ASPECTS OF EXTRA- AND INTRO-PUNITIVE EXPRESSION IN MENTAL ILLNESS

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INTRODUCTION

THE terms *extrapunitive* and *intropunitive* were introduced by Rosenzweig (1938) to denote two of the possible ways in which an individual might react to frustration or blame. He defined the extrapunitive reaction as: "When the individual tends to blame the external world, reacts with anger and hostility, and psychologically defends himself by what the psycho-analyst describes as the mechanism of projection. An ego which fears blaming itself thus gains security by blaming others instead".

The intropunitive reaction he defined as: "When the individual tends to blame himself, reacts with feelings of remorse and guilt and employs the mechanisms of defence called by the analyst displacement, isolation and undoing. An ego which fears blaming others thus gains security by blaming itself instead".

Whilst he recognized that no individual would react consistently in one particular way, he did envisage that certain types of individual might be characterized by a disposition to act more frequently in one way rather than in another. He did, for example, speculate that Paranoid patients might show a preference for extrapunitive responses; whilst Obsessional patients might show a preference for intropunitive responses. Many clinicians would like to add psychotic depressives to the intropunitive side.

Rosenzweig's original linkage of his terms with psycho-analytic concepts was perhaps unfortunate. Had the terms extrapunitive and intropunitive simply meant directing blame outwards and inwards respectively, the examples given by Rosenzweig would more readily have been seen as special instances of these main types of reaction. The psycho-analytic propensity for generalizing from atypical particulars too easily results in adoption of the view that anger and hostility *always* arise in a setting in which the ego fears blaming itself. This over-emphasis on intra-psychic determinism may give rise to the view that any form of criticism of others is fundamentally of a paranoid nature.

An investigation by Brown and Lacey (1954) illustrates the confusion likely to arise from associating extrapunitiveness exclusively with psycho-analytic projection and hence with paranoia. These authors using a projective test—Rosenzweig's Picture-Frustration Study—failed to find the relationship

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between extrapunitiveness and paranoid states. Examination of the items in the PF study would not, however, lead one to expect such a relationship, since the extrapunitive responses might include acting-out hostility, verbal criticism of others or projected hostility in the psycho-analytic sense. Thus, one picture shows a man being splashed by a passing car, in which are two other men. The reaction might be to hurl at the driver a brick (acting-out) or abuse (criticism of others) or to do and say nothing, but go away confirmed in the belief that the International Gang was still out to get him, because they knew that he could expose them to all the world and put right the wrong that had been done to him (projected hostility). It is only in respect of this last type of response that one would confidently predict the association with paranoid patients.

Similar difficulties would present themselves over intropunitiveness and psychotic depression (henceforth, for brevity, and to sharpen the distinction from psychoneurotic depression, referred to as Melancholia). The pedestrian might reply: "Don't worry, it was my fault. I wasn't looking where I was going" (self criticism) or he might go on his way thinking "people revile me and cast mud at me, because I am a wicked sinner" (guilt). It is only with the second type of response that one would confidently associate Melancholia.

That not all psychiatrists would agree in associating projective hostility so specifically with paranoid states has been brought out by Lewis (1934). The following citations, taken from the survey by Lewis and ranging from 1892 to 1934, probably illustrate current views with fair accuracy:

Thus Stoddart (1919) apparently recognizes that paranoid delusions may be part of the melancholic picture: "There is another class of melancholics . . . who . . . develop delusions of persecution, they believe that other people are against them, even that there are world-wide conspiracies to do them harm."

The next three authors, however, make a firm distinction between extrapunitive and intropunitive delusions. Séglas (1892): "The persecutory ideas found in deluded melancholics are not true ideas of persecution. Their foundation is not pride, but the peculiar humility of the melancholic; they bear the stamp of that peculiar quality of resignation which is their own; for the patient finds his persecution justified by his unworthiness, and, notwithstanding the 'persecution' label we attach to his delusions, he remains first and foremost a self-accuser."

Ballet (1892): "They are victims, but guilty victims, not as ordinary patients, innocent victims."

Bleuler (1924): "Delusions of persecution do not belong to the depressive forms of delusion. The delusion of deserved punishment must not be classed with that of the unjust persecution."

Lewis (1934) takes up an intermediate position: ". . . humility and resignation are by no means the only attitude the melancholic patient takes up, but . . . resentment and hostility may exist alongside these, or may even dominate the picture. . . . Resignation is certainly the commonest attitude towards the persecutory ideas, but it is not by any means the invariable one. It may be said that it is an admixture of other forms or reaction-types, which produces in some patients a resentful attitude towards the supposed discrimination, but where so small a number out of 61 patients are quite free from such features, one is more inclined to regard it as part of the depressive type of reaction."

The terms *extrapunitive* and *intropunitive*, in the wider sense suggested above, are tolerably accurate descriptions of the contrasting attitudes discussed by these psychiatrists. Despite the shrewdness with which these observers disentangled these attitudes, they nevertheless sometimes arrived at different

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conclusions. Séglas, Ballet and Bleuler reject extrapunitive delusions in Melancholia; Stoddart accepts the opposite view and Lewis takes up an intermediate position. The present investigation provides some information relevant to this divergence of opinion.

In a recent study (Foulds and Caine, 1959a) of which this is an extension, two scales constructed from the Minnesota Multiphasic Personality Inventory to measure the different aspects of intropunitiveness referred to above (viz. self-criticism and guilt) were described. These scales were found to function differently from each other when applied to psychoneurotic and psychotic groups. Siegel *et al.* (1957) have reported what they described as three hostility sub-scales (of the questionnaire type) measuring extrapunitiveness, intropunitiveness and projected hostility; but these terms were used somewhat differently.

Caine (1959) has described two measures (one questionnaire, one projective type) which could be said to represent acting-out hostility, projected hostility and undifferentiated self-criticism and guilt. These measures showed differences in the expected direction between melancholic and paranoid women. Acting-out hostility failed to differentiate; but projected hostility and self-criticism/guilt both differentiated at a high level of statistical significance. Foulds and Caine (1958, 1959b) have found that undifferentiated scales of extrapunitiveness and intropunitiveness were related to personality types rather than to diagnosis in neurotic men and women.

Although there is some overlap of subjects in three of the studies mentioned, they do lend support to the clinical view that mentally ill persons express their extrapunitiveness and intropunitiveness in characteristic ways. Despite the long history of these observations, just what is implied by these terms is still far from clear.

The main purpose of the present study then, is to justify breaking down the extrapunitive and intropunitive M.M.P.I. scales into five sub-scales. In furtherance of this aim it is necessary:

1. To see how far such a breakdown can contribute to our understanding of the attitudes to *self* and to *others* of various clinical groups;

2. To exploit for diagnostic purposes such between-group differences as might be found; and

3. To seek to understand the relationships between these sub-scales by means of within-group correlations between scales.

In the sections on procedure and results these three related problems are treated separately.

PROCEDURE

1. *Attitude to Self and Others*

The *extrapunitive scale* was broken down into three sub-scales on the basis of the following arguments. From clinical and experimental evidence there are three characteristically extrapunitive groups, namely psychopaths, paranoids and, in women, hysteroid personalities. These three groups will, it was predicted, express their hostility in different ways. The distinguishing feature of the psychopath, in relation to the other groups, will be the *acting-out* of his aggression readily admitted and defended. Although aggression may be ascribed to others as well, it will not be denied in himself. On the other hand acting-out hostility will be denied by the paranoid who will project it on to

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others. Thus the paranoid will feel himself in receipt of *a direct, personal attack from others to a degree such that the question of delusional thinking might well be raised.* In contradistinction to these two groups, hysteroid women will have neither of these predispositions to a marked degree. *Vis-à-vis* female obsessoid personalities, hysteroids will be generally more *critical of others* in attitude, without feeling personally attacked or required to attack others.

In selecting items from the M.M.P.I. (see Appendix A) for these three extrapunitive sub-scales of Acting-out Hostility (AH), Projected Delusional Hostility (DH) and Criticism of Others (CO), it was found that the AH scale presented the least difficulty. This consisted of relatively unambiguous items, such as (G-31) "At times I feel like smashing things" and (G-32) "At times I feel like picking a fist fight with someone".

In selecting items for the DH scale, to differentiate it from the merely critical attitude, an attempt was made to choose only those items in which a direct, personal receipt of hostility from others was implied, an act of open enmity about which the question of delusional thinking might well be raised. Thus (H-4) "I believe I am being followed", or (H-11) "I believe I am being plotted against".

The CO scale, unfortunately, tended to be somewhat more ambiguous since many of the M.M.P.I. statements might include, in addition to criticism of others, an implication of acting-out or of projection: for example (C-31) "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", although not implying violent physical assault, does suggest action being taken. Most of the remaining items included in this scale were either criticism of others only, or criticism of others with projection. Thus (C-3) "Some of my family have habits that bother and annoy me very much", may be criticism of others if the respondent either has not got, or does not deny, these habits in himself. It may, on the other hand, include a projective element if a majority of competent observers consider that he, rather than members of his family, has the tiresome habits. The projective element, in such an instance, though self-deceptive, would not generally be regarded as necessarily psychotic. Neither is a deliberate, active attack implied. To this extent it should be noted, there is some unavoidable, if regrettable, overlap in the sub-scales.

With regard to the *intropunitive scale* the sub-scales previously described (Foulds and Caine, 1959a) have been applied to this wider range of clinical groups. It was argued that Melancholics, *vis-à-vis* other groups, would be the high scorers on the Guilt scale (DG). This scale consisted of items involving *the perpetration of actual harm on others with accompanying guilt or deserved destruction of the self by disease or by others. The question of delusional thinking might again be raised,* as, for example, in (F-50) "Much of the time I feel as if I have done something wrong or evil". On the other hand, the other known intropunitive group, the obsessoid male neurotic, would be distinguished from the melancholic by his absence of guilt, but from the other groups by his high score on the Self-Criticism scale (SC). As distinct from the DG scale which involves the perpetration of harm on others, this SC scale consists of items *questioning one's own ability and adequacy in particular areas,* such as (A-23) "I (do not) seem to be as capable and smart as most others around me", or (I-41) "I shrink from facing a crisis or difficulty".

In addition to these specific predictions of high scoring, certain low scoring was also anticipated. Paranoids, if (as Rosenzweig claims) projection occurs "when the ego fears blaming itself" should have low SC scores. They should

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also have low AH scores, since they deny hostility in themselves and project it on to others.

The Psychopathic lack of conscience and of any standards to which one can appeal should ensure a low SC score. Melancholics, being, in the psychoanalytic view, afraid of blaming others, gain security by blaming themselves instead. They will, therefore, score low on CO.

In previous investigations (Foulds and Caine, 1958; Foulds, 1959) obsessoid Dysthymic women scored lower than hysteroid Hysterics and Dysthymics on the undifferentiated extrapunitive scale. Since there seems no reason for them to differ on the "psychotic" DH scale, obsessoid Dysthymic women will probably score significantly lower on AH and CO.

2. *Diagnostic Purpose (Between-group Differences)*

It was not considered likely that one combination of the five scores on the sub-scales, however weighted, would stretch out all the diagnostic groups along one continuum. The most appropriate method seemed to be to take each diagnostic pair in turn and, by means of the discriminant function technique, give suitable weights to the measures which helped to distinguish between the two groups concerned. This method has, of course, some limitations; but in clinical work, they are apt not to be too serious. The great majority of diagnostic problems only involve two possibilities. Even if the psychologist were starting from *carte blanche*, the pairing method might still be feasible. Measures might be used which were known to differentiate say, psychotics from neurotics. If the answer suggested odds on neurosis, one might then proceed to measures known to differentiate Hysterics from Dysthymics. If the answer this time suggested Dysthymia, one might then proceed to measures known to differentiate Anxiety States from neurotic Depressives and Obsessionals.

3. *Relationship Between the Sub-scales*

Correlations were calculated for all scales within each group. It was anticipated with regard to the relationships between the sub-scales that the within-group correlations between the three extrapunitive and between the two intropunitive sub-scales would be substantially higher than between any extrapunitive sub-scale and any intropunitive sub-scale. If Rosenzweig is right with regard to projection and self-blame, DH and SC should be negatively correlated.

Subjects

Cases were randomly selected from the files until groups of 20 men and 20 women had been completed for each of the following categories (with the exception of Psychopathic women, of whom only 11 were available): Hysterics of hysteroid personality (Hh); Dysthymics of hysteroid personality (Dh); Dysthymics of obsessoid personality (Do); Melancholics (M); Paranoid States (PS) and Psychopaths (Pp).

It was later ascertained that 75 per cent. of these cases had been used in previous research projects. These cases were successive admissions constituting an unselected population at the time of testing. The remaining 25 per cent. were referred by the psychiatrists for a clinical opinion and might, therefore, be presumed, in the majority of cases, to be less typical of the nosological groups to which they were ultimately assigned. The proportions of these two types of cases were fairly evenly distributed among groups, except that the male

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melancholics and both psychopathic groups were somewhat overloaded with clinical referrals. There was, however, no contamination of test results and clinical diagnosis in these cases, as the scales used here had not been devised at the time of testing and reporting.

The results obtained from 20 male and 20 female members of the hospital staff (or members of their families) were included for comparative purposes. There was some representation from each occupational group within the hospital.

Results

1. *Attitude to Self and Others (Between-group Comparisons)*

The means for the seven groups are shown graphically for each measure and for men and women in Figure 1. An analysis of variance was carried out on each measure separately to see if differences between the means were significant and in Appendix B the means, standard deviations, standard errors of differences between means and F values are given. Means and standard

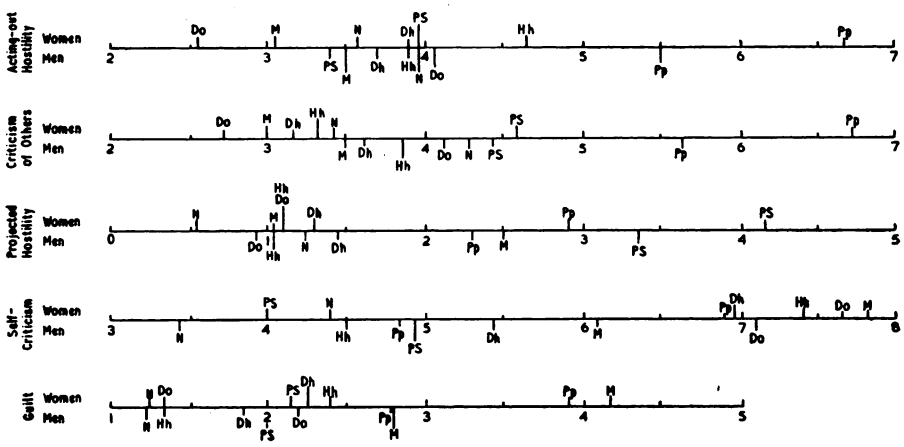


FIG. 1

deviations have been pooled where they did not differ significantly from one another. It can be seen that differences between women are more highly significant than those between men. A similar result was obtained in a recent study with neurotics (Foulds and Caine, 1959b). The pattern of results for men and women is, however, fairly similar for each of the variables. On *Acting-out Hostility*, Psychopaths were significantly higher than the rest for both men and women. The other groups did not differ significantly from each other, although for women obsessoid Dysthymics were almost significantly lower.

On *Criticism of Others*, Psychopaths again had values significantly higher than the rest. For both sexes Paranoid States came next. For men, Paranoid States were very close to the other groups; but, for women, they were also significantly higher than the rest.

On *Projected Delusional Hostility*, variation between groups was more highly significant than for any of the others. In men, Paranoid States were highest and, taken together with Melancholics and Psychopaths, differed significantly from the other groups. For women, Paranoid States were again

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highest, followed by Psychopaths, and these two differed significantly from the rest.

On *Self-Criticism*, obsessoid Dysthymic men were significantly higher than the rest. Normals were significantly lower. For women, on the other hand, the only significant differences were caused by Normals and Paranoid States being significantly low.

On *Delusional Guilt*, the scores for men fell into three groups (which differed significantly), Psychopaths and Melancholics being highest, then obsessoid Dysthymics, Paranoid States and hysteroid Dysthymics, and lowest Normals and hysteroid Hysterics. In women the same two groups were highest; but the lowest two were obsessoid Dysthymics and Normals.

In general, it is quite clear that the sex differences are very much less prominent than the similarities.

Tables I and II show the predicted and observed outstanding characteristics

TABLE I

Showing the Predicted and Observed Outstanding Characteristics of Each Diagnostic Group (Women)

Predicted		Group	Observed	
High	Low		High	Low
AH	SC	Pp	AH, CO DH, DG	
DH	AH, SC	PS	CO, DH	SC
DG	CO	M	DG	
		Hh		
		Dh		
	AH, CO	Do		DG

TABLE II

Showing the Predicted and Observed Outstanding Characteristics of Each Diagnostic Group (Men)

Predicted		Group	Observed	
High	Low		High	Low
AH	SC	Pp	AH, CO, DH, DG	
DH	AH, SC	PS	DH	
DG	CO	M	DG, DH	
		Hh		DG
		Dh		
SC		Do	SC	

of each clinical group among women and men respectively. From these tables it can be seen that the clinical groups revealed the characteristics which everyone would expect them to reveal, with perhaps three main exceptions—the high DH of male melancholics and the high DH and, above all, the high DG of both male and female psychopaths.

2. *Diagnostic Purpose (Between-group Differences)*

The best discriminant function to use to compare two groups is shown in Appendix C. The scales shown do not necessarily include only the measures for which the two groups differed significantly since the correlations between

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the measures affect the final result. Apart from hysteroid Dysthymics and hysteroid Hysterics, who had virtually the same responses, the discriminant function was always significant at the 1 per cent. level of significance, and frequently at the ·1 per cent. level. What this means in terms of prediction can be seen from the table. Amongst the women there was very little overlap between any two groups when the "best" measure was used to discriminate between them. For the men discrimination was not quite so good.

It has been shown previously (Foulds and Caine, 1958, 1959b) that Hysterics can be distinguished from Dysthymics, of no matter what personality type, by the M.M.P.I. Depression minus the Hypochondriasis (K corrected) scales for women and the Depression plus Psychasthenia (K corrected) scales for men. With a very considerably curtailed M.M.P.I. (containing only 168 items) it is, therefore, possible to differentiate with a useful degree of accuracy between as many as six different diagnostic categories for both men and women.

3. *Relationships Between the Sub-scales* (*Within-group Correlations*)

In Table III are given the correlations between the five variables taken in

TABLE III

Correlations (*Average Within Groups*)

	Men					Women			
	C	P	G	S		C	P	G	S
A	·50	·31	·42	·35	A	·42	·41	·19	·21
C		·30	·13	·16	C		·43	·19	·18
P			·46	·36	P			·22	·16
G				·53	G				·59

pairs, for men and women separately. These were calculated for variations *within* each group. They do not refer to the overall pattern of results, but to whether people within one diagnostic group tend to obtain similar scores. The various groups had correlations which were fairly similar and these have been pooled to give final values.

All the correlations are positive. People scoring highly on one measure tend to score highly on the others, relative to other people in the group and vice versa. The prediction that DH and SC would be negatively correlated was not, therefore, confirmed. The DH:SC average within-group correlations were, in fact +·36 for men and +·16 for women. Amongst women, however, Paranoid States did score highest of all groups on DH and lowest of all groups on SC. Male Paranoid States scored highest of all groups on DH, but at an intermediate position on SC.

These results could perhaps be interpreted as indicating a "general hostility factor". The correlations between the three extrapunitive measures are, however, higher, on the average, than their correlations with the two intropunitive measures and the correlations between SC and DG is higher than all the others. This confirms the hypothesis that the extrapunitive scores are to some extent measuring something different from the intropunitive. This is clearer for women than for men. For men there are correlations of about ·4 between AH and DH and the two intropunitive scores (the corresponding values for women being about ·2). This problem of the factors has already been discussed elsewhere (Creasy, 1959).

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Discussion

None of the within-group correlations between the scales is high enough to make any one of them superfluous. Each has, in fact, been shown to have been extremely effective in contributing to the differentiation between a wide variety of clinical conditions. In other words, each sub-scale appears to be measuring something sufficiently different from every other one to justify its separate existence. From the consonance of the scores with rather obvious clinical predictions, it would seem likely that these sub-scales are, in fact, measuring something approximating what they purport to be measuring. The most notable exception is provided by the Psychopaths. Either they are much more intropunitive than has usually been believed or they treat the test differently from the other groups. Some support is lent to the second view by the fact that, whilst they have scored very highly on both "psychotic" scales, the one scale on which they are second lowest of the clinical groups is SC. It would seem that Psychopaths may regard themselves as hot-tempered, cynical, interestingly mad or diabolically wicked; but that they draw the line at appearing faintly inferior or incompetent.

The principal remaining anomaly is the high DH of Melancholic men. One of the points at which the present study impinges most directly on significant clinical problems is in the differentiation between Melancholia and Paranoid States or Paraphrenia. Unfortunately, the question of whether ideas of persecution are felt to be justifiable or unjustifiable is ignored by the M.M.P.I. items. No direct evidence can, therefore, be offered. As has been noted, however, Paranoid women scored highest of all groups on Projected Delusional Hostility and lowest on Self-Criticism. Paranoid men scored highest on Projected Delusional Hostility, but at an intermediate position on Self-Criticism. Melancholic women scored lowest of all the patient groups on Projected Delusional Hostility; whilst Melancholic men scored second highest. This suggestive evidence raises the possibility that "justifiable" ideas of persecution may be commoner amongst men than amongst women. In other words, the position of Séglas, Ballet and Bleuler may be more applicable to Melancholic women than to Melancholic men.

G. W. Allport (1937) suggests that the mature personality is characterized by consistency and predictability of attitudes. From the present data it would seem unlikely that the converse holds. Psychoneurotics and, *mutatis mutandis*, psychotics, or at least psychotic depressives and well-preserved paranoid states, may well be extremely predictable in the areas studied here. Hilgard (1954) has pointed out that it is the integrative, not the integrated personality "which can handle the complexity of relationships with other persons in a culture like ours, a culture which makes plural demands. An integrated personality soon leads to its own isolation or destruction if it is not also integrative . . . the paranoid psychotic with highly systematized delusions is among the best integrated of personalities." If paranoids deny impulses or attitudes in themselves, which they then attribute to others, they cannot be among the best integrated of personalities in the sense of wholeness or one-ness. They only achieve a pseudo-integration. This perhaps becomes more apparent when grandiosity rather than persecution dominates the picture, as, for example, in the patient who believed that she was a Duchess, but was quite content to do menial work in the hospital without any apparent awareness of incongruity. Nevertheless, it is often said that given the initial premise everything else follows logically in paranoia. It would perhaps be truer to say that everything else

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follows rather predictably, since the basic delusion acts as a vortex swallowing up everything within the field. These patients may be thought of as less stimulus-bound than the normal person, since the main function of their defensive attitudes is to maintain, by constantly reinforcing the basic delusional belief, what integrity of personality is left to them, even to the extent of highly idiosyncratic selection and, indeed, gross distortion of external stimuli.

One of the inadequacies of the present study is the fact that neurotics have been rated on a hysteroid:obsessoid personality scale; whereas psychotics have not. Amongst neurotics it was, in fact, found that the measures were related to personality type rather than to diagnostic type. It would be of interest to classify psychotics according to both types of category. It may be that in the psychoses, which are considered to involve more far-reaching disturbances of personality, the influence of the pre-morbid personality may no longer be apparent. One could, indeed, conceive of a continuum of influence of pre-morbid personality—at its greatest, amongst the mentally ill, in neurotics and lessening through Melancholia, Paranoid States, Catatonic Schizophrenia to Hebephrenic Schizophrenia.

However this may be, it would seem that, if these results can be replicated by other workers, these attitudes may prove to be rather central issues either in psychiatric illness or, at least, in the psychiatrist's clinical appraisal of his cases for diagnostic purposes. It may be argued that these attitudes are relatively accessible to observation, that they have in consequence been given great weight by psychiatrists and that all that these measures have done is to confirm this fact. When such confirmation reaches a level at which subjective and objective assessments become justifiably interchangeable, a considerable advance has been made. Aside from this, however, the speculation that a person's concept of himself and of others may be a matter of rather crucial concern to him is no longer universally condemned. It may not be unreasonable to assume that radical threats to these concepts would require drastic defensive measures against intolerable distress. In the main, it would appear that these drastic defensive measures succeed only in reducing intolerable distress to just tolerable distress for the person himself or intolerable distress for those with whom he is concerned. It is idle to suppose that any discipline which deals with less than the higher level functions in terms of less than the higher level functions, can provide any information which will reduce this deep concern of the individual with himself and his relationship to his fellows to an insignificant epiphenomenon.

Summary and Conclusions

Five scales have been made up from the Minnesota Multiphasic Personality Inventory. Three of these scales are concerned with aspects of extrapunitiveness–Acting-out Hostility; Criticism of Others and Projected Hostility. The remaining two are concerned with aspects of intropunitiveness–Self-Criticism and Guilt.

These five scales have been given to 20 women and 20 men in each of the following categories: Normals;—Hysterics of hysteroid personality; Dysthymics of hysteroid personality; Dysthymics of obsessoid personality; Melancholics and Paranoid States (including Paranoid Schizophrenics) and to 20 male Psychopaths and 11 female Psychopaths.

Within-group correlations between scales were all positive; but, when the size and pattern of the correlations were considered, it was clear that the extra-

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punitive scores were to some extent measuring something different from the intropunitive scores.

The discriminant function technique was applied to the differentiation between each possible diagnostic pair. It was found that, with the exception of hysteroid Hysterics and hysteroid Dysthymics, the discriminant function was significant at the 1 per cent. level and frequently at the 0·1 per cent. level of significance.

Sex differences were found; but these were less marked than the similarities.

Amongst men, Psychopaths scored significantly higher on Acting-out Hostility and on Criticism of Others. On Projected Delusional Hostility their scores were exceeded (though not significantly) by Melancholics and particularly by Paranoid States. These three groups differed significantly from the neurotics and normals. On Self-Criticism, obsessoid Dysthymics scored significantly higher than all other groups and Normals significantly lower. On the Delusional Guilt scale, Psychopaths and Melancholics scored significantly higher than all others and Hysterics and Normals significantly lower.

Amongst women, Psychopaths scored significantly higher than all other groups on Acting-out Hostility and Criticism of Others. On Projected Delusional Hostility, their score was exceeded by the Paranoid States; but both of these groups were significantly higher than the remainder. On Self-Criticism, Paranoid States and Normals scored significantly lower than the rest. On the Delusional Guilt scale, Melancholics and Psychopaths were the highest and Normals and obsessoid Dysthymics the lowest.

Apart particularly from the high Delusional Guilt scores of Psychopaths, the clinical groups behaved as predicted (although differences which had been predicted were not always statistically significant). It was suggested that Psychopaths preferred to be thought wicked rather than incompetent.

Each of the five scales has contributed very considerably to differentiation between groups. The breaking down of the original extrapunitive and intropunitive scales was, therefore, justified. Indeed, the efficiency of these measures, if confirmed elsewhere, suggests that what a person reports about himself and others, in areas which may be broadly subsumed under Rosenzweig's headings of extra- and intro-punitiveness, may be of central importance to our understanding of the mentally ill.

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Appendix A

The items from the abridged M.M.P.I. were as follows:—

AH: D-30, E-7, F-31, G-29, G-31, G-32, G-47, G-48, I-1, I-2, I-4, I-26, J-43.

CO: B-55, C-3, C-31, D-47, D-49, D-50, D-52, D-53, E-9, E-53, F-30, G-50.

DH: G-52, G-53, G-54, G-55, H-4, H-10, H-11, H-15, H-26.

SC: A-23, C-25, C-29, F-33, I-13, I-25, I-26, I-31, I-39, I-40, I-41.

DG: F-50, G-3, G-4, G-9, I-17, I-36, I-37.

Appendix B

Table Showing Means, Standard Deviations, Standard Errors of Difference and F Values

Women

	AH		CO			DH			SC		DG		
	Pp	Rest	Pp	PS	Rest	Pp	PS	Rest	N,PS	Rest	N,Do	Dh, Hh,PS	Pp,M
Mean	6·6	3·6	6·7	4·6	3·2	2·9	4·2	1·0	4·2	7·4	1·3	2·3	4·1
S.D.	2·9	1·9	2·6		1·9	2·5		1·0	2·5			1·6	
S.E.	·7		1·0		·6	1·0		·6	·3		·3		·3
F	5·1		5·8			11·7			7·8		8·6		

Men

	Pp	Rest	Pp	Rest	PS, M,Pp	Rest	N	Rest	Do	N,Hh	Do, Dh,PS	M,Pp
Mean	5·5	3·8	5·6	4·0	2·7	1·2	3·4	5·2	7·1	1·3	2·0	2·8
S.D.	3·4	2·2	2·6		2·4	1·3		2·7			1·5	
S.E.	·8		·6		·3		·7		·7	·3		·3
F	1·7		1·5		6·7		3·7			3·5		

Significant values of F: ·05=2·2, ·01=3·0, ·001=4·0

Appendix C

A discriminant function has been calculated for each of the pairs of groups, hysteroid Hysterics and hysteroid Dysthymics being taken together. These are given below and have been adjusted so that a negative score means allot to one group and a positive score allot to the other. The percentages in the observed groups having these scores are given and the significance of the discrimination. These are the appropriate criteria if initially there is a 50:50 chance of a person coming from one or other of the groups.

Women

	PS	Do	PS	M	PS	Pp	PS	Dh,Hh	Do	M
<0	10	100	10	100	90	27·3	15	92·5	95	20
>0	90	0	90	0	10	72·7	85	7·5	5	80
	AH+4DH+3DG −3SC−0·5		3DH−DG−SC +0·5		3AH−5DH+2DG +SC−15·5		−AH+4DH+DG −SC−2·5		3DG−SC−1·5	

	Pp	Do	Do	Dh,Hh	M	Pp	Dh,Hh	M	Dh,Hh	Pp
<0	9	90	35	80	90	0	77·5	25	97·5	18·2
>0	91	10	65	20	10	100	22·5	75	2·5	81·8
	AH+CO+3DG −2SC−3·5		2SC−2DG−AH −8·5		2AH+2CO−SC −9·5		3DG−AH−5·5		CO+DG−9·5	

Men

	PS	Do	PS	M	PS	Pp	PS	Dh,Hh	Do	M
<0	20	95	35	65	70	40	20	77·5	70	25
>0	80	5	65	35	30	60	80	22·5	30	75
	3DH−DG−SC +0·5		DH−DG−0·5		AH+2CO−5DH +3DG−7·5		DH−1·5		3DH−SC+1·5	

	Do	Pp	Do	Dh,Hh	M	Pp	Dh,Hh	M	Dh,Hh	Pp
<0	65	30	55	85	85	40	70	40	67·5	30
>0	35	70	45	15	15	60	30	60	32·5	70
	2CO+4DG −SC−2·5		SC−DH−6·5		2CO−SC−4·5		DH+DG−3·5		3CO+5DG −2SC−15·5	

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