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PERSONALITY AND THE CLASSIFICATION OF ADULT OFFENDERS

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CLASSIFICATION often precedes causal analysis in science, and many attempts have been made to classify prisoners and criminals generally, usually in terms of the types of crimes committed. The work of Marcus (1960), West (1963) and Sinclair and Chapman (1973) in this country, and of Cloward and Ohlin (1960), Cohan and Short (1958), and Gibbons (1965) in the United States may be mentioned; reviews are available in books by Bloch and Geis (1970), Clinard and Quinney (1973), and Hood and Sparks (1970). The outcome, as Gibbons (1975) points out, has not been very successful. " Although it is perhaps too early for unequivocal assertions about the long-term prospects for career-oriented typologies, the evidence to date does not seem encouraging. . . . No fully comprehensive offender typology which subsumes most criminality within it yet exists. . . . The notion of identifiable careers in criminality may be an hypothesis about behaviour which is too clinical " (p. 152). It may be that a compromise solution will best fit the problem; as Sinclair and Chapman (1973) point out, their study suggests " that the younger prisoners are most usefully classified by their criminal behaviour, and the older by their social circumstances " (p. 351). In their study they also found interesting personality correlates with their two major " types "; the younger type (age less than 30 this conviction) had a positive extraversion score, and did not show an elevated neuroticism score; the older type had a negative extraversion score (introverted), and a high score on neuroticism. The inclusion of personality data in any analysis purporting to reveal offender " types " would seem most desirable, and in line with the general theory of anti-social behaviour advanced by Eysenck (1977).

The relative failure of attempts to find a useful typology in this field may in part be due to exaggerated expectations of what might be found. When Gibbons (1975) says that " it is by no means clear that existing typologies of criminals are empirically precise " (p. 152) he is suggesting a very high level of differentiation between criminals; a rather lower level of aspiration may be more in accord with the facts of the situation, without reducing the importance of discovering such a typology. Another reason may be that past attempts have been tied up closely with sociological theories about the environmental causes of criminal behaviour. Psychological theories centring in genetic causes, mediated through personality factors, may be equally important and may be useful in arriving at an empirically verifiable typology.

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There are two main types of evidence which combine to suggest that genetic factors are important in criminology. The first deals with concordance among MZ and DZ twins for criminality; of some 750 twins, it has been found in 10 independent investigations carried out in Germany, Japan, the United States, and in Scandinavia that concordance rates are over four times higher in MZ twins than in DZ twins (Eysenck, 1973). The second deals with adopted children; the work of Schulsinger (1972), Crowe (1972), Hutchings and Mednick (1973) has shown that with respect to criminality adopted children behave like their biological parents, not like their adoptive parents, although the latter provide their environmental conditions practically from birth. Criminal behaviour is linked with personality variables like P (psychoticism), E (extraversion), and N (neuroticism); this connection is apparent not only in adults (Eysenck and Eysenck, 1970, 1971a, 1971b, 1973) but also in adolescents (Foggit, 1974) and children (Allsopp, 1975; Allsopp and Feldman 1974, 1976). These variables in turn show strong evidence of genetic determination (Eysenck, 1975); *e.g.* a recent study of 544 pairs of twins has shown that heredity accounted for 81 per cent. of the total reliable variance in a measure of psychoticism (Eaves and Eysenck, 1976). It would seem possible, therefore, that a proper classification of criminal behaviour could be built up with reference to personality variables of this kind, in addition to sociological variables of the kind more frequently studied by criminologists. The present investigation constitutes a preliminary step in this direction. Some support for this thesis comes from the work of Marriage (1975), who studied a group of 228 long-term prisoners. He carried out a factor analysis on 22 variables including personality variables, crimes committed, age, class, etc., and obtained one factor (among others) which had the following loadings: violence, 0·53; sex crimes, 0·79; fraud offences, −0·78; P, 0·51. Thus violent and sex offences are "high P" offences, fraud is a "low P" offence. This is only a provisional finding, but it indicates the possible usefulness of the approach here suggested.

Population

Five groups of criminals were used, chosen according to their criminal career histories to fit into fairly distinct categories. These groups, together with the defining characteristics, are as follows:

(1) Violence. Subjects with two or more convictions for violence involving injury and no conviction for sex crimes or rape.

(2) Property. Subjects with three or more convictions for breaking and entering, and other convictions only for theft.

(3) Confidence crimes (fraud). Subjects with three or more convictions for fraud, no convictions for violence or sex offences, and no more than two convictions for breaking and entering. No convictions for robbery.

(4) Inadequates. Subjects with a rate of ten or more convictions in three years liberty and an average custodial sentence of less than 18 months. No convictions for robbery and not more than one conviction for a violence or sex offence.

(5) Residual. Prisoners who did not fall into any of the above categories, *i.e.* who committed a variety of crimes in combination.

These categories are of course *a priori*, although account was taken of previous work and theorising about the problem. Prisoners who only indulged in one type of criminal activity were rather rare, and consequently allowance had to be made for a certain amount of heterogeneity in the above definitions. Sex crimes were too specialised to be easily compatible with the other categories, and consequently were left out in this study. The numbers in some categories are quite small, and this will of course militate against the discovery of significant differences between groups; this fact just mirrors the actual occurrence of the different groups in the prison sampled. All the subjects were above 18 and below 38 years of age, so that extremes were excluded. The total number of prisoners tested was 156.

Tests and Measures

The main interest of this study centres on the Eysenck Personality Questionnaire (Eysenck and Eysenck, 1975), which provides scales for the measurement of P, E, N, and L (lie or dissimulation scale). The E scale could also be scored for two component factors, *i.e.* sociability and impulsiveness. Prisoners were fully aware of the fact that the scales were given as part of an experimental study, and that results would not be revealed to the prison authorities. Their L scale scores were not elevated above the normal control level, suggesting that dissimulation played little part in their responses.

We also used various laboratory investigations, details of which are available in Rust (1974, 1975). We studied eye-blink conditioning, using as the CS a tonal stimulus of 75 Db and 1000 Hz, applied through stereophonic headphones. Puff intensity was six p.s.i., CS–UCS interval 640 milliseconds, and UCS duration 60 milliseconds. Inter-stimulus interval between CS–UCS pairs was predetermined random rectangular between limits of eight and 15 seconds. Also studied were 17 G.S.R. variables, including mean and habituation scores on basal, amplitude, frequency and latency measures. Each subject received 21 stimuli at 95 Db, 1000 Hz and one second duration with regular-inter-stimulus interval of 33 seconds. The last experimental measure taken was the A.E.P. (averaged evoked potential) on the E.E.G. The stimulus for this experiment was a set of 50 tones at 55 Db, followed by 50 tones at 75 Db after an interval of one minute. All tones were sinusoidal, at 1000 Hz, and of one second duration. The inter-stimulus interval for both sets had a predetermined rectangular random distribution between limits of five and nine seconds. A great variety of scores was obtained from these various studies (Rust, 1974); those differentiating between our groups will be described briefly in the results section.

Results

Questionnaire

Details of the questionnaire data are given in Table 1, which includes means and standard deviations. Figure 1 shows a diagrammatic picture of the results. As will be seen, P separates out the conmen from all other groups,

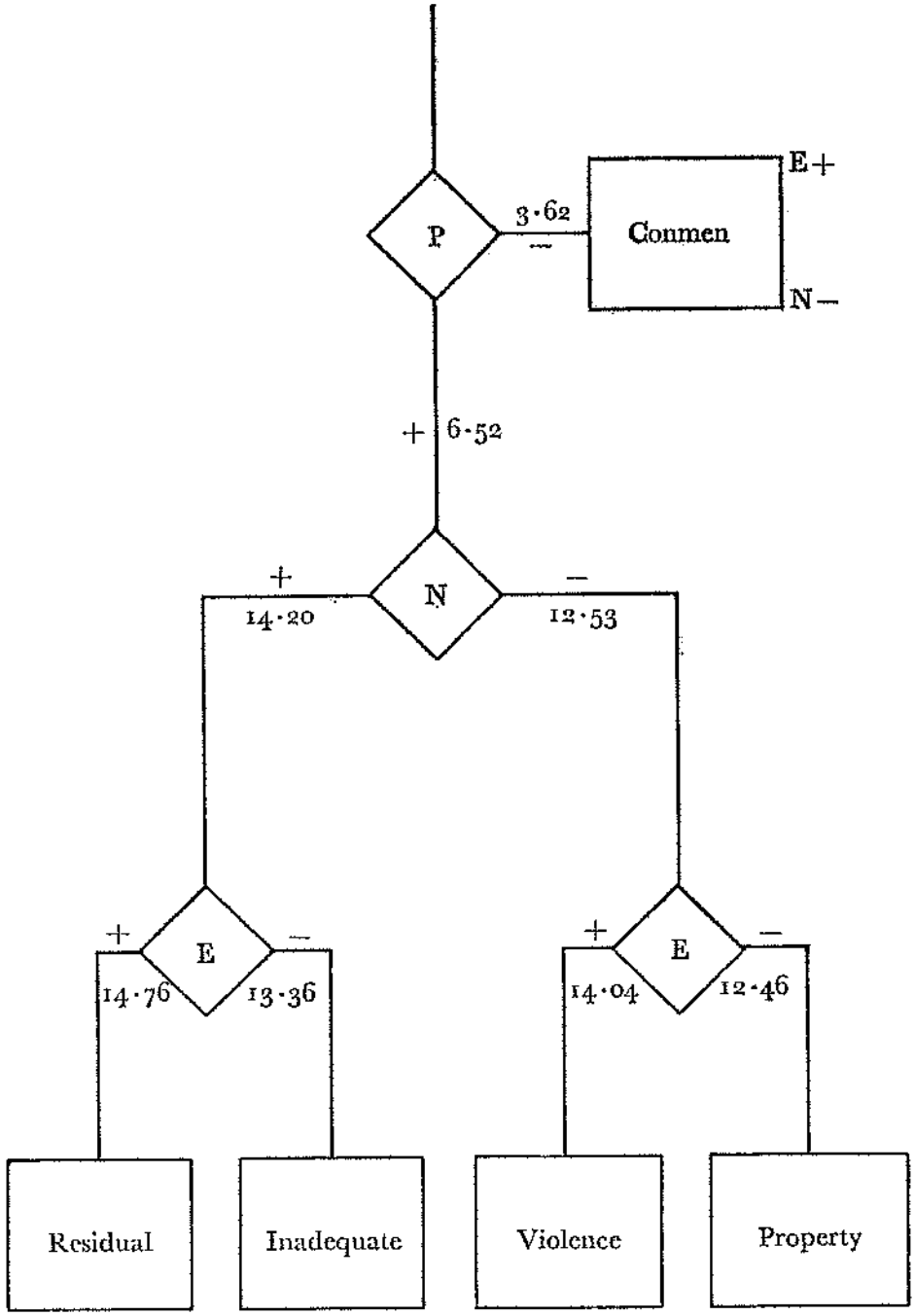


FIGURE 1

Segregation of criminal groups according to scores obtained on P, N and E

the former having very low P scores (as well as high E and low N scores). We next divide on N, with violence and property offenders having low scores, and inadequates and residuals having high scores. Last, these two sets are divided into high and low E scorers, with violent and residual prisoners scoring high, and inadequates and property offenders scoring low. Analysis of variance shows that there is a highly significant effect for P ($p < 0.01$), and a significant effect for N ($p < 0.05$). Effects for E are insignificant, as are those for sociability and impulsiveness. This does not necessarily mean that the E effects are spurious; with a larger population the p values could have reached the significance level. However, failure to reach this level necessitates caution in interpreting the observed differences.

TABLE 1

Means and S.D.S. of five offender groups for E.P.Q. scores

Number	P	E	N	Imp	Soc.	Age
(1) Violence (37)	6·11±4·31	14·04±5·40	12·05±5·41	10·41±2·47	12·04±4·61	30·15±4·93
(2) Property (30)	6·42±2·40	12·46±4·68	13·02±5·39	10·50±2·50	10·29±4·75	29·00±4·79
(3) Conmen (22)	3·62±2·60	15·00±4·14	9·62±5·77	9·95±2·97	13·29±3·43	29·73±4·81
(4) Inadequates (14)	7·93±4·45	13·36±4·11	14·75±5·45	10·57±2·53	11·11±4·25	28·43±4·80
(5) Residual (53)	5·65±3·66	14·76±4·13	13·66±4·75	10·38±1·99	12·01±3·56	28·89±4·60
F	3·60	1·55	3·04	0·09	1·89	0·60
P	< 0·01	n.s.	< 0·05	n.s.	n.s.	n.s.

Individual group differences were tested for significance, with the following results. For P, the fraud group was significantly differentiated from all other groups at p values ranging from 0·05 to 0·001 (inadequates). The inadequate and the residual groups were differentiated at the 0·05 level. For N, significant differentiation involved group 3, as compared with groups 2, 4 and 5, at p levels varying from 0·05 to 0·001. The major burden of differentiation, therefore, is borne by the fraud group, with only occasional significance attending differentiation among the other groups. These results, however, only tell us about individual sets of scores; they say nothing about the patterning of scores. As Figure 2 shows, these patterns are quite different, and the question arises whether the groups can be discriminated significantly on this basis. In this figure standardised scores for the groups have been plotted, to eliminate difference in means and variances between scales.

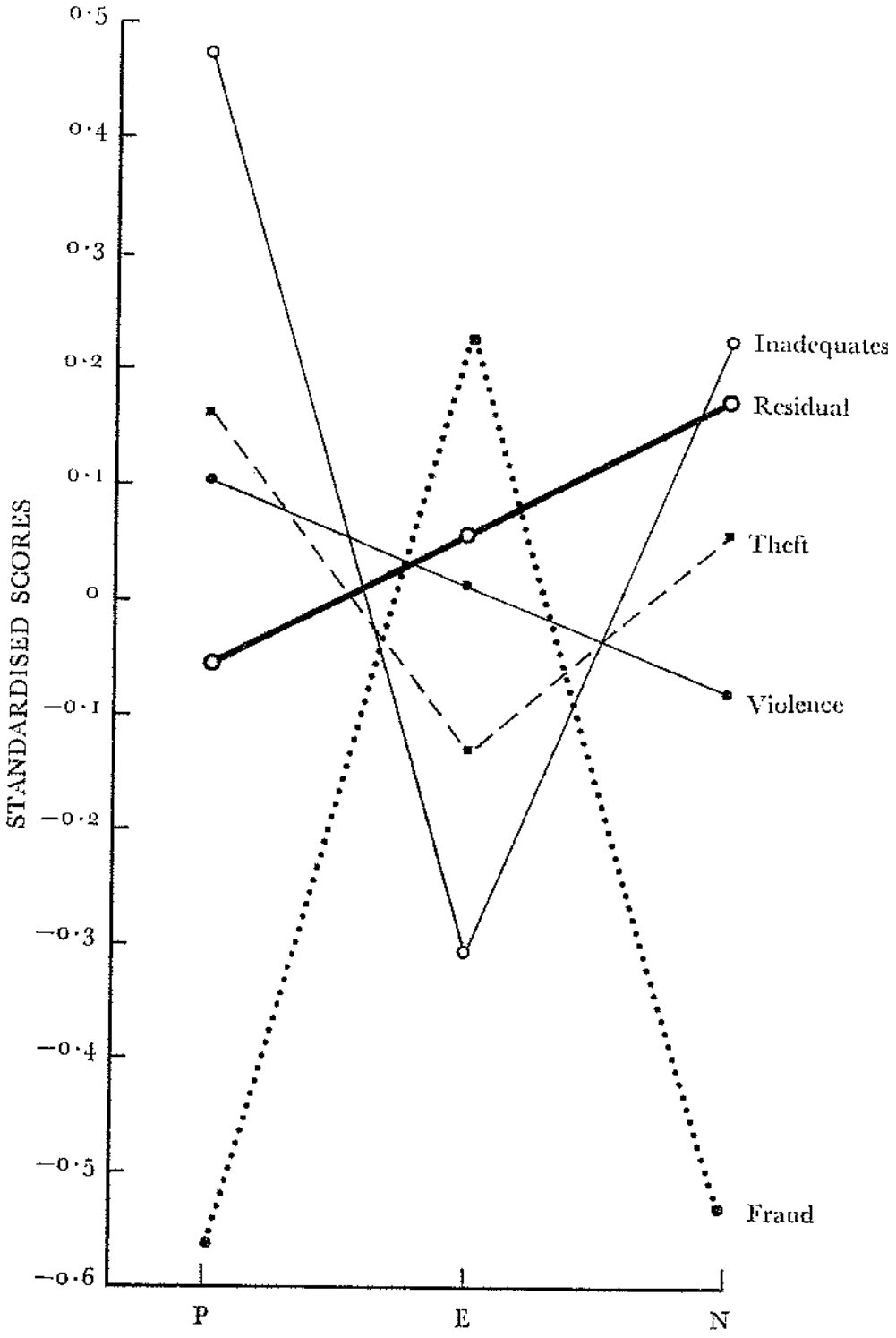
Figure 2, in fact, shows in diagrammatic form a *profile analysis* of the questionnaire data. The ordinate shows scores for the five groups using the within-groups variances. The analysis of the profiles showed them to differ significantly from each other. The effect was almost wholly due to the difference in profile between the fraud and the inadequate offenders.

Psycho-physiological data

Data for conditioning and A.E.P.s were not significant as far as differentiation between the offender groups is concerned. For the G.S.R. data, the

FIGURE 2

Profile analysis of questionnaire data, using standardised scores



multivariate analysis of variance including all 17 G.S.R. variables showed a significant difference at the 0·05 level between the five prison groups. Individual univariate analyses of variance indicated that this was accounted for by four variables: (1) change in basal conductance, (2) number of spontaneous responses, (3) response amplitude, and (4) response magnitude. A step-wise multivariate analysis showed that these four variables differentiated between the groups through a common factor. Through individual t-tests it was found that this common factor was contrasting groups 2 and 4 (theft and inadequate groups) with groups 1, 3 and 5 (violence, fraud and residual). This grouping makes sense as the theft and inadequate groups do indeed have much in common. Inadequacy is defined in terms of the number of convictions in the last three years' liberty and most of these convictions would normally be for theft. The results therefore indicate that prison subjects with convictions for theft (compared with other prisoners) have less change in basal conductance within the experiment, show more spontaneous responses and have larger responses. Overall the results show increased G.S.R. reactivity in theft and inadequate subjects. (Table 2.)

TABLE 2

G.S.R. Variables

Means and S.D.S. of five offender groups for G.S.R. variables

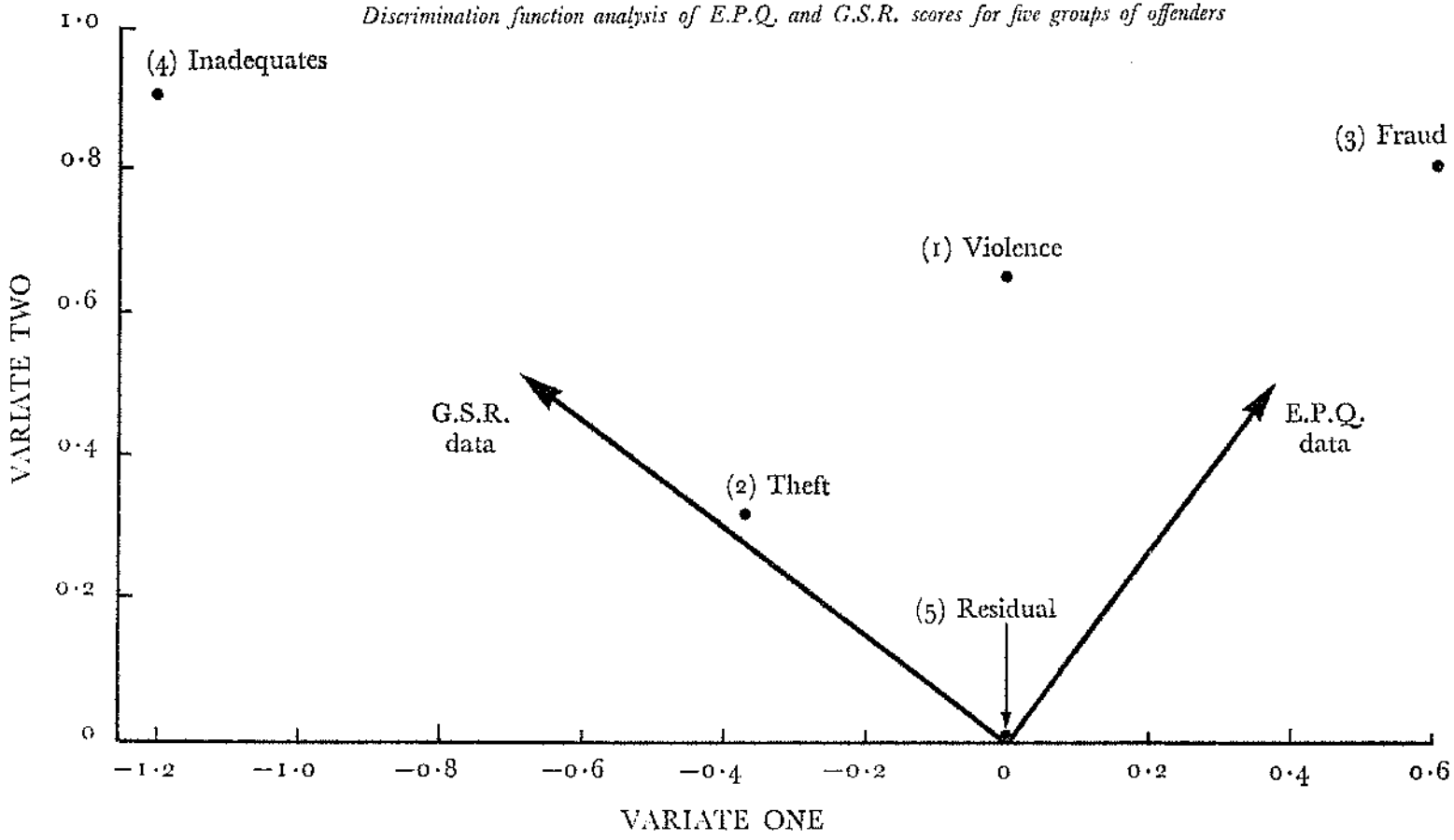
Group	Base change	Spontaneous response frequency	Response amplitude	Response magnitude
1	−0·025±0·06	0·69±0·56	6·10±3·1	4·01±3·1
2	−0·006±0·05	1·23±0·92	7·43±3·3	6·02±3·5
3	−0·019±0·05	0·75±0·59	6·02±3·5	4·07±3·8
4	0·025±0·12	0·92±0·74	8·96±2·6	6·74±3·9
5	−0·035±0·06	1·04±0·76	6·04±2·9	4·25±2·91
F	2·82	2·89	3·45	3·37
P	<0·05	<0·05	<0·02	<0·02

An immediate interpretation of this result might be that the relationship was mediated by personality, either directly or through particular personality types reacting differently to the testing situation. However the pattern of the G.S.R. results over the five groups does not mirror the differences in personality between the groups. Furthermore these particular G.S.R. variables showed no significant correlations with personality, intelligence or age in the sample as a whole. They also showed no correlation with a self-report questionnaire, completed by the subject, of anxiety during testing. In a multivariate analysis of variance carried out on both the G.S.R. and the personality measures together, a step-down F indicated that the differences between the groups in the G.S.R. were totally independent of any difference in personality. This finding was borne out by a canonical correlation analysis.

These contradictions are puzzling. We do have a clear indication that prisoners with convictions for theft and fraud have a distinctly different

FIGURE 3

Discrimination function analysis of E.P.Q. and G.S.R. scores for five groups of offenders



G.S.R. from other prisoners. It is not at all clear at this stage what could be mediating this effect, or which of the groups is ideosyncratic.[1]

It seemed of interest in this connection to investigate the relative positions of the five offender groups in the space generated by two sets of E.P.Q. and G.S.R. variables. We carried out a discriminant function analysis, using data from the four G.S.R. measures and the three E.P.Q. scales. The first variate was highly significant ($p < 0{\cdot}0018$), while the second variate was only marginally significant ($p < 0{\cdot}0874$). This is probably due to the method of extraction of the variates, which in this case would combine significant variance from the two sets of unrelated variables; it would seem reasonable to retain both variates. The relative positions of the five groups are plotted in Figure 3. It will be seen that two meaningful orthogonal variates emerge, as indicated by the arrows. The E.P.Q. data define one variate, which discriminates the fraud group from the rest, while the G.S.R. data define the other variate, which discriminates the inadequates from the rest. Appropriately enough the residual group forms the apex of the triangle produced by joining up the groups along the lines of the arrows, and drawing a line from group 3 to group 4; groups 2 and 1 are inside this triangle.

Discussion

This study was designed in the hope that psychological variables, defined by questionnaires and psycho-physiological measurements, would enable us to differentiate offenders habitually committing crimes of a particular kind from each other, and from a "residual" group constituted of offenders guilty of a multiplicity of different crimes. This hope has been realised; there are highly significant differences in scoring patterns between the five groups making up our sample. This result is satisfactory, particularly in view of the fact that some of the groups were quite small, and that the records on which allocation to groups was based were not always complete or easy to interpret. Furthermore, the definition of the groups was *a priori*, and may have been less than optimal for the achievement of discrimination. Blackburn (1971) and Megargee (1966) have produced evidence to suggest that even within a given well-defined category (murderers) it is possible to discover clearly demarcated psychological types (over-controlled and under-controlled, etc.) which in turn could be characterised in terms of personality variables closely corresponding to P, E and N. It seems possible that a more refined method of allocation and grouping will produce even better discrimination, and may in due course lead to a proper typology of criminal acts.

Summary

A group of 156 adult prisoners was selected to represent four areas of criminal activity (violence, theft, fraud, inadequacy) and one of multiple criminal activity (residual). These groups were tested by means of questionnaire (E.P.Q.) and psycho-physiological techniques (G.S.R., conditioning, evoked potentials). Data were processed singly and in combination, using

[1] Length of time in prison might have been a possible cause for observed differences but analysis showed this to be quite uncorrelated to any of the relevant variables.

analysis of variance, canonical correlation and discriminant function analysis. The results demonstrated clear differences between groups, suggesting that different types of crimes are committed by persons differentiated psychologically into different " types ".

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