Personality and attitude changes associated with long-term imprisonment

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PERSONALITY AND ATTITUDE CHANGES ASSOCIATED WITH LONG-TERM IMPRISONMENT

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Abstract

Very little is known about the psychological effects of imprisonment in general, and long-term imprisonment in particular. Most of our knowledge about imprisonment and its effects is derived from American sociological research, such as the classic study by Clemmer (1940). Psychologists seem to have avoided the problem and what data exists bears on the topic only tangentially. This study is an attempt to begin the process of bringing a particularly psychological point of view to bear on the issue.

The study is essentially a two-fold psychometric examination of the question of the effects of long-term imprisonment on personality (as measured by the Eysenck Personality Inventory, the Gough Femininity Scale, the Sixteen Personality Factor Questionnaire) and attitudes (as measured by the Semantic Differential). First, a cross-sectional analysis is outlined which yields data on the differences between groups of men in prison who have served differing mean lengths of total imprisonment during their careers. Second, a longitudinal analysis is presented which illustrates the changes which took place over the relatively short test-retest interval of 19 months. A factor-analytical study of the cross-sectional data and more detailed longitudinal analyses of identifiable psychometric groups are also presented.

Finally, an attempt is made to integrate the results into a coherent picture and suggestions are proffered which, it is hoped, may be of use both to future researchers and to the custodians of long-term prisoners.

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INTRODUCTION

"A good prisoner, it has been observed, is usually a bad man, and in the circumstances this result is sufficiently intelligible. Men kept for weeks, months, years, under a severe external pressure and encouraged in proportion as they submit to it, are in a direct course of preparation to yield to other forms of pressure as soon as they present themselves. They go in weak, or they probably would not be prisoners, and they come out still more enfeebled." (Capt. K.H. Maconachie, 1846, p.29).

Imprisonment has a long history. Genesis tells us of Joseph's imprisonment in Egypt 2000 years B.C. It originated as a means of detention and only later did it evolve into a punishment in its own right. Pugh (1968) relates that imprisonment has no connected history in England before the end of the 12th century although its origins are antique and go back before the time of Alfred. For custodial purposes at least, it seems that the stocks were probably our earliest "prison ". The earliest documentation of imprisonment in England is in a code of laws under Alfred (c.890), in which a distinct punitive element is evident in the requirement that the prisoner, during his customary 40-day incarceration in a royal manor, should submit himself to punishments of the bishop's devising.

The prison system in England has always been curiously open to the influence of charismatic leaders, and the history of the modern prison system probably begins around the end of the 18th century and beginning of the 19th century, when a number of such people, such as John Howard, Elizabeth Fry and Jeremy Bentham, were beginning to make their influence felt (see Fox, 1952). Alexander Maconachie was a man of this calibre and perhaps the most interesting of all from the psychological viewpoint. He first became known as a reformist on the penal settlement on Norfolk Island, Australia. His name will not be

found in psychology textbooks, yet his work displayed an intuitive and precocious grasp of some of the basic principles of learning theory. He anticipated Skinner by a century with his "Marks System", introduced first on Norfolk Island when he was appointed Superintendent in 1840, and later at Birmingham Prison during his brief stay there between 1849 and 1851. The idea was that all prisoners should be given "task sentences", for example a debt of 3000 marks, which could be paid off by industry, thrift, prudence and so forth. On both occasions, despite encouraging results from his scheme, greater events or lesser men brought the experiment to a halt. This was, unfortunately, a fate not uncommon to would-be prison reformists.

At the beginning of the 19th century the number of capital offences in England was enormous, estimated by Radzinowicz (1948) to exceed 200, including such trivial offences as stealing one shilling's worth of goods from a shop, nor was the penalty mitigated merely because the offender was a child. However, the mood of the country was becoming more humane so that courts were reluctant to convict people on petty offences, even when the evidence of their guilt was clear. This, coupled with the loss of American colonies and later the refusal of Australian colonies to accept more convicts, brought the idea of a prison sentence, as we know it today, to the fore, since previously, gaols, apart from debtors' prisons, were only places of safe custody for those awaiting trial, transportation or execution. All these things coincided with the development of two conflicting penal philosophies in the United States during the 1820s and 1830s. An interesting and concise account of this period is given by Howard (1960). The embodiment of these philosophies were Cherry Hill Prison (or, more correctly, the Eastern Philadelphia Penitentiary) and Auburn Prison in New York State. Essentially, Cherry Hill had a system of solitary confinement whereas Auburn operated "the silent system" whereby inmates were forbidden to talk to each other at anytime, infringements frequently being punished by flogging. Each system was designed to prevent

contamination of one inmate by another and each had its ardent proponents, a state of affairs which led to a disjointed penal system in the United States as each state built its prisons according to the particular preference of its authorities. This controversy aroused much interest and attracted European visitors. Upon visiting Cherry Hill, Charles Dickens (1874) recorded that "I believe that very few men are capable of estimating the immense amount of torture and agony which this dreadful punishment, prolonged for years, inflicts upon the sufferers; and .... I am .... convinced that there is a depth of terrible endurance in it which none but the sufferers themselves can fathom and which no man has right to inflict upon his fellow creatures." (p.115). However the Home Secretary of the day, Lord John Russell, on receiving enthusiastic reports from the Rev. Whitworth Russell and William Crawford, Inspectors of the Home District under the 1835 Act, who had visited Cherry Hill in 1836, initiated a Bill to establish a new national penitentiary organised on the Cherry Hill plan. The Bill became law in 1836 and the result was Pentonville Prison, completed in 1842. An intense programme of prison building ensued and within six years, 54 prisons had been built on similar lines. With very few exceptions, such as Wormwood Scrubs, built in 1874, all the walled prisons now in use in Britain date from this period.

The second half of the 19th century saw the formation of a Prison Commission, the first Chairman of which, Sir Edmund du Cane, presided during a period of 20 years harsh and rigid policy making. This eventually aroused much criticism and a committee under the chairmanship of Herbert Gladstone (later Lord Gladstone) was set up and its report, issued in 1895, according to Fox (1952) "remains the foundation stone of the contemporary prison system" (p.53). The report showed that the deterrent character of prisons did not reduce the incidence of crime, stressed that reformation as well as deterrence must be ensured, and generally advocated a more sensitive and constructive approach. The 1898 Act followed this and it removed detailed regulations of

the prison regime embodied in earlier Acts, leaving this to the subordinate legislation of Statutory Rules made by the Secretary of State. This paved the way for a flexible approach to prison affairs, but the Prison Commissioners were reluctant to accept the spirit of the Act and it was not until after the first World War, when suffragettes and conscientious objectors had come into personal contact with prison life and its shortcomings and raised a vocal and informed protest that interest once again focussed on prison problems. The appointment of Maurice Waller as Chairman in 1921 and Alexander Paterson as Prison Commissioner in 1922 marked the beginning of a new stage in prison development.

The emphasis from this point onwards changed towards personal responsibility and self-respect and this led, in 1923, to the organization of Wakefield Prison as a training prison with a more vigorous regime, less supervision and more scope for individual choice and responsibility. The Borstal scheme for boys was started in this period and 1930 saw the opening of the first British "open" institution (without bolts and bars) for boys at Lowdham Grange. This was followed, in 1936, by the first adult open prison at New Hall Camp; this was the first test of how one could resolve Alexander Paterson's dilemma that "you cannot train men for freedom in a condition of captivity". The results were successful and this led eventually to the opening of some other open prisons. The culmination of this period of penal history was the 1948 Act which abolished penal servitude, hard labour and the triple division of imprisonment,and introduced the idea of a remission of sentence (one sixth) for good behaviour.

More recent developments include the hostel scheme, whereby selected prisoners live in a separate hostel and pursue jobs on the outside as normal citizens, and one or two experimental systems such as the psychiatric prison at Grendon Underwood (see Snell, 1963) and an industrial training prison at Coldingley, where, as far as possible, normal industrial working conditions

are simulated. Specialist staff have also been introduced to the system, in particular, of course, the Prison Psychological Service (see Straker, 1963 for a history of this), although this is grossly understaffed.

Overall, then, it is clear that great efforts have been made to improve the lot of the prisoner in recent years. However, these efforts have been made largely at the periphery of the problem, for the fact remains that the majority of prisoners in Britain today, and the vast majority of long-term prisoners, are serving sentences in prisons that appalled many people when they were built 120 years ago. And despite the efforts that have been made to increase responsibility and self-respect, the scope for such efforts is severely hampered in overcrowded, older, walled prisons, which cannot function without a considerable degree of regimentation. Furthermore, the Mountbatten Report (H.M.S.O., 1966) reversed the trend towards greater freedom by placing a heavy emphasis on security, which effectively meant, due partly to staff shortage, that the prisoner's area of choice has been reduced in many cases. The problem is aggravated by the fact that the average length of sentence has increased since 1966 (see H.M.S.O., 1969, p.17), partly as a result of the Criminal Justice Act, 1967 which introduced suspended sentences. This Act has also, at the time of writing, had an unfortunate consequence in that men are now being imprisoned for relatively trivial offences, simply because they are under suspended sentences which automatically come into force on reconviction within the duration of the sentence. This has worsened the problem of overcrowding and lack of staff. On top of all this the number of life sentences has also risen in recent years, and, with the abolition of capital punishment, the prospect is that some of these men will remain in prison for very long periods.

The purpose of this study is to investigate the psychological effects of long-term imprisonment and in particular to examine the relationship between length of imprisonment and personality variables. The relationship

between length of imprisonment and various attitudinal variables will also be examined.

CHAPTER ONE

The Radzinowicz report (H.M.S.O. 1968), commenting on the special problems of prisoners incarcerated for ten years or more, observed that "this is a subject on which a multiplicity of opinions have been expressed, but on which there are virtually no hard facts, and on which very little research has been carried out." (p.57). This is undoubtedly so. In this chapter, however, an attempt will be made to glean from the literature whatever information might be of use in illuminating the problems facing the long-term prisoner.

The literature on imprisonment may be viewed as falling into three main catergories. The first deals directly with imprisonment and its effects, usually yielding sociological or descriptive information which is often not accessible to psychometric examination. The second is concerned with the psychological differences that exist between criminal subgroups and therefore yields data on prisoners as a by-product. The third presents psychological data which, usually by inference or analogy, can be used to formulate hypotheses about the effects of imprisonment. We shall look at these categories of literature in turn and discuss the problem in the light of their revelations.

Studies of Imprisonment

The question of influence, as Machonochie observed, is central to the topic of imprisonment. In prison a number of forces act on the individual. Some of these influences are apparent, such as the influence of the so-called "inmate culture". The classic study in this context is that of Clemmer (1940)

who saw the influence of the inmate culture as a very powerful and ultimately destructive force in terms of later adjustment to society at large. The theme of his work concerned the "Universals of Prisonisation", six in number, including such concepts as "Dogma" (e.g. the belief that all government officials are dishonest) and "Legend" ("the time when Buster Bloggs escaped three times in one week"). These ideas seem somewhat nebulous by today's standards but Clemmer was sufficiently convinced of their importance to conclude that the influence of these factors was sufficient to make a man characteristic of the prison community and seriously disrupt any adjustment he might otherwise have been able to make in society at large. Goffman (1968) echoes the basic sentiment expressed by Clemmer, namely that the primary influence in prison comes from the prisoners themselves, although his style is somewhat less florid. He comments "the new recruit frequently starts out with something like the staff's popular misconceptions of the character of inmates; he comes to find that most of his fellows have all the properties of ordinary, occasionally decent human beings, worthy of sympathy and support ..... A sense of common injustice and a sense of bitterness against the outside world tend to develop, marking an important movement in the inmate's moral career" (p.57). McCleery (1953) argues along similar lines. He observes that unjust treatment in prison breeds an attitude of mind which at once finds hitherto unavailable justification for the criminal act and leads to a desire to "get even" and take reprisals for this ill-usage through further crime at the first opportunity. With that decision, McCleery argues, the prisoner becomes a criminal. McCorkle and Korn (1954) saw this influence from a functional standpoint. They observed that "In many ways the inmate social system may be viewed as providing a way of life which enables the inmate to avoid the devastating psychological effects of internalizing and converting social rejection into self-rejection. In effect it permits the inmate to reject his rejectors rather than himself" (p.88).

Besides the sort of influence outlined above, there are more insidious pressures which bear on the prisoner. Glaser and Stratton (1961), for instance, laid emphasis on the depersonalizing aspects of total institutions, seen in such procedures as replacing personal clothing by institutional garb on entry or giving inmates numbers. They also felt that many practices in these institutions tended to degrade the inmate, such as doorless toilets and collection of information about their past. In this vein, Goffman (1968) says of the inmate's period of imprisonment "This time is something its doers have bracketed off ..... in a way not quite found on the outside. And as a result, the inmate tends to feel that for the duration of his required stay - his sentence - he has been totally exiled from living. It is in this context that we can appreciate something of the demoralising influence of an indefinite sentence or a very long one." Morris and Morris (1963) and Clayton (1971) have outlined some of the problems of the British, as opposed to American, prisoner, although since both studies were carried out at Pentonville, where the typical stay is four months, their observations are not necessarily universally applicable to the British prison system. A summary of some of the sociological work in this field is given in Cressey (1961).

Another important factor influencing the life of the prisoner in the British prison system is the almost total lack of responsibility carried by the inmate. Under our system a prisoner loses practically all his civil rights but perhaps more important for his ultimate benefit is the concomitant that he also forfeits his civil and social responsibilities. In Britain, the type of decision open to the inmate, unless he is one of the few at an open or special prison, is very trivial indeed and even the most simple request must be ritualized in the form of a petition to the governor. In effect, therefore, the prisoner's world is enormously reduced and requires minimal response from the inmate. Scheflen (1965) argues that

conformity to prison rules may be working against what is wanted of the inmate in the real world, where independence and responsibility are the hallmarks of success, a view shared by Klare (1962). The Radzinowicz report (H.M.S.O., 1968) recognised this feature of prison life. It said that " The following things may, and sometimes do, happen to a prisoner, and especially to a prisoner serving a very long sentence. He becomes excessively and irrationally concerned with the small things of his existence - whether he received a smaller portion of pudding than his neighbour - while he is unable to take in the significance of important changes or misfortunes in the life of his relatives outside. He looks inward and becomes more selfish. He becomes less alert, less ready to attempt any new activity, and less able to pursue it if he does take it up. He seems to lose the will or the ability to make decisions, and is content to become dependent on someone else to do so for him ..... A process of this kind ..... can represent damage to the personality" (p.58). A White Paper (H.M.S.O. 1965) observed that a considerable number of long-term prisoners reach a recognisable peak in their training, after which they may go downhill. Roper (1950) more precisely stated that he doubted whether a longer sentence than six years (four years after deduction of remission) ever helps in treatment, as opposed to preventive detention and the vindication of social standards.

Under the more severe types of confinement, there is evidence that such effects as noted above are permanent. Chodoff (1963), working with men who had been in wartime concentration camps, found that the most characteristic symptom was an obsessive - ruminative state about their experiences during incarceration. He also reported depression, seclusiveness, paranoia and a tendency to become dependent. Kral et al. (1967) compared captives who had been held for 3½ years with their brothers who had seen active service in Hong Kong but had not been captured.

Although the study took place 25 years after their release, the differences in favour of the non-captives were quite considerable, especially since the method of obtaining subjects favoured healthy rather than sick people (the subjects had to make their own way to a hospital to be interviewed and tested). Wechsler Adult Intelligence Scale scores were found to be significantly different (Verbal IQ, $p < .05$, Performance IQ, $p < .02$, Full Scale IQ, $p < .01$) and other general psychomotor effects were noted, for example slower Tapping Rate ($p < .05$). This latter test consisted of counting finger taps in three successive fifteen-second trials. Evidence of personality disorders was also found amongst the ex-prisoners of war in that they tended to manifest higher levels of tension, anxiety and depression than their brothers, and on the Rorschach test tended to respond in a more passive, dependent manner. Of course, some of the effects noted in this study could be due to a number of contributory factors, for example, the physiological effects of prolonged starvation during captivity. Furthermore, it must be made clear that one is not suggesting that the objective severity of incarceration is similar in concentration camps and "modern" British prisons. However, subjective feelings about treatment received will vary with circumstances, so that expectations will be much higher in prison today than in enemy concentration camps during wartime twenty five years ago. The Home Office have recognised this fact and in a White Paper (H.M.S.O. 1969) stated that "Members of the prison service expect and must be given working conditions in prison which compare with those to be obtained in other occupations in society ..... The same is true of the living and working conditions of prisoners. Standards thought adequate fifty years ago would be thought indefensible today ....." (p.7).

One of the most interesting aspects of Chodoff's report is the question of the social mediating influences which he found to be important. First, the destruction or unavailability of the home on release, which, of

course, so often is the case with the long-term prisoner. Second, the marked contrast between the wishful fantasies during the stress period and the actual conditions of the world. Glaser and Stratton (1961) have also noted this phenomenon in what they term a "release - binge fantasy". Two other factors of importance were the inadequacy of internal resources or external assistance in taking up life again on release, and a downward change in socioeconomic status. Both of these conditions apply only too well to many men leaving prison today.

Finally, in this section, one study which stands virtually alone is that of Taylor (1961) with New Zealand prisoners. This study is unique in that it set out specifically to examine some of the psychological effects of imprisonment using experimental techniques, although the sample is small and only cognitive variables were examined. He found significant deterioration with two tests of spatial ability, Koh's Blocks and McGill Delta Block Test, and significant improvement was found with the Digit Symbol subtest of the Wechsler-Bellevue Scale. This study, however, only involved a small number of subjects (two out of the three groups, for instance, consisted of only 6 matched pairs) and used only subjects who had served relatively short lengths of imprisonment (the"long-term" group had only previously served up to three years and their current sentences were up to three years). The importance of the study, however, lies in the fact that it is an attempt to bring the science of psychology to bear on the problem of imprisonment, and as such, given the relative neglect of this field of research, deserves attention despite its shortcomings.

To summarize the direct studies of imprisonment, these cover a wide area of interest and suggest many possibilities for further research. What is consistently clear is that imprisonment requires an adjustment on the part of the prisoner to his new environment. It is also probable, as we have seen, that this adjustment runs counter to the sort of behaviour

required of the prisoner on his release. These reactions on the part of the prisoner tend to be reinforced by what we have called the more insidious forms of pressure, such as depersonalisation, degradation and the removal from responsibility, and these pressures may have effects, the nature of which we cannot yet comprehend, but which may be profound. The question of whether these effects are reversible remains an open one. Wheeler (1961) has suggested that there is a reversal tendency in anti-social attitudes towards the end of sentence, resulting in a U-shaped curve representing "prisonisation". Glaser (1967), commenting on this subject, pointed out that many inmates seem to live apart from the social system and that aggressive and articulate inmates try to impose on their peers an exaggerated view of a general acceptance of anti-social attitudes in the inmate group. However, whatever the effects of imprisonment, it is clear that they pose the greatest problem for those men longest exposed to them, namely the long-term prisoners.

Studies of Criminals

We will now turn to the criminological literature to examine those studies which throw most light on the problem of imprisonment. Most criminological studies, as we have said, yield information on imprisonment and prisoners as a by-product of their real intention which is to yield data on criminals who, of course, are usually also prisoners. Occasionally, however, studies are presented which specifically examine criminals in prison, and these could equally well have been included in the previous section. However it was decided best to examine these studies in this section since the emphasis of the studies was felt to be on criminals rather than prisons. We shall therefore start this section by examining these studies, since they do provide continuity with the previous group of studies.

One of the most intuitively important aspects of the imprisonment

situation is the question of how incarceration affects the attitudes of prisoners. Quite clearly, much of what we have said in the previous section is of direct relevance to this topic; for instance, the inmate culture will obviously (and indeed, perhaps primarily) be exerting influence on prisoner's attitudes. Tolman (1939) noted the paucity of information available about the attitudes of convicted adult criminals towards the public system of law enforcement and justice. Watt and Maher (1958) found the situation little better twenty years later which they found difficult to reconcile with their observation that "it is generally conceded that the establishment of such (favourable) attitudes is among the legitimate goals of rehabilitation" (p.1). Schacter (1959) outlined the inherent difficulties of obtaining such a goal in an anxiety - producing situation such as imprisonment, since two factors in particular militate against this : the first is the tendency for people placed in the same predicament to accept the same standards; the second is the phenomenon which Festinger (1957) called "drive for self- evaluation", that is, the tendency to compare opinions with those of others within the same group. Both of these influences would tend to work against any rehabilitative influence, particularly in those prisons which operate under a strict regime.

Watt and Maher (1958) investigating the hypothesized existence of a generalized anti - authority attitude in prisoners found no firm evidence of this except in the group of convicted murderers whose attitudes towards Law and Justice correlated significantly ($p < .05$) with their attitudes towards Home and Parents, although the authors stressed caution in view of the number of correlations computed. The other classes of crime studied were violent crimes (including armed robbery and assault and battery), non - violent theft (including unarmed robbery, burglary and larceny), "intellectual" crimes (including fraud, forgery and embezzlement) and sexual offences (all types); no differences were found between the strength of attitudes of any of the

groups. In a later study, Hulin and Maher (1959) measured prisoners' attitudes to society's legal and moral codes and to the agents who administer and enforce such attitudes as a function of the length of time they had spent in prison. The data showed that with increasing length of stay in prison the expressed hostility became more intense and prisoner's ability to distinguish between his own treatment in particular and the law in general tended to disappear. Hulin and Maher, however, thought that a possible contributory factor in their findings could be an initial reticence on the part of newly sentenced prisoners to express their true opinions. This would explain the discrepancy between their findings and those of Brown (1970). Brown, investigating attitudes towards the legal establishment and aggression in recidivists and first-offenders, found little difference between prisoners confined one week and those confined one year except that the guilt scores of the newly arrived inmates were significantly ($p < .01$) higher. Recidivists, however, were found to have significantly ($p < .01$) less favourable attitudes towards legal authority and legal institutions and to have significantly ($p < .05$) more negative attitudes towards others. A study by Mosher and Mosher (1967) revealed a significant ($p < .001$) difference in guilt between first-offenders and recidivists, the first-offenders scoring considerably higher on the Mosher Incomplete Sentences Test. More particularly, significant differences were found for sex-guilt subscale, the hostility-guilt subscale and morality-conscience-guilt subscale. A significant correlation was found between age on entry to prison and guilt scores of first-offenders, indicating that the more guilty first-offenders were older on being sent to prison. Intelligence estimates were available for 149 of the prisoners and intelligence was found to be negatively correlated with guilt, the figure being low but significant ($r = 1.9$, $p < .05$).

There is in some studies of criminals an underlying assumption that recidivists are different from others in that they are more criminal,

as the comparisons in the above studies show. An alternative, or possible subsidiary explanation, which in view of what we have already said in this chapter, should be considered, is that recidivists are different because they have spent longer in prison. Obviously, in aetiological terms, this shift of emphasis has important consequences, and may suggest solutions to some of the problems of criminality which are at once radical and simple. It is therefore imperative that the possible effects of imprisonment (one might hypothesise a syndrome of "prisonality" as distinct from criminality) be considered in those studies of criminals which use prisoners as subjects, in other words, virtually all criminal studies.

The failure to consider the possible effects of imprisonment is evident in many of the studies which have administered personality tests to prisoners and could well account for some of the discrepant findings in this field. It is true for instance of Cattell, Eber and Tatsuoka's (1970) finding with the Sixteen Personality Factor Questionaire and of the previous findings by Cattell and Eber (1957) In the earlier study (N=45), criminals were found to be above average on Factor C (Emotional Maturity), Factor E (Dominance) and Factor H (Spontaneity), but below average on Factor O (Worry - proneness) The later study (N=891) found criminals to be decidedly below average on Factor C, Factor G (Responsibility), Factor Q_3 (Self-control) and Factor F (Enthusiasm) and above average on Factor O, while Factor E was noted to be somewhat low. Similarly, with respect to the finding of Caine, Foulds and Hope (1967) with the Hostility and Direction of Hostility Questionaire that the average Hostility score of male prisoners in a Scottish prison was more than 1·5 standard deviations above the normal mean, it is not possible to estimate the influence of prison experience on the results presented. A comparison study by Foulds (1968) between a prison and a hospital sample using the H.D.H.Q., which found on an operational interpretation that 15% of the prison sample could be classified as

psychopathic, also suffers from this shortcoming, although, in fairness, neither of these studies were criminologically orientated.

It is possible, also, that the failure to examine the effects of imprisonment on performance on personality tests may be a factor in the contradictory findings reported for the dimension of extraversion - introversion. Franks (1956) postulated two kinds of recidivist offender, namely "the introverted ones who condition well and the extraverted, possibly psychopathic ones who condition poorly and find great difficulty in learning the rules of their environment (desirable or otherwise)". In a similar vein, Trasler (1962) postulated the existence of two polar types of criminal, the normal "ambivert" or introverted person who has been subjected to very inefficient methods of social training, and the extraverted individual who forms conditioned responses relatively slowly. Trasler argued that, as there are no grounds for thinking that criminals who have been subjected to inefficient methods of socialisation will, as a group, prove to be more introverted than the general population, and, since criminals who have failed to respond to efficient methods of training are likely to be extraverts, then "the prison population as a whole will show a mean extraversion score rather higher than that of a non-criminal sample". (p.87). Eysenck (1964) reports confirmatory data on this point with both American and Australian criminals but Bartholamew (1959) had found no significant differences on the extraversion dimension between offenders and normal subjects, and Little (1963) reported that the mean extraversion scores obtained on a large sample of young offenders did not differ from the norms. In this particular field, argument is not limited to the discrepancies between the findings of different studies, but can also extend to the interpretation put on presented data within a study. Eysenck (1964) cited an unpublished study by Warburton in support of his postulated high extraversion in criminals, and produced a graph showing Warburton's prisoners above all his other groups of subjects

(including other prison groups) in terms of extraversion.

However, Warburton (1965) published his study and he described the extraversion tendency of his subjects in somewhat more subdued terms. The final twist of the spiral is provided by examining the data Warburton presents, and there we find that the mean score on the extraversion factors of the 16 P.F. questionnaire used (Cattell, Saunders and Stice, (1957) is 5·6. Since the general population mean is 5·5, we can hardly regard this as acceptable support for the notion that criminals are more extraverted than the general population.

As we have said, differing experiences of imprisonment may account, in part at least, for these discrepant findings, since imprisonment may, for example make men more introverted. An alternative explanation, however, has been proposed by Schalling and Holmberg (1970), who, extrapolating from Eysenck and Eysenck's (1963a) theory of the dual nature of extraversion, suggest that impulsivity, rather than sociability, typifies the criminal subject. A study by Eysenck and Eysenck (1970) which failed to find any real evidence of high extraversion in a prison group, suggested that this was because of the prisoner's circumstances affecting his responses to sociability items. This was confirmed by a later study by Eysenck and Eysenck (1971a) which, using a specially constructed questionnaire whose extraversion scales were almost entirely sociability ones, found prisoners to score significantly ($p < \cdot 001$) lower than the controls. Eysenck and Eysenck (1971b), however, also published an item analysis of their 1970 study responses and found that sociability did not distinguish between criminals and non-criminals, whereas impulsivity items do. A more recent study by Burgess (1972) suggests that failure to validate Eysenck's predictions about extraversion or neuroticism in criminal subjects may be due to the statistical methods usually employed in such studies. He cites examples where no significant differences occurred between criminals and controls using t-tests on means,

but when individual scores were plotted, Eysenck's prediction that criminals would tend to fall in the High E/High N quadrant was validated, using the chi-squared technique. The scatter of the control scores (neurotic controls tending to be introverted and extraverted controls tending to be stable) meant that no significant differences appeared between the means of the control and criminal groups. In view of these confused findings, the Scottish verdict of "not proven" seems appropriate to describe this hypothesis.

A number of studies have attested to the high degree of anxiety or neuroticism found in prisoners (Fitch, 1962, Eysenck, 1964, Warburton, 1965, Eysenck and Eysenck, 1970, Eysenck and Eysenck, 1971a), and compared with the case of extraversion, there appears to be relatively little dispute as to its existence. However, the problem remains even here as to whether the neuroticism is situational, as Warburton (1965) suggested, or whether, as Eysenckian theory suggests, it is of a more fundamental kind. Eysenck and Eysenck (1970), for example, postulated that "high degrees of anxiety or neuroticism tended to act as a drive stongly reinforcing the extraverted or introverted tendencies favouring or disfavouring anti-social conduct" (p.226). The literature provides us with no means of resolving this question in terms of the prison population, but an analysis which relates anxiety to length of imprisonment should help to determine to what extent this personality dimension is affected by situational variables.

In summary of the criminological work, one factor in particular, as we have seen, is of importance in determining the relevance of the findings to the problem in hand; this is the question of the extent to which these studies are actually reporting criminality, as opposed to "prisonality". That is to say, the extent to which the findings noted are reflecting pre-existing criminological predispositions as opposed to reflecting changes which have occured during, and as a result of, imprisonment. It is probably reasonable to assume that most of the studies cited are reporting the latter

to some degree and therefore the attitudinal and personality variables studied in this area may well prove fruitful in terms of examining the psychological effects of imprisonment per se.

Other Relevant Literature

Finally, we turn to that category of literature which deals with situations which are in some way similar to the prison situation. The biggest body of such literature, deals with sensory deprivation. The comparability of the effects of imprisonment and sensory deprivation is of course, very much open to discussion. In general, for obvious ethical reasons, sensory deprivation experiments involve extreme stimulus restriction for short periods of time, whereas imprisonment involves mild stimulus restriction for very long periods of time. One might feel that these situations are not sufficiently similar to warrant comparison, but, given that both represent stress situations, the consensus of studies (e.g. Davis et al., 1956, Funkenstein et al., 1957, Torrance, 1965) is that mild but prolonged stress is more damaging and requires a longer time for recovery than brief but intense stress.

Interest in the Russian "thought-reform" programmes and, indeed, dismay at the"confessions" produced at trials, prompted the classical McGill studies under Hebb. The first experimental demonstration of the effectiveness of sensory deprivation on attitude change was carried out by Bexton (1953) when he obtained a significantly greater increase in expressed belief in psychic phenomena (after hearing nine records strongly supporting belief in the subject) with a group of student subjects who had undergone sensory deprivation than with a control group. Suedfeld (1963, 1964), for example, had similar success in obtaining pro-Turkish attitude change with student subjects. He used a message which contained some criticism of the

Turks but which was broadly favourable and both studies showed that subjects who had been previously classified as conceptually simple changed more than conceptually complex subjects in both the control and sensory deprivation conditions, presumably because the more complex subjects could assimilate the conflicting influences in the message rather better and therefore arrive at a more balanced opinion. However in both Suedfeld studies, there was no significant difference between simple and complex control groups while there were significant differences between simple and complex sensory deprivation groups in both cases. This personality dimension of conceptual complexity-simplicity is expounded more fully by Harvey, Hunt and Schroder (1961) and Schroder, Driver and Streufert (1967). It correlates with the dimension of field-independence/field-dependence, conceptually complex people being more field-independent. In a similar vein, Smith, Myers and Murphy (1963), investigating conformity to a fictitious group norm using a version of the Crutchfield (1954) apparatus (which asks subjects to chose one of three tone patterns which matched a previously presented standard), found that sensory deprivation led to greater conformity among those lower in intelligence while the conforming behaviour of more intelligent subjects was not affected. These studies illustrate the existence of personality differences in the magnitude of disorientation caused by sensory deprivation and in the need for information.

The question of personality differences in sensory deprivation response has been the subject of a number of investigations. Myers et al. (1966) found that "stayers" (i.e. those who tended to endure sensory deprivation) were higher on the Affiliation scale of the Edwards Personal Preference Schedule. Wexler et al. (1958) found that this scale was correlated positively with endurance while Zuckerman et al. (1962) found that it correlated negatively with indices of anxiety during isolation. Hull and Zubek (1962), although finding no relationship between Affiliation

and adaption to sensory deprivation did observe that stayers in their sensory deprivation (but not in their perceptual deprivation) were higher on the E.P.P.S. Succorance scale. The Wexler study also noted that this scale was positively correlated with endurance and Zuckerman found it to be negatively correlated with complaints during sensory deprivation. Myers et al. found that the E.P.P.S. Deference scale best predicted staying and there was some support for this study by Wright and Zubeck (1966), who showed this to be true for one sample but not for a cross-validation sample. Zuckerman also noted that the Deference scale was negatively correlated with complaints and reported concentration difficulties during sensory deprivation.

The above group of studies is consistent with a number of investigations which have compared groups of males ranked high or low on femininity scales. Holt and Goldberger (1961) found femininity measures to differentiate successfully between successful and unsuccessful undergraduate sensory deprivation subjects, the more feminine subjects doing better. However, using a second group of unemployed actors, Holt and Goldberger found that the relationships between femininity and sensory deprivation tolerance were generally reversed, sometimes significantly so. The authors thought that this might be due to the presence of a large number of maladjusted homosexuals in this group, since it was found that femininity and passivity was associated with poor ego strength in these subjects. Hull and Zubeck (1962) found that stayers tended to be higher ($p < .10$) than quitters on a femininity scale and Zuckerman et al. (1962) found that the M.M.P.I. femininity scale was correlated with increases in somatic complaints and time estimates during sensory deprivation. As can be seen, none of theses findings are very clear-cut and indeed, a few studies, for example Biase and Zuckerman (1967), have failed to validate them; this may well be due, however, as the Holt and Goldberger study illustrates, to the influence of moderating variables, for example in the relationship between femininity and sensory deprivation tolerance.

Two other personality variables which have been studied in this connection are neuroticism and extraversion. Holt and Goldberger (1961) found that the M.M.P.I. neuroticism scales, Psychasthenia and Hypochondriasis were negatively related to adaptive responses in both of their samples (actors and students) although these scales did not predict endurance in the Myers et al. (1966), Peters et al. (1963) or Wexler et al. (1958) studies. However the Holt and Goldberger study was a short-term one (8 hours) and the adaptive response variables were verbalisations indicating adequacy of directed thinking and so forth. Zuckerman et al. (1962) found that their more neurotic subjects, as defined by the M.M.P.I., reported more effects of all kinds during sensory deprivation. Also Zuckerman et al. (1966) found that the Taylor Manifest Anxiety Scale and the Neuroticism scale of the M.P.I. had high positive correlations with a broad range of post-sensory deprivation interview and questionnaire measures of stress, thinking difficulty and worry. Calculations from the raw data of a study by Smith and Lewty (1959) (reported in Zubeck, 1969, p.78) revealed a correlation of - ·84 between the Neuroticism scale of the M.P.I. and time endured in sensory deprivation. On the other hand, in a study of perceptual deprivation, Wright and Zubeck (1966) derived a function (using the multiple discriminant function technique) in which the M.M.P.I. neuroticism index, the F and Hypochondriasis scales were three of the most potent variables, but they discriminated in a way contrary to most of the findings, namely in that stayers were higher on these variables than non-stayers. However, when these variables were analysed individually, no significant differences emerged.

Turning to the variable introversion - extraversion, a number of studies have attested to the possible importance of this variable in predicting reactions to sensory deprivation. Tranel (1962), dividing a small sample (N =20) into introverts and extraverts according to the Myers-Briggs Type Indicator (Myers, 1962), found that only one of the ten introverts

remained to the end of the sensory deprivation period (only 4 hours in this experiment), while eight of the ten extraverts endured to the end. The introverts, however, adhered well to instructions, while extraverts tended to go to sleep or move about excessively. Rossi and Solomon (1966), however, using the same test of extraversion, were unable to replicate these findings in a three-hour sensory deprivation experiment although the same researchers, in an earlier (1965) study, had found that introverts showed more button-pressing for promised time off from isolation and rated themselves higher on a sensory deprivation discomfort index. Reed and McKenna (1964) and Reed and Sedman (1964) used the M.P.I. to define extraversion and found that introverts manifested more depersonalisation experience in a short sensory deprivation experience of 20 to 60 minutes. These findings on the positive relationship between extraversion and ability to withstand sensory deprivation are in accordance with the previously discussed data on the E.P.P.S. Affiliation scale.

There is a further body of studies which usually fall within the realm of sensory deprivation, although they concern situations which occur either naturally or for reasons other than scientific research. Examples of this sort of experience are sea voyages and disasters, expeditions and explorations, manned space flight or simulation, experiments on man-in-the-sea, submarine-service selection and so forth. The situation in this category seems to have received most attention, however, is the "wintering-over" period in the Antarctic, where small groups of men man remote stations, cut off from external contact. Taylor (1969) has pointed out the similarities between the Antarctic and prison situations and clearly, the Antarctic situation, involving as it does the isolation of a group of men from society at large, is more comparable with imprisonment than the usual experimentally contrived sensory deprivation situation. Mullin (1960) listed three major stresses confronting isolated groups. First, even a relatively enriched

isolated environment palls to boring sameness compared to the variability conventionally available. Second, because of their interdependence, group members must find ways to get along with one another in what are often crowded and otherwise unfavourable conditions. And finally, few of the usual sources of emotional gratification and relief are available to group members. Quite clearly, Mullin's remarks apply only too well to many prisons in Britain today.

Apart from the expected findings of these studies, that is to say, boredom and monotony (see Levine, 1965 for a summary of submarine and Antarctic studies and David, 1963 for a summary of some aerospace studies), other less predictable findings emerged. A number of studies (e.g. Gunderson and Nelson, 1965, Nelson 1965, Gunderson, 1966a), ultimately seeking to improve personnel selection, have administered questionnaires to a number of wintering - over groups to provide information regarding the effects of group confinement upon affective states, emotional symptoms and somatic reactions. A summary of these test results is given by Gunderson (1966b) and amongst the most prevalent symptoms reported in midwinter (as opposed to before the start of winter) were depression and feelings of loneliness, headaches, irritability and feeling critical of others. Significantly, improvements in facilities and so forth made no difference whatsoever to the frequency with which these symptoms occurred.

Eilbert and Glaser (1959) studied the difference between well and poorly adjusted U.S.A.F. enlisted personnel (as judged by immediate supervisors) at isolated Arctic bases, and found that evidence of prior adequate adjustment augurs well for later assignment to isolated duty stations. Wright, Sisler and Chylinski (1963), investigating personality characteristics associated with favourable adjustment to northern isolated living, found that poorly adjusted men (supervisors' ratings) showed greater aggression and lesser deference and orderliness than did well-adjusted men. The poorly adjusted were also higher on five M.M.P.I. scales, namely Hypochondriasis,

Psychopathic Deviate, Psychasthenia, Schizophrenia, and Hypomania. In general the findings indicate that persons given to anti-social and psychotic tendencies are poor risks for efficient functioning in conditions of isolation. These results, insofar as the situations from which they emanate bear comparison with imprisonment, suggest that imprisonment may be maximally unsuitable to that very group of people, i.e. those of inadequate adjustment or those given to antisocial behaviour, for whom it is intended.

In summary of this final category of literature, it seems that, once again, the importance of moderating variables is paramount, particularly personality variables. The question of the relevance of sensory deprivation studies to imprisonment is to some extent resolved by the findings of those studies of groups of men in social isolation, for in these circumstances, as we have seen, there are indications of ill-effects despite the fact that those involved are there of their own free will and have been selected, in most cases, in terms of their suitability.

In conclusion of this chapter, then, we have seen from the sociological studies that a major influence affecting prisoners is the operation of norms in prison society which usually, are not the norms of society at large. Furthermore, the sort of behaviour required of prisoners is not of the kind that society values, in that, for instance, the level of responsibility of the prisoner is minimal and initiative in any real sense is discouraged. Criminological (and sociological) studies have shown that imprisonment can change attitudes in detrimental ways. The discrepancies apparent in criminological studies which have administered personality tests to prisoners could be due to the failure of some studies to take "prisonality", as well as criminality, into consideration. This suggests that imprisonment may well have effects on personality as well as attitudes. The sensory deprivation studies lend support to this view since they show that the removal of men from the normal variability of their sensory world has disrupting

emotional and cognitive effects which are moderated by personality variables. Even when, as in the case of groups in isolation, the environment is enriched by the presence of others, adverse effects are still reported despite the fact that those involved are not unwilling victims in the sense that prisoners are. Of particular importance in this connection is the finding that poor previous adjustment was correlated with poor adjustment in the isolated group situation since, if we can compare the two situations, prison is designed to hold people who have shown their lack of adjustment. Most of all, the long-term prisoner has demonstrated his lack of social adjustment (or, perhaps, his unwillingness to adjust to social norms) and most of all, the experience of imprisonment will affect him, for better or for worse.

The literature has suggested nothing more definite than "areas of interest" or facets of personality which might be involved in any changes occuring during or as a result of imprisonment. It is therefore not appropriate to formulate specific hypotheses but rather to state which "areas of interest" seem most likely to prove useful to the task of examining the effects of imprisonment.

In brief, then, we have seen that Eysenck's dimensions of introversion-extraversion and neuroticism-stability, although providing contentious results, have established themselves as factors of personality which one could not reasonably ignore in a study such as this. Equally, some social and sensory deprivation studies have pointed to the possibility that femininity may be a factor of personality which merits consideration in a situation involving the ability to withstand deprivation. By the very nature of the study, and, in particular, by what we have gleaned from the sociological studies of imprisonment, hostility is a dimension which must be examined. More generally, perhaps, it is wise to examine the personality of one's subjects as fully as circumstances will allow, and the use of a more detailed inventory like Cattell's 16 P.F. is therefore indicated since we have seen that it has been

used in this area of research with some success (marred largely by lack of control of all variables) and since it enjoys the additional advantage of being factor - analytically related to the important dimensions of introversion-extraversion and neuroticism-stability. Finally, both the sociological and criminological literature point to the importance of examining the relationship between length of imprisonment and prisoners' attitudes to various relevant concepts.

CHAPTER TWO

METHOD AND PROCEDURE

This research was carried out as part of a project investigating the psychological effects of long-term imprisonment. The project was commissioned and financed by the Home Office. The research team consisted of Dr. Neil Bolton, Peter Banister, Professor F.V. Smith and the writer. The actual testing and administration was undertaken jointly by Peter Banister and the writer.

In this chapter we shall look at the experimental design, the selection of the sample, the administration of the research in detail and the tests used, briefly examining each.

Experimental Design and Selection of Sample

While it is not usual to combine the discussion of the experimental design and the selection of the sample, in this case no alternative is realistic. The population from which the subjects of this study were chosen is small. In consequence, while selection was at all times random, it had to be made, in some cases, within a limited framework.

The essential design of the experiment was twofold, comprising a cross-sectional study of four groups of 50 men, each group having served a different mean length of imprisonment, and a longitudinal study in which some men were seen on a second occasion after an interval of approximately 19 months. The longitudinal study required that a comparison group be tested before and after a similar interval so that the differences might be compared. We shall look at the composition of the comparison group later. For the purposes of this research, a long-term prison sentence was defined as either a determinate sentence of ten years or longer, or an indeterminate sentence of life imprisonment or detention at Her Majesty's pleasure. About 1100 men were

serving such sentences in English and Welsh prisons on the 31st December, 1968. From this population the sample of subjects were chosen, excluding those of foreign nationality to avoid problems of communication.

The subjects were chosen on the basis of the variables initially available from Home Office central records, namely age, type of offence and type of sentence, date of reception and expected release date, where applicable. To expedite the longitudinal study, the sample of men serving determinate sentences was chosen from those whose expected date of release fell beyond the planned date of second testing. Men serving indeterminate sentences do not, of course, have any expected date of release in this sense, and can be released at any time. The main sample (200)was chosen to fill four groups of 50, each group comprising men received during 1961-62, 1963-64, 1965-66 and 1967-68, so that the mean length of current sentence served in the four groups on the 31st December, 1968 was approximately 1, 3, 5 and 7 years. Ideally, all four groups would have been matched for age, type of offence and type of sentence. However for the 1961-62 group it was impossible to match for type of offence. To be more specific, all groups were matched for age, so that there were insignificant differences between the means, and all groups were composed of 25 men serving determinate sentences and 25 men serving indeterminate sentences. Furthermore, for the 1963-64, 1965-66 and 1967-68 groups, the 25 determinates in each group were composed of 10 men sentenced for offences of violence (usually in connection with a robbery), 5 men sentenced for sexual crimes (all types) and the remaining 10 sentenced for property offences (including such crimes as fraud, non-violent robbery and spying). It was not possible to match the 1961-1962 determinate group in this way because of lack of numbers. The indeterminates in each group were almost entirely men sentenced for murder.

It was decided to include a further sample of men sentenced during and prior to 1960, as these men had served very long periods of imprisonment. Of course, numbers again were such that there was no possibility of matching

these men to other groups, but eventually 17 such men were seen and tested. In addition, during the course of testing in the various prisons, when the project had become known within the system, a further eight men volunteered their services. Although these men had no place in the design, it had previously been decided to accept any such offers from long - term men on the basis that a refusal of their offer might arouse suspicion. To elucidate this point, it must be appreciated that prisons are fertile breeding ground for rumour and suspicion and it was necessary, from the outset, to assure the men that the experimenters had chosen the subjects themselves on a random basis. The most popular misconception, which had to be quickly corrected whenever it arose, was that the men involved in the project had been chosen by the Home Office on some ulterior motive. A related misconception was that individual results would be passed over to the prison authorities or the Home Office and again it was necessary at all times to assure the men involved that this would never happen. The excellent inter - prison communication would have ensured that any such suspicions would have been quickly circulated and the study brought to a halt through lack of subjects. This sort of consideration could never be far from the writer's mind, especially in the early stages of the project.

After the first testing of the entire sample, when the results of the cross - sectional analysis had been computed, it became clear that with very few exceptions, there was no consistent pattern to the results. At this point, however, further variables were available for examination. These had been considered to be of importance prior to testing and the information was gathered during testing from prisoners' records and from interviews. These variables will be examined in detail later, but one variable in particular was crucial because of its obvious relevance and its reliability, namely the amount of imprisonment served on previous sentences by the men in the sample. Our review of the literature yielded no findings that

would lead one to suppose that the cumulative effects of successive prison sentences are any less effective in producing changes than a single, longer prison sentence. Furthermore, while prisoners' records were incomplete in many respects (some more so than others), there was always a clear record of previous sentences, so that it was possible to compute quite precisely the actual amount of imprisonment served in all cases and therefore, taking the present sentence into account, the total amount of imprisonment previously served. The statistical assumption had been made that previous imprisonment would, on average, tend to be equal in each of the four groups of 50 men and that therefore, total imprisonment would be distributed similarly to present imprisonment. Table 1 shows that this assumption was not justified. In fact there was no

Table 1

Distribution of Total Imprisonment on Initial Design

Group	1961-62	1963-64	1965-66	1967-68
n	50	50	50	50
Mean Imp. (yrs)	10·14	8·12	5·87	5·56
s.d.	4·98	5·57	4·21	6·70

significant difference between the 1961-62 and 1963-64 groups nor between the 1965-66 and 1967-68 groups in terms of total imprisonment (t - test n.s.). It was therefore decided to reorganize the study in terms of total imprisonment served. The design remained essentially the same, the experimental variable now being total imprisonment instead of imprisonment served on present sentence. Four new groups were formed by quartile division of the original sample (including the pre 1960 group) in terms of total imprisonment, although to retain parity of age means, Group 4 (the new groups were numbered 1-4, Group 4 having served longest) had to be reduced in number to 25, compared with 50 in each of

Groups 1,2 and 3. This was necessary since one generally has to be older to have served longer in prison. The new arrangement meant that it was no longer feasible to match the groups for type of offence (the total population from which the new groups were formed was now 217 compared to the 1100 from which the old groups were chosen) but it was possible, for Groups 1, 2 and 3 to have a similar distribution of type of sentence. This could not be done for Group 4. Table 2 sets out these details more precisely.

Table 2

Composition of the Revised Cross-sectional Sample

Group	1	2	3	4
n	50	50	50	25
Range of total imp.	0-3yr.11mth.	4-5yr.11mth.	6-8yr.8mth.	8yr. 9mth.-40yr.
Total imp.: mean (yrs.)*	2.47	4.94	6.99	11.29
Total imp.: s.d.	0.83	0.62	0.77	2.41
Age: mean**	32.6	34.8	35.2	35.2
Age: s.d.	7.9	10.4	9.9	3.7
Determinate sentences	20	21	17	17
Indeterminate sentences	30	29	33	8
Violent offenders	11	7	9	14
Sexual offenders	5	4	1	2
Property offenders	5	10	7	1

* all differences significant beyond the .001 level

** age measured at 31/12/1969, no significant differences between any groups

A serious criticism that could be levelled at the cross-sectional study is that any cross-sectional trends found are due merely to the effects of

release selection procedures (parole), which might ensure that the ' best' people are released so that eventually a 'hard-core' criminal element is left. This problem has been tackled in the following manner; on retesting the inmates after an interval (mean 19.08 months), it was found that 34 men had been released on parole, and, on further investigation, that 134 men had been eligible and considered for parole, but had not been released. It was therefore decided to compare the results of 'releasees' (men who had been paroled) with those of 'detainees' (men who were eligible for parole but had not been paroled). To this end, a group of 84 men was chosen from the 134 unsuccessful parole candidates which matched the group of 34 parolees for age and type of sentence(parole selection procedures vary according to type of sentence). Cross-sectional trends will therefore be discussed in the light of this comparison, which will enable us to determine more clearly whether any trends found are due to the effects of imprisonment or to the effects of parole procedures. Table 3 gives details of the composition of the samples of releasees and detainees.

Table 3

Composition of the Samples of Releasees and Detainees

		Detainees	Releasees
n		84	36
Age (31/12/69)	mean	39.40	38.81
	s.d.	8.55	10.61
% Indeterminates		35.70	36.10
% Determinates		64.30	63.90
Total imp. served (yrs.)	mean	10.21	9.15
	s.d.	6.58	6.01
Imp. served on present sentence	mean	5.89	6.19
	s.d.	3.27	1.76

The Comparison Group

A comparison group was included in the study to allow a comparison to be made between the differences found in the longitudinal study of prisoners and the differences found in a longitudinal study of free men living and working in society at large. It was necessary, for obvious administrative and practical reasons, to find a source of male subjects who (a) were local (b) were engaged in some form of activity which could withstand temporary interruption (c) had some point of focus to facilitate testing and (d) could reasonably be expected to be available for the second round of testing, after the longitudinal interval.

The comparison group was, in fact, for the above reasons, drawn from two sources. First, from Forestry Commission men working in some of the Northumberland Forestry villages, and second, from men serving in a local (Durham) company of the Territorial and Army Volunteer Reserve (T.A.V.R.) The T.A.V.R. men represented a good cross-section of the population and therefore presented no problems in terms of selecting a sample. From the Forestry Commission men, it was decided to chose members of the comparison group from those men not actually operating power saws. Power saw workers are known to be prone to a disorder which the Industrial Injuries Advisory Council (H.M.S.O. 1970) call "vibration - induced white fingers", and in view of this and bearing in mind that there may be as yet unknown psychological concomitants of this disorder, it was decided to omit power saw operators from the comparison group. This group was further trimmed to yield a sample of similar mean age to the prison groups. The final group tested twice numbered 30, having a mean age of 34·70, s.d. 9·80. The test - retest interval for controls was an average of 17·75 months compared to 19·08 months for the prison group. The many circumstances attendant upon the execution of the second testing session, in both cases, made it impossible to synchronise the intervals exactly.

General Procedure

Cooperation on the part of the inmates was an essential part of the success of this study. Indeed, several studies have foundered on this very problem. All the men who took part in the study did so voluntarily and it was essential, given that the subjects were drawn from a small population, that there should be as little wastage of subjects as possible. The initial intention was to ask one of the prison staff, for example, an assistant governor, to elicit the cooperation of the men picked for testing, and indeed the project started in this way. However, there was a worrying refusal rate in the initial period (about 33%) which, if it had continued, would have meant the exhaustion of the population in terms of finding suitably matched replacements. It was therefore decided to approach the men directly and this tactic, in fact, paid dividends, the refusal rate dropping to almost nil. The writer feels that this is a reflection of the difficulties under which prison staff so often have to work, where there is a tendency, on the part of the inmates, to attach sinister motives to their actions. Future researchers should take this point seriously. The experimenters, in approaching subjects, stated that they were from Durham University and that they were researching into the effects of long-term imprisonment. The independent nature of the study was emphasised at all points and each man was assured that no individual results would be passed on to the prison authorities. At the end of this introduction, the man was asked if he would take part. Care was taken that each man was adressed and treated respectfully throughout their association with the study although relationships often evolved in a friendly, informal and jocular manner. This sort of approach is particularly effective in this situation where numbers alone ensure a considerable degree or impersonality between staff and inmates.

Tests and Administration

The actual testing on the personality and attitude questionnaires was carried out in groups of various sizes according to the accomodation

available, the number of men to be tested in a particular prison, the ease of assembling men and so forth. Occasionally, it was necessary to test people individually. The cognitive tests of the second part of the study were carried out within a few days. The tests used are listed below, the order of listing reflecting the order of presentation to subjects.

(1) A semantic differential attitude test, measuring attitudes to five concepts which relate directly to the prisoners' situation (Prison Officers, The Law, Prison, Prisoners and Police) and to seven concepts judged to be of general importance (Home, Mother, Father, Work, Myself, Women and Marriage).

(2) The Eysenck Personality Inventory (EPI), Form B (Eysenck & Eysenck, 1964), which comprises scales measuring the dimensions of extraversion - introversion (E) and neuroticism - stability (N) as well as a lie scale (L).

(3) The Sixteen Personality Factor Questionnaire (16 P.F.), Form B (Cattell and Eber, 1964). The sixteen factors measured by this test are listed in the results section.

(Form B versions were used for both the EPI and 16 P.F. since, in both cases, Form A is widely used by the Prison Psychological Service)

(4) The Hostility and Direction of Hostility Questionnaire (H.D.H.Q.) (Caine, Foulds and Hope 1967). This test samples a number of manifestations of aggression and hostility.

(5) A 58 - item femininity scale (Gough, 1952).

We shall now look at these tests in more detail.

The Semantic Differential

The semantic differential test evolved from the theory of meaning put forward by Osgood (1952), Osgood and Suci (1955) and Osgood, Suci and Tannenbaum (1957) Their theory may be seen as an attempt to clarify and make more explicit the behavioural nature of Morris' (1946) theory. The central issue of the theory is, of course, semantic meaning, defined by Morris as the relation of signs to their significates (the word "hammer" in relation to the

object hammer). Osgood, Suci and Tannenbaum (1957) state this as follows " A pattern of stimulation which is not the significate is a sign of that significate if it evokes in the organism a mediating process, this process (a) being same fractional part of the total behaviour elicited by the significate and (b) producing responses which would not occur without the previous contiguity of non - significate and significate patterns of stimulation ". (P.7).

According to Osgood, Suci and Tannenbaum, the meanings which different individuals have for the same signs will vary to the extent that their behaviour towards the things have varied. This is because the composition of the representational process - the meaning of the sign - is entirely dependent upon the nature of the total behaviour occuring while the sign is being established. Given the essential sameness of human organisms and the stability of physical laws, most primary perceptual signs should be quite constant across individuals (e.g. "apple"). Given the stability of learning experiences within a particular culture, also, the meanings of most common verbal signs will be highly similar (e.g. the adjective "sweet"). On the other hand, the meanings of many signs will reflect the idiosyncrasies of individual experience (e.g."Father" , "Mother").

It is at this point that the principles of the semantic differential come into perspective. Osgood, Suci and Tannenbaum found that when finding out the meanings of things to various people, requested introspection of an unrestricted nature is fine (and as valid as most other test situations) for highly intelligent and verbally fluent subjects but less fluent subjects find it difficult to encode meanings spontaneously. However when dimensions which had not occured to them are suggested, these people can also make judgements quickly and confidently. The semantic differential provides a method whereby this can be achieved. Osgood, Suci and Tannenbaum, in the formulation of the test, noted three prerequisites (i) a carefully devised sample of alternative verbal responses which can be standardised across subjects (ii) these

alternatives to be elicited from subjects rather than emitted so that encoding fluency is eliminated as a variable and (iii) these alternatives to be representative of the way in which meanings vary. To increase the sensitivity of the instrument, a scale is inserted between each pair of terms so that the subject can indicate both the direction and intensity of each judgement.

Prerequisite (iii) is, of course, critical. The authors repeatedly factor analysed the responses of various subjects to various concepts and these analyses consistently yielded three predominant factors which they termed Evaluative (on which a scale like "good - bad" loads highly), Activity (e.g. "fast - slow") and Potency (e.g. "soft - hard"). A strong feature of the semantic differential is that a test can readily be constructed simply by choosing scales appropriate to the concept from the lists presented by Osgood, Suci and Tannenbaum. Furthermore, many people use the semantic differential purely as an attitude test by using only evaluative scales (e.g. Triandis and Fishbein, 1963).

In the present study, the semantic differential was compiled in the normal way. Thirteen seven - point scales, chosen from the tables presented by Osgood et al., formed the basis of the test for all concepts. Nine scales were selected as having high loadings on the evaluative dimension. These were "good - bad", "successful - unsuccessful", "pleasant - unpleasant", "clean - dirty", "happy - sad","important - unimportant", "kind - cruel","wise - foolish" and "fair - unfair". Two scales were selected for the same reason from the potency dimension, "strong - weak" and "soft - hard" and two from the activity dimension, "active - passive" and "fast - slow". Some concepts had one extra scale included where an appropriate scale was felt to be possible value in these cases. The concepts to be evaluated were chosen to fall into two broad categories, five relating directly to the prisoners' situation (Prison Officers, The Law, Prison, Prisoners and The Police) and seven being of general importance (Home, Mother, Father, Work, Myself, Women and Marriage). The complete test as presented to the subjects is shown in the appendix.

The main problem with the semantic differential, particularly as an attitude test, is one of concept - scale interaction, whereby scales (particularly evaluative scales) can assume different meaning in the context of different concepts. Osgood et al. (1957) recognised this phenomenom and subsequent research has confirmed it (e.g. Triandis, 1960 : Heise, 1969 : Presley, 1969 : Kubiniec and Farr, 1971.) . In view of this work, it was felt that the test could not be scored in the traditional way. Therefore Varimax rotations of principal components analyses of the scale scores obtained for each concept were carried out on a random sample of 50 subjects in the sample, using the program FTAN (Youngman, 1971). There was no consistent incidence of either potency or activity factors in the concepts analysed and no clearly defined potency or activity factors emerged in more than one or two individual concept analyses. For this reason it was decided to consider only the evaluative factors resulting from the analyses. Each concept had either two or three evaluative factors, reflecting different shades of evaluative meaning. It was decided to sum these different aspects into one evaluative score for each concept, thus avoiding the problem of defining some of the more abstruse shades of meaning and gaining in inter - concept comparability. This was achieved as follows : for every concept, the percentage of variance attributable to each evaluative factor was computed and the factor loadings of each variable (i.e. scale) on that factor were noted. It was decided that for this data, the best compromise between under - and over - inclusiveness could be reached by specifying a factor loading of 0·60 below which scales would not be considered to be sufficiently significant in a given factor to warrant their inclusion in the calculation of test scores. The significant scales having thus been chosen for each concept, their respective weightings were calculated by multiplying the factor loading of the scale on a given factor by the percentage of variance attributable to the factor. Where a scale loaded significantly on more than one factor, a weighting was calculated for each factor and the

resultant weightings were added to yield a total weighting for that scale on the concept concerned. The test was then scored using these scale weightings. This method meets the requirements outlined by Presley (1969) for the valid measurement of semantic differential responses.

The question of validity does not, of course, have quite the same significance for attitude questionnaires as for other types of test. Attitudes are usually readily accessible and face validity is therefore usually taken as satisfactory. Even if this were not the case, the fact that there is no necessary relationship between attitudes and overt behaviour, and the fact that attitudes can change relatively quickly pose problems for the establishment of validity and reliability. However, one or two studies have contrived to produce such quotients and the results have been surprisingly good. Osgood et al. (1957) and Jenkins, Russell and Suci (1957) report test-retest reliability quotients of between 0·83 and 0·91. Marais (1967) using lecture attendance and examination results as validatinn criteria of semantic differential responses to the concept Psychology, found that product - moment correlations were almost significant ($p < \cdot 10$) which the author felt was an encouraging result in view of the many determinants of behaviour besides attitudes. Marais also found a test - retest correlation coefficient of 0·58 ($n = 44$, 3 week interval) which, surprisingly, he felt was somewhat low.

Several other salient points arise in connection with the usefulness of the instrument. Osgood constructed his test in such a way that less intelligent subjects could effectively make use of dimensions which had not occured to them. However, there are differences between the use made of semantic space (in terms of seven - point scale) and intelligence, as studies by Kerrick (1956) and Light, Zax and Gardiner (1965) have shown although other studies, for example by Neuringer (1963) and Brod, Kernoff and Terwilliger (1964) have found no relationship. Stricker and Zax (1966) have suggested that these contradictions can be resolved with some attention to sample, size, age of

subjects, stimulus condition and the response measures utilized.

An equally important issue in this study is the question of factor structure stability across subject and time. Osgood et al. (1957) report minimal subject - scale interaction although Triandis (1960), for example, found that certain factors obtained from factor analysis of manager responses differed from those obtained from workers. More recently, however, Tanaka and Osgood (1965) investigated cross-culture, cross-concept and cross-subject variability in factor structure and found a high consistency across the subjects' meaning systems and an even higher consistency within each subject group. Stricker, Takahashi and Zax (1967) found cross-cultural stability in the methods of utilizing semantic space and their findings support the semantic differential technique as a method of comparing meaning in variety of quite different groups. A recent study by Rosenbaum, Rosenbaum and McGinnies (1971) revealed that the factor structures of the ratings of political concepts by supporters of President Johnson and Senator Goldwater were relatively uninfluenced by either subject differences or by time differences (during which the election took place). Clearly, it is of importance for this study that subject and time differences should exert a minimal influence on the results.

In summary, therefore, in view of the satisfactory background of the semantic differential as a measure of attitudes, particularly with regard to subject and time differences and in the view of the care which has been taken to ensure that the test is maximally valid for the particular subjects of this study, it would seem reasonable to feel confident in the results emanating from the test.

The Eysenck Personality Inventory

The Eysenck Personality Inventory (Eysenck and Eysenck, 1964) is a development of the Maudsley Personality Inventory (Eysenck, 1959) which measures the two personality dimensions of extraversion and neuroticism. It

differs from the M. P. I. mainly in that it is less difficult to understand, it no longer has the small but significant correlation between extraversion and neuroticism which was a feature of the earlier test, it includes a lie scale which may be used to eliminate subjects showing "desirability response set", and it has two parallel forms.

The test is factor - analytically derived but linked to Eysenck's theory of learning and personality (Eysenck, 1957, 1960), central to which is the concept of reactive inhibition, taken from Hullian learning theory. However, Eysenck regards Hull's notion of inhibition as related to the amount of "work" involved in a task as misguided and favours the Pavlovian concept of inhibition as a central feature of the nervous system. Like Hull, he assigns drive functions to inhibition. In particular, however, he postulated personality correlates which link up with conditionability, especially extraversion - introversion. Eysenck's concept of this dimension basically resembles that of Jung who described introverts as subjective in orientation, primarily interested in ideas, imagination and inner life, tender-minded and idealistic. Extraverts, on the other hand, are seen as outward and objective in orientation, primarily interested in social and practical affairs, tough-minded and realistic. He contends that there is a close relationship between the personality dimension of introversion - extraversion and the process of excitation and inhibition, namely that a high degree of extraversion is found in people whose inhibitory processes occur quickly, strongly and persistently and whose excitatory processes occur slowly, weakly and non-persistently; a high degree of introversion is found in people of whom the converse is ture. He predicts, therefore, that introverts would form conditioned responses more quickly, more strongly and more lastingly than would extraverted people. Furthermore, Eysenck argues that during periods of emotional instability, extraverts develop symptoms of the hysterical type while introverts develop dysthymic disorders (anxiety, depression, compulsive behaviour etc.). Position along the extraversion dimension is determined,

according to Eysenck, by characteristic properties of the central nervous system, namely the prevailing balance between excitatory and inhibitory processes within the cortex.

Neuroticism, in Eysenck's theory, is rather vaguely equated with anxiety, which he sees as largely dependent upon the relative lability or excitability of the autonomic nervous system. He suggests that just as intelligence may be considered a general factor in the cognitive area and extraversion a general factor in the emotional area, so neuroticism may be considered a general factor in the area of motivation or striving. Thus, Eysenck believes that, in part, at least, neuroticism may be considered to represent a defect of the will or of the capacity to persist in motivated behaviour. The generality of Eysenck's dimensions is supported by the work of Cattell, who has developed a multi - factorial theory of personality from which he has derived two main second - order factors (Cattell, 1957) which resemble Eysenck's two dimensions.

A critique of Eysenck's theory is beyond the scope of this study. Rather, we shall concentrate on examining some of the studies which have attested to the usefulness of the measuring instruments which have derived from the theory. Eysenck and Eysenck (1964) quote reliability quotients for the E-scale and the N-scale of the order of 0·8 and above, using two groups of normal subjects, with test - retest intervals of twelve months and nine months. Split - half reliability (Form A vs. Form B) is quoted to be in the region of 0·8 also. Eysenck and Eysenck (1970) have suggested that imprisonment may change responses to personality inventory items in unpredictable ways. This statement, seemed to be more of an excuse for the failure of their results to match the predictions of their theory with respect to criminals, than a concrete observation based on their data. For Le Unes and Christenson (1970), working with American convicts, have reported test - retest reliability coefficients (one - week interval) of 0·82 for E (identical to Eysenck's figure for normals) and 0·73 for N (compared to Eysenck's 0·84). This is especially interesting since Eysenck and Eysenck

adressed their remarks particularly to the E-scale. In view of these findings, it would seem that the E.P.I. scales are reliable, even with criminal subjects.

In a review of the M.P.I. , Bolton and Savage (1966) found that the concensus of studies using the test at that time offered limited support for Eysenck's theories. However, they regarded the M.P.I. as a valuable and speedy measure of extraversion and neuroticism and a useful research tool. In view of the close similarity between the E.P.I. and the M.P.I.,we may assume that these latter remarks also apply to the E.P.I. Furthermore, using the method of nominated groups, Eysenck (1962) and Eysenck and Eysenck (1963 b) have, on a number of occasions, shown a clear and predictable correspondence between the ratings of subjects by independent judges and the scores of subjects on the E.P.I. That is to say that individuals who impress others as being extraverted or neurotic in their behaviour, answered the E.P.I. in a corresponding manner. Comparing self - ratings of extraversion and neuroticism by 243 general psychology students with their E.P.I. scores, Harrison and McLaughlin (1969) found correlations of 0·72 for extraversion and 0·56 for neuroticism. Similarly, Vingoe (1966) found a clear correspondence between self - ratings of extraversion and scores on the E.P.I. Extraversion scale. More recently, Platt, Pomeranz and Eisenman (1971) have demonstrated the construct validity of the E.P.I. by comparing it with measures on the M.M.P.I. and with Rotter's Internal - External Control Scale.

White et al. (1968) , using students' ratings of each other (method of paired comparisons) and utilizing various indices of social behaviour, found the Extraversion scale tobe a valid measure of sccial behaviour. Evidence was also found, in this study, for the construct validity of the E.P.I., by comparing two groups of extreme scoring females; extraverts reported having broken more rules more frequently than introverts and expressed more permissive attitudes towards rule breaking.

Knowles and Kreitman (1965) report a study of a group of psychiatric

patients who were given the E.P.I. before and after one month of treatment during which their clinical condition improved substantially. Their Extraversion scores remained stable but their Neuroticism scores decreased in line with their clinical state. Studies of normals do not report this phenomenon. This evidence of sensitivity of the Neuroticism scale is similar to what Knowles (1960) had found with the M.P.I. Neuroticism scale.

As we saw in chapter I, Eysenck's tests have been used with some success on prisoners, although his theory of criminality has run into some difficulty. This may well be attributable to the fact that many studies have suffered from a lack of control of possibly important variables. This oversight is best exemplified by Eysenck himself who, as noted above, observes that imprisonment may change responses to personality inventory items and yet has not attempted to control for this variable in any of his studies. A more rigorous approach may yet yield support for Eysenck's theory in this field.

In summary, therefore, while the underlying theory of the E.P.I. is controversial, its usefulness as a research tool is undeniable. The validity of the two scales of the test has been well established and, in particular, it would seem to be a sensitive measure of extraversion and neuroticism.

The Sixteen Personality Factor Questionnaire

Cattell's theory of personality, like that of Eysenck, is also factor - analytically based Eysenck and Eysenck (1964) describe Cattell's theory as "the major alternative scheme" (P.6) and the two theories do, in fact, share some markedly similar features. The main difference lies in the degree of description and explanation which the respective authors have chosen as their working level. Eysenck sees normal personality as essentially definable in terms of extraversion and neuroticism. Cattell prefers a more detailed analysis(Cattell, Eber and Tatsuoka, 1970). Both have made substantial use of factor analysis in the evolution

of their theories and respective measuring instruments, and it is significant to note that Cattell's second - order analysis reduces his sixteen primary factors to two major second - order factors and six minor ones. The major second - order factors are invia - exvia and adjustment - anxiety, the former being similar to extraversion, although Cattell (1957) stresses the importance of social inhibition in its structure, rather than Eysenck's notion of general inhibition; adjustment - anxiety is similar to Eysenck's concept of neuroticism although Cattell interprets it in terms of classical psychoanalytic theory.

The issue of the reliability of the 16 P.F. is somewhat clouded by the question of the stability of the traits themselves. Traits are liable to real change (in a trend, through learning or maturation) and to state change (which is reversible). Cattell, Eber and Tatsuoka (1970) have produced tables from various sources showing "dependability coefficients" (test - retest interval of 4-7 days during which short interlude it is assumed that the people themselves have not changed) for Form B of the 16 P.F. of an average of 0·7 and above for all but three of the sixteen traits. Other tables show that this drops considerably with time. Of course it must be remembered that a totally reliable personality measuring instrument is also probably totally insensitive and therefore useless. People do change with time and, using the multi-factorial level of analysis employed by Cattell, one must expect less "reliability" than more simplistic structures provide. However the study by Le Unes and Christensen (1970) found that the reliability (dependability) coefficients for inmates (N = 59) were higher than for a group of students (N = 200) on 11 of the 16 factors. This would seem to agree with the remarks already made about trait - stability, since presumably more significant events occurred in the lives of the students during the one - week interval than was the case for the prisoners. It is also encouraging in that it shows that the reliability of inmate test results is not necessarily suspect.

Cattell's test is constructed in such a way that although items correlate

with their respective factors, by and large they do not correlate with each other, so that the question of homogeneity is not only irrelevant, it is, in Cattell's eyes, disadvantageous (see Cattell and Tsujioka, 1964) since a lack of homogeneity confers benefits in terms of the transferability of the test, i.e. its consistency when applied to different populations. Some of the evidence which Cattell presents for the validity of the 16 P.F. is in the form of correlation coefficients between the particular scales and the pure factors with which they are supposed to load. While these are encouragingly high (13 of the 16 Form B scales load at •6 and above), they are only acceptable as indications of validity to those who accept the factor - analytic method. Similarly, to the unconverted, his method of comparing true factor intercorrelations with factor scale intercorrelations is not convincing in view of its circularity, although these also yield very high correlations (in this method he correlates the respective correlations). Because of the strong empirical base of Cattell's approach, it is not possible to test predictions from predetermined tenets, as in the case with Eysenck's theory. Logically, this is not a weakness, and, indeed, Cattell would argue that it is a strength since, in principle, no bias comes to bear in the process of evolving the system of personality dynamics.

The principal indications of the validity of the 16 P.F. are to be found in the breadth of the area of personality responses sampled in the 25 years of research on the basic 16 P.F. structure (Cattell, 1946, 1947, 1950, 1956a, 1956b, 1956c : Cattell and Gruen , 1954) which have repeatedly confirmed the structure and underlined the real psychological unity of the traits. The universality of the factor structure has been attested to by studies using the 16 P.F. in a large number of other countries (e.g. Cattell, Pichot and Rennes, 1961 : Cattell and Nesselroade, 1965). Finally, there are an impressive number of studies which have found the 16 P.F. to successfully differentiate various clinical, criminological and normal groups (e.g. Gleser and Gottschalk, 1967 : Cattell , Kombos and Tatro, 19668 : Dornan and Harlan, 1968 : Townes and Wagner, 1966 :

Cowden, Schroeder and Peterson, 1971 : Cowden, Pacht and Bodemer, 1970).

In short, the 16 P.F. provides us with a means of examining the personality of our subjects in detail. Its strength lies in the fact that it is empirically based and does not therefore offer any problems of theoretical bias in the choice of items used in the test. Furthermore, it has been successfully used in many areas of research for a great number of years.

The Hostility and Direction of Hostility Questionnaire

The Hostility and Direction of Hostility Questionnaire "is designed to sample a wide, though not exhaustive, range of possible manifestations of aggression, hostility or punitiveness." (Caine, Foulds and Hope, 1967, p.5). The rationale behind the test is that drives may be displaced, sublimated and so forth and therefore manifest themselves in a number of apparently disjunctive ways. This view of the drive mechanism is consistent both with psychoanalytic theory and clinical observation, but cannot be measured by the traditional method which stresses the importance of unidimensionality and therefore eliminates tests which have low correlations with the criterion. In this sense the H.D.H.Q. is similar to the 16 P.F. The origins of the test lie in the development of Foulds' (1965) theory of personality and personal illness whereby punitiveness is seen as a possible means of assessing personal illness. Personal illness is seen as a continuum of increasing degrees of failure to maintain or establish mutual personal relationships. By this token, therefore, the more people are able to empathise with others, the more successful they are likely to be in establishing mutual relationships, and the less likely they are, even under stress to resort to blaming themselves or others.

The test, in its original form, was called the Extrapunitive and Intropunitive Scales (Foulds, Caine and Creasy, 1963, Hope, 1963). Foulds assumed that hostility was a unitary entity which could be directed inward on the self or

outwards against other people or objects and he employed the terms "intropunitive" and"extropunitive", first used by Rosenzweig (1934) to denote these directions. Five subscales were devised,(using items borrowed from the Minnesota Multiphasic Personality Inventory), three of which, Acting - out Hostility (A.H.) Criticism of Others (C.O.) and Paranoid Hostility (P.H.) are measures of extrapunitivness and the remaining two, Self Criticism (S.C.) and Guilt (G.) , being measures of intropunitivness.

Hope (1963) tested the assumptions behind the test regarding the unitary nature of hostility and its direction inward or outward by calculating the principal components of a number of subtest correlation matrices. A similar component structure was found for both normals and neurotics, the first component being unipolar with all five subtests represented, while the second component contrasted the intropunitive and extrapunitive subtests.An exception to the predicted findings was that in the normal sample , Acting-out Hostility had a very small loading on the second component, and in the light of this finding, Hope reinterpreted this scale as "urge to act out hostility". Philip (1968) tested the constancy of the component structure of the H.D.H.Q. by comparing Hope's results, obtained in South-East England, with data from similar populations of normals and neurotics in North-East Scotland. The structure corresponded closely with that of Hope's groups but Philip's normals scored higher on Total Hostility and were more intropunitive in Direction of Hostility than English normals. Being unable to offer any obvious explanation for these differences, Philip therefore emphasises the need for caution in the use of normative data for this test.

The first component was validated by the method of criterion groups, whereby psychotics, neurotics and normals were in the expected descending order of Total Hostility. The difficulty with this method, of course, is that the criterion variable can be confounded with other correlated variables. It was possible to avoid this in the validation of the second component by subdividing

the groups of paranoids and melancholies into "selected" and"non-selected" categories ("selected" subjects having a "purer" history of their illness). Predictions turned out as expected with all groups except normals who turned out to be more extrapunitive than neurotics. This finding was subsequently confirmed by the authors of the test in further analyses.

Using the Symptom Sign Inventory to diagnose Character Disorder, Foulds (1967) found that character disorder patients scored almost two standard deviations higher than neurotics on Total Hostility, although they were not significantly different on Direction of Hostlity. Using the same diagnostic instrument, Foulds (1968) compared two groups of men, prisoners and non-psychotic psychiatric patients, and found that on Total Hostility, prison normals and neurotics scored higher than their hospital counterparts, while the two character disorder groups had almost identical scores. Vinoda (1966) administered the H.D.H.Q. to three groups of women hospital paients - a group of convalescent medical and surgical patients, a group of psychiatric in-patients and a group of in-patients who had been admitted to hospital following a suicide attempt. Both component scores differentiated the groups. On Total Hostility, the attempted suicides scored very highly, almost two standard deviation above the mean normals while the psychiatric in-patient group scored midway between the attempted suicides and normals. On Direction of Hostility, attempted suicides and psychiatric patients were significantly more intropunitive than normals but were not themselves significantly different. These studies illustrate both the validity and sensitivity of the H.D.H.Q.

In reviewing the development of the test, Philip (1969) suggests some possible ways of improving it, for example, by rewording ambiguous questions and proposes a possible alternative interpretation of intropunitiveness (in terms of personal disturbance) and extrapunitiveness. Overall, however, he considers that these considerations are secondary to the collation of data from the test in its present form.

Clearly, the H.D.H.Q. is not well-established as either the E.P.I. or the 16 P.F. in terms of the amount of research that has been conducted using it. However those studies that have used it indicate that it is both valid and useful. When this is considered in conjunction with the relevance of its measures for the particular subjects of this study, the case for its inclusion is clear.

The Gough Femininity Scale

In compiling his test of femininity, Gough (1952) set out to find items "which would show minimum face validity but maximum empirical validity, and which could be combined into a brief, easily administered, non-threatening and practically efficient scale" (p. 438). Briefly, high scorers tend to be gentle in manner, kind, nurturant, non-aggressive and deferent; low scorers tend to be robust, decisive and initiatory and tend to value action and see themselves as strong and vigorous.

The 58 items of the Femininity Scale were subsequently pruned to 38 when the scale was included in the California Psychological Inventory (Gough, 1957). This was done to shorten the test and remove those items which analyses had shown to be least diagnostic. Ideally, this study would have chosen the new version, but the unavailability of any copies of the test before the beginning of testing made it necessary to use the old 58-item test which Gough (1952) had published in full. This presents no real problem since Gough (1966) indicates that the correlation between the two tests is very high, being typically greater than or equal to ·95. Gough also comments that findings with one should hold for the other and therefore, since most of the studies quoted here concern the new version of the test, these can reasonably be assumed to compare with the 58-item version. The California Psychological Inventory addresses itself to "folk concepts", supposedly universal dimensions of

interpersonal behaviour which arise out of social interaction and which are, therefore to be found in all cultures. In accord with this general outlook, the Femininity (Fe) Scale reflects a theory of role gender along a dimension of initiation to conservation (Gough, 1968). In pursuance of the claims, much of the data on the C.P.I. is, in fact, cross-culturally derived.

Gough (1952) reports consistent sex differences in the expected direction with a number of high school and college samples. He was also concerned that his test should differentiate sexual deviates from normals and he presents data indicating this ability in a study of 38 homosexual reformatory inmates and 38 other inmates, matched for age, education and IQ, but not known to have such sexual problems. For reasons which need not concern us here, only 32 items of the 58 were used in this study, but there were clear and significant differences between the two groups in the expected direction.

Supportive data for the sex difference in scores has come from many American studies (e.g. Vaught and Rosenbaum, 1966; Rosenberg and Sutton-Smith, 1968: Gough, 1968). McCarthy et al. (1970), comparing for masculinity-femininity indices, namely the M-F scoring of the Franck Drawing Completion Test, the Mf scale of the M.M.P.I., the W.A.I.S. M-F Index and the C.P.I. Fe scale, found the C.P.I. scale to differentiate males and females clearest in terms of personality. Although the W.A.I.S. M-F Index yielded a slightly higher t-ratio between the sexes, it did not correlate at all with the other three indices and the authors considered it not to be a personality measure at all.

Using the Fe scale as a measure of "manifest" femininity, Miller and Swanson (1960) confirmed several hypotheses concerning inbalances between latent and manifest expressions of hostility. Their work was followed by a series of investigations by Lansky (cf. Lansky , 1962) who stressed the concepts of "conscious" and "unconscious" femininity or role occupancy. Studies of sex-typing and identification have also successfully utilised the Fe scale (e.g. Mussen, 1961: von der Lippe, 1965). Gough (1966) cites a study which shows the

scale's ability to differentiate successfully and validly within same-sex samples. In this study, peer ratings were correlated with Fe scores and the coefficients derived were -·48 for males (femininity is scored positively) and ·38 for females, both significant.

The theoretical aspect of the Fe scale seems particularly well founded in view of the number of studies which have provided cross-cultural validation of the test. Gough (1966) cites studies in the United States, France, Italy, Norway, Turkey and Venezuela, all of which differentiated the sexes beyond the ·001 level. The highest average for males (Turkey, 18·17) was more than three points below the lowest average for females (Norway, 21·48). In addition, all six averages for men fall within a two point range and the six averages for women are also clustered within a two-point range. Gough considers that this may make possible the interpretation of absolute as well as relative values. Gough and Chun (1968) have even validated the Fe scale in Korea, although the level of efficiency was (not surprisingly) lower than in the other studies quoted here. Most recently, Levin and Karni (1971) have validated the scale in Israel and found highly significant differences, the validity of the scale in Israel being next to the United States.

The inevitable conclusion that one is drawn to with this test is that it is a valid measure of femininity. The range of subjects with whom it has been successfully used is impressive and the evidence of its ability to differentiate within same-sex samples is particularly encouraging in the context of the present study.

Summary

The choice of this battery of tests was guided by two main considerations. The first was that as far as possible, any line of research that the literature indicated might be of importance should be investigated.

The second consideration, which is related to the first, was that in view of the relative paucity of studies in this area, particularly studies bearing very directly on the problem in hand, as wide a range of personality characteristics as possible should be examined. It is hoped that the present battery fulfills these requirements in a way which leaves minimal room for contention on the issue of validity and reliability of the tests themselves.

Social and Criminological Variables

In the course of travelling to various prisons to interview and test subjects, the opportunity to inspect subjects' prison files presented itself. It was, of course, from this source that the initially unavailable information on previous imprisonment was obtained. It was decided to record information on various aspects of the prisoners' social and criminal background which was available in the prisoners' records held at the institution in which they were resident.

As is generally acknowledged, the information on prisoners' files is often rather scanty; for instance, the Radzinowicz Report remarks, in talking of an analysis of the records of some serious offenders, that "for various reasons, notably the unevenness of the amount of information contained in the records themselves, this study did not provide a fully comprehensive picture" (p.2). On occasion, where appropriate, information not available in the records was obtained in conversation with the subject. Bearing these factors in mind, the variables were divided into broad categories, precise figures only being used when records were relatively accurate. The variables are listed in these categories below. An explanatory comment accompanies each.

1 Social Variables

(j) Marital status at the beginning of current sentence. Either single

or married (including living with a common law wife).

(ii) Marital status at the time of testing

Classification as (i) above.

(iii) Number divorced during current sentence (in fact, the difference between (i) and (ii) in all cases).

(iv) Outside employment level before present conviction.

1. Labouring
2. Semi-skilled
3. Skilled
4. Vocational and professional

(v) Regularity of outside employment

1. Hardly ever worked
2. Worked semi-regularly
3. Worked regularly

2 Criminological Variables

a. Past Criminal History

(i) Age at first conviction (in whole years)

(ii) Total number of previous convictions (excluding minor motoring offences).

(iii) Seriousness of previous convictions

1. Petty thieving, etc.
2. Burglary, etc.
3. Serious housebreaking, minor violence, etc.
4. Sex, major violence, etc.

(iv) Total time spent in prison up to the beginning of the present sentence (to the nearest month, months expressed as a fraction of a year).

(v) Total time spent in prison, including the current sentence, up to the time of testing (to the nearest month, months expressed as a fraction of a year).

(vi) Sentences to Approved School or Borstal

0. Never
1. Once
2. More than once

b. Present Criminal Details

(i)** Rating of interest value of prison employment at time of testing

1. Uninteresting (e.g. cleaners)
2. Routine (e.g. tailors)
3. Interesting (including "blue" and "red bands"*, and training and educational courses)

* N.B. "Blue bands" and "red bands" are prisoners deemed suitable for special responsibilities and freedom of movement within the prison. Associated with this, their jobs are more interesting, as a rule. For example, they might escort visitors to various parts of the prison which are otherwise prohibited to prisoners.

(ii) Use made of prison educational facilities during present sentences

1. None
2. Limited
3. Average
4. Extensive

(iii) Extent of contact with outside life whilst in prison during present sentence (measured by numbers of visits and letters received from friends and relatives).

1. None
2. Limited
3. Good

** Variables double-asterisked are, of course, highly subjective and scores were arrived at by a combination of prisoners' views and the author's own impressions.

(iv) Use made of prison facilities in general (e.g. Sports, T.V., Library) during the current sentence.

1. None
2. Limited
3. Extensive

(v) Total number of petitions made to the Governor in the twelve months prior to testing.

(vi) Total number of offences committed in prison during the twelve months prior to testing.

(vii)** "Preferability" of the prison in which the subject was resident at time of testing.

Scored on a four-point scale, higher scores indicating less preferable prisons.

** Variables double-asterisked are, of course, highly subjective and scores were arrived at by a combination of prisoners' views and the author's own impressions.

CHAPTER THREE

The Cross-Sectional Analysis

PERSONALITY VARIABLES

Results

Table 4 presents the means and standard deviations of the personality variables for the four groups in the cross-sectional analysis and for the sample of releasees and detainees. T tests were carried out on this date, using the program CATT (Youngman, 1969).

TABLE 4

Personality Test Results - Means and Standard Deviations for the Cross-sectional Sample and Releasees & Detainees

Group		1	2	3	4	Det'ees	Rel'ees
N		50	50	50	25	84	36
Test							
E.P.I.	N (mean)	13.58	13.84	13.46	14.52	13.94	12.44
	(s.d.)	5.25	5.61	5.14	4.42	4.95	4.90
	E	14.14	13.46	14.00	12.16	13.10	14.22
		3.50	3.31	3.60	4.19	3.48	3.36
	L	1.78	1.88	1.94	1.52	1.83	2.14
		1.53	1.66	1.70	1.19	1.58	1.71
C.P.I. Masculinity-Femininity		26.92	27.46	26.88	26.64	27.02	27.64
		5.23	4.57	4.42	7.15	5.03	3.32

16 P.F. A (Sociability)	5.88	5.36	5.94	5.48	5.45	5.81
	1.80	1.45	1.68	1.73	1.59	2.10
B (Intelligence)	7.12	7.02	7.48	7.24	7.17	7.47
	2.11	2.15	1.93	1.67	2.02	1.89
C (Emotional Maturity)	4.04	3.18	3.68	3.16	3.19	4.19
	1.62	1.70	2.16	2.01	1.87	1.72
E (Dominance)	5.50	5.60	5.76	6.00	5.92	6.00
	2.04	1.88	2.06	2.40	2.21	2.16
F (Enthusiasm)	5.88	6.14	6.24	5.48	5.98	6.00
	2.34	1.98	2.14	1.73	1.96	2.10
G (Responsibility)	4.34	4.22	4.30	4.36	4.35	4.67
	1.93	1.96	2.11	1.98	1.63	2.16
H (Spontaneity)	4.60	4.30	4.54	4.00	4.20	4.97
	1.94	1.75	1.92	1.78	1.86	1.46
I (Sensitivity)	4.50	5.16	5.04	5.00	4.93	4.97
	1.47	1.91	2.13	1.94	1.99	2.13
L (Suspicion)	6.74	7.16	6.88	7.44	7.11	6.97
	1.87	2.01	2.05	2.29	2.11	2.18
M (Self-absorption)	5.74	6.46	6.34	6.40	6.35	6.08
	1.86	2.17	1.90	1.85	1.95	2.41
N (Sophistication)	5.58	5.30	5.12	4.72	5.07	5.72
	2.27	2.04	1.83	1.99	2.18	2.04
O (Worry-proneness)	6.30	6.54	5.98	6.40	6.58	5.83
	1.69	1.73	2.16	2.22	1.99	1.70
Q_1 (Radicalism)	5.26	5.42	5.54	4.92	5.61	5.69
	1.98	2.26	1.63	2.31	2.16	2.00
Q_2 (Self-sufficiency)	5.58	6.00	5.96	6.04	6.05	5.89
	1.76	1.68	1.74	2.03	1.80	1.77
Q_3 (Self-control)	5.48	5.18	5.30	4.92	5.21	5.69
	1.94	2.14	2.17	2.04	2.15	2.15

Q_4 (Tension)	6.36	6.94	6.32	6.96	6.79	6.44
	1.79	2.02	2.39	2.30	2.04	2.44
H.D.H.Q.						
AH (Acting-out Hostility)	5.11	5.54	5.84	6.40	5.87	5.28
	2.76	2.71	2.90	2.66	2.66	2.81
CO (Criticism of Others)	5.88	5.84	5.76	5.96	5.80	5.47
	2.77	2.96	2.43	2.84	2.71	2.69
PH (Paranoid Hostility)	2.34	2.22	2.22	2.08	2.42	1.94
	2.04	1.98	1.89	2.04	1.87	2.06
SC (Self-criticism)	4.52	4.82	4.56	5.52	4.81	4.19
	2.22	2.71	2.91	2.65	2.81	2.49
G (Guilt)	2.74	3.46	3.32	3.92	3.38	2.86
	1.72	2.01	1.93	1.98	1.80	1.76
TH (Total Hostility)	20.59	21.88	21.70	23.88	22.27	19.17
	7.75	8.66	9.13	7.26	7.79	9.44
EH (Extrapunitive Hostility)	13.32	13.60	13.53	14.44	14.08	12.69
	6.22	6.57	6.21	5.98	5.87	6.52
IH (Intropunitive Hostility)	11.78	13.10	12.44	14.96	13.00	11.25
	5.81	6.84	7.32	6.69	6.78	6.29
DH (Direction of Hostility)	- 1.86	- 0.50	- 1.38	+ 0.52	- 1.08	- 1.44
	7.17	8.19	6.83	9.15	8.04	6.63

The findings may be enumerated as follows:-

(i) Hostility, especially hostility directed towards the self, shows the most marked and consistent relationship with imprisonment. There are cross-sectional trends in H.D.H.Q. Guilt scores, Group 4 scoring significantly higher ($p < .02$) than Group 1, in Intropunitive Hostility (which reflects both Guilt and Self-Criticism), Group 4 scoring significantly higher ($p < .05$) than

Group 1, and in Acting-out and Total Hostility, although there are no significant differences between the groups on either of these measures.

(ii) All groups score significantly higher on H.D.H.Q. Total Hostility than a sample of normal males reported by Caine, Foulds and Hope (1967).

(iii) There is a trend of declining Extraversion, Group 4 scoring significantly lower ($p < .05$) than Group 1 on the E.P.I. E-Scale.

(iv) Releasees differ from detainees in scoring significantly higher on 16 P.F. Factor C (Emotional Maturity) ($p < .01$) and on 16 P.F. Factor H (Spontaneity) ($p < .02$) and in scoring significantly lower on Factor O (Worry-proneness) ($p < .05$).

Discussion

The most significant finding is that imprisonment appears to be associated with increasing levels of hostility, particularly hostility directed towards the self. Since releasees and detainees do not differ significantly on any of the measures of hostility (although releasees are generally slightly less hostile), there is no reason to believe that the increase is due to the operation of selection procedures for release rather than to the effects of imprisonment per se. It should be noted that all groups score significantly higher than a sample of normal males (combined N=31) reported by Caine, Foulds and Hope (1967), but the fact remains that there is a trend of increasing hostility with imprisonment. In particular, it is apposite to note that whereas Paranoid Hostility and Criticism of Others' scores remain constant (Paranoid Hostility actually declines slightly with imprisonment), Guilt and Intropunitive Hostility tend to increase. Acting-out Hostility also increases consistently, but not significantly, with imprisonment. McCorkle and Korn (1954) observed that "In many ways the inmate social system

may be viewed as providing a way of life which enables the inmate to avoid the devastating psychological effects of internalising and converting social rejection into self-rejection. In effect it permits the inmate to reject his rejectors rather than himself." (P.88) The results of the present study, however, suggest that the inmate rejects both his rejectors and himself. The observed tendency for imprisonment and introversion to be related is consistent with the interpretation.

The finding that extraversion, as measured by the E.P.I. E-Scale, declines with imprisonment, must be seen in the light of the fact that there is no significant difference between Group 1 and the normal population cited by Eysenck and Eysenck (1964), indeed, the means are almost identical (normal population mean 14.15, S.D. 3.92). There is no support, therefore, for theories which attribute greater extraversion to criminal groups. Furthermore, contrary to Schalling and Holmberg (1970) and Eysenck and Eysenck (1971), there is no evidence that prisoners are initially more impulsive than average, since Group 1 scored about average on Factor F (Enthusiasm) and below average on Factor H (Spontaneity), these factors being, in this interpretation, measures of impulsivity in Cattell's second-order factor of extraversion. It is somewhat difficult to state precisely the nature of the relationship between imprisonment and the two components of extraversion since there are only slight and non-significant tendencies. On the one hand, Factor E (Dominance) rises consistently, though non-significantly, with imprisonment and, on the other hand, Factor H (Spontaneity) scores are generally below average. Further studies are necessary to clarify these points. However, these studies must clearly take into account the operation of selection procedures for parole which, from these data at least, appear to differentiate between those detained and those released in that the latter score significantly higher ($p < .02$) on Factor H.

These results confirm those of earlier studies in demonstrating that prisoners are significantly more neurotic than the normal population,

e.g. Eysenck and Eysenck (1970), although neuroticism (E.P.I. N) does not show any consistent relationship with length of imprisonment. The results are also in accord with Cattell, Eber and Tatusoka's (1970) data in that all groups are below average on Factor G (Responsibility) and Factor C (Emotional Maturity), and above average on Factor O (Worry-proneness), but there is no support for the view that prisoners score below average on Factor Q_3 (Self-Control) and on Factor F (Enthusiasm). Furthermore, Cattell et al. found that Factor E (Dominance) was somewhat low, whereas this study finds that Dominance is about average in all groups, but that it tends to increase consistently, though non-significantly, with imprisonment.

As can be seen from Table 4, where trends have been mentioned, these are not usually absolutely consistent, although, taking a "line of best fit", the direction of change is quite clear. This would suggest that the psychological influence of imprisonment is selective, complex and undoubtedly subject to the influence of moderating variables. Some effort will be made to define the nature of these moderating variables in our subsequent analyses.

In summary, these results indicate the importance of taking length of accumulated imprisonment into account when assessing the personality of prisoners. Prisoners do not differ initially from the normal population in extraversion or impulsivity, but they are significantly more neurotic, hostile and "worry-prone" and have lower ego-strength (emotional maturity). Extraversion tends to decrease with increasing length of imprisonment although further studies are necessary to explore the problem of which components of this dimension are most affected by imprisonment. Most notable of all, perhaps, is the finding that hostility is positively associated with length of imprisonment, and since there are no significant differences between detainees and releasees on this dimension, one is led to the conclusion that imprisonment itself is responsible for this effect.

FACTOR ANALYSIS OF PERSONALITY VARIABLES

In addition to the straightforward cross-sectional analysis of the personality test scores, factor scores were assigned to individuals using the programs FTAN and FASC (Youngman, 1969). FTAN performs a principal components analysis and then Kaiser's Varimax rotation on the data. FASC uses the resultant factor matrix to assign factor scores to all subjects. These factor scores were then examined, as before, in a cross-sectional analysis of total-imprisonment groups. It should be noted, of course, that those variables which are a function of others (H.D.H.Q. Total Hostility, Extrapunitive Hostility, Intropunitive Hostility and Direction of Hostility) were omitted from the analysis since their inclusion would have yielded spurious correlations and factors.

Results

It was found, after some initial analyses, that five factors could meaningfully account for most of the variance. These factors are set out, in terms of their defining variables, in Table 5 below. A factor loading of 0.4 was arbitrarily selected as the point below which variables would not be considered in defining factors. The percentage of variance for which each factor accounts is also shown in brackets.

Table 6 shows the mean factor scores and standard deviations for the cross-sectional groups on the five factors. T-tests revealed no significant differences between the groups on any of the factors.

TABLE 5

Personality Factor Structure

Factor 1 (21.48%)		
H.D.H.Q.	Self Criticism	+ .81
E.P.1.	Neuroticism	+ .81
16 PF O	Worry-proneness	+ .77
16 PF Q_4	Tension	+ .75
H.D.H.Q.	Guilt	+ .75
16 PF C	Emotional Maturity	- .64
16 PF H	Spontaneity	- .63
16 PF Q_3	Self Control	- .61
Gough	Femininity	+ .44
16 PF Q_1	Radicalism	- .44

Factor 2 (12.02%)		
H.D.H.Q.	Criticism of Others	- .76
H.D.H.Q.	Paranoid Host.	- .72
16 PF L	Suspicion	- .72
H.D.H.Q.	Acting Out Host.	- .65
16 PF E	Dominance	- .44

Factor 3 (9.42%)		
E.P.1.	Extraversion	+ .74
16 PF F	Enthusiasm	+ .71
16 PF H	Spontaneity	+ .55
16 PF Q_2	Self-Sufficiency	- .50

Factor 4 (7.56%)		
16 PF N	Sophistication	+ .58
Gough	Femininity	+ .53
E.P.1.	Lie Scale	+ .53
16 PF I	Sensitivity	+ .51
16 PF Q_1	Radicalism	+ .41

Factor 5 (7.38%)

16 PF B	Intelligence	- .64
16 PF M	Self-Absorption	- .56
16 PF E	Dominance	- .55
E.P.1.	Lie Scale	+ .49

TABLE 6

Factor Scores x Groups

	Group 1	Group 2	Group 3	Group 4
Factor 1 M	- 0.39	0.63	0.87	1.64
S.D.	4.86	5.69	6.27	5.28
Factor 2	0.40	- 0.21	0.07	- 0.53
	3.39	3.13	3.53	3.62
Factor 3	0.35	- 0.33	0.33	- 0.68
	2.76	2.43	2.66	2.33
Factor 4	- 0.09	0.15	0.03	- 0.19
	2.27	1.81	2.01	1.85
Factor 5	0.27	- 0.03	- 0.19	- 0.11
	1.77	2.08	1.84	2.18

Discussion

It can be seen from Table 5 that the five factors account for approximately 58% of the total variance. The process of defining the essence of factors and naming them accordingly is inevitably idiosyncratic and heavily influenced by one's own experience both generally and in terms of the particular data with which one is dealing. I have called Factor 1 "Neurotic Intropunitive Hostility" because of its composition of variables reflecting these two aspects of personality. The fact that intropunitive hostility features strongly in the most important factor confirms the significance attached to it in the preceding section. Additionally, it is

clear that neuroticism or anxiety, as reflected in E.P.I. N, 16 P.F. Factor O and 16 P.F. Factor Q_4 is implicated as a significant dimension in individual differences in personality between prisoners in a way which the straightforward cross-sectional analysis did not reveal.

Factor 2 has been called "Extrapunitive Hostility" and Factor 3, "Extraversion," for obvious reasons. I have called Factor 4 "Sophistication" because of its component variables and because it is an aspect of personality of which one is aware in personal contact with long-term prisoners. The person high on this factor, in my estimation, would read widely and take an interest in current affairs both inside and outside prison; he would put forward unusual interpretations of events in conversation and would be sensitive to the impression he created with others.

Factor 5 was called "Shrewdness" for similar reasons to those supporting Factor 4. The person high on this factor would be a "manipulator", someone who tends to "know all the angles" and has the ability to achieve his desired goals.

Turning to Table 6, it can be seen that no consistent pattern between groups emerges except for Factor 1. There is a very consistent, although non-significant, rise in mean scores on this factor from Group 1 to Group 4. In view of the intropunitive hostility content of this factor, this provides some confirmation for the interpretation put on the data presented in the preceding section. However, neuroticism or anxiety also features very prominently in this factor, although it did not emerge as a significant variable in the cross-sectional analysis. What did emerge, however, is that, judging by the differences between releasees and detainees, the Parole Board tends to release people who are low on 16 P.F. Factor O and high on 16 P.F. Factor H, both variables being heavily loaded, in directions consonant with the above interpretation, on Factor 1. It would therefore follow that one would tend to expect to see this process reflected in the mean factor scores for the cross-sectional groups on Factor 1. This effect may therefore be a

contributory element in the observed increase in scores on this factor.

It is interesting to note, in view of the criticisms already expressed about the failure of researchers to convincingly confirm Eysenck's theory of criminality, that, in fact, in the analysis, extraversion is not the important dimension which it has been shown to be when data is gathered in more normal situations. In the prison situation, hostility and neuroticism assume an importance which they would not have in society at large, and therefore account for a much larger percentage of the total variance within a set of data relating to individual differences. It is therefore not surprising that research has failed to confirm the relationship between extraversion and criminality.

ATTITUDINAL VARIABLES

Results

Table 7 presents the means and standard deviations of the attitudinal variable for the four groups in the cross-sectional analysis and for the sample of releasees and detainees. Included in the table are the maximum, median and minimum concept scores (equivalent to scores of 7, 4 and 1 on the 7-point scale) to enable the reader to judge the absolute significance of the scores. T-tests were carried out on this data. The findings are as follows:-

(i) There is a decline in self-evaluation associated with imprisonment. For the concept "Myself", Group 3 scored significantly ($p < .001$) lower than Group 1 and significantly ($p < .05$) lower than Group 2.

(ii) For the concept "Work" Group 4 scored significantly ($p < .05$) lower than Group 1.

(iii) For the concept "Father" Group 4 scored significantly ($p < .05$) lower than Group 1.

(iv) There were no significant differences between releasees and detainees but for the concept "Work" releasees tended to score higher ($p < .10$) than detainees.

Discussion

Perhaps the most striking finding concerns the lower self-evaluation of men who have experienced longer terms of imprisonment. Scores on the concept "Myself" show a fairly consistent decreasing trend. There is a negligible difference between the means of Group 3 and Group 4 and only the larger standard deviation of Group 4 has prevented significant differences appearing between this group and Groups 1 and 2. This result is consistent

TABLE 7

Semantic Differential results - means and standard deviations for the cross-sectional sample and releasees and detainees.

Concept	Group 1	Group 2	Group 3	Group 4	Det'ees	Rel'ees	
(N)	(50)	(50)	(50)	(25)	(84)	(36)	Range*
Marriage (M)	10.25	10.08	9.89	10.37	10.34	10.55	13.09 7.48
(S.D.)	2.22	2.04	2.30	1.61	2.35	2.00	1.87
Myself	5.43	5.16	4.75	4.84	4.85	5.06	7.14 4.08
	0.86	0.86	1.12	2.46	1.07	1.03	1.02
The Police	6.01	5.89	6.05	5.67	5.81	6.09	8.19 4.68
	1.35	1.27	1.24	1.04	1.34	1.18	1.17
Work	6.16	6.07	5.76	5.66	5.89	6.36	7.70 4.40
	1.26	1.59	1.19	0.73	1.44	1.33	1.10
Father	7.92	8.01	7.49	7.11	7.68	7.75	10.57 6.04
	1.47	2.13	2.45	1.68	2.05	1.79	1.51
Prison Officers	8.66	7.76	8.63	8.33	8.07	8.26	14.00 8.00
	2.77	3.23	2.43	2.37	2.63	2.62	2.00
The Law	7.84	7.11	7.44	7.70	7.41	7.20	11.76 6.72
	1.69	2.16	1.74	1.55	1.81	1.63	1.68
Mother	7.18	7.35	7.10	6.84	7.08	6.99	8.26 4.72
	1.07	1.21	1.31	1.45	1.33	1.40	1.18
Prisoners	5.36	5.24	5.38	5.04	5.16	5.17	10.71 6.12
	1.74	1.93	1.31	1.45	1.80	1.29	1.53
Home	13.57	13.04	13.05	12.36	12.99	13.35	17.43 9.96
	2.74	3.62	2.95	2.50	3.03	2.94	2.49
Women	6.48	6.23	6.18	6.22	6.27	6.32	8.75 5.00
	1.07	1.30	1.02	0.90	1.13	1.02	1.25
Prison	4.16	3.82	4.14	3.98	3.68	4.00	8.61 4.92
	1.46	1.53	1.26	1.25	1.29	1.39	1.23

* The three figures quoted in this column represent the maximum, median and minimum points of the converted scales.

with the previous studies of, for example, Glaser and Stratton (1961) and Goffman (1968) who drew attention to the depersonalising and demoralising aspects of prison life. It is also in agreement with the findings in respect of the personality variables of this study in which guilt and self-directed hostility were found to increase with imprisonment. The tendency for self-rejection to increase with imprisonment, which is consistent with the observation that introversion and length of imprisonment are positively correlated, finds its parallel in the fact that prisoners' attitudes towards themselves tend to decline with imprisonment. There is no significant difference between releasees and detainees on this concept, which lends further credence to the contention that imprisonment itself is responsible for the observed decrease in self-evaluation. As a matter of conjecture it may be apposite to note the universally low opinions expressed by all groups on the concept "Prisoners". This might suggest that the lowering self-evaluation which occurs with longer experience of imprisonment could be due to an increasing identification on the part of the inmate with his fellow prisoners.

There is a very consistent cross-sectional decrease in scores on the concept "Work", indicating a gradual deterioration of prisoners' attitudes towards work. However there is also a near significant difference between releasees' and detainees' scores on this concept which would suggest that there is a tendency for those people to be released whose attitude toward work is most favourable. The less favourable attitudes of those men who have served longer may therefore be due, in part at least, to such selection procedures. Nevertheless, it is clear that imprisonment is not fulfilling the second part of the expectation voiced in the Radzinowicz Report (H.M.S.O. 1968) that "It is part of prison treatment that men should work; it is also part of prison treatment that their attitude to work both in prison and after release should be altered." (P.31).

There is a tendency for scores on the concept "Father" to decrease with imprisonment. There is no significant difference between releasees and detainees on this concept. It is somewhat difficult to interpret this

finding satisfactorily. It could simply be a function of the increasing lack of contact which longer-serving prisoners have obviously had with their fathers. It could also be a reflection of the inevitable deterioration in external relationships which occur under these circumstances. In this connection, the Radzinowicz Report observed a tendency amongst long-term prisoners to become insensitive to the problems of their relatives outside during their time in prison. However, neither of these hypotheses explains why the concept "Mother" was not similarly affected, which one would expect. One is left with theoretical speculation about the relative strength of the maternal and paternal bonds in prisoners, which future research may illuminate.

There is no support in these data for Hulin and Maher's (1959) finding that attitudes towards the law and its agents tend to deteriorate with increasing experience of imprisonment. It should be noted that Hulin and Maher did suggest that their findings might be due to an initial reticence on the part of newly sentenced prisoners to express their true opinions. It is interesting to observe, however, that while the attitudes of all groups tend to be favourable to the law and the police, their attitudes to prison officers tends to be neutral and their attitudes to prison unfavourable. The fact that no consistent decline occurs in these attitudes casts doubt on the strength of influence of the so-called prison culture as described in many sociological studies. Glaser (1967) pointed out that many inmates seem to live apart from the social system and that aggressive and articulate inmates try to impose on their peers an exaggerated view of the general acceptance of anti-social attitudes on the inmate group. The evidence here presented suggests that the influence of the inmate culture is either a great deal less than has been supposed or else it is at once less anti-social than previous work suggests and very quickly effective (since all the groups tend to be similar in their outlook to the relevant concepts).

In summary, the clearest and best supported finding is the decreasing self-evaluation concomitant with imprisonment. While it cannot be said with

any confidence that imprisonment causes a deterioration in men's attitude to work, it would appear to be falling short of its objective of improving attitudes to work. There does appear to be a decline in the evaluation of the concept "Father" associated with imprisonment although further study is needed to clarify just why this should be so. And, finally, there is no evidence in this study which supports Hulin and Maher's contention that hostility towards the law and its agents is positively correlated with length of time served in prison.

SOCIAL AND CRIMINOLOGICAL VARIABLES

Results

Table 8 presents the social and criminological data for the four groups. T-tests were carried out on all the variables except those relating to marriage and divorce. The marriage data were not subjected to statistical analysis since it would not be possible to determine whether the differences found were simply due to the lack of opportunity to marry which those who have served longer must inevitably have suffered, or if some other cause could be ascribed to the discrepancies. The divorce figures, however, were subjected to a chi-square analysis.

The significant results may be summarised as follows:-

(i) Group 4 had a significantly lower outside job level than Group 1 ($p < .05$) and Group 2 ($p < .02$).

(ii) Group 4 had significantly less regular employment than Group 1 ($p < .05$).

(iii) Group 4 was significantly younger at first conviction than Groups 2 and 3 ($p < .01$) and Group 4 ($p < .001$).

(iv) Group 4 had significantly more previous convictions than Group 3 ($p < .01$) and Groups 1 and 2 ($p < .001$).

(v) Group 4 had significantly more serious previous convictions than Group 2 ($p < .01$) and Groups 1 and 3 ($p < .001$).

(vi) Group 4 had served significantly more previous imprisonment than Groups 1, 2 and 3 ($p < .001$).

(vii) In terms of total imprisonment served, all the differences between the groups were significant ($p < .001$).

(viii) Group 4 had been to Borstal or Approved School significantly more often than Groups 1, 2 and 3 ($p < .01$)

(ix) Group 4 were held in significantly "worse" prisons than Group 3

($p < .01$).

(x) Group 3 had significantly more interesting prison jobs than Group 1 ($p < .02$).

Discussion

The divorce rates of Groups 1, 2 and 3 are high by any standards. Although Group 4's divorce rate is apparently lower, a chi-square analysis revealed that it did not differ significantly from the rates in the other groups and, in any case, the very small number married in Group 4 make it imperative to treat any related statistics with great caution. However, the rates of divorce overall highlight one of the profound problems associated with long-term imprisonment, namely its potentially disastrous effects on prisoners' families. In the case of Groups 1, 2 and 3, about 30% of married men had been divorced since the beginning of their current sentence. When it is realised that these figures probably underestimate the problem, since undoubtedly some families will have disintegrated without formal divorce proceedings having been taken, it can be seen that the problem is serious.

Taking the other social and criminological variables as a whole, by and large, they confirm common-sense expectations. With Job Level Outside and Regularity of Outside Work, one would expect Group 4 to be lower than other groups simply as a function, in terms of time, which they had available to establish themselves in employment. Similarly, it is not surprising, since the groups are matched for age, that Group 4 were younger at first conviction, had more previous convictions which were of a more serious nature, had served more previous imprisonment and were more likely to have been to Borstal or Approved School than other Groups. And, of course, since the groups were chosen on the basis of the total imprisonment served by the members of each, all differences between the groups on this variable are significant beyond the .001 level.

TABLE 8

Social and Criminological Variables

		Group 1	Group 2	Group 3	Group 4
NUMBER MARRIED AT START OF SENTENCE	raw	25	21	17	8
	% of total	50%	42%	34%	32%
NUMBER MARRIED AT TIME OF TESTING	raw	17	14	11	7
	% of total	34%	28%	22%	28%
NUMBER DIVORCED DURING SENTENCE	raw	8	7	6	1
	% of married men	32%	33%	28%	12.5%
JOB LEVEL OUTSIDE	mean	1.58	1.64	1.56	1.28
	S.D.	0.89	0.83	0.84	0.46
REGULARITY OF OUTSIDE WORK	mean	1.92	1.86	1.90	1.56
	S.D.	0.85	0.86	0.84	0.77
AGE AT 1ST CONVICTION	mean	21.36	19.68	19.42	14.96
	S.D.	8.73	9.59	9.40	4.65
NUMBER OF PRECONVICTIONS	mean	4.34	4.68	4.70	8.52
	S.D.	3.92	3.75	4.96	4.89
SERIOUSNESS OF PRECONVICTIONS	mean	1.78	2.02	1.66	2.76
	S.D.	1.17	1.19	1.14	0.83
LENGTH OF PREVIOUS IMPRISONMENT	mean	0.42	0.80	0.94	4.29
	S.D.	0.81	1.08	1.66	3.32
TOTAL IMPRISONMENT SERVED	mean	2.43	4.95	7.00	10.96
	S.D.	0.87	0.62	0.78	3.18
NUMBER OF TIMES SENT TO BORSTAL OR APPROVED SCHOOL	mean	0.38	0.46	0.36	1.04
	S.D.	0.73	0.73	0.72	0.93
PRISON JOB INTEREST RATING	mean	1.96	2.24	2.40	2.04
	S.D.	0.83	0.85	0.76	0.84
USE MADE OF EDUCATIONAL FACILITIES IN PRISON	mean	2.04	2.26	1.84	2.04
	S.D.	1.16	1.19	1.11	0.98
EXTERNAL CONTACT IN PRISON	mean	2.52	2.66	2.58	2.52
	S.D.	0.74	0.66	0.67	0.59
USE MADE OF GENERAL PRISON FACILITIES	mean	2.16	2.22	2.14	2.00
	S.D.	0.55	0.41	0.51	0.49
NUMBER OF PETITIONS DURING 12 MONTHS PRIOR TO TESTING	mean	3.02	3.04	2.12	4.72
	S.D.	7.20	5.28	3.51	6.44
NUMBER OF OFFENCES DURING 12 MONTHS PRIOR TO TESTING	mean	1.16	1.20	0.64	0.56
	S.D.	2.24	2.23	1.98	0.96
PRISON RATING	mean	2.36	2.18	2.06	2.72
	S.D.	0.85	0.92	0.93	1.06
AGE	mean	32.42	34.78	35.16	35.20
	S.D.	8.17	10.52	10.00	3.77
		N = 50	N = 50	N = 50	N = 25

Results (ix) and (x), which indicate that Group 3 had more interesting prison jobs and were housed in better prisons than others, are somewhat difficult to interpret. However, subtracting previous imprisonment from total imprisonment it can be seen that, on average, this group has served roughly 6 years on current sentence. It may be germane to note that this is a figure frequently quoted by both inmates and staff as representing something of a watershed in the prison life of the typical long-term inmate. Many staff feel that during a period of imprisonment of about this length, they can exert a rehabilitative influence on an inmate whereas, with periods of imprisonment of greater duration, they feel that their role tends rapidly to be seen as punitive by the inmate and to generate negative rather than positive responses from him. Strangely enough, many long-term prisoners take a rather similar view, although they tend to ascribe the positive effects to sources other than the staff, talking, for example, of "time to think things through" and so forth. It is interesting to note that Group 3 has also the lowest incidence of petitions to the Governor in the 12 months prior to testing. Given that this is a reasonable index of a man's acceptance of his situation, this would tend to support the above hypothesis, since those who were seen to accept their situation would tend to be moved to "better" prisons and given more interesting jobs.

It can be seen from Table 8 that Group 4 have also served, on average, about 6 years on current sentence and that they do not exhibit the tendencies ascribed to Group 3 above. The circumstances applying to Group 4, however are fundamentally different. Groups 1, 2 and 3 have served, on average, relatively short periods of previous imprisonment. Group 4 has served, on average, over 4 years imprisonment prior to their current sentences. Equally, the standard deviations are higher for Group 4 so that mean figures are therefore less representative of individual cases. Clearly, for these reasons, we cannot apply the same line of argument for both Group 3 and Group 4 despite their similar mean periods of imprisonment served on current sentence. It is obvious

however, that this whole area is one which future researchers might fruitfully explore.

Summary

In this chapter, we have examined personality, attitudinal, social and criminological variables relating to four cross-sectional groups of long-term prisoners and, in addition, the personality data has been factor analysed and re-examined in that light.

Hostility, especially intropunitive hostility, was found to increase with imprisonment and there was evidence to suggest that extraversion also declined as a concomitant of imprisonment. Consonant with these interpretations was the finding that self-evaluation declined with imprisonment. Attitudes to the concepts "Work" and "Father" also appeared to become less favourable in prison, although there was evidence that release-selection procedures may be responsible for the apparent effect in relation to the concept "Work". The declining attitudes to the concept "Father" and the high divorce rates found in most groups were suggested as indicative of the devastating effect of imprisonment on the families of prisoners.

Some very tentative evidence was proferred in support of the contention, which has some currency in prison circles, that imprisonment for periods of about six years, on current sentence appears to be something of a watershed.

CHAPTER FOUR

THE LONGITUDINAL ANALYSIS

154 of the original sample of prisoners were tested twice with a mean test-retest interval of 19.08 months. In addition, the comparison group (n = 30) was retested with a mean test-retest interval of 17.75 months. The many circumstances attendant upon the execution of the testing of both groups made it impossible to synchronise the test-retest interval exactly. The mean age of this prisoner group was 35.65 years (S.D. 9.72) while the mean age of the comparison group was 34.70 (S.D. 9.80). In this chapter the changes occurring during the test-retest interval will be examined. First, however, the question of personality stability will be examined.

Personality Stability

The longitudinal analysis permitted the assessment of the test-retest correlation of the tests used over a longer period than is usual. The test-retest correlations are set out below in Table 9.

It was noted earlier that Eysenck and Eysenck (1970) suggested that imprisonment may change responses to personality inventory items in unpredictable ways. It is clear, at least from these results, that there is no real basis for this view and, ironically, this is particularly apparent with the Eysenck Personality Inventory: the stability coefficients for the prisoners' scores compare favourably with those for the comparison group. In fact, these figures tend to lend weight to Eysenck's contention that the dimensions of extraversion - introversion and stability - neuroticism are deeply embedded and basic dimensions of personality. The Gough Femininity Scale also yields a high reliability coefficient.

TABLE 9

Test-retest Correlations (Significance levels in brackets)

		Prisoners (mean interval 19.08 months, N = 154)	Comparison (mean interval 17.75 months, N = 30)
Eysenck Personality Inventory	N	.77 (.001)	.69 (.001)
	E	.68 (.001)	.65 (.001)
	L	.58 (.001)	.79 (.001)
Gough Femininity Scale		.72 (.001)	.73 (.001)
Sixteen Personality Factor Questionnaire	A	.59 (.001)	.29 (N.S.)
	B	.56 (.001)	.41 (.05)
	C	.49 (.001)	.58 (.01)
	E	.50 (.001)	.55 (.01)
	F	.49 (.001)	.78 (.001)
	G	.42 (.001)	.23 (N.S.)
	H	.71 (.001)	.73 (.001)
	I	.37 (.001)	.55 (.01)
	L	.51 (.001)	.37 (.05)
	M	.53 (.001)	.81 (.001)
	N	.32 (.001)	.70 (.001)
	O	.58 (.001)	.47 (.01)
	Q_1	.49 (.001)	.20 (N.S.)
	Q_2	.44 (.001)	.19 (N.S.)
	Q_3	.40 (.001)	.59 (.01)
	Q_4	.66 (.001)	.44 (.05)
Hostility and Direction of Hostility Questionnaire	AH	.60 (.001)	.79 (.001)
	CO	.56 (.001)	.44 (.05)
	PH	.55 (.001)	.70 (.001)
	SC	.50 (.001)	.72 (.001)
	G	.50 (.001)	.48 (.01)
	TH	.67 (.001)	.73 (.001)
	EP	.69 (.001)	.71 (.001)
	IP	.60 (.001)	.75 (.001)
	DH	.63 (.001)	.67 (.001)
Semantic Differential	Marriage	.39 (.001)	.52 (.01)
	Me	.31 (.001)	.40 (.05)
	Police	.60 (.001)	.49 (.01)
	Work	.47 (.001)	.54 (.01)
	Father	.59 (.001)	.22 (N.S.)
	Prison Officers	.55 (.001)	.23 (N.S.)
	The Law	.66 (.001)	.42 (.05)
	Mother	.66 (.001)	.36 (.05)
	Prisoners	.58 (.001)	.39 (.05)
	Home	.66 (.001)	.46 (.01)
	Women	.41 (.001)	.63 (.01)
	Prison	.51 (.001)	.68 (.001)

Coefficients for the 16 P.F. range from .32 (Factor N) to .71 (Factor H) for prisoners and the range for the comparison group is even greater, from .19 (Factor Q_2) to .81 (Factor M). As noted earlier, Cattell makes the distinction between dependability, where the test-retest interval is short and the people themselves are assumed not to have changed, and stability, where the test-retest interval is longer, and both trait change (in a trend, through learning or maturation) and state change (reversible) can be assumed to have taken place. In Cattell's terms, therefore, these figures are stability coefficients. The fact that on the whole, the prisoners' scores seem less prone to gross fluctuation than those of the comparison group, then tends to make sense since presumably the comparison group have enjoyed a more varied set of experiences than the prisoners and should therefore have changed more. Le Unes and Christensen (1970) found a similar comparison between the reliability coefficients of prisoners and students over a one-week interval using the 16 P.F.

The coefficients for the Hostility and Direction of Hostility Questionnaire are moderately high for both groups, although the comparison group's scores seem, in general, somewhat more stable. This is consistent with the findings in the cross-sectional analysis where hostility was identified as one of the aspects of personality which seemed to change as a result of imprisonment.

Turning to the semantic differential coefficients, one is somewhat surprised at the high coefficients which some attitudes reveal over such a long period. In fact, the average semantic differential reliability coefficient for prisoners is .53 which is slightly higher than their average 16 P.F. coefficient (.50). It is customary in psychology to acknowledge the importance of attitudes but there is a tendency to underrate their importance on the implicit assumption that they are somehow more volatile than other facets of human behaviour. Perhaps this is not necessarily so.

Be that as it may, again it can be seen that the attitudes of the

prisoners are more stable than those of the comparison group. As noted above, the average coefficient for prisoners is .53 compared with an average coefficient of .44 for the comparison group. Once more, it is interesting to note that the most unstable concept for prisoners is "Me" which is consistent with the finding in the cross-sectional analysis that the self-concept was liable to deteriorate with imprisonment.

In summary of what has been said above, the notion that there are insuperable or unpredictable difficulties with assessing the personalities of prisoners using questionnaires (over and above the difficulties found with "normal" subjects) is invalidated by these data. The stability coefficients, over a relatively long test-retest interval, compare favourably on all tests used with those of a comparison group of normal subjects.

Personality Variables

Results

Tables 10a and 10b give the details of scores on test and retest of the longitudinal prison group (N = 154) and the comparison group (N = 30). Significant differences (correlated means t-test) are indicated.

The findings are as follows:-

(i) Prisoners' scores on E.P.I. Neuroticism decreased significantly ($p < .001$).

(ii) Prisoners' scores on E.P.I. Lie Scale decreased significantly ($p < .01$).

(iii) Prisoners' scores on the Gough Femininity Scale decreased significantly ($p < .01$).

(iv) Prisoners' scores on 16 P.F. Factor C (Emotional Maturity) increased significantly ($p < .001$).

(v) Prisoners' scores on 16 P.F. Factor O (Worryproneness) decreased

TABLE 10a

First and Second Personality Tests Results
of the Longitudinal Prison Sample
(mean interval 19.08 months, N = 154)

		1st Testing			Retest	
E.P.1.	M	13.79	5.16	.001**	12.75	5.01
	E	13.45	3.48		13.03	3.31
	L	1.90	1.55	.01*	1.60	1.42
GOUGH	M-F	27.32	5.14	.01*	26.55	5.17
16 P.F.	A	5.58	1.61		5.38	1.76
	B	7.14	2.02		6.86	2.27
	C	3.45	1.86	.001**	3.99	1.96
	E	5.77	2.03		5.81	1.98
	F	5.88	2.14		5.74	2.17
	G	4.29	1.94		4.23	1.88
	H	4.38	1.84		4.38	1.87
	I	5.03	1.87		4.79	1.93
	L	7.05	2.02		7.18	1.75
	M	6.36	1.93		6.60	1.90
	N	5.24	2.04		5.12	1.86
	O	6.49	1.94	.01*	6.12	1.85
	Q_1	5.43	2.18	.01*	5.95	2.12
	Q_2	5.82	1.79		5.59	1.66
	Q_3	5.23	2.11		5.01	1.96
	Q_4	6.68	2.09	.01*	6.31	2.10
H.D.H.Q.	AH	5.58	2.72		5.27	2.18
	CO	5.82	2.63		5.69	2.75
	PH	2.43	1.98	.01*	2.03	1.75
	SC	4.93	2.65		4.49	3.00
	G	3.40	1.77	.001**	2.92	1.70
	TH	22.19	7.87	.001**	20.27	7.49
	EP	13.78	6.07		12.99	5.38
	IP	13.24	6.42	.001**	11.66	6.56
	DH	- 0.63	7.67		- 1.35	7.34

TABLE 10b

First and Second Personality Test Results
of the Longitudinal Comparison Group
(mean interval 17.75 months, N = 30)

		1st Testing			Retest	
E.P.I.	N	10.37	4.08		9.97	3.69
	E	15.27	3.57		15.03	3.53
	L	1.53	1.52		1.53	1.56
GOUGH	M-F	24.13	4.97		25.17	4.85
16 P.F.	A	5.80	1.28	.05	5.20	1.28
	B	7.13	1.48		7.63	1.56
	C	4.67	1.81		4.57	1.73
	E	5.33	1.97		5.83	1.86
	F	6.83	1.95		6.43	2.11
	G	4.63	1.52		4.60	1.60
	H	4.83	1.63		4.70	1.92
	I	4.20	1.70		4.10	2.06
	L	6.53	1.56		6.87	2.22
	M	5.43	2.20		5.30	2.07
	N	4.10	1.68		3.93	1.73
	O	5.63	1.45		5.27	1.50
	Q_1	5.67	1.42		5.80	1.80
	Q_2	5.83	1.79		6.23	1.78
	Q_3	5.53	1.50		5.87	2.05
	Q_4	6.60	1.62		6.20	1.83
H.D.H.Q.	AH	5.57	2.11		5.73	2.05
	CO	5.30	2.18		5.43	2.58
	PH	1.27	1.03		1.17	1.24
	SC	3.63	2.33		4.00	2.11
	G	2.00	1.26		1.53	1.59
	TH	17.77	6.18		17.87	6.73
	EP	12.13	3.98		12.33	4.57
	IP	9.27	5.51		9.53	5.43
	DH	- 3.20	4.90		- 2.80	5.49

significantly ($p < .01$).

(vi) Prisoners' scores on 16 P.F. Factor Q_1 (Radicalism) increased significantly ($p < .01$).

(vii) Prisoners' scores on 16 P.F. Factor Q_4 (Tension) decreased significantly ($p < .01$).

(viii) Prisoners' scores on H.D.H.Q. Paranoid Hostility decreased significantly ($p < .01$).

(ix) Prisoners' scores on H.D.H.Q. Guilt decreased significantly ($p < .001$).

(x) Prisoners' scores on H.D.H.Q. Total Hostility decreased significantly ($p < .001$).

(xi) Prisoners' scores on H.D.H.Q. Intropunitive Hostility decreased significantly ($p < .001$).

(xii) Comparisons' scores on 16 P.F. Factor A (Sociability) decreased significantly ($p < .05$).

Discussion

The prisoners' retest scores represent what must be considered an improvement in their personality profiles reflected in the increase in emotional maturity and the decrease in neuroticism, worry-proneness, tension and intropunitive hostility. In contrast, over a similar interval, only one significant change was recorded in the comparison group, namely a decrease in sociability.

There are two relevant ways of considering these changes. The first is to examine the prison situation before and during the longitudinal interval and the second is to examine the nature of the relevant psychological characteristics per se. At this point, the first approach will be taken and the second approach will be perused in relation to subsequent analyses of the data in the light of which the arguments presented will come much more clearly into focus.

During first testing, a number of influences were apparent in the prison system. The Mountbatten report and its consequential changes in prison routine, most of which were not beneficial to prisoners, was still fresh in everyone's mind. Resentment of its consequences was readily detectable in prisoners in almost all prisons in which this research was carried out. The row about the Home Office's decision to require the visitors of Category "A" prisoners to be photographed for identification purposes at prisons blew up during the first round of testing. In some cases, local problems had exacerbated the situation and indeed, the author arrived in Parkhurst prison to start seeing prisoners the day after a serious riot had taken place. All these influences combined, during the first round of testing, to create tension within the prison system which in some prisons was almost tangible. One would expect this to have been reflected in questionnaire responses.

At the time of second testing some 19 months later, the Mountbatten report and the Category "A" visitors' photographs row had naturally lost some of their antagonistic impact and local difficulties, particularly in Parkhurst, had been overcome or circumvented in one way or another. Again one would expect to see this change reflected in questionnaire responses.

It should be pointed out that the longitudinal analysis provides complementary data to the cross-sectional analysis and does not replicate it. The cross-sectional analysis is not, of course, sensitive to the influences just described and indeed was intended to avoid them. However, what these results indicate, if the interpretation proffered above is tenable, is that positive (or non-negative) changes can take place in prison as well as negative changes, in the short term at least.

It is interesting to note in passing, that Eysenck's theory of criminality again finds no support in these data; indeed, the data here, if anything, indicate the opposite conclusion. If we consider scores on first testing, the comparison group is significantly ($p < .02$) more extraverted

than the prison group; on second testing, there is again a significant ($p < .01$) difference in extraversion in favour of the comparison group. The point must be stressed that while it may be reasonable to assume that these men can be thought of as "criminals in prison", it is not at all valid to treat them as typical criminals. In view of the link shown in this study between imprisonment and introversion, the use of prisoners as criminal subjects is an unsatisfactory way of resolving the issues which this theory has raised. Irrefutable confirmation of Eysenck's hypotheses can only come from the study of a carefully chosen group of criminals who are not in prison and who, ideally, have never been to prison.

Attitudinal Variables

Tables 11a and 11b give the details of scores on test and retest of both the longitudinal prison group and the comparison group.

There were no significant changes of attitude during the interval by either the prison group or the comparison group.

Discussion

The lack of change in attitude by both prisoners and comparisons over the test-retest period of 19 months gives emphasis to the argument put forward in the previous section that attitudes can be as stable as other aspects of our psychological make-up.

In the cross-sectional analysis, the expectation, voiced in the Radzinowicz Report, that attitudes to work should be altered by prison treatment, was mentioned. These results suggest that perhaps the report was expecting too much, particularly as our present prison system is under the heavy strain imposed by overcrowding and out-of-date buildings.

Both the cross-sectional and the longitudinal data suggest that

TABLE 11a

First and Second Semantic Differential Results
of the Longitudinal Prison Sample
(mean interval 19.08 months, N = 154)

	1st Testing		Retest	
Marriage	10.05	2.28	9.99	2.28
Me	5.03	1.32	5.03	0.88
Police	5.85	1.26	5.91	1.19
Work	5.85	1.30	5.87	1.06
Father	7.63	2.03	7.76	1.68
Prison Officers	8.20	2.73	8.36	2.53
The Law	7.50	1.85	7.55	1.75
Mother	7.07	1.25	6.94	1.36
Prisoners	5.32	1.71	5.33	1.48
Home	12.76	3.11	12.91	3.05
Women	6.31	1.09	6.33	1.14
Prison	3.91	1.35	4.05	1.37

TABLE 11b

First and Second Semantic Differential Results
of the Longitudinal Comparison Group
(mean interval 17.75 months, N = 30)

	1st Testing		Retest	
Marriage	11.31	1.32	11.24	1.71
Me	5.76	0.79	5.75	0.85
Police	6.76	0.96	6.88	1.04
Work	5.66	1.24	5.82	1.07
Father	8.27	0.92	8.04	1.65
Prison Officers	11.07	2.25	10.97	1.93
The Law	8.66	1.62	8.75	1.28
Mother	7.53	0.64	7.44	0.82
Prisoners	4.61	1.46	4.95	1.13
Home	15.24	1.43	14.64	1.67
Women	6.99	0.91	6.82	0.86
Prison	5.00	1.31	4.91	1.15

attitude change during present-day prison conditions is at best a gradual and slow process and is therefore not likely to be significant over periods similar to the longitudinal interval of approximately 19 months used in this study. Cognitive dissonance theory suggests that rapid attitude change only takes place under emotional stress, therefore, in the case of prisoners, the time immediately following their incarceration (particularly for the first time), would seem to be a period of potential rapid attitude change and thereafter would follow a period in which attitudes remained relatively stable.

A study by Brown (1970) does lend some support to this contention. He was investigating the attitudes of recidivists and first offenders towards the legal establishment and aggression and he found that prisoners confined one week scored significantly higher ($p < .01$) on a guilt index than prisoners confined one year; he also found that recidivists had significantly ($p < .01$) less favourable attitudes towards legal authority and legal institutions and to have significantly ($p < .05$) more negative attitudes towards others. A study by Mosher and Mosher (1967) also found first offenders to exhibit significantly ($p < .001$) more guilt than recidivists. Given, therefore, that for the particular sample of men in this study, this initial period of change has passed, these data therefore reflect a period of relative stability in attitudes which may change once more around the time of release, when, presumably, inmates would, once more, come under emotional stress.

High Scorers/Low Scorers Analysis

In addition to the straightforward longitudinal analysis, it was felt that some more particular information might be yielded by an analysis of the longitudinal changes pertaining to those who, at first testing, had high or low scores on certain variables. A small number of variables was therefore chosen for analysis in this way either because the cross-sectional analysis

had indicated their importance or because it was felt on a priori grounds that the variables were of importance.

The variables so chosen for this analysis were E.P.1. Neuroticism, E.P.1. Extraversion, H.D.H.Q. Intropunitive Hostility, Use Made of Prison Educational Facilities and Use Made of General Prison Facilities. The longitudinal sample was split into high or low scoring groups on each variable by specifying a comparison between those scoring less than the mean score and those scoring greater than or equal to the mean score. In this way the mean difference between test and retest on each variable for the two groups could be compared and subjected to t-tests. The program BSET (Youngman, 1969) executed this series of calculations.

High/Low E.P.1. Neuroticism

Results (Personality Variables)

Table 12 sets out the mean personality variable differences and their standard deviations for the high and low E.P.1. Neuroticism groups.

The results are as follows:-

(i) High E.P.1. Neuroticism scorers decrease in E.P.1. Neuroticism significantly ($p < .001$) more than low E.P.1. Neuroticism scorers.

(ii) High scorers decrease in 16 P.F. Factor A (Sociability) significantly ($p < .05$) more than low scorers.

(iii) High scorers increase in 16 P.F. Factor C (Emotional Maturity) significantly ($p < .02$) more than low scorers.

(iv) High scorers decrease in 16 P.F. Factor O (Worry-proneness) significantly ($p < .05$) more than low scorers.

Discussion

The fact that high E.P.1. Neuroticism scorers quite clearly scored

TABLE 12

High/Low E.P.1. Neuroticism x Personality Variable Differences

		Low (13-) E.P.1.N N = 73			High (14+) E.P.1.N N = 81	
E.P.1.	N	0.10	3.27	.001**	- 2.05	3.33
	E	- 0.47	2.32		- 0.40	3.05
	L	- 0.40	1.43		- 0.22	1.29
GOUGH	M-F	- 0.44	3.41		- 1.09	4.14
16 P.F.	A	0.05	1.53	.05*	- 0.43	1.50
	B	0.04	2.06		- 0.56	1.92
	C	0.15	1.87	.02*	0.89	1.92
	E	0.00	2.01		0.09	2.00
	F	- 0.05	1.88		- 0.35	2.12
	G	- 0.18	2.17		0.05	1.94
	H	- 0.16	1.28		0.15	1.52
	I	- 0.27	2.07		- 0.20	2.16
	L	0.33	1.95		- 0.04	1.79
	M	0.52	1.82		0.00	1.83
	N	0.11	2.37		- 0.32	2.15
	O	- 0.04	1.72	.05*	- 0.68	1.67
	Q_1	0.27	2.30		0.74	2.01
	Q_2	- 0.04	1.68		- 0.42	1.92
	Q_3	- 0.29	2.27		- 0.17	2.18
	Q_4	- 0.25	1.83		- 0.48	1.59
H.D.H.Q.	AH	- 0.03	2.01		- 0.65	2.23
	CO	- 0.04	2.08		- 0.20	2.85
	PH	- 0.42	1.90		- 0.38	1.66
	SC	- 0.48	2.27		- 0.63	2.68
	G	- 0.32	1.83		- 0.60	1.62
	TH	- 1.40	5.66		- 2.47	6.74
	EP	- 0.49	3.84		- 1.23	4.97
	IP	- 1.27	5.53		- 1.67	6.05
	DH	- 0.82	6.15		- 0.63	6.66
TOTAL IMPRISONMENT		7.74	7.49		7.23	5.56

lower on this variable after the interval of 19 months while low scorers remained more or less constant is somewhat difficult to interpret. The result is certainly clear enough, high scorers dropping on average two clear points on retest. It seems impossible to explain this without, in some way, commenting on the fundamental nature of neuroticism.

High neuroticism, by definition, implies a potential for neurotic behaviour under appropriate circumstances. It is, therefore, by definition, a somewhat volatile characteristic. Those who scored highly on this variable at first testing were therefore those members of the sample who had this potential. Reasons have already been given with regard to the then current influences in the British prison system which would have made this potential in these subjects manifest. On the other hand, low neuroticism is, by definition, a more stable characteristic, implying a potential for stable behaviour over a wide range of circumstances. One would therefore expect, on these premises, that those whose scores were below the mean to remain stable between first and second testing, as the data here indicates.

This interpretation finds support in the fact that low E.P.I. N scorers tend to remain constant on 16 P.F. Factor C whereas, by comparison, high scorers increase their scores on this factor and in the fact that low E.P.I. N scorers tend to remain constant on 16 P.F. Factor O whereas high scorers tend to decrease their scores. Since C- and O+ load highly on Cattell's second-order factor of Anxiety-Adjustment, which should be closely related to Eysenck's Neuroticism dimension on a priori grounds, the same argument will suffice to explain the longitudinal shift by high and low E.P.I. N scorers on these two variables.

High/Low E.P.I. Extraversion

Results (Personality Variables)

Table 13 sets out the mean personality variable differences and

their standard deviations for the high and low E.P.1. Extraversion groups.

TABLE 13

High/Low E.P.1. Extraversion x Personality Variable Differences

		Low (13-) E.P.1.E N = 79			High (14+) E.P.1.E N = 75	
E.P.1.	N	- 1.01	3.24		- 1.05	3.69
	E	0.48	2.90	.001**	- 1.39	2.16
	L	- 0.33	1.49		- 0.28	1.21
GOUGH	M-F	- 1.32	3.92		- 0.21	3.64
16 P.F.	A	- 0.16	1.60		- 0.24	1.46
	B	- 0.32	2.10		- 0.23	1.92
	C	0.62	1.89		0.45	1.97
	E	0.09	2.11		0.00	1.88
	F	- 0.10	2.05		- 0.32	1.97
	G	0.01	2.32		- 0.13	1.72
	H	0.27	1.39	.02*	- 0.28	1.39
	I	- 0.08	2.17		- 0.40	2.05
	L	0.28	1.94		- 0.01	1.80
	M	0.09	1.99		0.41	1.65
	N	0.13	2.10		0.37	2.40
	O	- 0.67	1.86	.05*	- 0.07	1.51
	Q_1	0.72	2.27		0.31	2.03
	Q_2	- 0.35	1.77		- 0.12	1.86
	Q_3	- 0.49	2.48		0.05	1.87
	Q_4	- 0.57	1.78		- 0.16	1.62
H.D.H.Q.	AH	- 0.18	2.23		- 0.55	2.05
	CO	0.13	2.69		- 0.39	2.29
	PH	- 0.29	1.90		- 0.52	1.63
	SC	- 0.85	2.54		- 0.25	2.42
	G	- 0.52	1.76		- 0.41	1.69
	TH	- 1.73	6.51		- 2.20	6.01
	EP	- 0.37	4.59		- 1.43	4.32
	IP	- 2.01	6.04		- 0.92	5.50
	DH	- 1.86	6.52	.05*	0.48	6.10
TOTAL IMPRISONMENT		7.88	6.21		7.05	6.86

The results are as follows:-

(i) High E.P.1. Extraversion scorers decrease in E.P.1. Extraversion significantly ($p < .001$) more than low E.P.1. Extraversion scorers.

(ii) High scorers decrease in 16 P.F. Factor H (Adventurousness) significantly ($p < .02$) more than low scorers.

(iii) Low scorers decrease in 16 P.F. Factor O (Worry-proneness) significantly ($p < .05$) more than high scorers.

(iv) Low scorers become significantly ($p < .05$) more extrapunitive (H.D.H.Q. Direction of Hostility) than high scorers.

Discussion

During the longitudinal interval, low scorers tended to increase slightly in extraversion, whereas high scorers tended clearly to decrease on this dimension. With regard to 16 P.F. Factor H (Adventurousness), which loads positively on Cattell's extraversion or "exvia" factor, there is a congruent shift of scores of equal magnitude in opposite directions by the groups of low and high scorers. In conjunction with this shift, high E scorers tend to become slightly more intropunitive in contrast with the marked shift towards extrapunitiveness of the low E scorers. Low E scorers, in addition, are becoming less worry-prone (16 P.F. Factor O) in comparison with high scorers.

These results must be seen in the light of the findings in the cross-sectional analysis. There it was found that there was a trend of declining extraversion and increasing intropunitive hostility. What these longitudinal data are beginning to suggest is the possibility that those who tend to be high on extraversion may be most vulnerable to the processes involved in this change during imprisonment. The point is perhaps reinforced by comparing these results with those of the comparison study of releasees and detainees. Releasees were found to differ from detainees in scoring significantly higher on 16 P.F. Factor C and 16 P.F. Factor H and in scoring significantly lower on 16 P.F. Factor O. In this analysis it can be seen that high E scorers tend to score lower on 16 P.F. Factor H in comparison with the upward trend on

this factor for low E scorers and tending to retain their level on 16 P.F. Factor O in comparison with the decrease on this factor for low E scorers. While it is true that the increase in 16 P.F. Factor C shown by both high and low E scorers only slightly favours the low E scorers, it is tenable to argue that the overall pattern of relevant personality characteristics in high E scorers tends to move towards the pattern found in detainees.

If the hypotheses drawn from these data are valid, then their importance is clear. The picture given is one in which a relatively distinct section of the subjects in this sample, namely those scoring relatively highly on E.P.I. Extraversion, seem to be most prone to the sort of influences which the cross-sectional analysis suggested were a concomitant of long-term imprisonment. Furthermore, this same section seem to be developing those personality characteristics which were seen to distinguish those whom the Home Office preferred to detain in prison rather than to release on parole.

High/Low H.D.H.Q Intropunitive Hostility

Results (Personality Variables)

Table 14 sets out the mean personality variable differences and their standard deviations for the high and low H.D.H.Q. Intropunitive Hostility Groups.

The results are as follows:-

(i) High H.D.H.Q. Intropunitive Hostility scorers decrease in Gough's Femininity measure significantly ($p < .01$) more than low scorers.

(ii) High scorers increase in 16 P.F. Factor C (Emotional Maturity) significantly ($p < .01$) more than low scorers.

(iii) High scorers decrease in 16 P.F. Factor O (Worry-proneness) significantly ($p < .01$) more than low scorers.

(iv) High scorers decrease significantly more than low scorers in H.D.H.Q.

Self Criticism ($p < .001$), Guilt ($p < .001$), Total Hostility ($p < .01$) and Intropunitive Hostility ($p < .001$) and become significantly ($p < .001$) more extrapunitive (H.D.H.Q. Direction of Hostility) than low scorers.

TABLE 14

High/Low H.D.H.Q.
Intropunitive Hostility x Personality Variable Differences

		Low H.D.H.Q. IP (13-) N = 81			High H.D.H.Q. IP (14+) N = 73	
E.P.I.	N	- 0.60	3.60		- 1.51	3.25
	E	- 0.38	2.41		- 0.48	3.04
	L	- 0.37	1.38		- 0.23	1.33
GOUGH	M-F	0.15	3.81	.01**	- 1.81	3.56
16 P.F.	A	- 0.01	1.42		- 0.41	1.63
	B	- 0.33	2.05		- 0.21	1.97
	C	0.11	1.69	.01**	1.01	2.07
	E	0.10	2.08		- 0.01	1.92
	F	0.07	1.85		- 0.52	2.14
	G	- 0.19	2.03		0.08	2.08
	H	- 0.19	1.36		0.21	1.45
	I	- 0.30	2.10		- 0.16	2.13
	L	0.22	1.74		0.04	2.02
	M	0.42	1.81		0.05	1.86
	N	- 0.04	2.12		- 0.21	2.42
	O	0.02	1.57	.01**	- 0.82	1.78
	Q_1	0.28	2.20		0.78	2.10
	Q_2	- 0.16	1.75		- 0.33	1.89
	Q_3	- 0.38	2.32		- 0.05	2.09
	Q_4	- 0.31	1.75		- 0.44	1.67
H.D.H.Q.	AH	- 0.22	2.09		- 0.51	2.21
	CO	0.05	2.39		- 0.32	2.63
	PH	- 0.41	1.80		- 0.40	1.76
	SC	0.21	2.19	.001**	- 1.41	2.54
	G	- 0.04	1.82	.001**	- 0.95	1.49
	TH	- 0.51	5.89	.01**	- 3.58	6.29
	EP	- 0.58	4.60		- 1.22	4.34
	IP	0.38	5.14	.001**	- 3.55	5.81
	DH	0.93	6.49	.001**	- 2.55	5.83
TOTAL IMPRISONMENT		7.24	6.80		7.73	6.25

Discussion

It has already been argued with respect to E.P.I. Neuroticism that it is valid to regard measures of some psychological attributes as indicating a potential for relevant characteristic behaviour. It is probably fair to say that hostility is one such attribute.

In the longitudinal analysis of personality results, reasons were put forward which might account for the changes noted between test and retest. If we compare the variables affected in the overall longitudinal analysis with the variables found to be important in this analysis, it can be seen that there are quite striking similarities. In general, the longitudinal analysis found that hostility decreased and that emotional maturity (16 P.F. Factor C) increased. What we find in this analysis, is that while low scorers on H.D.H.Q. Intropunitive Hostility remain relatively stable on all variables between test and retest, it is the high scorers on this variable who show marked and significant changes in hostility and emotional maturity consonant with the findings in the overall longitudinal analysis.

In the light of this interpretation, it can be said that 47% of this sample improved in the sense that their hostility decreased and their emotional maturity increased and 53% remained more or less constant with regard to these variables the importance of which has been established in previous analyses. Furthermore, these groups are identifiable by their respective mean scores on the Intropunitive Hostility measure of the H.D.H.Q.

Of course, the High/Low Scorers analyses do not indicate the absolute levels of any variables (apart from the particular variable under scrutiny). However, in this case, we see that 53% of the sample remain relatively stable over a wide range of psychological characteristics, whatever their level on those characteristics might be. It is therefore obvious that rehabilitative efforts may be more fruitfully expended on the remaining 47% identifiable by their high Intropunitive Hostility and that a range of beneficial personality

changes might take place as a result, such as a more masculine and outgoing interest pattern (Gough M-F), more emotional maturity (16 P.F., C), less worry-proneness (16 P.F., O) and an overall reduction in hostility (H.D.H.Q.).

High/Low Use Made of Prison Educational Facilities

Results (Personality Variables)

Table 15 sets out the mean personality variable differences and their standard deviations for the High and Low Use Made of Prison Educational Facilities groups.

The results are as follows:-

(i) High users decrease in Gough's Femininity measure significantly ($p < .05$) more than low users.

(ii) Low users decrease in 16 P.F. Factor B (Intelligence) significantly ($p < .05$) more than high users.

(iii) High users increase in 16 P.F. Factor L (Suspicion) significantly ($p < .01$) more than low users.

(iv) Low users have served significantly ($p < .001$) longer total imprisonment than high users.

Discussion

Perhaps the most important of the four results in this section is that low users have served longer total imprisonment than high users. The mean total imprisonment served by high users is, in fact, 5.11 years compared with 8.65 years for low users. This is consistent with the cross sectional findings with regard to the Social and Criminological variables. As can be seen in Table 8, the use made of prison educational facilities was highest in Group 2, which comprised men who had served periods of imprisonment

TABLE 15

High/Low Use Made of Prison Educational Facilities
x Personality Variables

		Low Use (Category 1 & 2) N = 103			High Use (Category 3 & 4) N = 51)	
E.P.1.	N	- 1.23	3.56		- 0.63	3.25
	E	- 0.57	2.76		- 0.14	2.65
	L	- 0.31	1.37		- 0.29	1.33
GOUGH	M-F	- 0.34	3.81	.05*	- 1.67	3.69
16 P.F.	A	- 0.20	1.42		- 0.20	1.74
	B	- 0.50	2.09	.05*	0.18	1.76
	C	0.62	2.00		0.37	1.76
	E	0.11	2.17		- 0.08	1.61
	F	- 0.28	2.12		- 0.06	1.78
	G	- 0.15	2.03		0.12	2.10
	H	0.04	1.36		- 0.08	1.52
	I	- 0.11	2.14		- 0.49	2.05
	L	- 0.13	2.01	.01**	0.67	1.42
	M	0.27	1.92		0.20	1.68
	N	- 0.08	2.32		- 0.20	2.15
	O	- 0.28	1.80		- 0.57	1.55
	Q_1	0.59	2.09		0.37	2.29
	Q_2	- 0.31	1.92		- 0.10	1.59
	Q_3	- 0.19	2.08		- 0.29	2.48
	Q_4	- 0.47	1.66		- 0.18	1.80
H.D.H.Q.	AH	- 0.35	2.08		- 0.37	2.29
	CO	- 0.03	2.69		- 0.31	2.12
	PH	- 0.49	1.89		- 0.24	1.50
	SC	- 0.63	2.57		- 0.41	2.34
	G	- 0.50	1.59		- 0.41	1.97
	TH	- 2.05	6.18		- 1.78	6.45
	EP	- 0.86	4.65		- 0.92	4.15
	IP	- 1.60	5.88		- 1.24	5.65
	DH	- 0.92	6.97		- 0.31	5.13
TOTAL IMPRISONMENT		8.65	7.49	.001***	5.11	2.80

ranging from 4 years to 5 years 11 months (see Table 2). The difficulty which arises in interpretation of these results is therefore that they are probably transient effects in the context of a longer prison sentence, possibly because the enthusiasm for this sort of activity is difficult to sustain in the circumstances of a long period of imprisonment. However, since these results do not implicate any of the variables found to be of importance in the longitudinal analysis, or indeed, in the cross-sectional analysis, it is therefore valid to examine them as being genuine, albeit transient, results of the amount of involvement in prison educational activities.

High users tend to become significantly less feminine in their interest patterns over the longitudinal interval than Low users. This would seem to indicate that the effect of prison educational activities is, in some degree, to imbue in its students those characteristics, considered positive in this society, which distinguish the low scorer on Gough's Femininity Scale, such as robustness, decisiveness, the tendency to initiate and so forth. High users also tend to show a slight gain in 16 P.F. Factor B(Intelligence) as opposed to a drop on this variable by Low users. And High users gain in 16 P.F. Factor L(Suspicion) as compared with Low users whose scores tend to decrease slightly.

It cannot be said that any of these results are surprising or that prison education is achieving anything radically different from other forms of education; decisiveness, intelligence and reasonable scepticism are legitimate aims and are, by the general consent of this society, desirable facets of personality. Unfortunately, in the prison situation, these effects appear to wax and wane during a long sentence so that the initial benefit is lost. It is one of the many difficult tasks facing prison staff to be able to find ways of sustaining motivation for this sort of activity so that it can continue to benefit the prisoner throughout his sentence.

High/Low Use Made of General Prison Facilities

Results (Personality Variables)

Table 16 sets out the mean personality variable differences and their standard deviations for the High and Low Use Made of General Prison Facilities groups.

TABLE 16

High/Low Use Made of General Prison Facilities
x Personality Variables

		Low Use (Category 1 & 2) N = 132			High Use (Category 3) N = 22	
E.P.I.	N	- 1.05	3.31		- 0.95	4.28
	E	- 0.43	2.78		- 0.41	2.42
	L	- 0.34	1.42		- 0.09	0.85
GOUGH	M-F	- 0.70	3.72		- 1.23	4.38
16 P.F.	A	- 0.11	1.50		- 0.77	1.62
	B	- 0.28	2.05		- 0.23	1.76
	C	0.62	1.92		0.05	1.89
	E	0.12	2.07		- 0.41	1.44
	F	- 0.13	2.00		- 0.68	2.05
	G	- 0.13	1.93		0.36	2.66
	H	- 0.01	1.39		0.05	1.58
	I	- 0.13	2.15		- 0.86	1.82
	L	0.14	1.92		0.09	1.56
	M	0.15	1.81		0.82	1.92
	N	- 0.16	2.30		0.14	2.07
	O	- 0.40	1.71		- 0.23	1.81
	Q_1	0.39	2.09		1.32	2.40
	Q_2	- 0.23	1.80		- 0.27	1.93
	Q_3	- 0.23	2.26		- 0.23	1.95
	Q_4	- 0.42	1.65		- 0.09	2.04
H.D.H.Q.	AH	- 0.39	2.14		- 0.18	2.23
	CO	0.02	2.51		- 1.00	2.37
	PH	- 0.36	1.80		- 0.64	1.64
	SC	- 0.48	2.48		- 1.00	2.56
	G	- 0.47	1.64		- 0.45	2.17
	TH	- 1.74	6.32		- 3.27	5.82
	EP	- 0.73	4.51		- 1.82	4.25
	IP	- 1.32	5.71		- 2.45	6.26
	DH	- 0.73	6.31		- 0.64	7.09
TOTAL IMPRISONMENT		7.77	6.94	.02*	5.70	2.75

The results are as follows:-

(i) Low users have scored significantly ($p < .02$) longer total imprisonment than high users.

There were no significant differences between any of the personality variable differences of the two groups.

Discussion

These results highlight the importance of what has just been said in respect of prison education. "General Prison Facilities" includes television, recreational facilities and most of what many would consider "the frills" of prison life. The high users of these facilities are a distinct group (N = 22 vs N = 132) and yet they do not seem to have altered in personality significantly in comparison with those who use these facilities only moderately or little at all. This seems to indicate the importance of educational facilities, above all, as vehicles of positive change in prison.

Of course, it would not be logical to deduct from these data that T.V. facilities, billiards and so forth are worthless in terms of the ultimate goals of imprisonment. It may well be that the 22 High users were those men whose need for this sort of activity was greatest and who were prevented from developing negative characteristics by their heavy involvement. If this were the case then both types of facility would have a very important function in the running of prison life.

High/Low Variables x Attitudinal Changes

Results

Tables 17a, 17b, 17c, 17d and 17e give the details of the High/Low Analysis for changes in attitude over the longitudinal interval.

TABLE 17a

High/Low E.P.1. Neuroticism x Attitudinal Variable Differences

	Low E.P.1. N (13-) N = 73		High E.P.1. N (14+) N = 81	
Marriage	0.03	2.42	- 0.15	2.59
Me	- 0.06	1.00	0.04	1.59
Police	0.03	1.05	0.10	1.14
Work	- 0.03	1.41	0.08	1.06
Father	- 0.04	1.47	0.29	1.90
Prison Officers	- 0.04	2.42	0.34	2.55
The Law	- 0.05	1.39	0.14	1.58
Mother	- 0.16	0.99	- 0.12	1.16
Prisoners	0.17	1.53	- 0.11	1.42
Home	0.22	1.79	0.09	3.08
Women	0.07	1.07	- 0.02	1.33
Prison	0.27	1.29	0.02	1.38
Total Imprisonment	7.74	7.49	7.23	5.56

TABLE 17b

High/Low E.P.1. Extraversion x Attitudinal Variable Differences

	Low E.P.1. E (13-) N = 79		High E.P.1. E (14+) N = 75	
Marriage	- 0.26	2.75	0.15	2.23
Me	- 0.02	1.65	0.00	0.91
Police	0.03	1.19	0.10	0.99
Work	0.06	1.13	- 0.02	1.34
Father	0.38	1.76	- 0.13	1.63
Prison Officers	- 0.04	2.50	0.37	2.47
The Law	- 0.06	1.72	0.17	1.20
Mother	- 0.20	1.15	- 0.07	1.01
Prisoners	0.04	1.54	- 0.01	1.42
Home	0.00	2.88	0.31	2.15
Women	0.00	1.36	0.05	1.04
Prison	0.00	1.49	0.29	1.16
Total Imprisonment	7.88	6.21	7.05	6.86

TABLE 17c

High/Low H.D.H.Q. Intropunitive Hostility
x Attitudinal Variable Differences

	Low H.D.H.Q. IP (13-) N = 81			High H.D.H.Q. IP (14+) N = 73	
Marriage	- 0.14	2.68		0.03	2.31
Me	- 0.15	1.66		0.15	0.85
Police	- 0.09	1.14		0.24	1.02
Work	- 0.06	1.40		0.12	1.02
Father	- 0.06	1.76		0.35	1.63
Prison Officers	- 0.01	2.66		0.35	2.29
The Law	0.02	1.49		0.09	1.50
Mother	- 0.15	1.13		- 0.12	1.02
Prisoners	0.05	1.44		- 0.01	1.53
Home	0.27	2.74		0.02	2.33
Women	- 0.13	1.20		0.19	1.20
Prison	0.05	1.14		0.24	1.54
Total Imprisonment	7.24	6.80		7.73	6.25

TABLE 17d

High/Low Use Made of Prison Educational Facilities
x Attitudinal Variable Differences

	Low Use (Category 1 & 2) N = 103			High Use (Category 3 & 4) N = 51)	
Marriage	0.04	2.39		- 0.26	2.74
Me	- 0.05	1.52		0.07	0.89
Police	0.11	1.08		- 0.03	1.13
Work	0.08	1.36		- 0.08	0.92
Father	0.02	1.91		0.35	1.19
Prison Officers	0.36	2.62		- 0.24	2.16
The Law	0.22	1.50	.05*	- 0.29	1.43
Mother	- 0.10	1.08		- 0.21	1.08
Prisoners	0.08	1.45		- 0.11	1.53
Home	0.19	2.42		0.07	2.81
Women	0.12	1.22		- 0.16	1.17
Prison	0.27	1.44		- 0.11	1.11
Total Imprisonment	8.65	7.49	.001***	5.11	2.80

TABLE 17e

High/Low Use Made of General Prison Facilities
x Attitudinal Variable Differences

	Low Use (Category 1 & 2) N = 132			High Use (Category 3) N = 22	
Marriage	- 0.03	2.55		- 0.24	2.31
Me	0.00	1.38		- 0.07	1.08
Police	0.08	1.12		- 0.06	0.98
Work	0.02	1.24		0.03	1.22
Father	0.07	1.80		0.49	1.05
Prison Officers	0.25	2.54		- 0.37	2.15
The Law	0.09	1.54		- 0.16	1.16
Mother	- 0.13	1.15		- 0.18	0.59
Prisoners	0.04	1.50		- 0.12	1.36
Home	0.17	2.65		0.05	1.91
Women	0.04	1.23		- 0.09	1.09
Prison	0.18	1.38		- 0.08	1.07
Total Imprisonment	7.77	6.94	.02*	5.70	2.75

Discussion

These data underline the point already made that attitudes are far more enduring characteristics than has been traditional to assume. It must be remembered, of course, that these data say nothing of the attitudes, per se, of the groups of high and low scorers concerned, but merely how these have developed and changed in regard to each other during the longitudinal interval. But the fact is that none of these groups of high and low scorers have changed any of their measured attitudes significantly. These figures simply represent random variations around a difference between test and retest of 0. Since, as has been said already, it is the intention of the prison authorities to change the attitudes of prisoners in some positive way, then the data from this study have suggested repeatedly that that may be an extremely difficult task.

CHAPTER FIVE

OVERALL SUMMARY OF RESULTS

Cross-Sectional Analysis

Personality

(i) Hostility, especially hostility directed towards the self, shows the most marked and consistent relationship with imprisonment. There are cross-sectional trends in H.D.H.Q. Guilt scores, Group 4 scoring significantly ($p < .02$) higher than Group 1, in Intropunitive Hostility (reflecting both Guilt and Self-criticism), Group 4 scoring significantly ($p < .05$) higher than Group 1, and in Acting-out and Total Hostility, although there are no significant differences between the groups on either of these latter measures.

(ii) There is a trend of declining Extraversion, Group 4 scoring significantly lower ($p < .05$) than Group 1 on the E.P.I. Extraversion Scale.

(iii) All groups score significantly higher on H.D.H.Q. Total Hostility than a sample of normal males reported by Caine, Foulds and Hope (1967).

Attitudes

(i) There is a decline in self-evaluation associated with imprisonment. For the concept "Myself", Group 3 scored significantly ($p < .001$) lower than Group 1 and significantly ($p < .05$) lower than Group 2.

(ii) For the concept "Work", Group 4 scored significantly ($p < .05$)

lower than Group 1.

(iii) For the concept "Father", Group 4 scored significantly ($p < .05$) lower than Group 1.

Social and Criminological Background

(i) Group 4 had a significantly lower outside job level than Group 1 ($p < .05$) and Group 2 ($p < .02$).

(ii) Group 4 had significantly less regular employment than Group 1 ($p < .05$).

(iii) Group 4 was significantly younger at first conviction than Groups 2 & 3 ($p < .01$) and Group 4 ($p < .001$).

(iv) Group 4 had significantly more previous convictions than Group 3 ($p < .01$) and Groups 1 & 2 ($p < .001$).

(v) Group 4 had significantly more serious previous convictions than Group 2 ($p < .01$) and Groups 1 & 3 ($p < .001$).

(vi) Group 4 had served significantly more previous imprisonment than Groups 1, 2 and 3 ($p < .001$).

(vii) In terms of total imprisonment served, all the differences between the groups were significant ($p < .001$).

(viii) Group 4 had been to Borstal or Approved School significantly more often than Groups 1, 2 and 3 ($p < .01$).

(ix) Group 4 were held in significantly "worse" prisons than Group 3 ($p < .01$).

(x) Group 3 had significantly more interesting prison jobs than Group 1 ($p < .02$).

The Longitudinal Analysis

Personality

On retesting -

(i) Prisoners' scores on E.P.I. Neuroticism decreased significantly ($p < .001$).

(ii) Prisoners' scores on E.P.I. Lie Scale decreased significantly ($p < .01$).

(iii) Prisoners' scores on the Gough Femininity Scale decreased significantly ($p < .01$).

(iv) Prisoners' scores on 16 P.F. Factor C (Emotional Maturity) increased significantly ($p < .001$).

(v) Prisoners' scores on 16 P.F. Factor O (Worry-proneness) decreased significantly ($p < .01$).

(vi) Prisoners' scores on 16 P.F. Factor Q_1 (Radicalism) increased significantly ($p < .01$).

(vii) Prisoners' scores on 16 P.F. Factor Q_4 (Tension) decreased significantly ($p < .01$).

(viii) Prisoners' scores on H.D.H.Q. Paranoid Hostility decreased significantly ($p < .01$).

(ix) Prisoners' scores on H.D.H.Q. Guilt decreased significantly ($p < .001$).

(x) Prisoners' scores on H.D.H.Q. Total Hostility decreased significantly ($p < .001$).

(xi) Prisoners' scores on H.D.H.Q. Intropunitive Hostility decreased significantly ($p < .001$).

(xii) The Comparison Group's scores on 16 P.F. Factor A (Sociability) decreased significantly ($p < .05$).

Attitudes

There were no significant changes of attitude during the longitudinal interval by either the prison group of the comparison group.

High Scorers/Low Scorers Analysis

High/Low E.P.I. Neuroticism

(i) High E.P.I. N scorers decrease in E.P.I. N significantly ($p < .001$) more than low E.P.I. N Scorers.

(ii) High scorers decrease in 16 P.F. Factor A (Sociability) significantly ($p < .05$) more than low scorers.

(iii) High scorers increase in 16 P.F. Factor C (Emotional Maturity) significantly ($p < .02$) more than low scorers.

(iv) High scorers decrease in 16 P.F. Factor O (Worry-proneness) significantly ($p < .05$) more than low scorers.

High/Low E.P.I. Extraversion

(i) High E.P.I. Extraversion scorers decrease in E.P.I. Extraversion significantly ($p < .001$) more than low E.P.I. Extraversion scorers.

(ii) High scorers decrease in 16 P.F. Factor H (Adventurousness) significantly ($p < .02$) more than low scorers.

(iii) Low scorers decrease in 16 P.F. Factor O (Worry-proneness) significantly ($p < .05$) more than high scorers.

(iv) Low scorers become significantly ($p < .05$) more extrapunitive (H.D.H.Q. Direction of Hostility) than high scorers.

High/Low H.D.H.Q. Intropunitive Hostility

(i) High H.D.H.Q. Intropunitive Hostility scorers decrease in Gough's Femininity measure significantly ($p < .01$) more than low scorers.

(ii) High scorers increase in 16 P.F. Factor C (Emotional Maturity) significantly ($p < .01$) more than low scorers.

(iii) High scorers decrease in 16 P.F. Factor O (Worry-proneness) significantly ($p < .01$) more than low scorers.

(iv) High scorers decrease significantly more than low scorers in H.D.H.Q. Self Criticism ($p < .001$), Guilt ($p < .001$), Total Hostility ($p < .001$) and become significantly ($p < .001$) more extrapunitive (H.D.H.Q. (Direction of Hostility) than low scorers.

High/Low Use Made of Prison Educational Facilities

(i) High users decrease in Gough's Femininity measure significantly ($p < .05$) more than low users.

(ii) Low users decrease in 16 P.F. Factor B (Intelligence) significantly ($p < .05$) more than high users.

(iii) High users increase in 16 P.F. Factor L (Suspicion) significantly ($p < .01$) more than low users.

(iv) Low users have served significantly ($p < .001$) longer total imprisonment than high users.

High/Low Use Made of General Prison Facilities

(i) Low users have served significantly ($p < .02$) longer total imprisonment than high users.

CONCLUSIONS

Imprisonment is a double-edged sword. On the one hand, it represents society's punishment inflicted upon those individuals who have been caught violating the currently most valued of social norms; on the other hand, it represents society's attempt to change these individuals in such a way that they will be less likely to contravene the social norms upon release. The motivation for this "rehabilitative" aspect is not clear and any one interpretation would probably not enjoy universal consensus. It may be economic, philanthropic or simply be generated by fear. The most important questions, however are whether these two aims can co-exist effectively in prison and if so, under what conditions?

Essentially, the punitive element of imprisonment should be passive since we now accept that criminals go to prison as punishment and not for punishment. However, it is naive to suppose that it is a purely passive aspect, since the authorities can and do change the conditions of prisons and alter the rules and regulations in ways which may make life better or worse for the inmates in their care. Indeed the system in Britain is so diverse in its nature, from "open" prisons to walled, strict institutions where sewing mailbags may be the only available occupation in certain circumstances, that the term "passive" ceases to retain its usual implications. Equally, the rehabilitative aspect of imprisonment should be active since one would assume that it must take a great deal of ingenuity and resources both within prison and after release, to alter a criminal's way of life to one which society at large would find acceptable. Again, however, this naive interpretation does not find much support in reality. It is true to say that certain individual prisons do make great efforts, based on reasonable theoretical grounds, to provide the inmate with an alternative outlook on life and to encourage him to use it. The majority, however, do not. They rely on that most passive of all influences - time - during which they hope that their charges will change their ways and lead better lives on their

release. Meanwhile, they provide them with whatever recreational and educational facilities they can. This is not to say that, for instance, education should not be considered as a legitimate part of rehabilitation, however it is defined, but rather that this is only one element in the equation and not necessarily the most important in most cases, since the vast majority of poorly educated men are not criminals.

It is however, much easier to criticise the prison authorities for their shortcomings than to suggest realistic ways of radically improving the system, given the chronic shortage of suitable establishments, the age of most of the prisons which do exist and the ever increasing number of inmates. The problem is essentially two-fold. First, in a society whose values are changing relatively quickly, how does one decide which values ought to be prominently taught in any system of rehabilitation? Second, given the current state of psychological knowledge, which theory or theories provide the most potentially fruitful base for a system of rehabilitation in the prison system today? In view of the perplexity of the issues raised by these questions it is merely churlish to criticise the prison authorities for not striking out in a new direction.

The present study has, of course, accepted the situation as it is and has addressed itself to examining the status quo. In general, the findings have indicated that the present system seems to generate a state of affairs, in long-term prisoners at least, which could not be considered beneficial to society or to prisoners themselves, in almost any usual interpretation of beneficence.

The factor-analysis of the personality data have indicated that the factors which are normally important in determining individual differences (such as extraversion) have been relegated to less important positions in the factor-structure and have been superseded by factors in which hostility, both intropunitive and extrapunitive, features strongly. Hostility appears to increase as a function of imprisonment and even the least hostile groups are clearly and significantly more hostile than the normal population.

Extraversion appears to decline as a function of imprisonment. In addition, it appears that those highest on this dimension are most likely to be vulnerable not only to this particular effect, but also to a change in certain personality aspects (over the test-retest period) which tend to characterise those whom the Parole Board prefer to detain rather than to release. In short, there is some evidence to suggest that those who score highly on the E.P.I. Extraversion Scale are most likely to be affected by the experience of imprisonment in terms of declining in extraversion and possibly in terms of developing characteristics which may be detrimental to their chances of release.

It was found that people low on H.D.H.Q. Intropunitive Hostility remained remarkably stable in all their personality characteristics over the test-retest interval while those high on Intropunitive Hostility showed a number of changes for the better. It is therefore argued that rehabilitative efforts are more likely to bring positive results, with those who score highly on this measure, on a range of important characteristics.

In terms of attitudes, which have been shown to be remarkably stable in prison, the most important finding has been that prisoners' attitudes to themselves seem to decline as a function of imprisonment, reflecting a gradual decrease in self-respect, possibly as a result of increasing identification with the prison group. Equally, it is fair to say that imprisonment is not generally achieving its stated aim of influencing the attitudes of prisoners in order to make them more favourably disposed to the concept of work.

The declining attitudes to the concept "Father" and the high divorce rates indicated in the data highlight one of the profound problems of imprisonment which any radical solution must take into account, namely its devastating effects on the families of the men imprisoned. This is not to say that the prison authorities are unaware of the problem or that they have been unwilling to try to alleviate it in certain circumstances, such as

home visits for men nearing the end of sentence or the much mentioned idea of conjugal visits. The problem remains urgent, however.

The data have indicated that beneficial personality changes are associated with heavy involvement in prison education facilities but that these appear to be transient in the context of a long prison sentence. The problem is how to generate enthusiasm for this sort of activity and then how to sustain the interest once generated. This brings us back to the fundamental problem of the uneasy coexistence of the punitive and rehabilitative elements in imprisonment. It is suggested that men can only accept the punitive aspect for so long provided that some sort of rehabilitative effort accompanies it. However, as time goes by and if their response to rehabilitation goes unrewarded either by release on parole or some promise or indication of such a possibility, then the punitive element becomes to be seen as intolerable and what has been gained is lost. The limit of the tolerable duration of punitive element of imprisonment (that is to say, imprisonment itself) is often quoted by both prison staff and inmates as somewhere about 6 years after which inmates rapidly become disillusioned. There is some support for this contention in the data in that those who have served approximately this length of time on present sentence, make significantly fewer Petitions to the Governor than others, which is a reasonable index of their acceptance of their situation.

Finally, it remains only to say that it is hoped that such ideas as have been put forward here will prompt others to examine their attitudes and perhaps, responsibilities towards long-term prisoners.

APPENDIX

THE SEMANTIC DIFFERENTIAL

Instructions

The purpose of this test is to measure the meanings of certain things to various people. In taking this test, please make your judgement on the basis of what these things mean to you.

At the top of each page of this booklet you will find a different subject or topic. Below each subject is a list of adjective scales which we want you to use to indicate what the subject means to you. For example, suppose the subject was TELEVISION and one of the scales was:-

interesting v : Q : s : ___ : s : Q : v uninteresting

All you have to do is to place a mark in one of the spaces between interesting and uninteresting, according to what you think of television. The little letters in the spaces are to help you - v stands for 'very', Q stands for 'quite' and s stands for 'slightly'. The middle space, which has no little letter, should be used if you think the subject (e.g. television) is equally close to (or equally far from) both ends of the scale (e.g. interesting - uninteresting), or if you think the scale is unrelated to the subject.

Important

1. To avoid confusion, please place your marks clearly in the middle of spaces.
2. Be sure you mark every scale on each page.
3. Never put more than one mark on a single scale.

Example:-

FOOTBALL

Dangerous	v	Q	s		s	Q	v	Safe
Dull	v	Q	s		s	Q	v	Exciting
Clean	v	Q	s		s	Q	v	Dirty
Bad	v	Q	s		s	Q	v	Good

Please Note:-

Sometimes you may feel as though you've had the same item before on the test. This will not be the case so do not look back and forth through the items. Do not try to remember how you marked similar items in the test. Make each item a separate and independent judgement. Work as fast as you can. Do not worry or puzzle over individual items. It is your first impressions, your immediate 'feelings' about the items that we want. On the other hand, please do not be careless, because we want your true impressions.

MARRIAGE

Successful	v	Q	s		s	Q	v	Unsuccessful
Unpleasant	v	Q	s		s	Q	v	Pleasant
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Bad	v	Q	s		s	Q	v	Good
Active	v	Q	s		s	Q	v	Passive
Happy	v	Q	s		s	Q	v	Sad
Unimportant	v	Q	s		s	Q	v	Important
Soft	v	Q	s		s	Q	v	Hard
Kind	v	Q	s		s	Q	v	Cruel
Foolish	v	Q	s		s	Q	v	Wise
Slow	v	Q	s		s	Q	v	Fast
Fair	v	Q	s		s	Q	v	Unfair

MYSELF

Foolish	v	Q	s		s	Q	v	Wise
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Cruel	v	Q	s		s	Q	v	Kind
Passive	v	Q	s		s	Q	v	Active
Pleasant	v	Q	s		s	Q	v	Unpleasant
Unsuccessful	v	Q	s		s	Q	v	Successful
Cowardly	v	Q	s		s	Q	v	Brave
Good	v	Q	s		s	Q	v	Bad
Unimportant	v	Q	s		s	Q	v	Important
Fast	v	Q	s		s	Q	v	Slow
Happy	v	Q	s		s	Q	v	Sad
Unfair	v	Q	s		s	Q	v	Fair
Hard	v	Q	s		s	Q	v	Soft

THE POLICE

Wise	v	Q	s		s	Q	v	Foolish
Strong	v	Q	s		s	Q	v	Weak
Cruel	v	Q	s		s	Q	v	Kind
Pleasant	v	Q	s		s	Q	v	Unpleasant
Passive	v	Q	s		s	Q	v	Active
Ungrateful	v	Q	s		s	Q	v	Grateful
Successful	v	Q	s		s	Q	v	Unsuccessful
Cowardly	v	Q	s		s	Q	v	Brave
Bad	v	Q	s		s	Q	v	Good
Important	v	Q	s		s	Q	v	Unimportant
Fast	v	Q	s		s	Q	v	Slow
Dirty	v	Q	s		s	Q	v	Clean
Happy	v	Q	s		s	Q	v	Sad
Hard	v	Q	s		s	Q	v	Soft
Unfair	v	Q	s		s	Q	v	Fair

WORK

Successful	v	Q	s		s	Q	v	Unsuccessful
Unpleasant	v	Q	s		s	Q	v	Pleasant
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Bad	v	Q	s		s	Q	v	Good
Active	v	Q	s		s	Q	v	Passive
Happy	v	Q	s		s	Q	v	Sad
Unimportant	v	Q	s		s	Q	v	Important
Soft	v	Q	s		s	Q	v	Hard
Kind	v	Q	s		s	Q	v	Cruel
Foolish	v	Q	s		s	Q	v	Wise
Slow	v	Q	s		s	Q	v	Fast
Fair	v	Q	s		s	Q	v	Unfair

FATHER

Foolish	v	Q	s		s	Q	v	Wise
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Cruel	v	Q	s		s	Q	v	Kind
Passive	v	Q	s		s	Q	v	Active
Pleasant	v	Q	s		s	Q	v	Unpleasant
Unsuccessful	v	Q	s		s	Q	v	Successful
Cowardly	v	Q	s		s	Q	v	Brave
Good	v	Q	s		s	Q	v	Bad
Unimportant	v	Q	s		s	Q	v	Important
Fast	v	Q	s		s	Q	v	Slow
Happy	v	Q	s		s	Q	v	Sad
Unfair	v	Q	s		s	Q	v	Fair
Hard	v	Q	s		s	Q	v	Soft

PRISON OFFICERS

Wise	v	: Q	: s	: ___	: s	: Q	: v	Foolish
Strong	v	: Q	: s	: ___	: s	: Q	: v	Weak
Cruel	v	: Q	: s	: ___	: s	: Q	: v	Kind
Pleasant	v	: Q	: s	: ___	: s	: Q	: v	Unpleasant
Passive	v	: Q	: s	: ___	: s	: Q	: v	Active
Ungrateful	v	: Q	: s	: ___	: s	: Q	: v	Grateful
Successful	v	: Q	: s	: ___	: s	: Q	: v	Unsuccessful
Cowardly	v	: Q	: s	: ___	: s	: Q	: v	Brave
Bad	v	: Q	: s	: ___	: s	: Q	: v	Good
Important	v	: Q	: s	: ___	: s	: Q	: v	Unimportant
Fast	v	: Q	: s	: ___	: s	: Q	: v	Slow
Dirty	v	: Q	: s	: ___	: s	: Q	: v	Clean
Happy	v	: Q	: s	: ___	: s	: Q	: v	Sad
Hard	v	: Q	: s	: ___	: s	: Q	: v	Soft
Unfair	v	: Q	: s	: ___	: s	: Q	: v	Fair

THE LAW

Successful	v	Q	s		s	Q	v	Unsuccessful
Unpleasant	v	Q	s		s	Q	v	Pleasant
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Bad	v	Q	s		s	Q	v	Good
Active	v	Q	s		s	Q	v	Passive
Happy	v	Q	s		s	Q	v	Sad
Unimportant	v	Q	s		s	Q	v	Important
Soft	v	Q	s		s	Q	v	Hard
Kind	v	Q	s		s	Q	v	Cruel
Foolish	v	Q	s		s	Q	v	Wise
Slow	v	Q	s		s	Q	v	Fast
Fair	v	Q	s		s	Q	v	Unfair

MOTHER

Foolish	v	Q	s		s	Q	v	Wise
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Cruel	v	Q	s		s	Q	v	Kind
Passive	v	Q	s		s	Q	v	Active
Pleasant	v	Q	s		s	Q	v	Unpleasant
Unsuccessful	v	Q	s		s	Q	v	Successful
Cowardly	v	Q	s		s	Q	v	Brave
Good	v	Q	s		s	Q	v	Bad
Unimportant	v	Q	s		s	Q	v	Important
Fast	v	Q	s		s	Q	v	Slow
Happy	v	Q	s		s	Q	v	Sad
Unfair	v	Q	s		s	Q	v	Fair
Hard	v	Q	s		s	Q	v	Soft

PRISONERS

Wise	v	Q	s		s	Q	v	Foolish
Strong	v	Q	s		s	Q	v	Weak
Cruel	v	Q	s		s	Q	v	Kind
Pleasant	v	Q	s		s	Q	v	Unpleasant
Passive	v	Q	s		s	Q	v	Active
Ungrateful	v	Q	s		s	Q	v	Grateful
Successful	v	Q	s		s	Q	v	Unsuccessful
Cowardly	v	Q	s		s	Q	v	Brave
Bad	v	Q	s		s	Q	v	Good
Important	v	Q	s		s	Q	v	Unimportant
Fast	v	Q	s		s	Q	v	Slow
Dirty	v	Q	s		s	Q	v	Clean
Happy	v	Q	s		s	Q	v	Sad
Hard	v	Q	s		s	Q	v	Soft
Unfair	v	Q	s		s	Q	v	Fair

HOME

Successful	v	Q	s		s	Q	v	Unsuccessful
Unpleasant	v	Q	s		s	Q	v	Pleasant
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Bad	v	Q	s		s	Q	v	Good
Active	v	Q	s		s	Q	v	Passive
Happy	v	Q	s		s	Q	v	Sad
Unimportant	v	Q	s		s	Q	v	Important
Soft	v	Q	s		s	Q	v	Hard
Kind	v	Q	s		s	Q	v	Cruel
Foolish	v	Q	s		s	Q	v	Wise
Slow	v	Q	s		s	Q	v	Fast
Fair	v	Q	s		s	Q	v	Unfair

WOMEN

Wise	v	Q	s		s	Q	v	Foolish
Strong	v	Q	s		s	Q	v	Weak
Cruel	v	Q	s		s	Q	v	Kind
Pleasant	v	Q	s		s	Q	v	Unpleasant
Passive	v	Q	s		s	Q	v	Active
Ungrateful	v	Q	s		s	Q	v	Grateful
Successful	v	Q	s		s	Q	v	Unsuccessful
Cowardly	v	Q	s		s	Q	v	Brave
Bad	v	Q	s		s	Q	v	Good
Important	v	Q	s		s	Q	v	Unimportant
Fast	v	Q	s		s	Q	v	Slow
Dirty	v	Q	s		s	Q	v	Clean
Happy	v	Q	s		s	Q	v	Sad
Hard	v	Q	s		s	Q	v	Soft
Unfair	v	Q	s		s	Q	v	Fair

PRISON

Successful	v	Q	s		s	Q	v	Unsuccessful
Unpleasant	v	Q	s		s	Q	v	Pleasant
Strong	v	Q	s		s	Q	v	Weak
Clean	v	Q	s		s	Q	v	Dirty
Bad	v	Q	s		s	Q	v	Good
Active	v	Q	s		s	Q	v	Passive
Happy	v	Q	s		s	Q	v	Sad
Unimportant	v	Q	s		s	Q	v	Important
Soft	v	Q	s		s	Q	v	Hard
Kind	v	Q	s		s	Q	v	Cruel
Foolish	v	Q	s		s	Q	v	Wise
Slow	v	Q	s		s	Q	v	Fast
Fair	v	Q	s		s	Q	v	Unfair

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