

Response Set, Authoritarianism and Personality Questionnaires

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A number of questionnaires were administered to 137 neurotic subjects in order to test five hypotheses. It was predicted (1) that personality questionnaires would not show evidence of 'acquiescence' response set of the kind found in connection with the F scale, and (2) they would not show evidence of another response set, 'indecisiveness', measured by the number of '?' responses endorsed. This new response set was predicted (3) to have high consistency from test to test. It was also predicted (4) that high scores on the 'content' of the F scale would correlate positively with 'acquiescence' and (5) negatively with 'indecisiveness' response set. All five predictions were verified.

1. INTRODUCTION

The M.P.I. (Maudsley Personality Inventory—Eysenck, 1959*b*) contains two sets of twenty-four questions and purports to measure two dimensions of personality, Neuroticism (N) and Extraversion (E). It has test-retest and split-half reliabilities of 0.8 or better, and possesses a certain amount of 'construct validity' (Eysenck, 1957, 1960*b*). It also possesses 'clinical validity', in the sense that neurotics score higher on N than normals, while psychopaths and hysterics score higher on E than do dysthymic groups (Eysenck, 1959*a*). The scales are virtually uncorrelated in normal groups, and they are independent of intelligence. A short form has been constructed for special use in market research (Eysenck, 1958) and in other fields where only limited time is available.

The N scale contains questions of one kind only, namely, where the 'Yes' answer is the neurotic one; the E scale contains questions of both kinds, i.e. in some the 'Yes' answer is the extraverted one, in others the 'No' answer. This arrangement has been criticised by Keehn (to appear), who suggests the possibility of response set (acquiescence) playing an important part in the results reached. While this possibility does not appear a very strong one, in view of the fact that on the short version of the test the correlation between E and N is very similar to that reported for the long version, although on the short version all the E questions are scored in the positive direction, nevertheless a separate study of this problem appeared advisable.

Work on response set has been mainly concerned with 'acquiescence', or the tendency to answer 'Yes' to all the questions presented, regardless of content; most of these studies have used questionnaires taken from work on the authoritarian personality. As this group of articles has been reviewed elsewhere (Eysenck, 1960*a*), no repetition will here be attempted. It should be noted, however, that 'acquiescence' is not the only response set which may appear in questionnaires. It has often been observed that some subjects give large numbers of '?' responses, possibly indicative of lack of decision, while others give many extreme responses, possibly indicative of 'rigidity' (or 'intolerance of ambiguity'). Some correlations

substantiating the relationship between rigidity and extreme response set have been published (Soueif, 1958; Brengelmann, to appear), and relations found between such response sets and neurotic and psychotic abnormality. In view of the work of Nigniewitzky (1955, 1956), it also seemed possible that extreme response set might be correlated with authoritarianism. We have here, then, a complex of findings and theories which suggest certain hypotheses, although it cannot be said that these can be deduced rigorously from some firm body of ascertained fact, or from a consistent theoretical system.

The hypotheses investigated in this study were as follows: (1) Personality inventories such as N do not show evidence of 'acquiescence' response set. (2) Personality measures E and N do not show evidence of correlation with 'extreme' response set, or its inverse, 'indecisiveness'. (3) 'Indecisiveness', as measured by the number of '?' responses marked, has a high degree of consistency as from test to test. (4) Content scores on the authoritarianism scales are not independent of 'acquiescence' response set, but show a positive correlation. (5) Content scores on the authoritarianism scales are not independent of 'indecisiveness' response set, but show a negative correlation.

2. THE EXPERIMENT

(a) *The tests*

Ten measures in all were used in this study. They are listed below, together with the numbers which will be used to refer to the various measures. (1) M.P.I. Extraversion scale. (2) M.P.I. Neuroticism scale. (3) Number of '?' answers in M.P.I. (4) Content score on the Jackson-Messick (1957) version of the F scale.* (5) Acquiescence score on the Jackson-Messick (1957) version of the F scale. (6) Number of '?' answers on the Jackson-Messick (1957) version of the F scale. (7) Hysteria scale of the MMPI. (8) Psychopathic deviate scale on the MMPI. (9) Psychasthenia scale of the MMPI. (10) Number of '?' answers on the Hy, Pd, and Pt scales.

(b) *The subjects*

These ten sets of scores were obtained from tests administered to 137 neurotic inpatients at Belmont and Netherne Hospitals. Psychiatric diagnoses were available for these subjects; the number of cases within each category is indicated by the number in parentheses: Psychopaths (10), Hysterics and Anxiety Hysterics (29), Personality Disorders (17), Anxiety State (20), Reactive Depressions (19), Obsessionals (5), and Others (37). Patients were both male and female (no sex differences were observed on any of the scales) and ranged in age from twenty-five to fifty (no age differences were observed).

3. RESULTS

The various psychiatric groups fell into the predicted order on the E scale; differences on the N scale were not statistically significant. The mean scores of the various groups were: Psychopaths = 31.5; Hysterics = 22.2; Depressives = 21.9; Others = 21.3; Personality Disorders = 19.7; Anxiety States = 19.0; Obsessionals = 17.4. While the hysteric group is the second most extraverted group, it is close to the dysthymic groups, and not significantly differentiated from them.

* The Jackson-Messick F scale (1957) consists of thirty items, fifteen as in the original and fifteen reversed by rewriting each item so that the content would appear to reflect a viewpoint opposed to the original, while retaining a similar style of expression. If we denote Fa as the number of pro-authoritarian items agreed by the subject and Vd the number of anti-authoritarian items disagreed with, then the content score is $Fa + Vd$, while the acquiescence set score is $Fa - Vd$.

None of the other scales gave significant results, excepting the 'acquiescence' measure of the F scale. On this scale, Depressives and Others have high positive scores, Personality Disorders and Obsessionals high negative scores. No obvious theoretical interpretation suggests itself. On the MMPI scale (Hy), Hysterics and Anxiety States have the highest scores, Psychopaths and Obsessionals the lowest. On Pd, Psychopaths and Depressives have the lowest (!) scores, Personality Disorders and Hysterics the highest. On Pt, Anxiety States and Obsessionals have the highest scores, Psychopaths, Hysterics and Personality Disorders the lowest. The pattern is vaguely in line with the MPI scales, if we identify Hy and Pd with extraversion, and Pt with introversion, as Ericksen does (1954*a*, 1954*b*). However, the relationships are by no means close, and the mean differences are not significant.

The ten sets of scores were intercorrelated, and a factor analysis carried out. Hotelling's principal components method was used, and rotation carried out according to Thurstone's principle of simple structures. Four factors emerged which could be identified with reasonable accuracy. The sets of loadings are given below in Table 1.

Table 1

No.	Test	Factor Loadings			
		1	2	3	4
1	M.P.I.: E	- 0.73	- 0.06	- 0.21	- 0.03
2	M.P.I.: N	0.86	0.07	0.19	- 0.03
3	M.P.I.: '?'	- 0.07	0.94	0.03	- 0.04
4	F: Content	- 0.04	- 0.65	- 0.52	0.30
5	F: Set	- 0.07	0.06	- 0.02	0.96
6	F: ?	0.02	0.85	0.17	- 0.02
7	M.M.P.I.: Hy	0.54	0.11	0.12	0.09
8	M.M.P.I.: Pd	0.62	0.12	0.36	0.03
9	M.M.P.I.: Pt	0.95	0.01	- 0.03	0.03
10	M.M.P.I.: '?'	0.04	0.84	- 0.36	- 0.12

Factor 1 has high positive loadings on the N, Hy, Pd, and Pt scales, and a high negative loading on E; it is clearly the well-known questionnaire neuroticism factor which has appeared over and over again in the literature (Eysenck, 1960*a*). The presence of the E scale here is due to a fact several times before encountered. While the N and E scales are independent in normal samples, they correlate together to the extent of 0.4 or thereabouts in neurotic samples. In this particular group the correlation is actually even higher than usual ($r = - 0.58$), thus giving rise to the high factor loading of $- 0.73$ for the E scale.

The second factor has high positive loadings on all three '?' counts and may thus be labelled a factor of *indecisiveness* or '?' response set, depending on whether we are willing to make the suggested psychological interpretation of the observed fact of more frequent choice of a non-committal answer. The actual correlations between the three quite independent '?' counts average above 0.6, a value which may be inserted in the Spearman-Brown prophecy formula to give a rough idea of the reliability of the total combined score. Even more interesting than this verification of our third hypothesis is the fact that the 'content' score of the F scale has a loading on this factor of $- 0.65$. Hypothesis 5 thus finds empirical

support, and we may conclude that persons who score high on the F scale, purified of its response set component, tend to have very definite opinions, and to shun 'wishy-washy' non-committal replies. The actual correlations of 'content' with the three '?' counts are: -0.17 , -0.56 , and -0.31 .

Factors 3 and 4 are of relatively little interest, each containing only one high loading. Factor 3 may be identified as 'anti-fascist', the only high loading being a negative one for the content score of the F scale, and factor 4 may be identified as one of acquiescence response set, this score having the only high loading on it. The actual correlation between content and set on the F scale is 0.21 ; this very slight positive correlation finds expression in the low positive loading of the content score on factor 4 (0.30). Hypothesis 4 is thus also verified, although not at a very high level of certainty. (The observed correlation is just below the 0.01 level of p .) It is interesting that E has a negative loading on factor 3; this agrees with the theory linking E and F (Eysenck, 1954).

The failure of the N scale to have a positive loading on factor 4 supports hypothesis 1, and indicates that the measurement of neuroticism is not complicated by the acquiescence response set. The failure of E and N to have loadings on factor 2 supports hypothesis 2, and suggests that the measurement of extraversion and neuroticism is not complicated by 'indecisiveness' response set. It is concluded therefore, that the results support all five hypotheses, at least as far as the particular sample tested is concerned.

4. DISCUSSION

The findings of this experiment suggest that 'acquiescence' response set may be a tendency peculiar to questionnaires of social attitudes, personal opinions, and similar content; it is conceivable that many people do not feel strongly about these issues, or that they have no wish to get embroiled in arguments about them. Questions about their own personal feelings, behaviour patterns and the like are not regarded as falling into the same category; subjects are usually interested in themselves, whatever else they may not care about, and they do not have to fear contradiction when answering questions about themselves. It was on these grounds that the prediction was originally made that personality questionnaire answers would be independent of acquiescence as measured on the F scale. It is, of course, possible that many different 'acquiescence' response sets exist, each confined to one type of material; if this were so, questionnaires relating to personality items might form a class independent of the response set generated by social attitude items, but not completely independent of other response sets. The high negative correlation between E and N speaks against this possibility, most E items requiring the 'Yes' answer for a high score; if acquiescence were a factor, the correlation between E and N should have been positive rather than negative. This fact is suggestive, but not conclusive; further work might with advantage be done in this field. The difficulty of using the same method of 'response reversal' that was used in relation to the F scale seems to be quite a considerable one. Most neuroticism questionnaires ask the subject whether he is suffering from symptoms *a*, *b*, *c*, etc., or not; it is difficult to reverse the question without involving oneself in a double negative,

which would make the test impossibly difficult for the less intelligent subjects. (At least this appears to be so in our own efforts along these lines.)

One might have predicted that in addition to the four factors actually discovered, there should have emerged a fifth one, with E, Hy and Pd having high loadings, and Pt having a low loading; such a factor of *extraversion* probably did not emerge in this analysis because of the unusually close relationship between E and N. In any case, while E is a pure measure of extraversion (at least in normal groups), Hy and Pd are compounds of E and N, just as Pt is a compound of I and N. On this basis, we would expect all three MMPI scales to have negative correlations with E (because of the neuroticism component), but we would expect these negative correlations to be lower in the case of Hy and Pd (because of the congruent extraversion component) than in the case of Pt. The actual figures are -0.27 , -0.20 and -0.66 ; the suggestion is that our theoretical analysis is perhaps along the right lines. The point is of some interest because some workers have used the score Hy-Pt as a measure of extraversion (Eriksen, 1954a, 1954b). Our results suggest that there appears to be some slight justification for this.

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