A typology of homicides: an investigation of Megargee's theory of control

McGurk, Barry J.

A TYPOLOGY OF HOMICIDES
AN INVESTIGATION OF MEGARGEE'S
THEORY OF CONTROL

BARRY J. McGURK

A THESIS PRESENTED FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN THE UNIVERSITY OF DURHAM

Preliminary Note

The views expressed in this thesis are the author's and do not necessarily represent those of the Prison Department, Home Office. The thesis is made available on the understanding that nothing contained in it will be reproduced without specific permission of the Prison Department, Home Office.

Acknowledgements

In addition to offering very special thanks to the many prisoners and prison officers who took part in this study I wish to thank two groups of people for their help with the project, the staff at the University of Durham and the staff in the Home Office, Prison Department.

The University of Durham

Although I am a part-time Ph.D. student I have been given every facility I required by the University. In particular I should like to thank my supervisor Dr. Neil Bolton, for his congenial help and friendly criticism, Professor F.V. Smith, for allowing me to study in the Psychology Department, John Steel, for his help with computing problems and statistical advice and the staff of the inter library loan section at the Science Library for their efforts on my behalf.

The Home Office, Prison Department

Apart from thanking the Home Office for allowing me to carry out this study in working hours, and hence for their financial support over the last five years, numerous individual people in the Home Office require thanks. Firstly, colleagues in the psychological service, Stuart Christie, Rick Magaldi, Mary McKeown, Geoff Twiselton, Hazel Cookson, Alan Farrow and Finlay Graham for their assistance with various parts of the project, and secondly, members of the Medical and Governor grades, in particular, Dr David Westbury, Lionel Steinhausen, Derek Whitehead and David Brooke for their tolerance and understanding. Thirdly, thanks to Sue Johnson and Irene Kennedy, typists at HM Remand Centre, Low Newton, for their efficiency. Finally, I wish to thank Rae McGurk in her role as Senior Psychologist, HM Remand Centre, Low Newton, for helping me initiate the project and, more importantly, in her role as my wife for helping me complete the project.

Abstract

In an attempt to explain why some mild mannered individuals commit extremely assaultive offences, Megargee (1966) has suggested that two personality types exist among extremely assaultive offenders, the undercontrolled who lack inhibitions against the expression of aggression and the overcontrolled who possess excessive inhibitions against such behaviour. Moderately assaultive offenders, however, are more likely to be composed soley of undercontrolled personalities according to Megargee's Theory of Control.

The current study began by carrying out a cluster analysis of MMPI profiles of individuals convicted of homicide. Profile types remarkably similar to those obtained by Blackburn (1971) from 'abnormal' homicides at Broadmoor were obtained which appeared to represent two broad categories of overcontrolled and undercontrolled individuals. A second cluster analysis of MMPI profiles from a random group of predominantly non-violent prisoners revealed, however, similar types. The results of a cluster analysis of MMPI profiles of non-criminals also challenged Megargee's theory as a profile type was produced which was similar to that found amongst extremely assaultive offenders, and which had previously been described as overcontrolled.

The suggestion was made that 'controlled' was a more appropriate term than 'overcontrolled' and the validity of a controlled-undercontrolled typology was examined by contrasting controlled and undercontrolled homicides on a variety of background, intellectual, behavioural and attitudinal variables. In general support was found for the typology, particularly on prison oriented behavioural measures. The implications of the findings for the control and treatment of controlled and undercontrolled prisoners were discussed and a short MMPI scale which discriminated between these groups was developed, and tentatively named the Undercontrolled Personality Scale.

CONTENTS

CHAPTER ONE

INTRODUCTION

A frequent human characteristic in reply to being presented with a mass of new data is to attempt to order or classify it. Plants are divided into species, books into subjects and the visual spectrum into colours. Whilst typologies have general heuristic value serving the advancement of some sort of argument, as a generalised concept to make a point, their real importance lies in the fact that people wish to make sense of whatever confronts them. People need to understand the world they live in, and an essential aid to what at first appears disorder is a system of classification.

Of all entities people themselves are perhaps the most confusing and difficult to understand and consequently a plethora of typologies of people have been proposed. The stance of the taxonomist usually determines the kind of classification system used For example, people can be looked at in terms of colour (racialist), nationality (geographer), sex (geneticist), body build (physician), language (linguist), social class (sociologist), deviancy (criminologist) and personality (psychologist).

The personality theorist Allport (1937) has contrasted the ideographic and nomothetic approach to the study of personality. The ideographic approach emphasises the uniqueness of the individual and hence the study of the single case whilst the nomothetic approach stresses the search for general principles governing behaviour using large samples of subjects. Allport favoured the ideographic approach because, as he put it, "The same fire that melts the butter hardens the egg" (page 102). Coutu (1949) has, however, described this position as "the fallacy of the unique

personality" and Hall and Lindzey (1970) have commented that most contemporary psychologists believe individuality can be accounted for in terms of adequate general principle and that sterile speculation can only result from focusing on the individual at this stage in the development of psychology.

The present writer concurs with the latter view, and the aim of the current study is to examine a typology of a small, but important, number of people, those who kill other people (hereafter referred to as homicides).

Homicide - the statistical perspective

The latest criminal statistics (H.M.S.O., 1976) indicate that over two million indictable offences were committed in 1975 in England and Wales. Seventy thousand of these were violent offences and five hundred and fifteen of these were recorded as homicide. Homicide occupies an insignificant part of the time of the police and the courts and as a form of violent death it is a comparative rarity More people are killed on the roads in a single week than are recorded in a year as homicide. Although homicide is rare, unlawful killing has been a cause for grave concern and central to political and public discussions on the philosophy of crime and punishment in this country, particularly since the suspension in 1965, and the abolition in 1969, of the death penalty.

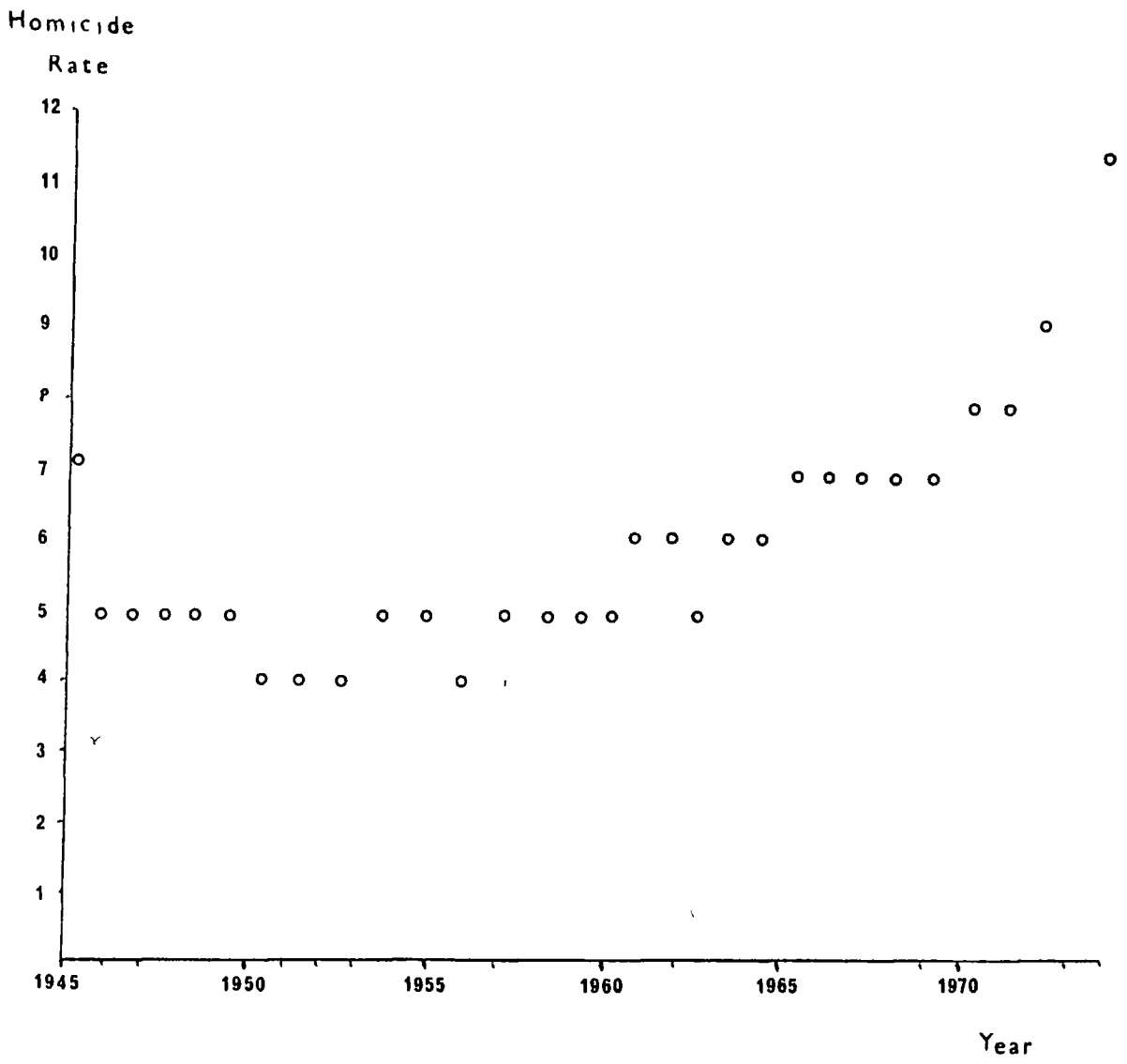
The amount of attention received by this crime would be absurd but for the special quality of homicide as the most serious of crimes and the character of the social reaction that it provokes. In 1975 there were over half a million burglaries and one and a half million thefts yet a single killing seems to outweigh them all. Society continues to hold life itself as sacrosanct, and it is perhaps the final irrevocability of death which attracts so much public attention to homicide. In these circumstances it is

hardly surprising that the public, the media, and the policy makers are as concerned as they are about the recent increase in the number of homicides. Over the past fifteen years the rate of homicides occurring in England and Wales has doubled (O H.E., 1976) as is shown by Diagram 1. The concern over this increase is reflected in the vast increase in the literature pertaining to homicide and this literature is reviewed later, following an examination of the history of the legal perspective on homicide.

DIAGRAM 1

HOMICIDE IN ENGLAND AND WALES 1945-1974

PER MILLION POPULATION.



Homicide - the legal perspective

Homicide is the unlawful killing of a human being and all civilized legal systems have attempted to classify homicide, despite the difficulties, by the degree of culpability of the offender. The major dimension on which classification is based is normally intention, including both the degree of mental capacity and the degree of premeditation. This can range from insanity to rationality and from a carefully planned killing to a simple accident The most important distinction in English law is between murder and manslaughter, which evolved in the fourteenth century (H M S O., 1953, Appendix 7) and resulted in two different penalties. Murder was a capital offence and led to the offender forfeiting his own life, whilst manslaughter was not a capital offence and usually led to a period of imprisonment. The traditional definition or description of murder derives from that given in the seventeenth century by Coke

"When a man of sound memory and of the age of discretion unlawfully kills any reasonable creature in being and under the King's peace, with malice aforethought either expressly or implied by the law, the death taking place within a year and a day". (Russel, 1947, page 532).

To summarize, murder was unlawful killing with 'malice aforethought' while manslaughter was defined as unlawful killing without malice aforethought The twentieth century has seen several changes in the law and the most important are as follows.

The Infanticide Acts (1922, 1938) brought about a new category of homicide, infanticide, which replaced the offence of murder in the case

of a woman who caused the death of a child under twelve months of age while "the balance of her mind was disturbed by reason of her not having fully recovered from the effect of having given birth to the child or by reason of the effect of lactation consequent upon the birth of the child". The Acts indicated that a woman found guilty of infanticide should be dealt with as though found guilty of manslaughter, usually a term of imprisonment was given.

The Road Traffic Act (1956) created the offence of "causing death by dangerous driving" which previously had been dealt with as manslaughter. Although it is still possible to be convicted of manslaughter as the result of using a motor car this is very rare, and today the number of offences of causing death by dangerous driving exceed the total of those for murder, manslaughter and infanticide.

The Homicide Act (1957) made two important changes in the law. Firstly a distinction was made between 'capital murder' and 'other murder', and the death penalty was abolished for all 'other murder' except those convicted by a court martial in the Army, Navy, or Air Force. Capital murder included killings in the course of theft, by shooting or explosion, in resisting arrest, and killing a police or prison officer Secondly, a new defence of diminished responsibility was introduced in Section 2 of the Act "Where a person kills or is a party to the killing of another, he shall not be convicted of murder if he was suffering from such abnormality of mind (whether arising from a condition of arrested or retarded development of mind or any inherent causes or induced by disease or injury) as substantially impaired his mental responsibility for his acts and omissions in doing or being a party to the killing". This defence was termed 'Section 2 Manslaughter' and made it possible for a person who might otherwise have been convicted of murder to be found guilty of manslaughter on grounds of diminished responsibility at the time of the offence.

Although the death penalty was suspended in 1965 and abolished in 1969 and therefore the difference between murder and manslaughter is no longer as important as it was it is still important in sentencing policy. A conviction for murder results in a statutory life sentence, or detention during Her Majesty's pleasure for someone under eighteen years of age, whilst the possible sentences for manslaughter range from absolute discharge to life imprisonment, the latter being uncommon (H.M.S.O., 1976).

Currently when a court decision is rearched the result is classified as murder, section 2 manslaughter, manslaughter, infanticide, lesser offence or acquittal. The latter includes "not guilty by reason of insanity" in that "the accused was labouring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong" (R. v McNaughten, 1843). Whilst this has been the subject of much debate the defence of insanity is now used rarely and during the last decade an average of only two cases a year have been reported (see, for example H.M.S.O., 1966, H.M.S.O., 1976). Prior to the Homicide Act, 1957, and the introduction of the plea of diminished responsibility which could reduce murder to manslaughter, acceptance of a plea of insanity could mean the difference between life and death for the accused. Following the Homicide Act the defence of diminished responsibility quickly replaced the defence of insanity in all but a handful of cases (Walker, 1968)

A successful defence of insanity leads automatically to committal to a secure mental hospital such as Broadmoor. On the other hand a successful defence of diminished responsibility allows the court to impose any sentence, including absolute discharge, that it sees fit. In practice a great deal of debate occurs in courtrooms about the mental state of the accused as it is notoriously difficult to determine the degree of culpability of individuals charged with homicide (Gibson, 1975). The court may find that

the accused was not 'responsible' for his actions at the time of the offence and decide to commit him to a hospital "on the written or oral evidence of two medical practitioners - 1) that the offender is suffering from mental illness, psychopathic disorder, subnormality or severe subnormality, and 2) that the mental disorder is of a nature or degree which warrants the detention of the patient in a hospital for medical treatment" (Mental Health Act, 1959)

More frequently, however, the court finds that the accused was not responsible for his actions at the time of the offence but decides that hospital treatment is not required. Examples of this include people who have carried out 'mercy killings' on sick members of their family after a long period of worry, people who kill their unfaithful wives in states of 'reactive depression' or 'chronic anxiety', and people subject to 'mood swings' who kill in jealous frenzies. Such individuals are given a prison sentence. The use of hospital orders would appear to indicate the presence of a lasting psychiatric condition in the offender which requires treatment.

The social context of homicide

Until recently, few attempts have been made to study in real detail, or in any systematic way, the factual attributes and the social context of homicide (McClintock, 1976). Throughout the literature three aspects of the crime stand out as having received most attention, the interpersonal relationship between the offender and victim, the motive for the offence and the method of killing the victim. These are dealt with in turn by reference to Gibson's (1975) study of homicide in England and Wales and Curtis's (1974) international comparison of homicide.

a) The interpersonal relationship between offender and victim.

Table A, which is a summary of several tables presented by Gibson (1975), who was concerned to examine the various legal categories of homicide, shows the relationship of the offender to the victim during the years 1967 to 1971. As can be seen the majority of homicides occur within families. Nearly half (48.08%) of the victims were related to the offender. If not related, the victim usually knew the offender (31.81%).

TABLE A RELATIONSHIP OF VICTIM TO OFFENDER, 1967 TO 1971, ENGLAND AND WALES

Son or daughter	18.43%
Other relative	7.50%
Associate	28.51%
Stranger	13.87%
Husband/lover	4.74%
Police/Prison Officer	0.30%
Wife	17.41%
Girlfriend	3.30%
Not Cleared up	5.94%

Curtis (1974) attempted to survey studies from sixteen countries using a modification of Wolfgang's (1958) classification of the interpersonal relationship between the offender and victim. He arranged the relationship between the offender and victim into an order corresponding to the degree of knowledge prior to the offence' 'husband-wife', 'other family', 'other primary group' (close friend, homosexual or heterosexual lover) and 'non primary group relationships' (prostitute, acquaintance, neighbour, business relation, sex rival or enemy, stranger, police officer, or felon).

Of the homicides examined in Denmark, 57 percent were within the family (Svalastoga, 1956) which was higher than in any other study. This, however, was not so much due to the killing of spouses as to killings within

other family relationships. Family killings figured highly in studies from Israel (42% reported by Landau and Drapkin, 1968), Poland (41% reported by Holyst, 1967) and the U.S.S.R. (40% reported by Connor, 1973). Curtis reported 25% in the U.S.A. and curiously the lowest rate occurred in Scotland (17% reported by Gibson and Klein, 1967). Conversely Scotland had the highest number of 'non primary group' killings (74%).

This survey by Curtis was not successful in identifying any underlying trends. Distinctions between West and East, industrial and non industrial, and urban or rural settings were not particularly useful in explaining or understanding the results. Surprisingly the author failed to examine the possibility that homicide outside the family is related to alcohol consumption, particularly since Wolfgang (1958) had reported that in two thirds of his homicide sample in Philadelphia, either the victim, offender, or both had been drinking immediately prior to the offence. Collectively the studies cited this far indicate that, in general, and certainly in England and Wales, homicide is associated with close interpersonal ties.

b) Motive.

Here motive should not be confused with intent, which is essentially a legal concept referring to the offenders ability to comprehend the nature of the act and is related to determination to reach goals. The term motive deals with the reasons for wanting to do so. The attribution of motive is often difficult as it is usually subjective particularly in the case of Section 2 manslaughter, and is impossible in the case of insane murder. However Table B, adapted from Gibson(1975) shows a breakdown of the

motive for homicides, which was attributed subjectively on the basis of an examination of police files, in England and Wales from 1967 to 1971. As can be observed the predominant motive was 'rage or quarrel'. Gibson pointed out that most motives involved personal emotions and that homicide in the course of other criminal activities is not common.

TABLE B: MOTIVE FOR HOMICIDE, ENGLAND AND WALES, 1967 TO 1971

Rage or quarrel	38 93%
Jealousy or revenge	12.95%
Sexual	6.20%
Theft or gain	9.48%
Feud	1.12%
Escaping arrest	0.41%
Apparently motiveless	9.67%
Other	14.76%
Not known	6.48%

Curtis's (1974) survey of the international literature used Wolfgang's (1957) motive categories in order to make comparisons. The first category 'Immediate Physical and Verbal Conflict' sought to capture flare-ups of the moment, conflicts over seemingly trivial subjects and with little past history. The second category was 'Self-Defensive Responses' again over trivial, flare-ups of the moment. The third category 'Revengeful Response' referred to events where the offender responded to some perceived injustice, sexual or non sexual. The fourth category of 'Robbery-Theft-Gain-Sexual Attack' was meant to specify robbers and sex assaulters who eventually killed their victims. This category is curious in that it contains sex offenders whose motivation would seem to be unrelated to that of robbers. Curtis does not indicate why the category is heterogenous.

Using the above categories immediate conflict killings were highest in the African Soga tribe (67% reported by Bohannon, 1960), the U.S.S.R.

(50% reported by Connor, 1973) and the U S.A. (43% reported by Curtis, 1974). Immediate conflict killings were lowest in India (0% in Delhi reported by Rao, 1968, 4% in Central India reported by Driver, 1961). Revengeful responses were highest in India (58% in Delhi reported by Rao, 1968) and in Israel amongst Arabs (41% reported by Landau and Drapkin, 1968). Curtis concluded that, although there were exceptions, immediate conflicts appeared more frequently in the West and in populations with advanced technologies. Forms of revenge arising out of long drawn out hostilities were somewhat more consistently relevant to the less technologically advanced, Eastern countries, and often involved property-land disputes.

c) The Method of Killing.

Table C, again modified from Gibson's (1975) study of homicide to show the overall pattern of methods of killing in England and Wales from 1967 to 1971 indicates that stabbing or cutting with knives and other sharp instruments accounted for more deaths than any other method. Guns were used the least and where they were used they were seldom used to kill in the course of another crime (H.M.S.O., 1973).

TABLE C METHOD OF KILLING, ENGLAND AND WALES, 1967-1971

Sharp instrument	26.70%
Blunt instrument	11.90%
Hitting or kicking	18 20%
Strangulation or asphyxiation	21.70%
Shooting	9.30%
Other	12.20%

In contrast to the British picture, Curtis (1974) showed that

nearly half (46%) of the homicides in the U.S A. and over half (56% reported by Tardiff, 1966) of the homicides in Canada were committed with guns. Amongst African tribes knives and arrows (61% reported by Hohannon, 1960) were the most widely used instruments of killing. Curtis concluded his international comparison of homicides by indicating that the weapon used was largely a function of its availability. Ineffective licensing laws in the U.S.A. and Canada results in guns being more easily obtainable than in European countries whilst the African tribesman has bow, arrow and knife readily available in that they are his hunting implements. The complexity of homicide is such that this connection between the availability of weapons and their utilization in homicide was the only unequivocal result in Curtis's international survey of homicide.

This section on the social context of the crime, particularly in this country, paints a picture very different from that often seen on the television and cinema of the homicidal psychopath, gun in jacket pocket, killing for pleasure a policeman or stranger who interferes with the course of a crime such as bank robbery. In reality the offender generally kills someone he knows or is related to, in an emotional flare-up with a weapon that is handy at the time. A recent view concurs with this, "murder is not generally the crime of the so called criminal classes - in most cases it is an incident in miserable lives" (O.H.E., 1976, page 4).

THEORIES OF HOMICIDE

In contrast to theories of delinquency and aggression which are numerous (see for example Selg, 1975) there are few theories of extreme aggression of homicidal proportions. Whilst the topic of homicide attracts the attention of research workers few have focused intensively on the topic

in order to develop a theoretical framework around homicide. The work which has been done on particular patterns of homicide, examples of which have been reviewed previously do little more than note the particular motives and the circumstances surrounding the act, with the implication that this helps in determining methods of control or prevention. McClintock (1976) has pointed out that such studies make the unwarranted assumption that homicides constitute a fairly homogeneous class of crime with respect to which it is legitimate to present statistical data on single elements of the incident - such as the interpersonal relationship between the victim and offender, the motive, and the method of killing.

Only three types of theory of homicide have been proposed, which will be called the medical, sociological and psychological models, and these are described in turn.

The Medical Model of Homicide

The medical model of homicide is based on the assumption that homicidal individuals have some form of "illness" that differentiates them from non-assaultive individuals. The presence of brain damage has been the subject of several studies and as early as 1949 Stafford, Clark and Taylor found that motiveless, insane and sexually motivated homicides had abnormal E.E.G. patterns compared to clearly motivated and accidental homicides Bonkalo (1967) also reported a higher incidence of abnormal E.E.G. patterns in motiveless, though sane, homicides. Sayed et al (1969) studied a group of insane homicides and found that diffuse E.E.G. activity was related to the degree of violence used. Some studies have claimed to find abnormal E E.G. patterns in homicides as a homogeneous group but they have been designed poorly. Chrzanowski and Szymusik (1970) claimed to find atrophy of sub-cortical

structures in the majority of homicides they studied. They did not employ a control group and the majority of their subjects were also alcoholics. Okasha et al (1975) found that twenty of their fortysix Egyptian murders showed abnormal E.E.G.s. Their subjects were composed of eight schizophrenics, two depressives, two epileptics, four subnormals and thirty psychopaths.

The relationship between aggression per se and E.E.G. abnormality is equally confusing. Several studies have shown that up to 50% of individuals with aggressive personalities, including psychopaths, exhibit abnormal E.E.G. patterns, in particular slow wave theta activity (Hill, 1963, Williams, 1969). However negative findings have been reported (Levy and Kennard, 1953, Arthurs and Cahoon, 1964) and Blackburn (1975) has recently criticised previous studies for not measuring either slow wave E.E.G. activity or aggression reliably, pointing out that neither aggression nor theta activity are dichotomous variables as previous studies have assumed. Perhaps all that can be concluded as far as homicide is concerned is that there may be a link between certain sorts of homicide, particularly motiveless (and possibly psychopathic) and insane homicide, and abnormal E.E.G. patterns. At this point it is worth noting that infact few homicides are motiveless or insane and as an explanation of the majority of homicides this theory has, as yet, little to offer.

In recent years research in the area of the medical model has moved from brain damage to chromosome abnormalities. The body cells of normal males contain two sex chromosomes, X and Y, but Sandberg et al (1961) reported a man with a 47, XYY karyotype, and this initial report stimulated a vast amount of research. When three percent of the patients in the Scottish State Hospital were found to have the 47, XYY karyotype (Jacobs et al, 1965) a stir was created in genetic circles, and because it had a bearing on crime

it also attracted a great deal of publicity. Other early studies concluded that the extra Y chromosome resulted in antisocial and aggressive behaviour (Price and Whatmore, 1967, Nielsen, 1968, Nielsen and Tsuboi, 1969, Telfer, 1968). However these early studies were conducted using mentally abnormal and often subnormal subjects. Clark et al (1970) examined XYY males in prison and found little difference between them and other men's criminal records. The suggestion that XYY individuals are more prevalent in special institutions is not in question, what is in question is whether or not the extra Y chromosome predisposes someone to be aggressive. Borgaonkar and Saleem (1974) in a comprehensive review of the literature have rejected this simple causal explanation and suggest that because XYY individuals are significantly taller, less intelligent and come from unstable families they may be more vulnerable to a series of societal decisions which may propel them in larger proportions into certain institutions. An editorial in The Lancet (November 30th, 1974) also suggested that a male with this karyotype who has been convicted of an offence is more likely to be committed to a secure hospital than an XY male despite the fact that "there is no greatly increased risk of deviant behaviour amongst males with an extra Y chromosome" (page 1297) Owen (1972) also concluded there was little evidence for the XYY hypothesis and, more pertinently, there was no evidence to link the XYY karyotype to homicide.

The Sociological Model of Homicide

There are two major theories that have been developed by sociologists, and they concentrate not on homicide alone but on both homicide and suicide. Lalli and Turner (1968) proposed that societies may contain two sub-societies, one an open society where status is achieved rather than ascriptive, and the other a closed society where status is

ascriptive and cannot be achieved They hypothesized that in a country with a largely open society but with a closed society in tow then the open society will direct aggression inwards whilst the closed society will direct aggression outwards. This hypothesis was tested in the U.S.A. comparing black people (a closed society according to the theorists) and white people (an open society according to the theorists) and was confirmed. White people had a high suicide rate whilst black people had a high homicide rate. Only one other study has examined this hypothesis, and found supporting evidence in South Africa, but not in Ceylon (Lester, 1971).

There are two problems with this theory. Firstly, no explanation is provided as to why ascriptive and achieved status should lead to homicide and suicide respectively. Presumably some form of frustration aggression paradigm must be utilized but even if this is the case it is probable that status is just one factor among many that contributes to homicide and suicide. Secondly, homicide and suicide are universal problems, and it is not known if all societies can be ordered on a continuum of open to closed. In conclusion, therefore, the specific mechanisms and the generality of the theory remain to be delineated.

Henry and Short (1954) have proposed a complex sociological theory of homicide which is based on the assumption that aggression is a consequence of frustration. Henry and Short also assumed that homicide and suicide are opposites in the sense that aggression is either directed inward or outward and further suggested that economic changes in society produce frustrating changes in people's social status. When the economic climate becomes unfavourable the position of someone in a low status group actually improves relative to someone in a high status group. On the other hand, the low status person loses out when the business cycle improves because even if his life improves in absolute terms he is relatively worse off compared to someone in a high status group. Hence according to Henry and Short, economic recession

produces more frustration for people in high status groups whilst economic improvement should cause more frustration for low status people.

The theory assumes that lower status groups are more likely to commit homicide whilst high status groups are more likely to commit suicide. This difference according to the theorists was due to child-rearing practises. Low status groups tend to exercise physical punishment by the father whilst high status groups exercise love withdrawal as a punishment usually by the mother. Henry and Short maintained that the basic target of aggression is another person and argued that the experience of love-orientated punishment which is dealt out by a parent who is also the source of nurturance results in inhibitions to express aggression against other people. Support for this argument is to be found in the psychological literature in that love orientated punishment has been shown to relate to self control (Sears et al, 1957) and social rather than delinquent behaviour (McCord et al, 1959). Henry and Short contend that upper status groups do not learn to use outward-directed aggression whilst lower status groups are not inhibited in maintaining the primary target of aggression as other people.

The theorists tested their assumption filled theory by predicting that i) suicides would be negatively correlated with the economy for both black (low status) and white (high status) people in the U.S.A. and ii) homicides would be positively correlated with the economy for both black (low status) and white (high status) people. Their predictions were confirmed for suicides, though not for homicides, among white people, and for both suicides and homicides among black people.

The theory has received some support from other workers (Wood, 1961, Gaier and Littumen, 1961) and little support from others (Teele, 1962, Teele, 1965, Lester, 1968). Most studies have used the status categories of white/black which is a racial category as well as a status category. Perhaps

social class would be a wiser choice for future studies. The theory itself is cumbersome, filled with assumptions and as Lester (1975) has recently pointed out it runs into particular difficulty in explaining the suicidal murderer. Since suicide and homicide can be committed by the same person (see, for example, West, 1966) it is difficult to assert that these behaviours are related to both status and the business cycle.

The Psychological Model of Homicide

Two not unrelated psychological theories of homicide have been put forward and they will be dealt with chronologically. Perhaps the best known of the environmental theories of aggression is that of Dollard, Doob, Miller, Mowrer and Sears (1939). Their frustration-aggression hypothesis contends that the occurrence of, and the strength of, aggression are determined by the degree of frustration and the strength of the constraints against aggression. Whilst many studies have related frustration to aggressive behaviour (see, for example, the excellent review by Selg, 1975) and some writers have noted that homicide, like other forms of assault, can be seen as a response to frustration (Buss, 1961) only one study has examined this hypothesis Palmer (1960) investigated a sample of fifty-one homicides and compared them to their brothers who had not killed, thus controlling for general family environment. He predicted that the homicides should have experienced more physical and emotional frustration as children and should have failed to learn socially acceptable ways of expressing aggression. His results confirmed the predictions·

1) the homicides had experienced significantly more physical frustrations than their brothers (for example, serious injuries, illnesses, beatings, accidents).

2) they had experienced significantly more psychological frustrations (such

as more severe toilet training, deformities, maternal rigidity and slower development of verbal ability.

3) they had shown significantly less socially acceptable outlets for aggression (for example, verbal aggression, shouting, athletics and sport).

4) they had shown significantly more unacceptable outlets for expressing aggression (such as lying, stealing, temper tantrums, and heavy drinking).

Palmer's data confirmed the hypothesis that homicides had been subjected to an unusual amount of frustration. Interestingly, he noted that some of his subjects showed no history of physical aggression other than the killing and the majority of his subjects were not professional killers, but that they had killed whilst emotionally disturbed.

Palmer, however, was not the first to notice that mild mannered individuals commit homicide. Earlier Berg and Fox (1947) and Wolfgang (1957) had reported that a large number of homicidal individuals had no prior history of assaultive behaviour and tended to reconvict less frequently subsequent to their release than most other criminal groups. Stearns (1957) and Wertham (1966) described adolescent killers who were well adjusted and socially responsible prior to their extreme aggression Lamberki, Blackman and Weiss (1958), Schultz (1960) and Weiss, Lamberti and Blackman (1960) examined the 'sudden murderer' and described their subjects as passive, subservient and dependent people These authors also speculated that these particular individuals had excessive ego controls and on the basis of their case histories, Lamberti et al (1960) noted that sudden murderers came from "cohesive family backgrounds where conformity to the rules of the social system was emphasized" (page 178) The theoretical implications of these studies, however, remained dormant until Megargee (1966) attempted to relate personality to homicide in a systematic way and his theory of homicide is described in some detail below, and is largely based on Megargee (1971).

In 1959 Megargee began work at the Alameda County Probation

Department and a major referral problem he faced was the prediction of assaultive behaviour in people who were potential probationers. Hence Megargee's original research interest was in attempting to predict assaultiveness using psychological tests. In the first study Megargee and Mendelsohn (1962) examined four groups of subjects.

1) extremely assaultive criminals (convicted of murder, assault with a deadly weapon and manslaughter)

2) moderately assaultive criminals (convicted of assault and battery)

3) nonviolent criminals (convicted of theft or homosexual acts), and

4) non-criminals.

All of the groups were equated for age and socioeconomic status and compared on the standard M.M.P.I. scales as well as twelve additional M.M P.I. derived scales that purported to measure hostility and control. Although a number of these scales were able to discriminate the three criminal groups from the noncriminal group, none of the traditional M.M.P.I. scales or any of the additional scales discriminated assaultive criminals from non-assaultive criminals in the expected direction. In particular, the nonviolent criminals and noncriminals were assessed as more hostile and less controlled than the extremely violent criminals. The following explanation was offered to account for the unexpected results "..... the extremely assaultive person is often a fairly mild mannered, long suffering individual who buries his resentment under rigid but brittle controls. Under certain circumstances he may lash out and release all his aggression in one, often disastrous act. Afterwards, he reverts to his usual overcontrolled defenses Thus he may be more of a menace than the mentally aggressive 'chip-on-the-shoulder' type who releases his aggression in small doses" (Megargee and Mendelsohn, 1962, page 437).

This speculation that extremely assaultive individuals may be mild

mannered but with excessive resentment buried under brittle controls was not followed up immediately. Megargee and his co-workers continued their search for a means of discriminating assaultive from nonassaultive criminals. Megargee and Mendelsohn (1963) compared extremely assaultive, moderately assaultive and nonassaultive criminals on a scale based on Murstein's (1956) Rorschach Hostility Scale and found no significant differences between the groups. Megargee (1964[b]) compared violent and nonviolent delinquents on the Rosenzweig Picture Frustration Study and again found no significant differences. Megargee (1965[b]) did find a statistically significant though psychologically insignificant correlation ($r = +0.23$) between Fisher and Cleveland's Barrier score on the Holtzman Inkblot Technique (Holtzman et al, 1961) and dormitory counselors ratings of aggressive behaviour. Finally, Megargee and Cook (1967) related five T.A.T. (Murray, 1943) aggression scales and five hostility scales from the Holtzman Inkblot Technique to eleven different behavioural criteria of aggression in extremely assaultive, moderately assaultive, verbally aggressive and nonaggressive delinquents. The behavioural criteria of aggression included the nature of the offence, school conduct, attendance record, and various ratings by the prison staff of the delinquents behaviour. The results were puzzling and indicated different patterns of relationships depending upon the particular behavioural criteria and scales used. For example, 'need aggression' on the T.A.T. was directly related to poor school conduct but not to any other criteria. Several inkblot scales were directly related to self reports of physical aggression but inversely related to actual aggression whilst in detention. Finally a factorial analysis resulted in four factors, a) inkblot scales, b) T.A.T. scales, c) observed aggression and d) self report aggression.

Megargee (1966) at this point returned to his earlier speculation relating excessive control to extreme aggression and theorised further. It was suggested that assaultive criminals could be divided into two distinct

types, 'Overcontrolled' and 'Undercontrolled', and the difference between these types lay in their inhibition against overt aggression The Undercontrolled person was seen as one whose inhibitions against the expression of aggression are quite low so that he typically responds to frustration with aggression. It is apparent, that, the first aspect of this dichotomy is congruent with the prevailing view that delinquents are generally more hostile than non-delinquents (Gorlow, Zimet and Fine , 1952, Mussen and Naylor, 1954, Rader, 1957, Stone, 1953, Young, 1956). However the Overcontrolled person was characterised as being rigidly inhibited against the overt expression of aggression, and therefore handles frustration in a different way. His instigation to aggression accumulates over time, via some form of temporal summation (Dollard et al 1939), and if this instigation to aggression reaches a level which exceeds his excessive inhibitions any resultant assaultive behaviour is likely to take the form of an extreme assault of homicidal proportions. It follows that a high level of instigation would be required to overcome their extreme rigid inhibitions. Conversely, undercontrolled individuals need not have much instigation to aggression before acting out in an aggressive fashion because little instigation is required to exceed their minimal aggressive inhibitions.

In order to test this typology Megargee (1966) made the assumption that the degree of violence of an aggressive act is proportional to the degree of instigation to aggression. He argued that a group of extremely violent offenders would paradoxically be assessed as more controlled and less hostile as a group than would moderately assaultive offenders because extremely violent crimes could be committed by both overcontrolled and undercontrolled people, but moderately assaultive crimes were more likely to be committed by undercontrolled people.

With this hypothesis in mind he obtained four groups of juvenile delinquents, two of which were labelled 'extremely assaultive' and 'moderately assaultive' on the basis of a ten point Aggression Scale (Megargee, 1966) which took into account, for example, the extent of the victims injuries, the relative size and armaments of the victim and offender and the immediate stimulus situation. The other two groups were labelled 'incorrigibles' (unruliness, defiance, unmanageability at home) and 'property offenders' (car thefts and burglaries being examples). During the first few days of detention the subjects were evaluated on behavioural check lists by dormitory staff, given a structured interview based on that of Bandura and Walters (1959) and administered the California Psychological Inventory (Gough, 1959), the Rosenzweig P-F Study, the T.A.T., the Holtzman Inkblot Test and a shortened version of either the W.A I.S (Wechsler, 1955) or W.I.S.C. (Wechsler, 1949) depending on the age of the subject.

A total of twenty eight predictions designed to examine the hypothesis that the extremely assaultive group would be more controlled and less hostile than the other groups were made. Of these, twenty two were in the predicted direction and fourteen were statistically significant. The results of the behavioural measures and more objective tests tended to be more positive than the results of interviews and projective tests. Whilst this study could not be considered as conclusive evidence for Megargee's typology, the consistency of the results firmly supported the notion, and cast further doubt upon the popular belief that all violent criminals are undercontrolled.

Other investigations have provided further support for Megargee's theory In the first of these Molof (1967) examined fifty five background variables on over four thousand male juvenile delinquents sentenced in California in 1963. He delineated three groups·

1) AHR. people convicted of assault, homicide, or forcible rape.
2) B. . people convicted of battery or simple assault, and
3) NA : those convicted of nonassaultive crimes.

Molof's A H.R., B., and N.A., samples were roughly equivalent to Megargee's (1966) extremely assaultive, moderately assaultive and nonviolent samples and hence of greatest interest is a comparison of the A.H.R. group with the other groups. The results indicated that the A H.R. group had been reared in a more favourable family environment and had a history suggesting better socialization than either of the other two groups. A cross-validation of two thousand boys convicted in 1964 yielded similar findings.

Blackburn (1968[b]) tested the typology directly at Broadmoor Hospital by comparing a number of M.M.P.I. scales and case history items on thirty eight extremely assaultive and twenty five moderately assaultive psychiatric patients. The results indicated that the extremely assaultive group were significantly less hostile, more overcontrolled, introverted, anxious and conforming than the moderately assaultive group. Interestingly the latter group contained more individuals with a criminal record or a diagnosis of psychopathic disorder than the extremely assaultive group. Blackburn concluded that the results supported Megargee's theory.

Blackburn (1968) also examined the incidence of extreme or homicidal aggression in paranoid and non paranoid schizophrenic offenders. He reasoned that paranoid schizophrenics are extroverted and undercontrolled whilst non paranoid schizophrenics are introverted and therefore overcontrolled. The results indicated

a) that homicidal assaultiveness and persistent aggression were significantly negatively correlated, therefore demonstrating that extremely violent behaviour can occur in people that are usually not aggressive, and

b) nonparanoid schizophrenics tended to have a history of homicidal assaults compared with paranoid schizophrenics although this difference did not reach significance. ($0.05 < p$ one tail < 0.10). Megargee (1971) has since expressed some scepticism regarding equating paranoid schizophrenia with undercontrol and non paranoid schizophrenia with overcontrol.

In Blackburn's (1971) third study four types of homicidal individuals were identified by means of a cluster analysis of M.M.P.I. scores. The subjects were fifty six patients at Broadmoor, nine subjects who were said to be suffering from a 'psychopathic disorder' and the remainder were 'mentally ill', within the terms of the Mental Health Act. The analysis resulted in four clusters, two of which were described as overcontrolled (Types 1 and 3) and two as undercontrolled (Types 2 and 4)

1) Overcontrolled repressor type - these subjects were described as overtly conforming, highly controlled and nonaggressive. They tended to cope with stress by using denial and repression. This group included 30% of the sample.

2) Paranoid - aggressive type - these subjects were disturbed, impulsive, but socially anxious and introverted. They were overtly aggressive. Of the total sample 23% fell into this group.

3) Depressed - inhibited type - depression and social anxiety characterised these patients. They were intropunitive in terms of hostility and exercised strong impulse control. This group contained 14% of the sample.

4) Psychopathic type - major neurotic and psychotic symptoms were absent amongst this group. They were lacking in anxiety, impulsive, extraverted, and hostile. They appeared to be comparable to the traditional view of the primary psychopath. This group contained 33% of the sample.

Perhaps the most interesting finding was that the largest single group consisted of overcontrolled individuals who appeared to be conforming, inhibited, unaggressive, and free from psychological disturbance. Blackburn concluded that his data supported Megargee's theory.

Whilst Blackburns work in England was supporting Megargee's typology, Megargee et al (1967) were developing an M.M.P.I. scale of assaultiveness which was labeled the Overcontrolled Hostility (O-H) scale.

All of the work on Megargee's theory of control since then in America has either been devoted to examining the validity of the new scale via correlational studies or via studies predicting differential behaviour of high and low O-H scorers in various experimental situations. The literature on the O-H scale is reviewed fully in chapter five but the reader should note at this point that the evidence for the validity of the scale is equivocal and the logic behind the development of the scale is called into question in that review prior to the development in this study of a logistically sound O-H scale.

Leaving the O-H scale aside for the moment five studies have examined Megargee's typology of overcontrol and undercontrol. Of these two are American (Megargee, 1966, Molof, 1967) and three are British (Blackburn, 1968[a], 1968[b], and 1971) and the latter were carried out using violent psychiatric offenders at Broadmoor hospital. Megargee, whilst citing Blackburn's work in support of his theory, stated "I have not yet confronted or thought through the application of this typology to violent psychiatric patients" (1971, page 137) and Blackburn recognised the difficulty of generalising his results to 'normal homicides' by stating that "Further research is necessary, however, to confirm whether or not this personality type (overcontrol) is over-represented among murderers generally" (1971, page 30).

The current study, therefore, set out initially to examine Megargee's typology in a sample of 'normal' homicides, people who killed and were not psychiatrically ill.

Summary

The statistical incidence of homicide and its legal and social aspects were examined. The medical, sociological and psychological theories

of the crime were discussed. Megargee's theory of control proved attractive in that it appeared clear, explicit and theoretically sound. In addition, the empirical research generated thus far supported the theory. The present study was aimed at examining the theory using a sample of non psychiatric homicides.

CHAPTER TWO

PERSONALITY TYPES AMONG 'NORMAL' HOMICIDES

Subjects

During the three year period from January 1972 to December 1975 51 males were charged with homicide and remanded in custody at HM Prison Durham. Of these, a total of 11 people were not included in the sample to be studied for the following reasons:

Full Scale IQ less than 80 on the Weschler Adult Intelligence Scale (Weschler, 1955) and hence were not able to comprehend the nature of further tasks.	4 subjects
Found 'Not Guilty' of homicide.	2 subjects
Unfit to plead and sent to a Special Hospital.	1 subject
Offence reduced to 'accessory after the fact'.	1 subject
Receiving medication and unable to comprehend the tasks.	1 subject
Unavailable for testing.	1 subject
Refused testing on the advice of his solicitor.	1 subject

The remaining 40 males were between 16 and 44 years of age ($\bar{x}$ = 26.22, s d. = 7.83) and all of the subjects fell into the lower socioeconomic groups ($\bar{x}$ = 4.12, s.d. = 0.87) according to the Registrar Generals (H.M.S.O., 1970) grading of occupations. The subjects were eventually convicted of Murder (N=16) Manslaughter (N=15) and Manslaughter

with diminished responsibility (N=9). Sentences varying from Life (N=24), a fixed period of between 18 months and 7 years (N=14), detention at Her Majesty's Pleasure (N=1) and Borstal (N=1) were awarded.

General Procedure

Several studies have overcome the problem of obtaining the co-operation of prisoners in carrying out psychological tasks by adopting the strategy of reassuring the subjects that the work was independent of the Home Office (Heskin et al, 1974). The present study could not adopt this approach because the test administrator was a Home Office employee. Hence reliance was placed on the routinization of tasks within prisons. For several years prior to the commencement of this study, all individuals charged with homicide were seen routinely for 'psychological testing' in Durham prison, and were given the WAIS. Owing to the reliability of the prison grape vine inmates charged with homicide expected to be given psychological tests. It was not difficult to ask the inmates to complete a personality test, in addition to the WAIS, without them attaching a sinister motive to the request, it was simply "routine". The subjects were told that a research project designed to look at people's opinions about various aspects of life was being carried out, and their help with this task would be much appreciated. All the subjects were seen individually after having been approximately one month in custody. Great care was taken to treat the men with respect in order that a friendly relationship developed between the tester and the testee. Although 11 people were excluded from the sample only one person refused to be tested.

Description of the measuring instrument

Recent reviews by Gynther (1972) and Rogers (1972) concluded that

despite its shortcomings (which are considered below) the Minnesota Multiphasic Personality Inventory (MMPI) devised by Hathaway and McKinley (1943, revised 1951 and 1967) is the foremost instrument in the fields of clinical assessment and personality research. In addition, previous work by Megargee et al (1967) on the development of the Overcontrolled Hostility scale and by Blackburn (1971) on types of 'abnormal' homicides utilized the MMPI and in order to make comparisons with previous work the MMPI was chosen as the personality measure.

The individual form of the MMPI contains 550 items, each on a card, which are sorted into true, false and cannot say categories. The items sample 26 areas. general health, neurological disturbances, cranial nerve symptoms, sensory, motor and autonomic nervous system disturbances, physiological disturbances, habit patterns, family and marital problems, occupational and educational questions, sexual, religious, political and social attitudes, manic and depressive affective responses, obsessive and compulsive symptoms, schizophrenic thinking disturbances, and masculine and feminine interest patterns.

The items are scored to give a profile consisting of four validity scales and nine standard clinical scales which were developed using the criterion group approach to the construction of personality inventories. The raw scores for each scale are converted into standardized 'T-scores' which have a mean of 50 and a standard deviation of 10. Since the publication of the original scales, over 200 scales based on the MMPI have been developed, and a simplified description of the scales used in this study is as follows.

Standard MMPI Scales	Description (from Gilberstadt and Duker 1965)
Cannot say (?)	Evasiveness
L	rigidity or naivete

Standard MMPI Scales	Description (from Gilberstadt and Duker 1965)
F	confused thinking or self depreciation
K	defensiveness
Hypochondriasis (Hs)	hypochondriasis and body narcissism
Depression (D)	depression
Hysteria (Hy)	repression and denial
Psychopathic Deviate (Pd)	immaturity and impulsiveness
Masculinity-Femininity (Mf)	interests characteristic of opposite sex
Paranoia (Pa)	sensitivity, hostility
Psychasthenia (Pt)	anxiety, obsessive thinking
Schizophrenia (Sc)	confused, schizoid, bizarre thinking
Mania (Ma)	euphoria, hyperactivity
Social Introversion (Si)	withdrawal, introversion.

Additional MMPI Scales	Description
Anxiety (A)	neuroticism or emotionality (Welsh, 1956)
Repression (R)	introversion or control (Welsh, 1956)
Extraversion (Ex)	extraversion (Giedt and Downing, 1961)
Denial (Dn)	denial of unfavourable attributes (Little and Fisher, 1958)
General Hostility (GH)	overall hostility (Caine et al, 1967)
Direction of Hostility (DH)	intropunitive/extrapunitive hostility (Caine et al, 1967).

Of the above scales the Anxiety and Repression scales represent the first two factors pervading the MMPI scales, and seem to measure, in Eysenck's (1957) terms, neuroticism and introversion respectively (Kassebaum Couch and Slater, 1959). These authors suggested that impulsivity and

sociability represent orthogonal vectors within the space between neuroticism and extraversion, and are therefore independent relative to each other. Blackburn (1972) has pointed out that this implies that the extravert may be impulsive or sociable, or both, depending on his degree of neuroticism.

The Extraversion and Repression scales purport to measure 'pure' introversion extraversion in contrast to the Social Introversion scale which measures 'neurotic' introversion (Corah, 1964, Blackburn, 1976). High scores on the Denial scale indicate anti-intraceptive and morally virtuous individuals who have poor insight (Little and Fisher, 1958). The General Hostility and Direction of Hostility scales are the major scales from the MMPI derived Hostility and Direction of Hostility Questionnaire (Caine, Fould's and Hope, 1967) which was developed alongside Foulds (1965) theory of personality and personal illness. He suggested that if the failure to establish personal relationships results in personal illness and individuals blaming themselves or others for this failure, then"blaming" could be seen as a means of assessing personal illness. Foulds assumed that hostility was uni-dimensional and could be directed outwards towards others or inwards towards the self. He used Rosenzweigs (1934) terms "extrapunitive" and "intropunitive" to denote these directions. The test itself has 5 sub-scales which sum to give General Hostility, of these Guilt and Self Criticism are scored in an intropunitive direction, whilst Acting-out Hostility, Projected Hostility and Criticism of Others are scored in an extrapunitive direction. The Direction of Hostility score is indicated by either intropunitiveness which is positive or extrapunitiveness which is a negative score. General Hostility and Direction of Hostility can, of course, be scored from any MMPI protocol.

In general the validity of MMPI scales has been called into question, particularly by Edwards (1957) and Messick and Jackson (1961) who suggested

that MMPI responses were related to the response sets of social desirability and acquiescence rather than to psychopathology. However when Block (1965) showed that item content and not response sets was the most important factor in item endorsement both Edwards (1967) and Jackson (1967) modified their positions on the issue. The validity scales (?, L, F, and K) within the MMPI have recently been seen as yielding trait inferences themselves (Gilberstadt and Duker, 1965; Blackburn, 1971) not least because of overlapping items. For example 10 of the 30 K scale items appear on the Hy scale and denial of hostile feelings, with which these items are concerned, can be seen as a personality characteristic rather than defensiveness or deliberate faking.

In criminological research the MMPI has primarily been used to examine differences between criminals and non criminals. Hathaway and Monachesi (1953) found significant differences with several samples on the Pd and Sc and Ma scales, Pd differentiating the groups more often than Sc and Ma. Monachesi (1950) found that Pd, Hy and D distinguished delinquents from non delinquents Clark (1952) compared soldiers in the "glass house" with "normal" soldiers and divided his delinquent soldiers into those with a) no psychiatric disorder, b) emotional instability and c) antisocial personality. All three groups differed on all MMPI scales from the normal group. Pd scores for the groups were. normals, 47.0, no psychiatric disorder, 62.4, emotional instability, 69.2, and antisocial personality, 73 7. Silver (1963) found differences between recidivists and non delinquents on the Pd scale but found no differences between recidivists, mild offenders and orphanage boys. Jackson and Clark (1952) found that college students convicted of theft scored significantly higher on Pd, Ma and Sc than non delinquent college students whilst Caditz (1959) found differences on Pd, Pa and Ma between delinquent and non delinquent boys.

In general, only one of the MMPI scales, Pd, has been consistent in discriminating delinquents and non delinquents but Waldo and Dinitz (1967) have suggested that this may be an artefact. They indicate firstly that significant differences (for example between T scores of 50 and 60) may be produced by a difference in only four items out of the fifty in the scale, and one of these items is "I have never been in trouble with the law". Secondly often studies do not control for socioeconomic status and this variable has been shown to affect Pd scores (Volkman, 1958). Finally studies cannot indicate whether certain personality traits result in criminality or whether criminal experiences produce those traits.

More recent studies have concentrated on attempting to distinguish delinquents who recidivate upon release from prison from those who do not. Some investigators have obtained significant, though small differences on the F, Hs, D, Hy, Pd, Ma and Si scales (Gough et al, 1965, Wirt 1967) leading Wirt to characterize recidivists as more sociable, psychopathic and stable than non recidivists. On the other hand negative results have been reported using single scales (Waltron, 1965), blind sorting of profiles by clinical judges (Mandel and Barron, 1966) mean profile comparisons (Panton, 1962) and elevations, mean ranks and code types (Mack, 1969).

The reliability of the MMPI has been examined using split-half and test-retest methods. Whilst low test-retest correlations have been reported (Hathaway and Monachesi, 1953, Mills, 1954) after periods up to five years, high test-retest correlations have been found using periods up to one week (Dahlstrom and Welsh, 1960, Rosen, 1953). The reliability of the test appears adequate using test-retest methods over short periods. The low correlations obtained over long periods may either be due to unreliability or the fact that people do actually change over long periods. Split-half methods have usually resulted in very low correlations (Schofield, 1950; Gilkland and

Welsh, 1952) but Dahlstrom and Welsh (1960) have suggested that this method is inappropriate as several scales contain ambiguous items which are liable to different interpretations, particularly by different psychiatric groups and hence parallel forms of scales cannot be obtained. The validity of this argument has, however, been doubted (Britton and Savage, 1966).

In conclusion, only the short term reliability of the MMPI has been demonstrated and the validity of the scales, particularly with criminals has not been established. As yet the MMPI seems unsuitable for individual diagnosis and leaves much to be desired but as a source of research inspiration, despite its cumbersome nature, it is the foremost psychometric instrument. Britton and Savage concluded their review of the test by stating that "New approaches to diagnosis with classifications using mathematical methods of group differentiation could reward investigation". The current study follows this recommendation.

RESULTS

The raw scores of the 19 MMPI scales were subjected to a cluster analysis using Ward's (1963) method from the computing package, 'Clustan 1B' (Wishart, 1972). This particular clustering method was adopted as it is suited to data of the kind produced by the MMPI (Glen et al, 1973, Wishart, 1974). The technique is based on the distance function d^2 which is the sum of the squared deviations of two series of scores (or profiles in this case). The smaller the value of d^2, the greater the similarity of the profiles. Firstly the pair of profiles having the greatest similarity is found and the number of groupings is progressively reduced until only two groups remain. At each step the next profile is chosen on the basis of the smallest increase on the total within groups variation, and an error term is generated at each step.

Deciding on the number of clusters present is problematic as there is no conventional quantitative indicator of the number of clusters in a set of data. Everitt (1974) suggests that with hierarchical techniques examination for large changes in the error term between fusions is the most appropriate method. Williams and Dale (1965), on the other hand, maintain that the identification of clusters should be carried out qualitatively, by subjective evaluation and interpretability of the results. Whilst some investigators have opted for a compromise between these positions using MMPI data in that they have examined the error term and the "clarity of the emergent profiles" (Glen et al, 1973, p. 53) it is difficult to support the strategy. Any MMPI profile has clarity in the sense that it can be interpreted and the researcher is open to the criticism that he may simply find what he sets out to look for in the data.

The present writer adopted the approach of examining the error term for its first large change. This criterion was chosen rather than the largest overall change since the largest change in the error term usually occurs at the final fusion of two clusters using Ward's method (see, for example, Everitt, 1974). This strategy avoids the imposition of a two cluster solution on the data and encourages the search for the first real indication in the data of dissimilarity.

The current data produced the expected largest change in the error term at two clusters. The first large change was infact the only other large change in the error term and this resulted in the adoption of a five cluster solution. Appendix A shows a summary of the fusions in this analysis. The MMPI profiles of these five normal homicide (NH) groups are shown in Diagrams 2 to 6 with continuous lines. The profiles are nonK corrected since raw scores were used in the analysis and wide variation in K between groups make K correction inappropriate. The mean scores of the 19 scales and the

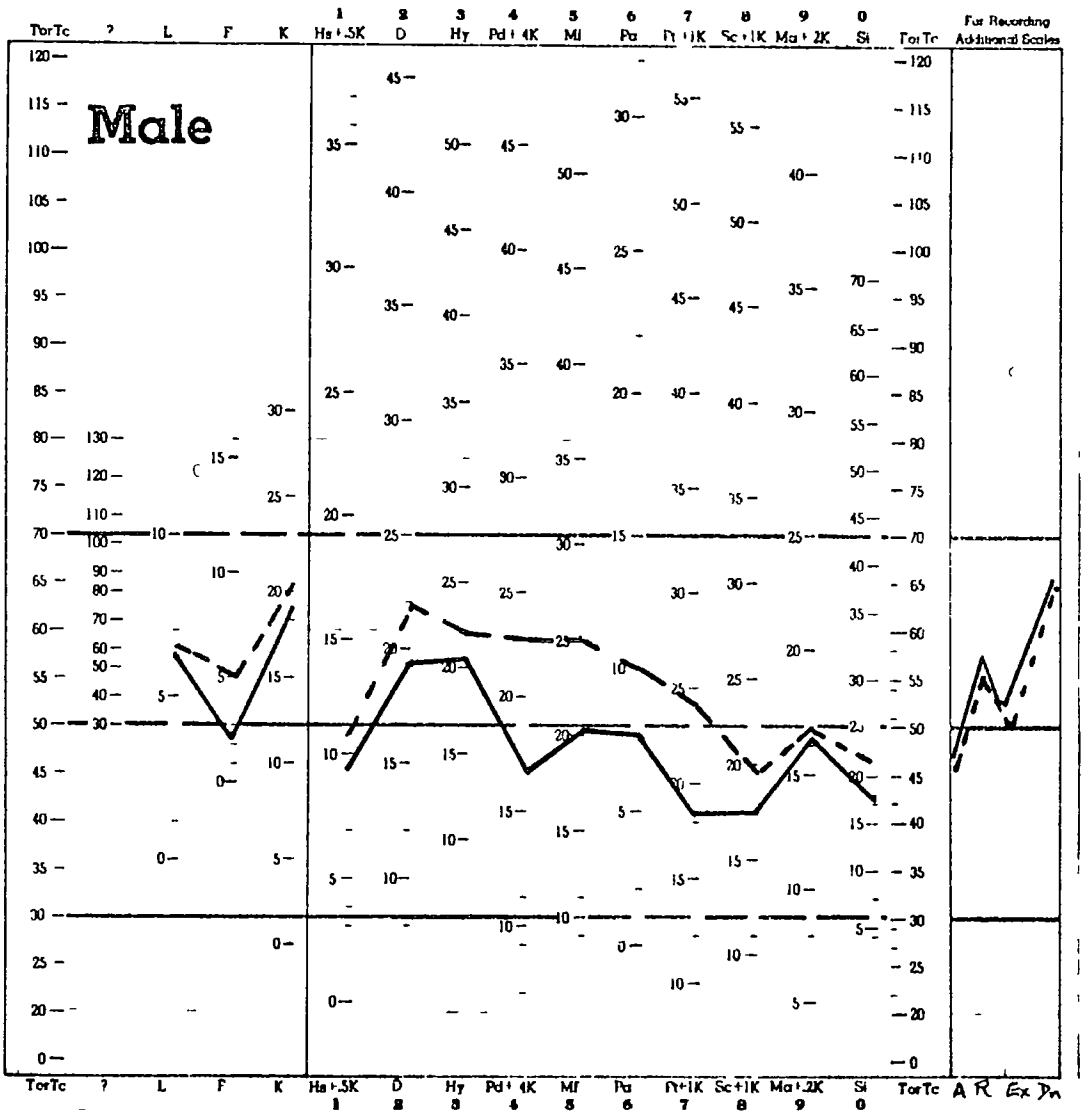
results of a one way analysis of variance for each scale across the five clusters are shown in Table D. T-test comparisons between the groups were carried out and these are shown in Table E.

The broken lines in Diagram 2 to 6 show Blackburn's (1971) profiles of abnormal homicides (AH) and as can be observed there is considerable similarity between the current and previous findings. The present 5 clusters were, therefore, provisionally given the same Type numbers as Blackburn's 4 groups. Two of the present clusters were similar to Blackburn's Type 2, differing only in level and hence these are called Types NH2a and NH2b.

Osgood and Suci (1952), Cronbach and Gleser (1953) and Nullally (1962) have discussed comparing profiles numerically and recommend the similarity coefficient $\sum d^2$ where d is the difference between the T scores of each scale. The advantages of this measure of similarity are that it includes all the available information in the profiles . level, shape and dispersion. The normal homicide (NH) clusters and Blackburn's abnormal homicide (AH) clusters were compared numerically using $\sum d^2$. Table F shows the similarity coefficients and generally supports the previous subjective observation of the similarity between the profiles. NH1 NH2a NH3 and NH4 are most similar to AH1 AH2 AH3 and AH4, respectively. NH2b is similar to both AH2 and AH4.

In addition to the calculation of similarity coefficients six independent psychologists were asked to say which of the AH Types, if any, was similar to each of the NH Types. The results are shown in Table G and the clinical judges were unanimous in their opinion. NH1, NH2a, NH2b, NH3 and NH4 were judged to be similar to AH1 AH2 AH3 and AH4 respectively. In contrast to the similarity coefficient NH2b was judged similar to AH2 and not to AH4. The most parsimonious explanation for this is that the similarity

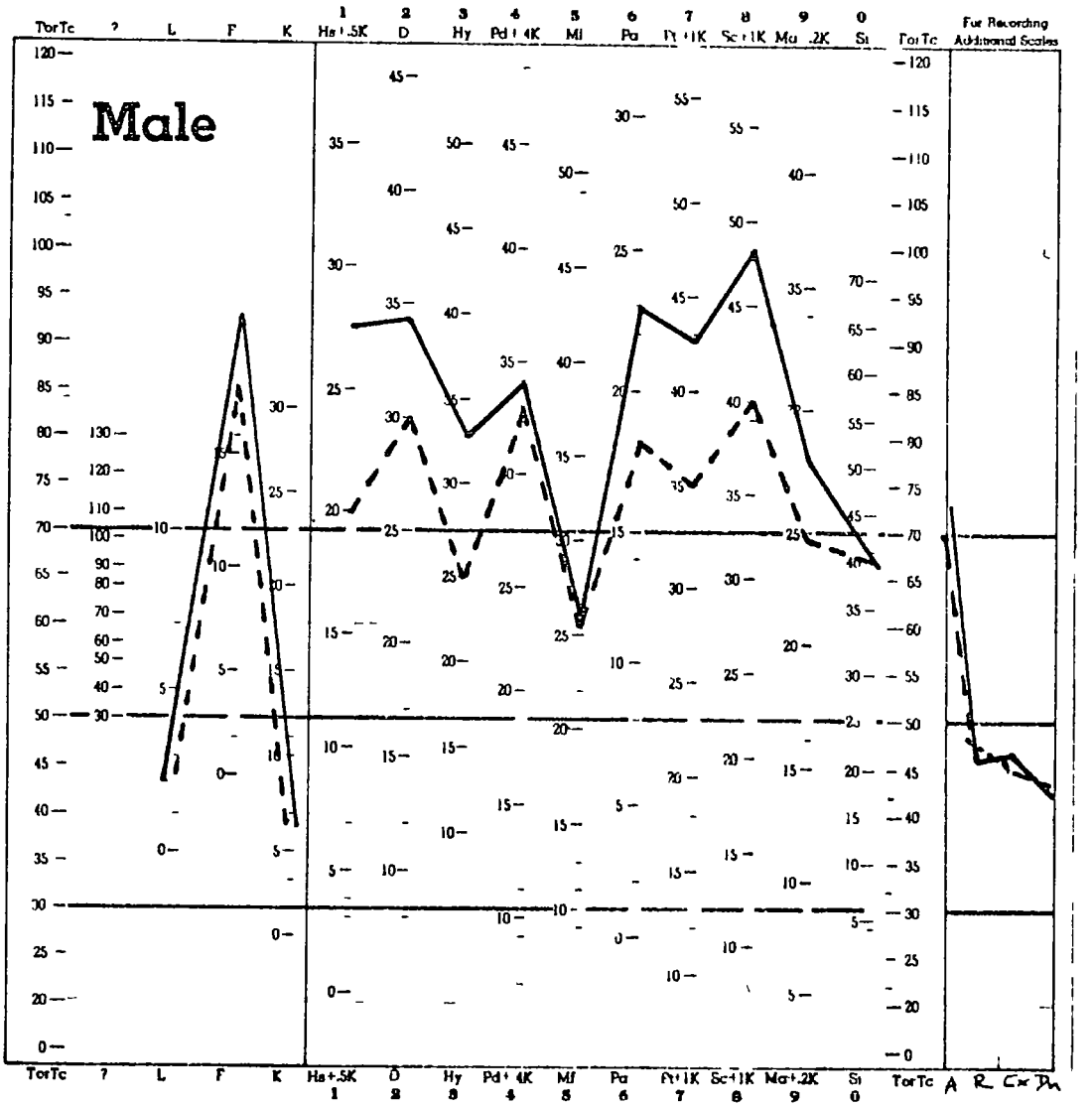
DIAGRAM 2 : MEAN PROFILES OF TYPES NH1 (N = 6) AND AH1 (N = 17)



AH1

NH1

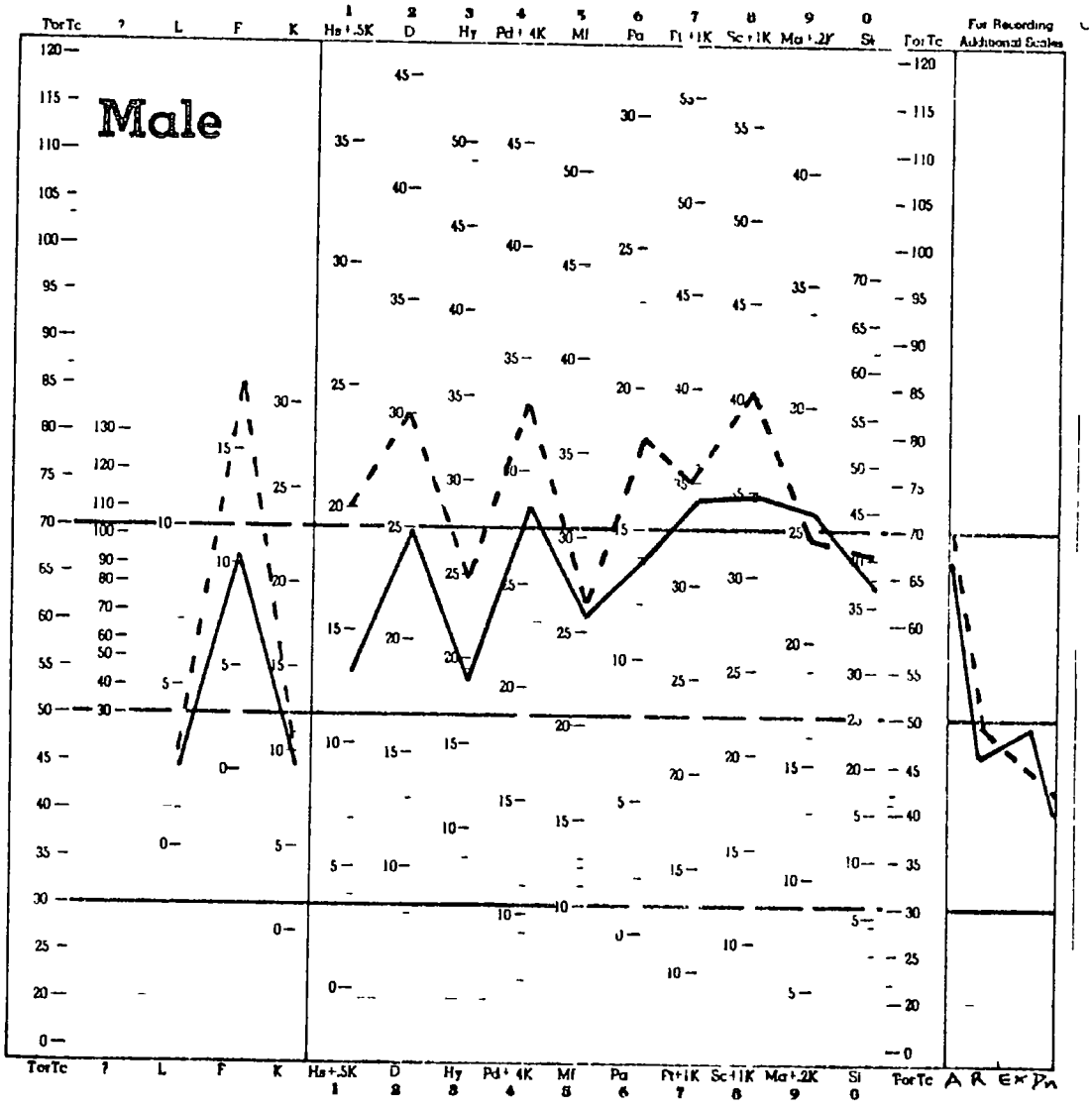
DIAGRAM 3 : MEAN PROFILES OF TYPES NH2a (N = 3) AND AH2 (N = 13)



— — — — AH2

———— NH2a

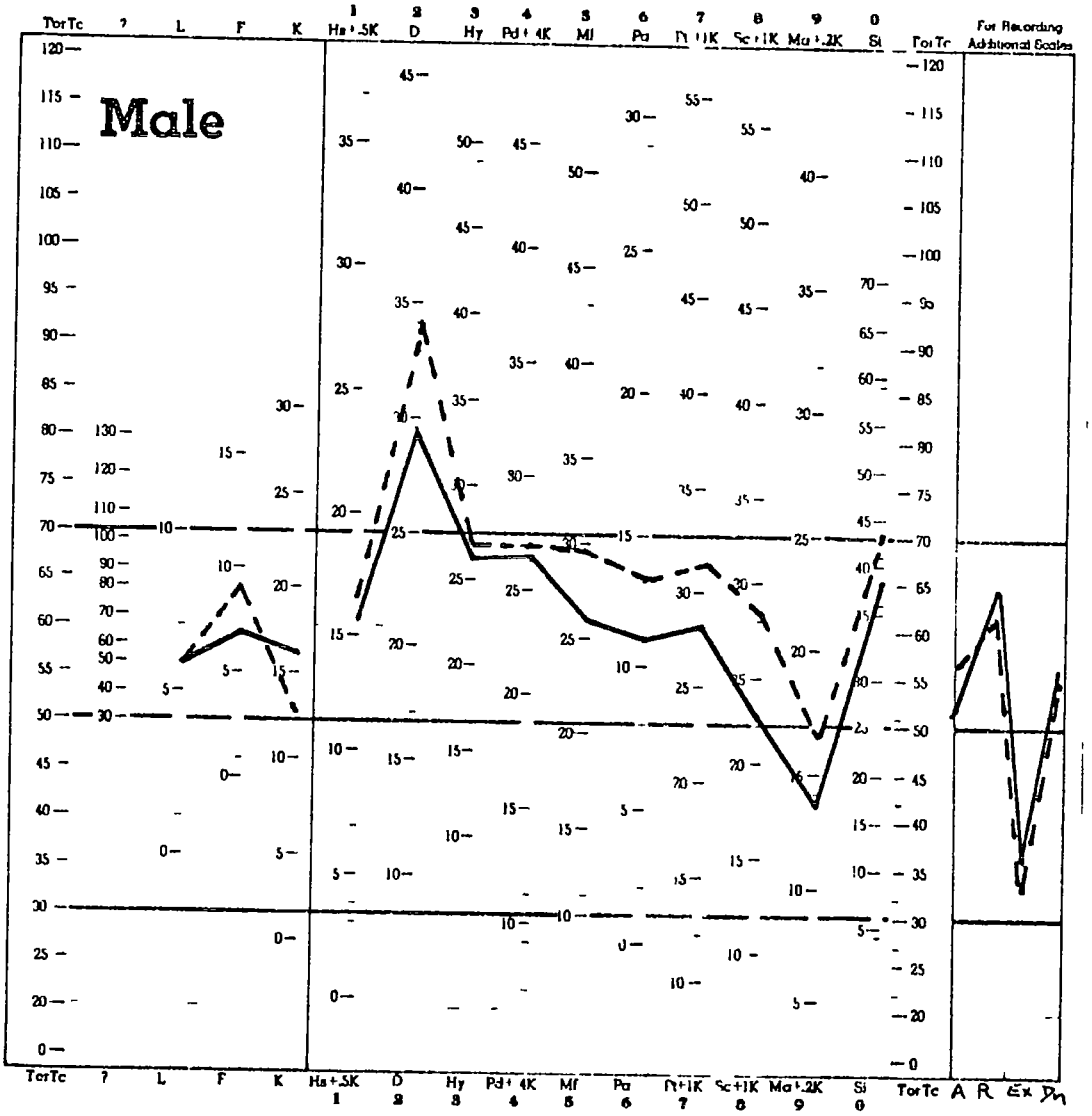
DIAGRAM 4 . MEAN PROFILES OF TYPES NH2b (N = 14) AND AH2 (N = 13)



AH2

NH2b

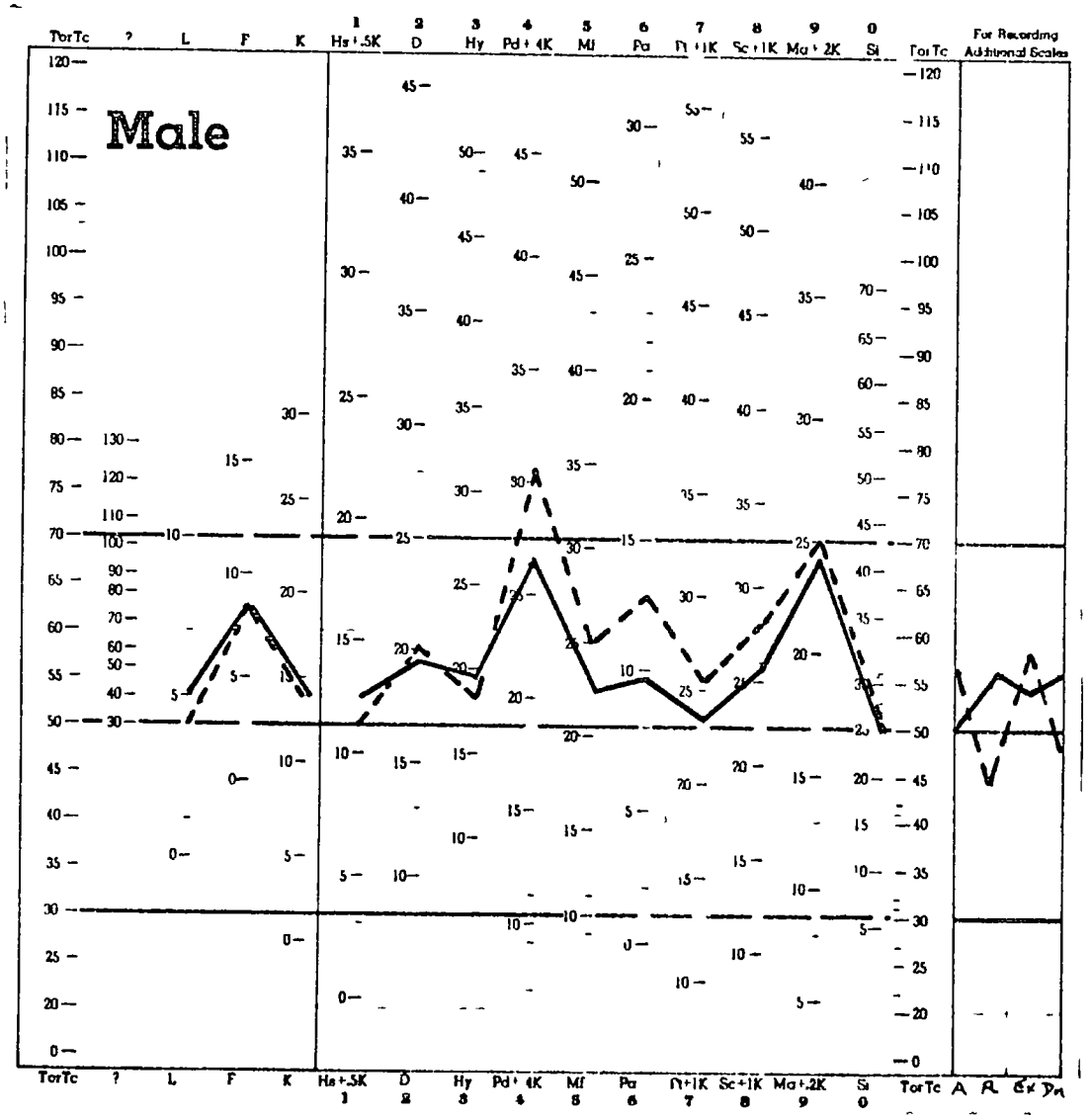
DIAGRAM 5 : MEAN PROFILES OF TYPES NH3 (N = 4) AND AH3 (N = 8)



AH3

NH3

DIAGRAM 6 : MEAN PROFILES OF TYPES NH4 (N = 13) AND AH4 (N = 7)



AH4

NH4

TABLE D

FIVE CLUSTERS OF 'NORMAL' HOMICIDES . ONEWAY ANALYSIS OF VARIANCE OF 19 MMPI SCALES.

	NH1(N=6)		NH2a(N=3)		NH2b(N=14)		NH3(N=4)		NH4(N=13)			
	$\bar{x}$	sd	$\bar{x}$	sd	$\bar{x}$	sd	$\bar{x}$	sd	$\bar{x}$	sd	F	
L	6.50	1.87	2.00	1.00	2.79	2.08	6.00	0.82	5.08	2.47	5.59	**
F	2.17	1.47	22.67	4.04	10.50	3.30	6.75	2.63	8 15	4.26	18.63	***
K	19.00	2.61	6.33	2.52	9.14	3.35	16.00	4.08	14.15	2.85	15.64	***
Hs	2.50	1.05	23.33	6.43	6.64	3.32	9.75	6.08	6.00	4.83	13.52	***
D	19.00	2.00	34.33	4.93	24.71	3.85	29.50	4.51	19.23	3.17	17.25	***
Hy	20.50	3.62	33.00	6.56	18.29	4.29	26.25	5.74	19.23	4.07	8.74	***
Pd	12.67	3.23	28.00	1.00	22.57	4.27	21.25	4.19	21.08	3.45	10.67	***
Mf	20.17	5.12	26.00	5.29	26.00	5.92	26.00	5.35	23.00	3.89	1.77	
Pa	7.83	1.60	23.00	6.08	13.79	3.49	11.25	3.20	9.85	3.63	11.59	***
Pt	3.00	2.53	39.33	1.53	26.50	4.16	17.75	7.14	10.62	3.97	64.26	***
Sc	3.00	1.41	46.67	5.13	27.57	7.29	10.75	2.75	15.00	6.52	36.24	***
Ma	13.83	2.14	26.67	2.08	24.14	2.57	10.75	4.50	22.15	3.29	27.84	***
Si	17.50	3.89	40.33	8.74	36.86	7.06	38.50	2.38	25.54	5.09	17.76	***
A	7.50	2.43	31.67	1.53	24.07	4.32	14.25	1.50	13.38	3.25	44.02	***
R	16.50	3.02	13.67	2.89	13.14	3.70	23.25	4.03	18.54	2.99	9.24	***
Ex	24.67	3.27	24.00	8.72	23.50	5.14	13.25	3.20	26.69	3.84	6.47	**
Dn	17.67	2.50	7.00	3.61	8.29	2.76	14.75	3.10	13.00	2.31	17.65	***
GH	7.83	2.56	36.33	2.89	30.43	5.50	17.25	3.77	19.85	5.19	31.83	***
DH	- 4.50	3.02	3.00	3.00	0.29	4.44	11.25	4.57	- 6.62	7.38	9.70	***

**p <.01

***p <.001

TABLE D

TABLE E

FIVE CLUSTERS OF 'NORMAL' HOMICIDES - T-TESTS BETWEEN CLUSTERS.

Scale	NH1 vNH2a t	NH1 vNH2b t	NH1 vNH3 t	NH1 vNH4 t	NH2a vNH2b t	NH2a vNH3 t	NH2a vNH4 t	NH2b vNH3 t	NH2b vNH4 t	NH3 vNH4 t
L	4.70**	3.93**	0.57	1.38	-0.98	-5.65**	-3.44**	-4.66***	-2.60	1.16
F	- 8.51*	- 7.81***	- 3.17*	-4.52***	4.88*	5.94**	5.55*	2.37	1.59	-0.79
K	7.03**	7.08***	1.30	3.65**	-1.65	-3.86*	-4.73*	-3.08*	-4.19***	0.84
Hs	- 5.57*	- 4.21***	- 2.36	-2.49*	4.37*	2.83*	4.39*	-0.98	0.40	1.13
D	- 5.18*	- 4.35***	- 4.38*	-0.19	3.18*	1.33	5.07*	-1.93	4.05***	4.24*
Hy	- 3.08	1.18	- 1.78	0.68	3.72	1.42	3.49	-2.58	-0.59	2.28
Pd	-10.39***	- 5.58***	- 3.44*	-5.06***	4.24***	3.10	6.19***	0.55	1.00	0.08
Mf	- 1.62	- 2.34*	- 1.77	-1.13	0.00	0.00	0.92	0.00	1.53	1.03
Pa	- 4.25	- 5.23***	- 1.98	-1.68	2.54	3.04	3.60	1.37	2.87**	0.74
Pt	-26.75***	-15.48***	- 3.97	-5.05***	9.04***	5.87**	20.36***	2.34	10.15***	1.91
Sc	-14.47**	-12.09***	- 5.19**	-6.32***	5.38**	10.99**	9.12***	7.05***	4.73***	-1.87
Ma	- 8.64**	- 9.29***	1.28	-6.59***	1.82	6.24**	2.99*	5.69**	1.74	-4.70**
Si	- 4.32*	- 7.85***	-10.59***	-3.78**	0.65	0.35	2.82	-0.74	4.80***	7.02***
A	-18.21***	-10.88***	- 4.43**	-4.39**	5.23***	15.04***	14.49***	7.13***	7.29***	0.74
R	1.37	2.13	- 2.86	-1.37	0.27	-3.66*	-2.62	-4.50**	-4.18***	2.16
Ex	0.19	0.61	5.48***	-1.19	0.10	2.04	-0.52	4.86***	-1.84	-6.99***
Dn	4.60*	7.45***	1.57	3.87**	-0.58	-2.99*	-2.76	-3.77*	-4.83***	1.05
GH	-14.48***	-12.52***	- 4.36**	-6.75***	2.66*	7.58***	7.48***	5.51***	5.14***	-1.09
D^H	- 3.53*	- 2.80*	- 6.06**	0.89	1.29	-2.88*	3.59**	-4.26**	2.92**	5.82***

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

TABLE E

TABLE F

SIMILARITY COEFFICIENTS BETWEEN BLACKBURN'S TYPES 1, 2, 3, 4 AND NORMAL HOMICIDE TYPES 1, 2a, 2b, 3 AND 4.

		NORMAL HOMICIDE TYPES				
		NH1	NH2a	NH2b	NH3	NH4
Blackburn's Types	AH1	25.83	118.78	63.94	40.04	29.24
	AH2	102.14	39.31	37.24	70.85	72.21
	AH3	75.21	82.95	50.82	23.75	57.88
	AH4	58.69	94.95	34.45	54.46	23.06

TABLE G

CLINICAL JUDGEMENTS OF THE SIMILARITY BETWEEN ABNORMAL HOMICIDE TYPES (AH1, AH2, AH3, AND AH4) AND NORMAL HOMICIDES TYPES (NH1, NH2a, NH2b, NH3, AND NH4).

		NORMAL HOMICIDE TYPES				
		NH1	NH2a	NH2b	NH3	NH4
ABNORMAL HOMICIDES	AH1	6*	0	0	0	0
	AH2	0	6*	6*	0	0
	AH3	0	0	0	6*	0
	AH4	0	0	0	0	6*
	Not Similar to any of above	0	0	0	0	0

*p = 0.016 Sign test (one tailed)

coefficient is primarily a distance measure whilst clinical judges take particular account of the shape of the profile, largely because of their training in the use of MMPI codes which is based on the relative shapes of profiles. In conclusion the current results indicate that similar personality types exist in normal homicides as exist in abnormal homicides, as measured by the MMPI.

Blackburn delineated and described the personality types he found among abnormal homicides in terms of the personality characteristics associated with Megargee's dimension of over-under control. Since the profiles found in this study with normal murderers are virtually the same the following descriptions of the current types are similar to Blackburn's descriptions of types of abnormal homicides.

Type NH1 contains 6 subjects (15% of the sample) and the mean profile remains within normal limits The differences between these subjects and others are that they have a high level of defensiveness (L, K, Dn) high impulse control (R, Ma) a low level of anxiety and hostility (A and GH) and do not report psychiatric symptoms, except for some depressive tendencies (D). Because of their conformity, control, their use of defence mechanisms such as denial and repression, and their lack of anxious and hostile feelings these subjects have been described as 'overcontrolled repressors' by Blackburn (1971 p. 6).

Type NH2a is the smallest group and contains only 3 subjects (7.5% of the sample). The majority of the MMPI scales are above normal limits indicating that the profile is distinctly abnormal. These subjects score high on the 'psychotic triad' (Pa Pt Sc) and also on the 'neurotic triad' (Hs, D, Hy). In addition these subjects appear immature and impulsive (Pd) and have higher levels of hostility (GH) and anxiety (A) than any other group. In terms of Megargee's theory of control these subjects have antisocial attitudes and

are irrational, even more so than Blackburn's AH Type 2 subjects from Broadmoor, and as such have undercontrolled characteristics. Since patients with this kind of MMPI profile are often diagnosed as paranoid schizophrenics Blackburn labelled this group as a 'paranoid aggressive' type.

Type NH2b is the largest group and contains 14 subjects (35% of the sample). The shape of this profile is similar to Type 2a but it is at a lower height, and only 4 scales fall outside normal limits, and then marginally so (Sc, Pt, Ma, Pd). Hence the profile is not extremely abnormal. These subjects report similar symptoms to Type 2a, but to a lesser degree. Two scales of the psychotic triad (Sc, Pt) are again elevated though two scales of the neurotic triad (Hs and Hy) are normal in this group. The depressive tendencies (D) impulsiveness (Pd) hostility (GH) and anxiety (A) that were reported by Type 2a are again evident in Type 2b. However the lowest scale within the psychotic triad is paranoia (Pa) and this kind of profile would not be diagnosed as paranoid schizophrenic. Consequently, although this group is disturbed, hostile, has anti social attitudes, and clearly falls into the undercontrolled category of Megargee, it cannot be labelled 'paranoid-aggressive'. Tentatively this group is labelled 'disturbed aggressive'.

Type NH3 contains only 4 subjects (10% of the sample) and has only one abnormal elevation, that of the Depression scale. These subjects score lowest on the Extraversion and Mania scales and high on the Repression and Social Introversion scales indicating strong impulse control, social anxiety and introversion. A moderate degree of hostility is shown and it is directed towards the self rather than towards others. Like Type 1, this group has overcontrolled characteristics but stress seems to be dealt with in a different manner in that guilt, self criticism, depression and social anxiety are reported. Blackburn called this type a 'depressed inhibited' group.

Tyne NH4 contains 13 subjects (32 5% of the sample) and is the second largest group in the sample. The profile, generally known as the 9-4 profile shows two elevation (Pd, Ma) just within normal limits, and is usually associated with the psychopathic personality. There is an absence of neurotic and psychotic symptoms. The most distinctive features are impulsiveness, anti-social attitudes (Pd, Ma) and a moderate degree of hostility which is directed predominately at other people. This type has characteristics which conform to Megargee's notion of undercontrol and has been called a 'psychopathic'type by Blackburn.

The two overcontrolled groups (Types NH1 and NH3) and the three undercontrolled groups (Types NH2a, NH2b and NH4) were combined in order to carry out a discriminant function analysis. Table H indicates that five variables constitute the discriminant function and the standardized discriminant function coefficients show that the greatest contribution is made by Ma, which is approximately four times as important as R, Pd, and Hy, and five times as important as L. This function is predominantly an impulse control/responsibility dimension with some contribution from the defense mechanisms of repression and denial. The adequacy of the discriminant function was checked by determining how many of the original cases would be correctly classified as overcontrolled/undercontrolled by the function. This procedure resulted in 97.50% of the subjects being correctly classified as overcontrolled/undercontrolled, thereby demonstrating the adequacy of the discriminant function.

DISCUSSION

Despite the difficulties of comparing samples that could differ on variables other than those examined in this study the similarity of the

TABLE H

DISCRIMINANT FUNCTION ANALYSIS BETWEEN OVERCONTROLLED (TYPES NH1 AND NH3) AND UNDERCONTROLLED (TYPES NH2a, NH2b, AND NH4) NORMAL HOMICIDES.

Step Number	Variable Entered	Variable Removed	F to enter or remove	Number Included	Wilks' Lambda	Significance	Rao's V	Change in Rao's V	Significance of Change
1	Ma		87.38	1	0.30	p<.001	87.38	87.38	0.000
2	Pd		4.74	2	0.27	p<.001	103.45	16.07	0.000
3	Hy		3.61	3	0.24	p<.001	117.63	14.19	0.000
4	R		3.95	4	0.22	p<.001	135.22	17.60	0.000
5	L		2.75	5	0.20	p<.001	149.11	13.89	0.000

Discriminant Function	Eigenvalue	Relative Percentage	Canonical Correlation	Functions Derived	Wilks' Lambda	Chi Square	DF	Significance
1	3.92	100.00	0.89	0	0.20	56.59	5	p<0.001

Standardized Discriminant Function Coefficients

L	0.16
Hy	0.21
Pd	-0.22
Ma	-0.89
R	-0.26

present results with Blackburn's are notable considering that different clustering methods were used in the studies. Blackburn used the clustering technique developed by Lorr and McNair (Lorr, 1966) which finally classified 80% of his total sample leaving 20% which could not be classified. The current study used Ward's method which classifies every subject as it is a hierarchical technique beginning with N-1 groups and continuing until two groups remain This is a weakness of the technique since if some individuals deviate markedly from all the characteristic profiles forming the clusters, they cloud the final picture. Despite this, the profiles from normal homicides are similar to abnormal homicides.

Whilst the same kinds of personalities were found the proportion of overcontrolled to undercontrolled people differed in the two studies. Of Blackburns classifiable subjects 56% were overcontrolled, but only 25% of the present sample were overcontrolled. It is surprising that the proportion of overcontrolled individuals should decrease when one moves from examining homicides in a psychiatric setting to homicides in prison. The overcontrolled groups exhibit few of the psychiatric symptoms generally associated with mental illness. On the other hand the undercontrolled groups have been called 'paranoid aggressive' 'disturbed aggressive' and 'psychopathic' because of their similarity to psychiatric patients. It would, therefore, not be unreasonable to expect that there would be a higher proportion of undercontrolled homicides in Broadmoor than in prison, but on the basis of the current evidence this does not appear to be the case.

This finding has two implications. Firstly, it is possible that the legal system may be classifying some homicides as mentally ill when infact they are not. One explanation for this may be that overcontrolled individuals, who appear mild mannered and tend not to have a history of psychiatric illness or previous conviction for assault (see Chapter 4) are

seen as mentally ill because their crime is so uncharacteristic. In other words, the feeling may exist that there must be something drastically wrong with an individual who kills unexpectedly and out of the blue, he may be mentally disturbed. On the other hand Broadmoor could be being used as a 'soft option' by the courts on the assumption that prison regimes are relatively punitive compared to the regime of a hospital. The suggestion would then be that a mild mannered individual who kills out of the blue does not really deserve to receive a prison sentence. This is reserved for persistent, hardened criminals, and overcontrolled individuals may not be seen in this light. Hence a softer option than prison is sought, which still involves incarceration, and Broadmoor immediately springs to mind. These two possible explanations for the higher proportion of overcontrolled homicides in Broadmoor than in prison are not mutually exclusive.

The second implication again stems from the finding that although overcontrolled individuals are over-represented in Broadmoor, they do not form the majority of homicides generally. Since only 25% of normal homicides were found to be overcontrolled any attempt to design a short test of overcontrolled hostility should not utilize a sample of homicidal individuals on the assumption that overcontrolled individuals predominate. Megargee et al (1967) made this assumption and this point is taken up further in Chapter 5.

Summary

A cluster analysis of 19 MMPI scales from 'normal' homicides ($N = 40$) resulted in five types which were similar to Blackburns types of 'abnormal' homicides. Megargee's theory of control was supported in that the five types appeared to represent two broad categories of undercontrolled and overcontrolled individuals. The implication of the results for the disposal of homicidal offenders, in particular to Broadmoor, were discussed.

CHAPTER THREE

PERSONALITY TYPES AMONG PRISONERS AND CONTROLS

The literature reviewed in Chapter One and the results presented in Chapter Two support the idea that two broad categories of overcontrolled and undercontrolled personality types exist among homicidal individuals. At approximately the same time as data was being collected by the present writer on normal homicides, Blackburn (1975) carried out a cluster analysis of MMPI profiles of 79 non-psychotic offenders at Broadmoor who were suffering from Psychopathic Disorder. The Mental Health Act of 1959 identifies individuals suffering from this disorder as exhibiting "abnormally aggressive or seriously irresponsible conduct", and it is probable, though not certain, that these subjects had carried out some act of extreme aggression. Blackburn was primarily concerned with relating his results to the traditional clinical descriptions of psychopathy of Cleckley (1964) and McCord and McCord (1964), but surprisingly, in view of the fact that the four types he found were "virtually identical to those obtained in a previous study of homicides drawn from the same institution" (p. 459), he did not relate his results to Megargee's theory of control. He concluded that two types were identifiable as primary and secondary psychopaths (as described clinically by Hare, 1970), and two types were not, despite all subjects being diagnosed as suffering from Psychopathic Disorder. Interestingly the primary and secondary psychopaths correspond to what have this far been called undercontrolled groups, Types AH1/NH1 and AH3/NH3 respectively.

On the assumption that the subjects of Blackburn's latest study behaved in an extremely aggressive manner for them to be sent to Broadmoor the results provide more support for Megargee's theory in that the four types were identical to those found among abnormal homicides and these were

shown to be undercontrolled and overcontrolled types (Blackburn, 1971). On the other hand if this assumption is incorrect, at least in there being a number of moderately assaultive and, perhaps, even non-violent offenders in Blackburn's sample, then the possibility exists that the consistently emerging profiles produced by Blackburn and the present author are not types of extremely assaultive offenders but types of offenders generally. A further important possibility also needs consideration and this is that these consistently emerging profiles may simply represent types of people generally rather than types of extremely assaultive offenders. If either or both of these possibilities were shown to hold true then Megargee's theory would require re-examination. The present chapter is devoted to studying these possibilities.

Subjects

A random group of seventy prisoners at HM Prison, Durham, who were remanded in custody were asked to take part in the study. Four inmates refused, and six inmates were found to be illiterate on a standardized prison reading test. The remaining inmates formed the prisoner group (N=60) and they were all found guilty of an offence (although not necessarily given a custodial sentence). They were aged between 21 and 53 years of age ($\bar{x}$ 28.02, s.d. : 8.01) and fell into the lower socioeconomic groups ($\bar{x}$ 4.02, s d. 0.68) according to the Registrar General's (H M.S.O., 1970) classification of occupations. The subjects were eventually convicted of various property offences (N=44) drug offences (N=4) sexual offences (N=4) and offences involving violence (N=8).

In addition a random sample of forty four prison officers from HM Remand Centre, Low Newton and from in-service training courses at

HM Prison, Durham were asked to take part in the study. Four officers refused to participate and the remaining subjects (N=40) were aged between 24 and 47 years of age ($\bar{x}$: 32.1, s.d. : 7.21) and fell into a lower socioeconomic group ($\bar{x}$: 4.00, s.d. : 0.000) according to the Registrar Generals classification of occupations. The selection of a group of prison officers as a comparison group (hereafter labelled the Control group) was dictated by several compelling reasons. Firstly they are of similar socioeconomic status to both the normal homicide and prisoner samples and this variable has been shown to influence MMPI scales (Volkman, 1958). Secondly they are 'inside' prison, as were the normal homicide and prisoner groups, and there is some evidence to suggest that differential responses to test items may occur 'outside' as opposed to inside prison (Hardwick, 1973). Prison officers are not incarcerated but they are the closest a researcher can get to a group of 'normal' people in a prison environment. Thirdly, prison officers are known to have a delinquent-free history since all prospective Home Office employees are scrutinized by Criminal Records Office prior to their employment. It would not be possible to assume that any other sample of the normal population were entirely delinquent free and scrutinizatio of such a sample by Criminal Records Office could only be carried out with difficulty and certainly at the expense of anonymity of the subjects. Fourthly, prison officers are known to be literate as they undertake standardized tests during the selection procedure prior to employment by the Home Office. Finally, whilst prison officers are, on the whole, quite happy to complete lengthy tests during their working hours the difficulties of persuading any other sample from the normal population are apparent. The researcher would have to ask the subjects to give up approximately two hours of their own time, without pay, and this is probably why, as far as the writer knows, no random samples of the normal population in Britain on the MMPI have been collected. Prison officers, then, provide an attractive, if not ideal, control sample.

Procedure

The testing of remand prisoners and prison officers was not routine and hence reliance could not be placed on the routinization of tasks within prisons (as was the case with the homicide sample) to assist in gaining the co-operation of the subjects. Special emphasis was placed on stressing the helpfullness,confidentially, and anonymity of their responses and great care was taken to treat the men with respect in order that a friendly relationship developed. The subjects were again told that a research project designed to look at people's opinions about various aspects of life was being carried out and their help with this task would be much appreciated. The prisoner group was administered the individual card form of the MMPI whilst the control group was administered the booklet form of the MMPI individually, or in small groups of between two and five people. The equivalence of these two forms of the MMPI has been adequately demonstrated (Hathaway and McKinley 1967).

Description of the measuring instrument

Identical MMPI scales were used in this part of the study as were used in the preceding chapter in order that comparisons could be made between the abnormal homicides, the normal homicides, the prisoners and the controls.

RESULTS

The raw scores of the 19 MMPI scales of both the prisoner and the control group were subjected to cluster analyses using Ward's (1963) method and summaries of these analyses are to be found in Appendix B (prisoner group) and Appendix C (control group). As can be seen from these summaries

the first large changes in the dissimilarity coefficients produced three clusters in each group. These results from the prisoner and control groups are discussed in turn.

The Prisoner Group

Diagrams 7, 8 and 9 show the non K corrected profiles of the three clusters of prisoners and on initial inspection of these profiles Diagram 7 appeared to be very similar to Types AH1 and NH1 (Chapter 2, Diagram 2), Diagram 8 appeared to be very similar to Type AH2 (Chapter 2, Diagram 3), and Diagram 9 appeared to be very similar to Type NH4 (Chapter 2, Diagram 6). Tentatively these new clusters were therefore labelled Types P1, P2 and P4. The mean scores of the 19 scales and the results of a one way analysis of variance for each scale are shown in Table I. T-test comparisons between Types P1, P2 and P4 were carried out and these are shown in Table J.

In order to examine the similarity of the new clusters to the previous findings quantitatively, similarity coefficients were calculated for the prisoner profiles and the abnormal and normal homicide samples and these are shown in Table K. As can be seen P1 is most similar to AH1, P2 is most similar to AH2, and P4 is similar to both NH4 and AH4. Further confirmation of this similarity is shown in Table L which shows the opinions of six psychologists who were asked to say which, if any, of the AH and NH profiles were similar to each of the P profiles. P1 was unanimously judged to be like AH1 (and like NH1 by five of the judges) whilst all six again agreed that P2 was like AH2, and P4 was similar to both AH4 and NH4.

Type P1 is the smallest prisoner group containing 10 subjects (16.67% of the sample) and the mean profile remains within normal limits. The subjects report few psychotic or neurotic symptoms. Table J indicates that the main differences between these subjects and the subjects in Types P2 and P4 are their low level of anxiety and hostility (A and GH), high level

of defensiveness (L, K and Dn) and high level of impulse control (R and Ma). They do, however, score highest on Pd which may reflect their immaturity rather than their impulsiveness. Apart from their Pd score this group has been described in a similar fashion to Type NH1 and this group is again called an overcontrolled repressor group for the moment.

Type P2 is the largest group and contains 28 subjects (46.67% of the sample) and the profile shown in Diagram 8 is abnormal in that all three scales of the "psychotic triad" (Pa, Pt and Sc) are well above normal limits. The subjects also report depressive symptoms (D) and appear immature in the sense that they are irresponsible and lack impulse control (Pd and Ma). Anxiety (A) and hostility (GH) are also at a high level. This group shows a striking similarity to Type AH2 and hence this group is again called an aggressive paranoid group, showing characteristics of the secondary psychopath (Hare, 1970) and conforming to Megargee's notion of undercontrol.

Type P4 represents 36.67% of the sample and contains 22 subjects. This profile is similar to Type NH4 in that, whilst all of the scales are within normal limits, it is generally known as the 9-4 profile showing the two elevations (Pd and Ma) usually associated with the psychopathic personality. These elevations indicate irresponsibility and poor impulse control and they also have a moderate degree of hostility which is directed toward others rather than toward themselves. This type can therefore again be labelled a psychopathic type and has characteristics which conform to Megargee's concept of undercontrol.

Types P2 and P4 (undercontrolled) were combined and contrasted with P1 (overcontrolled) in a discriminant function analysis. Table M shows that eight variables constitute the discriminant function with the greatest contribution from the General Hostility and Depression scales. A further three varied scales (K, Hs and Pd) contribute approximately the same amount to the function and it is perhaps unwise to interpret this function using a simple label.

DIAGRAM 7 : MEAN PROFILE OF TYPE P1 (N=10)

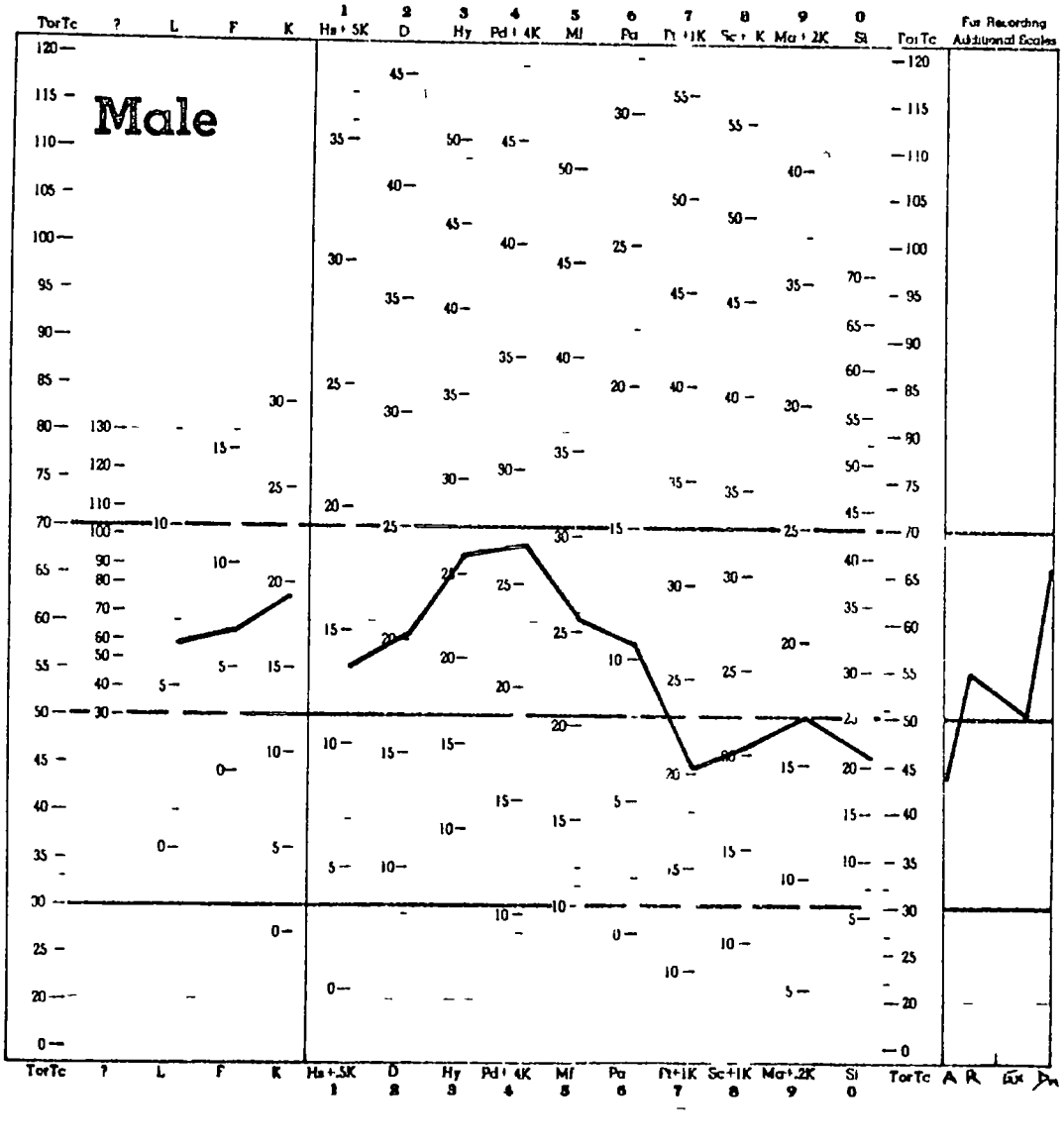


DIAGRAM 8 · MEAN PROFILE OF TYPE P2 (N=28)

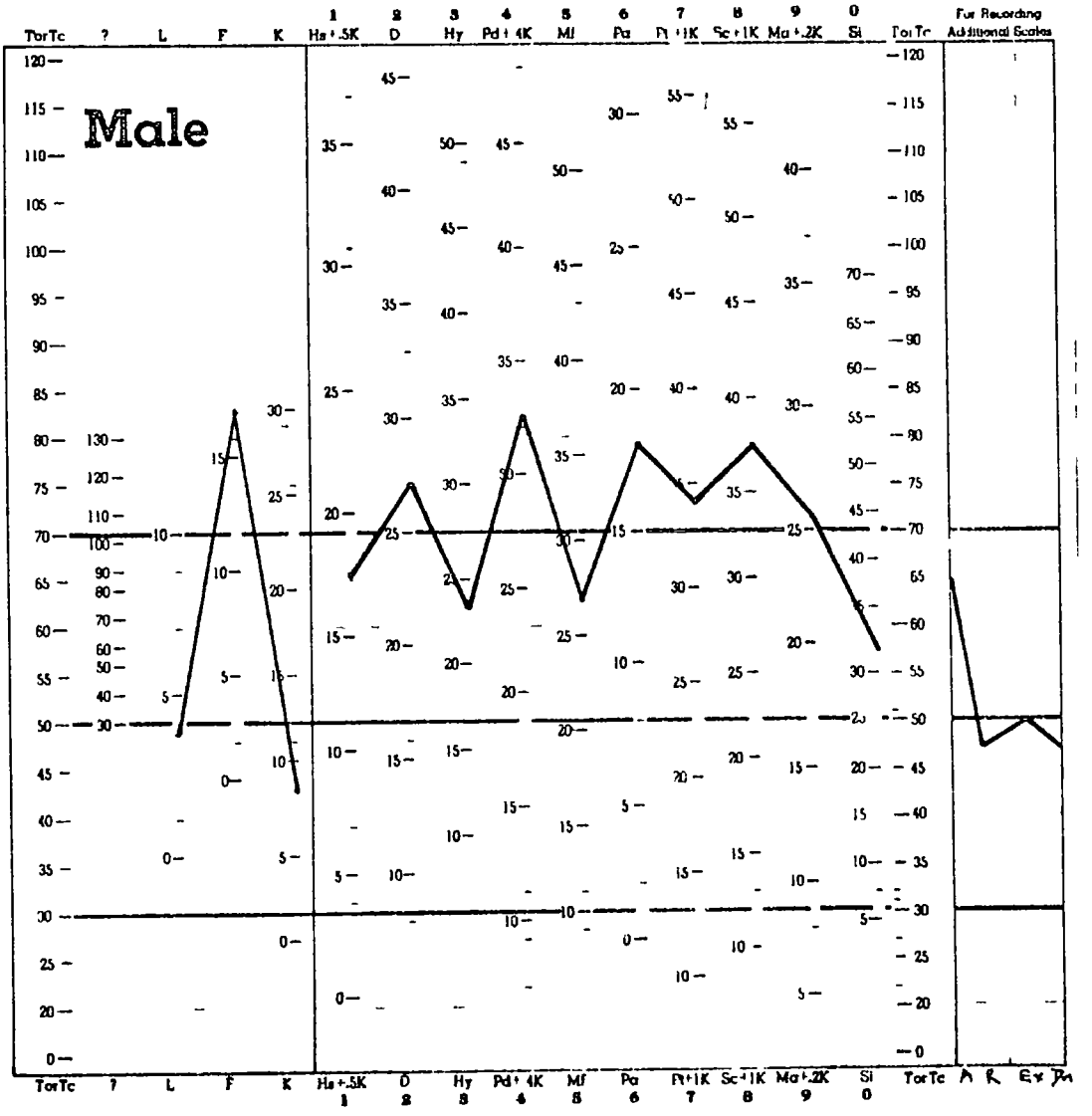


DIAGRAM 9 · MEAN PROFILE OF TYPE P4 (N=22)

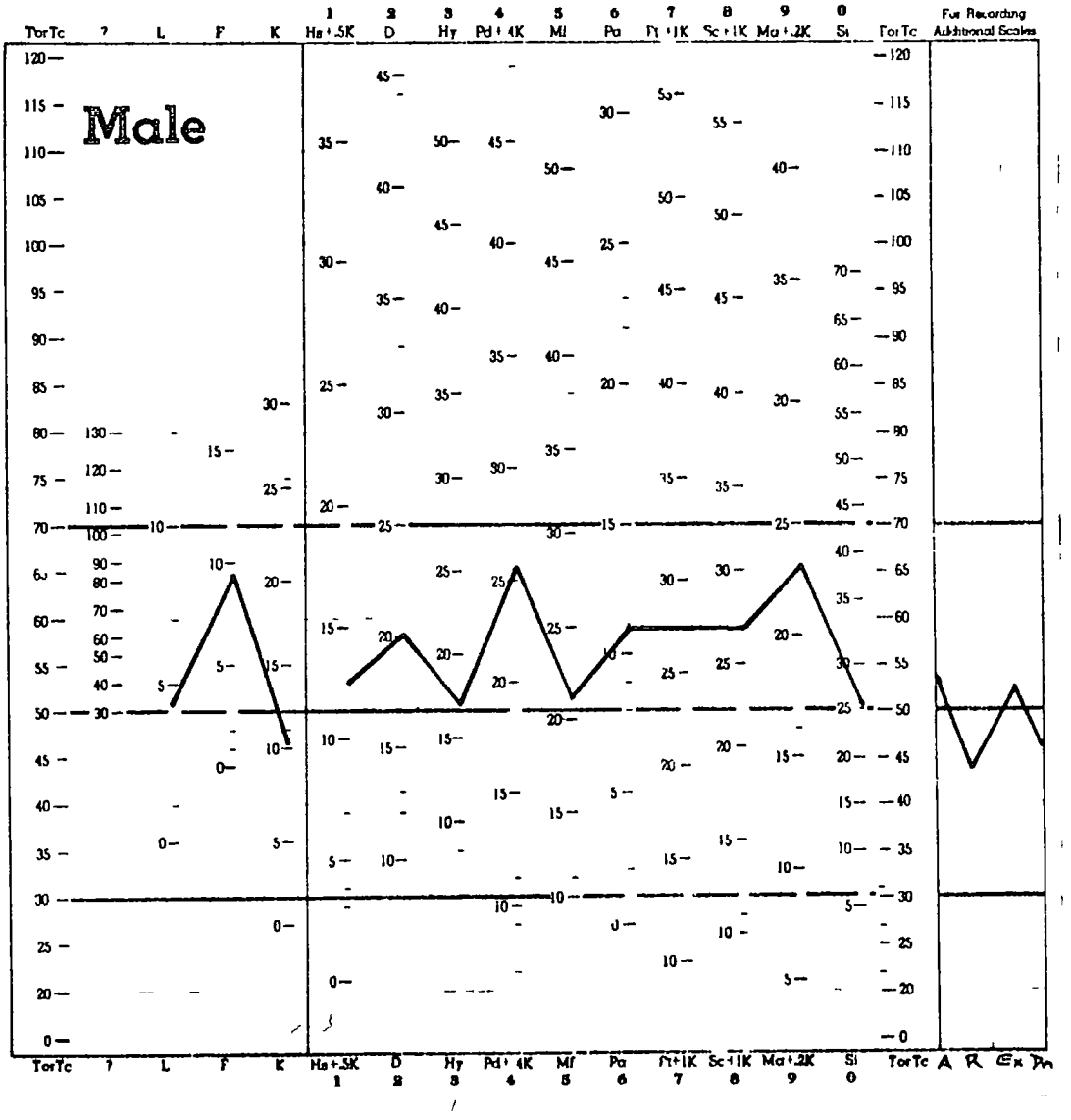


TABLE I

THREE CLUSTERS OF PRISONERS .
ONEWAY ANALYSIS OF VARIANCE OF 19 MMPI SCALES

	P1(N=10)		P2(N=28)		P4(N=22)			
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s d	F	
L	6.40	3.02	3.89	2.18	4.63	1.98	4.49	*
F	6.70	3 62	16.92	6.50	9.27	3.65	20.61	***
K	19.00	5.77	8.53	4.04	10.18	2 57	26 67	***
Hs	7 00	5 20	11 57	5.47	6.09	4.97	7.41	**
D	20.30	5.33	27.07	5.87	20.09	5.33	11.40	***
Hy	25.60	7.04	23.14	7.00	16.95	4.19	9.26	***
Pd	21.40	4 24	27.32	4.31	20.63	4.93	15.14	***
Mf	25.80	3 64	27 25	4 57	21.63	4.23	10.65	***
Pa	10.70	2.35	18.21	5.27	10.81	3 58	21.97	***
Pt	6.10	2.28	26.67	6.72	15.59	4.36	61.03	***
Sc	7.40	5.50	32 32	11.02	16.40	5.17	40.09	***
Ma	14 10	4.06	24 32	5.78	21.63	4.84	14.19	***
Si	21 20	4.96	31.92	6.45	25.50	7.44	11.68	***
A	10.00	2.78	23.67	4.80	15.63	4.15	44.57	***
R	18.50	6.27	14.03	4.39	13.27	4.51	4.35	*
Ex	24.50	5.58	24.28	4.94	26.59	5.50	1.28	
Dn	18.60	3.20	10.14	3.60	10.50	2.50	28.51	***
GH	10.10	3.21	29.75	5.64	21.90	4.05	64.65	***
D^H	-0.90	2.13	-2.21	7.88	-5.95	6.57	2.65	

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

TABLE J

THREE CLUSTERS OF PRISONERS - T TESTS BETWEEN GROUPS

Scale	P1 v P2 t	P1 v P4 t	P2 v P4 t
L	2.99**	2.03*	-1.15
F	- 6 08***	-1.85	5 26***
K	5.29***	4 62**	-1 75
Hs	- 2 36*	0.45	3.66**
D	- 3 28**	0.09	4 38***
Hy	0.95	3.60**	3 87***
Pd	- 3.54**	0.44	5.16***
Mf	- 0.91	2.53*	4.56***
Pa	- 6.04***	-0.11	5.89***
Pt	-14.08***	-8.06***	7.04***
Sc	- 9.18***	-4.37***	6.75***
Ma	- 5.33***	-3.79***	1.81
Si	- 4.39***	-1.70	3.40**
A	- 8.62***	-3.43**	6.55***
R	2.53*	2.86**	0.56
Ex	0.11	-1.04	-1.54
Dn	7.23***	6.68***	-0.40
GH	-13.34***	-8.85***	5.71***
D^H	0.80	3.25**	1.83

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

TABLE K

SIMILARITY COEFFICIENTS BETWEEN BLACKBURN'S ABNORMAL HOMICIDES (AH), NORMAL HOMICIDES (NH) AND PRISONERS (P)

	AH1	AH2	AH3	AH4	NH1	NH2a	NH2b	NH3	NH4	P1	P2	P4
AH1		97.89	56.54	43.56	25 82	118.78	63.94	40.04	29.24	15.39	74.91	40.39
AH2			54.89	59.14	104.12	39.31	37.24	70.85	72.21	84 71	18 19	60.25
AH3				57.60	75.21	82.95	50.82	23.75	57.88	58.06	53.69	58.47
AH4					58.69	94.95	74.45	54.46	23.06	42.63	47.12	21.18
NH1						136.98	80.21	57.25	42.13	33.28	93.50	49.88
NH2a							71.85	98.66	102.52	115.68	50.79	100.53
NH2b								57.00	47.02	62.67	29.29	37.04
NH3									47.62	41.08	63.67	51.50
NH4										29.39	55.45	19.97
P1											80.00	43.98
P2												62.20
P4												

TABLE L

CLINICAL JUDGEMENTS OF THE SIMILARITY BETWEEN PRISONER TYPES (P1, P2 AND P4) AND ABNORMAL HOMICIDE TYPES (AH1, AH2, AH3 AND AH4) AND NORMAL HOMICIDE TYPES (NH1, NH2a, NH2b, NH3 AND NH4)

		PRISONER TYPES		
		P1	P2	P4
ABNORMAL HOMICIDE TYPES	AH1	6**	0	0
	AH2	0	6**	0
	AH3	0	0	0
	AH4	0	0	6**
NORMAL HOMICIDE TYPES	NH1	5*	0	0
	NH2a	0	2	0
	NH2b	0	4	0
	NH3	0	0	0
	NH4	0	0	6**
	Not Similar to any of above	0	0	0

* p = 0.109 Sign Test (one tailed)
** p = 0.016 Sign Test (one tailed)

TABLE M

DISCRIMINANT FUNCTION ANALYSIS BETWEEN OVERCONTROLLED (TYPE P1) AND UNDERCONTROLLED (TYPES P2 AND P4) PRISONERS

Step Number	Variable Entered	Variable Removed	F to enter or remove	Number Included	Wilks' Lambda	Significance	Rao's V	Change in Rao's V	Significance of Change
1	GH		61.71	1	0.48	$p < .001$	61.71	61.71	0.000
2	Dn		11.53	2	0.40	$p < .001$	85.93	24.21	0.000
3	D		1.94	3	0.38	$p < .001$	90.93	5.00	0.025
4	Hs		4.90	4	0.36	$p < .001$	104.17	13.25	0.000
5	Pd		5.70	5	0.32	$p < .001$	121.28	17.11	0.000
6	K		2.18	6	0.31	$p < .001$	128.67	7.40	0.007
7	A		1.99	7	0.29	$p < .001$	135.83	7.16	0.007
8	Ex		1.53	8	0.28	$p < .001$	141.63	5.80	0.016
9	L		2.30	9	0.27	$p < .001$	150.84	9.20	0.002
10		A	0.97	8	0.28	$p < .001$	146.85	-3.97	1.000

Discriminant Function	Eigenvalue	Relative Percentage	Canonical Correlation	Functions Derived	Wilks' Lambda	Chi Square	DF	Significance
1	2.53	100.00	0.85	0	0.28	68.14	8	$p < .001$

Standardized Discriminant Function Coefficients

L	0.26
K	-0.40
Hs	-0.49
D	0.71
Pd	-0.38
Ex	0.22
Dn	-0.20
GH	0.70

TABLE M

The Control Group

Three clusters of controls were produced by the cluster analysis, although one of the clusters is perhaps undeserving of the term 'cluster' since it consists of one individual. Diagrams 10, 11 and 12 show the non K corrected profiles of these groups. On inspection of Diagram 10 this profile did not appear strikingly similar to any of the previous profiles (as was the case in previous matching comparisons) but it did appear to have many similar characteristics to Types AH1, NH1 and P1 (Diagrams 2, 3 and 7). Tentatively this new cluster was labelled Type C1. The profile shown in Diagram 11 had some similarities to Types AH2 (Diagram 8) but was thought to have not enough similarity for it to be given the same type number. This profile was tentatively called Type C5. The final cluster, which is shown in Diagram 12, showed no similarities to any previous profile and was labelled Type C6.

The similarity/dissimilarity of the new clusters to the previous findings were examined quantitatively using similarity coefficients and these are shown in Table N. Examination of this table shows that Type C1 is similar to Types AH1 and NH1, Type C5 is not similar to any previous cluster, and Type C6 is similar to Type P4.

Type C6 thus presents a problem. On initial inspection it did not appear similar to any other profile but the similarity coefficient shows it to be similar to Type P4 One problem with the similarity coefficient is that it is purely a distance measure and takes no account of the direction of the difference between profiles since the sign of the difference disappears in the calculation of Σd^2. Clinical judgements of the similarity between profiles on the other hand are perhaps most influenced by the shape of the profile and in particular the peaks in the profile.

Table O shows that only two of the six psychologists asked to match the previous profiles with the new profiles thought that Type C6 was similar to Type P4. Four of the psychologists thought that Type C6 was not similar to any of the previously obtained profiles. Interestingly the writer questioned the four psychologists who thought that Type C6 was dissimilar to any of the previously obtained profiles after the matching exercise on their reasons for this opinion. They all mentioned the fact that Type P4 exhibited the typical 9-4/4-9 (peaks on Pd and Ma) psychopathic profile but that Type C6, although having many similarities to Type P4, did not show the 4-9 profile, and this was their primary reason for stating that Type P4 was dissimilar to Type C6. Bearing in mind the drawbacks of the similarity coefficient described in the preceding paragraph it was decided that the profile given the label Type C6 should retain its identity as a new and different kind of profile. Table O also shows that the psychologists confirmed the writers original judgement and the similarity coefficients in that Type C1 was similar to Types AH1, NH1 and to a lesser extent P1, and that Type C5 was a new kind of profile.

Whilst Types AH1 and P1 were called overcontrolled repressor groups because their characteristics appeared at that time to conform to Megargee's concept of overcontrol, the subjects of Type C1 are non delinquent. Temporarily this group is labelled 'overcontrolled' and the implications of this finding are taken up in the discussion. Type C6, because it is an essentially normal profile, and it is dissmilar to any other profile is simply labelled a normal group. The individual represented by profile C5 scores high on the psychotic triad (Pt, Sc and Pa), impulsiveness (Pd and Ma), and anxiety and hostility (A and CH). The questionnaires were, of course, completed anonymously, but in a clinical setting this person would be referred for further investigation for evidence of mental illness.

DIAGRAM 10 : MEAN PROFILE OF TYPE C1 (N=29)

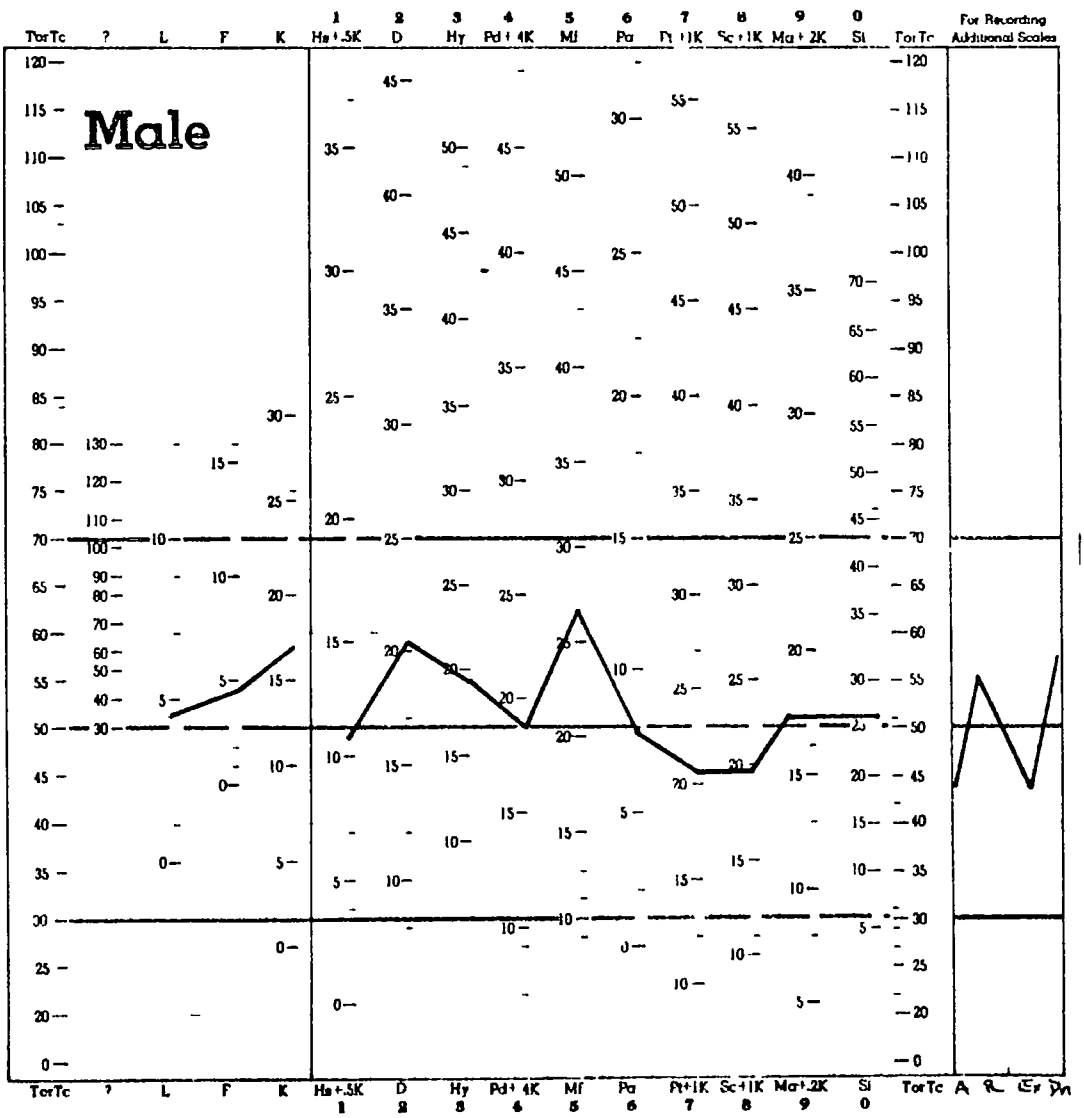


DIAGRAM 11 : MEAN PROFILE OF TYPE C5 (N=1)

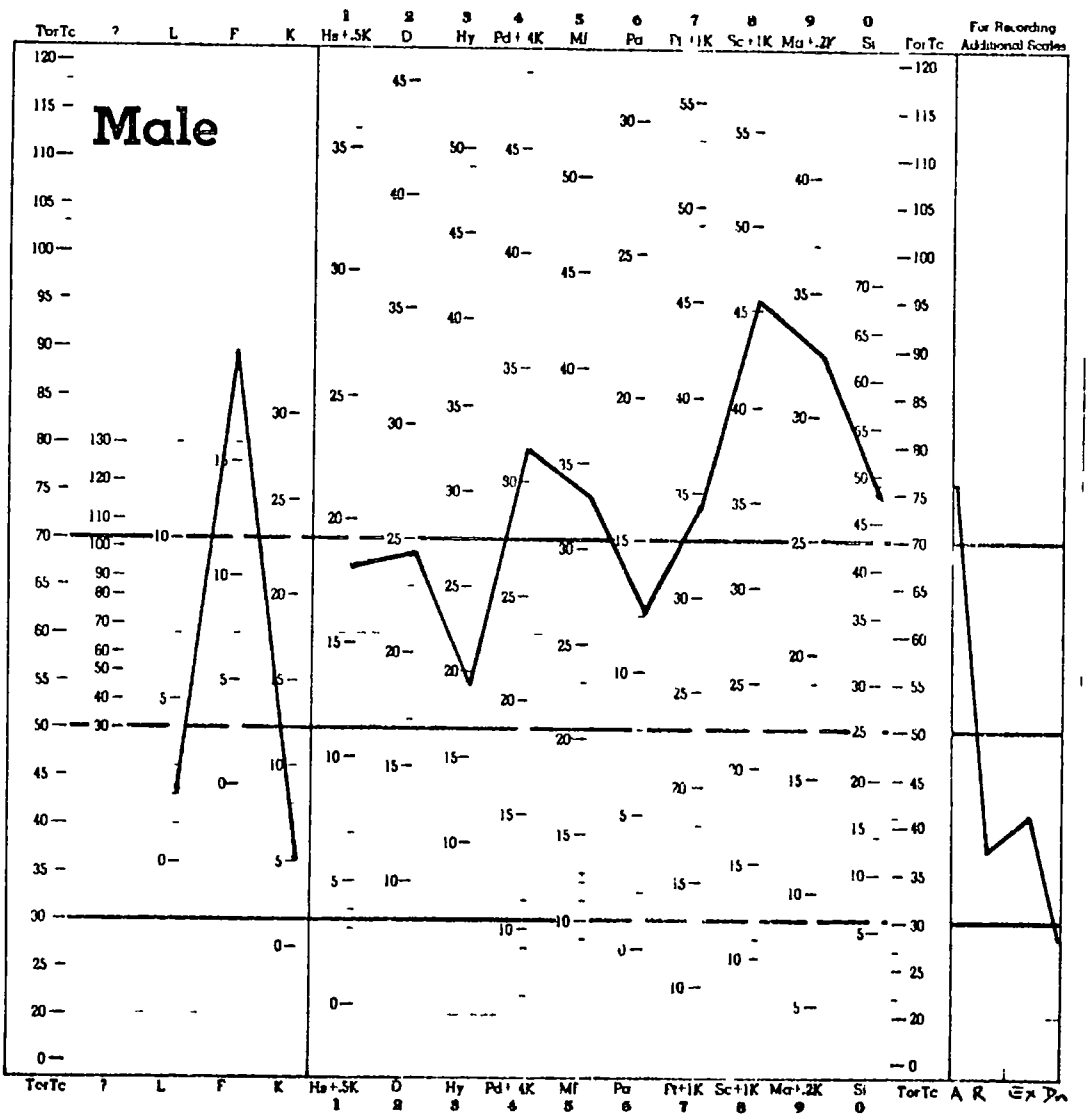


DIAGRAM 12 : MEAN PROFILE OF TYPE C6 (N=10)

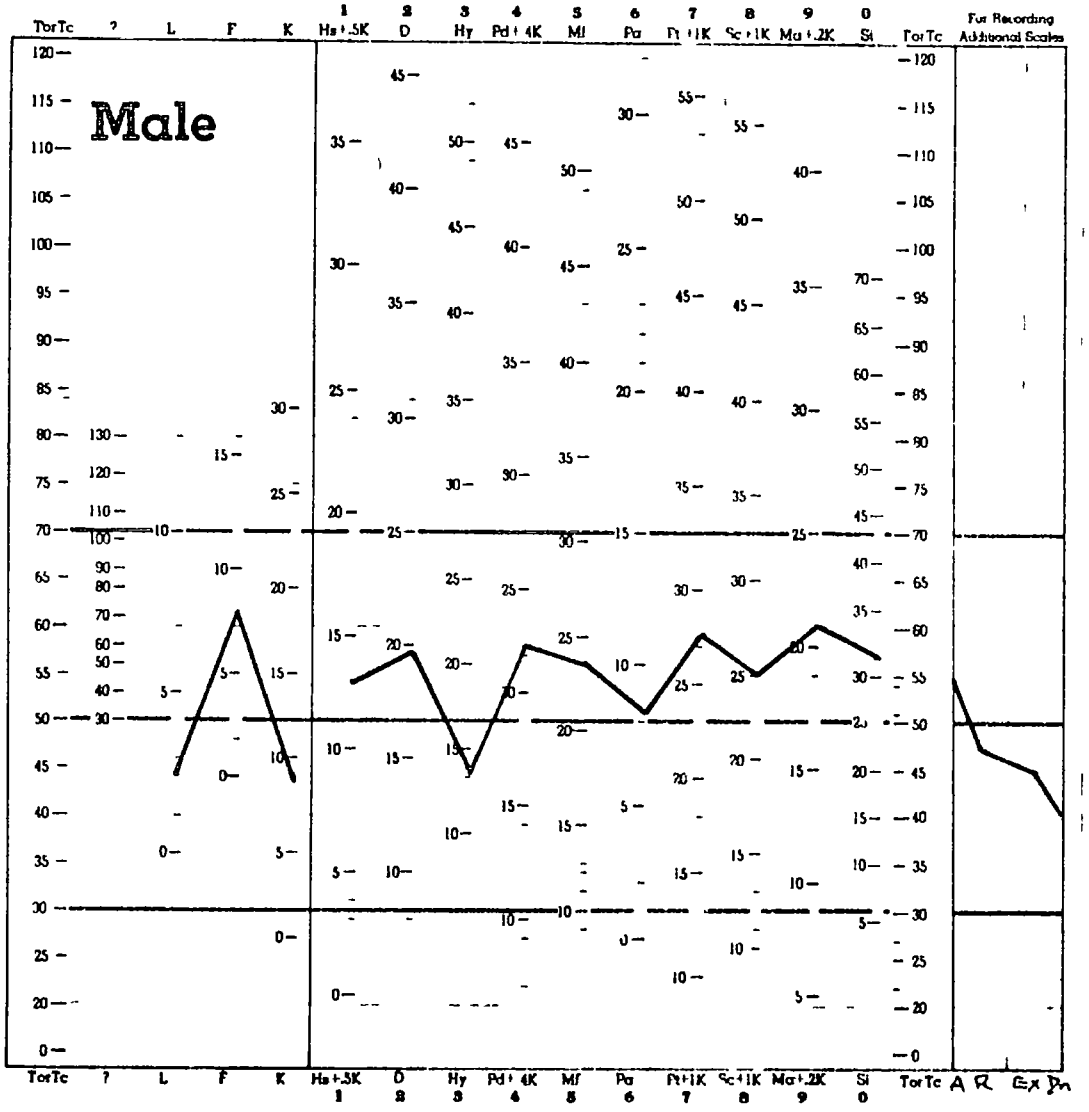


TABLE N

SIMILARITY COEFFICIENTS BETWEEN BLACKBURN'S ABNORMAL HOMICIDES (AH), NORMAL HOMICIDES (NH), PRISONERS (P) AND CONTROLS (C)

	AH1	AH2	AH3	AH4	NH1	NH2a	NH2b	NH3	NH4	P1	P2	P4	C1	C5	C6
AH1		97.89	56.54	43.56	25.82	118.78	63.94	40.04	29.24	15.39	74.91	40.39	21.56	105.40	46.34
AH2			54.89	59.14	104.12	39.31	37.24	70.85	72.21	84.71	18.19	60.25	92.55	42.33	68.58
AH3				57.60	75.21	82.95	50.82	23.75	57.88	58.06	53.69	58.47	61.10	81.01	56.86
AH4					58.69	94.95	34.45	54.46	23.06	42.63	47.12	21.18	48.10	70.93	33.79
NH1						136.98	80.21	57.25	42.13	33.28	93.50	49.88	22.09	127.80	52.40
NH2a							71.85	98.66	102.52	115.68	50.79	100.53	125.80	68.89	103.90
NH2b								57.00	47.02	62.67	29.29	37.04	66.85	55.16	38.19
NH3									47.62	41.08	63.67	51.30	45 23	95.93	50.45
NH4										29.39	55.45	19.97	33.49	93.12	32.98
P1											80.00	43.98	28.46	100 41	49.59
P2												62.20	88.26	52.25	67.87
P4													40.01	84.97	19.10
C1														102.74	38.36
C5															76.09
C6															

TABLE O

CLINICAL JUDGEMENTS OF THE SIMILARITY BETWEEN CONTROL TYPES (C1, C5 AND C6) AND ABNORMAL HOMICIDE TYPES (AH1, AH2, AH3 AND AH4), NORMAL HOMICIDE TYPES (NH1, NH2a, NH2b, NH3 AND NH4) AND PRISONER TYPES (P1, P2 AND P4)

		CONTROL TYPES		
		C1	C5	C6
ABNORMAL HOMICIDE TYPES	AH1	5*	0	0
	AH2	0	3	0
	AH3	0	0	0
	AH4	0	0	0
NORMAL HOMICIDE TYPES	NH1	5*	0	0
	NH2a	0	0	0
	NH2b	0	3	0
	NH3	0	0	0
	NH4	0	0	0
PRISONER TYPES	P1	4	0	0
	P2	0	2	0
	P4	0	0	2
	Not Similar to any of above	1	3	4

* $p = 0.109$ Sign Test (one tailed)

TABLE P

THREE CLUSTERS OF CONTROLS - MEANS, STANDARD DEVIATIONS AND T-TESTS BETWEEN CLUSTERS C1 AND C6

	C1 (N=29)		C5 (N=1)		C6 (N=10)		C1 v C6	
Scale	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	
L	4.37	1.84	2.00	0.00	2 30	1.15	4.14	***
F	4.34	2.72	18.00	0.00	6.70	2.21	-2.46	*
K	16.89	2.51	5.00	0.00	9.20	2.52	8.34	***
Hs	4.03	2.75	12.00	0.00	5.50	3.89	-1.30	
D	19.82	3.38	24.00	0.00	19.20	3.55	0.50	
Hy	19.06	3.92	19.00	0.00	13.30	4.78	3.78	**
Pd	14.24	4.44	25.00	0.00	16.80	2.78	-2.12	*
Mf	26.17	3 63	33.00	0.00	22.80	2 78	2.67	*
Pa	7.79	2.24	12.00	0.00	7.70	3.77	0.07	
Pt	6.79	3.55	34 00	0.00	13.00	4.05	-4.60	***
Sc	6.13	4 11	42.00	0.00	10.30	3.02	-2.93	**
Ma	14.48	3.19	32 00	0.00	17.50	4.17	-2.38	*
Si	25.51	6.38	47.00	0.00	30.40	6.18	-2.10	*
A	7.51	4.37	33.00	0.00	14.30	4.87	-4.07	***
R	18.37	4.60	10.00	0.00	15.30	3.86	1.89	
Ex	20.34	4.79	19.00	0.00	21.70	4.08	-0.80	
Dn	14.75	2.88	2.00	0.00	9.00	3.26	5.26	***
GH	11.03	3.95	32.00	0.00	20.20	2.52	-8.44	***
DH	-1.20	2.82	-7.00	0.00	-5.10	5.13	2.28	*

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

TABLE Q

DISCRIMINANT FUNCTION ANALYSIS BETWEEN "OVERCONTROLLED" (TYPE C1) AND NORMAL (TYPE C6) CONTROLS

Step Number	Variable Entered	Variable Removed	F to enter or remove	Number Included	Wilks' Lambda	Significance	Rao's V	Change in Rao's V	Significance of Change
1	K		69.56	1	0.35	p<.001	69.56	69.56	0.000
2	Ex		6.72	2	0.29	p<.001	89.44	19.88	0.000
3	Pt		6.61	3	0.25	p<.001	113.31	23.86	0.000
4	DH		8.59	4	0.19	p<.001	151.29	37.97	0.000
5	Mf		8.29	5	0.16	p<.001	198.64	47 35	0.000
6	Ma		4.65	6	0.13	p<.001	232.91	34.26	0.000
7	F		6.83	7	0.11	p<.001	292.46	59.55	0.000
8	D		4.87	8	0.09	p<.001	345.96	53.50	0.000
9	Si		2.70	9	0.08	p<.001	381.80	35.84	0.000
10	R		1.58	10	0.08	p<.001	405.49	23.68	0.000
11	Pd		3.95	11	0.07	p<.001	470.23	64.74	0.000
12	L		1.51	12	0.06	p<.001	499.72	29.48	0.000

Discriminant Function	Eigenvalue	Relative Percentage	Canonical Correlation	Functions Derived	Wilks' Lambda	Chi Square	DF	Significance
1	13.51	100.00	0.96	0	0.07	82.91	12	0.000

Standardized Discriminant Function Coefficients

L	-0.10
F	-0.35
K	0.38
D	0.16
Pd	0.19
Mf	0.32
Pt	-0 40
Ma	0 19
Si	-0.23
R	0 24
Ex	-0.19
DH	0.29

A discriminant function analysis was carried out between Types C1 and C6 and this is shown in Table Q. A total of twelve variables constituted the function but none of the variables contributed relatively heavily and it is difficult to interpret in any meaningful way.

DISCUSSION

The most striking feature of the results from the prisoner group is the emergence of profiles very similar to those obtained from abnormal homicide and normal homicide samples. The three prisoner types were similar to three of the four abnormal homicide types and to three of the five normal homicide types. In addition, Blackburn has noted that the profiles he obtained from 'psychopaths' were "identical" to those obtained from abnormal homicides. Hence the current profiles from prisoners are also similar to those produced by 'psychopaths'.

At this point it is worth noting again that one of the important implications of Megargee's theory is that whilst moderately assaultive crimes are more likely to be committed by undercontrolled people, extremely assaultive crimes can be committed by both under and overcontrolled people. 83.4 percent of the prisoner group (Types P2 and P4) appeared to have characteristics that have been described as undercontrolled whilst 16.6 percent were seen as overcontrolled. Whilst this latter percentage is small Megargee's theory as a theory of aggression would suggest that we should expect that some, if not most of these individuals, would have committed extremely assaultive offences at some time. The theory would also suggest that we should expect that large numbers of the undercontrolled prisoners would have committed moderately assaultive crimes at some time in their past.

Consequently an examination of the offenders previous convictions and current offence was made and only 15 of the 60 subjects were found to have committed a violent offence at any time. Megargee (1967) has indicated

that the existence of overcontrolled and undercontrolled types is restricted to offenders committing violent crimes of a particular kind involving "angry aggression", which has as its goal the injury of the victim (eg murder, wounding, battery). This is contrasted with "instrumental aggression" in which violence is the means to some other end such as robbery with violence and rape (Buss, 1961). Only 8 of the 15 men with a violent record had committed offences involving angry aggression and only 4 of these had committed extremely assaultive offences (attempted murder x 2, malicious wounding x 2) involving angry aggression. Table R shows the number of inmates falling into the personality classification by violence/non violence generally.

TABLE R

PERSONALITY TYPES AMONG PRISONERS AND VIOLENCE

	Violence	Non Violence	
Overcontrolled (P1)	3	7	N.S.
Undercontrolled (P2 plus P4)	12	38	

Three of the overcontrolled men had committed violent offences, but none had a history containing an extremely assaultive offence involving angry aggression. Of the four men who had committed such an offence two were in each of the two undercontrolled groups (P2 and P4). This is contrary to the predictions made from Megargee's theory in the preceding paragraph.

Twelve of the 38 undercontrolled men had a history of violent offending, 6 men having committed offences involving angry aggression (4 extremely assaultive and 2 moderately assaultive) and 6 men had committed violent offences using instrumental aggression. Only 2 undercontrolled subjects had committed moderately assaultive angry offences, and this is again contrary to predictions from Megargee's theory.

Perhaps the most important finding from the prisoner group is that both overcontrolled and undercontrolled personality types were found among the 45 prisoners without a history of any kind of violence. This would at first suggest that these personalities would appear to be associated with crime in general rather than just angry assaultive offences as has previously been thought. Before this conclusion is drawn the results from the control subjects will be discussed.

Table S shows a comparison, in percentages, of the number of individuals from five different samples falling into the three general categories of personality type that have been identified; and those that were not classified by the cluster analyses.

TABLE S

PERSONALITY TYPES FOUND IN FIVE SAMPLES·
ABNORMAL HOMICIDES, NORMAL HOMICIDES, PSYCHOPATHS
PRISONERS AND CONTROLS

	%"Overcontrolled" (Types 1 & 3)	%Undercontrolled (Types 2 & 4)	%Others (Types 5 &6)	%Unclassified by Analyses
Abnormal homicides (Blackburn, 1971)(N=56)	44.6	35.7	-	19.6
Normal homicides (N=40)	25.0	75.0	-	-
'Psychopaths' (Blackburn, 1975)(N=79)	34.2	45.6	-	20.2
Prisoners (N=60)	16.6	83.4	-	-
Controls (N=40)	72.5	-	27.5	-

Perhaps the most crucial finding of this study is that 72.5% of the control sample were found to be "overcontrolled" in that they appeared to have

characteristics similar to groups that have previously been labelled as overcontrolled.

As one control profile, Type C5 was constructed using only one subject t-tests between the profiles were carried out using only Types C1 (N=29) and C6 (N=10). These are shown in Table P, although the raw scores of each scale for Type C5 are included in the table for reference purposes. The profiles are described below.

Type C1 is the largest cluster containing 29 subjects (72.22% of the sample) and the profile remains within normal limits. The main differences between these subjects and those of Type C6 are their high level of defensiveness (L, K and Dn), their lov level of hostility and anxiety (GH and A) and their low scores on two scales of the 'psychotic triad' (Pt and Sc). The converse of these remarks apply to Type C6 which contains 10 subjects representing 25% of the sample. The profile of Type C6 again remains within normal limits.

Allocating a label to Type C1 poses a problem for although this type consists of normal subjects it has been shown to be similar to Types AH1, NH1 and P1 which were labelled overcontrolled repressors. These latter groups (AH1 and NH1) were seen as having similar personality characteristics to those described by Megargee as overcontrolled compared to the other clusters produced by their respective cluster analyses. In other words subjects in Types AH1 were seen by Blackburn as scoring high on defensiveness and impulse control and low on hostility and anxiety relative to Types AH2 and AH4. The present writer showed that subjects in Type NH1 scored in a similar fashion relative to Types NH2a, NH2b and NH4, and also found that profile NH1 was very similar to Type AH1.

On the other hand whilst it was noted that the profiles of AH1 and NH1 were within normal limits little was made of the findings. Little could be said of this at that stage but the finding that most of a control sample produce a profile similar to people described as overcontrolled poses serious

questions for Megargee's theory It may be argued that some individuals in the control sample are infact overcontrolled, as described by Megargee, and are prone to extreme aggression. The assertion is sometimes made that prison officers use violence excessively with little provocation but two factors counter the argument. Firstly it is stretching the bounds of possibility to assume that most of the control sample behave with extreme violence in the course of their work Prison riots would be an everyday occurrence if this were the case. Secondly none of the officers had committed extremely violent offences prior to their employment by the Home Office, or outside of working hours since their employment by the Home Office, as they would probably not continue in the employment of the Home Office if the latter were true. It is unrealistic to think that these men somehow store up their anger for firstly decades, and secondly, for working hours.

A much more parsimonious and plausible explanation exists - these "overcontrolled" men are not overcontrolled, they are simply normal and more appropriately called controlled. Taken on its own without reference to any other profile the profile of Type C1 would be described as "normal", as was Type C6. Taken on their own, without reference to other profiles, Types AH1, NH1 and P1 would not be described as overcontrolled repressors, they would also be described as "normal". The other groups that were seen as overcontrolled - the depressed inhibited subjects of Types AH3 and NH3 - if examined alone would probably be described by most clinicians as 'depressed normals' since they have only one peak above normal limits, and their depression may be due to being in prison rather than any underlying personality disturbance.

If this reasoning is accepted, and the groups previously labelled overcontrolled are simply controlled, Table 5 shows that Types 1, 3 and 6 are normal personalities and Types 2 and 4 undercontrolled. Type 5 contained only one person and had eight scales above normal limits. It is however an unrepresentative profile. Looked at in this light Table 5 reveals that

98.5% of the controls had normal personality profiles whilst 16.6% of prisoners, 34.2% of individuals said to be 'psychopathic' at Broadmoor, 44.6% of abnormal homicides at Broadmoor and 25% of normal homicides in prison also had personality profiles that appear controlled. These percentages from Broadmoor are probably an underestimate since about 20% of each sample was not classified by the cluster analyses and these unclassified cases are as likely to be within normal limits as outside of abnormal limits judging by the split in the classified subjects.

That the percentages of controlled individuals at Broadmoor are so high, even without taking account of the unclassified subjects, is not really surprising considering the discussion at the end of Chapter 2. There it was suggested that Broadmoor may be being used as a 'soft option' for uncharacteristic 'non-criminal' yet violent offenders and/or that people who kill without a history of violence may be perceived as having something severely wrong with them. These suggestions retain their potency with the revision that they are applied to controlled rather than overcontrolled individuals.

Does the validity of Megargee's theory also rest on the resolution of a semantic problem by calling overcontrolled people controlled? It will be remembered that when Megargee started his research programme he was concerned to explain why mild mannered individuals, as he found them to be in interview as probation applicants, with no history of violence, committed extremely violent offences. His subsequent finding that extremely assaultive prisoners scored lower on hostility measures than moderately assaultive and non-violent delinquents led him to suggest the idea of the undercontrolled personality.

Firstly the impression of someone, in an interview situation, as mild mannered is a relative judgement, rather like MMPI profile matching, and

it would probably be true that in comparison with other probation applicants these individuals would be "overcontrolled". Whether or not these mild mannered individuals would be seen as particularly mild mannered relative to non delinquent people is another question. It is probable that any controlled, usually non-delinquent and non-violent person convicted of an assaultive offence would behave in a mild mannered fashion in an interview situation, particularly if the offence was extremely assaultive, and, perhaps, shameful for the interviewee. Secondly, the preceding results shown in Table 5 indicate that controlled individuals constitute a higher proportion in extremely assaultive groups than in random prisoners. Hence extremely assaultive groups may be shown to score lower on tests of hostility than other delinquent groups; this being a statistical artefact.

In conclusion, Megargee's theory, on the evidence provided by this study, needs revision. Some individuals committing extremely assaultive crimes like homicide are undercontrolled and others are more appropriately called controlled than overcontrolled These personality types are found among not only extremely assaultive offenders but also among prisoners in general. The explanation for extremely assaultive offences being committed by mild mannered individuals is more likely to be found in the environment than in the person. To return to a recent description of homicide given in Chapter 1; "murder is generally not a crime of the so called criminal classes it is an incident in miserable lives"(O.H.E. 1976). Given miserable enough circumstances, perhaps anyone can kill.

Summary

Cluster analyses were carried out on a sample of random prisoners (N=60) and a sample of control prison officers (N=40). The prisoner group

produced three types similar to those obtained by Blackburn at Broadmoor and from the normal homicides described in Chapter 2. The results were contrary to Megargee's theory in that the prisoners labelled as overcontrolled did not have a history of extreme violence and few of those labelled undercontrolled had committed moderately assaultive offences. Most of the subjects were non-violent. Of particular note was the fact that 72.5 percent of the controls were seen as "overcontrolled" relative to various previously obtained delinquent profiles and this led to a reformulation of the results of previous studies. Individuals previously seen as overcontrolled in comparison to other delinquents were thought to be normal and controlled relative to the normal population.

The implications for Megargee's theory were discussed.

CHAPTER FOUR

CONTROLLED AND UNDERCONTROLLED HOMICIDES CONTRASTED

It has been suggested in the preceding chapter that controlled (rather than overcontrolled) and undercontrolled personality types exist in normal homicides and random prisoners. It was also thought that these types were found by Blackburn in his studies of abnormal homicides and 'psychopaths' at Broadmoor. Whilst the overcontrolled hypothesis per se has been questioned, definitive types of personality do consistently emerge from these different groups of offenders representing two broad categories of controlled and undercontrolled individuals. If, however, this typology is to be of any real value elucidation of the characteristics associated with these personalities and evidence relating to the validity of the typology must come from an examination of variables other than personality test results.

It has been shown that controlled and undercontrolled individuals are different kinds of people, as exhibited by MMPI profiles. However we do not know whether these kinds of people have behaved differently in the past, whether they will behave differently in prison, whether they are perceived as having different needs in prison, or whether they see their prison environments in a different manner. This chapter is directed to contrasting the controlled individuals with the undercontrolled subjects. The general hypothes is that the undercontrolled subjects, relative to the controlled subjects, will show a history of pathology and instability, be seen by prison staff as requiring more attention both in terms of treatment and control at the beginning of their sentence, prove troublesome to staff while serving their sentence and have negative attitudes toward their prison environment.

Subjects

The normal homicides (N=40) who were described in Chapter 2 were chosen for closer examination. They were chosen in preference to the prisoner group for several reasons. Firstly, they contain a slightly higher proportion of controlled individuals (25%) than the prisoner group. Secondly, they received much longer sentences with the result that their behaviour whilst in prison could be examined reliably. Thirdly, standardized detailed assessments by prison officers are only carried out on inmates serving over 18 months. Many of the subjects in the prisoner group received sentences less than 18 months (including probation) and hence this important source of information was only readily available for the homicide group. Finally the subjects in the prisoner group, having committed varied offences, were liable to be sent to different kinds of prison varying from those paying little attention to security, to those paying a lot of attention to security. The homicides on the other hand, because of the serious nature of their offence, would tend to be sent to similar closed, secure, prisons making any comparisons of the overcontrolled and undercontrolled groups meaningful.

Infact over 2/3 of the sample went to Wakefield Prison. Of the remainder, those serving relatively short sentences stayed at Durham, and others were sent to Hull, Northallerton, Liverpool, Gartree and Peterhead. One subject was given a borstal sentence and sent to HM Borstal Feltham and althouth this sentence was varied on appeal to six months imprisonment, he remained at Feltham until discharge. Of these prisons only Gartree can be considered to be housed not in old victorian buildings but in new buildings.

The controlled homicides' (N=10) mean age was 29.80 years, s.d. = 10.15. The mean age of the undercontrolled homicides was 25.03 years, s.d. = 6.68. This difference in ages appears fairly substantial, but it is not a significant difference ($t = 1.39$, $p = 0.19$). It is not easy to compare the

sentences received by the two groups as some of the sample received life sentences and others did not. However, one approach is to allocate the average length of a life sentence, which is currently 9.10 years (H.M.S. , 1976), to those receiving life sentences. If this is done the controlled subjects mean sentence length is 73.10 months, s.d. = 42.27 whilst the undercontrolled subjects mean sentence length is 85.56 months, s.d. = 46.32. This difference again appears large, though it is not significant ($t = -0.74$, $p = 0.46$).

Description of the measures and specific hypotheses

(a) Intellectual

The Wechsler Adult Intelligence Scale (WAIS) was devised by Wechsler in 1955 and has since become the most widely used individually administered test of intellectual ability Although Wechsler subscribed to the idea of general mental ability he assembled his test items by type of question or task into 11 subtests which silhouetted different kinds of thinking or performance. These are grouped together into two main classes labelled Verbal and Performance Scales The Verbal scales generally measure how much the subject has profited from previous learning experiences whilst the Performance scales largely measure reasoning power in situations that are unfamiliar to the subject. The normalized scaled scores on the subtests are added and compared with norms for the subjects age to give an overall verbal score (VIQ) an overall performance score (PIQ) and a total score (FSIQ). In his excellent review Savage (1970) concluded that the WAIS emerged as a valid, reliable and well standardized measure of Wechsler's concept of intelligence.

It will be remembered that the WAIS had been given routinely to all individuals charged with homicide at Durham Prison for several years prior to the study. Although no predictions were made about differences between the

controlled and undercontrolled subjects relating to the WAIS, the data was examined because it appeared intrinsically interesting, and it was readily available.

(b) Background Variables

Eight dichotomous background variables dealing with the psychiatric, social and criminological history of the offenders were examined. Four of these variables dealt with their behaviour prior to their current offence - 1) previous psychiatric treatment which was defined as both in and out patient treatment for a psychiatric problem, 2) marital status, 3) previous criminal convictions, and 4) previous criminal convictions involving assault. Four of the background variables dealt with aspects of their current offence - 5) was the victim a relative; 6) was the victim a female, 7) had the inmate attempted suicide following the offence; and 8) had there been a sexual element to the crime. These variables were collected from the prisoner's record which included detailed police, medical, psychiatric and social welfare reports. Any ambiguities were clarified by the inmate himself.

On the basis of the personality characteristics of controlled and undercontrolled homicides described earlier it was expected that the controlled subjects would be stable domestic killers without previous delinquent experiences. Consequently it was predicted that the undercontrolled group, relative to the controlled homicides, would tend to exhibit a history of psychiatric problems, be single, have previous convictions including assaultive convictions, have not killed a relative, with a sexual element to the crime and would have attempted suicide after the offence.

(c) Officers' Ratings

All inmates in the prison department undergo routine assessments of one form or another, but inmates serving over 18 months' are dealt with in detail

by Observation and Classification Units The staff of these Units receive special training in interviewing techniques and in the use of rating scales. In particular they are taught how to use a document known as the Standard Classification Form 2 (SCF2) which contains, when complete, a mass of information about the offenders background and previous criminal and institutional history. It was decided to concentrate on one page (p 7) of the SCF2, the page dealing with the expected behaviour and training needs of the inmate, and this is summarized in Table T.

As can be seen the officers are asked to assess, usually using 4 point scales, how the inmate will behave in prison, what his likely training needs will be and how he has reacted to his sentence. This is done in an interview situation. In an ideal research workers' world the officers would carry out the task 'blind', without any information other than that elicited in the interview situation. This was not the case as the officers study the prisoners record thoroughly in order to fill out other parts of the SCF2. On the positive side, however, the officers were 'blind' in the sense that they did not know whether or not the inmates were controlled or undercontrolled. In addition page 7 of the SCF2 is the only page which relies heavily, in a quantitative manner, on the opinions of the officers about the inmates, gained in the interview situation. Most of the SCF2 deals with factual data, such as whether the inmate has been to an approved school or not, and the officers tick an appropriate box.

Although there is a surprising lack of information relating to the inter-scorer reliability and validity of the SCF2 and it was not possible, for administrative reasons, to carry out special studies on the SCF2, predictions were made about the officers' ratings. The general hypothesis was that the controlled homicides, relative to the undercontrolled homicides, would be seen as likely to make fewer demands on the resources of the prison department (and be rated to the left side of the rating scales, under the

TABLE T : VARIABLES RATED BY OFFICERS
FOLLOWING THE CONVICTION OF AN OFFENDER

REACTIONS TO SENTENCE

Blames his predicament on	1	Bad planning
	2	Authority (eg police, judge, precons)
	3	Other persons
	4	Bad luck, drink, drugs, gambling
	5	No blaming
Desire for revenge is	1	Seriously expressed
	2	Half-hearted or none

EXPECTED BEHAVIOUR IN PRISON

Seems likely to					Seems likely to
Seek approval of staff	1	2	3	4	Not care about staff opinion
Be self-reliant	1	2	3	4	Make constant demands
Be independent of inmates	1	2	3	4	Be eager for acceptance by inmates
Be amenable to authority	1	2	3	4	Be resistent to authority
Be controlled	1	2	3	4	Be aggressive
Be acceptable	1	2	3	4	Arouse hostility
Remain in touch	1	2	3	4	Withdraw into himself
Be stable, calm, placid	1	2	3	4	Be unstable, anxious, disturbed

TRAINING NEEDS

Visits/letters not important	1	2	3	4	Visits/letters important
No resettlement problems	1	2	3	4	Serious aftercare problems
Educational level adequate	1	2	3	4	Needs educational help
Work patterns satisfactory	1	2	3	4	Work patterns need developing
Working skills sufficient	1	2	3	4	Skills could be improved
Insight adequate	1	2	3	4	Needs help to understand self

headings 'expected behaviour' and 'training needs' in Table T). It was also predicted that the controlled subjects would tend not to blame their predicament on anything other than themselves, and tend not to express revenge. If these predictions are not confirmed this could be due to poor inter-scorer reliability and validity of the SCF2 or to the lack of validity of the personality typology. On the other hand if the predictions are confirmed and the two groups of inmates are shown also to behave differently in prison then this not only indicates the validity of the typology, but also the validity of the officers' assessments.

(d) Behavioural Indices of Institutional Discontent

Zeeman et al (1976) in their successful application of catastrophe theory (Thom , 1972) to prison riots used behavioural indices of institutional tension. These included the incidence of inmates reporting sick, the incidence of reports of offences committed against prison discipline and the incidence of governors applications which are usually complaints or requests for material help. More recently Harwood et al (1977) used these variables in an examination of the effect of regime changes at Acklington prison and found a decrease in these measures concomitant with regime changes that were described as moving in the direction of 'humane containment'.

These variables were seen as crucial to any follow up of the personality types since they may be seen as indices of institutional discontent. It was predicted that the undercontrolled subjects would show more discontent than the controlled subjects and have a higher sick rate, a higher rate of governors applications and, perhaps most importantly, a higher rate of offences against discipline. The mean follow up period was 14.90 months, s.d. = 7.52, for the controlled individuals and 17.00 months, s.d. = 8 36 for the undercontrolled group. The data was expressed as a rate (per month) and was collected from the prisoners record and prison medical records.

(e) Attitudinal Variables

The semantic differential (Osgood, Suci and Tannenbaum, 1957), in view of its satisfactory background as a measure of attitudes (Heskin, 1974) and its ease of application, was chosen as the research tool for examining the inmates perceptions of their environment The major problem that has to be overcome in designing and scoring the semantic differential is concept-scale interactions. Osgood et al recognized this problem and research since the original work has confirmed that scales can assume different meanings for different concepts (Heis, 1969, Heskin, Bolton and Smith, 1973; Bradbury, 1974). The current study attempted to overcome this problem in two ways, the first being novel.

A pilot study was carried out using a random sample of prisoners (N = 100) who were asked to look at Osgood et al's (1957, p 37) complete list of bi-polar adjectives (see Appendix D) and tick those dimensions they would use if they were asked to give their opinions about the concepts Prison Food, Prison Discipline, My Present Prison Job, Visiting Arrangements, Other Prisoners, Recreational Facilities, Correspondence Facilities, My Crime, Prison Staff and Toilet Facilities in turn. They were not asked to rate these concepts but simply to say which dimensions they would use if they were asked to rate the concepts A frequency count was carried out and those adjective dimensions which were ticked by at least 50% of the men were used in the construction of the test for the homicides. This test is shown in Appendix E.

After the test had been completed by the homicide sample a principal components analysis was carried out for each concept, summaries of which are shown in Appendix F Presumably because the test was designed using only adjectives seen as relevant to the concepts by prisoners these analyses resulted in first factors accounting for an unusually large percentage of the variation in the scores - on average over 54% compared to 25% in Heskin,

Bolton and Smith's study of prisoners. These first factors were all evaluative in nature. The common strategy is usually to give weights to significantly loaded scales and sum across factors (Presley, 1969, Heskin, Bolton and Smith, 1973). This allows fairly effective comparisons to be made between groups on the same concept but it means that absolute comparisons (between concepts) are difficult, if not impossible. For this reason and because the present study produced such large first factors (three concepts infact only produced one factor, each accounting for over 70% of the variance) it was decided to use only these first, evaluative, factors and weightings were applied to the significant loadings on these factors. This did allow absolute comparisons to be made but it is to be remembered that different adjectives, albeit evaluative ones, are used in each case.

The mean length of time from sentence to testing was 14 90 months, s.d. = 7.52, for the controlled homicides and 17.00 months, s.d. = 8.36, for the undercontrolled subjects. This difference is not significant ($t = -0.74$, $p = 0.47$) and hence although it proved impossible to control the time from sentence to testing by using a fixed period for each subject, it did randomize out as was hoped. Four subjects refused to complete the semantic differential (1 controlled subject, 3 undercontrolled subjects) and the mean scale scores of the remaining 36 subjects were allocated to these uncooperative subjects.

It was predicted that the undercontrolled subjects, in contrast to the controlled subjects, would have negative attitudes toward Prison Food, Prison Discipline, My Present Prison Job, Visiting Arrangements, Recreational Facilities, Correspondence Facilities, Prison Staff and Toilet Facilities, but relatively positive attitudes toward Other Prisoners and My Crime. The last two predictions were made on the assumption that controlled individuals as non criminal types would tend not to get on with criminal types, who would form the majority of 'Other Prisoners', and their crimes would be seen more negatively because extreme violence is uncharacteristic of their behaviour.

RESULTS

(a) Intellectual

Table U shows the WAIS scores of the undercontrolled and controlled subjects The VIQ, PIQ and FSIQ showed no significant differences and only one subtest, Digit Span, showed a significant difference ($p < 0.05$) in that controlled subjects scored higher than undercontrolled subjects Digit Span has been shown to be particularly affected by intellectual/organic deterioration (Klove and Reitan, 1958, Ladd, 1959, Norman and Daley, 1959) and hence the only well supported method of pattern analysis (Guertin et al 1966) for intellectual/organic deterioration, PIQ-VIQ, was examined. The verbal-performance discrepancy was not significant, as is shown in Table U.

The FSIQ's of both groups are slightly higher than average at 103 but the original homicide sample was selected cutting out those with a FSIQ less than 80 and this probably accounts for this result.

(b) Background Variables

The results of the comparison between overcontrolled and controlled homicides are shown in Table V As can be seen the results generally support the predictions made earlier. In comparison with the undercontrolled subjects the controlled subjects tend to be married ($p < 0.01$) do not have previous convictions for assault ($p < 0.05$) and do not present a history containing psychiatric treatment ($p < 0.01$) Two other results were approaching significance The controlled subjects tended to kill relatives ($p = 0\ 09$) without the crime involving a sexual element ($p = 0.109$). Two hypotheses received little support. Unexpectedly, half of the controlled subjects had previous convictions (though not for assault) and only two undercontrolled subjects attempted suicide following the crime.

TABLE U · WAIS SCORES OF UNDERCONTROLLED AND CONTROLLED HOMICIDES COMPARED

WAIS Scale	Controlled Homicides (N=10)		Undercontrolled Homicides (N=30)		
	$\bar{X}$	s d.	$\bar{X}$	s d	t
Information	10 00	1.15	10 16	2.30	-0 30
Comprehension	10 20	2.30	10 10	2 84	0 10
Arithmetic	10.30	3.33	10 16	2 45	0 14
Similarities	10 50	3.17	10 43	2 66	0.07
Digit Span	12 30	2.83	10.10	2 18	2.56 *
Vocabulary	10 60	1 83	10 56	2 01	0.05
Digit Symbol	8 60	2 22	9.33	2.36	-0.86
Picture Completion	11.40	2.06	10.73	2 13	0.86
Block Design	10 80	3 01	11 76	2 51	-1.00
Picture Arrangement	9.10	2 47	9.56	2 28	-0.55
Object Assembly	10.70	2.66	11.03	3.07	-0.31
Verbal Scale IQ	104.00	10 32	102 13	11 42	0.46
Performance Scale IQ	101 80	11 03	103 83	10 77	-0.51
Full Scale IQ	103.70	9.14	103.20	10.27	0.14
PIQ-VIQ Discrepancy	-2.00	9.44	0.56	11.88	-0.67

* $p < 0.05$

TABLE V : CONTROLLED AND UNDERCONTROLLED HOMICIDES COMPARED ON BACKGROUND VARIABLES

Variable	Controlled Homicides (N= 10)	Undercontrolled Homicides (N=30)	Fisher's Exact Probability
Previous psychiatric history	0	13	0.009 *
Married	7	6	0.006 *
Any previous convictions	5	20	0 376 *
Any precons for assault	0	11	0 024 *
Victim a relative	5	7	0 090 *
Victim a female	5	18	0.245 **
Suicide attempt	0	2	0 558 *
Sexual element in crime	0	7	0.109 *

* One tailed tests
** Two tailed test

(c) Officers Ratings

The results of the officers' assessments are shown in Table W and generally support the predictions in that 13 out of 16 are in the expected direction and 7 are significantly so In comparison with the controlled subjects the undercontrolled individuals are seen as tending to blame other people or other things, rather than themselves, for their predicament ($p < 0.05$), to not care about staff opinions ($p < 0.05$), to make constant demands on staff ($p < 0.01$), to be eager for acceptance by other inmates ($p < 0.01$), to have serious aftercare problems ($p < 0.05$), to need educational help ($p < 0.05$), and to have working skills that could be improved ($p < 0.05$). The controlled subjects were not seen as being 'controlled' but the result is approaching significance ($p < 0.10$).

(d) Behavioural Indices of Institutional Discontentment

Table X shows that the two groups differed significantly, on all three variables, in the predicted direction. The undercontrolled subjects made more governors applications ($p < 0.01$) reported sick more often ($p < 0.05$) and committed more offences against discipline ($p < 0.05$) than the controlled subjects.

(e) Attitudinal Variables

The results for the ten semantic differential concepts are shown in Table Y and they do not support the hypothesis that undercontrolled subjects would exhibit negative attitudes compared to the controlled subjects. Only one comparison was significant. Recreation Facilities was rated as a relatively "happy" concept ($p < 0.05$) by the undercontrolled group. Infact only happy-sad loaded highly on this concept in the principal components analysis. This lack of evidence led the investigator to examine every single scale of the semantic differential and comparisons between the groups are to be found in Appendix F. Six comparisons were significant at $p < 0.05$

TABLE W · OFFICERS RATINGS OF OVERCONTROLLED AND UNDERCONTROLLED HOMICIDES FOLLOWING SENTENCE

REACTIONS TO SENTENCE

	Controlled Homicides (N=10)	Undercontrolled Homicides (N=30)
Blames his predicament on bad planning, authority, other persons, bad luck, drunk, drugs, gambling	2	18
No blaming	8	12

Fisher's exact probability (one tailed) = 0 011

	Controlled Homicides (N=10)	Undercontrolled Homicides (N=30)
Desire for revenge seriously expressed	0	1
Desire for revenge half hearted or none	10	29

Fisher's exact probability (one tailed) = 0.75

EXPECTED BEHAVIOUR IN PRISON

	Controlled Homicides (N=10)		Undercontrolled Homicides (N=30)		
	$\bar{X}$	s.d.	$\bar{X}$	s.d.	t
Seek approval of staff (rating 1) to Not care about staff opinion (rating 4)	1.90	0.31	2.23	0.63	-2.19 *
Be self-reliant (1) to Make constant demands (4)	1.90	0.32	2 30	0.65	-2.57 **
Be independent of inmates (1) to Be eager for acceptance (4)	1.90	0 31	2.63	0.80	-4 11 ***

* $p < .05$ (one tailed)
** $p < .01$ (one tailed)
*** $p < .001$ (one tailed)

TABLE W CONTINUED (OFFICERS' RATINGS)

	Controlled Homicides (N=10)		Undercontrolled Homicides (N=30)		
	$\bar{X}$	s.d.	$\bar{X}$	s.d.	t
Be amenable to authority (1) to Be resistant to authority (4)	1 80	0.42	1.83	0.53	-0.18
Be controlled (1) to Be aggressive (4)	1.70	0.48	2.03	0.61	-1 56
Be acceptable (1) to Arouse hostility (4)	2.00	0.00	2.17	0.60	-0.88
Remain in touch (1) to Withdraw into himself (4)	2.50	0.53	2.26	0 58	1.12
Be stable, calm, placid (1) to Be unstable, anxious (4)	2 60	0.52	2.53	0.77	0.25

TRAINING NEEDS

	Controlled Homicides (N=10)		Undercontrolled Homicides (N=30)		
	$\bar{X}$	s.d.	$\bar{X}$	s.d.	t
Visits/Letters not important (1) to Visits/letters important (4)	3.40	0.96	3.33	0 71	0.23
No resettlement problems (1) to Serious aftercare problem (4)	2.40	0.69	3.00	0.94	-1.84 *
Educational level adequate (1) to Needs educational help (4)	1 90	0.57	2.33	0.80	-1.58
Work patterns satisfactory (1) to Work patterns need developing (4)	2.00	0.66	2.73	0.91	-2.35 *
Working skills sufficient (1) to Skills could be improved (4)	2 20	0.92	3 03	0 80	-2.73 **
Insight adequate (1) to Needs help to understand self (4)	2 50	0 51	2.83	0.75	-1.30

* $p < .05$ (one tailed)
** $p < .01$ (one tailed)
*** $p < .001$ (one tailed)

TABLE X A COMPARISON OF THREE BEHAVIOURAL INDICES OF INSTITUTIONAL DISCONTENTMENT BETWEEN CONTROLLED AND UNDERCONTROLLED HOMICIDES

	Controlled Homicides (N=10)		Undercontrolled Homicides (N=30)			
Index of institutional discontentment	$\bar{X}$	s.d.	$\bar{X}$	s.d.	t	
Governors applications per month	0.17	0.25	0.69	0.86	-2.92	**
Governors reports per month	0.03	0.07	0.10	0.17	-1.69	*
Number of sick reports per month	0.24	0.23	0.49	0.61	-1.90	*

* $p < .05$ (one tailed)
** $p < .01$ (one tailed)

TABLE Y · SEMANTIC DIFFERENTIAL CONCEPTS BETWEEN CONTROLLED AND UNDERCONTROLLED HOMICIDES USING HIGHLY LOADED SCALES

	Controlled Homicides (N=10)		Undercontrolled Homicides (N=30)		
Concept	$\bar{X}$	s d.	$\bar{X}$	s d.	t
Prison Food (1=Nice, Pleasant, Good)	4.20	1.03	4.53	1 71	-0.56
Prison Discipline (1=Nice, Fast, Relaxed, Pleasant, Valuable)	4.23	0.89	4.29	1.31	-0 13
My Present Prison Job (1=Good, Valuable, Pleasant, Clean)	3.26	1.77	3.31	1.70	-0 08
Visiting Arrangements (1=Fair, Pleasant)	2 40	1.28	2.68	1.49	-0.54
Other Prisoners (1=Honest, Peaceful, Soft, Healthy, Kind, Fair)	4.18	0.56	3.96	0.88	0.74
Recreation Facilities (1=Happy)	3.90	0.74	3.27	1.44	1.71 *
Correspondence Facilities (1=Large, Good, Fair)	4.02	1.22	3.51	1.60	0.92
My Crime (1=Nice, Good, Happy, Kind, Brave)	6.22	0.87	5.67	1.20	1.33
Prison Staff (1=Sharp, Good, Brave, Pleasant, Honest, Fast, Fair)	3.79	0.92	4.07	1.37	-0.59
Toilet Facilities (1=Fair, Good, Pleasant, Nice)	4.70	1.05	4.76	1.93	-0.10

* $p < .05$ (one tailed)

(including, of course, Happy-Sad on Recreation Facilities) but considering that 98 t-tests were carried out these results could have occurred by chance alone, and no account will be taken of them. Using the 1% level of significance, then, no significant differences were found between the groups using the semantic differential.

DISCUSSION

Although the writer has questioned the idea of the overcontrolled personality and suggested that individuals previously described as having characteristics more appropriately described as normal or controlled the results of the present chapter generally support the existence of two broad categories of offender, which have been retermed controlled and undercontrolle

Although the attitudes towards their environment of the controlled and undercontrolled subjects are virtually the same, their past behaviour, their predicted behaviour as assessed by prison officers and their actual behaviour whilst in prison differ. The controlled individuals came from a relatively stable background in that they tended to be married and to present no history of psychiatric disturbance or assaultive behaviour. In contrast to the undercontrolled subjects they were seen as reacting to their sentence without blaming anyone, or anything, as seeking approval from staff; as being self reliant and independent of other inmates, and presenting few educational or working problems. More importantly the prediction that the controlled subjects would show less institutional discontentment was upheld. The controlled subjects reported sick less, made fewer governors applications and breached discipline less frequently than the undercontrolled subjects. Considering the small numbers of subjects in the controlled homicide group (N = 10) these results support the typology of controlled and undercontrolled offenders convincingly.

In terms of their intellectual ability and attitudes toward their surroundings the two groups were nearly identical. The groups did differ on the Digit Span subtest of the WAIS and on the Happy-Sad dimension for the concept Recreational Facilities on the Semantic Differential but the differences are hardly noteworthy. That the groups did not differ in terms of intellectual ability was expected but that they did not differ, not only between groups, but in an absolute sense, in terms of their attitude, is surprising. Both groups perceived 'My Crime' as the most negative concept (awful, bad, sad, cruel and cowardly) of all and with reference to the prison environment perceived 'Visiting Arrangements' most positively (fair, pleasant) and 'Toilet Facilities' most negatively (unfair, bad, unpleasant and awful). Heskin, Bolton and Smith (1973) examined prisoners' attitudes towards 13 concepts dealing with prison authority and home life over time using both a longtitudinal and cross sectional approach They reported no changes in attitude using the longtitudinal method and only one highly significant result, a decrease in self evaluation, using the cross sectional technique. It would however seem presumptious to assume that different personality types are as consistent in their attitudes generally.

Perhaps it was overoptimistic to expect that personality types should relate to attitudes towards specific parts of the prison environment. Good food would seem to be good food, and bad food would seem to be bad food regardless of personality type. The suggestion behind the original hypothesis regarding attitudes was that the undercontrolled subjects would somehow complain more about the prison environment, via the semantic differential, than the controlled subjects. What appears to have happened is that all the subjects may have adopted some kind of common standard, and regression to the mean could be a useful statistical analogy. It is possible that prison staff would rate aspects of the prison environment in much the same way and this would prove an interesting study. Alternatively the semantic differential

may not be a sensitive enough measure of attitudes to have picked up differences between groups. Whatever the reason for the semantic differential not picking up complaining behaviour, governors applications did show a difference between the two groups in the expected direction.

The support for the existence of controlled and undercontrolled homicides is not unequivocal but it is substantial. The personality types are found consistently and have been shown to behave differently whilst in prison, to have different backgrounds, and to be assessed differentially by officers. The implications of the results for the control and treatment of long term prisoners are important.

Megargee (1971, p 140) has suggested that the undercontrolled individual should be encouraged to foster cohtrols through the use of "automatic rewards for approved behaviour and punishments for disapproved behaviour". He also suggested that the appropriate treatment for the "'Chronically Overcontrolled'" person should be "some form of psychotherapy" in order that he could reduce his excessive inhibitions. Whilst the treatment suggested for undercontrolled inmates seems like a sound idea, it is difficult, as Megargee recognized to implement such a programme. A form of discrimination learning is likely to result in that they will learn to exhibit control only when the probability of punishment is high. The implementation of prison regimes based on the total control of rewards and punishments has been talked about, and written about, a great deal (see, for example, Laycock, 1976, Williams 1975) but little, in a practical sense, has occurred, and the prospects appear bleak.

To turn to the 'Chronically Overcontrolled',Megargee suggests that some form of psychotherapy would benefit them. If, however, the results of the current study are accepted, these individuals are essentially normal, controlled people, and psychotherapy for some supposedly underlying personality disturbance is unnecessary, and early release from prison would appear a possibility. This suggestion is likely to receive little support

from either the general public or political bodies. Imprisonment serves a variety of purposes, including retribution, and hence the prospects of early release for controlled individuals appears bleak.

In the face of these organisational, political, and societal problems, has a typology, which appears to have validity for normal homicides, and by interpolation albeit cautiously to offenders in general, any utility at all? It's main feasible use at present would seem to be in handling prisoners whilst they are in prison. We have seen that the types behave differently in prison and are perceived as having different needs. The implication of this is to deal with these two types at seperate institutions. The controlled individuals tend not to require the same amount of supervision and control that the undercontrolled individuals require, they also have fewer problems associated with resettlement, education and work.

It is not the purpose of this discussion to design two kinds of prison regime but it would appear reasonable to suggest that resources (prison officers, welfare officers, education officers and security hardware) should be allocated to where they are required. Administrative activity and research are suggested in this area.

Summary

The controlled homicides (N = 10) and undercontrolled homicides (N = 30) were contrasted on five sets of variables, intellectual, background variables, officers' ratings, indices of institutional discontent and attitudes

Few notable differences were found between the groups on the WAIS and the semantic differential. However, as predicted, the controlled homicides, in contrast to the undercontrolled homicides came from stable backgrounds with no history of previous psychiatric treatment or assaultive behaviour. In prison they reported sick less frequently, committed fewer offences against discipline and made fewer governors applications than the undercontrolled

group. Prison officers rated the controlled subjects as more self sufficient and having fewer training needs than the undercontrolled individuals.

The implications of the validity of the typology were discussed in terms of the treatment, control and the allocation of resources to two types of prison regime.

CHAPTER FIVE

THE DEVELOPMENT OF AN UNDERCONTROLLED PERSONALITY SCALE

Megargee's (1966) original work was aimed at discovering methods of discriminating between assaultive and non-assaultive criminals. The relevant literature has been described in chapter one with the exception of that dealing with the development of a scale to measure overcontrolled hostility and its validity. This literature is reviewed here.

Megargee, Cook and Mendelsoln (1967) in an attempt to develop a scale of general assaultiveness from the MMPI carried out item analyses between an extremely assaultive group, a moderately assaultive group, a non-assaultive group and a group of non-delinquents. This resulted in six provisional scales and one of these, a 55 item scale, successfully discriminated between the non-assaultive and assaultive criminals. This scale was cross validated on three new samples of extremely assaultive, moderately assaultive and non-violent criminals and although the extremely assaultive group scored significantly higher, as hypothesised, than the other two groups (which did not differ significantly themselves) those items not discriminating between assaultive and non-assaultive criminals were eliminated. This resulted in a 31 item scale on which the extremely assaultive group scored highest whilst overlap remained between the moderately assaultive and non-violent group. The researchers concluded that the scale was not, therefore, an adequate scale of general assaultiveness but claimed that the revised scale detected the overcontrolled assaultive person. Two reasons for this were given, firstly that the content of the items were surprisingly passive, and secondly that the extremely assaultive group should be the only group, according to Megargee's theory, to contain both overcontrolled and undercontrolled personalities. In the same study the new scale, which was called the Overcontrolled-Hostility (O-H) scale, correlated in the predicted direction with other MMPI scales measuring rigidity, excessive control, repression and a reluctance to express

symptoms. Turning to further samples the authors showed that criminals classified as "overcontrolled" on the basis of case history data obtained significantly higher scores on O-H than individuals classified "undercontrolled". College men scored significantly lower than "undercontrolled" subjects.

Subsequent studies have, however, provided equivocal evidence for the validity of the scale. Megargee (1969) found that prison inmates thought to have excessive controls against the expression of aggression (conscientious objectors) scored significantly higher, than other inmates, on O-H. Blackburn (1972) and Haven (1972) have reported significant relationships in the predicted direction, with psychometric and behavioural measures of control, respectively. White et al (1973) found that high O-H scorers scored high on those scales of the 16PF (Cattell et al, 1957) measuring control. Megargee (1967) reports that Spencer found that assaultive offenders whose crimes involved injury to the victim scored significantly higher on O-H than non violent offenders. White (1975) reported that high O-H scorers among young offenders gave significantly more impunitive responses on the Rosensweig Picture Frustration Study (Rosensweig et al, 1947) whilst low O-H scorers gave significantly more extrapunitive responses. Vanderbeck (1973) found that high O-H scorers reported angry feeling during a frustrating experience significantly less often than medium or low O-H scorers.

On the other hand Megargee (1971) reports that, in unpublished studies, Blackburn found no significant differences between extremely assaultive and moderately assaultive psychiatric offenders on O-H and Wheeler found no significant differences in recognition of tachistoscopically presented violent and non-violent drawings for high and low O-H scorers. Vanderbeck (1973) reported no significant relationship between O-H scores and physiological activity and Lester (1974) found that high O-H scorers did not show personality characteristics associated with the overcontrolled personality on a battery of personality tests.

Murderers with or without previous convictions for assault have been found not to differ significantly on O-H from non-violent offenders with or without previous convictions (Mallory and Walker, 1972), inmates without a history of violence except for one major outburst of violence were found to show no significant differences from those with a history of many violent offences and those with non-violent records (Fisher, 1970), and no significant differences have been found between young offenders convicted of extremely assaultive offences committed alone or with others and moderately assaultive offenders and recidivist thieves (Rawlings, 1973). More recently, Paulson et al (1976) found no significant differences between adults who physically abused their children and those who did not on the O-H scale.

Since the original work on the development of the test, as far as the writer can determine, seven studies report positive findings and seven report negative findings. A possible explanation for these equivocal findings, in the light of the results of this study described in preceding chapters, may be found in a closer examination of the development of the O-H scale. The scale was designed by comparing assaultive offenders with non-violent offenders and non-delinquents and, as an afterthought, was thought to measure overcontrolled hostility because of the passive content of the items and the fact that extremely assaultive offenders scored highly on the scale, and according to Megargee's theory extremely assaultive offenders are likely to consist of both overcontrolled and undercontrolled personalities whilst moderately assaultive offenders are likely to consist of largely undercontrolled personalities.

The results of the current study show first of all that overcontrolled individuals are more appropriately termed controlled, and secondly that a proportion of controlled, relatively normal individuals, with respect to their personality, exist not only among extremely assaultive prisoners (25%) but also a sample of random, predominantly non-violent, prisoners (18%). Even

if "overcontrolled personalities" were only exhibited by extremely assaultive offenders, Megargee's original criterion group of extremely assaultive offenders (N = 14) would only have contained, at a liberal estimate, four or five subjects with such personalities. The majority would be undercontrolled on the basis of the present evidence, and hence to label the scale an Overcontrolled Hostility scale would appear presumptious. Taking into account the fact that "overcontrolled" subjects, again on the basis of the present evidence, appear to have personalities that with respect to the normal population are simply normal and controlled, the logic of developing an O-H scale is questionable. Perhaps this explanation accounts for the equivocal and inconclusive nature of the validity studies of the O-H scale.

Several tests other than the O-H scale have been developed by contrasting prison groups with normals in attempts to develop scales measuring what can generally be termed 'criminal tendencies'. The two most recent examples are the social nonconformity scale of the Psychological Screening Inventory (Lanyon, 1974) and the criminal propensity scale of the Eysenck Personality Questionnaire (Eysenck and Eysenck, 1976). However, no objective personality test of 'criminal tendencies' has been designed that has recognized that criminals may be a heterogeneous group with respect to their personalities. The present study has shown that criminal groups contain controlled, normal personalities and until this is recognized the search for a scale measuring criminal tendencies in a universal fashion, using groups of criminals and normals, would appear fruitless. On the other hand, however, and bearing in mind the usefulness of being able to discriminate between controlled and undercontrolled criminals because of their different needs in terms of treatment and control, the development of a undercontrolled personality scale would appear a logical and useful step.

The purpose of this chapter is to develop such a scale, and an item analysis was carried out on the controlled homicides (N = 10) and the

undercontrolled homicides (N = 30) who were shown to differ on non-test, largely behavioural, measures in chapter four. Appendix G shows each item of the MMPI, the value of chi square (adjusted from Fisher's exact probability test if expected frequences of less than 5.0 occur) and the probability associated with the result. Items showing a difference between the groups at less than the 0.01 level of significance are starred. A complete list of these 24 discriminating questions is shown in Table Z, scored in the direction of undercontrol, and the test is tentatively labelled the Undercontrolled Personality Scale (U.P.S.).

DISCUSSION

Whilst it is not the purpose of this study to examine the validity of the U.P.S. it is interesting to note the mean scores of the various groups that have been isolated earlier in the study:-

Normal Homicides

Normal Homicides (N = 40)
$\bar{X}$ = 12.45, s.d. = 5.55

Controlled Homicides (N = 10)
$\bar{X}$ = 4.10, s.d. = 0.87

Undercontrolled Homicides (N = 30)
$\bar{X}$ = 15.23, s.d. = 3.03

Type NH1(N=6) $\bar{X}$=3.83,s.d.=0.98

Type NH3(N=4) $\bar{X}$=4.50,s.d.=0.57

Type NH2a,2b(N=17) $\bar{X}$=16.23,s.d.=3.15

Type NH4(N=13) $\bar{X}$=13.92,s.d.=2.39

As can be seen the U.P.S. differentiates between the criterion groups upon which the test was developed with a difference of over 11 raw score points between the controlled and undercontrolled homicides. This difference is highly significant ($t = -11.35$, $p < 0.001$). These groups were also compared on Megargee's O-H scale and were found not to differ significantly ($\bar{X}$ "overcontrolled" = 16.50, s.d. = 2.79; $\bar{X}$ undercontrolled = 14.46, s.d. = 3.43; $t = 1.88$, $p = 0.10$).

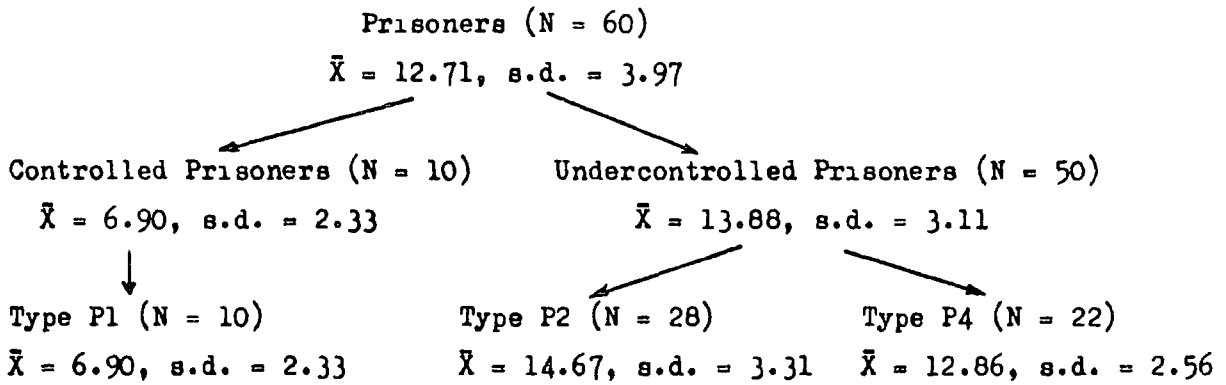
TABLE Z

ITEMS OF THE MMPI DISCRIMINATING CONTROLLED AND UNDERCONTROLLED HOMICIDES:- THE UNDERCONTROLLED PERSONALITY SCALE (U.P.S.)

1. When I take a new job, I like to be tipped off on who to keep in with.	*TRUE	FALSE
2. When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing.	*TRUE	FALSE
3. During one period when I was a youngster I engaged in petty thievery.	*TRUE	FALSE
4. I prefer to pass by school friends, or people I know but have not seen for a long time, unless they speak to me first.	*TRUE	FALSE
5. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.	TRUE	*FALSE
6. At times my thoughts have raced ahead faster than I could speak them.	*TRUE	FALSE
7. When I get bored I like to stir up some excitement.	*TRUE	FALSE
8. I have never had any breaking out on my skin that has worried me.	TRUE	*FALSE
9. My way of doing things is apt to be misunderstood by others.	*TRUE	FALSE
10. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world".	*TRUE	FALSE
11. I don't blame anyone for trying to grab everything he can get in this world.	*TRUE	FALSE
12. I do not blame a person for taking advantage of someone who lays himself open to it.	*TRUE	FALSE
13. I enjoy children.	TRUE	*FALSE
14. At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it.	*TRUE	FALSE
15. If several people find themselves in trouble, the best thing for them to do is to agree upon a story and stick to it.	*TRUE	FALSE
16. I refuse to play some games because I am not good at them.	*TRUE	FALSE
17. I think nearly anyone would tell a lie to keep out of trouble.	*TRUE	FALSE
18. At periods my mind seems to work more slowly than usual.	*TRUE	FALSE
19. People have often misunderstood my intentions when I was trying to put them right and be helpful.	*TRUE	FALSE
20. I have at times had to be rough with people who were rude or annoying.	*TRUE	FALSE
21. I must admit that I have at times been worried beyond reason over something that really did not matter.	*TRUE	FALSE
22. The members of my family and my close relatives get along quite well.	TRUE	*FALSE
23. I am not bothered by a great deal of belching of gas from my stomach.	TRUE	*FALSE
24. It makes me angry to have people hurry me.	*TRUE	FALSE

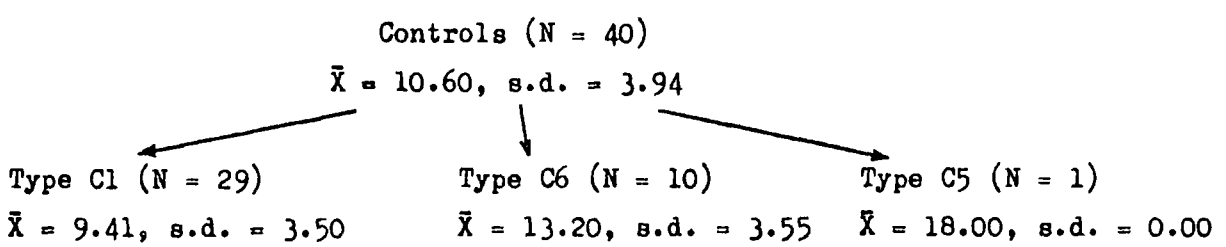
* Response indicating undercontrol.

Prisoners



If the prisoner group is considered as a crossvalidation sample, even though only one controlled prisoner type (P1) was produced by the cluster analysis, the U.P.S. shows a difference of nearly 7 raw score points between the controlled and undercontrolled prisoners. This result is also highly significant ($t = -6.70$, $p < .001$). The difference between these groups on Megargee's O-H scale was significant, but not as highly as on the U.P.S. ($\bar{X}$ "overcontrolled" = 16.67, s.d. = 3.49, $\bar{X}$ undercontrolled = 13.76, s.d. = 2.77; $t = 2.93$, $p < 0.01$). The U.P.S. would appear to make finer discriminations between controlled and undercontrolled prisoners than the O-H scale and hence have greater utility.

Controls



The mean scores of the control group are interesting in that the difference between Type C1 and Type C6 is significant ($t = -2.94$, $p < 0.01$). This would suggest that some non-delinquent individuals exhibiting normal MMPI profiles may have undercontrolled characteristics. Perhaps these

tendencies are channeled into socially acceptable forms of behaviour or perhaps the situational factors acting upon these individuals do not lead them into delinquency. Types C1 and C6 also differed significantly on Megargee's O-H scale ($\bar{X}$ C1 = 14.37, s.d. = 2.88, $\bar{X}$ C6 = 10.20, s.d. = 2.97; $t = 3.92$, $p < .001$) and in the absence of any information about these people other than their scores on the O-H scale, Type C1 would be perceived as chronically overcontrolled, to use Megargee's (1971) terminology. These subjects are, of course, normal non-violent individuals which throws further doubt on the validity of Megargee's O-H scale and the concept of the overcontrolled personality.

Further research is needed into the validity of the U.P.S.. It is to be hoped, however, that investigators do not compare, en mass, prisoners with non-delinquents or violent prisoners with non-violent prisoners in the traditional manner as the results of the current study would suggest that this is methodologically unsound.

Recognition that groups of prisoners contain subgroups that firstly differ markedly on undercontrol, secondly behave differently whilst in prison, and finally can perhaps be detected in a straightforward, economic, quick manner using the U.P.S. (or a combination of the U.P.S. and background variables - see chapter four) may lead to an administrative decision to carry out further research into possible practical applications of the controlled-undercontrolled typology. Hewlings (1971) has recently argued that murderers, in particular, present treatment problems and suggested that "positive experiments" are needed in this area. The setting up in 1975 of 'Lifer Assessment' units at H.M. Prisons Wakefield and Wormwood Scrubs, through which all prisoners serving life sentences pass at the beginning of their sentences for assessment purposes, would appear to facilitate the initiation of such a programme of research.

Summary

A review of the literature relating to Megargee's O-H scale was presented which showed that the evidence regarding the scale's validity was equivocal. An examination of the design of the scale revealed flaws in the logic of developing an O-H scale. An item analysis of the MMPI responses of controlled and undercontrolled homicides lead to the presentation of the Undercontrolled Personality Scale; a short, 24 item questionnaire. Suggestions for future research with prisoners were made.

CHAPTER SIX

CONCLUSIONS

To the reader who has carefully read the preceding chapters, this study may appear as a programmed series of investigations that were planned, from the outset, to follow a well organised logical development. Nothing could be further from the truth. At the beginning of the study the writer was stimulated into action by Blackburn's (1971) finding that "overcontrolled" and undercontrolled personality types exist among abnormal homicides at Broadmoor thereby supporting Megargee's theory of control. At this point, however, the sole aim of the current study was to determine whether similar types would be found among 'normal' homicides and infact the writer was extremely sceptical about finding such types on the assumption that individuals committed to Broadmoor would be very different from individuals committed to prison. Only when similar types of "overcontrolled" and undercontrolled personalities were produced by a cluster analysis of MMPI profiles from normal homicides did the writer perceive the next step in the way forward, and so it was at the end of each of the subsequent investigations that were carried out.

It will be remembered that the results of this first investigation posed the question as to whether such types represented prisoners in general rather than homicides and hence a cluster analysis of MMPI profiles of random prisoners was carried out which again surprisingly produced similar types to those found among abnormal and normal homicides.

The results thus far obtained then posed the question as to whether these types represented people in general rather than prisoners or homicides. Hence a cluster analysis of MMPI profiles of a comparison group of non-delinquents was carried out. The results from the prisoner group, which was composed of predominantly non-violent individuals, had challenged Megargee's

theory as the theory relates to extreme aggression but the finding that 72.5 percent of the non-delinquent group produced a profile which had previously been labelled "overcontrolled" challenged Megargee's theory directly. The homicides and prisoners who had previously been described as "overcontrolled" relative to other homicides and prisoners were then thought to have controlled and normal personalities relative to the normal population.

This reformulation of the results of previous investigations did not, however, inhibit the investigator from posing a further question; even if controlled was a more appropriate term than overcontrolled did a controlled-undercontrolled typology have any validity, and hence utility, in terms of non-personality test variables? In an attempt to answer this question controlled and undercontrolled homicides were contrasted on a variety of intellectual, background, and attitudinal variables, indices of institutional discontentment and ratings of the men made by prison officers. In general support was found for the typology in that controlled homicides, relative to undercontrolled homicides, came from stable backgrounds, did not have a history of assaultive behaviour, reported sick less often and committed offences less often in prison, made fewer demands on the prison authorities and were seen at the beginning of their sentences by prison staff as likely to present fewer problems in terms of treatment and control. The implications for the differential handling of controlled and undercontrolled prisoners by the prison authorities are apparent.

The final stage of the study was again prompted by the previous investigation. An item analysis of the MMPI responses of controlled and undercontrolled individuals was carried out in order to develop a short MMPI scale which would assist in discriminating between these kinds of personality types and this scale was tentatively named the Undercontrolled Personality Scale. This activity could not have been further from the mind of the investigator at the beginning of the study.

Finally, on the basis of the evidence provided by this study a controlled-undercontrolled typology of certainly homicides, and perhaps prisoners in general, would appear to have some reliability, validity and utility, but a great deal of research needs to be carried out before really firm conclusions can be drawn. Hopefully those readers who tend to read the last page of a murder story to see 'who done it' before turning to the first page will have been tempted by now to turn to page one on reading only these brief conclusions.

The author will be happy to make available further data, where available, in connection with the tables of this thesis.

APPENDICES

Appendix A

Cluster Analysis (Wards Method) fusion summary for Homicide Group (N 40)

Subjects	Dissimilarity Coefficient
12 and 15	0·261
18 and 34	0·262
17 and 31	0·304
9 and 40	0·320
26 and 36	0·330
4 and 8	0 402
10 and 19	0·417
6 and 24	0·421
27 and 38	0·440
3 and 13	0·499
1 and 17	0·528
10 and 21	0·555
16 and 20	0·556
30 and 37	0·592
1 and 12	0·612
25 and 29	0·613
2 and 3	0 613
7 and 23	0·670
5 and 25	0·703
4 and 28	0·708
9 and 11	0 800
30 and 39	0 874
6 and 7	0·898
4 and 26	0·908
10 and 18	0 936
22 and 32	0·948
2 and 9	0·975
27 and 33	1·293
30 and 35	1·366
5 and 14	1·490
4 and 6	1·756
10 and 27	2 126
2 and 10	2·413
16 and 22	2·732
4 and 5	2·734
1 and 2	5·648
4 and 16	7·262
1 and 30	8·306
1 and 4	23·751

Appendix B

Cluster Analysis (Wards Method) fusion summary for Prisoner Group (N 60)

Subjects	Dissimilarity Coefficient
14 and 33	0·183
45 and 48	0·216
43 and 53	0·227
13 and 52	0·240
8 and 42	0·295
34 and 45	0 305
50 and 60	0·318
24 and 30	0·347
13 and 31	0 369
19 and 55	0 370
2 and 5	0 378
50 and 56	0·379
8 and 9	0·437
29 and 35	0 451
25 and 38	0·455
43 and 51	0 470
1 and 41	0·484
3 and 13	0·494
25 and 47	0·527
32 and 54	0·553
37 and 57	0 568
12 and 14	0·581
1 and 36	0·584
26 and 40	0 628
4 and 7	0·635
46 and 50	0·637
27 and 49	0·647
6 and 32	0·651
11 and 16	0·682
17 and 39	0·779
4 and 34	0·831
46 and 59	0·854
46 and 58	0 898
18 and 19	0·930
1 and 43	0 947
4 and 37	0·955
8 and 44	0 992
26 and 27	0 998
23 and 24	1 023
18 and 21	1·152
20 and 46	1·177
2 and 15	1·211
3 and 12	1·262
3 and 22	1·490
6 and 25	1 554
8 and 23	1·715
1 and 17	1·910
10 and 28	2·084

Appendix B Continued

Subject	Dissimilarity Coefficient
1 and 20	2 364
4 and 6	2 725
18 and 26	2·806
10 and 18	3 739
2 and 11	4 058
2 and 4	5 741
3 and 29	6 026
1 and 8	6·791
2 and 10	7 052
1 and 3	12·277
1 and 2	30·582

Appendix C

Cluster Analysis (Wards Method) fusion summary for Controls (N 40)

Subject	Dissimilarity Coefficient
33 and 34	0·240
16 and 38	0·403
7 and 15	0·425
19 and 30	0 467
5 and 40	0·512
2 and 18	0·540
9 and 27	0·557
14 and 33	0·565
6 and 8	0·584
10 and 22	0·618
3 and 12	0·645
2 and 35	0 704
16 and 26	0·735
14 and 24	0 739
1 and 6	0 783
11 and 23	0·799
2 and 39	0·831
13 and 37	0·900
1 and 10	0·954
19 and 21	0·983
7 and 25	1 009
3 and 32	1 076
20 and 28	1 092
17 and 29	1 099
11 and 13	1 192
2 and 4	1·423
20 and 31	1·427
9 and 14	1·502
3 and 19	1 714
7 and 16	1·946
3 and 5	2·408
1 and 9	2·515
3 and 11	2·832
2 and 17	2 897
2 and 20	3·845
3 and 7	5·248
1 and 3	6·163
2 and 36	9·550
1 and 2	18·097

Appendix D

Osgood Et Al's (1957, p 37) Adjective Dimensions

1 good - bad
2. large - small
3. beautiful - ugly
4 yellow - blue
5. hard - soft
6. sweet - sour
7. strong - weak
8. clean - dirty
9. high - low
10. calm - agitated
11. tasty - distasteful
12. valuable - worthless
13. red - green
14. young - old
15. kind - cruel
16. loud - soft
17 deep - shallow
18 pleasant - unpleasant
19 black - white
20. bitter - sweet
21 happy - sad
22 sharp - dull
23 empty - full
24 ferocious - peaceful
25. heavy - light
26. wet - dry
27. sacred - profane
28. relaxed - tense
29. brave - cowardly
30. long - short
31. rich - poor
32 clear - hazy
33 hot - cold
34. thick - thin
35. nice - awful
36. bright - dark
37. bass - treble
38. angular - rounded
39 fragrant - foul
40. honest - dishonest
41. active - passive
42. rough - smooth
43. fresh - stale
44. fast - slow
45. fair - unfair
46 rugged - delicate
47 near - far
48 pungent - bland
49 healthy - sick
50. wide - narrow

Appendix E

THE SEMANTIC DIFFERENTIAL

OPINION SURVEY

The purpose of this survey is to find out prisoners views about various aspects of prison life. Written at the top of each page of this booklet you will find a part of prison life to be judged, and beneath this you'll find a set of scales made up of opposite adjectives.

As an example of how to use these scales, imagine that 'The Parole System' is written at the top of the page and hence you are rating that. If you feel that this is very closely related to one end of a scale you should place your check marks as follows -

fair x _ _ _ _ _ _ unfair

OR

fair _ _ _ _ _ _ _ x unfair

If 'The Parole System' is quite closely related to one or the other end of the scale (but not extremely), you should place your check marks as follows -

good _ x _ _ _ _ _ bad

OR

good _ _ _ _ _ _ x _ bad

If 'The Parole System' is only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows -

quick _ _ x _ _ _ _ slow

OR

quick _ _ _ _ _ x _ _ slow

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging.

If you consider the thing you're judging, in this example 'The Parole System', to be neutral, both sides of the scale being equally associated with concept, or if the scale is completely irrelevant and unrelated to the concept, then you should place your check mark in the middle space -

soft _ _ _ x _ _ _ hard

Your judgements are anonymous and confidential - please do not put your name on this booklet. Work at fairly high speed through the survey - it's your first impressions that are wanted On the other hand, please do not be careless, because your real impressions are required.

PRISON FOOD

FRESH	_ _ _ _ _ _ _ _	STALE
AWFUL	_ _ _ _ _ _ _ _	NICE
LARGE	_ _ _ _ _ _ _ _	SMALL
VALUABLE	_ _ _ _ _ _ _ _	WORTHLESS
DISTASTEFUL	_ _ _ _ _ _ _ _	TASTY
UNPLEASANT	_ _ _ _ _ _ _ _	PLEASANT
BAD	_ _ _ _ _ _ _ _	GOOD
HOT	_ _ _ _ _ _ _ _	COLD

PRISON DISCIPLINE

FAIR	_ _ _ _ _ _ _ _	UNFAIR
BAD	_ _ _ _ _ _ _ _	GOOD
SOFT	_ _ _ _ _ _ _ _	HARD
VALUABLE	_ _ _ _ _ _ _ _	WORTHLESS
UNPLEASANT	_ _ _ _ _ _ _ _	PLEASANT
TENSE	_ _ _ _ _ _ _ _	RELAXED
DISHONEST	_ _ _ _ _ _ _ _	HONEST
AWFUL	_ _ _ _ _ _ _ _	NICE
SLOW	_ _ _ _ _ _ _ _	FAST

MY PRESENT PRISON JOB

PLEASANT	_ _ _ _ _ _ _ _	UNPLEASANT
WORTHLESS	_ _ _ _ _ _ _ _	VALUABLE
BAD	_ _ _ _ _ _ _ _	GOOD
HARD	_ _ _ _ _ _ _ _	SOFT
DIRTY	_ _ _ _ _ _ _ _	CLEAN
LIGHT	_ _ _ _ _ _ _ _	HEAVY

VISITING ARRANGEMENTS

PLEASANT	_ _ _ _ _ _ _ _	UNPLEASANT
SAD	_ _ _ _ _ _ _ _	HAPPY
FAIR	_ _ _ _ _ _ _ _	UNFAIR
AWFUL	_ _ _ _ _ _ _ _	NICE
GOOD	_ _ _ _ _ _ _ _	BAD
LARGE	_ _ _ _ _ _ _ _	SMALL
WORTHLESS	_ _ _ _ _ _ _ _	VALUABLE
SHORT	_ _ _ _ _ _ _ _	LONG
SLOW	_ _ _ _ _ _ _ _	FAST
KIND	_ _ _ _ _ _ _ _	CRUEL

OTHER PRISONERS

HARD	_ _ _ _ _ _ _ _	SOFT
DIRTY	_ _ _ _ _ _ _ _	CLEAN
PLEASANT	_ _ _ _ _ _ _ _	UNPLEASANT
FEROCIOUS	_ _ _ _ _ _ _ _	PEACEFUL
POOR	_ _ _ _ _ _ _ _	RICH
ACTIVE	_ _ _ _ _ _ _ _	PASSIVE
HEALTHY	_ _ _ _ _ _ _ _	SICK
DISHONEST	_ _ _ _ _ _ _ _	HONEST
TENSE	_ _ _ _ _ _ _ _	RELAXED
HAPPY	_ _ _ _ _ _ _ _	SAD
AGITATED	_ _ _ _ _ _ _ _	CALM
GOOD	_ _ _ _ _ _ _ _	BAD
WEAK	_ _ _ _ _ _ _ _	STRONG
KIND	_ _ _ _ _ _ _ _	CRUEL
UNFAIR	_ _ _ _ _ _ _ _	FAIR

RECREATIONAL FACILITIES

VALUABLE	_ _ _ _ _ _ _ _	WORTHLESS
PASSIVE	_ _ _ _ _ _ _ _	ACTIVE
SLOW	_ _ _ _ _ _ _ _	FAST
UNFAIR	_ _ _ _ _ _ _ _	FAIR
HEALTHY	_ _ _ _ _ _ _ _	SICK
NICE	_ _ _ _ _ _ _ _	AWFUL
HAPPY	_ _ _ _ _ _ _ _	SAD
DIRTY	_ _ _ _ _ _ _ _	CLEAN
BAD	_ _ _ _ _ _ _ _	GOOD

CORRESPONDENCE FACILITIES

FAIR	_ _ _ _ _ _ _ _	UNFAIR
AWFUL	_ _ _ _ _ _ _ _	NICE
GOOD	_ _ _ _ _ _ _ _	BAD
SMALL	_ _ _ _ _ _ _ _	LARGE
WORTHLESS	_ _ _ _ _ _ _ _	VALUABLE
LONG	_ _ _ _ _ _ _ _	SHORT
PLEASANT	_ _ _ _ _ _ _ _	UNPLEASANT
SLOW	_ _ _ _ _ _ _ _	FAST
SAD	_ _ _ _ _ _ _ _	HAPPY

MY CRIME

SAD	_ _ _ _ _ _ _ _	HAPPY
HAZY	_ _ _ _ _ _ _ _	CLEAR
AWFUL	_ _ _ _ _ _ _ _	NICE
BAD	_ _ _ _ _ _ _ _	GOOD
KIND	_ _ _ _ _ _ _ _	CRUEL
PLEASANT	_ _ _ _ _ _ _ _	UNPLEASANT
UNIMPORTANT	_ _ _ _ _ _ _ _	IMPORTANT
COWARDLY	_ _ _ _ _ _ _ _	BRAVE
ACTIVE	_ _ _ _ _ _ _ _	PASSIVE

PRISON STAFF

STRONG	_ _ _ _ _ _ _ _	WEAK
DISHONEST	_ _ _ _ _ _ _ _	HONEST
FAST	_ _ _ _ _ _ _ _	SLOW
DULL	_ _ _ _ _ _ _ _	SHARP
YOUNG	_ _ _ _ _ _ _ _	OLD
BAD	_ _ _ _ _ _ _ _	GOOD
LARGE	_ _ _ _ _ _ _ _	SMALL
HARD	_ _ _ _ _ _ _ _	SOFT
PLEASANT	_ _ _ _ _ _ _ _	UNPLEASANT
AGITATED	_ _ _ _ _ _ _ _	CALM
SAD	_ _ _ _ _ _ _ _	HAPPY
RELAXED	_ _ _ _ _ _ _ _	TENSE
COWARDLY	_ _ _ _ _ _ _ _	BRAVE
FAIR	_ _ _ _ _ _ _ _	UNFAIR

TOILET FACILITIES

CLEAN	_ _ _ _ _ _ _ _	DIRTY
UNPLEASANT	_ _ _ _ _ _ _ _	PLEASANT
COLD	_ _ _ _ _ _ _ _	HOT
UNFAIR	_ _ _ _ _ _ _ _	FAIR
GOOD	_ _ _ _ _ _ _ _	BAD
AWFUL	_ _ _ _ _ _ _ _	NICE
LARGE	_ _ _ _ _ _ _ _	SMALL

Appendix F

THE CONTROLLED AND UNDERCONTROLLED HOMICIDES COMPARED ON EACH SCALE OF THE SEMANTIC DIFFERENTIAL AND A SUMMARY OF THE FACTOR ANALYSIS ON EACH CONCEPT OF THE SEMANTIC DIFFERENTIAL

PRISON FOOD

Bipolar Dimensions (with extreme scores)			Controlled Group (No·10)		Undercontrolled Group No 10)			Factor Analysis Factor t Loadings
			x̄	s d.	x̄	s d.	t	
Fresh	(1) Stale	(7)	3 80	1 03	4 13	2 03	-0 67	0 88
Awful	(7) Nice	(1)	4 70	1·42	4 60	1 75	0 16	0·90
Large	(1) Small	(7)	4 80	0 78	4·30	1 62	1 29	0·63
Valuable	(1) Worthless	(7)	4 10	1 66	4 40	1 85	-0 45	0·84
Distasteful	(7) Tasty	(1)	4·30	0·82	4·20	1·79	0 24	0·88
Unpleasant	(7) Pleasant	(1)	4 00	1 15	4·40	1 75	-0 67	0·93
Bad	(7) Good	(1)	4·10	1 19	4·70	1·82	-0 97	0·92
Hot	(7) Cold	(7)	3·40	1 07	4 50	1·60	-2 03*	0·56
							% of variance	72 40

* p< ·05 (one tailed)

PRISON DISCIPLINE

Bipolar Dimensions (with extreme scores)			Controlled Group (No 10)		Undercontrolled Group (No 30)			Factor Analysis		
			$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1	Factor 2	Factor 3
Fair	(1) Unfair	(7)	3 70	1.25	3·60	2·03	0 15	0·15	0 84	0 02
Bad	(7) Good	(1)	3·60	0·96	4·27	1·55	-1 27	0·09	0·83	0 08
Soft	(7) Hard	(1)	4·00	1·49	4·10	1·24	-0 21	-0 03	0·01	0·65
Valuable	(1) Worthless	(7)	3·50	1·35	3·56	1·67	-0 11	0·44	0·32	0·58
Unpleasant	(7) Pleasant	(1)	4·00	0·81	4·63	1 56	-1·64	0 01	0·27	0 19
Tense	(7) Relaxed	(1)	4·70	1·16	4·67	1·56	0·06	0·56	0 13	-0 46
Dishones	(7) Honest	(1)	4·10	1·52	4·06	1·64	0·06	0·29	0·44	0 46
Awful	(7) Nice	(1)	4·10	1·10	4·20	1 16	-0·24	0 84	0·26	-0 14
Slow	(7) Fast	(1)	4·50	1·58	4·43	1 50	0·12	0 82	-0 06	0 24
							% of variance	39 30	19 50	15 30

MY PRESENT PRISON JOB

Bipolar Dimensions (with extreme scores)				Controlled Group (N·10)		Undercontrolled Group (N 30)			Factor Analysis Loadings	
				$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1	Factor 2
Pleasant	(1)	Unpleasant	(7)	3·10	1·85	3·16	1·72	-0·10	0·81	-0·08
Worthless	(7)	Valuable	(1)	3·40	2·27	3·47	1·89	-0·09	0·84	-0·32
Bad	(7)	Good	(1)	3·30	1·70	3·13	1·83	0·25	0·96	-0·02
Hard	(1)	Soft	(7)	4·50	1 27	4·03	1·56	0·85	0·09	-0·49
Dirty	(7)	Clean	(1)	3·80	2·15	3·47	1·98	0·45	0·62	0·36
Light	(1)	Heavy	(7)	3·10	1·37	3·13	1·97	-0·05	0·03	0·68
								% of variance	49·10	25·10

VISITING ARRANGEMENTS

Bipolar Dimensions (with extreme scores)				Controlled Group (N·10)		Undercontrolled Group (N·30)			Factor Analysis (Loadings)		
				$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1	Factor 2	Factor 3
Pleasant	(1)	Unpleasant	(7)	2·20	1·13	2·43	2·45	-0·46	0·69	0·34	0·40
Sad	(7)	Happy	(1)	3·80	1·55	3·06	1·95	1·08	0·08	0·92	0·14
Fair	(1)	Unfair	(7)	2·60	1·58	2·93	1·76	-0·53	0·87	0·24	0·16
Awful	(7)	Nice	(1)	2·70	1·16	2·57	1·45	0·26	0·21	0·59	0·66
Good	(1)	Bad	(7)	2·40	1·17	2·66	1·65	-0·47	0·48	0·24	0·75
Large	(1)	Small	(7)	2·60	1·17	3·20	1·80	-0·98	0·53	-0·00	0·24
Worthless	(7)	Valuable	(1)	2·40	1·26	2·13	1·67	0·46	0·26	0·13	0·75
Short	(7)	Long	(1)	4·10	1·66	3·60	1·88	0·75	0·52	0·54	0·09
Slow	(1)	Fast	(7)	4·20	1·32	4·63	1·79	-0·70	-0·22	-0·38	-0·17
Kind	(1)	Cruel	(7)	2·80	0·79	2·60	1·38	0·43	0·06	0·42	0·38
								% of variance	49 9	12·9	10·3

PRISONERS

Bipolar Dimensions (with extreme scores)			Controlled Group (N 10) $\bar{x}$	s.d.	Undercontrolled Group (N 30) $\bar{x}$	s.d.	t	Factor Analysis (Loadings) Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Hard	(1) Soft	(7)	3·60	0·70	3·90	1·15	−0·77	−0·84	0·03	0·08	0·00	−0·20	0·01
Dirty	(7) Clean	(1)	4·70	0·67	3·90	1·27	1·89 *	0·60	0·44	0·19	0·11	0·13	0·03
Pleasant	(1) Unpleasant	(7)	4·20	1·13	3·93	1·36	0 56	0·12	0·09	0·68	0·28	−0·02	0·09
Ferocious	(7) Peaceful	(1)	3·40	1·50	3·70	1·21	−0·64	0·60	0·09	0·18	0·60	−0·08	−0·14
Poor	(7) Rich	(1)	5·10	1·10	4·36	1·13	1·79 *	−0·05	0·14	−0·09	0·03	−0·01	0·91
Active	(1) Passive	(7)	4·20	1·13	3·40	1·40	1·63	0·04	0·89	0·15	0·02	0·19	0·12
Healthy	(1) Sick	(7)	3·60	1·17	3·36	1·59	0·43	0·28	0·40	0·05	0·45	0·02	−0·46
Dishonest	(7) Honest	(1)	4·10	1·29	4·37	1·03	−0·66	0·61	−0·30	0·22	−0·11	0·03	0·00
Tense	(7) Relaxed	(1)	4·50	1 27	4·30	1·32	0·42	0·13	0·06	0·25	0·04	0·66	−0·01
Happy	(1) Sad	(7)	4·40	0·84	4·20	1·18	0·49	−0·28	0·44	0·22	0·57	0·23	0·01
Agitated	(7) Calm	(1)	4·50	0·85	4·37	1·13	0·34	0·11	−0·06	0·16	0·69	0·24	0·04
Good	(1) Bad	(7)	4·30	0·82	3·97	1·03	0·92	0·17	0·10	0·80	0·01	0·35	−0·13
Weak	(7) Strong	(1)	4·20	1·32	3·93	0·98	0·68	0·09	0·23	−0·02	0·36	0·64	0·00
Kind	(1) Cruel	(7)	4·10	0·87	3·83	1·31	0·60	0·48	0·26	0·44	0·31	0·18	−0·09
Unfair	(7) Fair	(1)	4·00	0·94	3·76	1·43	0·48	0·76	0·24	0·24	0·27	0·03	−0·19

*$p < 0·05$ (one tailed)

% of variance 23·3 15·0 9·2 8·3 7·7 7·1

RECREATIONAL FACILITIES

Bipolar Dimensions (with extreme scores)	Controlled Group (N·10)		Undercontrolled Group (N 30)			Factor Analysis (Loadings)
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1
Valuable(1) Worthless (7)	3·90	1·45	3·50	1·91	0·61	0·84
Passive (7) Active (1)	4·50	1·18	3·50	1·63	1·78*	0·78
Slow (7) Fast (1)	4·00	0·66	4·00	1·59	0·00	0·67
Unfair (7) Fair (1)	3·50	1·08	3·53	1·69	-0·06	0·74
Healthy (1) Sick (7)	3·50	0·97	3·46	1·52	0·06	0·87
Nice (1) Awful (7)	3·70	0·43	3·26	1·53	1·36	0·89
Happy (1) Sad (7)	3·90	0·74	3·27	1·44	1·80	0·94
Dirty (7) Clean (1)	3·90	0·87	3·46	1·63	0·80	0·75
Bad (7) Good (1)	3·70	0·82	3·40	1·83	0·71	0·81

% of variance 70·5

* p 0·05 (one tailed)

CORRESPONDENCE FACILITIES

Bipolar Dimensions (with extreme scores)	Controlled Group (N 10)		Undercontrolled Group (N 30)			Factor Analysis (Loadings)	
	$\bar{x}$	s.d.	$\bar{x}$	s d	t	Factor 1	Factor 2
Fair (1) Unfair (7)	3·90	1·66	3·11	1·97	1·10	0·70	0·39
Awful (7) Nice (1)	3·60	1·17	3·36	1 59	0·43	0·66	0·37
Good (1) Bad (7)	3·90	1·59	3·40	1·75	0·80	0·72	0 54
Small (7) Large (1)	4·60	1·43	4·23	1·57	0 65	0·82	0·11
Worthless (7) Valuable (1)	2·80	1·75	2·43	1·74	0·58	0·16	0·92
Long (1) Short (7)	4·30	1·16	3·70	1·68	1·04	0·55	0·15
Pleasant (1) Unpleasant (7)	2·90	1·52	2·50	1·28	0·82	0·20	0·78
Slow (7) Fast (1)	4·90	1·10	4·53	1·57	0·68	0·53	0·12
Sad (7) Happy (1)	3·80	0·91	2·96	1·54	1·61	0·52	0·73
					% of variance	55·9	14·6

MY CRIME

Bipolar Dimensions (with extreme scores)				Controlled Group (N·10)		Undercontrolled Group (N·30)			Factor Analysis (Loadings)		
				$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1	Factor 2	Factor 3
Sad	(7)	Happy	(1)	6·50	1·08	5·80	1·32	1·51	0·81	−0·13	0·12
Hazy	(7)	Clear	(1)	4·10	1·91	4·06	2·03	0·05	0·04	−0·03	0·51
Awful	(7)	Nice	(1)	6·60	0·96	5·86	1·30	1·63	0·89	−0·20	−0·14
Bad	(7)	Good	(1)	6·70	0·94	5·83	1·36	1·85*	0·88	−0·11	0·17
Kind	(1)	Cruel	(7)	5·70	1·56	5·60	1·40	0·19	0·69	−0·22	0·00
Pleasant	(1)	Unpleasant	(7)	6·40	0 96	5·63	1·56	1·45	0·73	−0·28	0·11
Unimportant	(7)	Important	(1)	2·20	1·93	2·80	1·77	−0·91	−0·40	0·84	0·21
Cowardly	(7)	Brave	(1)	5·40	1·26	5·26	1·70	0·23	0·61	−0·05	−0·36
Active	(1)	Passive	(7)	3·20	1·55	3·40	1·63	−0·34	−0·09	0·71	−0·46
								% of variance	51·3	15·4	11·3

*$p < 0.05$

PRISON STAFF

Bipolar Dimensions (with extreme scores)			Controlled Group (N 10)		Undercontrolled Group (N 30)			Factor Analysis (Loadings)		
			$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1	Factor 2	Factor 3
Strong	(1) Weak	(7)	3·60	1·57	3·73	1·51	−0·24	0·59	0·21	−0·17
Dishonest	(7) Honest	(1)	3·90	1·37	4·30	1·64	−0·69	0·68	0·47	0·10
Fast	(1) Slow	(7)	4·10	1·52	4·13	1·56	−0·06	0·66	0·14	−0·05
Dull	(7) Sharp	(1)	3·90	1·91	1·91	4·00	−0·14	0·77	0·14	0·24
Young	(1) Old	(7)	3·20	0·92	0·92	3·43	−0·60	0·06	0·06	0·77
Bad	(7) Good	(1)	3·50	1·18	4·10	1·49	−1·15	0·76	0·49	0·13
Large	(1) Small	(7)	4·00	0·94	4·03	1·24	−0·08	0·13	0·39	−0·23
Hard	(1) Soft	(7)	3·40	0 69	3·53	1·10	−0·36	0·28	−0 09	−0·09
Pleasant	(1) Unpleasant	(7)	3·60	0·96	4·03	1·79	−0·73	0·72	0·38	0·39
Agitated	(7) Calm	(1)	4·00	1·33	4·33	1·54	−0·61	0·29	0·79	0·15
Sad	(7) Happy	(1)	3·80	1·23	4·06	1·36	−0·55	0·38	0·78	0·08
Relaxed	(1) Tense	(7)	3·90	1·19	3·90	1·45	0·00	0·01	0·89	0·13
Cowardly	(7) Brave	(1)	4·00	0·94	4·46	1·41	−0·97	0·72	0·35	0·10
Fair	(1) Unfair	(7)	3·60	1·26	3·80	1·85	−0 32	0·65	0·27	0·28
								% of variance 47·2	11·8	9·6

TOILET FACILITIES

Bipolar Dimensions (with extreme scores)			Controlled Group (N 10)		Undercontrolled Group (N 30)			Factor Analysis (Loadings)
			$\bar{x}$	s.d.	$\bar{x}$	s.d.	t	Factor 1
Clean	(1) Dirty	(7)	4·10	1·97	4·73	2·22	-0·80	0·84
Unpleasant	(7) Pleasant	(1)	5·30	1·25	4·90	2·02	0·59	0·91
Cold	(7) Hot	(1)	4·50	0·97	4·33	2·02	0·25	0·72
Unfair	(7) Fair	(1)	4·30	1·49	4·60	1·92	-0·45	0·93
Good	(1) Bad	(7)	4·50	1·26	4·86	2·03	-0·53	0·93
Awful	(7) Nice	(1)	4·70	1·42	4·36	1·95	0·05	0·90
Large	(1) Small	(7)	4·80	1·32	4·83	2·08	-0·05	0·61
							% of variance	75·4

APPENDIX G

ITEM ANALYSIS OF MMPI ITEMS BETWEEN CONTROLLED AND UNDERCONTROLLED HOMICIDES

	ITEM	CHI SQUARE	P
1.	I like mechanics magazines	0·00	1·00
2.	I have a good appetite	0·00	1·00
3.	I wake up fresh and rested most mornings	0·14	0·71
4.	I think I would like the work of a librarian	0·00	0·81
5.	I am easily awakened by noise	2·15	0·14
6.	I like to read newspaper articles on crime	6·53	0·01
7.	My hands and feet are usually warm enough.	0·12	0·73
8.	My daily life is full of things that keep me interested.	0·03	0·85
9.	I am about as able to work as I ever was	0·00	1·00
10.	There seems to be a lump in my throat much of the time.	0·12	0·73
11.	A person should try to understand his dreams and be guided by or take warning from them.	2·34	0·13
12.	I enjoy detective or mystery stories	0·16	0·69
13.	I work under a great deal of tension.	0·43	0·51
14.	I have diarrhea once a month or more	0·37	0·54
15	Once in a while I think of things too bad to talk about	1·43	0 23
16	I am sure I get a raw deal from life.	4·13	0·04
17.	My father was a good man.	3·33	0·07
18.	I am very seldom troubled by constipation.	0·00	1·00
19	When I take a new job, I like to be tipped off on who should be gotten next to	14⅔65	0·0001

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
20.	My sex life is satisfactory	0·69	0·41
21	At times I have very much wanted to leave home	4·85	0·03
22	At times I have fits of laughing and crying that I cannot control	1·05	0·31
23.	I am troubled by attacks of nausea and vomiting	1·44	0·23
24.	No one seems to understand me.	4·60	0·03
25.	I would like to be a singer	0·04	0·85
26.	I feel that it is certainly best to keep my mouth shut when I'm in trouble.	4·04	0·04
27.	Evil spirits possess me at times	0·37	0·54
28.	When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing.	8·62	0·003
29.	I am bothered by acid stomach several times a week.	1·05	0·31
30.	At times I feel like swearing.	1·90	0·16
31	I have nightmares every few nights.	0·37	0 54
32.	I find it hard to keep my mind on a task or job.	5·27	0·02
33	I have had very peculiar and strange experiences.	3·39	0·07
34	I have a cough most of the time.	0·05	0·83
35.	If people had not had it in for me I would have been much more successful	0·21	0·65
36.	I seldom worry about my health	0·04	0·31
37.	I have never been in trouble because of my sex behaviour.	1·05	0·31
38.	During one period when I was a youngster I engaged in petty thievery.	9·40	0·002
39.	At times I feel like smashing things.	3·47	0·06

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
40.	Most any time I would rather sit and daydream than to do anything else.	1·44	0·23
41.	I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going".	1·67	0·19
42.	My family does not like the work I have chosen (or the work I entend to choose for mylife work)	0·69	0·41
43.	My sleep is fitful and disturbed.	2·34	0·13
44	Much of the time my head seems to hurt all over	0·12	0·73
45	I do not always tell the truth	6·42	0·01
46	My judgment is better than it ever was.	0·03	0·85
47	Once a week or oftener I feel suddenly hot all over, without apparent cause	0·37	0·54
48.	When I am with people I am bothered by hearing very queer things.	0·37	0·54
49.	It would be better if almost all laws were thrown away.	0·00	1·00
50.	My soul sometimes leaves my body.	0·12	0·73
51.	I am in just as good physical health as most of my friends.	0·08	0·78
52.	I prefer to pass by school friends, or people I know but have not seen for a long time, unlessthey speak to me first.	34·84	0·0000
53.	A minister can cure disease by praying and putting his hand on your head.	2·34	0·13
54.	I am liked by most people who know me	0·00	1·00
55.	I am almost never bothered by pains over the heart or in my chest.	0·16	0·69
56	As a youngster I was suspended from school one or more times for cutting up	0·37	0·54
57	I am a good mixer	0·04	0·85
58	Everything is turning out just like the prophets of the Bible said it would	0·00	1·00
59.	I have often had to take orders from someone who did not know as much as I did	0·38	0·54

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
60.	I do not read every editorial in the newspaper every day.	0·12	0·73
61	I have not lived the right kind of life	1·67	0·02
62	Parts of my body often have feelings like burning tingling crawling or like "going to sleep"	2·84	0 09
63	I have had no difficulty in starting or holding bowel movement.	2·84	0·09
64.	I sometimes keep on at a thing until others lose their patience with me.	4·59	0·03
65.	I loved my father.	0·12	0·73
66.	I see things or animals or people around me that others do not see.	0·12	0·73
67.	I wish I could be as happy as others seem to be.	6·42	0·01
68.	I hardly ever feel pain in the back of the neck.	0·06	0·81
69.	I am very strongly attracted my members of my own sex.	0·08	0·78
70.	I used to like the drop-the-handkerchief.	0·05	0·83
71	I think a great many people exaggerate their misfortunes in order to gain the sympathy and help of others.	2·83	0·09
72	I am troubled by discomfort in the pit of my stomach every few days or oftener	0·37	0·54
73.	I am an important person	0·06	0·81
74.	I have often wished I were a girl (Or if you are a girl) I have never been sorry that I am a girl.	0 12	0·73
75	I get angry sometimes.	0·37	0·54
76.	Most of the time I feel blue	0·05	0·81
77.	I enjoy reading love stories.	0·16	0·69
78.	I like poetry.	0·16	0·69
79.	My feelings are not easily hurt.	0·13	0·71
80.	I sometimes tease animals.	3·39	0·07

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
81.	I think I would like the kind of work a forest ranger does.	1·20	0·27
82.	I am easily downed in an argument.	0·00	1·00
83.	Any man who is able and willing to work hard has a good chance of succeeding.	0·00	1·00
84.	These days I find it hard not to give up hope of amounting to something.	0·30	0·58
85.	Sometimes I am strongly attracted by the personal articles of others such as shoes, gloves, etc , so that I want to handle or steal them though I have no use for them.	0·12	0·73
86	I am certainly lacking in self-confidence.	1·25	0·26
87	I would like to be a florist	0·00	1·00
88	I usually feel that life is worth while	0·00	1·00
89	It takes a lot of argument to convince most people of the truth.	0·52	0·47
90.	Once in a while I put off until tomorrow what I ought to do today.	0·12	0·75
91.	I do not mind being made fun of	2·84	0 09
92.	I would like to be a nurse.	1·44	0·23
93.	I think most people would lie to get ahead.	6·40	0·01
94.	I do many things which I regret afterwards (I regret things more or more often than others seem to).	3·47	0·06
95.	I go to church almost every week.	0·12	0·73
96	I have very few quarrels with members of my family	3·39	0·07
97.	At times I have a strong urge to do something harmful or shocking.	1.87	0·12
98.	I believe in the second coming of Christ	0·21	0·65
99.	I have met problems so full of possibilities that I have been unable to make up my mind about them.	1·43	0·23

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
100.	I like to go to parties and other affairs where there is lots of loud fun	1·74	0·19
101.	I believe women ought to have as much sexual freedom as men.	0·12	0·73
102.	My hardest battles are with myself	5·27	0·02
103.	I have little or no trouble with my muscles twitching or jumping.	0·00	1·00
104.	I don't seem to care what happens to me.	0·88	0·34
105.	Sometimes when I am not feeling well I am cross	2·05	0·15
106	Much of the time I feel as if I have done something wrong or evil.	1·86	0 17
107	I am happy most of the time.	0·21	0·65
108.	There seems to be a fullness in my head or nose most of the time.	0·69	0·41
109	Some people are so bossy that I feel like doing the opposite of what they request even though I know they are right	11·25	0·001
110.	Someone has it in for me	1.25	0·26
111.	I have never done anything dangerous for the thrill of it.	4·04	0·04
112.	I frequently find it necessary to stand up for what I think is right.	0·04	0·84
113.	I believe in law enforcement.	0·12	0·73
114.	Often I feel as if there were a tight band about my head.	0·71	0·40
115.	I believe in a life hereafter.	0·34	0·56
116.	I enjoy a race or game better when I bet on it.	0·85	0·36
117.	Most people are honest chiefly through fear of being caught.	2·83	0·09
118.	In school I was sometimes sent to the principal for cutting up.	1·67	0·20

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
119.	My speech is the same as always (not faster or slower, or slurring no hoarseness).	1·05	0·31
120.	My table manners are not quite as good at home as when I am out in company.	0·85	0·35
121.	I believe I am being plotted against.	1·44	0·23
122	I seem to be about as capable and smart as most others around me	0·21	0·65
123.	I believe I am being followed	0·68	0·41
124.	Most people will use somewhat unfair means to gain profit or an advantage rather than to lose it.	6·40	0 01
125.	I have a great deal of stomach trouble.	1·05	0·31
126.	I like dramatics.	0·04	0·84
127.	I know who is responsible for most of my troubles.	0·16	0·70
128.	The sight of blood neither frightens me nor makes me sick.	0·38	0·54
129.	Often I can't understand why I have been so cross and grouchy.	1·64	0·20
130.	I have never vomited blood or coughed up blood.	0·13	0·72
131.	I do not worry about catching diseases.	1·25	0·26
132.	I like collecting flowers or growing house plants	0·05	0·83
133	I have never indulged in any unusual sex practices	0·89	0·39
134	At times my thoughts have raced ahead faster than I could speak them.	9·40	0·002
135.	If I could get into a movie without paying and be sure I was not seen I would probably do it	4·85	0·03
136.	I commonly wonder what hidden reason another person may have for doing something nice for me.	4·04	0·004

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
137.	I believe that my home life is as pleasant as that of most people I know	0·52	0·47
138.	Criticism or scolding hurts me terribly.	2·34	0·16
139	Sometimes I feel as if I must injure either myself or someone else.	1·25	0·26
140	I like to cook	0·14	0·71
141	My conduct is largely controlled by the customs of those about me	0·13	0·72
142	I certainly feel useless at times.	5·76	0·02
143.	When I was a child, I belonged to a crowd or gang that tried to stick together through thick and thin.	2·15	0·14
144.	I would like to be a soldier.	6·01	0·01
145.	At times I feel like picking a fist fight with someone.	3·97	0·05
146.	I have the wanderlust and am never happy unless I am roaming or travelling about	1·25	0·26
147.	I have often lost out on things because I couldn't make up my mind soon enough.	1·74	0·19
148.	It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important.	0·89	0·35
149.	I used to keep a diary.	1·86	0·17
150	I would rather win than lost in a game.	0·05	0·81
151.	Someone has been trying to poison me.	0·00	1·00
152	Most nights I go to sleep without thoughts or ideas bothering me	0·84	0·36
153.	During the past few years I have been well most of the time.	1·05	0·31
154	I have never had a fit or convulsion	0·34	0·56
155	I am neither gaining nor losing weight	0·14	0·71
156.	I have had periods in which I carried on activities without knowing later what I had been doing.	5·27	0·02

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
157.	I feel that I have often been punished without cause.	0·00	1·00
158	I cry easily	0·34	0·55
159.	I cannot understand what I read as wellas I used to.	1·44	0·23
160.	I have never felt better in my life than I do now.	1·05	0·31
161.	The top of my head sometimes feels tender.	3·39	0·07
162.	I resent having anyone take me in so cleverly that I have had to admit that it was one on me.	4·85	0·03
163.	I do not tire quickly.	1·05	0·31
164.	I like to study and read about things that I am working at.	0·00	1·00
165.	I like to know some important people because it makes me feel important.	0·14	0·71
166	I am afraid when I look down from a high place	0·54	0·46
167	It wouldn't make me nervous if any members of my family got into trouble with the law	0·14	0·71
168	There is something wrong with my mind.	0·37	0·54
169.	I am not afraid to handle money.	0·12	0·73
170.	What others think of me does not bother me	0·14	0·71
171.	It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.	0·84	0·36
172.	I frequently have to fight against showing that I am bashful.	1·86	0 17
173.	I liked school.	0·31	0·58
174.	I have never had a fainting spell.	0·84	0·36
175.	I seldom or never have dizzy spells.	0·05	0·83
176.	I do not have a great fear of snakes.	0·16	0·69

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
177.	My mother was a good woman	0·12	0·73
178.	My memory seems to be alright	1·05	0·31
179.	I am worried about sex matter.	1·05	0·31
180.	I find it hard to make talk when I meet new people.	0·84	0·36
181.	When I get bored I like to stir up some excitement.	7·67	0·006
182	I am afraid of losing my mind	3·47	0·06
183	I am against giving money to beggars.	0·04	0·84
184	I commonly hear voices without knowing where they come from	0·12	0·73
185	My hearing is apparently as good as that of most people	0·08	0·78
186.	I frequently notice my hand shakes when I try to do something.	2·88	0·09
187.	My hands have not become clumsy or awkward.	0·16	0·69
188.	I can read a long while without tiring my eyes	0·04	0·85
189	I feel weak all over much of the time.	0·69	0·41
190.	I have very few headaches.	0·04	0·84
191.	Sometimes, when embarrassed, I break out in a sweat which annoys me greatly.	1·04	0·31
192	I have had no difficulty in keeping my balance in walking	0·69	0·41
193	I do not have spells of hay fever or asthma	2·34	0·13
194	I have had attacks in which I could not control my movements or speech but in which I knew what was going on around me	1·44	0·23
195	I do not like everyone I know.	0·06	0·81
196.	I like to visit places where I have never been before.	0·12	0·73

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
197	Someone has been trying to rob me.	0·12	0·73
198	I daydream very little	0·13	0·72
199	Children should be taught all the main facts of sex.	0·00	1·00
200.	There are persons who are trying to steal my thoughts and ideas.	0·00	1·00
201.	I wish I were not so shy.	2·71	0·10
202.	I believe I am a condemned person.	0·89	0·35
203.	If I were a reporter I would very much like to report news of the theatre.	0·00	1·00
204.	I would like to be a journalist.	0·08	0·78
205.	At times it has been impossible for me to keep from stealing or shop-lifting something.	1·87	0·17
206.	I am very religious (more than most people).	0·12	0·73
207.	I enjoy many different kinds of play and recreation	0·06	0·81
208.	I like to flirt	4·85	0·03
209	I believe my sins are unpardonable	0·34	0·56
210.	Everything tastes the same.	0·00	1·00
211	I can sleep during the day but not at night	1·05	0·31
212	My people treat me morelike a child than a grown-up.	2·84	0·09
213.	In walking I am very careful to step over sidewalk cracks.	1·04	0·31
214.	I have never had any breaking out on my skin that has worried me.	8·62	0·003
215.	I have used alcohol excessively.	0·04	0·04
216.	There is very little love and companionship in my family as compared to other homes.	0·00	1·00

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
217.	I frequently find myself worrying about something.	1·25	0·26
218.	It does not bother me particularly to see animals suffer.	0·21	0·65
219.	I think I would like the work of a building contractor.	0·14	0·71
220.	I loved my mother.	0·23	0·64
221.	I like science.	0·13	0·72
222.	It is not hard for me to ask help from my friends even though I cannot return the favour.	0·32	0·57
223	I very much like hunting	0·59	0·44
224	My parents have often objected to the kind of people I went around with.	0·03	0·85
225.	I gossip a little at times	0·71	0·40
226.	Some of my family have habits that bother and annoy me very much	3·97	0 05
227.	I have been told that I walk during sleep.	0·12	0·73
228.	At times I feel that I can make up my mind with unusually great ease.	1·04	0·31
229.	I should like to belong to several clubs or lodges	0·13	0·72
230.	I hardly ever notice my heart pounding and I am seldom short of breath.	0·04	0·85
231.	I like to talk about sex.	0·59	0·44
232.	I have been inspired to a program of life based on duty which I have since carefully followed.	0·00	1·00
233	I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.	4·85	0·03
234	I get mad easily and then get over it soon.	4·85	0·03

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
235.	I have been quite independent and free from family rule	0·04	0·85
236.	I brood a great deal	1·67	0·19
237.	My relatives are nearly all in sympathy with me	0·00	1·00
238.	I have periods of such great restlessness that I cannot sit long in a chair	5·76	0·02
239.	I have been disappointed in love.	0·00	1·00
240.	I never worry about my looks.	0·84	0·36
241.	I dream frequently about things that are best kept to myself.	4·60	0·03
242.	I believe I am no more nervous than most others.	0·16	0·69
243.	I have few or no pains.	0·21	0·65
244.	My way of doing things is apt to be misunderstood by others.	9·38	0·002
245	My parents and family find more fault with me than they should.	0·12	0·73
246	My neck spots with red often	0·37	0·54
247	I have reason for feeling jealous of one or more members of my family	0·69	0 41
248	Sometimes without any reason or even when things are going wrong I feel excitedly happy "on top of the world".	6·80	0·009
249.	I believe there is a Devil and a Hell in afterlife.	0·00	1·00
250.	I don't blame anyone for trying to grab everything he can get in this world.	17·78	0·0000
251.	I have had blank spells in which my activities were interrupted and I did not know what was going on around me.	5·27	0·02
252.	No one cares much what happens to you.	0·12	0·73
253.	I can be friendly with people who do things which I consider wrong.	1·05	0·31

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
254.	I like to be with a crowd who play jokes on one another.	0·00	1·00
255.	Sometimes at elections I vote for men about whom I know very little.	4·04	0·04
256.	The only interesting part of newspapers is the "funnies".	0·69	0·41
257.	I usually expect to succeed in things I do.	0·00	1·00
258.	I believe there is a God.	0·04	0·85
259.	I have difficulty in starting to do things.	1·43	0·23
260.	I was slow learner in school.	0·14	0·71
261.	If I were an artist I would like to draw flowers	0·21	0·65
262	It does not bother me that I am not better looking	1·05	0 81
263	I sweat very easily even on cool days.	4·13	0·04
264	I am entirely self confident.	0·14	0·71
265	It is safer to trust nobody.	1·64	0·20
266.	Once a week or oftener I become very excited.	3·96	0·05
267.	When in a group of people I have trouble thinking of the right things to talk about.	5·65	0·02
268.	Something exciting will almost always pull me out of it when I am feeling low.	0·00	1·00
269.	I can easily make other people afraid of me and sometimes do for the fun of it.	0·12	0·73
270.	When I leave home I do not worry about whether the door is locked and the windows closed.	0·88	0·34
271.	I do not blame a person for taking advantage of someone who lays himself open to it	15·04	0·0001
272	At times I am all full of energy.	0·37	0·54
273	I have numbness in one or more regions of my skin.	0·05	0·82

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
274.	My eyesight is as good as it has been for years	0·03	0·85
275	Someone has control over my mind	0·00	1·00
276	I enjoy children	7·67	0·006
277	At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it	11·25	0·0008
278.	I have often felt that strangers were looking at me critically.	2·34	0·12
279.	I drink an unusually large amount of water every day.	1·88	0·17
280.	Most people make friends because friends are likely to be useful to them.	0·95	0·33
281.	I do not often notice my ears ringing or buzzing.	0·59	0·44
282.	Once in a while I feel hate toward members of my family whom I usually love.	5·27	0·02
283.	If I were a reporter I would very much like to report sporting news.	0·89	0·35
284.	I am sure I am being talked about.	4·04	0·04
285.	Once in a while I laugh at a dirty joke	0·00	1·00
286.	I am never happier than when alone.	0·06	0·81
287.	I have very few fears compared to my friends	0·13	0·71
288	I am always disgusted with the law when a criminal is freed through the arguments of a smart lawyer	1·74	0·19
289	I am troubled by attacks of nausea and vomiting	1·44	0·23
290	I work under a great deal of tension.	0·43	0·51
291.	At one or more times in my life I felt that someone was making me do things by hypnotizing me.	0·12	0·73
292.	I am likely not to speak to people until they speak to me.	0·03	0·85

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
293.	Someone has been trying to influence my mind.	1·04	0·30
294.	I have never been in trouble with the law.	5·76	0·02
295.	I liked "Alice in Wonderland" by Lewis Carroll.	0·00	1·00
296.	I have periods in which I feel unusually cheerful without any special reason.	2·05	0·15
297.	I wish I were not bothered by thoughts about sex.	1·44	0·23
298.	If several people find themselves in trouble, the best thing for them to do is to agree upon a story and stick to it.	10·98	0 0009
299.	I think that I feel more intensely than most people do	2·34	0·13
300.	There never was a time in my life when I liked to play with dolls.	0·04	0·85
301	Life is a strain for me much of the time.	4·60	0·03
302.	I have never been in trouble because of my sex behaviour.	1·05	0·31
303.	I am so touchy on some subjects that I can't talk about them.	0· 8	0·35
304.	In school I found it very hard to talk before the class.	0·00	1·00
305.	Even when I am with people I feel lonely much of the time.	4·85	0·03
306.	I get all the sympathy I should	0·08	0·78
307.	I refuse to play some games I am not good at them.	7·67	0·006
308.	I seem to make friends about as quickly as others do	0·00	1·00
309	At times I have very much wanted to leave home.	4·85	0·03
310.	My sex life is satisfactory.	0·69	0·41
311.	During one period when I was a youngster I engaged in petty thievery.	9·40	0·002

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
312.	I dislike having people about me.	0·69	0·41
313.	The man who provides temptation by leaving valuable property unprotected is about as much to blame for its theft as the one who steals it.	0·37	0·54
314.	Once in a while I think of things too bad to talk about.	1·43	0·23
315	I am sure I get a raw deal from life.	4·13	0·04
316	I think nearly anyone would tell a lie to keep out of trouble.	9·40	0·002
317	I am more sensitive than most other people	1·67	0 20
318.	My daily life is full of things that keep me interested	0·03	0·85
319.	Most people inwardly dislike putting themselves out to help other people.	2·76	0·10
320.	Many of my dreams are about sex matters.	4·60	0·03
321.	I am easily embarrassed.	0·00	1·00
322.	I worry over money and business.	0·32	0·57
323.	I have had very peculiar and strange experiences.	3·39	0·07
324.	I have never been in love with anyone.	0·06	0·81
325	The things that some of my family have done have frightened me.	0·12	0·73
326	At times I have fits of laughing and crying that I cannot control.	1·05	0·31
327	My mother or father often made me obey even when I thought that it was unreasonable.	0·16	0·69
328	I find it hard to keep my mind on a task or job.	5·27	0·02
329	I almost never dream	0·38	0·54
330.	I have never been paralyzed or had any unusual weakness of any of my muscles	0·04	0·85
331.	If people had not had it in for me I I would have been much more successful.	0·25	0·61

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
332	Sometimes my voice leaves me or changes even though I have no cold.	1·44	0 23
333.	No one seems to understand me.	4·60	0·02
334.	Peculiar odors come to me at times.	0·43	0·51
335.	I cannot keep my mind on one thing.	4·13	0·04
336.	I easily become impatient with people.	5·65	0·02
337.	I feel anxiety about something or someone almost all the time.	1·25	0·26
338.	I have certainly had more than my share of things to worry about.	1·43	0·23
339.	Most of the time I wish I were dead.	1·87	0·17
340.	Sometimes I become so excited that I find it hard to get to sleep	4·85	0·03
341.	At times I hear so well it bothers me.	1·04	0·30
342	I forget right away what people say to me.	0·06	0·81
343.	I usually have to stop and think before I act even in trifling matters	0·58	0·44
344	Often I cross the street in order not to meet someone I see	4·13	0 04
345	I often feel as if things were not real.	0·38	0·54
346	I have a habit of counting things that are not important such as bulbs on electric signs, and so forth.	4·59	0·03
347.	I have no enemies who really wish to harm me.	3·47	0·06
348.	I tend to be on my guard with people who are somewhat more friendly than I had expected.	0·59	0·44
349.	I have strange and peculiar thoughts.	1·87	0·17
350	I hear strange things when I am alone.	0·34	0·55
351.	I get anxious and upset when I have to make a short trip away from home.	0·07	0·78
352.	I have been afraid of things or people that I knew could not hurt me.	4·84	0·02

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
353.	I have no dread of going into a room by myself where other people have already gathered and are talking.	0·16	0·69
354.	I am afraid of using a knife or anything very sharp or pointed.	0·71	0·40
355.	Sometimes I enjoy hurting persons I love.	0·37	0·54
356.	I have more trouble concentrating than others seem to have.	0·89	0·35
357.	I have several times given up doing a thing because I thought too little of my ability	2·15	0·14
358	Bad words often terrible words come into my mind and I cannot get rid of them	3·96	0·05
359.	Sometimes some unimportant thought will run through my mind and bother me for days	6·53	0·01
360.	Almost every day something happens to frighten me.	1·44	0·23
361.	I am inclined to take things hard.	0·03	0·85
362.	I am more sensitive than most other people.	1·67	0·20
363.	At times I have enjoyed being hurt by someone I loved.	1·88	0·17
364.	People say insulting and vulgar things about me	3·97	0·05
365.	I feel uneasy indoors	1·64	0·20
366	Even when I am with people I feel lonely much of the time	4·85	0·03
367.	I am not afraid of fire	2·83	0·09
368	I have sometimes stayed away from another person because I feared doing or saying something that I might regret afterwards	2·76	0·10
369	Religion gives me no worry.	0·06	0 81
370.	I hate to have to rush when working.	1·90	0·17

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
371.	I am not unusually self-conscious.	0·54	0·46
372	I tend to be interested in several different hobbies rather than to stick to one of them for a long time.	3·08	0·08
373.	I feel sure that there is only one true religion.	0·34	0·56
374.	At periods my mind seems to work more slowly than usual.	10·80	0·001
375.	When I am feeling very happy and active, someone who is blue or low will spoil it all.	3·97	0·05
376.	Policemen are usually honest.	1·04	0·31
377.	At parties I am more likely to sit by myself or with just one other person than to join in with the crowd.	0·31	0 58
378.	I do not like to see women smoke.	2·34	0·13
379.	I very seldom have spells of the blues	0·83	0·36
380.	When someone says silly or ignorant things about something I know about I try to set him right	2·34	0·13
381	I am often said to be hotheaded.	1·64	0·20
382	I wish I could get over worrying about things I have said that may have injured other people's feelings.	1·64	0·20
383	People often disappoint me.	0·04	0·85
384.	I feel unable to tell anyone all about myself	2·76	0·10
385.	Lightning is one of my fears.	0·12	0·73
386.	I like to keep people guessing what I'm going to do next	6·00	0·01
387.	The only miracles I know of are simply tricks that people play on one another.	0·16	0·69
388.	I am afraid to be alone in the dark.	0·37	0·54
389.	My plans have frequently seemed so full of difficulties that I have had to give them up.	4·85	0·03

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
390.	I have often felt badly over being misunderstood when trying to keep someone from making a mistake.	3·07	0·08
391.	I live to go to dances.	0·30	0·58
392.	A windstorm terrifies me.	0·34	0·56
393.	Horses that don't pull should be beaten or kicked	0·00	1·00
394.	I frequently ask people for advice.	3·08	0·08
395.	The future is too uncertain for a person to make serious plans	2·05	0·15
396	Often even though everything is going fine for me I feel that I don't care about anything.	4·84	0·03
397.	I have sometimes felt that difficulties were piling up so high that I could not overcome them.	0·85	0·36
398.	I often think, "I wish I were a child again".	6·53	0·01
399.	I am not easily angered.	1·90	0·17
400.	If given the chance I could do some things that would be of great benefit to the world.	0·03	0·85
401.	I have no fear of water.	0·05	0·82
402.	I often must sleep over a matter before I decide what to do.	1·43	0·23
403.	It is great to be living in these times when so much is going on.	0·21	0·65
404.	People have often misunderstood my intentions when I was trying to put them right and be helpful.	10·97	0·0009
405.	I have no trouble swallowing	0·37	0·54
406	I have often met people who were supposed to be experts who were no better than I.	1·74	0·19
407	I am usually calm and not easily upset.	0·58	0·44
408	I am apt to hide my feelings in some things, to the point that people may hurt me without their knowing about it.	0·00	1·00

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
409.	At times I have worn myself out by undertaking too much.	2·05	0·15
410.	I would certainly enjoy beating a crook at his own game.	0·89	0·35
411.	It makes me feel like a failure when I hear of the success of someone I know well.	5·27	0·02
412.	I do not dread seeing a doctor about a sickness or injury.	0·52	0·47
413.	I deserve severe punishment for my sins.	0·14	0·71
414.	I am apt to take disappointments so keenly that I can't put them out of my mind.	1·64	0·20
415.	If given the chance I would make a good leader of people.	2·34	0·13
416.	It bothers me to have someone watch me at work even though I know I can do it well.	3·08	0·08
417.	I am often so annoyed when someone tries to get ahead of me in a line of people that I speak to him about it.	1·86	0·17
418	At times I think I am no good at all	3·08	0·08
419	I played hooky from school quite often as a youngster.	4·04	0·04
420	I have had some very unusual religious experiences	0·69	0·41
421	One or more members of my family is very nervous.	3·33	0·07
422.	I have felt embarrassed over the type of work that one or more members of my family have done.	0·37	0·54
423.	I like or have liked fishing very much.	0·30	0·58
424.	I feel hungry almost all the time.	3·39	0·70
425.	I dream frequently.	0·04	0·85
426.	I have at times had to be rough with people who were rude or annoying.	9·86	0·002
427.	I am embarrassed by dirty stories.	0·34	0·56
428.	I like to read newspaper editorials.	0·85	0·36

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
429.	I like to attend lectures on serious subjects.	2·34	0·13
430.	I am attracted by members of the opposite sex.	0·37	0·54
431.	I worry quite a bit over possible misfortunes.	0·00	1·00
432.	I have strong political opinions.	0·00	1·00
433.	I used to have imaginary companions.	0·68	0·41
434.	I would like to be an auto racer.	0·00	1·00
435.	Usually I would prefer to work with women.	4·60	0·03
436	People generally demand more respect for their own rights than they are willing to allow for others.	0·08	0·78
437	It is all right to get around the law if you don't actually break it	0·71	0·40
438	There are certain people whom I dislike so much that I am inwardly pleased when they are catching it for something they have done.	2·34	0·13
439.	It makes me nervous to have to wait.	1·67	0·20
440.	I try to remember good stories to pass on to other people.	0·00	1·00
441.	I like tall women.	0·00	1·00
442.	I have had periods in which I lost sleep over worry.	0·03	0·85
443.	I am apt to passup something I want to do because others feel that I am not going about it in the right way.	0·31	0·58
444.	I do not try to correct people who express an ignorant belief.	1·20	0·27
445	I was fond of excitement when I was young (or in childhood)	0·08	0·78
446.	I enjoy gambling for small stakes.	0·30	0·58

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
447.	I am often inclined to go out of my way to win a point with someone who has opposed me.	4·13	0·04
448	I am bothered by people outside on streetcars in stores etc , watching me.	2·34	0·13
449	I enjoy social gatherings just to be with people	0·54	0·46
450	I enjoy the excitement of a crowd	0·03	0·86
451.	My worries seem to disappear when I get into a crowd of lively friends.	0·00	1·00
452.	I like to poke fun at people	5·27	0·02
453.	When I was a child I didn't care to be a member of a crowd or gang.	0·03	0·86
454.	I could be happy living all alone in a cabin in the woods or mountains.	0·59	0·44
455.	I am quite often not in on the gossip and talk of the group I belong to.	3·33	0·07
456.	A person shouldn't be punished for breaking a law that he thinks is unreasonable	0·13	0·72
457	I believe that a person should never taste an alcoholic drink.	0·34	0·56
458.	The man who had most to do with me when I was a child (such as my father stepfather, etc) was very strict with me.	0·04	0·84
459	I have one or more bad habits which are so strong that it is no use in fighting against them	3·33	0·07
460	I have used alcohol moderately (or not at all).	0·16	0·69
461.	I find it hard to set aside a task that I have undertaken, even for a short time.	0·84	0·36
462.	I have had no difficulty starting or holding my urine.	0·06	0·81
463.	I used to like hopscotch.	0·04	0·85
464.	I have never seen a vision.	0·06	0·81

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
465.	I have several times had a change of heart about my life work.	2·34	0·13
466	Except on a doctor's orders I never take drugs or sleeping powders	0·00	1·00
467.	I often memorize numbers that are not important (such as automobile licences etc)	0·89	0·35
468	I am often sorry because I am so cross and grouchy.	1·20	0·27
469.	I have often found people jealous of my good ideas, just because they had not thought of them first.	0·59	0·44
470	Sexual things disgust me.	0·12	0·73
471.	In school my marks for deportment were quite bad.	1·86	0·17
472.	I am fascinated by fire.	0·12	0·73
473.	Whenever possible I avoid being in a crowd.	6·01	0·01
474.	I have to urinate no more often than others.	0·00	1·00
475.	When I am cornered I tell that portion of the truth which is not likely to hurt me.	0·54	0·46
476.	I am a special agent of God	0·12	0·73
477.	If I were in trouble with several friends who were equally to blame I would rather take the whole blame than to give them away	5·06	0·02
478	I have never been made especially nervous over trouble that any members of my family have gotten into.	0·54	0·46
479	I do not mind meeting strangers	0·21	0·65
480	I am often afraid of the dark.	0·37	0·54
481.	I can remember "playing sick" to get out of something.	2·76	0·10
482.	While in trains, busses, etc., I often talk to strangers.	2·76	0·10

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
483.	Christ performed miracles such as changing water into wine.	0·03	0·86
484.	I have one or more faults which are so big that it seems better to accept them and try to control them rather than to try to get rid of them.	1·64	0·20
485.	When a man is with a woman he is usually thinking about things related to her sex.	5·76	0·02
486.	I have never noticed any blood in my urine.	0·12	0·73
487.	I feel like giving up quickly when things go wrong.	4·13	0 04
488.	I pray several times every week.	0·05	0·83
489	I feel sympathetic towards people who tend to hang on to their griefs and troubles.	0·00	1·00
490	I read the Bible several times a week	0·00	1·00
491.	I have no patience with people who believe there is only one true religion	1·43	0·23
492	I dread the thought of an earthquake.	0·57	0·44
493.	I prefer work which requires close attention, to work which allows me to be careless.	0·05	0·83
494.	I am afraid of finding myself in a closet or small closed space.	0·43	0·51
495.	I usually "lay my cards on the table" with people that I am trying to correct or improve.	0·00	1·00
496.	I have never seen things doubled (that is, an object never looks like two objects to me without my being able to make it look like one object).	0·14	0·71
497.	I enjoy stories of adventure.	1·44	0·23
498.	It is always a good thing to be frank.	0·16	0·69
499	I must admit that I have at times been worried beyond reason over something that really did not matter.	8·62	0·003

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
500.	I readily become one hundred per cent sold on a good idea.	0·00	1·00
501.	I usually work things out for myself rather than get someone to show me how.	0·05	0·83
502.	I like to let people know where I stand on things.	0·06	0·81
503	It is unusual for me to express strong approval or disapproval of the actions of others	0·03	0·86
504.	I do not try to cover up my poor opinion or pity of a person so that he won't know how I feel	2·15	0·14
505.	I have had periods when I felt so full of pep that sleep did not seem necessary for days at a time.	1·25	0·26
506.	I am a high-strung person.	1·05	0·31
507.	I have frequently worked under people who seem to have things arranged so that they get credit for good work but are able to pass off mistakes onto those under them.	2·05	0·15
508.	I believe my sense of smell is as good as other people's.	0·37	0·54
509.	I sometimes find it hard to stick up for my rights because I am so reserved.	1·05	0·31
510	Dirt frightens or disgusts me.	0·21	0·65
511.	I have a daydream life about which I do not tell other people.	0·71	0·40
512	I dislike to take a bath.	0·00	1·00
513.	I think Lincoln was greater than Washington	0·03	0·85
514	I like mannish women	0·37	0·54
515.	In my home we have always had the ordinary necessities (such as enough food, clothing etc.).	0·34	0·56
516.	Some of my family have quick tempers.	0·30	0·58

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
517.	I cannot do anything well.	0·37	0·54
518	I have often felt guilty because I have pretended to feel more sorry about something than I really was	6·00	0·01
519	There is something wrong with my sex organs.	0·23	0·64
520	I strongly defend my own opinions as a rule.	0·05	0·83
521	In a group of people I would not be embarrassed to be called upon to start a discussion or give an opinion about something I know well.	0·13	0·72
522.	I have no fear of spiders.	0·08	0·78
523.	I practically never blush.	0·03	0·86
524.	I am not afraid of picking up a disease or germs from door knobs.	2·83	0·09
525.	I am made nervous by certain animals.	0·00	1·00
526.	The future seems hopeless to me.	0·03	0·85
527.	The members of my family and my close relatives get along quite well.	9·26	0·002
528.	I blush no more often than others.	0·71	0·40
529.	I would like to wear expensive clothes.	2·05	0·15
530.	I am often afraid that I am going to blush	4·60	0·03
531.	People can pretty easily change me even though I thought that my mind was already made up on a subject.	1·67	0·20
532.	I can stand as much pain as others can	0·21	0·65
533	I am not bothered by a great deal of belching of gas from my stomach.	8·62	0·003
534.	Several times I have been the last to give up trying to do a thing.	0·04	0·85
535.	My mouth feels dry almost all the time.	2·34	0·12
536.	It makes me angry to have people hurry me.	8·62	0·003

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
537.	I would like to hunt lions in Africa	3·97	0·05
538.	I think I would like the work of a dressmaker.	0·00	1·00
539.	I am not afraid of mice.	0·34	0·56
540.	My face has never been paralyzed.	0·06	0·81
541.	My skin seems to be unusually sensitive to touch.	1·05	0·31
542.	I have never had any black, tarry-looking bowel movements.	1·67	0·20
543.	Several times a week I feel as if something dreadful is about to happen.	2·34	0·12
544.	I feel tired a good deal of the time.	1·87	0·18
545	Sometimes I have the same dream over and over	3·47	0·06
546	I like to read about history	0·16	0·69
547	I like parties and socials.	0·38	0·54
548.	I never attend a sexy show if I can avoid it	0·04	0·85
549.	I shrink from facing a crisis or difficulty.	2·88	0·09
550.	I like repairing a door latch.	0·03	0·85
551.	Sometimes I am sure that other people can tell what I am thinking.	1·67	0·20
552.	I like to read about science.	0·03	0·86
553.	I am afraid of being alone in a wide-open place.	0·34	0·56
554.	If I were an artist I would like to draw children.	0·30	0·58
555.	I sometimes feel that I am about to go to pieces.	4·13	0·04
556	I am very careful about my manner of dress.	1·19	0·27
557.	I would like to be a private secretary.	0·12	0·73

ITEM ANALYSIS CONTINUED

	ITEM	CHI SQUARE	P
558.	A large number of people are guilty of bad sexual conduct.	0·59	0·44
559.	I have often been frightened in the middle of the night	0·05	0·83
560.	I am greatly bothered by forgetting where I put things.	0·16	0·69
561.	I very much like horseback riding.	0·04	0·84
562.	The one to whom I was most attached and whom I most admired as a child was a woman. (Mother, sister aunt, or other woman)	0·71	0·40
563.	I like adventure stories better than romantic stories.	1·05	0·31
564.	I am apt to pass up something I want to do when others feel that it isn't worth doing.	2·88	0·09
565.	I feel like jumping off when I am on a high place.	0·69	0·41
566.	I like movie love scenes.	0·13	0·72

BIBLIOGRAPHY

Allport, E W (1937) Personality : A psychological interpretation. New York : Holt.

Arthurs, R G S, and Cahoon, E B (1964) A clinical and electroencephalographic survey of psychopathic personality. American Journal of Psychiatry, 120, 875 - 882.

Berg, I A, and Fox V, (1947) Factors in homicides committed by two hundred males. Journal of Social Psychology, 26, 109 - 119.

Blackburn, R, (1968a) Emotionality, extraversion and aggression in paranoid and nonparanoid schizophrenic offenders. British Journal of Psychiatry, 115, 1301 - 1302.

Blackburn, R, (1968b) Emotionality, extraversion and aggression in psychiatric offenders. British Journal of Psychiatry, 114, 821 - 828.

Blackburn, R, (1970) M M P I dimensions of sociability and impulse control. Broadmoor Hospital, Berkshire : Special Hospitals Research Report, No 1.

Blackburn, R, (1971) Personality types among abnormal homicides. British Journal of Criminology, 11, 14 - 31.

Blackburn, R, (1972) Dimensions of hostility and aggression in abnormal offenders. Journal of Consulting and Clinical Psychology, 38, 1, 20 - 26.

Blackburn, R, (1975a) Aggression and the E E G : A quantitative analysis. Journal of Abnormal Psychology, 84, 4, 358 - 365.

Blackburn, R, (1975b) An empirical classification of psychopathic personality. British Journal of Psychiatry, 127, 456-60.

Blackburn, R, (1976) Personal communication. 23rd September.

Block, J, (1965) The Challenge of Response Sets : Unconfounding Meaning. Acquiescence and Social Desirability in the M M P I. New York : Appleton - Century - Crofts.

Bohannon, P, (1960) African Homicide and Suicide. Princeton : Princeton University Press.

Bonkalo, A, (1967) Electroencephalography in criminology. Canadian Psychiatric Association Journal. 12, 282 - 286.

Borgaonkar, D S, and Saleem, A S, (1974) The XYY male - or syndrome? In Steinberg, A G and Beam, A G (Eds.), Progress in Medical Genetics. New York : Grune and Stratton Inc.

Bradbury, E L, (1973) The efficacy of the semantic differential in measuring attitudes and attitude change : a pilot study. Home Office mimeo. Office of the Chief Psychologist, C P Report Series II, No 9.

Britton, P G, and Savage, R D, (1966) The Minnesota Multiphasic Personality Inventory. In Savage, R D (Ed.), Readings in Clinical Psychology. Oxford : Pergamon Press Ltd.

Buss, A H, (1961) The Psychology of Aggression. New York · Wiley.

Caditz, S, (1959) Effect of a training school experience on the personality of delinquent boys. Journal of Consulting Psychology, 27, 4, 501 - 509.

Caine, T M, Foulds, E A, and Hope, K, (1967) Manual of the Hostility and Direction of Hostility Questionnaire. London : University of London Press.

Cattell, R B, Saunders, G H, and Stice, G, (1957) Handbook for the Sixteen Personality Factor Questionnaire. Champaign, Illinois : Institute of Personality and Ability Testing.

Chrzanowski, R, and Szymusik, A, (1970) Results of pneumo-encephalography in a group of murderers. Polish Medical Journal, 9, 758 - 764.

Clark, E R, Telfer, M A, Baker, D, and Rosen, M, (1970) Sex chromosomes, crime and psychosis. American Journal of Psychiatry, 126, 1659 - 1663.

Clark, J H, (1952) The relationship between M M P I scores and psychiatric classification of army general prisoners. Journal of Clinical Psychology, 8, 86 - 89.

Cleckley, H, (1964) The Mask of Sanity. St Louis : Mosby.

Conner, W D, (1973) Criminal homicide, USA/USSR : reflections on Soviet data in a comparative framework. Journal of Criminal Law and Criminology, 64, 1, 111 - 117.

Corah, N, (1964) Neuroticism and extraversion in the M M P I : empirical validation and exploration. British Journal of Social and Clinical Psychology, 3, 168 -

174.

Cronbach, L J, and Gleser, G C, (1953) Assessing similarity between profiles. Psychological Bulletin, 50, 456 - 473.

Curtis, L A, (1974) Criminal Violence. Lexington, Mass : D C Heath and Company.

Dahlstrom, W G, and Welsh, E S, (1960) An M M P I handbook. Minneapolis : University of Minnesota Press.

Dollard, J, Doob, L W, Miller, N W, Mowrer, O H, and Sears, R R, (1939) Frustration and aggression. New Haven : Yale University Press.

Driver, E, (1961) Interaction and criminal homicide in India. Social Forces, 40, 40, 153 - 158.

Edwards, A L, (1957) The social desirability variable in personality assessment and research. New York . Dryden.

Edwards, A L, (1967) The social desirability variable : a review of the evidence. In Berg I A (Ed.), Response Set in Personality Assessment. Chicago : Aldine Publishing Co.

Everitt, B, (1974) Cluster Analysis. London : Heinemann.

Eysenck, H J, (1957) The Dynamics of Anxiety and Hysteria. London : Routledge and Kegan Paul.

Eysenck, H J, and Eysenck, S B J, (1976) The Manual of the Eysenck Personality Questionnaire, Windsor, Berks : N F E R.

Fisher, G, (1970) Discriminating violence emanating from overcontrolled versus undercontrolled aggressivity. British Journal of social and clinical Psychology, 9, 54 - 59.

Foulds, G A, (1965) Personality and Personal Illness. London : Tavistock Press.

Gibson, E, and Klein, S, (1969) Murder, London · H M S O.

Gibson, E, (1975) Homicide in England and Wales, London : H M S O.

Giedt, I H, and Downing, L, (1961) An extraversion scale for the M M P I. Journal of Clinical Psychology, 17, 156 - 159.

Gilberstadt, H, and Duker, J, (1965) A handbook for clinical and actuarial M M P I interpretation. Philadelphia : W B Saunders and Co.

Gilliland, A R, and Coglin, R, (1951) Norms, reliability and forms of the M M P I. Journal of Consulting Psychology, 15, 435 - 438.

Glen, A, Royer, F L, and Custer, R, (1973) A study of M M P I - profile types of hospitalized alcoholic veterans. Newsletter for Research in Mental Health and Behavioural Sciences, 15, 3, 53 - 56.

Gorlow, L, Zimer, C N, and Fine, H J, (1952) The validity of anxiety and hostility Rorschach content scores among adolescents. Journal of Consulting Psychology, 16, 73 - 78.

Gough, H E, (1957) Manual of the California Psychological Inventory. Palo Alto, California : Consulting Psychologists Press.

Gough, H E, Wenk, E A, and Rozynko, V V, (1965) Parole outcome as predicted from the C P I, the M M P I, and a base expectancy table. Journal of Abnormal Psychology, 70, 432 - 441.

Guertin, W H, Rabin, A L, Frank, E H, and Ladd, C E, (1962) Research on the Wechsler Intelligence Scales for Adults, 1955 - 1960. Psychological Bulletin, 59, 1 - 26.

Gynther, M D, (1972) The M M P I. In Buros, O K (Ed.), The Seventh Mental Measurements Yearbook. Highland Park, N J : Gryphan Press.

Hall, C S, and Lindzey, G, (1970) Theories of Personality. New York : John Wiley and Sons.

Hardwick, A, (1972) The effect of 'inside' and 'outside' instructions on P E N and H D H Q scores. Home Office mimeo. Office of the Chief Psychologist. C P Report Series II, No 6.

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

Harwood, J, McGurk, B J, and Graham, F, (1977) An evaluation of the Acklington Regime · an attempt at assessing 'humane containment'. Home Office mimeo. Directorate of Psychological Services. D P S Report.

Hathaway, S R, and McKinley, J C, (1943) The Minnesota Multiphasic Personality Inventory Manual (revised 1951 and 1967) New York · Psychological Corporation.

Hathaway, S R, and Monachesi, E D, (1953) Analysing and Predicting Juvenile

Delinquency with the M M P I. Minneapolis : University of Minnesota Press.

Henry, A F, and Short, J F, (1954) Suicide and Homicide. Glencoe, Ill. : Fress Press.

Heise, D R, (1969) Some methodological issues in semantic differential research. Psychological Bulletin, 72, 406 - 422.

Heskin, K, (1974) Personality and Attitude Change associated with Long Term imprisonment, Ph D. Thesis. Durham University.

Heskin, K J, Bolton, N, and Smith, F V, (1973) Measuring the Attitudes of Prisoners by the Semantic Differential. British Journal of Social and Clinical Psychology, 12, 73 - 77.

Hewlings, D, (1971) The treatment of murderers. Howard Journal of Penology, 13, 2, 96 - 106.

Hill, D, (1944) Cerebral dysrhythmia : its significance in aggressive behaviour. Proceedings of the Royal Society of Medicine, 37, 317 - 328.

H M S O, (1922) The Infanticide Act. London : H M S O

H M S O, (1938) The Infanticide Act. London . H M S O

H M S O, (1953) Royal Commission on Capital Punishment 1949 - 1953. London : H M S O

H M S O, (1956) The Road Traffic Act. London : H M S O

H M S O, (1957) The Homicide Act. London . H M S O

H M S O, (1970) Registrar General's Classification of Occupations. London : H M S O

H M S O, (1973) The Control of Firearms in Great Britain. London : H M S O

H M S O, (1976) Criminal Statistics, England and Wales, 1976. London : H M S O

Holtzman, W H, Thorpe, J S, Swartz, J D, and Henon, E W, (1961) Inkblot Perception and Personality · Holtzman Inkblot Technique. Austin, Texas : University of Texas Press.

Holyst, B, (1967) Detection of Criminal Homicides, Warsaw : Juridicial Edition.

Jackson, D N, (1967) Acquiescence Response Styles, Problems in the Identification and Control. In Berg, I A (Ed.), Response Set in Personality Assessment. Chicago : Aldine Publishing Company.

Jackson, K, and Clark, S, (1958) Thefts among college students. Personnel and

guidance journal, 36, 557 - 562.

Jacobs, P A, Brunton, M, Melville, M M, Brittain, R P, and McClemour, W I, (1965) Aggressive behaviour, mental subnormality and the XYY male. Nature, 208, 1351 - 1352.

Jarvick, L F, Klodin, V, and Matsuyama, S S, (1973) Human aggression and the extra Y Chromosome · Fact or Fantasy? American Psychologist, 28, 8, 674 - 682.

Kassebaum, G C, Couch, A S, and Slater, P E, (1959) The factorial dimensions of the M M P I. Journal of Consulting Psychology, 23, 226 - 236.

Klove, H, and Reitan, R M, (1958) Effect of dysphasia and spatial distortion on WB results American Medical Association Archives of Neurological Psychiatry, 80, 708 - 713.

Ladd, C E, (1959) An analysis of the W A I S performance of brain damaged and neurotic patients. M Sc Thesis, University of Iowa.

Lalli, M, and Turner, S H, (1968) Suicide and homicide. Journal of Criminal Law Criminology and Police Science, 59, 191 - 200.

Lancet, (1974) What becomes of the XYY male? November 30th, 1297 - 1298.

Lamberti, J W, Blackman, N, and Weiss, J, (1958) The sudden murderer : a preliminary report. Journal of Social Therapy, 4, 2 - 15.

Landau, S, and Drapkin, I, Ethnic Patterns of Criminal Homicide in Israel. Mimeo, Institute of Criminology, The Hebrew University of Jerusalem.

Lanyon, R I, (1973) Psychological Screening Inventory Manual. Goshen, New York : Research Psychologists Press.

Lester, D, (1971) Suicide and homicide in open and closed societies. Psychological Reports, 29, 430.

Lester, D, (1973) Murder . A Review. Corrective and Social Psychiatry and Journal Applied Behaviour Therapy, 19, 4, 40 - 50.

Lester, D, and Lester, G, (1975) Crime of Passion : Murder and the Murderer. Chicago : Nelson Hall.

Lester D, Perdue, W C, and Brookhart, D, (1974) Murder and the control of aggression. Psychological Reports, 34, 3, 706.

Levy, S, and Kennard, M A, (1953) A study of the electroencephalogram as related to personality structure in a group of inmates of a state penitentiary. American Journal of Psychiatry, 109, 832 - 839.

Little, K B, and Fisher, J, (1958) Two new experimental scales of the M M P I. Journal of Consulting Psychology, 22, 305 - 306,

Lorr, M, (1966) Approaches to typing : a critique. In Lorr, M, (ed.), Explorations in Typing Psychotics. Oxford : Pergamon.

Mack J L, (1969) The M M P I and recidivism. Journal of Abnormal Psychology, 74, 5, 612 - 614.

Mallory, C H, and Walker, C E, (1972) M M P I O-H Scale responses to assaultive and non-assaultive prisoners and associated life history variables. Educational and Psychological Measurement, 32, 1125 - 1128.

Mandel, N E, and Barron, A J, (1966) The M M P I and criminal recidivism. Journal of Criminal Law, Police Science and Criminology, 57, 35 - 38.

Magargee, E I, (1965a) Assault with intent to kill, Transaction, 2, 6, 27 - 31.

Magargee, E I, (1965b) The relationship between Barrier scores and aggressive behaviour. Journal of Abnormal Psychology, 70, 307 - 311.

Megargee, E I, (1966) Undercontrolled and overcontrolled personality types in extreme anti-social aggression. Psychological Monographs, 80, (3, whole No 611)

Megargee, E I, (1971) The role of inhibition in the assessment and understanding of violence. In Singer, J E, (Ed.), The Control of Aggression : Cognitive and Physiological Factors. New York Academic Press.

Megargee, E I, Cook, P E, and Mendelsohn, G A, (1967) Development and evaluation of an M M P I scale of assaultiveness in overcontrolled individuals. Journal of Abnormal Psychology, 72, 519 - 528.

Megargee, E I, and Mendelsohn, G A, (1962) A cross validation of twelve M M P I indices of hostility and control. Journal of Abnormal and Social Psychology, 65, 431 - 438.

Mersick, S, and Jackson, D N, (1961) Acquiescence and the factorial interpretation of the M M P I. Psychological Bulletin, 58, 299 - 304.

Mills, W W, (1954) M M P I profile pattern and stability throughout four years of college attendance. Ph D Thesis : University of Minnesota.

Molof, M J, (1967) Differences between assaultive and non-assaultive juvenile offenders in the California Youth Authority. Research report no 51, Division of Research, State of California, Dept. of the Youth Authority.

Monachesi, E, (1950) Personality characteristics and socioeconomic status of delinquents and non delinquents. Journal of Criminal Law, Criminology and Police Science, 40, 570 - 583.

Murray, H A, (1943) Thematic Apperception Test Manual. Cambridge, Mass : Harvard University Press.

Mussen, P H, and Naylor, H K, (1964) The relationship between overt and fantasy, aggression. Journal of Abnormal and Social Psychology, 49, 235 - 240.

McClintock, F H, (1976) Homicide. British Journal of Criminology, 16. 3. 284 - 287.

McCord, W, and McCord, J, (1964) The Psychopath an Essay on the Criminal Mind. New York Van Nostrand.

Nielsen, J, (1968) The XYY syndrome in a mental hospital. Genetically determined criminality. British Journal of Criminology, 8, 186 - 202.

Nielsen, J, and Tsuboi, T, (1969) Intelligence, EEG, personality deviation, and criminality in patients with the XYY syndrome. British Journal of Psychiatry. 115, 965.

Norman, R D, and Daley, M F, (1959) Senescent changes in intellectual ability among superior older women. Journal of Gerantology, 14, 457 - 464.

Nunnally, J, (1962) The analysis of profile data. Psychological Bulletin, 4, 311 - 319.

O H E, (1976) Murder, Manslaughter and Infanticide. Office of Health Economics, No 4, January.

Okasha, A, Sadek, A, and Abdel Moneim, S, (1975) Psychosocial and electroencephalographic studies of Egyptian Murderers. British Journal of Psychiatry,

126, 34 - 40.

Osgood, C E, and Suci, G J, (1952) A measure of relation determined by both mean differences and profile information. Psychological Bulletin, 49, 251 - 262.

Osgood, C E, Suci, G L, and Tannenbaum, P H, (1957) The Measurement of Meaning. Urbana, Illinois University of Illinois Press.

Owen, D R, (1972) The 47, XYY male · A review. Psychological Bulletin, 78, 209 - 233.

Palmer, S, (1960) A Study of Murder. New York : Crowell.

Panton, J H, (1962) The identification of habitual criminalism with the M M P I. Journal of Clinical Psychology, 18, 133 - 136.

Panton, J H, (1974) Personality differences between male and female prison inmates : measured by the M M P I. Criminal Justice and Behaviour, 1. 4. 332 - 339.

Paulson, M J, Schwemer, G T, and Bendel, R B, (1976) Clinical application of the Pd, Ma, and (o-H) experimental M M P I scales to further understanding of abusive parents. Journal of Clinical Psychology, 32, 3, 558 - 564.

Price, W H, and Whatmore, P B, (1967) Criminal behaviour and the XYY male. Nature, 213, 815.

Rader, G E, (1957) The prediction of overt aggressive verbal behaviour from Rorschach content. Journal of Projective Techniques, 21, 294 - 306.

Rao, S V, (1968) Murder. New Delhi · Government of India Press.

Rawlings, M L, (1973) Self control and interpersonal violence. Criminology, 11, 23 - 48.

Rodgers, D A, (1972) The M M P I. In Buros, O K (Ed.), The Seventh Mental Measurements Yearbook. Highland Park, N J, : Gryphon Press.

Rosen, A, (1953) Test - retest stability of M M P I scales for a psychiatric population. Journal of Consulting Psychology, 17, 217 - 221.

Rosenzweig, S, (1934) Types of reaction to frustration. Journal of Abnormal and Social Psychology, 29, 298 - 300.

Rosenzweig, S, Fleming, E E, and Clark, H J, (1947) Revised Scoring Manual for the Rosenzweig Picture - Frustration Study. Provincetown, Massachusetts : The

Journal Press.

R V M'Naughten, (1843) 4 St. Tr. (N S) 847, 10 C and F 200.

Sandberg, A A, Koepf, G F, Ishihara, T, and Hauschka, T S, (1961) An XYY human male. Lancet, 2, 488 - 489.

Schofield, W, (1950) Changes in response to the M M P I following certain therapies. Psychological Monographs, 64, 5.

Schultz, L G, (1960) The wife assaulter One type observed and treated in a probation agency. Journal of Social Therapy, 6, 103 - 111.

Selg, H, (1975)(Ed.) The Making of Human Aggression. London : Quartet Books Ltd.

Stafford - Clark, D, and Taylor, F H, (1949) Clinical and electroencephalographic studies of prisoners charged with murder. Journal of Neurology, Neurosurgery and Psychiatry, 12, 325 - 330.

Stearns, A W, (1957) Murder by adolescents with obscure motivation. American Journal of Psychiatry, 114, 303 - 305.

Stone, H, (1953) The relationship of hostile aggressive behaviour to aggressive content on the Rorschach and Thematic Apperception Test. Ph D Thesis : University of California.

Svalastogo, K, (1956) Homicide and social contact in Denmark. American Journal of Sociology, 61, 37 - 41.

Tardiff, G, (1966) La Criminalite De Violence M Sc Thesis · University of Montreal.

Telfer, M A, (1968) Are some criminals born that way. Think, 34, 24.

Thom, R, (1972) Stabilite structurelle et morphogenese. New York . Benjamin.

Vanderbeck, D J, (1973) A construct validity study of the O-H (Overcontrolled Hostility) scale of the M M P I, using a social learning theory approach to the catharsis effect. F. C. I. Research Reports, 5, 2, 1 - 18.

Volkman, A P, (1958) A matched group personality comparison of delinquents and non delinquent juveniles. Social Problems, 6, 238 - 245

Waldo, G P, and Dinitz, S, (1967) Personality attributes of the criminal · The Journal of Research in Crime and Delinquency, 4, 2, 185 - 202.

Walker, N D, (1968) Crime and Punishment in Britain. Edinburgh : University of

Edinburgh Press.

Ward, J H, (1963) Hierarchical grouping to optimize an objective function. American Statistical Association Journal, 58, 236 - 244.

Watton, J B, (1963) A prison maladjustment scale for the M M P I. Journal of Clinical Psychology, 19, 109 - 110.

Wechsler, D, (1949) The Wechsler Intelligence Scale for Children. New York : Psychological Corporation.

Wechsler, D, (1955) The Wechsler Adult Intelligence Scale. New York : Psychological Corporation.

Weiss, J W, Lamberti, J W, and Blackman, N, (1960) The sudden murderer. Archives of General Psychiatry, 2, 669 - 678.

Welsh, G S, (1956) Factor dimensions A and R. In Welsh, G S, and Dahlstrom, W G, (Eds.), Basic Readings on the M M P I in Psychology and Medicine. Minneapolis University of Minnesota Press.

Wertham, F, (1966) Dark Legend : A Study in Murder. New York · Bantam Books.

West, D, (1966) Murder followed by Suicide. Cambridge, Mass. Harvord University Press.

White, W C, (1973) Selective modelling in youthful offenders with high and low O-H (Overcontrolled Hostility) personality types. F. C. I. Research Reports, 2, 3, 1 - 31.

White, W C, (1975) Validity of the Overcontrolled Hostility (O-H) scale : A brief report. Journal of Personality Assessment, 39, 6, 587 - 590.

White, W C, McAdoo, W G, and Megergee, E I, (1973) Personality factors associated with over and undercontrolled offenders. Journal of Personality Assessment, 37, 473 - 478.

Williams, D, (1969) Neural factors related to habitual aggression. Brain, 92, 503 - 520.

Williams, W T, and Dale, M B, (1965) Fundamental problems in numerical taxonomy. In Preston, R D (Ed.), Advances in Botanical Research. London : Academic Press.

Wirt, R D, (1967) M M P I characteristics associated with outcomes in group

psychotherapy with prisoners. Paper presented at the Second Conference on Recent Developments in the Use of the M M P I, Minneapolis, Minnesota, April.

Wishart, D, (1972) Clustan 1B. Information Bulletin, University College, London.

Wishart, D, (1974) Personal Communication via the Home Office.

Wolfgang, M E, (1957) Victim-precipitated criminal homicide. Journal of Criminal Law and Criminology, 48. 1 - 11.

Wolfgang, M E, (1958) Patterns in Criminal Homicide. Philadelphia : University of Pennsylvania Press.

Wood, S M, (1961) Adolescent violence and homicide. Archives of General Psychiatry, 5, 528 - 534.

Young, F M, (1956) Responses of juvenile delinquents to the Thematic Apperception Test. Journal of Genetic Psychology, 38, 251 - 259.

Zeeman, E C, Hall, C S, Harrison, P J, Marriage, G H, and Shapland, P H, (1976) A model for institutional disturbances. British Journal of Mathematical and Statistical Psychology, 29, 1, 66 - 80.