Predicting Sales Performance Using 16PF5

Robert Williams, ASE's psychometric developer, addressed the November meeting.

Robert began his presentation by discussing data collected from a financial services organisation. For two samples of 100 high and 100 low performing area managers and 100 high and 100 low performing sales agents, the criterion variable used as the basis for a concurrent criterion-related validity study was the sales revenue generated. Two discriminant function analyses were carried out - the first for the sales agents and the second for the area managers. Discriminant function analysis is the most appropriate statistical model to use when the performance data is split between two extremes of high and low performance.

Sales agents, within this one particular insurance company, are responsible for generating sales of life and pension products by contacting potential customers from a specific customer base. In addition to handling administrative and service tasks, the successful sales agent will be able to develop effective rapport when liaising with customers. The area manager has line management responsibility in addition to servicing the customer base of his particular sales area.

The following three factors were found to be significant predictors of the sales performance of sales agents: A (Warmth); G (Rule-Conscientiousness); (negative direction), and H (Social Boldness). Ten factors were found to be significant predictors of the sales performance of area managers, including the Impression Management measure. The other nine significant factors are: A (Warmth); C (Emotional Stability); E (Dominance); G (Rule-Conscientiousness); (negative direction); H (Social Boldness); M (Abstractedness); N (Privateness); O (Apprehension); and Q (Tension).

New Products

Helen Bradley, ASE's training manager, went on to talk about forthcoming 16PF products, including new norms in a data supplement to be published this year, and a book being written by Wendy Lord entitled Overcoming Obstacles to Interpretation and new narrative reports. Helen hopes to report back in June 1999 when the range of products has been launched.

In addition, Helen discussed PIN-POINT, (formerly the Business Personality Indicator), and an alternative personality assessment for use in junior and first line management recruitment. All 16PF users registered with ASE have automatic access to this tool which is designed to be quick to administer (20 - 25 minutes), score and interpret across eleven dimensions: change oriented, risk taking, competitive, limelight seeking, work oriented, stamina, perfectionist, time managed, warm, outgoing, and worrying.

Data is available to map this tool on to NEO-FFI and MBTI.

Finally, Helen presented information regarding TRILOGY - a package of products designed as the base assessments required for the successful recruitment, development and retention of staff. The package includes:

Personal Competency Framework - Job Analysis: a structured questionnaire based on 45 competencies derived by Vic Dulewicz at Henley Management College.

Interview 2 - a package that includes differing lengths of structured interview questions for a huge variety of jobs and levels of experience.

Capitalising on People - an interactive CD-ROM designed for the appraiser and the appraisee to get the most out of the Performance Management process. The package includes a personal needs analysis (for guidance around the package), along with practical "how to" approaches for teaching people.

Personal Competency Framework - 360° based on the same 45 competencies above, this questionnaire is designed to provide an individual with a working action plan based on their strengths and development needs and any under-utilised potential and growth needs for the future.

Robert William and Helen Bradley are both with ASE.

The Art of Interpreting 16PF Profiles

Ken Rawling took the afternoon session of the November meeting, and has written the following summary. All the examples relate to 16PF4A. Names and minor details have been altered to ensure anonymity.

My talk examined the issue of individual differences in the prediction of prediction from the 16PF, and the problem of how to apply validity findings to individual cases.

The general question of individual differences in validity was raised by Ghisellini as long ago as 1956. It has been re-examined more recently by Meijer (1996) in relation to a verbal reasoning test, and other recent articles have looked at the predictive priorities of motivational distortion scales.

Most 16PF profiles seem to produce accurate interpretations and predictions within the usual margins of error but in a minority of cases they can be seriously misleading. An extreme example of this was "Chris" who took the 16PF as part of the selection procedure for the post of commercial manager in a large manufacturing company. The person specification included the ability to identify new business opportunities and formulate medium and long range sales strategies, and highly developed interpersonal skills and leadership qualities. Chris's scores were:

A 8 B 8 C 8 D E 9 F 8 G 9 H 1 I 8 J 0 K 5 L 1 M 9 N 0 O G 8 Q 8 Q 8 Q 8 Q 8 8 8 8 9 10 0 10 3 5 7 1 1 9 3 6 1 1 but in real life he was almost the inverse of his 16PF profile. In an outward-looking role which required a dynamic, proactive approach, he seldom left his office, and he spent an inordinate amount of time - sometimes days at a stretch - working on low priority tasks in specific areas, such as redesigning the sales call and recording system, whilst neglecting the broader responsibilities of the position. Chris was given plenty of support, but successive attempts to tackle these performance issues...
issues were unsuccessful, and his employment was terminated after about a year, at a great personal cost to him, and enormous financial cost (in terms of lost business) to the company concerned.

In such cases, inaccurate profiles can also invalidate comparisons between candidates. A small, specialist PR company recruited MA (female) and JM (male) as client services executives:

A B C E F G H I M N O Q Q Q U M
9 5 8 7 8 5 9 5 7 8 6 3 6 3 2
JM 6 6 5 8 9 5 9 8 5 8 2 7 2 6 4

JM was nominally senior to MA but their roles were very similar. Their main duties included advising the company's retail clients, writing press briefings, helping out with exhibitions and demonstrations, and carrying out routine administrative tasks as required. They were a similar age and both had previously worked for PR companies.

Their 16PF profiles are closely comparable - the pattern similarity coefficient is 0.4 (p<0.02) - yet to their colleagues they were like "chalk and cheese". MA was successful in the role and fitted in well, but JM exhibited some fairly extreme characteristics, which caused some anxious problems in the small team of six. In a follow-up review the company listed his alleged failings, which included lack of creativity, carelessness over details, being disorganised and missing deadlines, making tactless remarks to clients and overreacting under pressure. He had been asked to leave after about nine months.

Seriously inaccurate 16PF profiles like these are rare, but if they are consistent with the other evidence about an individual they may be used in support of bad selection and development decisions, so it is very important to try to identify them.

Unfortunately this is no easy matter. The Motivational Distortion scales and the I-14 Response Style indicators are useful warning indicators, but they are only a guide, and high MD/IM scores do not necessarily mean that distortion has occurred. Chris's MD score was 10, but the company that recruited him has recruited many other candidates with high MD scores into the same functional area, and almost all of them have been successful.

One practical step which users can take to try to identify inaccurate profiles is to look very carefully indeed at the interface between the profile and other evidence. The slightest discrepancy should be investigated. It is easy to say this with hindsight, but if this had been examined more carefully, neither Chris nor JM would have been appointed. In each of these cases the assessors noticed aspects of behaviour which were inconsistent with the profile, but chose to discount them.

In interviewing unknown candidates, the Extraversion primaries are probably the easiest to verify, followed by the Anxiety ones. When both are high factors should be fairly easy to confirm with the possible exception of I and M.

Another important issue in interpretation is the question of how to interpret validity data and integrate them with other evidence in individual cases.

It could be argued that validity coefficients are of limited usefulness in interpreting individual profiles at the best of times. They tend to be low, and much depends on the specific combinations of scores that the person has obtained. It is not easy to interpret a profile that has high scores on primaries that correlate positively with a relevant criterion, combined with high scores on other scales that correlate negatively with it. What guidelines can we give to new users, apart from advising them to give more weight to the scales which have the highest correlation with the criteria used in the validation study, and more weight to the validity data the more closely the criteria used in the validation study seem to resemble those in the current situation? A further problem in applying validity findings to a specific situation is that differences between candidates can be masked by restriction of range.

The art of interpreting 16PF profiles should be given more attention than it appears to have received, and then perhaps it will become less of an art and more of a science. As has often been pointed out, one cannot predict job performance to be very closely related to job performance. Too many other factors are involved, including changes in the job holder's

motivation, their ability/willingness to adapt to a different organisational culture, and last, but not least their ability to manage their limitations. But we could almost certainly improve the accuracy of prediction in individual cases by making more use of qualitative data to verify the primary scores, and developing more explicit procedures for integrating validity data with other evidence.

References:

Letter to the Editor

Dear Editor

The Newsletter is a valuable aide-mémoire in jogging memory about presentations made at meetings of the user group. However, with the best will in the world, the comments can never be fully satisfactory if we are unable to attend a meeting. (Last year I had to cancel attendance at one meeting because of a bout of illness.) To allow for such eventualities, would it be possible for more complete notes plus handouts to be made available (for a fee of course.) Although such notes would not be as good as attending they would help to fill the void and perhaps also contribute to cash flow of the group.

Whilst writing may I also congratulate the committee on including presentations on other methods of assessment, which can do nothing but good in terms of improving our understanding of personality, as no single method (including my own specialty) has all the answers!

Lawrence Warner

Bath

Cross-Cultural and Global Recruitment: Issues and Solutions

At our September meeting, Dr Rob Fetham discussed the use of personality assessment tools for this purpose.

Large and successful companies world-wide either operate, or aspire to move into, global markets. Global businesses compete for all key resources that will give strategic advantage - brands, intellectual property, distribution channels and more. There is now a growing awareness that people are a key resource, which will be increasingly sourced on an international basis. Companies are competing in a global marketplace, for scarce talent - IT, managerial, and so on.

The global manager is particularly in demand, and companies therefore need to look outside their normal recruitment territory. For example, ethnocentric multinationals operating from the USA or UK may find that they do not have suitable people to operate effectively in a global environment.

Jack Welch, the CEO of General Electric believes that Sweden probably has more good managers than any other country and that a Swede is a global traveller.

In order to recruit and develop staff globally, and assuming suitable candidates can be attracted, successful benchmarking of interviewed candidates is imperative. Global companies need globally consistent standards of assessment. This raises issues for both practitioners and test developers.

First, consider the issues for the practitioner who wants to use a personality assessment tool as part of a global selection exercise.

Benchmarking in international recruitment is problematic.

Traditional assessment techniques such as the interview are inevitably subjective. Although research clearly shows that more structured interviewing can improve the validity of the interview, it is a case of imposing structure on a subjective process. This subjectivity is always present, and arguably subjective biases will be even more problematic in cross-national recruitment: questionnaire and interview form are more of an influence. But subjective bias occurs not only in the interview but also in more recently developed "assessment
in cross-national recruitment where national and ethnic stereotyping is more of an influence. But subjective bias occurs not only in the interview but also in more recently developed "assessment centre" approaches such as group discussion exercises, in-tray tasks and presentations. While such techniques have been shown to be highly predictive of career success, the reasons why they are successful are less well understood. It is probable that aspects of their success result from "culture capture" - identifying people with the attitudes, values and beliefs most closely attuned to those of the recruiting organisation. The continuing value of such approaches in a fast-changing multicultural environment is possibly questionable, though it is an area in which more research is needed.

Do psychometric tests provide an answer to global benchmarking?

Global companies may turn to psychometric tests as offering an apparently "objective" alternative. While there is some merit in this approach, it is also true that the seeming objectivity of psychometrics often disappears when used cross-nationally. Psychometric tests fall into two broad categories - reasoning/ability tests and self-report/personality questionnaires.

Reasoning tests are transferrable across cultural boundaries, since they are based on problem solving tasks that can often be translated in near equivalent form (e.g. numerical or diagrammatic reasoning). However even scores on reasoning tests may relate back to cultural and educational factors. Also reasoning skills are only one part of the overall picture of any candidate. Moreover where recruiters are in a sellers' market, for example at senior levels of recruitment, such tests may be unacceptable to candidates.

Increasingly, personality assessment tools play a major part in recruitment, and make a significant contribution to the identification of human potential, but problems of cultural adaptation are particularly acute. In comparing managers across cultures there is a major need for good quality objective personality measures to enable one to compare like with like.

The problems of applying personality assessment techniques across different cultures

Global organisations need internationally equivalent personality measures, for recruitment as well as other aspects of human resource development, and the marketplace has instruments that claim to meet this need. Unfortunately some of these are available only in their original language, whilst others have been translated into different languages.

Using English as an international assessment medium does not work, neither does simple translation. The main problem is the failure to convey the real essence or critical meaning of personality self-report questions across nationalities. This results in two major errors and distortions: personality profiles which are not so much measuring an individual, but simply reflecting national differences, and personality instruments which lack technical adequacy and validity in relating scores to job performance.

Short sentences or single words may not be sufficient to convey the full meaning. Many words have several different meanings and it is the equivalence of the message they convey that is important across languages.

16PF and PAPI (PA Preference Inventory)
The perspectives taken by the 16PF and PAPI are complementary. The 16PF measures general characteristics that have face validity in an occupational setting. PAPI was designed specifically to measure behaviours relevant to work. There are two aspects to that relevance: first, the scales are measuring aspects of personality that have been identified as important determinants of work performance, and second, they are designed to measure the interaction between current organisational culture/role demands, and the emphasis placed by the individual on particular behavioural styles. This makes 16PF and PAPI very compatible, with the 16PF identifying the underlying characteristics, and the PAPI informing us as to how these characteristics might be influenced by the current work environment. The 16PF can inform the PAPI assessment by highlighting unused potential.

PA Consulting Group has redesigned PAPI, beginning with translation and back-translation of questions from UK/English and resolving semantic differences. He gave a number of examples of English words and phrases that have a completely different meaning in other European languages even when carefully translated.

Setting objective benchmarks in cross-cultural assessment and recruitment is difficult but it has been shown that some level of cultural equivalence is achievable. It is not just an issue of language. Fair assessment requires the development of assessment tools which have been truly adapted to the culture and context of the country in question.

Rob Fellheim is with PA Consulting Group from whom the full text of this article is available.

Emotional Intelligence Explained . . .
Madelene McGill contributes the following summary of Dan Goleman's 1995 book Emotional Intelligence

Dan Goleman's book "Emotional Intelligence" is a thought-provoking survey of current research in the field of emotional intelligence or EQ. He defines emotional intelligence as the composite ability to rein in emotional impulse, to read another's feelings, handle relationships smoothly and, quoting Aristotle, "to be angry with the right person, to the right degree, at the right time, for the right purpose and in the right way". Howard Gardner, in his book "Frames of Mind" spoke of a spectrum of 'intelligences', of which was emotional intelligence. He defined this as 'the ability to understand other people, what motivates them, how they work and how to work co-operatively with them.' Emotional intelligence is a 'master aptitude', affecting all others. High EQ supported by emotional intelligence produces balance. We need to harmonise head and heart. People with high componential and technical intelligence may be poor pilots of their emotional lives. It is likely that componential and technical IQ contributes only about 20% to the factors that determine life success. A high IQ is not necessarily a preparation for the vicissitudes of life. Certain people appear to misread signals. They may, for instance, overstress their welcome, intrude on other people's space and send the wrong emotional messages.

Evolution has given emotion a central role in the human psyche - feelings are essential guides. In primitive (wo)man, the brain stem and the limbic brain, which house emotional learning and memory, developed first. The hippocampus recognises dry facts - the amygdala adds emotion and functions as the storehouse of emotionally charged memories. The neocortex - the more recently developed brain - allows us to have 'feelings about feelings'. Salovey, a psychologist at Yale, subsumes Goleman's framework in his definition of emotional intelligence. His framework is as follows:

a) Knowing one's own emotions - the capacity for self-awareness - recognising emotion as it happens and monitoring it
b) Managing one's emotions - the capacity to handle feelings and express them appropriately
c) Motivating oneself - marshalling emotions in the service of a goal - exercising emotional self-control - getting into a 'flow state'
d) Recognising emotion in others - demonstrating empathy - being attuned to subtle social signals
e) Handling relationships - the capacity to manage others' emotions - social competence

He characterises emotionally competent men as having a rich emotional life and being comfortable with themselves and others. They are socially poised, outgoing, cheerful, committed, and able to take responsibility, ethical, empathetic, caring, and rational rather than ruminative and fearful. Emotionally competent women feel positive about themselves. They are outgoing, assertive and expressive, able to express their feelings appropriately. They are spontaneous, reach out to people and are open to sensual experience. They do not
ruminate or feel spurious guilt.

Much emotion is unconscious and the ability to bring it into consciousness is one component of emotional intelligence.

Women appear to be more emotionally enhanced than men are in that they experience both positive and negative emotions more strongly. Children tend to have more emotional literacy than men and pick up on trouble spots earlier. It would seem that there are certain people, both male and female, who are emotionally alethymic, bland, lacking emotional sensitivity and with a limited emotional vocabulary.

**Self-mastery**

Self-mastery is the ability to feel appropriate emotion in a balanced way neither too much nor too extreme. Emotion is cumulative and often gets carried over into other life domains. Irritated emotion at work gets carried into non-work life - one goes home and 'kicks the cat' or shouts at the children. The capacity to soothe ourselves is a fundamental 'life tool'. Chogyam Trungpa said of anger, "Don't suppress it but don't act upon it.

Emotional distress can overwhelm working memory and paralyse it. Worrying is either cognitive i.e. there is a constant intrusion of worrying thoughts, or somatic i.e. where there is physical. Worrying thought generates further worrying thoughts. Such thinking is self-defeating, rigid and uncreative. The images generated can provoke physical symptoms. It is necessary to interrupt the spiral by identifying 'triggers' early and encouraging worries to take a critical stance, negative assumptions that they are making - in other words, to cognitively re-frame the assumptions on which they are operating.

People who exhibit high levels of hope appear more motivated and less defeatist in the face of challenge. Optimists hold a belief that things will turn out OK, despite setbacks, whereas pessimists often demonstrate what Selman called 'learned helplessness'. Mood can, of course, be contagious. Co-ordination of mood between two people is the essence of rapport. In order to feel and demonstrate empathy one needs to be self-aware. If one person is emotionally tone-deaf, they are unable to experience feelings of empathy.

**In the workplace**

How does emotional intelligence manifest itself in the workplace? Goleman suggests that emotionally intelligent people recognise and respond to others appropriately; have insight into others feelings, motives, and concerns, constantly fine-tune their behaviour while, at the same time, respecting their own needs and feelings. Consequently they are better at organising other people and able to arrive at solutions, rather than focus on problems. Those with a high emotional intelligence (EQ) become node centres. They are collaborative, take the initiative and generally act as positive influencers in the group. People also respond to them more quickly - even on e-mail. If companies are to encourage the development of emotional intelligence, it is necessary to change the cultural norms which underpin the culture from the top down.

**Emotional Intelligence and Well-Being**

It has been established that there are links between the brain and the immune system. Where a person is in a high pressure job where they have little control over process or outcomes, laboratory studies have demonstrated that high levels of a substance called adenosine triphosphate, which reduces the efficiency of the body’s defences, is secreted by the platelets thereby lowering immunity to infection.

**The development of Emotional intelligence**

Temperament may be described as the 'background murmur' of feelings, which determines our basic disposition. Each of us has a genetic emotional range associated with differences in emotional circuitry. Children who seem to have more activity in the left frontal lobe of the brain while melancholic people have more activity in the right frontal lobe. Much depends on how parents handle a child's temperament during childhood. Children who are encouraged to be curious, persistent, exercise self-control, engage with others in a trusting manner, understand others and seek to be understood, communicate and exchange ideas, feelings and concepts and balance their own needs with those of others are likely to display higher levels of emotional intelligence than children who have not had such education and have a headstart. They have to learn that there is a time and place for everything. They need to be encouraged to explore what they are feeling, share those feelings and understand both how their reactions to those feelings impact on others and the decisions to which those feelings contribute.

**Enhancing Emotional Intelligence in adulthood**

While the foundations of emotional intelligence are laid in childhood, much can be done at a later stage. It is necessary to build self-awareness and help people develop a vocabulary that makes the links between thoughts and feelings, reactions and decisions so that they are able to name the emotions that trigger reactions. They then have to learn to manage those feelings constructively. This involves working to develop skills in being able to select between alternative options, examining and understanding the different consequences, thereby growing an understanding of personal strengths and weaknesses which drive the choices one makes. It means learning to listen and ask questions rather than making assumptions and being able to separate other people's actions from one's own emotional reactions. In the workplace it means learning how to collaborate, make compromises and resolve conflict.

**The implications**

There are implications for those of us whose work involves selection and/or induction development. In Goleman's most recent book "Working with Emotional Intelligence" he quotes Spencer's analysis of competence studies for Hay-McBer in 286 organisations, two-thirds of them in the US and the remaining third in twenty other countries. Of twenty-one generic competences which distinguishes the 'star performers' from the rest, eighteen (85%) were based on emotional intelligence. Two of the three others were intellectual and the third was technical expertise. There are, as yet, no proven valid and reliable measures of emotional intelligence. The skilled selector has to design ways of observing and subjectively evaluating EQ. Developmentally, one has to bring people - and organisations - to a point where they recognise the importance of emotional intelligence, work with them to foster both an organisational climate and a process, which foster and encourage its development. In the present economic climate, however, this is rarely rated a 'bottom-line' priority.

**GOLEMAN, D. "EMOTIONAL INTELLIGENCE" 1995**

Published by Bloomsbury Press (Paperback)

Madeleine McGill is with Senior Executive Selection Coaching & Development Ltd.

**Acknowledgement**

The 16PF User Group gratefully acknowledges financial support from ASE NFER - NELSON, the sole UK licensee selling 16PF. Support is directed at defraying the production costs of the Newsletter. The Newsletter remains independent, and views expressed do not necessarily represent the views of ASE NFER - NELSON, or the Editor.

**CONSULTING EDITORS**

Roy Childs, Team Focus Ltd
Dr Ken Miller, Miller & Tyler Ltd
Membership Administrator: Ali Fox, Tel: 0171 261 9425

**Editor**

David Roberts, David Roberts and Partners
Church House, 3 Station Road, East Leake, Loughborough, Leics. LE12 6LQ
Tel: 01509 852870 Fax: 01509 856859
e-mail: david@davromc.demon.co.uk