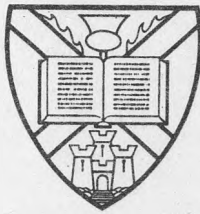


CHANGES IN PSYCHOLOGICAL
STATE IN CHARACTER
DISORDERED AND NEUROTIC
PATIENTS

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1969



SUMMARY OF THESIS

CHANGES IN PSYCHOLOGICAL STATE IN CHARACTER DISORDERED AND NEUROTIC PATIENTS

This study was prompted by the suggestion (Foulds, 1967) that hospitalized female character disorders tend to present with an "exaggerated" degree of mental suffering and that they would possibly show a markedly rapid "improvement" as assessed by psychological tests. In view of the poor prognosis usually carried by these patients it was considered worthwhile to compare the way in which character disorders and a control group of neurotics reacted to hospitalization. It was hoped that such an investigation might cast light on the nature of character disorder. Because of the confusion existing in the area of personality disorder, and because this study followed from Foulds' work, it was decided to select the character disorders on the basis of a scale of the Symptom Sign Inventory (SSI) which attempts to identify persons having longstanding neurotic conditions marked by interpersonal difficulties, plaintiveness and the arousal of antipathy in those who treat them.

The relationship of these character disorders to the McCords (1964) type of psychopathy was discussed and previous studies involving the SSI character disorder scale were also reviewed, as was the literature on tests used in the present study.

Neurotic and character disordered women in three wards of the Royal Edinburgh Hospital were tested within three days of admission and again two weeks later. Retesting was carried out on twelve neurotics and eleven character disorders. The tests used provided symptom, attitude and trait measures and were chosen for their relevance to previous work.

The main findings were these:- 1) at initial testing character disorders had more symptoms, higher hostility and anxiety and were more expedient and socially naive than neurotics. 2) from test to retest, character disorders declined more than neurotics on symptom measures mainly due to a falling off of symptoms in anxiety and depression but there were no significant changes in general hostility or anxiety. 3) the scores of character disorders fell on acting-out hostility and increased on delusional hostility. 4) at retest only four character disorders would still have been classed as such on the SSI and these patients scored higher than the others on overt, symptomatic anxiety and delusional hostility; they were also more guilt-prone, apprehensive and naive.

It was suggested that character disorders responded to a crisis with a display of symptoms of depression and anxiety which subsided rapidly, giving the appearance of improvement, but leaving chronic symptomatology and personality problems closely associated with very poor interpersonal relationships.

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Chapter 1

A. Introduction

That group of psychiatric patients described as personality disorders or psychopathic personalities has long been regarded with pessimism by psychiatrists. Writing of a group of hysterical psychopaths, Forrest (1967) commented that, "Most of these patients carry a poor prognosis: further hospitalization, drug or alcohol problems and attempted suicide can be anticipated. Response to treatment is very limited and the amount of medical and nursing time and bed occupancy which these patients demand is quite alarming."

Although, strictly speaking, no psychiatric symptomatology is needed to make the diagnosis of personality disorder, nevertheless, as Forrest (1967) and Foulds (1967) have pointed out, these patients tend to present with more symptomatology than might be expected on clinical grounds. Foulds has argued that these patients are differently motivated and that since they (in particular female hysterical psychopaths) seem to have "an almost unlimited supply of self-pity, this motivation may well be the concomitant desire to evoke the pity of others." He suggested that this "exaggeration" of the degree of mental suffering might correspond to the "hello" responses.

With this in mind and drawing on his clinical impressions, Philip (personal communication) suggested that it would be a worthwhile exercise to compare the way in which personality disordered and neurotic patients respond to being hospitalized. It was decided, therefore, to test groups of personality disordered and neurotic patients as soon after admission as possible (to maximise any differences in motivation between the groups) and to retest

them soon afterwards in order to study and compare the changes, if any, which had occurred. In line with the implications of Foulds (1967), it was thought that the personality disordered group would show a markedly rapid improvement in mental state as assessed by psychological tests. It was considered that this investigation could have implications for treatment and be of interest in terms of understanding the nature of this disorder (especially its plaintive, self-pitying and manipulative aspects).

The class of Personality Disorder, as described by the American Psychiatric Association (1968) and the World Health Organization (1968), has had a confusing history. Members of this class have been variously described as psychopaths, character disorders, character neurotics, immature or inadequate personalities, sociopaths, conduct or behaviour disorders and so forth. Different writers have used the same terminology for different psychological states and different terminology for the same psychological state.

Historically, greatest attention has been paid to the most socially troublesome members of the class of Personality Disorders - the "psychopaths" (McCord and McCord, 1964) with their propensity for aggressive, antisocial and criminal acts. Unfortunately, those other abnormal personalities which are less socially deviant have, perhaps, tended to be regarded similarly because of the widespread use of the term "psychopath" with all its implications.

McCord and McCord (1964) traced the development of the concept of psychopathy from the early 1800's. They cite how Prichard in 1835 introduced the term "moral insanity" to designate criminals who, though of unimpaired

intellect, showed an absence of control and ethical sense. Lombroso described the "moral imbecile" as "guiltless, highly aggressive, boastful, impulsive, peculiarly insensitive to social criticism and physical pain." Towards the end of the nineteenth century Koch introduced the term "constitutional psychopathic inferiority" and throughout the present century "psychopathic personality" has been widely used. The concept of psychopathy has sometimes been extended to cover a heterogeneous group of psychological disorders and asocial behaviours, so losing much of its meaning and usefulness. Among those who sought to sharpen its definition were Cleckley (1955) and McCord and McCord (1964).

Cleckley (1955) distinguished a core group of "true" or "primary" psychopathic personalities. He emphasized the personality traits of guiltlessness, incapacity for "object love", emotional shallowness, egocentricity, purposelessness and impulsivity. He also pointed out the psychopath's superficial charm (sometimes), inability to learn from experience and tendency to seek external control as well as stressing that the psychopath suffers from "semantic dementia" in that, although able to understand the strictures of society and parrot them with skill, he dissociates what he says from what he does.

McCord and McCord (1964) also limited "psychopath" to "an antisocial, aggressive, highly impulsive person who feels little or no guilt and is unable to form lasting bonds of affection with other human beings." This definition has the advantage of concentrating on the personality disorder and not on the socially unacceptable behaviour. The McCords argue that there are other socially deviant persons who "do not share the character

structure of the true psychopathic personality"; and again that "guiltlessness is one of the central features of psychopathy not only does this deficiency of guilt set the psychopath apart from the normal man, it also distinguishes him from other cultural deviants. Non-psychopathic criminals, for example, internalise an underworld code of morality." The authors add that "unless an individual exhibits the two critical psychopathic traits - guiltlessness and lovelessness - he should not be categorized as psychopathic."

Most writers seem to agree that such a group of psychopaths (mainly males) does exist and, in this discussion, "psychopath" will be taken to refer to this group unless otherwise stated.

However, the psychopaths represent only a minority of the persons who may be considered to have personality disorders and they are not of primary interest in this study. As explained fully in Chapter 3, because of the difficulty psychiatrists experience in differentially diagnosing neurotic and predominantly personality disorders, and for other practical reasons, it was decided to adopt a standardized procedure for the classification of patients for this study so that it would be possible to clearly specify the group of persons selected. Since this research follows from earlier work by Foulds, the Symptom Sign Inventory, or SSI, (Foulds and Hope, 1968) was employed; this is described in Chapter 2. The SSI has an empirically derived Character Disorder Scale which satisfactorily differentiates between "character disorders" and all other groups of the personally disturbed and the normal. Foulds' use of "Character Disorder" distinguishes the group under study from the more restricted category of "Psychopathy" as defined by

Cleckley (1955), McCord and McCord (1964), Craft (1960) and others. The criterion group of female character disorders were described clinically in Foulds (1967) and Robin (1965) using the term "psychopath", however, as follows:-

" 'Psychopath' implies Personality Disorder therefore behaviour disturbance is present from childhood or early adolescence. Such symptomatology as is shown may represent a continuous and chronic inability to adjust and may appear as persistent neurotic symptomatology, usually with a rather shallow emotional reactivity, or recurrent explosions. Many cases have a combination of subjective disturbance and social difficulties. I should think the sample of psychopaths with which you are concerned would be rather biased to the group usually called 'hysterical psychopaths'." Foulds comments that "such cases are recorded in most Mental Hospitals with a frequency which is far beyond that of cases which would meet the McCords criteria." In this discussion "character disorder" refers to this group of patients, unless otherwise stated.

In comparing character disorders and neurotics an inconsistency arises in that while the classification as character disorder is primarily related to personality traits, the classification as neurotic is primarily related to psychiatric symptomatology. Foulds (1965) has stressed the differences between traits and symptoms - traits being more enduring, universal and egosyntonic than symptoms which, in the neurotic, are closely associated with environmental stress. Whereas personality traits emphasize the continuities in behaviour, symptoms and signs of neurotic or psychotic illness signal a

disruption of continuity.

No symptoms are required to make the diagnosis of Personality Disorder. The abnormality is in the personality itself and consists of quantitatively deviant, enduring patterns in the person's observed behaviour. This distortion of personality develops early in life and becomes the characteristic way in which the person copes with his environment and, in particular, handles his interpersonal relationships. By comparison, the neurotic is recognised as having symptoms which "signal a disruption of continuity, arising from the failure of defence dynamisms adequately to reorganize conflicting forces, to maintain a sufficient integration of the self-concept to enable the individual to continue to be in satisfying relationships with other persons" (Foulds, 1965).

Both personality disorders and neurotics have abnormal personalities in the sense of deviating from the mean of the general population on certain traits (e.g., McAllister, 1968) but, as Slater and Roth (1969) argue, such differences are quantitative, not qualitative. Though the personality of the character disorder may differ from that of the neurotic and both differ from the normal, yet they are comparable in terms of the same dimensions.

Although personality disorder does not imply symptoms and need not lead to any distress, those persons here called character disorders do produce symptoms, are distressed and are appealing for help (e.g., Robin, 1965; Forrest, 1967). Thus at the time when these character disorders are admitted to hospital there is usually a disruption of the continuity of behaviour; i.e., there are aspects of their behaviour (symptoms) which are in addition to, and qualitatively different from, those features which would

lead to a diagnosis of personality disorder. This disruption of continuity is similar to that of the neurotics. Indeed Foulds (1965) has remarked that "probably the majority of psychopaths who are hospitalised are suffering from a neurotic illness and should be classified as, for example, depression or hysteria in a psychopathic personality." Certainly the argument so far is in accord with Slater and Roth's case for considering the personality disorders and the neuroses together. It appears then that for the groups being considered in this study, the inconsistency of the classifications (i.e., character disorder and neurosis) reflects differing clinical emphases (leading to different terminology) rather than a qualitative difference in the psychological phenomena (as between traits and symptoms). So long, therefore, as both personality (continuity) and symptomatology (discontinuity) are considered and treated separately, it would seem to be a legitimate exercise to compare character disorders and neurotics.

The case as stated, though following Slater and Roth's tendency to regard the division between psychopathic and neurotic states as mainly a matter of convenience, does not deal with the logical problem of possible overlap of cases when two conceptually different systems of classification are employed. This difficulty is underlined by Foulds' suggestion that such character disorders might be regarded as cases of neurosis in psychopathic personalities. It would seem then that any given patient could be classified as both neurotic and character disordered. If patients can be assigned to either or both categories then logically no meaningful comparison can be made between character disorder and neurosis.

In terms of past history and personality (e.g., Robin, 1965; Forrest, 1967, etc.) such groups can be adequately distinguished and Foulds (1967) has commented that "the efficiency of differentiation implies that the psychiatrists who diagnosed individuals in the present samples as Psychopaths (here called Character Disorders) did, in fact, select a rather homogeneous group."

The suggestion that character disorders could be classed as cases of neurosis in a psychopathic personality is a misleading oversimplification. The neurotic component is diagnosed on the basis of a disruption of continuity of behaviour and the presence of symptomatology and psychiatric signs. Yet Foulds (1967) has been able to differentiate character disorders from all other groups of the personally disturbed on the basis of the former's reporting of different symptomatology on the Symptom Sign Inventory. Moreover, based on their responses these character disorders would usually be given an SSI diagnosis of psychotic depression rather than of a neurotic condition. Foulds comments, "that the main alternative SSI diagnosis to character disorder is psychotic depression draws attention to the fact that the differentiating items are somewhat at odds with the criteria used for clinical classification. In all neurotic and psychotic groups so far examined with the SSI this has not been so (Foulds, 1965). The validity of answers to questionnaires is dependent upon the more or less equivalent motivation of subjects. The present results suggest that character disorders can be identified by rather consistently invalid responses to certain questions." This would seem to be the differential influence of the psychopathic personality. Thus the neurosis and the

personality disorder must be considered to be intimately related and the neurosis to be markedly, but quantitatively, different from other neurotic conditions. If we consider the character disorder's responses to be differently motivated (i.e., to elicit the sympathy of others) and her responses to the SSI character disorder scale to reflect this different motivation, then the differences are quantitative and not qualitative (the SSI character disorder scale differentiates on a more or less and not on an all-or-none basis - "neurotics" report some of these eight symptoms, "character disorders" report more).

In a strictly logical sense the classifications under consideration can overlap (as before due to the terminology used) but it can be argued that there is sufficient quantitative psychological difference between them to make this unlikely in any given case and, to justify in terms of psychological meaningfulness, a comparison of groups of character disorders and neurotics.

B. Review of Literature

Having discussed personality disorder and described the group of character disorders under consideration, it remains to complete the review of the literature.

There have been many studies of changes in psychological state but often these have been concerned with the effectiveness of treatment. Drug trials and investigations of the effectiveness of various forms of psychotherapy (reviewed and debated by Eysenck, 1965; Strupp, 1965; Keisler, 1966; Malan et al, 1968) are relevant only in so far as they indicate possible methods of study and the occurrence of measurable changes in psychological state with time. Since in the present study interest is focussed on short-term changes, differential therapeutic effects are not of much relevance, nor are changes over months or years.

The theory, methods and research findings of Foulds and his associates have generated this project and, it is felt, provide an adequately coherent framework for it. In the absence of an abundance of studies of more than passing relevance to the matters under consideration, it is intended to concentrate on studies employing the character disorder scale of the Symptom Sign Inventory or researches with the same theoretical or methodological orientation and to include other studies only where they are relevant to a specific point.

When Foulds (1967) first distinguished female character disorders from all other groups of the personally disturbed on the basis of the Symptom Sign Inventory (SSI) he also compared these groups on other measures. The Hostility and Direction of Hostility Questionnaire (Caine, Foulds and Hope,

1967) was used to provide a measure of general hostility and of Direction of Hostility (Extrapunitiveness v Intropunitiveness; Rosenzweig, 1934). Foulds found that these female character disorders scored significantly higher on general hostility than did groups of normals, neurotics and psychotics. Comparing these other groups, the psychotics scored significantly higher than the neurotics and the neurotics significantly higher than the normal women. Foulds wrote that "the outstanding difference between neurotics and character disorders, whether diagnosed clinically or by means of the character disorder scale of the SSI, is that the latter score about two standard deviations higher on General Hostility. This seems a reasonable reflection of a long term difficulty in personal relationships." When the groups were compared as to direction of hostility it was found that the normals were significantly less intropunitive than the others, there was no significant difference between the character disorders and the neurotics and the psychotics were significantly more intropunitive than the neurotics (the difference between the psychotics and character disorders was not statistically significant). Foulds considered that psychopaths, in the McCords' sense of the term, should score very high on a measure of general hostility and extrapunitively rather than intropunitively. These character disorders differed from this picture in being intropunitive.

Foulds (1964) had argued that personality accounts for the more enduring directional aspects of punitive behaviour while illness merely alters temporarily the amount of such behaviour. In his 1967 paper and in earlier studies (Caine, 1965; Foulds, 1965), using the Hysteroid-Obsessoid Questionnaire (Caine and Hope, 1967) a negative correlation was found, as

expected, between intro-punitiveness (HDHQ) and hysteroidness. This was the case for normals, neurotics and psychotics but not for character disorders. Foulds commented, "The fact that in the character disorder class, unlike the rest, there was virtually no association between Direction of Hostility and the Hysteroid-Obsessoid measure may suggest the presence of the 'hello' response. The desire to exact pity would certainly be better served by exaggerating the intro rather than the extrapunitive responses." This is in accord with the previously stated case for the possibility of the character disorders exaggerating their symptomatology in order to evoke the pity of others.

Finally, using a tapping test, an affective discrepancy score (Himmelweit, 1945) was derived. The character disorders scored as significantly more pessimistic than the neurotics on this measure. Foulds thought that this might be one indication of the former's habituation to failure to achieve their level of aspiration. Foulds also noted that approximately twice as many character disorders as neurotics had attempted suicide.

Philip (1968) studied personality factors involved in attempted suicide. He reported that an SSI diagnosis of character disorder occurred in 48% of the group (42% of the men and 54% of the women). Of the remainder of the group 20% were classed as personally disturbed (but not character disordered), 20% as borderline disturbed and 12% as normal.

In addition to the SSI, Philip used the 16 Personality Factor Questionnaire, 16PF (Cattell and Eber, 1964) and the HDHQ and compared the four SSI diagnostic categories on these measures.

Although the character disorders were significantly differentiated from the normal and borderline disturbed groups on a number of measures, they were never significantly differentiated from the personally disturbed group. This is not really in contradiction to Foulds (1967) findings because Philip's personally disturbed group scored higher on the HDHQ than did Foulds' neurotics and psychotics; the two samples of character disorders scored similarly. This difference may be related to the fact that few of Foulds' neurotics or psychotics had attempted suicide whereas all of Philip's sample of the personally disturbed had done so.

Philip's study provides descriptions, in terms of the 16PF and the HDHQ, of the character disorders in terms of the 16PF and the HDHQ. For the present purpose mean scores which are - 1 SD or more from the mean of the normal population on which the 16PF was standardized are considered to be abnormal. Thus male and female character disorders were very anxious and also introverted (second-order factors). On the first-order factors related to anxiety, the men scored as emotionally less stable (C-), shy (H-), apprehensive and guilt-prone (O+) and tense (Q4+). They were also expedient (G-). Female character disorders were emotionally unstable (C-), suspicious (L+), apprehensive and guilt-prone (O+), suffering from undisciplined self-conflict (Q3-) and tense (Q4+). They too were expedient (G-). The 16PF descriptions of the personally disturbed groups were similar to the above.

On the HDHQ the character disorder and personally disturbed groups scored as very hostile. Men were average as regards direction of hostility but the women were markedly intropunitive (self-criticism and delusional guilt).

Philip's subjects were also given psychiatric diagnoses. The most frequently used diagnoses were those of affective disorder and personality disorder and these two groups were compared on the 16PF and HDHQ. Although the number of patients diagnosed as personality disorders differed slightly from the number given on SSI diagnosis of character disorder, the mean 16PF and HDHQ scores of the two groups matched almost perfectly. The only small difference (not significant) worth commenting on was that the male personality disorders were slightly extrapunitive while the male character disorders were slightly intropunitive (both groups being within the normal range). It would seem therefore that the SSI was picking out a group of patients whose psychological state was of significance to the psychiatrists.

Comparing those patients given a psychiatric diagnosis of personality disorder with those classed as affective disorder, for men the only significant difference on the 16PF was on Factor G; while the affective disorders were average on this the personality disorders were expedient and insensitive to group influences. On the HDHQ the personality disorders were significantly more extrapunitive, especially in their tendency to act out their impulses.

The personality disordered women scored as very high on anxiety (16PF second-order factor) whereas the affective disorders were only slightly more anxious than normal. The two groups also differed significantly on four of the first-order factors related to anxiety. The affective disorders were also significantly more shrewd (N+) than the personality disorders. On the HDHQ the personality disorders scored as significantly more hostile, more extrapunitive (more likely to act out, criticize others and feel paranoid) and more guilt ridden.

In another study Philip and McCulloch (1968) examined attempted suicides on a test-retest basis. The subjects were first seen after admission to the Poisoning Treatment Centre of the Royal Infirmary of Edinburgh and they were retested approximately five weeks later. At initial testing, using the SSI, it was found that 56% were classed as character disorders, 32% as personally ill but not character disorders and 12% as normal. For women there was a significant reduction in reported symptomatology at retest with significant falls in scores on the personal illness and character disorder scales of the SSI. Unfortunately the retesting was by post and so the proper conditions for administering the SSI were not fulfilled and the results must be treated with caution. These patients had also been given the Neuroticism Scale Questionnaire, NSQ (Scheier and Cattell, 1961) and, by comparison with normals, they were very anxious and also desurgent and generally neurotic. At retest there were no important changes on the NSQ scores. Not only does this study closely accord with that of Philip (1968) as regards the proportion of attempted suicides who are given an SSI diagnosis of character disorder (i.e., approximately half), it also indicates that scores on the character disorder scale are, like those on the personal illness scale, subject to significant variation over a period of about five weeks. This means that whether or not a woman scores as character disordered on the SSI may be partly dependent upon when testing is carried out.

Philip (1968) wrote that "Foulds (1967) found that 39% of Vinoda's (1966) female attempted suicides were character disordered, 52% were personally ill and 9% were normal. Philip and McCulloch (1968) considered that the difference in the proportions of character disorders was due to the composition

of the groups sampled. Vinoda's attempted suicides were all psychiatric in-patients while the group seen by Philip and McCulloch had been tested in the Poisoning Treatment Centre before psychiatric disposal had been arranged. The same state of affairs was extant in the present study and it seems likely that the two Edinburgh groups contain a number of personality disordered patients who would not be offered or would not accept psychiatric in-patient treatment." This argument is probably valid but it would seem that the factor of time might still be considered. Patients remain in the Poisoning Treatment Centre for at most a few days and so these people were tested very soon after their suicide attempt.

Foulds (1967) also found that only 24% of Vinoda's psychiatric controls were character disordered. Philip (unpublished data) tested a group of psychiatric patients and found that only 22% were character disordered. Thus it seems that an SSI diagnosis of character disorder is given twice as frequently in a population of attempted suicides as it is in a psychiatric population. As Philip (1968) comments, "this is not surprising when it is considered that the purpose of the CD scale is to identify persons in whom chronic interpersonal difficulties, plaintiveness and self-pity are common." The association of attempted suicide with this type of character disorder is in accord with psychiatric opinion. For example, Forrest (1967) listed a history of attempted suicide and attempted suicide as the presenting disturbance among his criteria for classifying female patients as "hysterical psychopaths."

Foulds (1968) studied male character disorders and neurotics in hospital and in prison. The tests he used were the SSI and the HDHQ. He found that in a hospital population character disorders were significantly more hostile than neurotics but that there was no difference on direction of hostility, both being intro-punitive. In a prison population character disorders were almost significantly more hostile than neurotics. Though the difference in direction of hostility between these groups was not significant the character disorders were significantly more intro-punitive than normals in prison (they were extra-punitive). These results show that the earlier findings on character disorders are confirmed in this apparently different (i.e. prison) population. It is of interest to note that whereas the hospital and prison character disorders were similar on general hostility and direction of hostility, the prison normals and neurotics were significantly more hostile than their respective hospital counterparts (in terms of SSI classification). This again indicates that SSI diagnosed character disorders score more consistently on the HDHQ from sample to sample than do neurotics and normals.

In summary, character disordered men can be described (by comparison with normals) as very hostile, somewhat intro-punitive, very anxious and also lacking in conscientiousness. Female character disorders are very hostile, markedly intro-punitive, very anxious, pessimistic and also expedient. Character disorders are more hostile than neurotics but both groups are intro-punitive, anxious and otherwise similar in terms of personality. There seems to be an association between attempted suicide and character disorder. Although the character disorder scale is apparently picking out a

group whose psychological state is meaningful to psychiatrists, scores on this scale may be expected to change in as short a period as five weeks.

Traditionally the psychopath (McCord and McCord, 1964; Cleckley, 1955) has been regarded as suffering from little or no anxiety, guilt, depressive tendencies or inner conflict - "the psychopath is one whose conduct is satisfactory to himself and to no one else" (Partridge, 1928) - and to be in many ways the opposite of the neurotic. This is obviously a very different description from that presented here but the high anxiety scores of these character disorders are in line with those listed by Cattell and Eber (1964) for psychopaths and seem to be typical of many types of neurotics and of deviant behaviours (e.g. exhibitionists). Foulds (personal communication) has investigated anxiety in psychopaths by means of the 16PF second-order factor and psychiatric ratings of anxiety and of degree of psychopathy. While the psychopaths were generally very anxious (16PF), among those rated as less severely psychopathic there was a high correlation between the rating scale and questionnaire estimates of anxiety but among those rated as severe psychopaths there was no such correlation. Foulds has, therefore, suggested that the use of physiological measures of anxiety along with the present techniques might prove helpful (a similar type of problem to that of Lazarus and Alfert (1964)). Foulds' psychopaths did, however, differ from these character disorders in that they were extrapunitive (HDHQ) and so more like the McCords' group.

If one accepts Foulds' (1961; 1965) argument for the separate consideration of personality traits and symptomatology, there remains the problem of assessing personality while the patient is suffering from an illness.

In studies employing the 16PF (e.g. Cattell and Scheier, 1961; Cattell, Tatro and Komlos, 1965) Cattell has shown that there are personality traits in which neurotics and psychotics differ from normals (e.g. C-, emotionally unstable, is typical of psychiatric groups) and he has suggested that there is a "functional imbalance" in the personality processes of the mentally ill. McAllister (1968) considered that this was a similar idea to that of Foulds (1965), that processes occur in the mentally ill which interfere with the satisfactory establishment and relative endurance of adequate personal relationships; these interfering processes presenting as signs or symptoms of psychiatric illness or as abnormal degrees of personality traits. However, granted that personality abnormalities can be expected in the mentally ill, to what extent is personality assessment affected by the transient emotional state of the patient?

Various studies have dealt with the relative changes in symptom and personality measures during illness. For the present research, studies involving neurotic patients, and especially depressives, (because of the amount of depressive symptomatology reported by character disorders on the SSI) are the most relevant. The following studies also indicate the sensitivity to psychological change of specific measures.

Foulds (1959) found that in neurotic women symptom measures changed relatively more than personality measures on retest following one month's treatment of a conventional kind not involving intensive psychotherapy.

Martin and Caine (1963) found changes among neurotics in symptoms and attitude (direction of hostility, HDHQ) but not in personality measures over a period of five months more intensive psychotherapy. Caine (1965) followed up a group of chronic neurotics (receiving similar treatment to this) during hospitalization and for a year after discharge and concluded that the trait measure was probably more resistant to change than the other measures. Adams and Foulds (1962) gave the SSI, HDHQ and HOQ to a group of female depressed patients and retested them at termination of treatment when clinical ratings of improvement were also available. The total SSI, general hostility, self-criticism and delusional guilt (HDHQ) all showed significant falls at retesting among the improved patients. None of these changes occurred in the unimproved group. Neither the direction of hostility (HDHQ) nor the HOQ changed for either group. However, when a group of improved psychotic depressives was examined separately they did show a significant change in the extrapunitive direction on the HDHQ and in the hysteroid direction on the HOQ. In this respect the improved psychotics moved closer to the neurotics - as they had also done on the symptom measures. In this case it seemed to the authors that the illness was affecting the validity of self-description on the initial testing of the psychotic depressives.

Foulds (1965) reported a study of six groups of personally ill women (non-paranoid schizophrenics, paranoid states, melancholics, hysterics, anxiety states and neurotic depressives). These patients were given the SSI, HDHQ and HOQ within a week or so of admission and retested from four to six weeks later. They were also independently rated as to whether or not they had improved in the interim. For all groups taken together, the scores of the

improved patients changed significantly on total SSI (i.e. total number of symptoms reported), general hostility and all five subscales of the HDHQ. As expected, direction of hostility (HDHQ) did not change but, contrary to expectation, the HOQ did change. This was mainly due to the depressives, both psychotic and neurotic, who moved somewhat from the obsessoid to the hysteroid end of the scale. The scores of the unimproved patients did not change except for the total SSI. Foulds commented that, "the total SSI declined more markedly in the improved than in the unimproved group and general punitiveness declined very significantly only in the improved group. It would appear, therefore, that general punitiveness may be a 'deeper' measure of clinical change."

Coppen and Metcalfe (1965) gave depressed patients the Maudsley Personality Inventory, MPI (Eysenck, 1959). They found that there was a significant increase on extraversion after recovery from the depressive illness and that this only applied to the endogenous group of patients. They concluded that this indicated that with a psychotically depressed person, the illness intrudes into the personality in a measurable degree.

Mayo (1967) studied psychological changes associated with improvement in depression. His subjects were a mixed group of 24 psychotic and neurotic depressives tested in their first week of hospitalization and again after six weeks. He used the SSI, HDHQ and HOQ and degree of improvement was rated by the consultant psychiatrist.

From test to retest there was a significant drop in symptoms as measured by the SSI personal illness and psychotic v neurotic scales. The general punitiveness scores (HDHQ) dropped significantly. This was mainly

due to a drop in the intro-punitiveness scores (self-criticism and delusional guilt) and indeed the direction of hostility scores changed significantly in the extrapunitiveness direction. Mayo stressed the sensitivity of the general punitiveness score as an indicator of severity of depression. Apart from its sensitivity to improvement, this measure showed a significant difference between melancholics and neurotic depressives when they were first admitted.

Whereas scores on the SSI and HDHQ changed with the patients' improved mental health, the HOQ scores showed no change and were presumably not affected by the course of the illness. Mayo thought that perhaps his subjects were less severely depressed than those of Adams and Foulds or Coppen and Metcalfe.

However, Kendall and Discipio (1968) tested depressed patients with the Eysenck Personality Inventory, EPI, (Eysenck and Eysenck, 1963), successor to the MPI, before and after recovery. They found that, while depressed, the patients gained spuriously high Neuroticism and low Extraversion scores because they tended to rate their current state of mind rather than their normal selves. These researchers found that if instructions of the "when your usual self" type were added the patients could assess their normal personalities well even when deeply depressed.

In these studies there is a confusion between the practical problem of assessing personality in the presence of symptoms and the psychological problem of whether there is a real, albeit transient, change in personality due to illness. Although in the long term personality (as habitual patterns of behaviour) may change, it seems simplest to deal with short term changes

in personality measures as a psychometric problem. Foulds (1965) has argued that such changes as do occur are due to only limited success having been achieved in constructing measures of habitual personality patterns which are free of (especially psychotic) symptom variables. The same sort of problem has bedevilled Cattell's work on anxiety and blurred the distinction between state and trait. If personality is considered in terms of habitual patterns of behaviour then Coppen and Metcalfe really showed that with a psychotically depressed person the illness may intrude into the measurement of personality in a measurable degree.

Since in the present study we are not concerned with patients who are psychotic, it would seem unlikely that any particular degree of distortion would be operative (unless the character disorders "exaggerate" traits which are related to symptom variables, e.g. anxiety on the 16PF) and certainly there should be no test-retest variation over a short time.

Otherwise this review has shown the sensitivity to clinically assessed psychological changes of the total SSI and of the scales of the SSI while general hostility (HDHQ) has been shown to reflect differences and changes at a "deeper" level.

Chapter 2

The Tests Used in the Present Study

The tests used in this study were objective, standardized instruments providing a wide range of personality, symptom and attitudinal measures. There is a substantial body of data on these tests relating to normal subjects and to psychiatric patients and, in addition, satisfactory test-retest data is available.

The items comprising the tests are reproduced in Appendix A.

a) The Symptom Sign Inventory (SSI)

The SSI (Foulds and Hope, 1968) is primarily a diagnostic instrument. The tester administers the questionnaire orally in individual interview with the patient and in this way information about psychiatric symptoms and signs is elicited.

The development of the SSI has been in accordance with Foulds' concern to develop independent measures of signs and symptoms on the one hand and of traits and attitudes on the other. He argues that traits can be distinguished from symptoms by the former's comparative universality, egosyntonicity and endurance.

The Manual of the SSI (Foulds and Hope, 1968) gives the necessary information on the administration and scoring of the inventory: and also provides information on the derivation of items for each of the a priori psychiatric scales. In the present study, the full SSI (80 items) was administered but only 3 scales, those for Personal Disturbance (PD), Character Disorder (CD) and Neurotic v Psychotic (N v P) were scored.

The PD scale consists of 20 items, each of which distinguishes at least 7 female diagnostic classes from a sample of normal females. This scale is a modified version of the Personal Illness Scale described by Foulds (1965). The PD scale contains fewer items from the a priori anxiety scale and more from the neurotic depression and obsessional scales than did the earlier PI scale. The finding of Mayo (1967) that there was a population of normals who had high scores on the PI scale, but had not sought psychiatric aid, led to the dropping of the term "Personal Illness" since it became "clear that whilst almost all those who are personally ill obtain high scores on the scale, some who obtain high scores are not personally ill" "The term 'disturbance' has been chosen because it is non-committal as to whether the disturbance is observed or felt." (Foulds and Hope, 1968). For the present purposes the PD scale is assumed to distinguish "people who experience, or are observed to manifest, difficulty in mutual personal relationships, this difficulty being so distressing to many of them, or to their intimates, that help is sought to alleviate their problems" (Philip, 1968).

The Manual provides data on the distribution of scores on the PD scale for normal women and psychiatric patients. Based on these frequency distributions three categories of Personal Disturbance were set up. Scores of 0 and 1 were considered Normal, scores of 2, 3 and 4 considered Borderline and scores of 5 and above considered indicative of Personal Disturbance. Foulds (1965) has argued that a linear relationship does not exist between the total number of symptoms responded to on the PI scale (or on the whole SSI) and degree of psychiatric disturbances. All that can be

said is that the higher the score, the greater the probability of accurately assigning the individual. Therefore, since in the present research all the subjects were psychiatric in-patients, it was considered justifiable to include in the sample all those whose scores were 2 and above.

The Character Disorder (CD) scale (Foulds, 1967) was derived "to identify persons having longstanding neurotic conditions marked by chronic interpersonal difficulties, plaintiveness and the arousal of antipathy in those who treat them" (Philip, 1968).

Affirmative responses to 8 SSI items were found to differentiate clinically diagnosed character disordered women from women with other psychiatric diagnoses. These items are:-

- A 1 Does your hand often shake when you try to do something?
- B 5 Are you depressed because of some particular loss or disappointment?
- E 5 Are you afraid you might do something seriously wrong against your will?
- E 8 Have you an unreasonable fear that some careless act of yours might have very serious consequences?
- H 1 Are you worried about having said things that have injured others?
- H 6 Because of things you have done wrong, are people talking about you and criticizing you?
- H 8 Do you cause harm to people because of what you are?
- H10 Do you ever go to bed feeling you wouldn't care if you never woke up again?

For women, scores of 4 and above are regarded as indicative of character disorder. Foulds has also regarded the CD scale as helping to reduce misclassification errors in the SSI, because the patients thus classified tend otherwise to be given an SSI diagnosis of psychotic

depression. Foulds has been unable to clarify the relationship of the CD scale to the alternative diagnoses (neurotic or psychotic) on the SSI and this problem is bound up with the general problem of properly relating personality disorder and psychiatric illness. Nonetheless the CD scale has been used to provide a criterion diagnostic group in several studies (e.g. Foulds, 1967, 1968).

If a person is categorized as Personally Disturbed and not as Character Disordered the SSI can then be used to classify her as Neurotic or Psychotic. The Neurotic v Psychotic (N v P) scale comprises 19 items. Scores of 3 and above are Psychotic, a score of 2 is "uncertain" and scores of 1 and below are Neurotic.

Foulds (1965) found that the differentiation provided by this scale was in agreement with psychiatric diagnosis in 70 per cent of cases. A further 13 per cent were "uncertain" and there was disagreement in 17 per cent of the cases. As it is recognised that psychiatric diagnosis is not a perfect criterion, this seems to be an adequate measure of agreement.

The SSI has been previously used to study change in symptomatology in psychiatric patients (Foulds, 1965) and has been found to be sensitive to such change. The instrument is, nonetheless, rather difficult to administer and score on a test-retest basis. For this reason two psychologists, with much experience of the SSI, were asked to independently assess which of the items could, and which could not, be theoretically subject to change. The two psychologists agreed on 75 (94%) of the items and it was possible to develop a consistent approach to the scoring of the other 5 items. This was considered to be an adequate measure of agreement. It was still the case,

however, that the scoring of any item depended on the information produced by the patient and this might vary depending on her orientation towards her own morbidity. Also, since the tester did not remind the patient of her previous answer the test-retest reliability (unknown) of the SSI also enters into the problem; i.e. to what extent does the SSI on two occasions elicit the same symptomatology from a patient whose psychological state has not changed? This present study was in no way an attempt to assess this test-retest reliability of the SSI and indeed the whole emphasis was on the assessment of change.

b) The Hostility and Direction of Hostility Questionnaire (HHDQ)

The HHDQ (Caine, Foulds and Hope, 1967) is designed to measure a wide range of possible manifestations of aggression, hostility or punitiveness. Foulds (1965) has described in detail the development of the HHDQ. Hostility was assumed to be a unitary entity which could be directed inward on the self or outwards against other people or objects. Rosenzweig's (1934) terms - "intropunitiveness" and "extrapunitiveness" - were employed to denote these directions. Five subscales were devised of which 3, urge to act out hostility (AH), criticism of others (CO) and delusional hostility (DH) were measures of extrapunitiveness, while the other 2, self criticism (SC) and delusional guilt (G), measured intropunitiveness. The findings of Foulds, Caine and Creasy (1960) and Hope (1963) have led to the acceptance of formulae for calculating 2 main scores on this test;

$$\text{General Hostility} = \text{AH} + \text{CO} + \text{DH} + \text{SC} + \text{G}$$

$$\text{Direction of Hostility} = (2\text{SC} + \text{G}) - (\text{AH} + \text{CO} + \text{DH})$$

For Direction of Hostility, positive scores indicate intropunitiveness.

Information on the validity and reliability of these scores, and on the results for various diagnostic groups, is included in the Manual. Using the SSI CD scale, previously described, Foulds (1967) showed that SSI-diagnosed character disordered patients scored about 2 standard deviations higher than neurotics on General Hostility although they were not significantly different on Direction of Hostility.

Philip (1969) has suggested an alternative interpretation of the extrapunitive and intropunitive scores which he believes is closer to the origins of the questionnaire. Foulds, Caine and Creasy (1960) "considered that the extrapunitive subtests measured something different from the intropunitive tests. Experience with the inventory indicated that the intropunitive measures varied over time more than the extrapunitive measures and it was considered that it might be profitable to measure extrapunitiveness and intropunitiveness independently rather than combining them in a Direction of Hostility score. In normals, Sum I (SC + G) tends to be somewhat lower than Sum E (AH + CO + DH), while in the psychiatrically ill the two measures are equal, indicating a rise in the amount of intropunitiveness displayed by psychiatrically ill persons. Hospitalized psychopaths, as Foulds (1965) pointed out, score high on both measures. Thus Sum I can be conceptualized as an index of personal disturbance manifested primarily in the form of self-blame and psychiatric symptomatology, Sum E can be seen as indicative of disturbance less related to psychiatric symptomatology and possibly more related to psychopathy, while Sum I + Sum E would be an overall, undifferentiated indicator of personal disturbance." In accordance with this argument, two further scores are used in this study:-

$$\text{Sum E (extrapunitiveness)} = \text{AH} + \text{CO} + \text{DH}$$

$$\text{Sum I (intropunitiveness)} = \text{SC} + \text{DG}$$

c) The Sixteen Personality Factor Questionnaire

The Sixteen Personality Factor Questionnaire, or 16PF, (Cattell and Eber, 1964) is the product of a great deal of factor analytic research and aims to provide a broad coverage of personality traits. The theoretical basis of the 16PF lies in the many publications of Cattell (e.g. Cattell, 1965) and the test has been much used. Critical reviews on the 16PF have been provided by, for example, Holtzman, (1965) and Klein, Barr and Wolitzky, (1967).

The 16PF assesses personality in terms of 16 first-order, obliquely related factors and 7 second-order factors (of which only 5 seemed relevant to this study). Brief descriptions of the bipolar first-order factors are as follows:-

<u>Factor</u>	<u>Low Score</u>	<u>High Score</u>
A	Aloof	Warm, outgoing
B	Unintelligent	Intelligent
C	Emotionally unstable	Mature, stable
E	Submissive	Dominant
F	Reticent	Enthusiastic
G	Expedient	Conscientious
H	Shy	Venturesome
I	Tough-minded	Sensitive
L	Trustful	Suspecting
M	Practical	Self-absorbed
N	Naive	Sophisticated
O	Confident	Apprehensive

<u>Factor</u>	<u>Low Score</u>	<u>High Score</u>
Q1	Conservative	Radical
Q2	Group-dependent	Self-sufficient
Q3	Uncontrolled	Self-controlled
Q4	Relaxed	Tense

The second-order factors are obtained by applying the following formulae:-

$$\text{Anxiety} = 4.02 - .16C - .15H + .17L + .260 - .18Q_3 + .33Q_4$$

$$\text{Extraversion} = -.55 + .15A + .29E + .37F + .43H - .14Q_2$$

$$\text{Tough Poise} = 7.54 - .42A + .19C + .17E + .23F - .55I - .19M + .20N$$

$$\text{Independence} = .50 - .23A + .37E - .13G + .27M + .33Q_1 + .30Q_2$$

$$\text{Neuroticism} = 6.27 - .07B - .26C - .17E - .38F - .10G + .10H \\ + .22I + .260 - .09Q_1 + .35Q_4$$

The products of these formulae are rounded to the nearest whole number, the constants in the equations ensuring that the scores are sten scores. In dealing with the 16PF all raw scores are converted to sten scores so as to be able to compare a person's score on one factor with his score on any other factor regardless of the means and variances of the raw scores of these factors. The standard ten point scale (sten scale) uses ten points to cover the population range, with the mean at 5.5. Tables are provided in the Handbook for converting the raw scores to stens.

The Handbook gives an account of the design and rationale of the 16PF, provides bipolar descriptions of the factors and information on the reliability and validity of these factors. Directions for administering and scoring the 16PF are also included in the Handbook. Much information

is available on the scores of clinical groups on the 16PF and the psychometric properties of the test have been the subject of considerable research, including cross-cultural studies (e.g. Tsujioka and Cattell, 1965).

In this study, Form A of the 16PF was employed.

d) Anxiety Scale Questionnaire

The Anxiety Scale Questionnaire (Cattell and Scheier, 1963) is a 40-item questionnaire closely related in theory, development and item content to Cattell's 16 Personality Factor Questionnaire (16PF), discussed above. It is most intimately related to the 16PF second-order factor of Anxiety and was employed in this study to discover if the anxiety component of personality changed significantly over the 2-week interval between the first and second testing. It was not wished to administer the 16PF twice to each patient and, rather than compare scores across instruments, it was decided to administer the Anxiety Scale on both occasions of testing, although this introduced a degree of redundancy.

The Anxiety Scale is designed to measure free-floating anxiety. The Manual contains information on the administration, scoring and interpretation of the test and also data on its validity and reliability. A total raw score is obtained which can be converted to stens by using the tables provided in the Manual.

In addition, the items are divided into a) those which manifestly refer to anxiety, the score from which may be called overt, symptomatic, conscious anxiety, and into b) the more covert, relatively indirect, hidden purpose questions. The analysis of the total anxiety score into

these overt and covert subscales is intended to indicate the degree to which the patient is or is not conscious of his anxiety and the extent, if at all, of his desire to distort and overemphasize symptoms.

In this study 4 scores were used, the total raw score, the total sten score (for comparison with the 16PF), the overt (raw) score and the covert (raw) score.

Chapter 3

General Methodology of the Study

1. Description and Selection of Subjects

The subjects tested in this study were female in-patients drawn from 3 wards of the Royal Edinburgh Hospital (over a period of 4 months). Much of the work on the SSI has been carried out only on women and the character disorder scale, in particular, was originally developed on a group of female (hysterical) character disorders, (there is a different scale for men (Philip, 1968)). For this reason it was decided that only female patients would be considered in the present study.

As far as possible the subjects were consecutive admissions. However, a few patients were lost from the sample because it was not possible to test them initially within 2 or 3 days of admission or because complete data could not be obtained at that time. Some other patients who seemed, on clinical grounds, suitable, were excluded (properly or not) by the SSI. (Only one patient was deemed untestable). Of the patients on whom complete initial testing was carried out, 5 were discharged before retesting. It had been hoped to have 2 samples each of 15 patients but this number could not be obtained in the time available. Altogether complete initial testing was done on 28 subjects (12 character disorders and 16 neurotics) and retesting was done on 23 of these (11 character disorders and 12 neurotics). The initial data on the 28 cases is, therefore, presented in Appendix B as the better description of the psychological state of these patients within 3 days of admission. The main discussion will be concerned with the smaller

number on whom retest data was obtained. It is not thought that the omission of these cases affected the character disorder group but some differences were found between the personality descriptions (16PF) of the larger and smaller groups of neurotics. These will be discussed later.

In order to reduce the contamination of the data by factors attributable to old age (e.g. organic processes and personality changes) an upper age limit of 65 years was set. The subjects' ages, in fact, ranged from 19 to 53 years for the character disorders and from 19 to 62 years for the neurotics. The mean ages of the larger and smaller groups of character disorders were 34.7 and 36.1 years respectively; and the larger and smaller groups of neurotics both had a mean age of 38.9 years. As none of these differences approaches statistical significance it is felt that the groups are sufficiently well matched as regards age.

Since all subjects completed the 16PF, Cattell's Factor B (Lower V Higher scholastic mental capacity) was used as a rough indicator of intellectual level. No subject had a sten score of less than 4. It is assumed, therefore, that all the patients were intellectually capable of coping with the tests. There were no significant differences between the groups (the statistical data is reported later with the other test results) and so it is considered that the groups are also sufficiently well matched as regards intellectual level.

Although it was intended to rely as much as possible on SSI diagnoses, the selection of patients for the study was carried out in two stages. Firstly, in order to minimise the interference of organic factors in the process of change between testing and retesting, patients who were clinically

regarded as having an illness of organic origin or as being suitable for ECT were excluded. Then, to avoid unnecessary screening, patients with a history of schizophrenia or of psychotic depression, and patients on whom such a current clinical diagnosis had been made were also excluded. The exclusion of these clinically diagnosed psychotic patients should help to overcome one of the weaknesses of the SSI as a diagnostic instrument. Patients scoring as character disordered most commonly have an alternative diagnosis of psychotic (usually melancholic) (Foulds, 1967) and it is not entirely clear how to interpret their status. The elimination of these cases should thus help to avoid this confusion and give a "purer" sample of character disorders (i.e. fewer of the present sample of character disorders will be "really" primarily psychotics).

The second stage of the screening was based entirely on the SSI. Those patients not already excluded were given the SSI within 3 days of admission. The SSI was scored for Personal Disturbance (PD), Character Disorder (CD) and Neurotic (N) v Psychotic (P). Patients who scored as PD and CD (with alternative diagnoses of either N or P) formed the character disorder group for this study and those who scored as PD, not CD, and as N formed the neurotic group. Patients who scored as not PD or as PD, not CD, and P were excluded.

Thus ultimately the SSI score was the sole criterion for selection as a character disorder or as a neurotic. Apart from the fact that this SSI differentiation was one of the issues of interest in this study the justification for relying entirely on it was twofold. Because patients were being tested so soon after admission there was generally no sufficiently

precise clinical diagnosis available. Then also, it has been shown (e.g. Schmidt and Fonda, 1956; Norris, 1959; Pasaminick, Dinitz and Lefton, 1959; Kreitman, 1961) that whereas psychiatrists make usefully reliable diagnoses of organic and psychotic states, they do not make reliable differentiations within the general group of neuroses and personality disorders.

Vernon (1964) argued that such findings may be due less to the subjectivity of psychiatric judgement than to the imprecision of the categories used. Granted that the categories at present used are imprecise and seem likely to remain so for some time yet this is all the more reason to objectify as far as possible the process of diagnosis. Foulds (1965) summed up the situation - "At the present time it seems safest to conclude that there are some states that some psychiatrists can diagnose reasonably reliably under some conditions. Nevertheless, even if psychiatric diagnosis could be shown to be highly reliable under optimal conditions, it could serve only as the criterion by which to develop some more objective, public and quantitative means of classification, since the optimal conditions cannot readily be met in routine clinical practice." Although the SSI has its disadvantages (e.g. patients with relatively few symptoms, but easily diagnosed clinically, may be missed by the SSI and classified as normal), it is such a standardized instrument with a consistent frame of reference.

Those subjects selected for the study were interviewed individually (on the ward) within 3 days of admission. The patient was given the SSI and supervised while completing the HDHQ and Anxiety Scale. The tester then went over the instructions for the 16PF with her and she was left to complete

this questionnaire in her own time (usually the same evening). The initial testing session lasted for a minimum of $1\frac{1}{4}$ hours.

Two weeks after the first interview the patient was again given the SSI, HDHQ and Anxiety Scale. This session usually lasted for 1 hr. On this second occasion of testing the SSI was introduced by requesting the subject to answer the questions mainly as she had felt recently - "since I last saw you" - although, it was explained, some of the questions apply over a longer time. For the HDHQ and Anxiety Scale the patient was told not to try to remember how she had answered previously but rather to answer as she felt about the questions "just now."

Most of the patients were co-operative and completed the tests without undue difficulty. The tester felt that in general good rapport was established. A few patients, however, objected to filling in the questionnaires, especially the 16PF. In such cases it was necessary to sit in, giving encouragement, while the 16PF was completed. These patients would not otherwise have been willing or emotionally able to cope with the 16PF but great care had to be taken to avoid influencing the patient's answers. This supportive procedure was also very time consuming.

2. Design of Study

The study was planned in such a manner as to provide a detailed description of the two groups at initial testing and to allow for the investigation and comparison of changes over time. Conceptualizing the character disorders' breakdown (i.e. circumstances leading to hospitalization) as an explosive episode during which they tend to "exaggerate" their distress, the general hypothesis was that they would have more deviant scores than the neurotics on psychological tests but that after a short interval their scores would change more than the neurotics' in the direction of improvement." The neurotics were acting as a control group against which to gauge the deviance of the character disorders' test scores at admission. Although little systematic therapy would have been carried out in as short a time as two weeks, hospitalization itself could be expected to produce some test score changes and so again the neurotics served as a control group against which to estimate the magnitude of changes among the character disorders. It was hoped that the two-week test-retest interval would be long enough to allow the character disorders to "settle down" and yet not so long that the neurotics would show considerable improvement.

Most of the following were suggestions rather than predictions:-

1. For the SSI, at initial testing the character disorders would have higher scores on total SSI, total SSI less the items of the character disorder scale, personal disturbance and the neurotic v psychotic scale. These scales have been shown to be sensitive to clinical change and so from test to retest the neurotics should not change but the character disorders may. Moreover the amount of symptomatic change should be greater for the character disorders.

2. On the HDHQ it was predicted that at initial testing the character disorders would be higher on general punitiveness, extrapunitiveness (Sum E) and intro-punitiveness (Sum I) but that there would be no difference on direction of hostility (both groups being intro-punitive). From test to re-test no changes would be expected among the neurotics.

On the basis of work such as that of Mayo (1967), general hostility has come to be regarded (Philip, 1969) as an overall indicator of personal disturbance and to provide a "deeper" measure of clinical change than the SSI (Foulds, 1965). Change might occur on this measure among the character disorders but this should not happen unless there had been a considerable decline in symptomatology. It was suggested that Sum E (related to psychopathic disturbance) would remain constant but that Sum I (related to self-blame and psychiatric symptomatology) would decline, perhaps sufficiently to produce a change in direction of hostility - the character disorders becoming more extrapunitive. If general hostility changed it would be due to this decline in intro-punitiveness.

3. It was suggested that the character disorders would score more deviantly than the neurotics on the 16PF. Both groups were expected to differ from the normal mainly on Anxiety (and the first-order factors related to it) and it was expected that the character disorders would exceed the neurotics on this factor. Because of the uncertain (state or trait) status of anxiety (Cattell, 1965) this was considered to be the aspect of the 16PF most likely to change. Consequently the Anxiety Scale Questionnaire was given at test and retest. It was thought that if any change occurred it would be that the character disorders would decline in overt anxiety - this

overt anxiety being assumed to be related to the patient's desire to distort and overemphasize symptoms (Cattell and Scheier, 1963).

4. It was suspected that scores on the character disorder scale of the SSI would fall at retest and it was considered important to investigate what other measures might be associated with this. No evidence existed on which to base suggestions.

3. Treatment of Results

All the statistical methods and formulae employed can be found in either Siegel's "Nonparametric Statistics for the Behavioural Sciences" (1956) or Guilford's "Fundamental Statistics in Psychology and Education" (1965).

Foulds (1965, 1967) has used parametric statistics when dealing with measures from the Symptom Sign Inventory. In the present study it was decided to apply nonparametric tests to such measures since no assumptions about the distributions of scores could be made.

Comparisons between groups on scores obtained from the Symptom Sign Inventory were made by means of the Mann-Whitney U Test:-

$$U = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1$$

where n_1 = the number of cases in the smaller sample

n_2 = the number of cases in the larger sample

R_1 = sum of the ranks assigned to group whose sample size is n_1 .

The transformation

$$U = n_1 n_2 - U^1$$

was applied, when necessary, to obtain the smaller value of U.

Comparisons of the initial and retest scores of each group were by means of the Wilcoxon Matched-pairs Signed-ranks Test (Siegel, pp. 75-83).

Data obtained from the Hostility and Direction of Hostility Questionnaire, Anxiety Scale Questionnaire and 16 Personality Factor Questionnaire were considered suitable for treatment by parametric statistics.

Since there were only two groups, comparisons between these were made by means of the t-test:-

$$t = \frac{M_1 - M_2}{\sqrt{\frac{(\Sigma x_1^2 + \Sigma x_2^2)}{(N_1 + N_2 - 2)} \left(\frac{N_1 + N_2}{N_1 N_2} \right)}}$$

where M_1 and M_2 = means of the two samples

Σx_1^2 and Σx_2^2 = sums of squares in the two samples

N_1 and N_2 = numbers of cases in the two samples

Comparisons of the initial and retest scores of each group were carried out using the t-test for differences between correlated pairs of means:-

$$t = \frac{M_d}{\sqrt{\frac{\Sigma x_d^2}{N(N - 1)}}}$$

where M_d = mean of the N differences of paired observations

x_d = deviation of a difference from the mean of the differences

Correlations involving data from these tests were by means of the Pearson Product-Moment Coefficient of Correlation:-

$$r_{xy} = \frac{\Sigma xy}{N \sigma_x \sigma_y}$$

where r_{xy} = correlation between X and Y

x = deviation of any X score from the mean in test X

y = deviation of any Y score from the mean in test Y

Σxy = sum of all the products of deviations, each x deviation times its corresponding y deviation

σ_x and σ_y = standard deviations of the distributions of X and Y scores.

4. Presentation of Results

The results of this study are presented in the next chapter in five sections. Section 1 is the description and comparison of the two groups in terms of the test scores obtained at initial testing. Section 2 is the description and comparison of the two groups in terms of the test scores obtained at retesting. Section 3 contains the results of comparing the initial and retest scores of each group, taken separately. Section 4 reports the results of comparing the character disorders and neurotics as to the degree of change, from test to retest, recorded for each on the SSI, HDHQ and Anxiety Scale Questionnaire. Finally, Section 5 is concerned with the test score comparisons of two sub-groups of the character disorders - those for whom the SSI diagnosis of character disorder was upheld at retesting and those for whom it was not.

All the probability values (p) reported in the results chapter are for two-tailed tests.

Chapter 4

Results

1. Description and Comparison of the Groups at Initial Testing

a) The Symptom Sign Inventory

Table 4.1 shows the median scores of the character disordered (CD) and neurotic (N) groups on the measures obtained from the SSI.

Table 4.1.

Median Scores of the Groups on the SSI.

	<u>CD</u>	<u>N</u>
	Median	Median
Total Number of Symptoms	29	14.2
Number of Neurotic Symptoms	20	10.1
Number of Psychotic Symptoms	9	4.0
Personal Disturbance	10	5.5
Neurotic v Psychotic	4	0.2
Character Disorder Scale	5.25	1.2
<u>Subscales</u>		
Anxiety	5.25	3.4
Depression (Neurotic)	8.25	4.5
Mania	0.4	0.4
Paranoid	0.4	0.9
Obsessional	4.2	1.50
Schizophrenia	2.0	0.9
Hysteria	2.2	2.4
Melancholia	6.25	2.1

The character disorders had a significantly greater total number of symptoms (Mann-Whitney $U = 6.5$, $P < .02$), a greater number of neurotic ($U = 13.5$, $P < .002$) and also of psychotic ($U = 4$, $P < .002$) symptoms. In addition the character disorders had significantly higher scores on the

Personal Disturbance ($U = 10.5, P < .002$) and Neurotic v Psychotic ($U = 5, P < .002$) scales. When the two groups were compared on the eight subscales of the SSI, it was found that the character disorders reported significantly more symptoms of anxiety ($U = 32, P < .05$), neurotic depression ($U = 13, P < .002$), obsessiveness ($U = 10, P < .002$), schizophrenia ($U = 18.5, P < .02$) and melancholia ($U = 3.5, P < .002$).

Since a score of 4 or more on the character disorder scale was the criterion for selection as a character disorder it follows that the neurotic group all had lower scores on this scale. In order to discover how the groups compared on symptoms other than those used to differentiate between them, the scores on the character disorder scale were subtracted from the total number of symptoms reported. It was found that the group of character disorders still reported significantly more symptoms than did the neurotics ($U = 16.5, P < .002$).

b) The Hostility and Direction of Hostility Questionnaire

Table 4.2 gives the mean scores of the two groups on the HDHQ.

Table 4.2.

Mean Scores of the Groups on the HDHQ.

	<u>CD</u>	<u>N</u>
	Mean (SD)	Mean (SD)
General Hostility	30.27 (4.63)	19.42 (5.68)
Sum E	15.91 (3.73)	9.58 (5.09)
Sum I	14.36 (2.01)	9.83 (2.37)
Direction of Hostility	+ 7.55 (4.88)	+ 8.00 (6.93)
Acting out Hostility	6.91 (1.93)	4.58 (2.69)
Delusional Hostility	2.45 (1.30)	0.75 (0.83)
Criticism of Others	6.55 (2.27)	4.25 (2.55)
Guilt	5.64 (1.15)	2.25 (1.23)
Self-criticism	8.73 (1.54)	7.58 (2.25)

The character disorders were significantly higher on General Hostility ($t = 4.77, P < .001$), Sum E ($t = 2.95, P < .01$), Sum I ($t = 4.69, P < .001$), Acting out Hostility ($t = 2.26, P < .05$), Delusional Hostility ($t = 3.59, P < .01$), Criticism of Others ($t = 2.17, P < .05$) and Guilt ($t = 6.50, P < .001$). The two groups did not differ significantly on Direction of Hostility (both being Intropunitive) or on Self-criticism.

c) The Anxiety Scale Questionnaire

Table 4.3.

Scores of the Groups
on the Anxiety Scale Questionnaire.

	<u>CD</u>	<u>N</u>
	Mean (SD)	Mean (SD)
Total (Raw) Score	55.73 (7.44)	42.33 (10.45)
Total (Sten) Score	9.36 (0.88)	7.50 (1.66)
Covert Anxiety Score	24.91 (5.68)	19.67 (5.07)
Overt Anxiety Score	30.82 (4.15)	22.67 (5.72)

The character disorders scored significantly higher (i.e. as more anxious) than the neurotics on all four measures:- Total (Raw) Score ($t = 3.36, P < .01$), Total (Sten) Score ($t = 3.17, P < .01$), Covert Anxiety ($t = 2.23, P < .05$) and Overt Anxiety ($t = 3.71, P < .01$).

d) Sixteen Personality Factor Questionnaire (16PF)

The mean scores obtained by the group on the sixteen primary factors and five second-order factors of the 16PF are shown in Tables 4.4 and 4.5 respectively. Six of the first-order factors reveal significant differences between the groups. Thus the character disorders are less stable, C - ($t = 2.39, P < .05$), less conscientious, G - ($t = 2.24, P < .05$), more suspicious, L + ($t = 2.64, P < .02$), less sophisticated, N - ($t = 3.10, P < .01$), more apprehensive, O + ($t = 4.44, P < .001$) and more tense, Q4 ($t = 2.68, P < .02$).

Table 4.4.

Scores of the Groups on the 16PF (Primary Factors).

<u>First-Order Factors</u> (High Score Description)	<u>CD</u>		<u>N</u>	
	Mean	(SD)	Mean	(SD)
A. (outgoing)	5.18	(1.80)	5.25	(1.74)
B. (intelligent)	6.45	(1.37)	7.42	(1.44)
C. (stable)	2.18	(1.19)	3.50	(1.32)
E. (dominant)	5.00	(1.35)	5.25	(1.23)
F. (enthusiastic)	3.82	(2.04)	4.58	(1.55)
G. (conscientious)	3.18	(1.69)	4.92	(1.85)
H. (venturesome)	3.45	(1.30)	3.83	(1.07)
I. (sensitive)	6.45	(1.88)	5.83	(1.52)
L. (suspecting)	8.18	(1.27)	6.50	(1.61)
M. (self-absorbed)	6.55	(1.67)	5.25	(1.30)
N. (sophisticated)	4.00	(1.41)	6.00	(1.53)
O. (apprehensive)	9.36	(0.64)	7.33	(1.31)
Q1. (radical)	6.09	(1.00)	5.75	(1.83)
Q2. (self-sufficient)	7.64	(1.07)	6.75	(1.96)
Q3. (self-controlled)	3.55	(1.37)	5.08	(1.98)
Q4. (tense)	8.73	(0.86)	7.00	(1.87)

Three significant differences between the groups on the second-order factors were found. The character disorders were more anxious ($t = 4.53, P < .001$), less tough ($t = 2.17, P < .05$) and more neurotic ($t = 4.46, P < .001$).

Table 4.5.

Scores of the Groups on the 16PF Second-Order Factors.

	<u>CD</u>		<u>N</u>	
	Mean	(SD)	Mean	(SD)
Anxiety	9.18	(0.71)	7.25	(1.16)
Introversion-Extraversion	3.64	(1.49)	4.08	(1.11)
Toughness	3.45	(1.37)	4.92	(1.7)
Independence	6.82	(0.94)	5.92	(1.23)
Neuroticism	9.27	(0.72)	7.08	(1.38)

The difference between the groups on the second-order factor of Toughness was not found in the larger sample (data reported in Appendix B)

on whom only the one testing was carried out. Since this larger sample is more likely to be representative of consecutive admissions the present finding must be treated with some doubt. In the larger sample a significant difference was found on Factor Q3 (character disorders being less self-controlled) and this difference has vanished in the data reported here. The best conclusion would seem to be that for those patients who remained in hospital for more than two weeks there was no difference between the groups on Q3 (self-control) but that there was on Toughness.

Assuming that scores of within \pm 1SD of the mean are normal then, on a sten scale, scores of 1 to 4 and 7 to 10 are deviant. By comparison with the normal population, the group of character disorders are much less stable (C-), less enthusiastic (F-), less conscientious (G-), less venturesome (H-), much more suspicious (L+), less sophisticated (N-), much more apprehensive (O+), more self-sufficient (Q2+), less self-controlled (Q3-) and much more tense (Q4+). On the second-order factors they score as much more anxious, more introverted, less tough and much more neurotic than normal subjects.

By comparison with the normal population the group of neurotics are more intelligent (B+), less stable (C-), less venturesome (H-), more apprehensive (O+) and more tense (Q4+). On the second-order factors they score as more anxious and neurotic than normal subjects.

Pearson product-moment correlation coefficients were calculated for the second-order anxiety factor (16PF) and the total (sten) score on the Anxiety Scale Questionnaire. For the character disorders, $r_{xy} = .84$ ($P < .01$) and for the neurotics $r_{xy} = .81$ ($P < .01$).

2. Description and Comparison of the Groups at Retesting

a) The Symptom Sign Inventory

Table 4.6 shows the median scores of the character disordered (CD) and neurotic (N) groups on the SSI at retesting.

Table 4.6.

Scores of the Groups on the SSI.

	<u>CD</u>	<u>N</u>
	Median	Median
Total Number of Symptoms	21.5	13
Number of Neurotic Symptoms	13.25	9.0
Number of Psychotic Symptoms	9.0	1.5
Personal Disturbance	8.0	3.5
Neurotic v Psychotic	2.0	0
Character Disorder Scale	3.0	0.9
<u>Subscales</u>		
Anxiety	3.4	4.0
Depression (Neurotic)	5.25	3.5
Mania	0.3	0.25
Paranoid	1.0	0.1
Obsessional	3.4	0.5
Schizophrenia	2.25	0.3
Hysteria	3.0	1.3
Melancholia	4.5	1.3

The character disorders again had a significantly greater total number of symptoms ($U = 25.5, P < .02$), a greater number of neurotic ($U = 32, P < .05$) and also of psychotic ($U = 18, P < .02$) symptoms. The character disorders still had significantly higher scores on the Personal Disturbance ($U = 30, P < .05$) and Neurotic v Psychotic ($U = 0.5, P < .002$) scales. When the two groups were compared on the eight subscales of the SSI, it was found that the character disorders admitted to significantly more symptoms of paranoia ($U = 28, P = .02$), obsessiveness ($U = 1, P < .002$), schizophrenia ($U = 29, P < .05$) and melancholia ($U = 14, P < .002$).

Thus, two weeks after the initial testing, the character disorders no longer admitted to more symptoms of anxiety or neurotic depression but, on the other hand, had more paranoid symptoms than the neurotics.

As before, the scores on the character disorder scale were subtracted from the total number of symptoms reported. It was again found that the character disorders had still reported significantly more symptoms than the neurotics ($U = 27.5, P < .02$).

Since the groups had not been differentiated for this study on the basis of their scores on the character disorder scale at retesting, they were on this occasion compared on this scale. Character disorders had significantly higher retest scores on the character disorder scale than neurotics ($U = 19.5, P < .02$). Nevertheless, at retesting, only four of the character disordered group would have been given a diagnosis of "character disorder".

b) The Hostility and Direction of Hostility Questionnaire

Table 4.7 gives the mean scores of the two groups on the HDHQ.

Table 4.7.

Scores of the Groups on the HDHQ.

	<u>CD</u>	<u>N</u>
	Mean (SD)	Mean (SD)
General Hostility	29.18 (6.53)	17.75 (6.97)
Sum E	15.73 (4.59)	9.00 (4.36)
Sum I	13.45 (2.77)	8.75 (4.26)
Direction of Hostility	+ 6.36 (4.56)	+ 6.42 (7.75)
Acting Out Hostility	5.73 (2.09)	3.92 (2.02)
Delusional Hostility	3.45 (1.61)	0.92 (0.86)
Criticism of Others	6.55 (2.19)	4.17 (2.79)
Guilt	4.82 (1.4)	2.08 (1.44)
Self-criticism	8.64 (1.72)	6.67 (3.09)



The character disorders were again significantly higher on General Hostility ($t = 3.87, P < .001$), Sum E ($t = 3.44, P < .01$), Sum I ($t = 2.96, P < .01$), Delusional Hostility ($t = 4.53, P < .001$), Criticism of Others ($t = 2.16, P < .05$) and Guilt ($t = 4.41, P < .001$). As before, there was no significant difference between the groups on Direction of Hostility (both being Intropunitive) or Self-criticism, but this time the character disorders did not score higher on Acting Out Hostility either.

c) The Anxiety Scale Questionnaire

The character disorders still scored as more anxious than the neurotics on all four measures: Total (Raw) Score ($t = 2.91, P < .01$), Total (Sten) Score ($t = 2.81, P < .02$), Covert Anxiety ($t = 2.83, P = .01$) and Overt Anxiety ($t = 3.30, P < .01$).

Table 4.8.

The Scores of the Groups
on the Anxiety Scale Questionnaire.

	<u>CD</u>	<u>N</u>
	Mean (SD)	Mean (SD)
Total (Raw) Score	55.00 (9.0)	39.25 (14.85)
Total (Sten) Score	9.27 (0.86)	7.08 (2.33)
Covert Anxiety Score	25.91 (5.57)	19.17 (7.36)
Overt Anxiety Score	29.09 (3.89)	20.08 (7.8)

Pearson product-moment correlation coefficients were calculated for the total (sten) score on this test and the 16PF second-order anxiety factor.

For the character disorders $r_{xy} = .85 (P < .01)$ and for the neurotics

$r_{xy} = .89 (P < .01)$

3. A. Comparisons of the Initial and Retest Scores of the Group of Character Disorders

a) The Symptom Sign Inventory

When the test and retest scores of the character disorders were compared by means of the Wilcoxon matched-pairs signed ranks test it was found that, from test to retest, there had been a significant drop in the total number of symptoms ($T = 2.5, P < .01$) and in the number of neurotic symptoms ($T = 3.5, P < .02$) but not in the number of psychotic symptoms reported. Significant falls in the following scores emerged - Personal Disturbance Scale ($T = 8, P = .05$), Neurotic v Psychotic ($T = 4, P = .05$) and Character Disorder ($T = 0, P < .01$). There was also a significant decline in the number of symptoms of anxiety ($T = 2, P < .01$), neurotic depression ($T = 0, P < .01$) and melancholia ($T = 0, P = .02$). There were no such changes in the number of symptoms reported on the a priori mania, paranoid, obsessional, schizophrenia or hysteria subscales.

When the scores on the Character Disorder scale were subtracted from the total numbers of symptoms reported, a significant decline, from test to retest, was found in the number of these other symptoms ($T = 3.5, N = 9, P < .05$).

b) The Hostility and Direction of Hostility Questionnaire

Comparing the test and retest scores of the character disorders, using the t-test for correlated means, it was found that there were no significant changes in the General Hostility, Sum E, Sum I and Direction of Hostility scores. From test to retest there was, however, a drop in the Acting Out Hostility score ($t = 2.45, P < .05$) and a rise in the Delusional Hostility score ($t = 3.73, P < .01$). The other three subscales, Criticism of Others, Guilt and Self-criticism, showed no change.

c) The Anxiety Scale Questionnaire

There were no significant changes from test to retest on these measures.

B. Comparisons of the Initial and Retest Scores of the Group of Neurotics

a) The Symptom Sign Inventory

When the test and retest scores of the neurotics were compared by means of the Wilcoxon matched-pairs signed ranks test, it was found that there had been a significant fall in the total number of symptoms reported ($T = 12, P < .05$). There was no significant change in the number of neurotic or psychotic symptoms reported nor in the scores on the Personal Disturbance, Neurotic v Psychotic or Character Disorder Scales. There was a drop in the number of symptoms of hysteria ($T = 3, P < .05$), but none of the other a priori symptom subscales showed any change.

Subtracting the scores on the Character Disorder Scale from the total numbers of symptoms reported at test and retest, a significant fall in the number of these other symptoms emerged ($T = 6.5, N = 11, P < .02$).

b) The Hostility and Direction of Hostility Questionnaire

Comparing the test and retest scores of the neurotics, using the t-test for correlated means, no significant changes were found on any of the measures obtained from the HDHQ.

c) The Anxiety Scale Questionnaire

There were no significant changes from test to retest on these measures.

4. Comparison of the Degree of Change, from Test to Retest, in the Character Disordered and Neurotic Groups

a) The Symptom Sign Inventory

The two groups were compared as to the gross changes in their respective scores on the various measures obtained from the SSI by subtracting the retest scores from the corresponding initial scores and subjecting the resulting "change" scores to Mann-Whitney U-tests. There were no significant differences between the groups as to the change in total number of symptoms, number of neurotic symptoms, number of psychotic symptoms, total number of symptoms less those of the Character Disorder scale, score on the Personal Disturbance scale or score on the Neurotic v Psychotic scale. The character disorder group did lose a significantly greater number of symptoms on the Character Disorder scale than the neurotics ($U = 19.5, P < .02$). Of the eight a priori symptom subscales only anxiety showed a significant difference - the character disorders lost more symptoms of anxiety than the neurotics did ($U = 32.5, P < .05$).

In order to take account of the differences between the groups in the initial levels of symptomatology, the "change" scores were also calculated as percentages of the corresponding initial scores. It was found that the character disorders showed a mean drop in total number of symptoms of 22.2%, as against the neurotics' 22.8%. Thus both groups lost the same proportion of their total initial symptomatology. When the scores on the Character Disorder scale were subtracted from the total numbers of symptoms, the character disorders were found to have lost 18.7% of these other symptoms, while the neurotics had lost 24.1% (this difference in proportions was not significant). When calculated as percentages of the initial scores, there

were no significant differences between the "change" scores of the character disorders and neurotics on the Character Disorder and anxiety scales.

b) Hostility and Direction of Hostility Questionnaire

There were no differences between the groups as to the degree of changes in their scores on the HDHQ.

c) Anxiety Scale Questionnaire

Again there were no differences between the groups as to the degree of changes in their scores.

5. Within-Group Comparisons of the Character Disorders

Although this study was not concerned with the psychometric reliability of the SSI, it was noted that only four of the eleven patients initially diagnosed as character disordered would have been so classified by the SSI at retesting. The Character Disorder scale is, of course, a symptom scale and so scores on it may be expected to change but the diagnosis of "character disorder" refers to an enduring psychological state and so it is of interest to know why in so many cases (two-thirds of the present sample) the SSI diagnosis was subject to change. Those patients in whom the character disorder diagnosis was upheld at retesting (Group A, n = 4) were, therefore, compared with those in which the diagnosis changed (Group B, n = 7). It is realised that the numbers in these subgroups are very small but the exercise of comparison is justified by the lack of information on this topic. The groups were compared, by means of the Mann-Whitney U-test, on all the test measures obtained in this study. Clearly significant differences between the groups were found on the following points:-

1. Group A reported more symptoms of anxiety at retesting with the SSI

($U = 2$, $P = .024$), 2. Group A had higher overt anxiety scores at testing ($U = 0$, $P = .006$) and retesting ($U = 1$, $P = .012$) on the Anxiety Scale Questionnaire, 3. Group A had higher scores on the Delusional Hostility scale ($U = 2$, $P = .024$) of the HDHQ at initial testing, 4. on the 16PF, Group A scored as less sophisticated, N- ($U = 3$, $P = .042$), and as more apprehensive, O+ ($U = 3$, $P = .042$).

Chapter 5

Discussion

The most striking outcome of this research has been the number of measures on which the character disorders were differentiated from the neurotics. It is simplest to begin by discussing each test separately.

a) The Symptom Sign Inventory

The character disorders presented with a great deal of varied symptomatology. At initial testing they had higher scores than the neurotics on total SSI, total SSI less the character disorder scale, neurotic symptomatology, psychotic symptomatology and on the personal disturbance and neurotic v psychotic scales. All these differences and the difference on the diagnostic criterion, the character disorder scale, remained at retesting. Thus on every symptom measure the character disorders scored (at test and retest) as more severely distressed than the neurotics. But while the neurotics showed significant changes, from test to retest, only on total SSI and total SSI less the character disorder scale (similar changes were noted in slightly improved patients by Foulds, 1965), the scores of the character disorders declined significantly on all these measures except the number of psychotic symptoms. In this last respect they differed from the expected pattern of change indicative of improvement. Foulds' theory of a continuum of personal disturbance and research findings, such as Adams and Foulds (1962), indicate that psychotic depressives (with whom the character disorders are most likely to be confused on the SSI) may be expected to lose their psychotic symptoms first and to become more like neurotics. That the

character disorders lost so much symptomatology so quickly and that the psychotic symptoms did not share in this fall as much as the neurotic symptoms supports the view that, despite having a lot of psychotic symptoms, these patients are not really psychotic.

Similarly, the very high level of initial symptomatology, the number of changes in such a short time and the unusual pattern of the changes suggest that the character disorders are indeed exaggerating the degree of their distress and that consequently the changes are not genuine signs of improvement (to the extent that symptom changes would represent improvement in neurosis).

This view is supported by comparing the two groups on the SSI subscales. It was found that initially the character disorders reported significantly more symptoms and signs of anxiety, neurotic depression, obsessionality, schizophrenia and melancholia. Whereas the neurotics only lost a significant amount of hysterical symptomatology, the character disorders lost, from test to retest, symptoms of anxiety, neurotic depression and melancholia. Although this was a move towards the scores obtained by neurotics, at retest the character disorders were still higher on obsessionality, schizophrenia and melancholia. In addition, at retest they had more paranoid symptoms than the neurotics. It is difficult to interpret this pattern of changes but it may be that the more dramatic, public symptomatology (e.g. anxiety and depression) with its power to elicit the sympathy of others has declined and that the remaining symptoms are less superficial, perhaps more related to the patient's chronic fears and guilt feelings about the failure of her interpersonal relationships and also related to the hostility which she has come to expect, or at least suspect, in others due to her own inadequacies in personal relationships.

The only SSI scales on which the character disorders' scores fell significantly more than the neurotics were the character disorder scale itself and the anxiety subscale. Since Foulds (1967) commented that the character disorder scale seemed to elicit invalid responses such a large change could be expected if the above interpretation were accurate. As large a change as for the anxiety subscale would also have been expected on the depressive subscale for the above view to be tenable. In fact the fall on depressive symptomatology only just failed to be significantly greater for character disorders than for neurotics. None of the other changes on the SSI was anywhere near being significantly greater for one group than the other.

Moreover, the two groups lost approximately the same proportion of their initial symptomatology (if the items of the character disorder scale are excluded, the neurotics actually lost a slightly greater proportion of their symptoms than did the character disorders). This suggests that change processes were occurring in the neurotics also, though this was perhaps less noticeable clinically and statistically because of the lower level of initial symptomatology.

That the neurotics dropped a significant number only of hysterical symptoms at retest may be a chance occurrence. However, it is odd that it should have been the hysterical subtest of the SSI which showed the only significant change. When the items of the SSI were assessed by two psychologists (see Chapter 2) to establish which could, and which could not, be theoretically subject to change, they agreed that nine out of the ten hysterical symptoms could not change at retest. That changes did occur

perhaps reflects a change in the patients' orientation towards their illness, i.e. that at retest neurotic patients were less focussed on their somatic symptomatology. It is worth noting that the one item expected to be subject to change asked whether the patient was worried about her physical health. A change in response to this item would also suggest a change in the attitude of the patient towards her illness. The results of a study by Foulds (1966) suggested that somatization of symptoms might be a substitute form of intropunitiveness; a finding which "accords well with the psychoanalytic view that somatization of symptoms drains off intropunitiveness. In this way somatization of symptoms could be regarded as an alternative outlet for intropunitiveness at a more covert level." Foulds then went on to say that "virtually all psychotherapists would agree that there is little prospect of movement in therapy until the impunitive attitude begins to give way to the extrapunitive or, probably more hopefully, to the intropunitive attitude one aspect of progress in therapy might be assessed by a measurable movement away from ostensibly somatic to psychological symptoms." The present finding, especially when considered along with the fall in total SSI, may indicate a slight but real improvement in the psychological state of the neurotics even after as short a period as two weeks.

From this it could be argued that whereas the neurotics did show some improvement, the only improvement shown by the character disorders was the discarding of superficial symptoms thereby exposing the chronic symptoms and problems of the "person" (Foulds, 1965). Further testing of such character disorders would be necessary to discover whether or not the remaining symptoms fell away after a longer interval. It is suggested here that these symptoms

would persist. This is based on the expectation that responses usually associated with, for example, schizophrenia would disappear at an early stage if they were the result of exaggeration. It is not being argued that these symptoms are the manifestation of a psychotic illness, but rather that they are the manifestation of a failure of interpersonal relationships as severe as occurs in a psychotic illness.

b) The Hostility and Direction of Hostility Questionnaire

The initial scores of the character disorders on the HDHQ were very similar to those reported by Foulds (1967) and Philip (1968) for female character disorders. The scores of the neurotics were more like those obtained by Foulds and those reported in the test manual than those of Philip's personally disturbed group of attempted suicides who were more hostile than is usual among hospitalized neurotics.

As expected, the present character disorders were higher on general hostility (being both more Intropunitive and more Extrapunitive) but did not differ from the neurotics on direction of hostility (both groups being intropunitive). There were no significant changes in any of those scores and the above differences between the groups remained at retest. Thus the many changes occurring on the SSI among the character disorders were not reflected at this "deeper" level and the decline in Intropunitiveness and change in direction of punitiveness suggested by Foulds did not occur. These findings tend to support the above interpretation of the symptom changes, if general hostility is seen as an indicator of personal disturbance reflecting the chronic insecurity of the "person".

Sum E (extrapunitiveness) has been viewed (Philip 1969) as indicative of disturbance less related to psychiatric symptomatology and more related to psychopathy. As expected, the character disorders scored higher on this than the neurotics. Although the E scores of neither group changed at retest, in the case of the character disorders component scores did change. Initially, the character disorders were higher on acting-out, criticism of others and delusional hostility but on retest the acting-out score had fallen significantly so that they were no longer higher than the neurotics. Meanwhile, the delusional hostility scale showed a significant increase at retest. This increase in projected hostility was also reflected on the SSI where at retest the character disorders reported more paranoid symptoms than the neurotics did. In line with the discussion of the SSI these changes may be interpreted as indicating a shift from displaying aggression (to defend the "person") to admitting to the fear of others stemming from interpersonal failures. This would be analagous to losing symptoms which were easily noticed and served the dual purpose of attracting attention and sympathy and at the same time tending to obscure real deep-lying fears and inadequacies.

Thus the explosive episodes involving these character disorders would be associated with an increased level of urge to act out hostility and an increased level of neurotic symptomatology.

Philip (1969) has viewed Sum I (intropunitiveness) as an index of personal disturbance primarily in the form of self-blame and psychiatric symptomatology. The character disorders scored higher than the neurotics on intropunitiveness but they were not more self-critical. The overall

difference was due to the high degree of delusional guilt expressed at test and retest. This extreme guilt-proneness was also shown in the very high score on Factor 0 of the 16PF. In symptomatology this guilt may have found expression in the obsessionalism and melancholia subscales of the SSI.

Foulds and Mayo (1967) and Mayo (1968) have shown that symptoms of personal disturbance alone may not lead to neurotic breakdown. Interpersonal failures and intropunitiveness are also important. In view of the chronic interpersonal difficulties of these character disorders much of their guilt may derive from failures of the "person". Thus intropunitiveness and interpersonal failures would be intimately related and no change on direction of hostility could be expected until the problems of the "person" had been mitigated.

c) 16 Personality Factor Questionnaire

The present study confirmed the findings of Philip (1968) as to the personality characteristics of character disorders. The scores of the two samples were very similar. By comparison with normals, female character disorders are very anxious and somewhat introverted (second-order factors); emotionally unstable (C-), expedient (G-), suspicious (L+), apprehensive and guilt-prone (O+), lacking self-control (Q3-) and tense (Q4+). In the present study they were also more serious (F-), shy (H-), naive (N-) and self-sufficient (Q2+). These latter scores were very similar to Philip's but (perhaps because of the smallness of the present sample) just fell beyond ± 1 SD of the mean. Additional second-order factors were scored on this occasion and the character disorders came out as much more neurotic and rather less tough than normals.

Neurotics differed from normals on only five first-order factors; higher intelligence (B+) and four of the anxiety-related factors C-, H-, O+, Q4+. They were also more anxious and introverted (second-order). These neurotics were slightly less deviant than Philip's personally-disturbed attempted suicides but, as was pointed out in discussing the HDHQ, Philip's cases seem to have been more deviant than neurotics seen in psychiatric hospitals.

In comparison with the neurotics, the present character disorders were much more anxious and neurotic and perhaps also less tough (second-order factors) - they were not significantly more introverted or independent. The character disorders differed from the neurotics on four first-order factors related to anxiety; they were emotionally less stable(C-), more suspicious (L+), more apprehensive and guilt prone (O+) and more tense (Q4+). In addition they were more expedient (G-) and less shrewd (N-). Whenever the groups differed the character disorders were always further from the mean of normals than were the neurotics.

The difference between the groups on anxiety was also found on the Anxiety Scale Questionnaire. The character disorders were significantly more anxious (having both more covert and overt anxiety) at test and retest and no changes occurred for either group. The test and retest scores on this measure correlated sufficiently highly (there is an overlap of items) with the 16PF second-order anxiety factor to suggest that anxiety related scores would not have changed had the 16PF been given again. However, for both character disorders and neurotics the overt anxiety score only just failed to show a significant fall at retest. This suggests that both groups were

losing overt anxiety but that perhaps the time interval was too short to show significant differences. Neither total anxiety nor covert anxiety showed changes approaching significance.

It could be argued that these very high anxiety scores reflected the patient's state of mind at the time of testing rather than any stable behavioural trait. However, there was no dramatic decline (such as happened on the SSI anxiety subscale) even on overt anxiety and such indications of change as there were applied equally to character disorders and neurotics. This seems to make it less likely that the character disorders were exaggerating their anxiety. Cattell (1964) conceived of anxiety as a disorganizing force or symptom of disorganization rather than a drive or motivating force and he has found that the high anxiety pattern of first-order anxiety related factors, as obtained in this study, is pronounced in neurotic and personality disordered groups. The present findings on anxiety are consistent with the results obtained on the HDHQ and it would seem that these test scores represent something less superficial to the character disorder than her plethora of symptoms. Certainly it would not seem unreasonable to suppose that severe interpersonal difficulties might be reflected in very high levels of anxiety and feelings of insecurity.

That the character disorders were less conscientious (G-) than the neurotics is to be expected in view of their manipulative behaviour. It may be supposed that the character disorders' comparative lack of sophistication (N-) could lead them to overdramatise their distress and leave themselves open to the suspicion of not being genuine. Lowe (1969) has distinguished psychopathic and neurotic patients on the basis of their typical impairments

of personal relationships. He argued that the individual with psychopathy tends to manipulate others, using them as mere objects or as a means to his own immediate ends; while the neurotic patient may attempt this, he fails due to his own insecurity and anxiety. One might suggest from the present findings that these character disorders have also failed to manipulate others successfully due to their incompetence in understanding others and their over-anxiety and insecurity (this relationship being reciprocal). Subsequent upon a crisis, something more dramatic than "wolf!" has to be cried and so attempted suicide and the presentation of a great deal of anxiety and depressive symptomatology occurs. This would be a desperate extension of the behaviour which has already failed.

The character disorder scale of the SSI is not a diagnostic scale in the same way that the other SSI scales are. The nature of the items is not so clearly related to the nature of the disorder and Foulds (1967) regarded character disorders as being typified by systematically invalid responses to these items. Further, the diagnosis of "character disorder" refers to an enduring psychological state. If a woman initially scores as character disordered but at retest, two weeks later, she no longer does so, this does not mean that she is no longer character disordered. Rather there has been a change in her psychological state (perhaps in her motivation) which has led to her no longer responding to these items in this invalid way. Changes might occur as six of the eight items of the scale were rated by two psychologists as being open to change. The present findings suggest that it is at the high point of her symptomatology that a woman is most likely to

be picked up by this scale. This means that the actual time of testing is important in establishing with this scale the proportion of character disorders in any given population.

Anxiety seems to have been closely related to change on the character disorder scale. Those in whom the diagnosis did not change were higher on overt, symptomatic, conscious anxiety (Anxiety Scale Questionnaire) both at test and retest. This measure is also supposed to be related to the desire to distort and overemphasize symptoms. Although they were not different at initial testing, these patients reported more symptoms of anxiety at retesting (SSI). When tested on the 16PF these women scored as more apprehensive and guilt prone (O+) and more naive (N-). In accord with the above formulations of change among character disorders, it seems that those who change least on the character disorder scale are those most given to persist in overt, unsophisticated expression of superficial anxiety.

It was further found that those in whom the diagnosis did not change had higher scores on the delusional hostility scale of the HDHQ at initial testing. By retest the others had increased more on this scale and the difference between the subgroups failed to be significant. It has been argued above that on the HDHQ the character disorders shifted from defending the self by showing that they could threaten others, to admitting their fear of other people. Thus those "ultra" character disorders expressed greater fear of others at initial testing but not at retesting, again showing less abandonment of defensive display.

It is realised that the obvious explanation for the change from acting out hostility to delusional hostility is that the former is a less sophisticated, less socially acceptable way of expressing hostility. In the

hospital situation patients might learn to deny their own hostility (thus becoming more like the neurotics) and project it onto others. Yet those who projected their hostility most were the most naive, most given to direct expression of anxiety and not the most sophisticated.

The present results on the 16PF disagree with McAllister (1968) who found that neurotics differed from the normal on more factors than did personality disorders. His neurotics were similar to the present sample but his personality disorders evidently were not like these character disorders. They scored as assertive (E+), happy-go-lucky (F+), shrewd (N+) and expedient (G-) which is much more like the McCords' idea of psychopathy. However, neither of McAllister's groups differed from the normal as much as the present ones (again perhaps due to these being much smaller samples) and his criterion of deviance was that a score be more than 1.1 sten (instead of, as here, one standard deviation) from the mean of normals. If the one standard deviation criterion of abnormality is adopted then McAllister's personality disorders differed from normals on two factors, F+ and N+ (happy-go-lucky and shrewd), while his neurotics differed on only one factor, O+ (apprehensiveness). However, information presented by Cattell and Eber (1964) would suggest that on the whole neurotics differ from normals on more factors than do personality disorders (including psychopaths).

This is an important point in trying to determine the relationship between character disorder, neurosis and the personality disorders (including psychopathy). According to Foulds' (1965) theory of a continuum of increasing degrees of failure to maintain or establish mutual personal relationships,

neurotics should differ from the normal more than personality disorders. His studies with the SSI and HDHQ have shown that while the continuum is generally supported, the findings on personality disorders and psychopaths do not entirely agree with the theory; e.g. on the HDHQ psychopaths score as more hostile than neurotics or even most psychotics. The present research has shown once again that character disorders are equally hostile. McAllister felt that his 16PF results supported Foulds' theory but as has been shown, the interpretation of his results depends on where the criterion of deviance is set.

The present 16PF results are consistent with the previous work on the HDHQ in placing character disorders beyond neurotics on the continuum of personal disturbance. When the longstanding interpersonal difficulties and recurrent crises of the character disorders are taken into account it can be seen that this is quite reasonable. Moreover, Foulds' concept of each group of the personally disturbed containing the pathology of the previous group is also upheld in terms of symptomatology - the character disorders having neurotic symptoms plus others that the neurotics do not have.

A synthesis of the present findings on character disorders suggests that these women have severe personality problems (especially in terms of anxiety, guilt and insecurity) and chronic symptomatology (some of it apparently psychotic), intimately connected with their very poor interpersonal relationships. At times of crisis they over-react with desperate, manipulative behaviour and intense self-pity. This causes them to present additional, more superficial symptomatology (particularly of depression and

anxiety) and to behave dramatically (e.g. by attempting suicide). Such explosive episodes are successful in the short term in that the extra symptoms attract attention and sympathy without exposing the deeper problems and enable the woman to leave the threatening situation (e.g. by entering hospital). However, this behaviour is merely an exaggeration of her usual socially maladaptive responses and makes it still more difficult for her to establish relationships with others in the longrun. It is hypothesized that when the threatening situation seems more remote or when some satisfactory interpersonal relationship is established these "defensive" symptoms are abandoned revealing the fear and suspicion of others. It is only this facade of symptomatology which rapidly declines - in all other respects the character disorder changes no more than the neurotic but this gives the appearance of improvement and, just when the patient has gained some confidence in others, she is probably discharged from hospital. If this is so, then the destruction of this confidence and the worsening of her personal relationships due to her explosive behaviour may be expected to aggravate her problems and make her even more likely to break down again when a further crisis occurs.

These character disorders share the impulsiveness, selfishness, expediency and manipulateness of the psychopaths of whom the McCords write but they lack their tough, aggressive attitude and seem to be the main sufferers from their own actions. To successfully manipulate others a certain shrewdness is required. Lacking this makes these character disorders socially incompetent and their failure leads them to fear others and blame themselves.

Appendix A

The items of the Symptom Sign Inventory.

The items of the Hostility and Direction of Hostility
Questionnaire.

The items of the Anxiety Scale Questionnaire.

The items of the Sixteen Personality Factor Questionnaire.

The Symptom Sign Inventory

- A
- 1 Does your hand often shake when you try to do something?
 - 2 Do you sweat very easily, even on cool days?
 - 3 Do you suffer from palpitations or breathlessness?
 - 4 Are there times when you feel anxious without knowing the reason?
 - 5 Are you afraid of being in a wide-open space or in an enclosed space?
 - 6 Are you afraid that you might be going insane?
 - 7 Have you a pain, or feeling of tension, in the back of the neck?
 - 8 Have you any difficulty in getting off to sleep (without sleeping pills)?
 - 9 Are you afraid of going out alone?
 - 10 Have you any particular fear not mentioned above?

- B
- 1 Do you cry rather easily?
 - 2 Have you lost interest in almost everything?
 - 3 Have you ever attempted to do away with yourself?
 - 4 Is the simplest task too much of an effort?
 - 5 Are you depressed because of some particular loss or disappointment?
 - 6 Have you found it difficult to concentrate recently?
 - 7 Does the future seem pointless?
 - 8 Are you more absent-minded recently than you used to be?
 - 9 Are you slower recently in everything you do?
 - 10 Do you ever seriously think of doing away with yourself because you are no longer able to cope with your difficulties?

Past week

C

- 1 Do you ever feel so confident and successful that there is nothing you can't achieve?
- 2 Do you ever become very excitedly happy at times, for no special reason?
- 3 Are you ever so cheerful that you want to laugh and joke with everyone?
- 4 Are there times when exciting new ideas and schemes occur to you one after the other?
- 5 Are you ever so full of pep and energy that you carry on doing things indefinitely?

Past week

- 6 Do you ever become so excited that your thoughts race ahead faster than you can express them?
- 7 Are you ever so cheerful that you want to wear lots of gay things, like button-holes, flowers, bright ties, jewellery, etc.?
- 8 When you get bored, do you ever like to stir up some excitement?
- 9 Do you ever feel so full of energy and ideas that you don't want to go to bed?
- 10 Are you a much more important person than most people seem to think?

D

- 1 Are people talking about you and criticizing you through no fault of your own?
- 2 Have you an important mission to carry out?
- 3 Are there people who are trying to harm you through no fault of your own?
- 4 Is someone trying to poison you or make you ill in some way?
- 5 Have you some special power, ability or influence which is not recognized by other people?

- 6 Is someone, other than yourself, deliberately causing most of your troubles?
- 7 Are people plotting against you through no fault of your own?
- 8 Do you ever take strong action against an evil person for the sake of a principle?
- 9 Do you ever see someone do or say something which most people do not take much notice of, but which you know has a special meaning?
- 10 Can people read your thoughts and make you do things against your will by a sort of hypnotism?

E

- 1 Are you distressed by silly, pointless thoughts that keep coming into your mind against your will?
- 2 Are you compelled to think over abstract problems again and again until you can't leave them alone?
- 3 Are you unnecessarily careful in carrying out even simple everyday tasks like folding up clothes, reading notices, etc.?
- 4 Are you unable to prevent yourself from doing quite pointless things, counting windows, uttering phrases, etc.?
- 5 Are you afraid you might do something seriously wrong against your will?
- 6 Do distressing thoughts about sex or religion come into your mind against your will?
- 7 Do you feel you just have to check things again and again - like turning off taps or lights, shutting windows at night, etc. - although you know there is really no need to?
- 8 Have you an unreasonable fear that some careless act of yours might have very serious consequences?
- 9 Are you excessively concerned about cleanliness?
- 10 Do you have an uneasy feeling if you don't do something in a certain order, or a certain number of times?

F

- 1 Do you feel that there is some sort of barrier between you and other people so that you can't really understand them?
- 2 Do you ever see visions, or people, animals or things around you that other people don't seem to see?
- 3 Do you often wonder who you really are?
- 4 Do you ever have very strange and peculiar experiences?
- 5 Do you think other people regard you as very odd?
- 6 Do you often feel puzzled, as if something has gone wrong either with you or with the world, without knowing just what it is?
- 7 Do you ever hear voices without knowing where they come from?
- 8 Do you feel you cannot communicate with other people because you don't seem to be on the same 'wave-length'?
- 9 Do you have very strange and peculiar thoughts at times?
- 10 Is there something unusual about your body - like one side being different from the other and meaning something different?

G

- 1 Do you ever lose the use of an arm or leg or face muscle?
- 2 Do you ever have fits or difficulty in keeping your balance?
- 3 Do you ever completely lose your voice (except from a cold)?
- 4 Do you ever lose all feeling in any part of your skin - so that you wouldn't be able to feel a pin prick - or do you ever have burning or tingling sensations?
- 5 Do you ever have 'black-outs', dizzy spells or faints?
- 6 Have you been in poor physical health during most of the past few years?
- 7 Do you often suffer from blurring of vision or any other difficulty with your sight which no one seems to be able to put right?
- 8 Are you often bothered with pains over your heart, in your chest or in your back?
- 9 Do you ever do things in a dream-like state without remembering afterwards what you have been doing?
- 10 Are you worried about your physical health?

H

- 1 Are you worried about having said things that have injured others?
- 2 Are you an unworthy person in your own eyes?
- 3 Have you some bodily condition which you find disgusting?
- 4 Are you a condemned person because of your sins?
- 5 Are you troubled by waking in the early hours and being unable to get off to sleep again (if you don't have sleeping pills)?
- 6 Because of things you have done wrong, are people talking about you and criticizing you?
- 7 Are you ever so low in spirits that you just sit for hours on end?
- 8 Do you cause harm to people because of what you are?
- 9 Are you ever so 'worked up' that you pace about wringing your hands?
- 10 Do you ever go to bed feeling you wouldn't care if you never woke up?

Personality Questionnaire (HDHQ)

- | | | | |
|-----|---|------|-------|
| 1. | Most people make friends because friends are likely to be useful to them. | True | False |
| 2. | I do not blame a person for taking advantage of someone who lays himself open to it. | True | False |
| 3. | I usually expect to succeed in things I do. | True | False |
| 4. | I have no enemies who really wish to harm me. | True | False |
| 5. | I wish I could get over worrying about things I have said that may have injured other people's feelings. | True | False |
| 6. | I think nearly anyone would tell a lie to keep out of trouble. | True | False |
| 7. | I don't blame anyone for trying to grab everything he can get in this world. | True | False |
| 8. | My hardest battles are with myself. | True | False |
| 9. | I know who, apart from myself, is responsible for most of my troubles. | True | False |
| 10. | Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right. | True | False |
| 11. | Some of my family have habits that bother and annoy me very much. | True | False |
| 12. | I believe my sins are unpardonable. | True | False |
| 13. | I have very few quarrels with members of my family. | True | False |
| 14. | I have often lost out on things because I couldn't make up my mind soon enough. | True | False |

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|-----|--|------|-------|
| 15. | I can easily make other people afraid of me, and sometimes do for the fun of it. | True | False |
| 16. | I believe I am a condemned person. | True | False |
| 17. | In school I was sometimes sent to the principal for misbehaving. | True | False |
| 18. | I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing. | True | False |
| 19. | Most people are honest chiefly through fear of being caught. | True | False |
| 20. | Sometimes I enjoy hurting persons I love. | True | False |
| 21. | I have not lived the right kind of life. | True | False |
| 22. | Sometimes I feel as if I must injure either myself or someone else. | True | False |
| 23. | I seem to be about as capable and clever as most others around me. | True | False |
| 24. | I sometimes tease animals. | True | False |
| 25. | I get angry sometimes. | True | False |
| 26. | I am entirely self-confident. | True | False |
| 27. | Often I can't understand why I have been so cross and grouchy. | True | False |
| 28. | I shrink from facing a crisis or difficulty. | True | False |
| 29. | I think most people would lie to get ahead. | True | False |
| 30. | I have sometimes felt that difficulties were piling up so high that I could not overcome them. | True | False |

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|-----|--|------|-------|
| 31. | If people had not had it in for me I would have been much more successful. | True | False |
| 32. | I have often found people jealous of my good ideas, just because they had not thought of them first. | True | False |
| 33. | Much of the time I feel as if I have done something wrong or evil. | True | False |
| 34. | I have several times given up doing a thing because I thought too little of my ability. | True | False |
| 35. | Someone has it in for me. | True | False |
| 36. | When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing. | True | False |
| 37. | I am sure I get a raw deal from life. | True | False |
| 38. | I believe I am being followed. | True | False |
| 39. | At times I have a strong urge to do something harmful or shocking. | True | False |
| 40. | I am easily downed in an argument. | True | False |
| 41. | It is safer to trust nobody. | True | False |
| 42. | I easily become impatient with people. | True | False |
| 43. | At times I think I am no good at all. | True | False |
| 44. | I commonly wonder what hidden reason another person may have for doing something nice for me. | True | False |
| 45. | I get angry easily and then get over it soon. | True | False |

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|-----|---|------|-------|
| 46. | At times I feel like smashing things. | True | False |
| 47. | I believe I am being plotted against. | True | False |
| 48. | I certainly feel useless at times. | True | False |
| 49. | At times I feel like picking a fist fight with someone. | True | False |
| 50. | Someone has been trying to rob me. | True | False |
| 51. | I am certainly lacking in self-confidence. | True | False |

Self Analysis Form

- | | | | |
|--|-----------|------------|--------|
| 1. I find that my interests, in people and amusements, tend to change fairly rapidly | True | In between | False |
| 2. If people think poorly of me I can still go on quite serenely in my own mind | True | In between | False |
| 3. I like to wait till I am sure that what I am saying is correct, before I put forward an argument | Yes | In between | No |
| 4. I am inclined to let my actions get swayed by feelings of jealousy | Sometimes | Seldom | Never |
| 5. If I had my life to live over again I would (A) plan very differently, (B) want it the same | A | In between | B |
| 6. I admire my parents in all important matters | Yes | In between | No |
| 7. I find it hard to "take 'no' for an answer", even when I know what I ask is impossible | True | In between | False |
| 8. I doubt the honesty of people who are more friendly than I would naturally expect them to be | True | In between | False |
| 9. In demanding and enforcing obedience my parents (or guardians) were:
(A) always very reasonable,
(B) often unreasonable | A | In between | B |
| 10. I need my friends more than they seem to need me | Rarely | Sometimes | Often |
| 11. I feel sure that I could "pull myself together" to deal with an emergency | Always | Often | Seldom |
| 12. As a child I was afraid of the dark .. | Often | Sometimes | Never |
| 13. People sometimes tell me that I show my excitement in voice and manner too obviously | Yes | Uncertain | No |

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|-----|--|----------------|--------------|-------|
| 14. | If people take advantage of my
friendliness I: (A) soon forget and
forgive, (B) resent it and hold it
against them | A | In between | B |
| 15. | I find myself upset rather than helped
by the kind of personal criticism
that many people make | Often | Occasionally | Never |
| 16. | Often I get angry with people too
quickly | True | In between | False |
| 17. | I feel restless as if I want something
but do not know what | Very
rarely | Sometimes | Often |
| 18. | I sometimes doubt whether people I am
talking to are really interested in
what I am saying | True | In between | False |
| 19. | I have always been free from any vague
feelings of ill-health, such as
obscure pains, digestive upsets,
awareness of heart action, etc. ... | True | Uncertain | False |
| 20. | In discussion with some people, I get
so annoyed that I can hardly trust
myself to speak | Some-
times | Rarely | Never |
| 21. | Through getting tense I use up more
energy than most people in getting
things done | True | Uncertain | False |
| 22. | I make a point of not being absent-
minded or forgetful of details | True | Uncertain | False |
| 23. | However difficult and unpleasant the
obstacles, I always stick to my
original intentions | Yes | In between | No |
| 24. | I tend to get over-excited and "rattled"
in upsetting situations | Yes | In between | No |
| 25. | I occasionally have vivid dreams that
disturb my sleep | Yes | In between | No |
| 26. | I always have enough energy when faced
with difficulties | Yes | In between | No |
| 27. | I sometimes feel compelled to count
things for no particular purpose .. | True | Uncertain | False |

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|-----|--|-------|-------------|-----------|
| 28. | Most people are a little queer mentally, though they do not like to admit it | True | Uncertain | False |
| 29. | If I make an awkward social mistake I can soon forget it | Yes | In between | No |
| 30. | I feel grouchy and just do not want to see people: (A) occasionally, (B) rather often | A | In between | B |
| 31. | I am brought almost to tears by having things go wrong | Never | Very rarely | Sometimes |
| 32. | In the midst of social groups I am nevertheless sometimes overcome by feelings of loneliness and worthlessness | Yes | In between | No |
| 33. | I wake in the night and, through worry, have some difficulty in sleeping again | Often | Sometimes | Never |
| 34. | My spirits generally stay high no matter how many troubles I meet ... | Yes | In between | No |
| 35. | I sometimes get feelings of guilt or remorse over quite small matters .. | Yes | In between | No |
| 36. | My nerves get on edge so that certain sounds, e.g., a screechy hinge, are unbearable and give me the shivers | Often | Sometimes | Never |
| 37. | If something badly upsets me I generally calm down again quite quickly | True | Uncertain | False |
| 38. | I tend to tremble or perspire when I think of a difficult task ahead ... | Yes | In between | No |
| 39. | I usually fall asleep quickly, in a few minutes, when I go to bed | Yes | In between | No |
| 40. | I sometimes get in a state of tension or turmoil as I think over my recent concerns and interests | True | Uncertain | False |



WHAT TO DO: Inside this booklet are some questions to see what attitudes and interests you have. There are no "right" and "wrong" answers because everyone has the right to his own views. To be able to get the best advice from your results, you will want to answer them exactly and truly.

If a separate "Answer Sheet" has not been given to you, turn this booklet over and tear off the Answer Sheet on the back page.

Write your name and other particulars at the top of the Answer Sheet.

First, you should answer the four sample questions below so that you can see whether you need to ask anything before starting. Although you are to read the questions in this booklet, you must record your answers on the answer sheet (alongside the same number as in the booklet).

There are three possible answers to each question. Read the following examples and mark your answers at the top of your answer sheet where it says "Examples." Put a mark, x, in the left-hand box if your answer choice is the "a" answer, in the middle box if your answer choice is the "b" answer, and in the right-hand box if you choose the "c" answer.

EXAMPLES:

1. I like to watch team games. (a) yes, (b) occasionally, (c) no.
2. I prefer people who:
(a) are reserved, (b) (are) in between, (c) make friends quickly.
3. Money cannot bring happiness. (a) yes (true), (b) in between, (c) no (false).
4. Woman is to child as cat is to: (a) kitten, (b) dog, (c) boy.

In the last example there *is* a right answer—kitten. But there are very few such reasoning items among the questions.

Ask *now* if anything is not clear. The examiner will tell you in a moment to turn the page and start.

When you answer, keep these four points in mind:

1. You are asked not to spend time pondering. **Give the first, natural answer as it comes to you.** Of course, the questions are too short to give you all the particulars you would sometimes like to have. For instance, the above question asks you about "team games" and you might be fonder of football than basketball. But you are to reply "for the average game," or to strike an average in situations of the kind stated. Give the best answer you can at a rate not slower than five or six a minute. You should finish in a little more than half an hour.
2. Try **not** to fall back on the middle, "uncertain" answers except when the answer at either end is really **impossible** for you—perhaps once every two or three questions.
3. Be sure not to skip anything, **but answer every question, somehow.** Some may not apply to you very well, but give your best guess. Some may seem personal; but remember that the answer sheets are kept confidential and cannot be scored without a special stencil key. Answers to particular questions are not inspected.
4. Answer as honestly as possible what is true of **you.** Do not merely mark what seems "the right thing to say" to impress the examiner.

DO NOT TURN PAGE UNTIL TOLD TO DO SO

1. I have the instructions for this test clearly in mind. (a) yes, (b) uncertain, (c) no.
2. I am ready to answer each question as truthfully as possible. (a) yes, (b) uncertain, (c) no.
3. It would be good for everyone if vacations (holidays) were longer and everyone *had* to take them. (a) agree, (b) uncertain, (c) disagree.
4. I can find enough energy to face my difficulties. (a) always, (b) generally, (c) seldom.
5. I feel a bit nervous of wild animals even when they are in strong cages. (a) yes (true), (b) uncertain, (c) no (false).
6. I hold back from criticizing people and their ideas. (a) yes, (b) sometimes, (c) no.
7. I make smart, sarcastic remarks to people if I think they deserve it. (a) generally, (b) sometimes, (c) never.
8. I prefer semiclassical music to popular tunes. (a) true, (b) uncertain, (c) false.
9. If I saw two neighbors' children fighting, I would: (a) leave them to settle it, (b) uncertain, (c) reason with them.
10. On social occasions I: (a) readily come forward, (b) respond in between, (c) prefer to stay quietly in the background.
11. I would rather be: (a) a construction engineer, (b) uncertain, (c) a teacher of social studies.
12. I would rather spend a free evening: (a) with a good book, (b) uncertain, (c) working on a hobby with friends.
13. I can generally put up with conceited people, even though they brag or show they think too well of themselves. (a) yes, (b) in between, (c) no.
14. I'd rather that the person I marry be socially admired than gifted in art or literature. (a) true, (b) uncertain, (c) false.
15. I sometimes get an unreasonable dislike for a person: (a) but it is so slight I can hide it easily, (b) in between, (c) which is so definite that I tend to express it.
16. In a situation which may become dangerous I believe in making a fuss and speaking up even if calmness and politeness are lost. (a) yes, (b) in between, (c) no.
17. I am always keenly aware of attempts at propaganda in things I read. (a) yes, (b) uncertain, (c) no.
18. I wake up in the night and, through worry, have difficulty in sleeping again. (a) often, (b) sometimes, (c) never.
19. I don't feel guilty if scolded for something I did not do. (a) true, (b) uncertain, (c) false.
20. I am considered a liberal "dreamer" of new ways rather than a practical follower of well-tried ways. (a) true, (b) uncertain, (c) false.
21. I find that my interests in people and amusement tend to change fairly rapidly. (a) yes, (b) in between, (c) no.
22. In constructing something I would rather work: (a) with a committee, (b) uncertain, (c) on my own.
23. I find myself counting things, for no particular purpose. (a) often, (b) occasionally, (c) never.
24. When talking I like: (a) to say things, just as they occur to me, (b) in between, (c) to get my thoughts well organized first.
25. I never feel the urge to doodle and fidget when kept sitting still at a meeting. (a) true, (b) uncertain, (c) false.

26. With the same hours and pay, I would prefer the life of: (a) a carpenter or cook, (b) uncertain, (c) a waiter in a good restaurant.
27. With acquaintances I prefer: (a) to keep to matter-of-fact impersonal things, (b) in between, (c) to chat about people and their feelings.
28. "Spade" is to "dig" as "knife" is to: (a) sharp, (b) cut, (c) shovel.
29. I sometimes can't get to sleep because an idea keeps running through my mind. (a) true, (b) uncertain, (c) false.
30. In my personal life I reach the goals I set, almost all the time. (a) true, (b) uncertain, (c) false.
31. When telling a person a deliberate lie I have to look away, being ashamed to look him in the eye. (a) true, (b) uncertain, (c) false.
32. I am uncomfortable when I work on a project requiring quick action affecting others. (a) true, (b) in between, (c) false.
33. Most of the people I know would rate me as an amusing talker. (a) yes, (b) uncertain, (c) no.
34. Many ordinary people would be shocked if they knew my inner personal opinions. (a) yes, (b) uncertain, (c) no.
35. I get slightly embarrassed if I suddenly become the focus of attention in a social group. (a) yes, (b) in between, (c) no.
36. I am always glad to join a large gathering, for example, a party, dance, or public meeting. (a) yes, (b) in between, (c) no.
37. In school I preferred (or prefer): (a) music, (b) uncertain, (c) handwork and crafts.
38. I believe most people are a little "queer" mentally though they do not like to admit it. (a) yes, (b) in between, (c) no.
39. I like a friend (of my sex) who: (a) seriously thinks out his attitudes to life, (b) in between, (c) is efficient and practical in his interests.
40. "If at first you don't succeed, try, try, again," is a motto completely forgotten in the modern world. (a) yes, (b) uncertain, (c) no.
41. I feel a need every now and then to engage in a tough physical activity. (a) yes, (b) in between, (c) no.
42. I would rather mix with polite people than rough, rebellious individuals. (a) yes, (b) in between, (c) no.
43. In intellectual interests, my parents are (were): (a) a bit below average, (b) average, (c) above average.
44. When I am called in by my boss (or teacher), I: (a) see a chance to put in a good word for things I am concerned about, (b) in between, (c) fear something has gone wrong.
45. I feel a strong need for someone to lean on in times of sadness. (a) yes, (b) in between, (c) no.
46. I occasionally get puzzled when looking in a mirror, as to the meaning of right and left. (a) true, (b) uncertain, (c) false.
47. As a teenager, I joined in school sports: (a) occasionally, (b) fairly often, (c) a great deal.
48. I would rather stop in the street to watch an artist painting than listen to some people having a quarrel. (a) true, (b) uncertain, (c) false.
49. I sometimes get in a state of tension and turmoil as I think of the day's happenings. (a) yes, (b) in between, (c) no.
50. I sometimes doubt whether people I am talking to are really interested in what I am saying. (a) yes, (b) in between, (c) no.

51. I would like to be: (a) a forester, (b) uncertain, (c) a grammar or high school teacher.
52. For special holidays and birthdays, I: (a) like to give personal presents, (b) uncertain, (c) feel that buying presents is a bit of a nuisance.
53. "Tired" is to "work" as "proud" is to: (a) rest, (b) success, (c) exercise.
54. Which of the following items is different in kind from the others? (a) candle, (b) moon, (c) electric light.
55. I admire my parents in all important matters. (a) yes, (b) uncertain, (c) no.
56. I have some characteristics in which I feel definitely superior to most people. (a) yes, (b) uncertain, (c) no.
57. If it is useful to others, I don't mind taking a dirty job that others look down on. (a) true, (b) uncertain, (c) false.
58. I like to go out to a show or entertainment: (a) more than once a week (more than average), (b) about once a week (average), (c) less than once a week (less than average).
59. I think that plenty of freedom is more important than good manners and respect for the law. (a) true, (b) uncertain, (c) false.
60. I tend to keep quiet in the presence of senior persons (people of greater experience, age, or rank). (a) yes, (b) in between, (c) no.
61. I find it hard to address or recite to a large group. (a) yes, (b) in between, (c) no.
62. I would rather live in a town: (a) which is rough, prosperous, and booming, (b) uncertain, (c) artistically laid out, but relatively poor.
63. If I make an awkward social mistake, I can soon forget it. (a) yes, (b) in between, (c) no.
64. When I read an unfair magazine article, I am more inclined to forget it than to feel like "hitting back." (a) true, (b) uncertain, (c) false.
65. My memory tends to drop a lot of unimportant trivial things, for example, names of streets or stores in town. (a) yes, (b) in between, (c) no.
66. I am considered a person easily swayed by appeals to my feelings. (a) yes, (b) in between, (c) no.
67. I eat my food with gusto, not always so carefully and properly as some people. (a) true, (b) uncertain, (c) false.
68. I generally keep up hope in ordinary difficulties. (a) yes, (b) uncertain, (c) no.
69. People sometimes warn me that I show my excitement in voice and manner too obviously. (a) yes, (b) in between, (c) no.
70. As a teenager, if I differed in opinion from my parents, I usually: (a) kept my own opinion, (b) in between, (c) accepted their authority.
71. I prefer to marry someone who can: (a) keep the family interested in its own activities, (b) in between, (c) make the family a part of the social life of the neighborhood.
72. I would rather enjoy life quietly in my own way than be admired for my achievements. (a) true, (b) uncertain, (c) false.
73. I can work carefully on most things without being bothered by people making a lot of noise around me. (a) yes, (b) in between, (c) no.
74. I feel that on one or two occasions recently I have been blamed more than I really deserve. (a) yes, (b) in between, (c) no.
75. I am always able to keep the expressions of my feelings under exact control. (a) yes, (b) in between, (c) no.

76. In starting a useful invention, I would prefer: (a) **working on it in the laboratory**, (b) **uncertain**, (c) **selling it to people**.
77. "Surprise" is to "strange" as "fear" is to: (a) **brave**, (b) **anxious**, (c) **terrible**.
78. Which of the following fractions is not in the same class as the others? (a) $3/7$, (b) $3/9$, (c) $3/11$.
79. Some people seem to ignore or avoid me, although I don't know why. (a) **true**, (b) **uncertain**, (c) **false**.
80. People treat me less reasonably than my good intentions deserve. (a) **often**, (b) **occasionally**, (c) **never**.
81. The use of foul language, even when it is not in a mixed group of men and women, still disgusts me. (a) **yes**, (b) **in between**, (c) **no**.
82. I have decidedly fewer friends than most people. (a) **yes**, (b) **in between**, (c) **no**.
83. I would hate to be where there wouldn't be a lot of people to talk to. (a) **true**, (b) **uncertain**, (c) **false**.
84. People sometimes call me careless, even though they think me an attractive person. (a) **yes**, (b) **in between**, (c) **no**.
85. My reserve always stands in the way when I want to speak to an attractive stranger of the opposite sex. (a) **yes**, (b) **in between**, (c) **no**.
86. I would rather have a job with: (a) **a fixed, certain salary**, (b) **in between**, (c) **a larger salary, but depending on my constantly persuading people I am worth it**.
87. I prefer reading: (a) **a realistic account of military or political battles**, (b) **uncertain**, (c) **a sensitive, imaginative novel**.
88. When bossy people try to "push me around," I do just the opposite of what they wish. (a) **yes**, (b) **in between**, (c) **no**.
89. Most people would be "better off" if given more praise instead of more criticism. (a) **true**, (b) **uncertain**, (c) **false**.
90. In discussing art, religion, or politics, I seldom get so involved or excited I forget politeness and human relations. (a) **true**, (b) **uncertain**, (c) **false**.
91. If someone got mad at me, I would: (a) **try to calm him down**, (b) **uncertain**, (c) **get irritated**.
92. I would like to see a move toward: (a) **eating more vegetable foods, to avoid killing so many animals**, (b) **uncertain**, (c) **getting better poisons to kill the animals which ruin farmers' crops (such as squirrels, rabbits, and some kinds of birds)**.
93. If acquaintances treat me badly and show they dislike me: (a) **it does not upset me a bit**, (b) **in between**, (c) **I tend to get downhearted**.
94. Careless folks who say "the best things in life are free" usually haven't worked to get much. (a) **true**, (b) **in between**, (c) **false**.
95. Because it is not always possible to get things done by gradual, reasonable methods, it is sometimes necessary to use force. (a) **true**, (b) **in between**, (c) **false**.
96. At fifteen or sixteen I went about with the opposite sex: (a) **a lot**, (b) **as much as most people**, (c) **less than most people**.
97. I like to take an active part in social affairs, committee work, etc. (a) **yes**, (b) **in between**, (c) **no**.
98. The idea that sickness comes as much from mental as physical causes is much exaggerated. (a) **yes**, (b) **in between**, (c) **no**.
99. Quite small setbacks occasionally irritate me too much. (a) **yes**, (b) **in between**, (c) **no**.
100. I very rarely blurt out annoying remarks that hurt people's feelings. (a) **true**, (b) **uncertain**, (c) **false**.

101. I would prefer to work in a business: (a) talking to customers, (b) in between, (c) keeping office accounts and records.
102. "Size" is to "length" as "dishonest" is to: (a) prison, (b) sin, (c) stealing.
103. AB is to dc as SR is to: (a) qp, (b) pq, (c) tu.
104. When people are unreasonable, I just: (a) keep quiet, (b) in between, (c) despise them.
105. If people talk loudly while I am listening to music, I: (a) can keep my mind on the music and not be bothered, (b) in between, (c) find it spoils my enjoyment and annoys me.
106. I think I am better described as: (a) polite and quiet, (b) in between, (c) forceful.
107. I attend social functions only when I have to, and stay away any other time. (a) yes, (b) uncertain, (c) no.
108. To be cautious and expect little is better than to be happy at heart, always expecting success. (a) true, (b) uncertain, (c) false.
109. In thinking of difficulties in my work, I: (a) try to plan ahead, before I meet them, (b) in between, (c) assume I can handle them when they come.
110. I have at least as many friends of the opposite sex as of my own. (a) yes, (b) in between, (c) no.
111. Even in an important game I am more concerned to enjoy it than to win. (a) always, (b) generally, (c) occasionally.
112. I would rather be: (a) a guidance worker with young people seeking careers, (b) uncertain, (c) a manager in a technical manufacturing concern.
113. If I am quite sure that a person is unjust or behaving selfishly, I show him up, even if it takes some trouble. (a) yes, (b) in between, (c) no.
114. Some people criticize my sense of responsibility. (a) yes, (b) uncertain, (c) no.
115. I would enjoy being a newspaper writer on drama, concerts, opera, etc. (a) yes, (b) uncertain, (c) no.
116. I find it embarrassing to have praise or compliments bestowed on me. (a) yes, (b) in between, (c) no.
117. I think it is more important in the modern world to solve: (a) the political difficulties, (b) uncertain, (c) the question of moral purpose.
118. I occasionally have a sense of vague danger or sudden dread for no sufficient reason. (a) yes, (b) in between, (c) no.
119. As a child I feared the dark. (a) often, (b) sometimes, (c) never.
120. On a free evening I like to: (a) see an historical film about past adventures, (b) uncertain, (c) read science fiction or an essay on "The Future of Science."
121. It bothers me if people think I am being too unconventional or odd. (a) a lot, (b) somewhat, (c) not at all.
122. Most people would be happier if they lived more with their fellows and did the same things as others. (a) yes, (b) in between, (c) no.
123. I like to go my own way instead of acting on approved rules. (a) true, (b) uncertain, (c) false.
124. Often I get angry with people too quickly. (a) yes, (b) in between, (c) no.
125. When something really upsets me, I generally calm down again quite quickly. (a) yes, (b) in between, (c) no.

126. If the earnings were the same, I would rather be: (a) a lawyer, (b) uncertain, (c) a navigator or pilot.
127. "Better" is to "worst" as "slower" is to: (a) fast, (b) best, (c) quickest.
128. Which of the following should come next at the end of this row of letters: xooooxxooxxx?
(a) xox, (b) oox, (c) oxx.
129. When the time comes for something I have planned and looked forward to, I occasionally do not feel up to going. (a) true, (b) in between, (c) false.
130. I could enjoy the life of an animal doctor, handling disease and surgery of animals. (a) yes, (b) in between, (c) no.
131. I occasionally tell strangers things that seem to me important, regardless of whether they ask about them. (a) yes, (b) in between, (c) no.
132. I spend much of my spare time talking with friends over social events enjoyed in the past. (a) yes, (b) in between, (c) no.
133. I enjoy doing "daring," foolhardy things "just for fun." (a) yes, (b) in between, (c) no.
134. I think the police can be trusted not to ill-treat innocent people. (a) yes, (b) in between, (c) no.
135. I consider myself a very sociable, outgoing person. (a) yes, (b) in between, (c) no.
136. In social contacts I: (a) show my emotions as I wish, (b) in between, (c) keep my emotions to myself.
137. I enjoy music that is: (a) light, dry, and brisk, (b) in between, (c) emotional and sentimental.
138. I try to make my laughter at jokes quieter than most people's. (a) yes, (b) in between, (c) no.
139. I admire the beauty of a fairy tale more than that of a well-made gun. (a) yes, (b) uncertain, (c) no.
140. Hearing different beliefs about right and wrong is: (a) always interesting, (b) something we cannot avoid, (c) bad for most people.
141. I am always interested in mechanical matters, for example, in cars and airplanes. (a) yes, (b) in between, (c) no.
142. I like to tackle problems that other people have made a mess of. (a) yes, (b) in between, (c) no.
143. I am properly regarded as only a plodding, half-successful person. (a) yes, (b) uncertain, (c) no.
144. If people take advantage of my friendliness, I do not resent it and I soon forget. (a) true, (b) uncertain, (c) false.
145. I think the spread of birth control is essential to solving the world's economic and peace problems. (a) yes, (b) uncertain, (c) no.
146. I like to do my planning alone, without interruptions and suggestions from others. (a) yes, (b) in between, (c) no.
147. I sometimes let my actions get swayed by feelings of jealousy. (a) yes, (b) in between, (c) no.
148. I believe firmly "the boss may not always be right, but he always has the right to be boss." (a) yes, (b) uncertain, (c) no.
149. I tend to tremble or perspire when I think of a difficult task ahead. (a) generally, (b) occasionally, (c) never.
150. If people shout suggestions when I'm playing a game, it does not upset me. (a) true, (b) uncertain, (c) false.

151. I would prefer the life of: (a) **an artist**, (b) **uncertain**, (c) **a secretary running a social club**.
152. Which of the following words does not properly belong with the others? (a) **any**, (b) **some**, (c) **most**.
153. "Flame" is to "heat" as "rose" is to: (a) **thorn**, (b) **red petals**, (c) **scent**.
154. I have vivid dreams, disturbing my sleep. (a) **often**, (b) **occasionally**, (c) **practically never**.
155. If the odds are really against something's being a success, I still believe in taking the risk. (a) **yes**, (b) **in between**, (c) **no**.
156. I like it when I know so well what the group has to do that I naturally become the one in command. (a) **yes**, (b) **in between**, (c) **no**.
157. I would rather dress with quiet correctness than with eye-catching personal style. (a) **true**, (b) **uncertain**, (c) **false**.
158. An evening with a quiet hobby appeals to me more than a lively party. (a) **true**, (b) **uncertain**, (c) **false**.
159. I close my mind to well-meant suggestions of others, even though I know I shouldn't. (a) **occasionally**, (b) **hardly ever**, (c) **never**.
160. I always make a point, in deciding anything, to refer to basic rules of right and wrong. (a) **yes**, (b) **in between**, (c) **no**.
161. I somewhat dislike having a group watch me at work. (a) **yes**, (b) **in between**, (c) **no**.
162. I keep my room smartly organized, with things in known places almost all the time. (a) **yes**, (b) **in between**, (c) **no**.
163. In school I preferred: (a) **English**, (b) **uncertain**, (c) **mathematics or arithmetic**.
164. I have sometimes been troubled by people's saying bad things about me behind my back, with no grounds at all. (a) **yes**, (b) **uncertain**, (c) **no**.
165. Talk with ordinary, habit-bound, conventional people: (a) **is often quite interesting and has a lot to it**, (b) **in between**, (c) **annoys me because it deals with trifles and lacks depth**.
166. I like to: (a) **have a circle of warm friendships, even if they are demanding**, (b) **in between**, (c) **be free of personal entanglements**.
167. I think it is wiser to keep the nation's military forces strong than just to depend on international goodwill. (a) **yes**, (b) **in between**, (c) **no**.
168. People regard me as a solid, undisturbed person, unmoved by ups and downs in circumstances. (a) **yes**, (b) **in between**, (c) **no**.
169. I think society should let reason lead it to new customs and throw aside old habits or mere traditions. (a) **yes**, (b) **in between**, (c) **no**.
170. My viewpoints change in an uncertain way because I trust my feelings more than logical reasoning. (a) **true**, (b) **to some extent**, (c) **false**.
171. I learn better by: (a) **reading a well-written book**, (b) **in between**, (c) **joining a group discussion**.
172. I have periods when it's hard to stop a mood of self-pity. (a) **often**, (b) **occasionally**, (c) **never**.
173. I like to wait till I am sure that what I am saying is correct, before I put forth an argument. (a) **always**, (b) **generally**, (c) **only if it's practicable**.
174. Small things sometimes "get on my nerves" unbearably though I realize them to be trivial. (a) **yes**, (b) **in between**, (c) **no**.
175. I don't often say things on the spur of the moment that I greatly regret. (a) **true**, (b) **uncertain**, (c) **false**.

176. If asked to work with a charity drive, I would: (a) **accept**, (b) **uncertain**, (c) **politely say I'm too busy**.
177. Which of the following words does not belong with the others? (a) **wide**, (b) **zigzag**, (c) **regular**.
178. "Soon" is to "never" as "near" is to: (a) **nowhere**, (b) **far**, (c) **next**.
179. I have a good sense of direction (find it easy to tell which is North, South, East, or West) when in a strange place. (a) **yes**, (b) **in between**, (c) **no**.
180. I am known as an "idea man" who almost always puts forward some ideas on a problem. (a) **yes**, (b) **in between**, (c) **no**.
181. I think I am better at showing: (a) **nerve in meeting challenges**, (b) **uncertain**, (c) **tolerance of other people's wishes**.
182. I am considered a very enthusiastic person. (a) **yes**, (b) **in between**, (c) **no**.
183. I like a job that offers change, variety, and travel, even if it involves some danger. (a) **yes**, (b) **in between**, (c) **no**.
184. I am a fairly strict person, insisting on always doing things as correctly as possible. (a) **true**, (b) **in between**, (c) **false**.
185. I enjoy work that requires conscientious, exacting skills. (a) **yes**, (b) **in between**, (c) **no**.
186. I'm the energetic type who keeps busy. (a) **yes**, (b) **uncertain**, (c) **no**.
187. I am sure there are no questions that I have skipped or failed to answer properly. (a) **yes**, (b) **uncertain**, (c) **no**.



ANSWER SHEET: THE 16 P. F. TEST, FORM A

(Do not tear off this sheet unless told to do so.)

NAME _____ SEX _____ AGE _____ DATE _____

(Write M or F) (Nearest Year)

1	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	176	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
2	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	177	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
3	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	178	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
4	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	179	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
5	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	180	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
6	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	156	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
7	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	157	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
8	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	158	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
9	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	159	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
10	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	160	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
11	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	136	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
12	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	137	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
13	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	138	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
14	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	139	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
15	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	140	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
16	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	141	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
17	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	142	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
18	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	143	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
19	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	144	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
20	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	145	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
21	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	146	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
22	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	147	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
23	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	148	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
24	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	149	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>
25	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>	150	a	<input type="checkbox"/>	b	<input type="checkbox"/>	c	<input type="checkbox"/>

BE SURE YOUR MARKS ARE HEAVY. ERASE COMPLETELY ANY ANSWER YOU WISH TO CHANGE.

END OF TEST

Appendix B

Comparison of the groups of Character Disorders (n = 12) and Neurotics (n = 16) on which only initial testing could be carried out. Since this data is more representative of consecutive admissions it is considered to be the better description of the psychological state of these patients within three days of admission.

The groups were compared on the SSI by means of the Mann-Whitney U-Test and on the HDHQ, Anxiety Scale and 16PF, by means of the t-test (df = 26). All significant differences reported are two-tailed.

1. The Symptom Sign Inventory

Table B.1 below describes the character disorders and the neurotics on the main measures obtained from the SSI. The character disordered group had a significantly greater number of symptoms ($U = 6.5, P < .002$), a greater number of neurotic symptoms ($U = 18, P < .002$) and also of psychotic symptoms ($U = 5, P < .002$). In addition the character disorders had significantly higher scores on the Personal Disturbance ($U = 10.5, P < .002$) and Neurotic v Psychotic scales ($U = 7, P < .002$).

Table B.1.

Median Scores of the Groups on the SSI.

	<u>CD</u> Median	<u>N</u> Median
Total Number of Symptoms	29	14.2
Number of Neurotic Symptoms	19.5	10.25
Number of Psychotic Symptoms	9.0	3.7
Personal Disturbance	10.5	5.2
Neurotic v Psychotic	3.8	0.3
Character Disorder Scale	5.25	1.0

When the two groups were compared on the eight subscales of the SSI, it was found that the character disorders reported a significantly greater number of symptoms of anxiety ($U = 42, P < .02$), neurotic depression ($U = 17, P < .002$), obsessionalism ($U = 21, P < .002$), schizophrenia ($U = 20.5, P < .002$) and melancholia ($U = 4.5, P < .002$). There were no significant differences between the groups with respect to the number of manic, paranoid or hysterical symptoms reported. The median scores of the groups on the eight subscales are given in Table B.2:-

Table B.2.

Median Number of Symptoms of the Groups
on SSI Subscales.

	<u>CD</u>	<u>N</u>
	Median	Median
Anxiety	5.0	3.3
Neurotic Depression	8.0	4.25
Mania	0.3	0.4
Paranoid	0.5	0.4
Obsessional	4.0	1.25
Schizophrenia	2.5	0.3
Hysteria	2.25	2.0
Melancholia	6.25	2.2

The SSI results for this larger sample differ in no important way from those reported earlier for the initial testing of the test-retest sample.

2. The Hostility and Direction of Hostility Questionnaire

Table B.3 shows the mean scores obtained by character disorders (CDs) and neurotics (Ns) on the HDHQ. The groups differ significantly on all but two of these measures - Direction of Hostility and Self-criticism

Table B.3.

Scores of the groups on the HDHQ.

	<u>CD</u>	<u>N</u>	
	Mean (SD)	Mean (SD)	
General Hostility	30.75 (4.71)	20.25 (5.74)	t = 4.98, P < .001
Sum E	16.17 (3.72)	10.25 (5.12)	t = 3.26, P < .01
Sum I	14.58 (2.05)	10.00 (2.09)	t = 5.57, P < .001
Direction of Hostility	+ 7.58 (4.93)	+ 7.5 (6.58)	t = 0.04, n.s.
Acting out Hostility	7.08 (1.93)	4.94 (2.31)	t = 2.50, P < .02
Criticism of Others	6.58 (2.17)	4.50 (2.34)	t = 2.31, P < .05
Delusional Hostility	2.5 (1.25)	0.81 (0.95)	t = 3.91, P < .001
Self-criticism	8.83 (1.51)	7.63 (1.99)	t = 1.68, n.s.
Delusional Guilt	5.75 (1.16)	2.38 (1.16)	t = 7.31, P < .001

All of these scores are very similar to those reported in the text and the comparisons of the two groups also show the same outcomes.

3. The Anxiety Scale Questionnaire

The mean scores obtained by the groups on the four measures derived from this test are shown in Table B.4. The character disorders (CD) scored significantly higher (i.e. as more anxious) on all four measures.

Table B.4.

Scores of the groups on the Anxiety Scale.

	<u>CD</u>	<u>N</u>	
	Mean (SD)	Mean (SD)	
Total (Raw) Score	56.42 (7.47)	42.88 (10.12)	t = 3.76, P < .001
Total (Sten) Score	9.42 (0.86)	7.56 (1.61)	t = 3.49, P < .01
Covert Score	25.25 (5.55)	19.44 (6.24)	t = 3.11, P < .01
Overt Score	31.17 (4.14)	23.44 (5.24)	t = 4.07, P < .001

Thus again the scores reported here are similar, as are the results of comparing the groups, to those given in the Results chapter.

4. The Sixteen Personality Factor Questionnaire

Table B.5 shows the mean scores obtained by the groups on the sixteen first-order factors of the 16PF.

Table B.5.
Scores of the group on the 16PF.

<u>First-Order Factors</u> (high score description)	<u>CD</u> Mean (SD)	<u>N</u> Mean (SD)
A (Outgoing)	5.08 (1.83)	5.06 (1.85)
B (Intelligent)	6.58 (1.44)	6.88 (1.76)
C (Stable)	2.08 (1.19)	3.50 (1.12)
E (Dominant)	5.00 (1.29)	4.94 (1.25)
F (Enthusiastic)	3.92 (1.98)	4.13 (1.73)
G (Conscientious)	3.17 (1.63)	5.13 (1.73)
H (Venturesome)	3.42 (1.26)	3.38 (1.32)
I (Sensitive)	6.25 (1.92)	5.88 (1.54)
L (Suspecting)	8.33 (1.31)	6.44 (1.46)
M (Self-absorbed)	6.17 (2.03)	5.63 (1.45)
N (Sophisticated)	4.00 (1.35)	5.81 (1.63)
O (Apprehensive)	9.42 (0.64)	7.31 (1.40)
Q1 (Radical)	6.17 (0.99)	5.69 (1.69)
Q2 (Self-sufficient)	7.67 (1.03)	7.06 (1.92)
Q3 (Self-controlled)	3.42 (1.31)	5.19 (1.91)
Q4 (Tense)	8.83 (0.89)	7.00 (1.61)

When the groups were compared, using the t-test, it was found that the character disorders and neurotics differed on seven of these factors. The character disorders scored as significantly less stable, C-($t = 2.90$, $P < .01$), less conscientious, G-($t = 2.94$, $P < .01$), more suspicious, L+($t = 3.42$, $P < .01$), less sophisticated, N-($t = 3.01$, $P < .01$), more apprehensive, O+($t = 4.68$, $P < .001$), less self-controlled, Q3-($t = 2.66$, $P < .02$) and more tense, Q4+($t = 3.34$, $P < .01$).

In terms of comparisons between the character disorders and the neurotics, this picture differs from that obtained with the smaller groups, and reported in the Results chapter, in that Factor Q3 here distinguished the groups, whereas with the smaller samples it does not. Otherwise the results are very similar to those reported previously.

The scores of the two groups on the second-order factors are given below.

Table B.6.

Scores of the groups on five second-order factors.

<u>Second-Order Factor</u> (High Score Description)	<u>CD</u> Mean (SD)	<u>N</u> Mean (SD)
Anxiety	9.25 (0.72)	7.31 (1.16)
Extraversion	3.67 (1.44)	3.56 (1.37)
Toughness	3.67 (1.49)	4.69 (1.72)
Independence	6.75 (0.84)	6.06 (1.09)
Neuroticism	9.25 (0.72)	7.31 (1.40)

By comparison with the neurotics, the character disorders scored as significantly more anxious ($t = 4.93$, $P < .001$) and also as more neurotic ($t = 4.22$, $P < .001$). With the smaller test-retest groups a significant difference was also found on toughness, the neurotics being more tough ($t = 2.17$, $P < .05$) than the character disorders.

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