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Hooked on horoscopes: We may not be able to persuade people that astrology and graphology are nonsense. But psychology, with the help of a showman, reveals why they are so popular

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Why do so many people believe in, consult and act upon the predictions of astrologers and graphologists? But such predictions are not only irreconcilable with scientific rationalism and Christian beliefs, they have a highly dubious record when it comes to validly and reliably describing personality accurately, predicting behaviour or foretelling the future. Social scientists have considered seriously the possibility that horoscopes and handwriting analyses have some validity, but impartial research has failed to find any replicable, significant evidence. Both graphology and astrology are falsifiable, and both have been falsified, yet people from all backgrounds still believe. The question is: why?

There are two sorts of answer to this question. One is related to the fact that in our society we often need to assess, describe or measure people. Employers, for example, often need to make judgments about which individuals to employ, perhaps having to make a selection from a large number of candidates. Bewildered selectors, increasingly under pressure to use 'objective' assessment procedures rather than relying on intuition, turn to any means of assessment that they feel gives them 'insight' into the more and more sophisticated applicants.

Some resort to school grades or leisure pursuits (always the source of greatest lies on an application form), despite evidence that these are poor predictors of success in a job. Indeed, there may even be a reverse correlation between good grades in certain A-level subjects and success at work.

Other employers consult occupational psychologists whose carefully constructed psychometric tests appear to provide objective scientific measures. However, a combination of distrust of psychology (especially in Britain), a growing number of unqualified consultants setting up in business and the profusion of overenthusiastic claims and poorly designed tests means that distraught and overburdened selectors are turning elsewhere. Many have turned to graphology. Newspapers such as the Observer, The Independent and the Sunday Times have all published reports of important, influential and presumably intelligent people in organisations such as banks and financial houses using the services of graphologists and other tests for the selection of employees. This is despite literally dozens of scientific studies that challenge the ability of graphology to assess or describe an individual's character.

The more plausible reason for the popularity of graphological and astrological interpretations, readings and the like is because, paradoxically, they are true. But, and it is an important but, the reason they are true is that they are vague, positive generalisations which are true of most people and yet are supposedly derived specifically for a named individual.

This is part of a phenomenon that psychologists refer to as the Barnum effect, whereby people will accept feedback about their personality, no matter how trivial or general, because they believe it is based on personality assessment procedures. The effect is named after Phineas T Barnum, a showman and circus owner in 19th-century America who claimed 'There's a sucker born every

Personnel managers and personality analysis

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minute' and whose formula for success was 'A little something for everybody'. According to research on the Barnum effect, people believe in astrology and graphology because they fall victim to the fallacy of personal validation. In other words they take the generalised, trite, bogus descriptions, which are true of nearly everybody, to be specifically true of themselves.

Psychologists have been investigating the Barnum effect for about 40 years. During this time, they have isolated some of the circumstances that determine whether a person will be fooled by bogus feedback, the characteristics of those that are and are not fooled, and the type of things that people believe and trust in.

An early classical study took place in the late 1950s when Ross Stagner, an American psychologist, gave 68 personnel managers a well-established personality test. But instead of scoring it and giving them the results, he handed each person a bogus feedback in the form of 13 statements derived from horoscopes, graphological analyses and so on. He then asked each manager to read the feedback (supposedly derived for him/herself from the 'scientific' test) and decide how accurate the assessment was by marking whether each sentence was: amazingly accurate, rather good, about half and half, more wrong than right or almost entirely wrong. More than a third felt their profile was an amazingly accurate description, while 40 per cent thought it was rather good (see Table). Almost none believed it to be very wrong.

The response of the personnel managers to the individual statements also reveals one of the reasons why the Barnum effect occurs. The two statements the managers considered most accurate were: 'You prefer a certain amount of change and variety and become dissatisfied when hemmed in by restrictions and limitations' (91 per cent marked it as 'rather good' or 'amazingly accurate') and 'While you have some personality weaknesses, you are generally able to compensate for them' (89 per cent). In comparison, the two statements rated as least accurate were 'Your sexual adjustment has presented problems for you' and 'Some of your aspirations tend to be pretty unrealistic'. General feedback has to be positive for the Barnum effect to work because, not unnaturally, people have a penchant for the positive.

Many researchers have replicated this result. In the late 1960s, a French psychologist advertised his services as an astrologer in various newspapers. He received hundreds of requests for his services, and replied to each letter with an identical copy of a single, ambiguous, 'horoscope'. More than 200 of his clients wrote back praising his accuracy and perceptiveness.

In Australia, Robert Trevethan regularly asks his first-year psychology students at the University of Charles Sturt, in New South Wales, to write down in detail their dreams, or to describe what they see in an inkblot; the more mystical the task the better. A week later he gives them a profile - the same 13 statements that Stagner used - and asks them to rate it. Only after they have publicly declared their belief in the test does he encourage them to swap profiles. The humiliation of being so easily fooled is a powerful learning experience.

Research on the Barnum effect has shown that belief in this bogus feedback is influenced by various factors. Curiously, personality of the client and the analyst have little effect. Of course, naive or gullible people are (tautologically!) more susceptible. Men and women are equally likely to accept the feedback. And the status and prestige of the analyst are only marginally important, which is good news for the more bogus people in this field.

Some variables are crucial, however. One of the most important is what kind of information the person is asked to give. The more detailed and specific the questions the better - for example, specifying exact time, date and place of birth to astrologers. In one study at the University of Kansas, C R Snyder gave all his subjects the same horoscope. He found that those told the interpretation was based on the year, month and day of birth judged it to be more accurate than those told it was based only on the year and month.

These, and many other studies, show that when people receive general statements they think pertain only to them, their faith increases in the procedure and in the analyst. How well the analyst

has differentiated a person from others is no measure of satisfaction; this depends entirely on the extent to which clients believe the diagnosis is specific to them.

A second crucial component of the Barnum effect is that humans tend to be hungry for compliments but sceptical of criticism. Feedback must be favourable. It need not be entirely positive, but if it is by and large favourable with the occasional mildly negative comment (that itself may be seen as a compliment) people will believe it. This can easily be demonstrated by using Stagner's 13 statements with the opposite, primarily negative, meaning; for example, 'You do not pride yourself as an independent thinker and accept others' statements without satisfactory truth.'

This confirms another principle in personality measurement, the 'Pollyanna principle', which suggests that there is a universal human tendency to use or accept as true positive words or feedback more than negative words and feedback. In one experiment, Snyder and his colleagues showed that there were five times as many favourable as unfavourable statements in feedback that subjects found highly acceptable. The rarely accepted interpretations, by comparison, contained twice as many unfavourable as favourable statements.

In the light of the Barnum effect, therefore, it is not difficult to explain the popularity of astrology and graphology. The lengthy feedback is based on specific information-time and place of birth for astrology; slant and size of writing, how the letters are joined, dotting of i's and crossing of t's, use of loops and so on in graphology. It is nearly always favourable. Take, for example, an analysis of Nigel Lawson's writing published in the Observer on 3 November 1989. 'Optimistic, forward-looking. Extrovert. Intelligent. Appreciative of the arts. Cultured. Decisive. Signs of stubbornness. Quick mind, but not good with trivia; needs people to whom he can delegate.' A typical example of general positive statements that are applicable to between five and ten million other people who live in Britain. And note the praising with faint damns: 'Signs of stubbornness', for instance, and 'not good with trivia'. Not so many people would be happy to hear of themselves 'signs of intelligence' or 'slow mind, but good with trivia'.

Another factor is that it is often the troubled (worried, depressed, insecure) who visit astrologers, graphologists and fortune tellers. They are particularly sensitive to the supposedly objective positive and their future. Therefore, the very type of feedback and the predisposition of the people who seek it makes the acceptance highly probable.

The Barnum effect also accounts for the popularity of astrological books and stars columns in newspapers and magazines. They offer a fairly long description for each Sun sign in positive general terms, but with the caveat that it is an approximation and that an accurate horoscope needs to be cast specifically for an individual. But if the general description seems true (and it probably is), people frequently conclude that it must be even more accurate when more specific information is used.

Furthermore, this process is enhanced over time for two reasons. The first is a human characteristic that psychologists have been aware of since Freud pointed it out. This is that people selectively remember positive statements about themselves rather than negative. So people are more likely to remember feedback that coincides with their own view of themselves than information that is less relevant or contradicted it. Secondly, people have to pay for the services of an astrologer or graphologist. If you have paid for something, you are less likely to admit that you have wasted your money on inferior items. The more one pays the better. Perhaps one needs a wealth warning in every astrological statement.

Astrological and graphological readings have other attractions, particularly for people who are anxious or insecure. The readings not only give useful, 'fascinating' information about oneself, but they may also predict the future so reducing anxieties and uncertainties about what will happen. Also, unlike other forms of therapy that require effort (and often pain) in the form of recognising one's problems and/or modifying one's behaviour to obtain benefit, one merely has to supply the graphologist with a sample of handwriting or the astrologist with the time and place of birth. There is much to gain and little to lose. Not surprisingly, a comfortable collaborative illusion of scientific

validity emerges from the buyer and seller of the astrological reading or handwriting analysis.

Finally, there is one other reason why people validate graphology and astrology-the self-fulfilling prophecy. The statement, for example, that 'As a Virgo, you are particularly honest', may lead to you noticing or selectively recalling all or any, albeit trivial, instances that confirm this behaviour (such as pointing out that a person had dropped a bus ticket or returning excess change). The self-fulfilling prophecy may work on both a conceptual and a behavioural basis. And Virgos may not only come to include the trait of honesty in their self-concept, but also become slightly or occasionally more honest. Thus the predictions of graphology and astrology may come true in part because they dictate them.

So, beware the fortune cookie, the graphologist, the astronomer! The moral of the story, of course, is that you can impress anyone with the perspicacity of your psychological insights provided that you confine yourself to statements that are vague, relevant for most people, generally favourable, but personalised just for you. Fortune tellers have been exploiting this fact for hundreds of years. Crystal balls have been replaced by tarot cards or simple pen and ink, but the principle remains the same. The fault of false belief is not in our stars, but in ourselves.

----- HOW PERSONNEL MANAGERS RATED
 THEIR 'PERSONALITY ANALYSIS' -----
 Amazingly Rather About More Almost accurate good half wrong entirely and than wrong half right -
 ----- You have a great need for other people to like
 and admire you 39 46 13 1 1 ----- You have a
 tendency to be critical of yourself 46 36 15 3 0 -----
 You have a great deal of unused capacity which you have not turned to your advantage 37 36 18 1
 4 ----- While you have some personality
 weaknesses, you are generally able to compensate for them 34 55 9 0 0 -----
 ----- Your sexual adjustment has presented problems for you 15 16 16 33 19
 ----- Disciplined and self- controlled outside, you
 tend to be worrisome and insecure inside 40 21 22 10 4 -----
 ----- At times you have serious doubts as to whether you have made the right decision or
 done the right thing 27 31 19 18 4 ----- You prefer
 a certain amount of change and variety and become dissatisfied when hemmed in by restrictions
 and limitations 63 28 7 1 1 ----- You pride yourself
 as an independent thinker and do not accept others' statements without satisfactory proof 49 31 12
 4 4 ----- You have found it unwise to be too frank in
 revealing yourself to others 31 37 22 6 4 ----- At
 times you are extroverted, affable, sociable, while at other times you are introverted, wary,
 reserved 43 25 18 9 5 ----- Some of your
 aspirations tend to be pretty unrealistic 12 16 22 43 7 -----
 ----- Security is one of your major goals in life 40 31 15 9 5 -----
 ----- Not all percentages add up to 100 per cent because of omissions by an occasional
 subject. -----

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