Person. individ. Diff. Vol. 7, No. 2, pp. 263–264, 1986
Printed in Great Britain.

0191-8869/86 $3.00 + 0.00

An empirical study of the validity of handwriting analysis

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(*Received 17 June 1985*)

Summary—The EPQ was administered to 99 *S*s, and a handwriting sample provided by each. A professional graphologist undertook to analyse the handwritings, and fill in the EPQ as she thought would have been done by the respondents. Significant correlations were only obtained for the P category; neither E, nor N, nor the L scale showed significant correlations between *S*s and the graphologist.

The validity of graphological analysis of personality traits does not rest on a very firm foundation. There are some positive correlations between the scores and evaluations obtained from graphological tests and the evaluation and assessments resulting from psychological testing. Extra-chance results have been reported, e.g. by Eysenck (1945, 1948), Linton, Epstein and Hartford (1962), Lomonoco and Harrison (1973) and Williams, Berg-Cross and Berg-Cross (1977), but these are off-set by the negative findings of Lester, McLaughlin and Nosal (1977), Rosenthal and Lines (1972), Lemke and Kirchner (1971) and Vestewig, Santee and Moss (1976). These studies dealt with personality traits; when external criteria are used, again there is disagreement, with Keinan, Barak and Ramati (1984), Sonnemann and Kerman (1962) and Zdep and Weaver (1967) obtaining positive results and Jansen (1973) negative ones. The most likely interpretation would seem to be that there are some slight relationships between certain aspects of handwriting and certain personality traits, but that much depends on the skill of the graphologist and perhaps the method he or she uses on the type of script furnished, and on the atomistic or holistic approach to the graphological analysis.

It is sometimes said that there are two ways of doing research in the graphological field, namely the holistic and the analytic. This is not quite correct; there are essentially four ways, because the holistic and the analytic method may be employed on the side of the *handwriting analysis*, or on the side of the relationship between handwriting and personality. This gives four combinations. The holistic analysis of handwriting is essentially impressionistic; the graphologist looks at the sample and gives an impressionistic account, based on experience, reading, experiment etc., of the kind of personality he believes the handwriting discloses. The analytic method would instead use measurement of the constituents of the handwriting, such as distance between words, width of letters, height of lower-case, middle-zone or upper-zone letters etc. These measurements would then be converted into personality assessments on the basis of some kind of formula. Once the holistic or analytic (or intermediate; it is of course possible to combine these two methods in various ways) analysis has been completed, it has to be related to some external criterion. This may be done through a holistic method (such as matching against an impressionistic account of the *S*'s personality), or by more analytic means, such as by correlation with a quantitative assessment of the *S*'s traits as measured by a personality inventory. Using the letters H to stand for holistic, A for analytic, as applied to the handwriting analysis, M for matching and C for correlation, we clearly have four possibilities: HM, AM, HC and AC. The possibility exists that some of these combinations are better suited to the graphologist's abilities, and may hence give better results than others; clearly all four should be explored.

Of particular interest is the study of Stabholz (1981), because like the study to be described presently it used a correlational method [correlation of predictions with the P, E, N and L factors in the EPQ (Eysenck and Eysenck, 1975)] but employed a completely analytic method of measuring in great detail the handwriting samples used. As will be seen, the graphologist in the present investigation used a more holistic method of handwriting analysis, although of course based on similar aspects of the handwriting to those specifically analysed by Stabholz (1981). Stabholz used 158 pairs of twins, 77 MZ and 81 DZ twins, of these, 144 were male, 172 female. The measures taken were: (1) distance between words; (2) width of letters 'm' and 'o'; (3) height of lower-case letters; (4) height of middle-zone letters; (5) height of upper-zone letters. It was hypothesized that extraverts would have higher middle-zone letters, higher lower-case letters and a greater width of letters 'm' and 'o'. It was also hypothesized that the distance between words would be less, and so would be the height of upper-zone letters.

It was found that, for both males and females extraverts did have higher middle-zone letters, at an acceptable level of significance. Lower-case letters were higher for extraverted women as compared with introverted women, but for males the difference was non-significant. So were all the other comparisons based on these hypotheses, which themselves were derived from authors such as Williams *et al.* (1977).

It was also hypothesized that there would be greater irregularity in the writing of high N scorers, but this was not found to be so. It is interesting that for the personality dimension of P a larger number of significant correlations was found, but as these had not been predicted, a replication of the study would be needed in order to make the results acceptable. Scores on the L or dissimulation scale, which may also be interpretated as a measure of conformity, were correlated negatively with P, as usual; here also a number of significant correlations with handwriting features were found. The point is interesting because, as we shall see, it was only with respect to P that the study here reported gave any evidence of positive results. One last feature of the Stabholz (1981) study may be of interest, namely the genetic analysis carried out. MZ twins, as compared with DZ twins, were found to have higher intra-class correlations and an analysis of the data along the lines of biometrical genetical analysis showed that the major contribution to phenotypic variability was made by within-families environmental variance, which together with additive genetic variance constituted a model which fitted the data quite well. There was no evidence for any between-families environmental variance. This finding is similar to that which is usual for personality features (Fulker, 1981), but it does seem extraordinary that such features as differences in schooling, upbringing and family background, which are usually believed to be responsible for differences in handwriting, played no part at all in the causation of the phenotypic differences observed.

In the present study a professional graphoanalyst, member of the International Graphoanalysis Society, undertook the analysis of 99 free-handwriting samples, each about a page in length and written in ink. The subjects were a fairly random

sample of the population, 48 male and 51 female, with an average age of about 30 yr. The personality traits to be estimated from these handwritings were the three main dimensions of personality, P, E and N, as well as a L or conformity scale (L); details about the meaning of these dimensions will be found in Eysenck and Eysenck (1985).

All the *Ss* filled in the EPQ (Eysenck and Eysenck, 1975) and the graphologist was furnished with empty forms and instructed to fill these in as the *Ss* had done, simply on the basis of her judgement of the *S*'s personality based on the handwriting. In addition she marked each form with a plus sign (to indicate that she was particularly confident of her judgement), a minus sign (to indicate that she was particularly uncertain of her judgement); for the average run-of-the-mill *Ss* she put neither a plus nor a minus. No relationship was found between accuracy of judgement and signs, so that no further analysis will be undertaken of these signs.

Correlations were calculated for all the forms, regardless of sex. Only the correlation for P was statistically significant (0.22); that for E was −0.03; that for N was −0.06; and that for L was 0.06.

Correlations were also calculated separately for males and females. For males the correlations with P, E, N and L were respectively 0.10, 0.06, 0.00 and −0.04. For females they were 0.34, −0.12, 0.11 and 0.13. Thus for both groups the correlations with P were the highest, with the others going in opposite directions, and quite insignificant.

The general outcome, at least as far as this particular graphologist and this particular sample of persons and traits is concerned, is not dissimilar to the picture obtained from the other studies quoted. There is very little relationship between personality and graphological analysis, although that between psychoticism as self-rated and psychoticism as grapho-analysed, is statistically significant, although it should be noted that this is only one of four such analyses undertaken, so that the overall effect is not very significant. There is thus little support here for the validity of graphological analysis.

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