

PSYCHONEUROTIC SYMPTOM CLUSTERS, TRAIT CLUSTERS AND PSYCHOLOGICAL TESTS

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INTRODUCTION

PSYCHIATRISTS and clinical psychologists can be classified into the Big-Endians who believe in classification and the Little-Endians who do not. Each side has its derogatory stereotype of the other. According to the Little-Endians, Big-Endians are tough-minded, cold, impersonal monsters who think about the human personality in terms which are static and rigidly structural rather than fluid and dynamic. Contrary to Swift, they love people in general and hate Tom, Dick and Harry. In the field of mental health, they believe in illnesses rather than in people and believe that these illnesses all have an as yet unknown physical cause. They are reactionaries.

Some Big-Endians believe that this stereotype arose in part from certain unfortunate historical associations. The most famous classificatory system in psychiatry, that of Kraepelin, was formulated at a time when the layman thought of matter as being made up of discrete particles, of mind as being made up of discrete faculties and of mental illness as an entity dissociable from the person suffering from it. Acceptance of the need for classification in science does not of necessity imply ignorance of Heisenberg's *Principle of Uncertainty* or of Whitehead's *Process and Reality*. The classification and description of symptom clusters by the modern method of factor analysis may bear a close resemblance to the Kraepelinian system without entailing acceptance of all Kraepelin's opinions on the nature of symptoms. The view that the factors of the mind may be ordering concepts derived from operations carried out for the convenience of the observer rather than necessarily existent in the observed can well be applied to the classification of those who are mentally ill. This radical change in attitude appears to have passed unnoticed among the Little-Endians. Until it has been recognized future debates are likely to continue to be as heated and profitless as heretofore.

The contention is then that some investigators at least should endeavour to discover what progress can be made within the established descriptive classificatory system or modifications thereof. The present modification which was proposed in a previous study (Foulds, 1955), though implicit in many authoritative psychiatric texts, does not appear to have been used as a basis for systematic investigation.

Curran and Guttman (1949) state that "true obsessive-compulsive states may develop in personalities with little or no evidence of obsessional characteristics in their previous make-up", whilst Lewis and Mapother (1941) claim that "the hysterical personality . . . is not found in all patients who show hysterical symptoms, but nearly all people of hysterical personality show hysterical

symptoms". A distinction is clearly being made between symptom clusters (or syndromes) and trait clusters (or personality types).

The characteristic pre-morbid personality traits of obsessional and hysterical patients as described by Lewis and Mapother (1941) have formed the basis of a rating scale which has served to divide the psychoneurotic subjects of this study into two groups. The relevant passages are as follows: "Very many obsessional patients have for years before they became ill shown a rather characteristic mental constitution; they are extremely cleanly, orderly and conscientious, sticklers for precision; they have inconclusive ways of thinking and acting; they are given to needless repetition. Those who have shown such traits since childhood are often morose, obstinate, irritable people; others are vacillating, uncertain of themselves, and submissive". Lewis and Mapother (1941) use the following descriptive terms for the hysterical personality: "they are over-active, unsatisfied with their own capacities and, therefore, pose and pretend; they show lability of affect and exuberance of fancy, egotism, untruthfulness, longing for prestige, sympathy and love; they use illness to satisfy these needs; they show heightened suggestibility, hypomnesia is common; it occurs more frequently in women who may be both coquettish and frigid".

The subjects of this study have been further split on the basis of their clinical diagnosis into Dysthymics (Anxiety States and psychoneurotic depressives) and Hysterics. Patients could, therefore, be classified as Hysterics with a hysteroid personality; Hysterics with an obsessive personality; Dysthymics with a hysteroid personality and Dysthymics with an obsessive personality.

Given this classification, it becomes possible to determine whether various psychological test measurements are related to symptom clusters or to personality trait clusters. If all the test measurements relate to diagnosis or to personality type, the unrelated variable could be ignored subsequently; if, however, some measures relate to diagnosis and some to personality type, the value of the classification for clinical psychologists would have been demonstrated. The likelihood that it would be useful for psychiatrists would have been increased, but not proven.

Psychiatrists are frequently concerned to know what heuristic value there is in demonstrating agreement between psychological tests and such a dubious outside criterion as psychiatric diagnosis. If a close agreement can be demonstrated, this suggests that the classifications which psychiatrists make are in fact predictive of the behaviour of members of each class in certain standard test situations. This is an indication that the rather subjective processes through which psychiatrists have perforce to go in order to arrive at a diagnosis are not entirely *dereistic*. It suggests further that the behaviour of particular individuals in certain standard test situations is predictive of the way in which psychiatrists will classify these particular individuals. The results are, therefore, mutually supportive. For this psychiatrists should be grateful rather than querulous. If exceedingly close agreement can be demonstrated, this suggests that, for classificatory purposes *per se*, it does not matter which system is used. If one system happens to be objective and quantitative that system is to be preferred, since correlation with other as yet unrelated variables is facilitated. It is not suggested that this goal has been reached, but its desirability is beyond reasonable doubt.

In addition to confirming or disconfirming the psychiatric diagnosis the psychological tests do of course provide a reasonable amount of other potentially useful information. From the present battery, for example, the psychiatrist may learn something of the patient's concept of herself in relation

to others, something of the extent and direction of her hostile impulses, something of her speed and fluency of mental functioning, something of the nature of the symptoms of which she herself complains, something of the extent to which pre-occupation with these symptoms interferes with attention to other concerns and, incidentally, something of the patient's generally acquired information, general intellectual capacity and idiosyncratic problems over inter-personal relationships. If, say, the Hysteric's manner of functioning in each of these areas were totally at odds with what would, from many decades of experience of many psychiatrists, be expected of an Hysteric, the results would naturally need to be treated with considerable caution.

SUBJECTS AND THEIR CLASSIFICATION

For fourteen months all women (aged 20 to 59) admitted to the hospital and diagnosed as psychoneurotic were included in the study. For the next three months only Dysthymics of obsessive personality under 40 years of age and Dysthymics and Hysterics of hysteroid personality over 40 years of age were tested to ensure matching for age. This necessitated rejecting only 4 out of 72 successive admissions. Distortion of the sample was, therefore, minimal and it may be regarded as reasonably representative of psychoneurotic women admitted to this hospital.

For the diagnostic classification the psychiatric diagnosis—uncontaminated by test results—which was entered in the official records was accepted. For the personality classification two psychiatrists independently rated the pre-morbid personality of subjects on the five-point Hysteroid-Obsessive Rating Scale.

The items of the scale were as follows:

- | | | |
|--|----|---|
| 1. <i>Excessive display of emotions</i> | to | Scarcely any display of emotions |
| 2. Complete inability to indulge in fanciful thinking | to | <i>Vivid daydreams which come to be half believed</i> |
| 3. <i>Very frequent mood changes</i> | to | Mood tends to remain extremely constant |
| 4. Often seems to be conscience-stricken | to | <i>Seems to be completely lacking in conscience</i> |
| 5. Slow and undecided owing to weighing of pros and cons | to | <i>Given to precipitate action</i> |
| 6. Obstinate independent | to | <i>Childishly over-dependent</i> |
| 7. <i>Careless and inaccurate</i> | to | Stickler for precision |
| 8. <i>Emotions appear shallow</i> | to | Appears to feel things too deeply |
| 9. <i>Extreme desire to impress and gain attention</i> | to | Extremely self-effacing |
| 10. This patient arouses my sympathy | to | This patient arouses my hostility |

Italicized items are scored +2 (hysteroid) through to -2 (obsessive). Item 10 is not included in the hysteroid:obsessive score.

Re-rating reliability correlation after an average interval of one month was .65. In 12 per cent. of the cases the rating of one or other psychiatrist changed from the hysteroid to the obsessive side or conversely. The inter-psychiatrist correlation was .67. In 14 per cent. of the cases on the initial rating, on which the classification was based, the two psychiatrists failed to agree on the category. A third rater was then used. The resulting distribution of the 68 cases was: 16 Hysterics of hysteroid personality (Hh); 4 Hysterics of

obsessive personality (Ho); 26 Dysthymics of hysteroid personality (Dh) and 22 Dysthymics of obsessive personality (Do).

THE TESTS

The tests used were the Mill Hill Vocabulary Scale, the Progressive Matrices (1938), the Porteus Mazes, the Thematic Apperception Test, the Minnesota Multiphasic Personality Inventory, the Superiority-Inferiority Index and the Tapping Test.

The Progressive Matrices was given without a time limit; but the time taken for each set was recorded with the patient's knowledge.

The Porteus Maze administration was as previously reported (Foulds, 1951, 1952). On this occasion scoring categories were limited to total time taken (T.T.); number of wrong directions (W.D.); number of lifted pencils (L.P.); number of crossed lines (C.L.) and the time taken on second performance, when the subject had to repeat numbers after the tester, as a percentage of the first performance (distraction effect).

The Thematic Apperception Test was administered as previously reported (Foulds, 1953) and on this occasion the scoring categories were: Mean number of words per picture; Fluency (i.e. number of words spoken per minute); and expressed Hostility as rated by three judges.

The Superiority-Inferiority Index was administered and scored as previously reported (Foulds, 1958)*. A positive score indicates that the subject thinks she comes nearer to her conception of ideal conduct than most people, that is she feels relatively superior; conversely, a negative score indicates that she feels relatively inferior.

In the Tapping Test subjects were asked to tap with a pencil as quickly as possible for 10 seconds. A transparent sheet marked off into 320 half-inch squares was placed over the protocol and the number of squares containing dots was counted, the scatter score being the average of three trials.

The Mill Hill Vocabulary scale and the Minnesota Multiphasic Personality Inventory were administered in the standard way.

Since the majority of measures gave markedly skewed distributions, it was thought that clarity and ease of comparison would best be served by using throughout the Mann Whitney U for $n_2 > 20$ (2 tail), where

$$U = n_1 n_2 + \frac{n_1 (n_1 + 1)}{2} - R_1 \quad (R_1 \text{ being } \sum \text{ ranks of } n_1)$$

and

$$Z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\frac{(n_1)(n_2)(n_1 + n_2 + 1)}{12}}}$$

The Ho group was too small to be useful, so the study was confined to 16 Hh; 26 Dh and 22 Do.

* The subject is presented with twenty-four situations in which a person has made a provocative remark to which four possible answers are supplied. Two of these blame the provoker (extrapunitive) and two the provoked (intropunitive). For each situation the subject has first to select the answer she thinks she would make (S), then the answer she thinks ought to be made (O) and, finally, the answer she thinks most people would make (M). The Superiority-Inferiority Index is (Oe-Me) - (Oe-Se) i.e. the difference, regardless of direction, between the number of extrapunitive responses that the subject thinks she would and ought to make subtracted from the difference, again regardless of direction, between the number of extrapunitive responses that the subject thinks most people would and ought to make.

RESULTS

Table I shows the differences between each pair of groups for all measures. Clearly the differences tend to fall into three rather distinct groups: those which are not significant anywhere; those which are significant, or nearly so, as between diagnostic, but not personality groups and those which are significant between personality but not diagnostic groupings. The median scores for the latter two groups are shown in Table II.

TABLE I
Mann Whitney U for $n_2 > 20$ (2 Tail)

	Hh and Dh		Hh and Do		Do and Dh	
	Z	p	Z	p	Z	p
Maze distraction % ..	2.19	.0286	1.91	.0562	.07	.9442
MMPI: D-Hs ..	2.10	.0358	1.94	.0524	.29	.7718
TAT: Total words ..	2.32	.0204	1.85	.0644	.53	.5962
Tapping ..	2.09	.0366	U=72 $\alpha = > .10$		1.12	.2628
Maze: L.P. ..	.27	.7872	2.74	.0062	3.03	.0024
Maze: T.T. ..	.92	.3576	2.16	.0308	2.24	.0250
P.M. time ..	.18	.8572	1.91	.0562	2.57	.0102
Superiority index ..	.75	.4532	2.51	.0120	1.55	.1212
MMPI: Hostility ..	.87	.3844	2.56	.0104	1.58	.1142
MMPI: Hy+Pd+Pt-Sc	1.10	.2714	1.42	.1556	2.58	.0098
Maze: C.L. ..	.30	.7642	.94	.3472	1.13	.2584
Maze: W.D. ..	.61	.5418	1.20	.2302	1.86	.0628
TAT: Wpm ..	.63	.5286	.07	.9442	.66	.5092
TAT: St.T. ..	.45	.6528	1.57	.1164	.68	.4966
P.M. score ..	1.58	.1142	.17	.8650	1.56	.1188
M.H.V. score ..	.23	.8180	.89	.3734	1.08	.2802
Age ..	.51	.6100	.64	.5222	1.41	.1586

TABLE II
Median Scores on Measures Showing Significant Differences Between Either Diagnostic or Personality Types

	Hh	Dh	Do
Maze: distraction percentage ..	77	66	68
Tapping: number of squares entered ..	26	4	5
TAT: mean words per story ..	101	78	84
M.M.P.I.: D-Hs scales ..	5	12	13
Maze: total time in seconds ..	250	274	368
Maze: lifted pencils ..	8	7	16
Progressive matrices: time in minutes ..	33	36	56
M.M.P.I.: hostility scale ..	9	9	6
Superiority-Inferiority index ..	3	1	-1
M.M.P.I.: Pd+Hy+Pt+Sc scales ..	273	290	258

Tests Showing No Differences

The groups were roughly equated for age in the first instance. Progressive Matrices and Mill Hill Vocabulary scores would have been equated had they not chanced to be so. There was no difference between groups on the Matrices: Vocabulary grade ratio. Previous results (Foulds, 1956) were thus not confirmed. The earlier study used diagnostic classes only and the administration was different in the two studies. In the present study the examiner was seated by the patient and the time taken to complete each set was noted with the

patient's knowledge of the result. In the former study the examiner was seated behind the subject and proceeded with other work, allowing the test to be completed in the patient's own time without interruption. The pressure on the patient to work fast was, therefore, much less. The findings of Himmelweit (1946) indicate that hysterics have a preference for speed and dysthymics for accuracy in such test situations. The dysthymics, then, in the set used for the present study, would be at a disadvantage. Such remarks as "I must be the slowest person you've had for a long time", "I'm getting slower", "I hope I'm right but I don't know" were not uncommon in this group and indicate their discomfort in the situation. Conclusive reasons for this failure to confirm previous findings are, however, lacking.

The Maze W.D. score has been shown to correlate $-.55$ with Progressive Matrices in a psychoneurotic group (Foulds, 1951) so that differences would not be expected.

The Maze C.L. score would not be expected to show significant differences, since, in earlier studies (Foulds, 1951) Depressives score low and Anxiety States high. Combining these groups would, therefore, tend to mask differences from Hysterics.

The TAT Fluency score failed to differentiate, contrary to previous results (Foulds, 1953). Again no very convincing reason for this failure of confirmation can be offered. Testing was, however, carried out by a different psychologist who pressed for elucidation of points rather less and obtained, in consequence, rather shorter stories. It may be that dysthymics become especially inhibited when pressed. If this explanation be true, standardization of the procedure is inadequate.

Tests Showing Differences Between Personality Types

Maze L.P., Maze T.T. and Matrices time do not differentiate between groups with similar personality ratings, but do differentiate significantly between groups with dissimilar personality ratings, regardless of diagnosis.

The Superiority Index and the MMPI:Hostility Scale (Siegel, 1956) clearly behave in a very similar way. In these instances the scores of the Dh group fall mid-way. It is tempting to speculate that both the pre-morbid personality and the illness influence scores. One would suppose that these patients might originally have felt as superior and hostile as the hysteroid Hysterics, but that those factors which have led to their developing an Anxiety State or a Depression have also contributed to a reduction in their feelings of superiority and outwardly directed aggression. It is usually claimed in the literature (Curran and Guttman, 1949; Henderson and Gillespie, 1950) that the majority of reactive depressives blame others, but that a minority blame themselves. Although the differences between the Dh and Do groups are not statistically significant, they suggest that the extra- and intropunitive depressives observed by the clinicians are likely to be the hysteroid and obsessive personalities respectively.

On each of the MMPI scales—Hysteria, Psychopathic deviant, Psychasthenia and Schizophrenia—the Dh group scores highest. This group complains of having "the mostest" and seems to be suffering from a free-floating disgruntlement.

Tests Showing Differences Between Diagnostic Groups

The third group of measures is obviously related to diagnosis. The distraction effect on maze tracing time, the difference between the Depressive and

Hypochondriacal Scales on the MMPI and the productivity on the TAT all behave in a very similar manner.

Original tracing time and distraction effect on the Mazes correlate $\cdot51$, yet the former is associated with the personality rating, the latter with the diagnostic category—Hysterics speeding up less than either Dysthymic group. This perhaps supports the view originally suggested that preferred speed of work may be slowed by pre-occupation with something other than the task in hand. Before their illness the Dh group may have been slightly quicker rather than slightly slower than the Hh group.

The excess of the Depression over the Hypochondriasis scale is more marked with the two Dysthymic groups, who both produce less on the TAT.

The Tapping Test was unfortunately not introduced at the beginning of the investigation and 12 subjects were missed. The scatter of the Hh group (14 cases) is significantly greater than that of the Dh group (22 cases). The difference between the two Dysthymic groups is clearly not significant; whereas the Hh:Do difference is significant with a χ^2 test, but not with the Mann Whitney U for $n_2=9$ to 20. It seems likely that with larger numbers this measure would relate to diagnosis rather than to personality type. Eysenck (1952), however, reports contrary results. He found the widest scatter amongst Anxiety States with Hysterics, Normals and Psychopaths following in that order. The difference in scoring system cannot account for this disagreement.

A simple scoring system can be adopted to obtain syndrome and personality scores for each subject. On each test the scores were cut into quintile divisions. Those falling within the first quintile division scored -2 (the Dysthymic end in the case of the syndrome tests, the obsessive end in the case of the personality tests) and so through -1 ; 0 ; $+1$ to $+2$ (the Hysteroid or hysteroid end). The sum of the scores thus obtained on each of the three syndrome tests (Tapping being omitted as it had not been done by all subjects) constituted the "syndrome score". A similar procedure was adopted for six personality measures to give the "personality score".

Taking the optimal cutting point on the syndrome scale, 53 of the 68 cases, or 78 per cent., were in accord with the psychiatric diagnosis.

Taking the optimal cutting point on the personality scale, 53 of the 68 cases, or 78 per cent., were in accord with the personality rating. The "personality score" in fact correlated $\cdot62$ with the personality rating scale.

Sixty per cent. of the cases were in agreement with both the clinical diagnosis and the personality rating. The results appear sufficiently encouraging to warrant proceeding with cross-validation studies.

It is perhaps of interest that the attitude of the psychiatrist to the patient was associated with the personality rating scale.

Table III shows the psychiatrist's attitude plotted against his rating of the patient as hysteroid or obsessive.

TABLE III
The Psychiatrist's Attitude to the Female Psychoneurotic Patient in Relation to His Rating of Her Personality

				Sympathetic	Neutral	Hostile
Hysteroid	..	..	..	24	45	14
Obsessive	..	..	..	26	24	0

For $n=2$, $\chi^2=13\cdot09$; $P < \cdot01$ (close to $\cdot001$)

TABLE IV
The Psychiatrist's Attitude to the Male Psychoneurotic Patient in Relation to His Rating of His Personality

					Sympathetic	Neutral	Hostile
Hysteroid	..	..	..	..	7	27	22
Obsessive	..	..	..	..	19	21	3

For $n=2$, $\chi^2=19.39$; $P < .001$

TABLE V
The Psychiatrist's Attitude to Male and Female Psychoneurotic Patients

					Sympathetic	Neutral	Hostile
Women	..	..	..	..	50	69	14
Men	..	..	..	..	26	48	25

For $n=2$, $\chi^2=9.68$; $P < .01$

Table IV shows the similar comparison for male psychoneurotics.

Table V shows the attitude of the psychiatrist to male and female psychoneurotics irrespective of personality type.

There is thus a significant positive association between the psychiatrist's rating of either a psychoneurotic man or woman as obsessive in personality and his feeling of sympathy for that person. Male patients are disliked significantly more than female patients, particularly when they are hysteroid. Though these results may indicate a bias in the psychiatrist's rating, the personality types which emerge from this rating nevertheless provide an adequate bias for differentiating the performances of these groups on a number of psychological tests which have been objectively scored.

Since only about one-fifth of the ratings were done by female psychiatrists, it could not be reliably determined whether or not their attitudes differed from those of the male psychiatrists. There is a hint that she may be even more hostile to the hysteroid female patient than is her male colleague. The personality type of the psychiatrist has not—for diplomatic reasons—been taken into account.

DISCUSSION

If the results of this investigation were confirmed, it would appear that the value of classification of psychoneurotics in terms of symptom-clusters and of trait-clusters, even in its present crude form, would have been demonstrated as far as psychological testing is concerned. The advantages would be: (1) that the psychologist would have greater insight into what his measures were measuring (2) diagnostic differences with psychiatrists might often be found to be due to talking about different modes of classification; (3) two sets of measures would be available, one of which would be expected to remain relatively constant and the other to change with clinical improvement in the patient.

In this study more than half the women diagnosed as Anxiety States or psychoneurotic Depressives were rated as more hysteroid than obsessive in personality. Whilst it may well be that a larger proportion of obsessive Dysthy-

mics would be found in Out-patient Clinics, the figures are sufficiently striking to suggest that it would be of considerable interest to try to relate the hysteroid and obsessive personalities to extraversion and introversion. If the hysteroid personality were found to correlate highly with extraversion and the obsessive with introversion as most people would anticipate, the correlation between extraversion and Hysteria and between introversion and Anxiety might well be considerably smaller than Jung supposed. The wisdom of taking diagnostic groups to establish dimensions of personality would then be questionable.

This two-fold classification within the psychoneurotic group might be a useful frame of reference for clinical studies. It might, for example, be worth enquiring whether the anxiety or the depression of the hysteroid *Dysthymics* do, in fact, follow the same course as that of the obsessive *Dysthymics*. If phobias are to be found in both groups, are they fears of the same types of impulse or situation?

For some considerable time doubt existed about the diagnosis, or the diagnosis was changed, in 15 out of the 68 cases. This applied to 4 of the 16 in the Hh group; 8 of the 26 Dhs; 2 of the 22 Dos and 1 of the 4 Hos. For $n=1$, $\chi^2=2.71$, which approaches a p of $<.05$. Diagnostic uncertainty is, therefore, likely to be more marked when the patient is rated as of hysteroid personality. This perhaps suggests that diagnosticians may sometimes change their universe of discourse from symptom to trait clusters and conversely. The patient initially diagnosed as an Anxiety State with a hysteroid personality is often found to settle down within a few days of entering hospital, possibly because entering hospital is part of her at least pre-conscious campaign for, say, bringing her husband to heel; whereas entering hospital for the obsessive woman may be an admission of failure. The psychiatrist becomes more aware of the histrionicity, the lability and shallowness of affect than of the now quiescent palpitations, tremors and free-floating anxiety. He shifts his attention from symptoms to personality traits and, it is suggested, mistakenly feels tempted to change his diagnosis to Hysteria.

One would above all wish to enquire why it is that two people rated as having similar types of personality do apparently develop different symptom-clusters. Could it be, for example, that the hysteroid individuals who develop an Anxiety State or a Depression are the ones who have tried to manipulate the psychological situation with hysterical symptoms, but have failed or have found themselves in a geographical situation in which this has not been possible? If the hysteroid woman's husband does not pay her sufficient attention, a paralysed arm may serve; if he has quite suddenly and unexpectedly departed to the moon with a blonde, it may not.

CONCLUSIONS

1. Sixty-eight psychoneurotic women admitted to hospital were classified as follows: 16 as Hysterics of hysteroid personality; 4 as Hysterics of obsessive personality; 26 as *Dysthymics* of hysteroid personality and 22 as *Dysthymics* of obsessive personality.

2. Psychological tests were administered to these groups and it was found that some measurements differentiated between Hysterics and *Dysthymics* regardless of personality type, others between hysteroids and obsessives regardless of diagnostic type.

3. The "diagnostic score" based on tests was in agreement with the psychiatric diagnosis in 78 per cent. of the cases. The same agreement was

obtained between the "personality score" based on tests and psychiatric ratings of personality type. The test scores were in agreement with both the diagnosis and personality rating by the psychiatrist in 60 per cent. of the cases.

4. It is suggested that adherence to some such double classificatory system as the one presented here may (a) increase the inter-judge reliability of diagnosis; (b) provide psychologists with one set of measures which should vary with the patient's clinical condition and another which should remain relatively constant.

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