Group		
	Intimate	Stranger	Control
Mean Age	29.1	27.0	31.7
Cult. Background (%)			
Aboriginal	39.0	65.1	14.3
European	53.7	25.6	48.6
Other	7.3	9.3	37.1
Education (%)			
Elementary	22.0	25.6	8.6
Jr. High	63.4	69.8	45.7
Sr. High	14.6	4.7	37.1
Post secondary	0	0	8.6

Table 4

Forensic Data

	Group		
	Intimate	Stranger	Control
Mean length of sentence (mos)	34.9	43.4	53.7
Mean interval b/w arrest and conv. (mos)	3.8	3.7	7.1
Mean length of time served (mos.)	10.8	15.9	7.1
Total number of prior convictions (mean)			
Violent	.7	1.38	0
Nonviolent	5.78	7.53	7.77
Mean number of suicide attempts	.63	.49	.09
Substance involvement in index offense (group %)			
Alcohol	31.7	23.3	14.3
Narcotics	7.3	11.6	42.9
Polysubstance	43.9	51.2	22.9
None	17.1	14.0	20.0

Extant literature suggests that of the information contained in table 4 only that dealing with length of time served may impact the MMPI-2 and IBS (Greene, 1991; Mauger &

Adkinson, 1987). Consequently only this category of data was analyzed statistically. More specifically, group means with regard to length of current period of incarceration were compared by calculating a one-way ANOVA [$F(2, 116) = 11.297$, $p < .0000$] followed by Bonferroni multiple comparisons with the significance level set at .05. The Bonferroni comparisons revealed group SA had spent significantly more time incarcerated than had the other two groups. Groups IA and CO did not differ significantly with regard to this variable.

In terms of the other variables, visual inspection indicates little differences between the two target groups with the exception of the total convictions and suicide attempts categories. The observed difference with regard to number of violent convictions is, of course, an artifact of the subject selection procedure (i.e., subjects were selected because they differed with regard to this variable). The difference in terms of nonviolent offenses on record, however, cannot be attributed to subject selection criteria and thus seems to suggest greater involvement in antisocial activity.

Observed differences with regard to history of suicide attempts are important in that a history of self-injurious behavior speaks directly to the issue of emotional stability (Hawton, 1992). Unfortunately, the very small expected cell frequencies for this data preclude statistical interpretation of the observed differences (Howell, 1987). Nonetheless, it can be noted the observation of higher number of suicide attempts among group IA subjects is consistent with previous research (Daniel & Holcomb,

1985) and data indicating a strong link between disturbed family relations and attempted suicide (Bancroft et al., 1977; Hawton, et al., 1982).

Main Analyses

Factor Analysis of IBS. The IBS is a 21 scale instrument which, excluding the validity scales, measures three broad areas of interpersonal behavior: aggression, assertion, and relationship. In the interest of reducing the large number of DV's in this study, a factor analysis was conducted on the IBS. Parenthetically, the MMPI-2 was excluded from factor analysis in an effort to remain consistent with previous research (e.g. Valliant et al., 1984) and thereby facilitate comparison with existing data.

Factor analytic studies conducted by the authors of the inventory (Mauger & Adkinson, 1987), reveal two main factors -- one defined by substantial loadings from all the assertiveness scales, the other defined by substantial loadings from the aggressiveness scales -- and a smaller, third factor representing the category of relationship variables.

The factor analysis conducted for this study identified four factors with eigenvalues greater than 1.0. Table 5 contains the eigenvalues and percentage of variance associated with each factor, as well as the cumulative percentage of variance accounted for.

Table 5

IBS Factor Analysis

Factor	Eigenvalue	Pct. of Var.	Cum Var
1	6.04	33.6	33.6
2	4.55	25.3	58.9
3	1.29	7.1	66.0
4	1.02	5.7	71.7

Although the Kaiser-Guttman rule identifies four factors, the decision was made to employ a three factors solution primarily because of its very close correspondence with the results of the previous factor analysis (Mauger & Adkinson, 1987). Table 6 contains the factor loadings for each IBS scale. Information regarding variance accounted for by each factor and total variance accounted for by the three factor solution can be gleaned from Table 5.

Table 6

IBS Rotated Factor Matrix

Scale	Fct. 1	Fct. 2	Fct. 3
GGR	.928	-.076	.026
HS	.913	-.038	.043
EA	.836	-.137	.021
DR	.820	-.095	.138
VE	.830	-.059	-.052
PH	.868	-.080	.107
PA	.685	-.155	-.414
SGR	.052	.802	.387
SC	-.217	.764	.291
IA	.-021	.799	.024
DA	.189	.568	.526
FR	.053	.559	.409
PR	-.196	.713	.172
RE	-.124	.590	.212

Table 6 (Cont'd)

IBS Rotated Factor Matrix

Scale	Fct. 1	Fct. 2	Fct. 3
RF	-.108	.190	.742
CA	-.296	-.180	-.694
DP	.056	-.237	-.745
SH	.397	-.619	.128

As mentioned earlier, the factor loadings associated with the three factor solution adopted by this study essentially replicate the three factor structure for the IBS reported by Mauger and Adkinson (1987). The sole exception to this is scale SH (the shyness scale of the relationship factor) which, in this factor analysis, loads most heavily on Factor 2 (the assertiveness factor).

Having adopted a three factor solution, the IBS was for all subsequent analyses reduced to three composite scores labeled Aggression, Assertiveness, and Relationship, corresponding to factors 1 to 3, respectively. Group contrasts on this instrument were then conducted by comparing group means on each composite score. Composite scores

were derived by calculating a total score for each of the three IBS factors for each subject.

Examining the effects of Cultural Background and Education. Ideally, the effects of these variables would be evaluated by calculating a 3-way (Group X Cultural Background X Education) MANOVA. Unfortunately, the relatively small number of subjects in this study produced cell sizes which effectively precluded this option. Consequently, it was decided to assess the impact of these variables by way of two separate MANOVA's. The first focused on the Cultural background variable and, as such, was organized as a 3 (group) X 2 (Aboriginal, European) MANOVA. Similarly, the second MANOVA focused on the Education variable and consequently was organized as a 3 (group) X 3 (Elementary, Jr. High, Sr. High) MANOVA. Parenthetically, because only three subjects in group CO reported having received any post secondary education, the post secondary and senior high categories were collapsed so that the education variable was now confined to three categories: Elementary, Jr. High, and Sr. High. Significant overall F-values were then followed by a series of univariate F-tests and discriminant function analyses to assess the unique contribution of individual variables.

The results of these analyses failed to identify a statistically significant main effect of Cultural Background on the MMPI-2 (Wilks Lambda =. 859, $p<.209$), the RAAS (Wilks Lambda =.927, $p<.192$) or the IBS (Wilks Lambda =. 914, $p<.116$). Similarly, the analyses of Group X Cultural Background interaction effects also failed

to reach significance on the MMPI-2 (Wilks Lambda =.824, p<. 642), the IBS (Wilks Lambda =.915, p<. 116), or the RAAS (Wilks Lambda =.927, p<. 192).

The MANOVA focusing on Education levels also failed to detect statistically significant interactions on the MMPI-2 (Wilks Lambda = .893, p.< .409), the IBS (Wilks Lambda = .676, p< .398), or the RAAS (Wilks Lambda = .919, p< .139). However, despite producing insignificant main effects on the IBS (Wilks Lambda = .919, p< .139), and MMPI-2 (Wilks Lambda = .755, p< .076), Education was found to exert a significant effect on the RAAS (Wilks Lambda = .871, p.< .020). As a result, a series of univariate F-tests and Discriminant Function Analyses were calculated for the RAAS data. Table 7 contains the results of the Univariate F-tests, while Table 8 shows the standardized discriminant function coeffecients for the RAAS variables. Means by education level for the RAAS factor which produced a significant F-value are shown in Table 9.

Table 7

RAAS Univariate F-tests (2, 116) df with education as the IV

Variable	F	p values
Close	.374	.689
Depend	5.625	.005
Anxiety	2.208	.114

Table 8

RAAS Standardized Discriminant Function Coeffecients

	Function Number	
Variable	1	2
Close	.060	.978
Depend	-.773	-.341
Anxiety	.390	-208

Table 9

RAAS Depend Factor -- Mean scores by Education Level

Education Level	Mean Depend Score
Elementary	19.22
Junior High	17.52
Senior High	15.41

Data emerging from this series of analyses reveal a significant effect of education on the Depend factor of the RAAS, with least educated subjects producing higher scores on this factor suggesting greater difficulty in the area of interpersonal trust.

To summarize, the overall pattern of data emerging from the series of analyses conducted to examine the effects of Cultural Background and Education revealed only a main effect of Education on the Depend scale of the RAAS, with least educated subjects producing scores suggestive of greater difficulties in the area of trust. Importantly, all analyses of group interaction effects failed to reach significance.

Group Comparisons. Group differences were examined in three step fashion. First, a series of MANOVA's were calculated with "group" as the independent variable. The MANOVA procedure was deemed ideally suited to the analysis of data emerging from this study given the one-way design, absence of covariates, and multiple criterion variables (Tabachnick & Fidell, 1989). Next, MANOVA's which produced overall F-values significant at the .05 level were supplemented with a series of univariate F-tests to assess the unique contribution of each individual variable. Finally, significant univariate F-values were followed by Bonferroni contrasts to localize group differences. The details of these analyses are listed below.

The first MANOVA involved a comparison of group scores on the 10 MMPI-2 clinical scales. Overall, group differences on this instrument failed to reach significance (Wilks Lambda = .789, $p<.153$). As a result, further examination of group differences on the MMPI-2 were not conducted with the exception of the planned comparisons associated with specific hypotheses.

The next MANOVA examined group differences along the three IBS composite scores. This analysis revealed significant overall group differences (Wilks Lambda =.878, $p<.02$), and consequently was followed by a series of univariate F-tests and Bonferroni contrasts. The results of the F-tests are reported in Table 10.

Table 10

IBS Univariate F-tests with (2, 116) df

variable	F	Significance of F
Aggression	4.38	.015
Assertiveness	2.44	.091
Relationship	3.44	.035

Table 10 reveals significant group differences on the aggression and relationship factors, but not the assertiveness one. The ensuing Bonferroni contrasts revealed significantly higher aggression scores for group IA compared to control subjects (Eta sqd. = .062), but nonignificant differences between the two target groups on this dimension. The exact pattern of results emerged on the relationship factor. That is, group IA scores on this dimension were significantly higher than group CO scores (Eta sqd.= .059), but did not differ from group SA scores. Overall, this IBS data suggests group IA subjects are more aggressive and experience greater difficulties in relationships than do control subjects, but they do not differ with regard to these variables from group SA subjects.

The final MANOVA was calculated to examine potential group differences along the three RAAS factors. As was the case for the IBS data, this analysis revealed overall group differences (Wilks Lambda = .821, $p < .001$), and consequently was followed with a series of Univariate F-tests and Bonferroni contrasts. Table 11 contains information regarding the F-tests.

Table 11

RAAS Univariate F-tests with (2, 116) df

Variable	F	Significance of F
Anxiety	5.25	.007
Depend	4.43	.014
Close	.732	.483

Table 11 reveals significant group differences with regard to the Anxiety and Depend factors of the RAAS. The Bonferroni comparisons of group means, with alpha set at .05, indicated significantly higher scores for group SA (Eta sqd. = .081) relative to both other groups on the Anxiety factor. Group IA, on the other hand, scored significantly higher than the control group, but not group SA, on the Depend factor (Eta sqd. = .06). Overall, this pattern of results indicates group SA subjects are more anxious in relationships than the other two groups, while group IA subjects tend to perceive others

as more unreliable than control subjects, but do not differ in this regard from group SA subjects.

Hypotheses testing. The literature review conducted during the planning stages of this experiment generated five specific hypotheses. In accordance with recent recommendations regarding the testing of a priori predictions (Howell, 1987; Keppel & Zedec, 1989), all hypotheses were tested by way of planned pairwise comparisons. In order to control the experiment-wise alpha level, a Bonferroni type adjustment was made by setting the experiment-wise alpha level at .05 and then dividing it by the number of hypotheses. Consequently, each test was evaluated against an alpha level of .01. In order to ensure the assumptionÿof homogeneity of variances was not violated, Levene's test for equality of variances was calculated for each comparison. A statistically significant difference on this test indicates the homogeneity of variance assumption is not satisfied and an adjustment must be made (in this case an SPSS adjustment). Table 12 contains the results of this series of tests for homogeneity of variance.

Table 12

Levene's Tests for homogeneity of Variances

Variable	F	Significance of F
6 (PA)	.014	.905
5 (MF)	5.233	.025
2 (D)	2.522	.116
4 (PD)	.602	.440
SC	4.205	.043

Note. SC refers to the self-confidence scale of the IBS, all other scales are MMPI-2 scales. PA= Paranoia; MF= Masculinity-Feminity; D=Depression; PD=Psychopathic Deviate

Table 12 reveals that MMPI-2 scales 6, 2, and 4 satisfied the homogeneity of variance assumption. In contrast, the significant F values associated with scale 5 of the MMPI-2 and the SC scale of the IBS indicate the homogeneity of variance assumption is not satisfied for these scales. Consequently, an SPSS adjustment for heterogeneity of variances was made when evaluating predictions regarding these scales.

The first hypothesis was designed to compare the two target groups with regard to impulse control. More specifically, it was expected that inmates incarcerated for assaulting a relative stranger (grp. SA) would evince lower impulse control than those incarcerated for assaulting an intimate (grp. IA). This expectation was evaluated by comparing average group elevations on scale 4 (PD) of the MMPI-2. Contrary to expectations, the pairwise comparison of group means on scale 4 of the MMPI-2 did not reveal a statistically significant differences for groups IA and SA {t (80.65) = 1.45, $p<.08$}.

The second hypothesis was designed to examine potential differences with regard to interpersonal style. That is, it was expected that group SA subjects would report a more suspicious and guarded interpersonal style than group IA subjects. This possibility was examined by comparing group elevations on scale 6 (PA) of the MMPI-2. Again contrary to expectation, the planned comparison failed to reach significance at the required .01 level {t (82) = -.05, $p<.48$}.

The third prediction stated that group IA subjects would report significantly higher level of depression than group SA subjects. The accuracy of this prediction was assessed by comparing group elevations on scale 2 (D) of the MMPI-2. As expected, the planned pairwise comparison of group means on this scale did in fact reveal group IA subjects to be significantly more depressed than those from group SA {t (82) = 2.61, $p<.006$; Eta sqd.= .077).

The fourth hypothesis predicted subjects in group IA would report more conservative beliefs than subjects in group SA. These attitudinal differences were expected to manifest as significantly lower elevations on scale 5 (MF) of the MMPI-2 for group IA relative to group SA. Contrary to this expectation, group differences on scale 5 of the MMPI-2 did not reach the required level of significance {t (64.31) = 1.94, $p<.03$).

Finally, the last hypothesis predicted that group IA inmates would report lower self-esteem than group SA inmates. This possibility was evaluated by comparing group means on scale SC of the IBS. Once again contrary to expectations, group differences on this scale did not reach significance {t (77.02) = -1.53, $p<.07$).

Profile Interpretation. Group profiles for the MMPI-2, IBS, and RAAS are shown in Figures 1, 2, and 3, respectively. Consistent with previous data (Kalichman, 1988), the group of intimate-violent men (grp. IA) produced a spike-4 profile. Groups CO and SA, on the other hand, produced within-normal-limit (WNL) profiles (i.e., no t-score above 65). However, Greene (1991) argued that WNL profiles obtained in institutional settings should be evaluated for consistency with the individual's overall presentation. The basis for this argument is the observation that WNL profiles often reflect an adjustment to chronically engrained problems of considerable seriousness (e.g., severe characterologic disorders). Insofar as direct experience with the participants of this study, and group demographic profiles, (e.g., history of suicide attempts and substance abuse), both argue against the emotional and interpersonal harmony

Figure 1

MMPI-2 Group Profiles

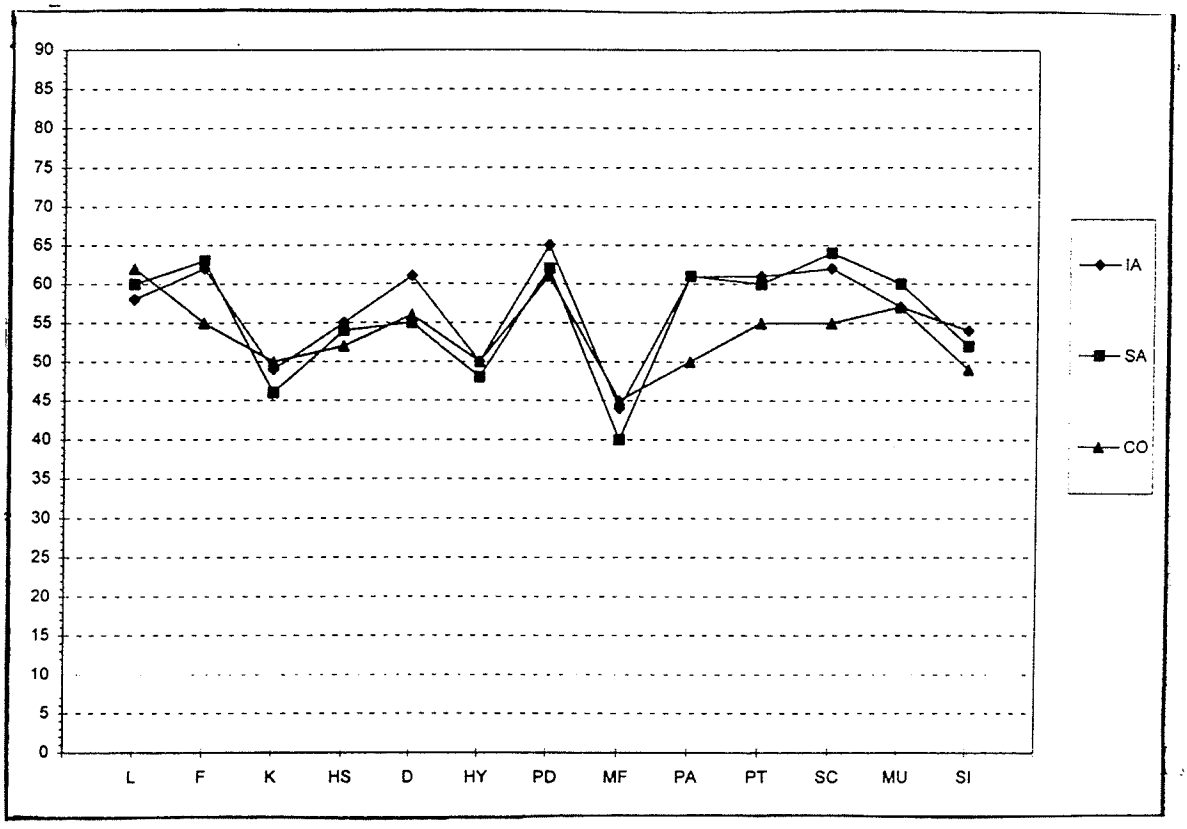


Figure 2

IBS Group Profiles

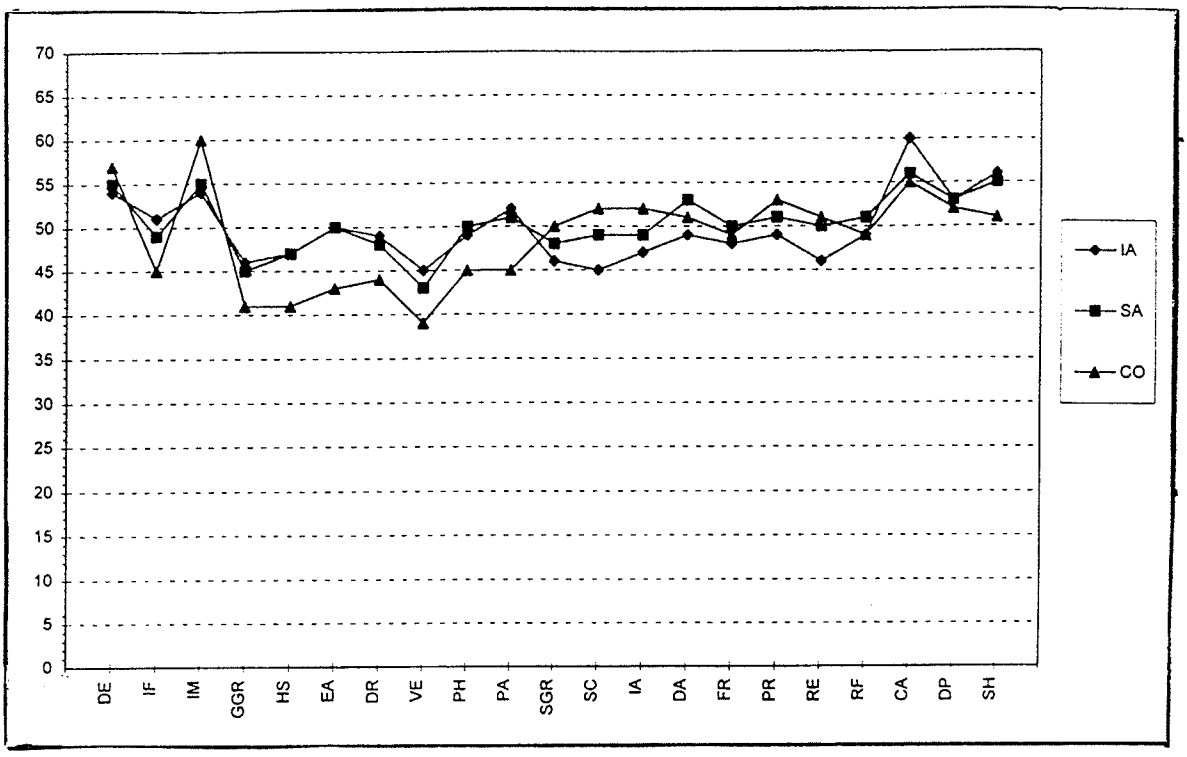
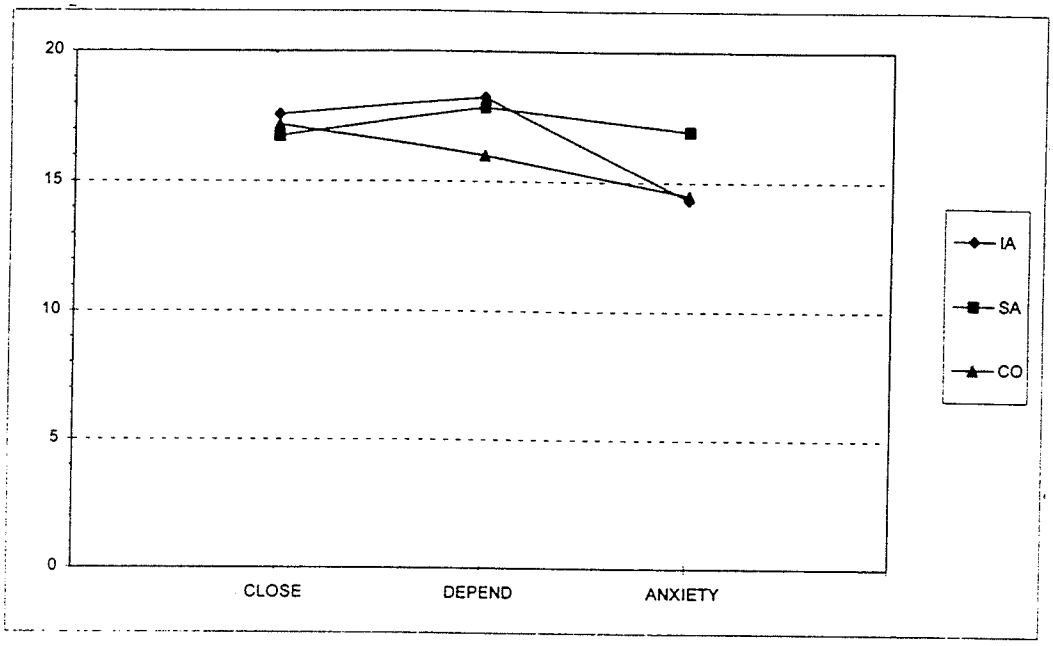


Figure 3

RAAS Group Profiles



suggested by the WNL profile, the resulting data are taken to reflect an adjustment to chronic problems. Consequently, two-point codetype profiles are generated for groups SA and CO, while the group IA profile is interpreted as a spike 4 to address the T65 elevation on scale 4. All MMPI-2 profile descriptions are made with reference to Greene (1991).

Based on Greene's argument regarding WNL profiles obtained in institutional settings, the group SA MMPI-2 profile is interpreted as reflecting a 4-8/8-4 codetype. Characteristics associated with this personality profile include pronounced difficulties with the modulation of affect, moodiness, and emotionally inappropriate behavior. Also noted are difficulties in the formation of deep emotional bonds and a tendency to perceive the world as dangerous and unpredictable. The saliency of this last point increases when, as is the case with these subjects, the next high point is scale 6. The perceived unpredictability of their surrounding typically produces a cognitive set marked by hypersensitivity to danger cues and a deeper layer of negative affect centering on a profound sense of alienation. Often, this situation is exacerbated by the presence of significant anger and resentment, and a defensive constellation which revolves around projection. A history of criminal activity, arrests, and suicide attempts is also frequently associated with this codetype.

The spike 4 profile for group IA is associated with impulsiveness, rebelliousness, and poor relationships with authority figures. These individuals are also

characterized by a low tolerance for frustration, limited insight, and egocentricity. Difficulty with the modulation of affect and the presence of significant anger typically produce a history of angry outbursts of aggression. Also noted is a tendency toward the formation of superficial relationships, but much difficulty with regard to the establishment of lasting emotional bonds.

Group Co produced a profile with high points at scales 4 and 9. Individuals with this personality profile are typically described as socially facile and free from anxiety. Closer inspection, however, reveals pronounced impairments in the capacity to form stable emotional bonds, notably poor judgment, and an apparent inability to learn from experience. A tendency to employ acting-out as the primary defense mechanism sometimes results in a cyclical pattern of inappropriate behavior followed by guilt.

With regard to IBS profiles, all three groups produced validity scale configurations suggestive of an attempt to present in a favorable light. Group CO's pattern of endorsement on the validity scale items indicates somewhat more pronounced impression management attempts suggestive of greater effort in this regard. In terms of the clinical scales, group profiles are remarkably consistent. Exceptions to this statement include: a) the group CO profile is noticeably lower on the aggressiveness subscales suggesting a lower frequency of aggressive behavior with these subjects, and b) the group IA profile includes a noticeable elevation on the CA subscale indicating a greater tendency to avoid conflict. Generally however, the profiles are consistent to a degree which casts serious doubt on the clinical relevance of the observed differences.

The RAAS profiles for the three groups involved in this study are also very similar. Main points of divergence included a) higher scores on the anxiety factor for group SA reflecting greater anxiety in relationships, and b) lower scores on the depend factor for group CO suggesting they, compared to the two target groups, view other as more dependable. Overall, all three groups produced attachment profiles indicative of an anxious-avoidant attachment style.

Summary of Results

Demographic data collected as part of this study revealed control subjects to be better educated and slightly older than the target groups. Moreover, group SA was found to contain a disproportionate number of Aboriginal subjects and to have served a longer period of incarceration. Group IA subjects, on the other hand, reported a higher number of suicide attempts. Although not analyzed statistically, this last point is consistent with previous data (Daniel & Holcomb, 1985).

Overall group differences were examined by way of a series of MANOVA's. Principle component analysis of the IBS was undertaken to reduce the number of criterion variables in this study. Ultimately, a three factor solution which paralleled that reported by the authors of the IBS was adopted and employed for all subsequent analyses. The results of the MANOVA procedures revealed nonsignificant group differences on the MMPI-2. However, the groups were found to differ significantly in terms of their IBS and RAAS profiles. As a result, a series of univariate F-tests and Bonferroni contrasts were calculated to more specifically investigate group differences.

These analyses revealed significant differences between mean scores for groups IA and CO on the relationship and aggression factors of the IBS. However, the two target groups did not differ significantly on these dimensions. Further analysis of the RAAS data revealed significantly higher scores on the anxiety factor for group SA compared to both other groups. Group IA subjects scored higher than group CO, but not group SA, on the depend factor.

Overall, with the exception of higher anxiety in relationships among SA subjects, the quantitative data emerging from this study reveal very little difference between the two target groups. It seems important to note, however, that all three groups produced relatively low attachment profiles suggesting the presence of attachment difficulties in all subjects. Therefore, the RAAS data are largely in accordance with the MMPI-2 data (qualitative profile interpretation) which revealed relational difficulties for all three groups.

This study also examined five specific hypotheses. The pairwise comparisons of group means designed to test these predictions failed to detect differences between the two target groups with regard to impulsivity, interpersonal style, attitudinal characteristics, and self-esteem. As a result, the data emerging from this study are not in accordance with previous data suggesting that intimate-violent males, relative to their stranger-violent counterparts, suffer from low self-esteem (e.g., Edwall et al., 1989) and harbor more conservative value systems (e.g., Hamberger & Hastings, 1991). Nor are the data emerging from this study consistent with previous findings of lower impulse

control (e.g., Edwall et al., 1989) and interpersonal suspiciousness (Lang et al., 1987) among stranger-violent males compared to intimate-violent ones.

Perhaps not surprisingly since this is the most consistent trend to emerge from a review of existing research, the expectation that intimate-violent males would report higher level of depression than stranger-violent ones was confirmed. Thus, the present study replicates a host of previous research (e.g., Bland & Orn, 1986; Breiner, 1992; Faulk, 1874; Flournay & Wilson, 1991; Russell & Hulson, 1992) indicating that intimate-violent males tend to be more depressed than stranger-violent ones.

Finally, an analysis of average group profiles was undertaken to provide qualitative personality portraits of each group. The MMPI-2 group profiles identified problems with the modulation of affect, difficulty forming stable relationships, and a reliance on projection suggestive of paranoid traits as central personality characteristics for the target groups. The control subjects, on the other hand, produced a personality profile consistent with that of individuals who provide favorable initial presentations, but who eventually reveal difficulties in the areas of judgment, the capacity to learn from experience, and the formation of stable emotional bonds. The IBS profiles simply reveal a greater tendency to avoid conflict for group IA subjects and generally lower aggression scores for control subjects. RAAS data seems to extend the MMPI data by suggesting difficulties forming stable emotional bonds for group IA subjects are related to a perception that others are generally unreliable, while the same difficulty in group

SA subjects is related to a more general belief that stable bonds are generally unavailable.

Discussion

This study was designed to identify personality differences between intimate- and stranger-violent men. Ultimately, the goal was to generate data which would directly contribute to treatment planning in a correctional facility. In keeping with previous research in this nascent area of enquiry, a decision was made to focus on current patterns of personality organization rather than attempting to identify causal/developmental variables.

In this section, observed differences with regard to depression, interpersonal anxiety, and history of suicide attempts are discussed. Following this, the decision to adopt a "here and now" perspective is discussed in light of the failure to identify overall group differences. Based directly on this discussion, it will be argued the current focus on (largely) atheoretical observations should be abandoned in favor of theory driven, developmental research. Finally, this section will close by proposing a theoretical framework within which future research can be conducted.

Depression, anxiety and suicidality

Despite producing MMPI-2, IBS and RAAS profiles which, overall, were more similar than different, the groups in this study were found to differ statistically with regard to levels of depression and interpersonal anxiety. Moreover, although small cell frequencies precluded statistical analysis of the data, visual inspection revealed a higher

number of suicide attempts among the intimate-violent subjects. Differences in terms of this variable were especially pronounced when comparing the violent subjects with the nonviolent controls.

Higher levels of interpersonal anxiety among stranger-violent subjects were indexed by the anxiety subscale of the RAAS. Parenthetically, the term "interpersonal anxiety" is here employed to identify the social origins of this affective state. In other words, the anxiety subscale of the RAAS is believed to index anxiety associated with interpersonal variables as opposed to, for instance, anxiety associated with unacceptable intrapsychic impulses. When viewed in light of the well established patterns of aggressive behavior, data indicating relatively high levels of interpersonal anxiety among stranger-violent males suggest a link between anxiety and aggression. Interestingly, in 1957 the interpersonal theorist Leary described a pattern of social behavior based on a link between anxiety and aggression. The essential characteristic of this behavioral pattern is a generally hostile, aggressive interpersonal stance fueled by a desire to avoid anxiety related to feelings of inferiority and helplessness. The cognitive set associated with this interpersonal style is typically dominated by a belief that social status is directly linked to the capacity to assert dominance over others. Leary (1957) linked this interpersonal style to the early experience of "parental cruelty". Perhaps most relevant to this study, Leary reported a strong link between this interpersonal style and delinquency.

In addition to being consistent with previous research (e.g., Daniel & Holcomb, 1985), the finding of greater depression among intimate-violent males is also consistent with attachment theory in that depression is explicitly predicted following separation from an attachment object (Bowlby, 1979). Also expected in this situation are pervasive feelings of guilt, anxiety, and low self-esteem. Although data reported by this study do not indicate the presence of inordinately low self-esteem among intimate-violent males, feelings of anxiety often accompany depression (Gilbert, 1992), and previous research has linked feelings of guilt with violence among intimates (e.g., Daniel & Holcomb, 1985).

Although low cell frequencies precluded statistical analysis of data regarding prior suicide attempts, visual inspection did reveal a higher number of past attempts among intimate-violent subjects. In addition to being consistent with previous research (Kalichman, 1988), these data also dovetail nicely with data linking family conflict and suicide (e.g., Hawton et al., 1982). The greater frequency of suicide attempts among intimate-violent individuals is also predictable from an attachment theory perspective. Specifically, it has been argued (Adam, 1982) that suicide gestures, especially within the context of an intimate relationship, sometimes represent attempts at forcibly maintaining tenuous attachment bonds. It therefore seems conceivable that suicide gestures may act as a follow-up to failed physical attempts to force the continuation of an attachment bond. Stated somewhat differently, having failed to physically maintain the needed bond, the aggressor may resort to 'emotional blackmail' in a last ditch effort

to maintain the affectional tie (e.g., "I'll kill myself if you leave"). Alternatively, but still consistent with this analysis, the parasuicide may serve the function of demonstrating remorse (e.g., "I can't live with myself after what I've done") and/or the depth of the aggressor's commitment to the victim (e.g., " I'd rather die than lose you"). Overall, data regarding depression and suicide attempts among intimate-violent subjects appear generally consistent with attachment theory.

Regarding the failure to identify overall group differences

Previous studies attempting to generate an MMPI personality profile for criminally violent individuals have produced inconsistent and/or conflicting data (e.g. Armentrout & Haur, 1978; Bauer & Clark, 1976; Buck & Graham, 1978; Fraboni at al., 1990; Lothstein & Jones, 1978). Earlier, this failure to obtain robust data was ascribed to a tendency to define violence very broadly thereby obscuring differences among subgroups of violent individuals. In essence, the argument here is that violence is not a unitary phenomenon and therefore cannot be understood by examining large groups of individuals who have committed widely discrepant acts of violence. The next logical step, given this position, is to examine strictly defined subgroups of violent individuals in an attempt to capture the psychological essence of specific violent acts or tendencies.

In an attempt to do so, this study, employing extremely stringent inclusion criteria, identified and then compared two groups of assaultive individuals and a control group of nonviolent criminals. Despite these stringent criteria, this study failed to identify statistically significant differences between the groups on the basis of MMPI-2

profiles. Additionally, although producing some statistically significant differences, group IBS and attachment profiles emerged as more similar than different. The only seemingly robust quantitative difference to emerge from this study is the finding that males who assault intimates are more depressed than those who assault strangers.

Qualitative analysis of group MMPI-2 profiles revealed a spike-4 profile for group IA and a within-normal-limits (WNL) profile for group SA. However, the WNL profile was interpreted as reflecting an adjustment to chronic difficulties (Greene, 1991) and, consequently, was interpreted as a 4-8 codetype. Although consistent with some prior research (e.g., Kalichman, 1988; Lothstein & Jones, 1978), the observed spike-4 and 4-8 profiles appear to contribute little toward clarifying the generally inconsistent literature. The situation is further exacerbated by the high level of similarity of group profiles on all three dependent measures. In short, the target groups in this study produced MMPI-2, IBS, and RAAS profiles which are more similar than different.

An examination of demographic data revealed that stranger-violent subjects had served a significantly longer period of incarceration and had received more prior convictions. This last point is, however, made solely on the basis of visual inspection of the data. Visual inspection of the data also revealed a higher number of suicide attempts among the intimate-violent subjects. Aside from these differences, the demographic profiles of the target groups were also quite similar, with most differences emerging in comparisons to control subjects.

This overall pattern of results, especially those related to the MMPI-2, raise some interesting issues. For instance, it may be argued that psychological variables are not related to interpersonal violence (Strauss et al., 1980). Although this may account for the highly inconsistent state of the literature, this argument seems untenable at least in that it appears to suggest that violence emerges out of a psychological vacuum. Logically extending this argument ultimately leads to the position that all behavior emerges out of a psychological vacuum. In other words, if violent behavior is exclusively pulled from the environment without input from intrapsychic variables, why not attempt to explain all behavior exclusively by reference to external stimulus configurations. Although consistent with early behaviorist formulations, this position is largely incompatible with the prevailing psychological/philosophical zeitgeist which has moved beyond simple stimulus-response models to include intrapsychic/organismic variables in at attempt to understand human nature (e.g., Capra, 1983; Gilbert, 1992; Mahoney, 1991, Wilson, 1990; Wolf, 1988). With this in mind, the notion that interpersonal variables, regardless of their importance or salience, are always mediated by intrapersonal ones is preferred-- at least by virtue of being more consistent with prevailing scientific thought.

Having said this, the question then becomes why is it so difficult to identify the relevant intrapersonal variables? One possibility is that the subgroups studied in this investigation do not differ appreciably in this regard. In other words, intimate- and stranger-violence may emerge out of the same intrapsychic backdrop. Once again,

although consistent with the general pattern of results emerging from this study, this position is not entirely convincing. For one thing, previous research has amply documented the groups targeted by this study share very similar developmental histories (e.g., Bartol, 1991; Fiqia et al., 1987; Shoham et al., 1986), yet evince very different patterns of aggressive behavior (e.g., Dutton & Hart, 1993; Edwall et al., 1989). Stated somewhat differently, discernibly different patterns of aggressive behavior appear to be emerging out of very similar sociological backgrounds. Given this situation it seems reasonable to continue to look to intrapsychic variables in an attempt to understand these differential patterns of aggressive behavior.

Another possibility for explaining the observed pattern of results is that the violent acts examined by this investigation are associated with very similar patterns of personality organization but, within this global pattern, different constituent elements achieve salience. In other words, not all elements within a given MMPI-2 personality profile need to be equally emphasized for all individuals. Thus, IA and SA subjects may be driven by the same general personality structure but, within this global pattern, different elements are brought to the fore resulting in different behavioral patterns. To illustrate, the MMPI-2 4-8 profile is associated with moodiness, difficulties with the modulation of affect, emotional inappropriateness, attachment difficulties, and an ensuing sense of alienation. Also associated with the 4-8 profile is a tendency to perceive the world as dangerous resulting in a cognitive set marked by hypersensitivity to threat. The spike 4 profile discussed earlier is very similar, differing mainly in that

these individuals are less sensitive to threat but more egocentric. Thus, it seems conceivable that within this general personality structure, SA subjects are driven primarily by safety considerations (i.e., sensitivity to threat is emphasized) whereas IA subjects are most concerned with issues of affiliation. In other words, both target groups are characterized by, among other things, sensitivity to threat and attachment issues, but group SA is most responsive to issues of personal safety, while group IA is most sensitive to issues of attachment.

From this perspective, it seems reasonable to suggest the instruments employed by this study, and others of its kind, may be too broad to identify anything other than global patterns of personality organization. With regard to the data emerging from this study, it seems conceivable the MMPI-2, by virtue of being a broad measure of personality (Greene, 1991), identified an overall system-pattern but was incapable of more finely discriminating sub-patterns of organization within the system. Therefore, the resulting profiles seem relatively accurate for both target groups but are unable to account for the different behavioral repertoires (i.e., patterns of aggression) observed within each group. Similarly, the IBS is a very global measure of aggressive, assertive, and relationship related behaviors (Mauger & Adkinson, 1987), while the RAAS provides a broad index of perceived capacity to form stable affectional bonds (Collins & Read, 1990). As a result, neither instrument seems well suited to capture the subtle variations being referred to here. More generally, it may simply be that current

assessment technology is not sensitive enough to index the psychological variables which result in aggressive behavior targeting either intimates or strangers.

In a sense, the current failure to delineate broad psychological differences between these target groups parallels data (e.g., Bartol, 1991; Giles-Sims, 1983; Shoham et al., 1986) which indicate these groups share very similar sociological profiles -- especially with regard to conflictual family relations. Yet, despite these similar sociological and psychological profiles, these groups evince discernibly different patterns of target selection for their aggressive impulses. This last point strongly suggests the need for continued research to understand and, ultimately, control the offending behaviors. However, it seems necessary to shift attention away from molar patterns of organization onto more subtle/specific variable constellations. What is being suggested here is a shift away from "snapshot" comparisons of static personality profiles to a more detailed, developmental investigation of dynamic issues. A concomitant shift toward more theory-guided research seems a necessary adjunct (at least initially) to a shift toward more dynamic, developmentally-based processes (Kohut, 1984).

With this in mind, a psycho-social model, heavily influenced by developments in the fields of physics, biology, sociology, psychodynamic science (including attachment theory), and evolutionary theory, is outlined below in an attempt to provide a tentative framework for future research. Parenthetically, despite the numerous points of congruence alluded to earlier between attachment theory proper and the research literature, the model outlined below seems a more powerful framework by virtue of

subsuming all the concerns of attachment theory while providing a more detailed analysis of personality dynamics.

Suggestions for Future Research

Theoretical Framework. The notion that constituent elements of an organized system (in this case personality or, to use a currently more popular term, the self) may be differentially emphasized, while still retaining the overall pattern of organization is consistent with recent developments in the fields of physics (Capra, 1982; Hawking, 1988), sociobiology (Day, 1990), evolutionary science (Gilbert, 1989; 1992), and psychology (Gilbert, 1992; Wilson, 1990). C.G. Jung largely anticipated these ideas in seminal work published at the beginning of this century (e.g., Jung, 1917) and thus sowed the seeds for cross-fertilization between depth psychology and quantum physics (e.g., Mansfield, 1991; Mansfield & Spigelman, 1991).

The basic premise here is that the self-system is a fluid entity composed of various inherited potentials, algorithms, and archetypal themes (Gilbert, 1989; Jung, 1917). Eventually, through the combined influence of heredity and social experience, an overall system-pattern is established and experienced as relatively continuous in time (Wolf, 1988). Various patterns of organization are then recruited, to a greater or lesser extent, by social context and manifest as individually organized cognitive, affective, and behavioral repertoires (Carson, 1969; Gilbert, 1989; 1992; Jung, 1917).

Gilbert (1989; 1992) proposed an evolutionary model of self -organization which seems especially relevant to the issues addressed by this study. Very briefly,

Gilbert (1989; 1992) proposed an evolutionary model of self -organization which seems especially relevant to the issues addressed by this study. Very briefly, evolutionary concerns related to inclusive fitness, coupled with evolving brain structures, are believed to have given rise to four basic biosocial goals: competing, co-operating, care-eliciting, and care-giving. According to Gilbert, these biosocial goals influence patterns of self-organization at both the overall system level and at the sub-system level.

A review of Gilbert's arguments , and associated empirical data, suggests the biosocial goals of competing and care-eliciting are especially relevant to the target groups of this study. More specifically, it seems possible that, although sharing the same basic pattern of self-organization, men who assault their intimates are driven more by care-eliciting concerns, while those who assault strangers are more concerned with issues related to the biosocial goal of competing. To illustrate, care-eliciting concerns are chiefly related to significant others with the primary goal being proximity seeking and/or maintenance (Gilbert, 1989). Typically, this biosocial goal is associated with the affective experiences of separation anxiety, anger, and depression. Cognitively, care-eliciting concerns are associated with an orientation toward issues of isolation, and the need for others. With regard to behavioral concomitants, care-eliciting concerns lead to psychomotor agitation, expressions of distress, and requests/demands for proximity to significant others. Developmentally, care-eliciting concerns appear linked to the experience of indifference/neglect (Gilbert, 1989). Interestingly, the experience of

parental neglect/indifference has been empirically linked to spousal abuse (Andrews & Brown, 1988).

Conversely, individuals who evince a pattern of aggressive behavior directed almost exclusively toward strangers appear driven by concern related to the biosocial goal of competition. From an evolutionary perspective, this concern is associated with an orientation toward issues of power/dominance with a concomitant focus on the evaluation of threat and marked sensitivity to issues of social status (Gilbert, 1989). Affects typically associated with this general orientation include anger, resentment, and eÿaluation anxiety. Interestingly, depression is only predicted with these individuals following a perceived loss of status associated with defeat (Gilbert, 1992). At a behavioral level, individuals driven by competition concerns evince a general tendency to assert physical and/or intellectual dominance in their social sphere. Developmentally, this general pattern of organization appears linked to the early experience of hostile rejection from parental figures (Gilbert, 1989).

Patterson (1986) has empirically linked a hostile parenting style to aggressiveness, attentional deficits, and a marked sensitivity to threat among school age children. Additionally, both Patterson (1986) and Gilbert (1989) have noted a link between the early experience of parental figures as sources of threat and paranoid traits in adulthood. Gilbert further elaborated on this notion by adding that these paranoid elements, exacerbated by stimulant use, may produce an excessively aggressive personality oriented toward physical displays of dominance. In other words, the

protracted experience of hostile rejection by one's parents seems to predispose an individual toward a pattern of hostile interactions with one's environment which, when coupled with stimulant use, may produce a characterological reliance on violence as a means of interacting (Gilbert, 1989; Patterson, 1986).

More succinctly, from an evolutionary perspective it seems that stranger-violent individuals use power and rank as organizational structures for social behaviors, whereas for intimate-violent individuals social behavior is organized around narcissistic needs for proximity to attachment objects. To be sure, power and dominance issues often emerge in domestic violence situations. However, my own clinical experience suggests intimate-violent males oriented toward issues of power/dominance tend also to be aggressive outside the home, whereas males who are exclusively aggressive toward their partners tend to be relatively unassertive and self-effacing.

While admittedly speculative, this formulation appears reasonably consistent with previous research. For example, previous research has found intimate-violent males to be excessively jealous (e.g., Breiner, 1992) and depressed (e.g., Rosen, 1991). The current study has replicated previous findings regarding depression and has also found intimate-violent males to be concerned regarding the reliability of their affectional bonds (this last point may reasonably be seen as suggesting the presence of jealousy). Inasmuch as Gilbert's model predicted a strong need for proximity, along with the experience of anxiety and depression following perceived separation, these data appear consistent with the aforementioned formulation. Perhaps most importantly,

Gilbert (1989) predicted demands for proximity from these individuals. Conceivably, such demands may, at some point, rise to the level of physical aggression but there is little reason to expect this aggression to target strangers.

With regard to stranger-violent individuals, Gilbert (1989) predicted a generally aggressive/assertive interpersonal style, with a specific orientation toward issues of status and power, and a cognitive style sensitive to threat. Consistent with these predictions, previous research has found stranger-violent males to be a) interpersonally suspicious (e.g., Lang et al., 1987; Sinha, Senn, & Sinha, 1988), b) sensitive to criticism (e.g., Davis & Sines, 1991; Fiqia et al., 1987), and c) highly aggressive (e.g., Hill et al., 1982; Jackson, Hope, & Glass, 1987). To be sure, this study failed to replicate findings of interpersonal suspiciousness and relatively high aggression levels among stranger-violent males. Nonetheless, the experimental findings referenced earlier seem to outweigh the present results and thus impress as generally consistent with Gilbert's evolutionary model.

Although the research literature seems generally consistent with the theoretical model outlined here, there exist data which do not support the proposed linkages between the early experience of neglect or abuse and intimate- and stranger-violence, respectively. More specifically, Dutton and Hart (1993), in a direct comparison of intimate- and stranger-violent incarcerated males, found evidence of a higher incidence of abuse among the intimate-violent group. Insofar as the model discussed earlier specifically predicts a link between parental neglect (as opposed to active abuse) and

intimate-violence, these data seem inconsistent with the evolutionary framework suggested here. This inconsistency, however, may reasonably be ascribed to differences in sample characteristics. To illustrate, Dutton and Hart defined intimate-violent men as those "... whose files contained reports of violence directed toward family members, regardless of any reports of violence toward non-family members." (p.27). The net result was a sample of intimate-violent men "... the majority of whom had also assaulted non-family members." (p.26). In other words, Dutton and Hart (1993) actually compared stranger- and mixed-violent (aggressive toward both intimates and strangers) individuals. Moreover, violence was broadly defined to include physical and sexual abuse, as well as threats. In contrast, this study defined stranger and intimate aggression in a manner which was almost mutually exclusive. Additionally, violence was very narrowly defined to exclude sexual and verbal aggression. More succinctly, Dutton and Hart (1993) compared stranger- and mixed-violent males employing a very broad definition of violence. This study, on the other hand, compared relatively pure samples of stranger- and intimate-violent males employing a much narrower definition of violence. The net consequence of these methodological differences is that the resulting data are difficult, if not impossible, to compare.

It may also be argued that this study's finding of higher RAAS anxiety scores among stranger-violent subjects is inconsistent with the evolutionary model being proposed here. However, it should be noted Gilbert's model predicts anxiety in both target groups; the difference being that stranger-violent individuals are assumed to

experience primarily evaluation anxiety, whereas intimate-violent individuals are predicted to experience an adult variant of separation anxiety. In support of this position, this study produced data indicating intimate-violent males tend to perceive others as undependable. Conceivably, this perception could be associated with separation anxiety. Moreover, previous research has found stranger-violent males to be hypersensitive to criticism and has linked this hypersensitivity to their aggression (Davis & Sines, 1991). Importantly, this finding was replicated in three separate settings, including a correctional facility, suggesting both robustness and relevance to the present study.

Suggestions. Given the argument developed above, it seems desirable to adopt the approach employed by Maiuro et al (1988) and move away from global measures, such as the MMPI-2, to instruments examining more specific elements of personality organization. Instruments specifically designed to index patterns of interaction in family of origin, attitudes toward women, paranoid traits, reactions to social criticism, communication and problem solving abilities, seem especially relevant to the issue of intimate- versus stranger-violent. Within this context, it seems desirable to evaluate group differences with regard to interpersonal suspiciousness prior to incarceration to avoid confounding characterological paranoia with situationally driven fear. Depending on specific logistical constraints, community treatment centers and/or pre-trial assessments may provide settings conducive to this task.

Providing logistical considerations can adequately be addressed, longitudinal research focusing on the long-term effects of specific child rearing patterns seems highly desirable. Although admittedly difficult to conduct, such research may prove most fruitful in that it may potentially illuminate general personality dynamics from a developmental perspective, while simultaneously identifying causal variables leading to stranger- and intimate-violence. Ideally, such research would attempt to link interpersonal variables to intrapsychic factors through the use of a validated instrument such as Benjamin's (1974) Structural Analysis of Social Behavior.

Treatment Implications. Existing data identifies depression and suicidality as salient concerns for men incarcerated on domestic violence charges. Consequently, these issue should be carefully addressed during intake screening and intervention strategies specifically targeting these concerns should be directly incorporated into institutional treatment programs. Moreover, given the observed depression appears linked to attachment issues, it should be addressed with supportive, unstructured interventions rather than with short-term psychoeducational programs (Gilbert, 1992). Ultimately, however, the supportive therapeutic relationship should be used to link the depression to the maladaptive and highly unacceptable behavioral patterns. At this point, the focus of treatment may start to swing toward a more psycho-educational stance.

The theoretical model outlined earlier suggests intimate-violent males are driven by separation anxiety/fear, while stranger-violent males are driven by hostility/anger related to social status with a concomitant orientation toward power and dominance. As

seems important to address the presumed link between self-worth and the capacity to dominate one's social sphere (i.e., it seems important to eliminate the belief that status, and therefore personal worth, is linked to the capacity to dominate others). Cognitive-behavior programs would appear well-suited to this task, especially those focusing on reframing social interactions.

Finally, if verified empirically the link between separation fear/anxiety and intimate-violence should be addressed within the context of a treatment program sensitive to attachment issues. This clearly eliminates short-term psycho-educational programming designed to target "cognitive distortions" as this approach only tends to harden defenses and therefore interfere with this sort of therapy (Gilbert, 1992; Kohut, 1984). Unfortunately, personal experience strongly suggests a correctional environment does not lend itself to dynamic interventions which require an ambiance of safety, honesty, and openness. Consequently, it is recommended institutional programming for intimate-violent inmates focus on interpersonal skills training, especially as it relates to communication skills and general problem solving. Interventions designed to address attachment issues can then be mandated as a condition of parole and provided in a more conducive community setting.

Concluding Comments

This study was designed to delineate existing personality differences between subcategories of aggressive males. The literature review conducted in preparation for this study revealed a highly inconsistent overall pattern of results. For the most part, this

inconsistency seemed easily attributable to overly lenient subject selection procedures. Confusingly broad and protean definitions of violence seemed to further interfere with the emergence of a cohesive body of data.

In an attempt to address these issues, this study compared very strictly defined groups of intimate- and stranger-violent males. Moreover, violence was narrowly defined to exclude acts of verbal aggression, sexual aggression and murder. However, despite addressing previously identified methodological flaws, this study failed to identify substantial personality differences between the target groups. Insofar as the target groups evince easily discernible behavioral patterns, failure to identify substantive group difference was ascribed to design limitations rather than concluding the groups do not differ psychologically. Stated somewhat differently, the two target groups obviously exist -- otherwise they would not be so readily identified. Therefore, rather than concluding the groups do not differ appreciably, failure to identify psychological difference is attributed to the nature of the research being conducted, particularly the instruments employed and the lack of a theoretical framework.

The most obvious implication derived from this conclusion is that research in this area should continue --albeit with a rather dramatic shift toward theory driven longitudinal research. To be sure such a shift would likely be accompanied by substantial increases in logistical costs and labor intensity. However, barring major developments in assessment technology, research in this area does not appear promising within the current methodological framework.

References

Adams, D. (1990). Identifying the assaultive husband in court: You be the judge. Response to the Victimization of Women and Children, 13, 13-16.

Adams, K.S. (1982). Loss, suicide, and attachment. In Parkes, C.M. and Stevens-Hinde, J. The Place of Attachment in Human Behavior. New York: Basic Books.

Andrews, B. & Brown, G.W. (1988). Marital violence in the community: A biographical approach. British Journal of Psychiatry, 153, 305-312.

Armentrout, J.A., & Hauer, A.L. (1978). MMPI of rapists of adults, rapists of children, and nonrapist sex offenders. Journal of Clinical Psychology, 34, 330-332.

Bartol, C.R. (1991). Criminal Behavior: A Psychosocial Approach (3rd ed.). Englewood Cliffs, N.J.: Prentice-Hall.

Bancroft, J., Skrimshire, A., Casson, J., Harward-Watts, O. & Reynolds, F. (1977). People who deliberately poison or injure themselves: Their problems and their contacts with helping agencies. Psychological Medicine, 7, 289-303.

Bauer, G, & Clark, J. (1976). Personality deviance and prison incarceration. Journal of Clinical Psychology, 32, 279-282.

Benjamin, L.S. (1974). The structural analysis of social behavior. Psychological Review, 81, 392-425.

Bland, R., & Orn, H. (1986). Family violence and psychiatric disorder. Canadian Journal of Psychiatry, 31, 129-137.

Bowlby, J. (1979). The making and breaking of affectional bonds. London: Tavistock.

Bowlby, J. (1984). Violence in the family as a disorder of the attachment and caregiving systems. American Journal of Psychoanalysis, 44, 9-27.

Breiner, S.J. (1992). Observations on the abuse of women and children. Psychological Reports, 70, 153-154.

Buck, J.A., & Graham, J.R. (1978). The 4-3 MMPI profile type: A failure to replicate. Journal of Consulting and Clinical Psychology, 46, 344-353.

Buss, A.H. (1961). The psychology of aggression. New York: John Wiley.

Buss, A.H. & Durkee, A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 21, 343-349.

Butcher, J.N., Dahlstrom, W.G., Graham, J.R., Tellegen, A.M., & Kaemmer, B. (1989). MMPI-2: Manual for administration and scoring. Minneapolis: University of Minnesota Press.

Capra, F. (1982). The turning point: Science ,society, and the rising culture. New York: Bantam Books.

Carson, R.C. (1969a). Interaction concepts of personality. London: Allen & Unwin

Carson, R.C. (1969b). Interpretive manuÿl to the MMPI. In J.N. Butcher (Ed.), MMPI: Research developments and clinical applications. (pp. 239-252). New York: McGraw-Hill.

Cohen J. & Cohen, P. (1983) Applied multiple regression/correlation analysis for behavioral science (2nd ed.) Hillsdale NJ: Lawrence Erlbaum.

Collins, N.L. & Read, S.J. (1990). Adult attachment, working models, and relationship quality in dating couples. Journal of Personality and Social Psychology, 58, 644-663.

Daniel, A.E., & Holcomb, W.R. (1985). A comparison between men charged with domestic and nondomestic homicide. Bulletin of the American Academy of Psychiatry and Law, 13, 233-241.

Davidson, T. (1978). Conjugal crime. New York: Hawthorn.

Davis, K.R., & Sines, J.O. (1971). An antisocial behavior pattern associated with a specific MMPI profile. Journal of Consulting and Clinical psychology, 36, 229-234.

Day, S. (1990). Genes that control genes. New scientist, 1741: special supplement inside Science, 40, 1-4.

Deiker, T.E. (1974). A cross-validation of MMPI scales for aggression on male criminal criterion groups. Journal of Consulting and Clinical psychology, 42, 196-202.

Dutton, D.G. (1984). Interventions into the problem of wife assault: Therapeutic policy and research implications. Canadian Journal of Behavioural Science, 16, 281- 297.

Dutton, D.G., & Hart, S.D. (1993). Risk markers for family violence in a federally incarcerated population. Forum, 5, 26-28.

Edwall, G.E., Villenueva, M.R., Holligan, R.A., Buchanan, R.J., & Campbell, C.O. (1989). Females incarcerated for assaultive crimes: Differential personality and demographic variables. American Journal of Forensic Psychology, 7, 49-57.

Edwards, A.L. (1959). Manual of the Edwards Personal Preference schedule. New York: The Psychological Corporation.

Elbow, M. (1977). Theoretical considerations for violent marriages. Social Casework, 58, 515-526.

Faulk, M. (1974). Men who assault their wives. Medical Science Law, 14, 180-183.

Fiqia, N.A., Lang, R.A., Plutchik, R., & Holden, R. (1987). Personality differences between sex and violent offenders. International Journal of Offender Therapy and Comparative Criminology, 31, 211-226.

Flournay, P.S, & Wilson, G.L. (1991). Assessment of MMPI profiles of male batterers. Violence and Victims, 6, 309-319.

Fraboni, M., Cooper, D., Reed, T., & Saltstone, R. (1990). Offense type and two-point MMPI code profiles: Discriminating between violent and non-violent offenders. Journal of Clinical Psychology, 46, 774-777.

Frances, A., & Gale, L. (1973). Family structure and treatment in the military. Family Process, 12, 171-178.

Gelles, R.J. (1980). Violence in the family: A review of research in the seventies. Journal of Marriage and Family, 42, 873-885.

Gelles, R.J., & Strauss, M.A. (1979). Determinants of violence in the family: Toward a theoretical integration. In W.R. Burr, R. Hill, F. Nye, & I.L. Reiss (Eds.). Contemporary Theories about the Family (pp. 549-581). New York: Free Press.

Gilberstadt, H., & Duker, J. (1965). A handbook for clinical and actuarial MMPI interpretation. Philadelphia: Saunders.

Gilbert, P. (1989). Human nature and suffering. New York: Guildford Press.

Gilbert, P. (1992). Depression: The evolution of powerlessness. New York: Guildford Press.

Giles-Sims, J. (1983). Wife battering: A systems theory approach. New York: Guildford Press.

Goldstein, D., & Rosenbaum, A. (1985). An evaluation of the self-esteem of maritally violent men. Family Relations, 34, 425-428.

Greene, R.L. (1991). The MMPI-2/MMPI: An interpretive manual. Needham Heights: Allyn and Bacon.

Hale, G., Duckworth, J., Zimostradt, S. & Nicholas, D. (1988). Abusive partners: MMPI profiles of male batterers. Journal of Mental Health Counselling, 10, 214-224.

Hamberger, L.K., Hastings, J.E. (1986). Personality correlates of men who abuse their partners: A cross validation study. Journal of Family Violence, 1, 323-341.

Hamberger, L.K., Hastings, J.E. (1991). Personality correlates of men who batter and non-violent men: Some continuities and discontinuities. Journal of Family Violence, 6, 131-147.

Hare, R.D. (1970). Psychopathy: Theory and Research. New York: Wiley.

Hathaway, S.R. & McKinley, J.C. (1940). A multiphasic personality schedule (Minnesota): I. construction of the schedule. Journal of Psychology, 10, 249-254.

Hawking, S.W. (1988). A brief history of time: From the big bang to black holes. New York: Bantam Books.

Hawton, K., O'Grady, J., Osborne, M., & Cole, D. (1982). Adolescents who take overdoses: Their characteristics, problems, and contacts with helping agencies. British Journal of Psychiatry, 140, 118-123.

Hawton, K. (1992). Suicide and attempted suicide. In Paykel, E.S. (ed.) Handbook of Affective Disorders, pp. 635-650. New York: Guildford Press.

Heilbrun, A.B. (1982). Cognitive models of criminal violence based upon intelligence and psychopathy levels. Journal of Consulting and Clinical Psychology, 50, 546-557.

Heilbrun, A.B. (1990). The measurement of criminal dangerousness as a personality construct: Further validation of a research index. Journal of Personality Assessment, 54, 141-148.

Heilbrun, A.B., & Heilbrun, M.R. (1985). Psychopathy and dangerousness: Comparison, integration and extension of two psychopathic typologies. British Journal of Clinical Psychology, 24, 181-195.

Hill, R., Langevin, R., Paitich, D., Handy, L., Russon, A., & Wilkinson, L. (1982). Is arson an aggressive act or a property offense? A controlled study of psychiatric referrals. Canadian Journal of Psychiatry, 27, 648-654.

Holland, T.R., Beckett, G.E., & Levi, M. (1981). Intelligence, personality, and criminal violence: A multivariate analysis. Journal of Consulting and Clinical Psychology, 49, 106-111.

Hotaling, G.T., & Sugarman, D.B. (1986). An analysis of risk markers in husband to wife violence: The current state of knowledge. Violence and Victims, 1, 260-266.

Howell, D.C. (1987). Statistical Methods for Psychology. Boston: PWS-Kent.

Jackson, H.F., Hope, S., & Glass, C. (1987). Why are arsonists not violent offenders? International Journal of Offender Therapy and Comparative Criminology, 31, 143-151.

Jensen, P.S., Lewis, R.L., & Xenakis, S.N. (1986). The military family in review: Context, risk, and prevention. Journal of the American Academy of Child Psychiatry, 25, 225-234.

Johnson, J. (1971). A cross validation of 17 experimental MMPI scales related to antisocial personality. Journal of Consulting and Clinical Psychology, 36, 564-565.

Jung, C.G. (1917). Two Essays on Analytical Psychology. Princeton, N.J.: Princeton University Press.

Kalichman, S.C. (1988). MMPI profiles of women and men convicted of domestic homicide. Journal of Clinical Psychology,44, 847-853.

Kaufman, A.S. (1990). Assessing adolescent and adult intelligence. Needham: Allyn and Bacon.

Keppel, G. and Zedec, S. (1989). Data analysis for research designs: Analysis of variance and multiple regression/correlation approaches. New York: W.H. freeman and company.

Kohut, H. (1984). How does Analysis Cure? Chicago: University of Chicago Press.

La Grone, D.M. (1978). The military family syndrome. American Journal of Psychiatry, 135, 1040-1043.

Lang, R.A., Holden, R., Langevin, R., Pugh, G.M., & Wu, R. (1987). Personality and criminality in violent offenders. Journal of Interpersonal Violence, 2, 179-195.

Leary, T. (1957). Interpersonal diagnosis of personality. New York: Ronald Press.

Lion, J.R., Madden, D.J., & Christopher, R.L. (1976). A violence clinic: Three years experience. American Journal of Psychiatry, 133, 432-435.

Lothstein, L.M., & Jones, P. (1978). Discriminating violent individuals by means of various psychological tests. Journal of Personality Assessment, 42, 237-243.

Mahoney, M.J. (1991). Human change processes: The scientific foundations of psychotherapy. New York: Basic books.

Maiuro, R.D., Cahn, T.S., Vitaliano, P.P., Wagner, B.C., & Zegree, J.B. (1988). Anger, hostility, and depression in domestically violent versus generally assaultive men and non-violent control subjects. Journal of Consulting and Clinical Psychology, 56, 17-23.

Mansfield, V. (1991). The opposites in quantum physics and Jungian psychology: Part 1 theoretical foundations. Journal of Analytical Psychology, 36, 267-287.

Mansfield, V. and Spigelman, J. (1991). The opposites in quantum physics and Jungian psychology: Part 2 applications. Journal of Analytical Psychology, 36, 289-306.

Mauger, P.A. & Adkinson, D.R. (1980). Interpersonal Behavior Survey (IBS) manual. Los Angeles: Western Psychological Services.

McCreary, C.P. (1976). Trait and type differences among male and female assaultive and nonassaultive offenders. Journal of Personality Assessment, 40, 617-621.

Megargee, E.I. (1982). Psychological determinants and correlates of criminal violence. In M.E. Wolfgang, & N.A. Weiner (Eds.). Criminal Violence (pp. 81-179). Beverly Hills: Sage.

Megargee, E.I., Cook, P.E., & Mendelson, G.A. (1967). Development and validation of an MMPI scale for assaultiveness in overcontrolled individuals. Journal of Abnormal Psychology, 72, 512-528.

Meloy, J.R. (1992). Violent Attachments. New jersey: Jason Aronson Inc.

Mischel, W. (1961). Preference for delayed reinforcement and social responsibility. Journal of Abnormal and Social Psychology, 62, 1-7.

Mosher, D.L. (1965). Interaction of fear and guilt inhibiting unacceptable behavior. Journal of Consulting Psychology, 29, 161-167.

Neidig, P.H., Friedman, D.H., & Collins, B.S. (1986). Attitudinal characteristics of males who have engaged in spouse abuse. Journal of Family Violence, 1, 223-233.

Panton, J.H. (1962). The identification of habitual criminalism with the MMPI. Journal of Clinical Psychology, 18, 133-139.

Patterson, G.R. (1986). Maternal Rejection: Determinant or product for deviant child behavior. In W.W. Hartrup & Z. Rubin (eds.) Relationships and development pp. 289-320. Hillsdale N.J.: Lawrence Erlbaum Associates Inc.

Persons, R.W. (1968). Verbal operant conditioning of severely antisocial adolescents by delinquent and normal Es. Psychological Reports, 22, 745-748.

Persons, R.W., & Marks, P.A. (1971). The violent 4-3 MMPI personality type. Journal of Consulting and Clinical Psychology, 36, 189-196.

Quay, H.C. (1965). Psychopathic personality: Pathological stimulation seeking. American Journal of Psychiatry, 122, 180-183.

Quinsey, V.L. (1975). Psychiatric staff conferences on dangerous mentally disordered offenders. Canadian Journal of Behavioural Science, 7, 60-69.

Quinsey, V.L., Arnold, L.S., & Pruesse, M.G. (1980). MMPI profiles of men referred for a pretrial psychiatric assessment as a function of offense type. Journal of Clinical Psychology, 36, 410-417.

Roberts, A.R. (1981). Sheltering battered women. New York: Springer.

Rosen, I. (1991). Self-esteem as factor in social and domestic violence. British Journal of Psychiatry, 158, 18-23.

Rosenbaum, A., & O'Leary K.D. (1981). Marital violence: Characteristics of abusive couples. Journal of Consulting and Clinical Psychology, 49, 63-71.

Ross, A. (1974). Psychological disorders of children. New York: McGraw-Hill.Russell, R.J., & Hudson, B. (1992). Physical and Psychological abuse of heterosexual partners. Personality and Individual Differences,13, 457-473.

Sorbin, T.R., Wenk, E.A., & Sherwood, D.W. (1968). An effort to identify assault-prone offenders. Journal of Research in Crime and Delinquency, 5, 66-71.

Sinha, K., Sen, A.K., & Sinha, P. (1988). A study of personality in criminals and noncriminals. Social Science International, 4, 1-8.

Shah, S.A. (1975). Dangerousness and civil commitment of the mentally ill: Some public policy considerations. American Journal of Psychiatry, 132, 501-505.

Shoham, S.G., Rahav, G., Markowski, R., & Chard, F. (1987). Family Parameters of violent prisoners. Journal of Social Psychology, 127, 83-91.

Stewart, M.A., & de Blois, C.C. (1981). Wife abuse among families attending a child psychiatric clinic. Journal of the American Academy of Child Psychiatry, 20, 845-862.

Symonds, M. (1978). The psychodynamics of violence prone marriages. American Journal of Psychoanalysis, 38, 213-222.

Syverson, K.L., & Romney, D.M. (1985). A further attempt to differentiate violent from non-violent offenders by means of a battery of psychological tests. Canadian Journal of Behavioural Science, 17, 87-92.

Truscott, D. (1990). Assessment of overcontrolled hostility in adolescence. Psychological Assessment: A Journal of Consulting and Clinical Psychological, 50, 150-151.

Valliant, P.M., Asu, M.E., Cooper, D., & Mammola, D. (1984). Profile of dangerous and non-dangerous offenders referred for pre-trial psychiatric assessment. Psychological Reports, 54, 411-418.

Wagner, E.E., Klein, I. (1977). WAIS differences between murders and attackers referred for evaluation. Perceptual and Motor Skills, 44, 125-126.

Walker, L.E.A. (1984). The battered woman syndrome. New York: Springer.

Wilson, J.Q., & Hernstein, R.J. (1985). Crime and human nature. New York: Simon & Shuster.

Wilson, R.A. (1990). Quantum Psychology. Pheonix, Arizona: New Falcon Press.

Wolf, E.S. (1988). Treating the Self: Elements of clinical Self Psychology. New York: Guildford Press.

Yablonski, L. (1962). The violent gang. New York: Macmillan.

Appendix A

Revised Adult Attachment Scale

Adult Attachment Scale (Collins & Read, 1990)

Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. Please think about all your relationships (past and present) and respond in terms of how you generally feel in these relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel.

Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

1——2——3——4——5
Not at all characteristic of me — Very characteristic of me

1) I find it relatively easy to get close to others. _____
2) I do not worry about being abandoned. _____
3) I find it difficult to allow myself to depend on others. _____
4) In relationships, I often worry that my partner does not really love me. _____
5) I find that others are reluctant to get as close as I would like. _____
6) I am comfortable depending on others. _____
7) I do not worry about someone getting too close to me. _____
8) I find that people are never there when you need them. _____
9) I am somewhat uncomfortable being close to others. _____
10) In relationships, I often worry that my partner will not want to stay with me. _____
11) I want to merge completely with another person. _____
12) My desire to merge sometimes scares people away. _____
13) I am comfortable having others depend on me. _____
14) I know that people will be there when I need them. _____
15) I am nervous when anyone gets too close. _____
16) I find it difficult to trust others completely. _____
17) Often, partners want me to be closer than I feel comfortable being. _____
18) I am not sure that I can always depend on others to be there when I need them. _____

Scoring Instructions for the Revised Adult Attachment Scale

The scale contains three subscales, each composed of six items. The three subscales are CLOSE, DEPEND, and ANXIETY. The CLOSE scale measures the extent to which a person is comfortable with closeness and intimacy. The DEPEND scale measures the extent to which a person feels he/she can depend on others to be available when needed. The ANXIETY subscale measures the extent to which a person is worried about being rejected or unloved.

Scoring: Sum the ratings for the six items that compose each subscale as indicated below. Items with an asterisk should be reverse coded before summing.

Scale	Items
CLOSE	1 6 8* 12 13* 17*
DEPEND	2* 5 7* 14 16* 18*
ANXIETY	3 4 9 10 11 15

Appendix B

MMPI-2 Cover Page

DO NOT OPEN UNTIL TOLD TO DO SO

MMPI-2™

Minnesota Multiphasic Personality Inventory-2™

S. R. Hathaway and J. C. McKinley
and the MMPI Restandardization Committee
of The University of Minnesota Press:
James N. Butcher, W. Grant Dahlstrom,
John R. Graham, Auke Tellegen

This inventory consists of numbered statements. Read each statement and decide whether it is *true as applied to you* or *false as applied to you.*

Example: Section of answer sheet correctly marked.

A ● (F)

B (T) ●

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right. If a statement is **true** or **mostly true,** as applied to you, blacken the circle marked **T.** (See A at the right.) If a statement is **false** or **not usually true,** as applied to you, blacken the circle marked **F.** (See B at the right.) If a statement does not apply to you or if it is something that you don't know about, make no mark on the answer sheet. But try to give a response to every statement.

Remember to give **your own** opinion of yourself.

In marking your answers on the answer sheet, *be sure that the number of the statement agrees with the number on the answer sheet.* Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks on this booklet.

Remember, try to respond to every statement.

Now open the booklet and go ahead.

Appendix C

IBS Cover Page

Interpersonal Behavior Survey (IBS)

Administration Booklet

Paul A. Mauger, Ph.D., David R. Adkinson, Ph.D., Suzanne K. Zoss, Ph.D.,
Gregory Firestone, Ph.D., and David Hook, M.A.

Published by

WPS WESTERN PSYCHOLOGICAL SERVICES
Publishers and Distributors
12031 Wilshire Boulevard
Los Angeles, California 90025

DIRECTIONS: Fill in the information requested on the answer sheet, then read each of the following items carefully and decide how well it describes you. There are NO right or wrong answers. If you feel that the item describes you fairly well or is correct most of the time, fill in the circle marked T on your answer sheet. If you feel that the item description is very much unlike yourself or is wrong most of the time, fill in the circle marked F.

In recording your answers on the answer sheet, be sure that the number of the statement agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Make only one response to each statement. Do not make any marks on this booklet.

W-165A