Michael Moore

On the failures of graphology

Abstract

Research evidence concerning the lack of validity of graphology for personnel selection or placement is followed by several possible reasons for the continued popular belief in the usefulness of graphology. The latter include content, mistaking reliability for validity, intuitive appeal, limited predictiveness, and illusory correlations.

Keywords: graphology; validity; personnel selection; illusory correlations.

Advertisements like the following ones often appear worldwide:

--   Handwritten application should be sent to: THE ADVERTISER P O BOX 4719, MARINA, GPO, LAGOS

--   Qualified and experienced candidates can send handwritten application along with a passport size photograph to the Principal, BGS National Public School, Hulimavu, B'G-Road, Bangalore 560076.

--   Send handwritten application to: Taylor Industries / Attn: Maria Cornelius 6015 N. Xanthus Ave. / Tulsa, OK 74130-1508 Or fax to: 918- 266- 4194

--   Please send handwritten application with CV to: Denise Lavey, St Albans Medical Centre, 26-28 St Albans Crescent, Bournemouth BH8 9EW.

--   Les candidatures manuscrites accompagnées d'un curriculum vitae détaillé sont à adresser à: la guerche sur l'aubois18150 la guerche sur l'aubois

--   Vergiss auch nicht den handgeschriebenen Lebenslauf. Besten Dank. Schicke die Bewerbung an: Gemeindeverwaltung Hittnau Lehrlingswesen Postfach 8335 Hittnau

These employers will submit the handwritten applications they receive to a graphologist in order to determine the candidates' suitability for the advertised post. Here are some claims

made by professional handwriting analysts:

--   Graphology helps to "decide which person to use as your accountant, who you should hire as your baby-sitter, who you should go into business with, who you should date, who you should trust, and innumerable other applications".

--   Graphology can be practical when redundancy is inevitable. It can detect new directions in which the employee could channel his energies.

--   Graphology can save time, money and effort in this area by seeing that the essential characteristics required for the job are present.

--   Graphology recognizes a sign that is "associated with bitterness, bad instincts and guilt. The higher the claw, the worse the situation is, and the more conscious the writer is of her guilt and criminality".

--   Ludwig Klages (1872-1956), the father of German graphology, even claimed that graphology was "effective in detection of 'non-Aryans'".

While employers may be tempted to use a relatively inexpensive selection (and placement) method, those familiar with the difficulties of personnel selection, as well as knowledgeable about the rigors of validation are likely to raise an eyebrow: Are such claims based on acceptable research?

Among the multitude of replies to this question a much quoted one is a study by Rafaeli and Klimoski (1983). The latter examined the relationship between assessments of the handwriting of 104 real estate agents conducted by expert graphologists and measures of the performance of those agents. Their research was funded by the American Association of Handwriting Analysts. When these researchers concluded that the graphologists' assessment bore no relationship to actual performance, the funding organization threatened to sue them in order to prevent publication of their findings. Neter & Ben-Shakhar's (1989) results went even further: Their examination of 17 studies involving 63 graphologists, 51 nonprofessional analysts, and more than 1,200 handwriting samples concluded that graphologists were no better than non-graphologists at predicting job performance.

These studies dealt with personnel selection. A whole slate of other studies investigated the ability of graphologists to diagnose personality traits. Their results were similarly negative: A meta-analysis drawn from over 200 studies concluded that graphologists were generally unable to predict any kind of personality trait on any personality test (Jennings, Amabile & Ross, 1982).

What can then be the reasons for the continued use of graphology, in spite of hundreds of findings that dispute its ability to provide valid advice to employers?

--   Content. A study predating the above (Jansen, 1973) found that psychologists

analyzing typewritten transcripts of the handwriting samples seen by graphologists made predictions of equal validity. This suggests either that graphologists can be pretty good psychologists or that any fairly intelligent person can draw some meaningful conclusions from a CV…

-- Mistaking reliability for validity. Graphologists tend to agree with each other not only about the coding of graphological signs (such as slant, size, rhythm etc; correlation coefficients of 0.6 to 0.85 between two independent readers of the same document), but also about the interpretation (0.42). But as it turns out, even non-graphologists tend to agree with each other in invalid naïve interpretations (0.30), for instance about depression, methodicalness, or originality (Dean, 1992). King & Koehler (2000) have referred to this as "shared but invalid beliefs about the relationship between handwriting and personality variables".

-- Intuitive appeal. Handwriting appears to be such a good source of information: It differs from person to person; it is rich in detail (400 features by one system of analysis); there is a belief that everything we do expresses something about us (Allport & Vernon, 1933). So size is thought to indicate degree of egoism, forward slant might be related to outgoingness, and so on. Some of these associations have a semantic character: Regularity of rhythm is thus purported to indicate reliability of behavior.

-- Limited predictiveness. Gender, SES, and degree of literacy have low but significant correlations with handwriting. To the extent that any of these is correlated with personality traits or with job performance measures, there will be some low correlations between handwriting signs and some criterion variables. This is of no practical use, since there are far stronger (i.e. valid) indicators of each of these status variables. The same holds for the tremor found in the handwriting of alcoholics and the relationship between poor handwriting and poor school performance. If graphologists had no greater pretensions than these, there would be fewer objections to their activity. But there is a huge conceptual leap between Miss Taylor failing Johnny (whose handwriting she cannot decipher) and an employer's decision not to hire someone because her writing slants downward.

-- Illusory correlations. Nearly half a century ago Chapman & Chapman (1969) introduced this concept to designate the seeing of an expected relationship between variables even when no such relationship exists. This is a far reaching concept, touching on such phenomena as superstition, prejudice, stereotype, as well as the topic at hand, and related to confirmation bias, selective attention and similar phenomena. Graphology itself is but one of a long list of supposedly diagnostic devices which fail when submitted to rigorous psychometric analysis. (The Chapmans used the Draw-A-Person projective test, as well as the Wheeler signs of homosexuality in the Rorschach

to illustrate their point.)

A typical example of an illusory correlation (Kammann & Cambbell, 1982) is the following: Objective data clearly show that there is no useful correlation (meaning that the median r is 0.10, range 0.02 to 0.18) between happiness and several life-circumstance factors, such as income, type of work, gender, religion, race, age, city size, level of education. And yet when respondents estimated the percent of people who were happy in various categories of such variables, they thought a far higher percent were happy among those earning a lot than those with a low income, those living in rural areas than those in large cities, etc. They were also asked about the importance of these variables to happiness. Here, too, the illusion continued: for instance, high education was thought as important for happiness by 86%.

King & Koehler (2000) applied the concept of illusory correlation to graphology. They had participants judge the relatedness between certain handwriting features (such as size) and personality dimensions (such as modesty/egotism). Some other pairs, drawn from graphological manuals, were speed of writing and impulsiveness, slope and pessimism or spacing and extroversion. They were given random pairings of handwriting samples and brief personality profiles; that is to say, there was zero correlation between handwriting and personality. Yet the participants found a correlation of .65!

In the following I shall describe my own informal investigation concerning the validity of graphology. A few years ago I contacted seven graphological organizations around the world, and requested information about "controlled studies in which the results of handwriting analysis are shown to predict employee characteristics." I received a reply from four. These responses contain important information about the mindset of professional graphologists.

The president of the American Association of Handwriting Analysts (he who threatened to sue Rafaeli) referred me to a published article, which, as it turns out, says that the study "of the validity of /handwriting/ variables has yielded up to now no convincing success" (Lockowandt, 1976, p. 5). He also suggested that I inquire at the Israeli Graphological Institute. These, in their turn, referred me to Allport & Vernon (1933) who had indeed been sympathetic to the cause in their famous book on Expressive Movement. It is unfortunate that they had not read the book, for its authors concluded that "...the [graphological] terms employed often seem to obscure rather than reveal the personality." Allport & Vernon also reported the results of an experiment, in which 10 handwriting samples were to be matched with 10 personality descriptions. Graphologists averaged 2.4 hits, non-graphologists' average success rate was 1.8. In other words, years of training and practice enabled the professionals to miss 76%, while those who had no training missed 82% of the cases presented to them. I was also visited by the institute's secretary, himself a practicing graphologist. He told me that when asked by a kibbutz how to assign a new member to work, he could advise them, on the basis of a handwriting sample, whether that person should work in wood or in metal. He also

told me that there was a good article on graphology in Playboy.

The 3rd response came from the president of the Handwriting Analysts International. He was extremely pessimistic about the existence of adequate research in this field, and added that "it would be difficult if not impossible to assign any specific writing characteristics... to a given syndrome". Yet he referred me to a European source (whom I could not locate) who "has done a linear study of 70 plus years on a single subject".

Lastly, Prof. Marchesan of the International Society of Handwriting Psychology sent me a list of 307 scholarly works he had co-published in Italy, together with an English language flier about the society. The latter contained no information about the reliability, validity or utility of graphology. It did, however, claim that the theory underlying graphopsychology can be used "for the reconstruction of the characteristics of historical personages for whom there is no handwriting sample available". The examples of such personages given were Dante, Jesus, and Mary. To make absolutely sure that my query had not been misunderstood, I wrote Prof. Marchesan again, and asked him for empirical data. He responded by an updated bibliography, and by saying that his group "has applied, with considerable success, Handwriting Psychology for self knowledge, for work aptitude related to scholastic preparation, for choosing one's partner in life, for the selection and hiring of personnel or, for change of position or promotion of personnel already on the staff".

The main conclusion I can draw from the evidence presented in this article coincides with a statement made by Pirsig: "The real purpose of the scientific method is to make sure Nature hasn't misled you into thinking you know something you actually don't know" (Pirsig, 1974, p. 94).

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