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Recruitment and Selection is a vital issue for Camden to get right. With skills shortages in some key areas and the push for improvement in efficiency following government pressures, we need to ensure we have the right people, with the right qualities to deliver our services in the best possible way. There are many aspects to improving service delivery, but we believe that recruiting a good workforce with the capacity to deliver is a vital foundation. In line with our business strategy - Camden Moving On - we have taken several steps in developing, improving and linking together the council's people, infrastructures and culture via an innovative recruitment and selection solution.

Camden has successfully built a workforce of over 8000 staff that broadly represents the demographics of its local community. However, Camden, like many Councils, do not make optimal use of the available labour market, often neglecting to utilise experience from outside of local government. As a result, the Office of Deputy Prime Minister (ODPM) Pay and Workforce Strategy 2005 recognised: "authorities need to compete effectively with public, private and not-for-profit sector in attracting and recruiting talent'. Therefore, we needed to continue to move towards a more open, accessible recruitment and selection system where these sectors are equally engaged. From research we know that people aren't necessarily attracted to one sector or another. It is the content of the job (linked to career progression), employment package and more importantly the working culture that matters to them the most.

In Camden we work towards a culture where we:

- **Focus on our customers**
- **Take responsibility**
- **Work together**
- **Find better and cheaper ways of doing things**

We needed to therefore develop an innovative yet cost effective assessment solution that would fit with these core values – The Camden Ways of Working. It was important the assessment solution captured the critical behaviours that would demonstrate how we live our Ways of Working in order to help Camden reach its goal of achieving 'excellence'.

In partnership with Saville Consulting, we were able to identify these behaviours that not only predicted job performance in Camden, but also future performance.

A representative sample of 220 staff from various parts of the business completed a Saville Consulting Wave work styles questionnaire and the Work Importance Evaluation inventory online. Using a 180-degree feedback methodology participants were asked to nominate an individual (line manager/colleague/reportee) to rate their work performance on 36 job performance behaviours and 6 ability dimensions. In addition, nominees rated each individual against Camden's Ways of Working (WoW's), on a general measure of overall current job proficiency and future job potential (promotability).

In summary, we found the WoW's corresponded broadly with all Wave clusters. For instance, finding better and cheaper related to the Wave Thought cluster; focusing on customers related to the Wave Delivery cluster; taking responsibility related to the Wave Influence cluster and working together related to the Wave Adaptability cluster.

These results are both interesting and revealing in providing a valid and reliable platform for developing a corporate behavioural assessment framework. The table below shows the overarching WoW behavioural model. Eight core behavioural competencies have been recommended.

- Communicate with people
- Building relations

We focus on our customers

- Make judgements
- Achieve success

We take responsibility

- Provide support
- Provide leadership

We work together

- Creative innovation
- Embrace change

We find better and cheaper ways of doing things

We are now in the process of validating a corporate assessment framework we developed for Camden managers across the council to use so that the best people are selected and assessed on performance that is relevant to the job and to our Ways of Working Values. There is scope for further extending the framework for the purposes of talent management and succession planning.

This innovative approach has not only significantly improved our 'thinking' around the way we select and assess talent, but also provided a smart opportunity to further communicate and reinforce our business drivers, thus creating internal synergy across the council.

Suneeta Sisodia C.Psychol

Suneeta is an innovative Chartered Occupational Psychologist with 6 years of experience in both public and private sector organisations. She is currently working for the London Borough of Camden as a Recruitment Specialist within the Organisational Development Directorate. Her work involves a wide range of innovative projects including, strategic design and delivery of selection and assessment methods, managing cultural change, learning and development solutions and HR consultancy. She is also committed to providing lectures and workshops for the undergraduate Work & Organisational Psychology course at Thames Valley University.

PEOPLE AND ORGANISATIONS@WORK

In conversation with Professor Ronald Hambleton

Professor Ronald Hambleton

Tell us a little about your background and how you came to be working where you are currently?

I graduated from the University of Toronto in Canada in 1969 in the field of psychometric methods and I wanted to work in a university community in the US for a few years to gain some experience, make some professional connections with professors and testing specialists in the US, see a bit of the world, and then return to Canada to a university position. But as it turned out, I came to Amherst, here in Massachusetts and I am still here after 37 years. This is a beautiful place to live. We have some of the most glorious countryside in the US, as well as a wealth of cultural life, and there are five colleges and universities close by. My wife is happy here, and the University has treated me very well over the years. I find myself travelling all over the world, as part of my work, but I am always glad to return home.

What kind of work are you involved in at the moment?

I teach a full load of graduate level courses in educational and psychological testing, introductory and advanced item response theory and applications, classical test theory models and methods and educational research methods, and I advise doctoral students in our program. I am very involved in research with my colleague, Stephen Sireci, other colleagues, and students on topics such as computer-based testing issues (e.g., detecting item exposure), new test designs (specifically, multi-stage test designs), validity of emerging item formats for assessment, development and validation of new methods for setting standards on performance assessments, methods and guidelines for adapting tests from one language and culture to another, design and field-testing of new approaches for reporting test scores, and technical issues in large-scale assessment programs (e.g., score reporting, and evaluation of standards). I also consult with many organizations around the world in the fields of education, medicine, military, national and state governments, etc. on assessment issues and problems.

You have a reputation as a leader in the field of IRT. Can you tell us how that has come about?

My work with IRT goes all the way back to my doctoral dissertation completed in 1969. I got my start by criticizing the position of some that the Rasch model was the only IRT model worthy of study. I felt there were many models that might be useful, not just one, and found myself constantly at battle with the advocates of the Rasch model. As a good teacher and writer, I was given many opportunities to address the merits of item response theory as a framework for solving practical measurement problems. Several of the early papers I wrote were influential in the development of thoughts about IRT leading to the Hambleton-Swaminathan book published in 1985. Our book was published at a time when there was little or no competition and so it was widely read. It was objective and readable, and so I think our work became well known because many psychometricians around the world were eager to learn about IRT and our book was handy and received very positive reviews. From there, we have continued to produce research on model fit, test development, bias detection, new test designs and additional books in 1991, and 1997, etc.

How does this grounding in IRT influence your opinion of the work occupational psychologists should be doing?

I believe that you can't hope to be a cutting edge occupational psychologist without thorough training in IRT. In the United States, there has been a gradual transition from the development, evaluation and uses of tests based upon classical measurement models to IRT models and methods.

All of the extensive state testing (20 to 30 million students) in the US is based upon IRT (test development, equating, detection of bias, score reporting, etc.). All important admissions tests are IRT-based in the US. Many of the larger credentialing exams (and there are 100s) are IRT-based (eg around 200,000 nurses and 100,000 accountants are assessed each year). Computer adaptive testing requires IRT modelling in item selection, and ability estimation, and all of the international assessments, such as TIMSS and OECD/PISA, use IRT models in scale construction and score reporting.

I teach both classical and modern measurement to my students, because I believe both are important in the field of assessment, but it is getting harder and harder to function

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in the assessment field today without a thorough knowledge of the models and applications of IRT.

Tell us about your work with the International Test Commission and test adaptation and where you think that is going next.

I have been associated with the ITC since 1982. In 1989 I began to question two aspects of international assessments—sampling and test adaptation practices. I was not convinced that samples used for some of these research studies were valid and I was even more concerned that the tests were losing their integrity in the translation process, both in relation to the language itself and the cultural differences between countries. After discovering that there were few technical standards available, I was able to generate interest and funding, and a committee under my leadership was formed to develop the first set of technical guidelines. Since then the ITC has held two international conferences, produced a book and now we are working on the second set of guidelines. I think the ITC has had a major impact on researchers' understanding of the technical challenges and we have made a significant contribution to improved practices of test adaptation.

In your opinion, how is technology changing the way we assess people?

Well, there's no doubt that the use of computers in testing and assessment has dramatically altered the landscape for testing, for score reporting, and for test analysis. Computers allow for new item types, particularly sequential problems, and new test designs, such as Multi Stage Testing (MST) and Computer Adaptive Testing (CAT). They provide flexibility in scheduling exams. There is the potential for the assessment of higher-level thinking and the capability for immediate score reporting. We are now able to shorten testing time, with little or no loss in measurement precision, and we can improve the sophistication of our measurement criteria. We can also remove the 'floor and ceiling' effects of candidate assessment by optimizing the selection of test items to individual candidates. I am certain that we will see all or nearly all educational and psychological tests being carried out on computers within the near future. Now we are seeing the rise of internet testing all over the world and that is bringing with it yet another raft of opportunities, as well as challenges, particularly around the questions of security and cheating.

What are your thoughts on technology in relation to computer adaptive testing and score reporting?

I am a strong advocate for CAT, for all the reasons I have stated, although it is heavily model based and model violations can be problematic. Reporting is a big topic in assessment at the present time and the reality is that we have done a poor job over the years on this topic.

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FIVE TIPS FOR DEVELOPERS AND USERS OF MULTIPLE LANGUAGE TESTS

1. **It is not just about translation but adaptation.** It is good adaptation that is necessary to bring the language versions of a test in line culturally, linguistically, and psychologically.
2. **Choose qualified and multiple translators.** A team of translators will ensure that personal preferences and idiosyncrasies do not influence the outcome of the translation/adaptation process.
3. **Avoid the use of backward judgmental designs only.** A forward translation design is focused on the judgment of the equivalency of the tests in the countries and cultures for which it is intended, and therefore this design provides more useful information.
4. **Recognize the need for empirical review** as well as a judgmental review of the adapted test. All too often judgmental reviews are deemed sufficient to justify the use of an adapted test in a second language and culture. But empirical evidence collected in the second language and culture is needed too to justify the use of the test.
5. **Be prepared to spend the time and money to do the job well.** There is more involved than many people think and there are no short cuts. Investment of time, resources, and funds are essential for getting test adaptation right.

Ronald Hambleton holds the titles of Distinguished University Professor, Chairperson of the Research and Evaluation Methods Program, and Executive Director of the Center for Educational Assessment at the University of Massachusetts at Amherst in the USA. He is a Fellow of Divisions 5 and 15 of the American Psychological Association (APA) and an active member in the American Educational Research Association, the National Council on Measurement in Education (NCME), the International Test Commission (ITC) and the International Association of Applied Psychology (IAAP). He is the author or co-editor of eight books, and author or co-author of more than 600 research papers, reports, and reviews.

He received the Career Achievement Award from the National Council on Measurement in Education for outstanding contributions to measurement theory and practice and leadership in the measurement field in 1993. He was awarded an Honorary Doctorate from the Faculty of Social Sciences at the University of Umea in Sweden, and received the Chancellor's Medal from the University of Massachusetts for distinguished scientific research contributions in 1994. He received the Outstanding Teacher Award from the School of Education at the University of Massachusetts in 1997. He was promoted to the rank of Distinguished University Professor in 1998. In 2001, he was recognized by the International Test Commission for his 20 years of service and his contributions to improving testing practices around the world. He received the Outstanding Career Achievement Award from the Association of Test Publishers and an Honorary Doctorate from the University of Oviedo in Spain in 2003. In 2005, he was awarded the E. F. Lindquist Award from AERA and ACT for distinguished contributions to the field of educational assessment, and in 2006, he received the APA Division 5 Samuel J. Messick Award for Distinguished Scientific Contributions.

Professor Hambleton has served as a consultant to a number of organizations including the Arab Council for Child Development, the Institute of Banking in Saudi Arabia, Alpine Media, Microsoft, Hewlett-Packard, the Municipal Securities Rulemaking Board, the National Association of Securities Dealers, the New York Stock Exchange, the Educational Commission for Foreign Medical Graduates, the National Board of Medical Examiners, Professional Examination Service, Graduate Management Admissions Council, the Law School Admissions Council as well as a large number of examination and assessment boards all over the world.

POW! Winter Edition

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Welcome to the 2006 winter edition of POW! Eugene has taken a short break from the hot seat and I have the honour of wearing the editor's cap for this edition. Eugene has not disappeared and you can catch up with him on page 6 as a contributor.

The theme for this edition is Innovations in Assessment, which, if you were to say that to a room full of occupational psychologists could generate a variety of responses. And I can sympathise with their dilemma. It is a rather wide subject and the interpretation of what constitutes 'innovation' is widely debated in the profession. Nevertheless, it has generated some lively discussion and this magazine is the perfect platform to air the views of a good number of professionals who have kindly offered us their contributions. And, one fact remains irrespective of any debate – assessment is one of the core offerings that we supply as a profession to private and public sector organisations.

We have touched on the many and growing applications of IRT, that Ron and Wouter have described, through to innovative approaches to commercial challenges that are evident in the case studies. All of the articles demonstrate the fantastic opportunities we have, as occupational psychologists, to be innovative.

From reading these articles, I have realised that innovation in assessment is not limited to a radical or revolutionary new test, using the very latest in cutting edge IRT. Indeed, it can quite simply be something that has allowed a client to achieve exactly what they wanted more efficiently, or more effectively.

I have had the pleasure of working on a number of projects that have pushed at the boundaries, from new ways of delivering assessments online, to using IRT as a means of improving test efficiency. As a profession we have so much still to learn and that is both challenging and exciting. These opportunities are enhanced by so many new discoveries – technological advances, new legislation, new statistical applications and new ways of thinking about roles.

Whilst I'm in the hot seat, I'd like to reiterate something that Eugene often says. The feedback from readers of POW! has been extremely positive, but we are still concerned by the lack of articles that come to us voluntarily. It would be so nice to see articles landing in the POW! Inbox without coercion or nagging from the editorial team. So please, put your thinking caps on and put pen to paper (or finger to keyboard.) Any ideas for what you'd like to see in future editions are always welcome, as are case studies, research findings and professional opinions.

On that note, can I mention that the next edition will be looking at the implications of the new Age Discrimination legislation and the impact that this is having on business practices. So, if this is something that you are particularly interested in, or have experience of, we would be delighted to hear from you. Please drop us a line at POW.dop@bps.org.uk.

Finally, having helped to get this edition of POW! to you, I am starting to understand the amount of effort and dedication that goes into each edition and my thanks go to everyone involved, particularly those that have taken the time to write something for us or made themselves available for an interview.

I think that's all from me. Keep those innovations coming – we're doing a great job!

Nicola Tatham is an independent consultant based in Derbyshire. She began her career with the Home Office and then went to work for the RAF in recruitment and selection. More recently, she has worked at SHL, managing the product design and innovation team, where she oversaw the development of a wide variety of innovative products.

> "From reading these articles, I have discovered that innovation in assessment is not limited to a radical or revolutionary new test."

Innovations in assessment

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Ten years ago Robert Sternberg mocked his fellow members of the APA by suggesting that modern ability tests were still the equivalent of black-and-white television or the rotary-dial telephone. Their basic design had not altered in 50 years. Although Sternberg was targeting intelligence tests he could equally have aimed his fire at most areas of psychometric testing. In personality, interest and attitude testing, self-report questionnaires still dominate and there are few signs of any radical change. At the International Test Commission (ITC) conference on Computer based Testing and the Internet held in Winchester in 2002, almost everyone was heralding a new era in computer based simulations to replace the ability test and the personality questionnaire. At the most recent conference ITC conference in Brussels in 2006, there was barely a simulation to be seen. Indeed, the only example of a highly developed commercial simulation test that I have heard of recently is the simulated road test which is being introduced into the driving exam in the UK.

If there are few innovations in the technology of tests themselves, there are at least some in the technology that supports assessment. Over the last decade, the drudgery has been taken out of scoring a test and managing a campaign of testing to multiple test takers. No longer is it absolutely necessary to write an interpretation of a test (although purists will disagree) because a wide variety of reports are now available for specific purposes (like team assessment) and soon there will be report engines genuinely capable of combining information from a battery of assessments into a single report. It is also possible to have an assessment or its interpretation delivered on a mobile phone or PDA.

So where do we go next? I do not think simulations are the new direction. Despite their appeal, they are commercially unattractive to test developers. It seems that the self report questionnaire will endure for a great deal longer. So what is going to be different?

I hope assessment research is about to enter a new era. As professionals who use tests, we often see them as ends in themselves. It seems obvious to us that an accurate description of a person's abilities and temperament is going to be useful to an employer. It seems equally obvious that if we give test takers themselves a better degree of self insight, they will be equipped to change and become better employees. We sometimes get frustrated and bewildered when we find that not all employers will adopt a programme of assessment and when they do, they will apparently pay us a fraction of what we believe our assessment services are worth to them.

I suspect this is because we are looking at the problem from the wrong side. Those who run organisations usually have operational goals such as greater efficiency, better competitive strategy and better retention of their most talented employees. With justification, we believe that good assessment will help employers attain these goals. However, we have been singularly bad at assembling the data that would make our case. Of course, there are exceptions such as the work done to demonstrate the utility of tests in the employee selection process. Even there, the data are rarely presented to make a clinching case to senior management in an organisation anxious to create an increase in the value of its shares.

Consider the problem of employee retention. Depending on the level of the job, the fully loaded cost of retaining a worker who leaves is from 1.0 to 2.5 times the annual salary paid for that job. From January 2004 to January 2005, 24% of American workers voluntarily quit their jobs. In the retail sector, 45% did so. Wal-Mart employs over 1,600,000 people and its turnover rate is 44%, close to the industry average. Each year, therefore, Wal-Mart must recruit, hire and train more than 700,000 employees just to replace those who have left. The average annual salary of an employee at Wal-Mart is about £13,000, so annual employee turnover costs Wal-Mart at least £13,000 X 700,000 = £9,100,000,000.

What if we could demonstrate a clear link between sound assessment and increased employee retention? What if we could demonstrate to Wal-Mart and other employers that when the results of psychometric assessment are skilfully blended into the HR recruitment and retention strategy, they could

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Robert McHenry

Robert McHenry is Chairman and CEO of OPP Ltd. For much of his career, he has worked as a consultant to the public and private sectors on staff selection, performance management, succession planning and organisational change. Among his personal clients have been Cadbury Schweppes plc, Bass plc, InterContinental Hotels, Eli Lilly, Siemens and the Export Credit Guarantee Department. Robert founded OPP in 1989 and has built the company into an international business with offices in Oxford, Paris, Brussels, Amsterdam, Dublin, Copenhagen, Chicago and Champaign, Illinois, USA.

Getting the best from online testing

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Results from the CIPD Annual Recruitment, Retention and Turnover Survey 2006, indicate that almost two thirds of the organisations surveyed use e-recruitment. Despite this they found many employers are still reluctant to carry out any form of selection online, preferring to use the internet for online applications rather than testing.

Organisations who do use online testing at the application stage, however, find that it does help them meet business needs and reduces HR resource requirements. So why do organisations use them and how can you get the best from online testing?

For ASDA a key driver for using online tests was to save the time and resources needed for sifting through thousands of applications for their graduate and management recruitment schemes. ASDA is widely recognised as a top employer and last year was placed second in The Sunday Times 'Top 10 Best Big Companies to Work For' and also named Scotland's best employer at the Scottish National Business Awards. As an employer of choice they often have over 10,000 applications for their graduate and management schemes. This is a familiar problem for organisations who run annual graduate recruit schemes.

For Specsavers the driver for using online tests was about achieving consistency across a large number of stores as well as saving time in the selection process. At Specsavers each store has responsibility for recruiting its own staff and the available paper-based tests were used by only a few stores as they were very time consuming to administer and score. Most stores were relying on an application form and interview to recruit staff.

The challenge of using any online recruitment process is to find tools that provide rich information on applicants' suitability without being resource intensive. ASDA and Specsavers both chose a bespoke option which adopted an integrated approach to online testing at the application stage. This meant they did not have to compromise on the quality of their selection decisions in order to make them more quickly and efficiently.

They, like many organisations, are keen to employ people with the right values and attitudes to drive their businesses forward in increasingly competitive market sectors. ASDA for example firmly believes in hiring its colleagues for their attitude rather than experience. They are prepared to invest and train those whose personality best suits the company. Judith Colbert, Resourcing Manager at ASDA, points out: "We want our new colleagues to be as enthusiastic about the company's work and future as we are. As such, we needed an application process that would represent this." It was also important to ensure both successful and unsuccessful candidates would complete the application process with positive impressions of the ASDA brand and its values.

Working with occupational psychologists at Criterion Partnership, the ADSA online application process is an integrated one that consists of:

- An application form, which assesses applicants by scoring their responses
- A bespoke cognitive test which simulates the demands of the role and measures candidates abilities
- A bespoke personality questionnaire, to measure factors essential for success with ASDA
- Scored work experience and education questions

The integrated system filters candidates, automatically progressing those most compatible and flagging others for further investigation by the resourcing team. This reduced the amount of time and effort required to select applicants for the next stage in the selection process.

At Specsavers too they place a great deal of value in selecting applicants who reflect the company's stated values of warmth, service and professionalism. They wanted to maximise staff retention in the organisation and needed a recruitment method that would select the most suitable applicants from the outset. They needed their new system to provide richer information on applicants and give a clearer focus to the interview process for short-listed candidates.

Richard Hunter, Co-Director of Criterion Partnership said: "One of the key challenges is to create a system that can deliver rich, detailed information on applicants but which does not take up too much of the store managers' time. This was why with Specsavers we decided to build a bespoke online system which doesn't require any paperwork to be done and also generates complete, instantly usable reports. The store managers get vital information with little effort, which they can use to complement their one-to-one interviews."

Since the new recruitment process went live, Specsavers has experienced significant and tangible benefits from their integrated online system. Staff turnover is down by 4% in a little over six months, with further improvements in this figure expected. Chris Howarth, Head of Professional Recruitment at Specsavers said, "All the information we receive in the reports very accurately represents the capabilities of the individual.

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Diane Aitchison

Diane Aitchison is a Chartered Occupational Psychologist and Director at Criterion Partnership Ltd, a psychometric test publisher and occupational psychology consultancy specialising in HR strategy, recruitment, development and organisational change. Diane has supported clients on a wide range of recruitment and development initiatives over the last 12 years, increasingly using online technology to meet clients' needs.

Passionate about assessment – an interview with Eugene Burke

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Eugene, this must be an interesting switch for you from commissioning copy for POW! and editing each edition.

Well, yes, but there are two reasons I wanted to work this edition this way. The first one is that assessment and innovation are both passions of mine, and the second is that, now that POW! has established itself , we need to strengthen the support in getting the editions out. We had quite a few problems with the last one although the feedback has been very good. That's why we now have Nicola Tatham onboard and I hope we will be able to build up the POW! team in the coming months to really secure it as a communication to both DOP members as well as the wider community of psychology and the public.

So, why are you so passionate about assessment?

Let me say upfront that assessment and psychometrics are not a panacea for organisational problems. Well constructed assessments do help address key organisational problems, but they are one of the tools that occupational psychology provides to address an issue. Let's take absenteeism and counter productive behaviours as an example. According to the CBI, the UK is losing over £11 billion pounds a year just from people not turning up for work and from time wastage in the workplace. There may be a number of factors contributing to this: the organisational culture, performance management systems, – how well communicated and understood they are, as well as how effective managers and supervisors are in managing the problem. But we also know from personality research that there are dispositions that also contribute to these issues. In fact, we have just launched a short screening tool that I designed for SHL that our data shows not only addresses the problem of absenteeism, but also relates to how effective people are in a customer facing role and how safe they are in safety critical roles. So, I know from 26 years in this area that effective assessment does contribute to managing key organisational problems.

What drew you to psychometrics and occupational psychology?

I graduated in 1979 after reading a very applied degree at the University of Aston which had established one of the few centres at that time focusing on what it called industrial psychology. After I graduated, I joined the Ministry of Defence assigned as a research psychologist to developing, reviewing and validating tests for the selection of Royal Air Force officers and non-commissioned personnel. So, I learned my trade, so to speak, from the ground up and was very lucky to work alongside some very bright applied statisticians both here in the UK as well as in the US where I served for two and half years with the United States Air Force in the late 1980s.

In addition to developing one of the first live computer-based testing facilities deployed by the RAF in the early 1990s, what I found and continue to find was that if you don't know your people very well, then you can expect anything else you try to develop your people to be a wasted or less than optimal investment, and that includes education and training, technology as well as procedures and protocols. Let me give you an example from over sixty years ago. In World War II, some very eminent psychologists were asked to address a very pressing problem. While Britain was able to produce some very impressive airframes in the Spitfire and Hurricane in quantity, what the war effort was struggling with was getting pilots who not only had a chance of surviving the first six hours of real combat, but surviving the fighter pilot training. Before the tests developed by those applied psychologists were introduced, failure in pilot training was running at around 70% including accidents and training fatalities. After the tests were introduced, success rates went up to 70%. So, you can see from this rather dramatic example that well designed and well targeted assessments make a very measurable difference to outcomes in the workplace.

If I jump briefly to the senior manager and executive assessments I have undertaken for private and public sector clients, then whether that be at an individual, organisational level or in situ team, again the value of assessment is substantial in the speed it gives you to understand the people you are working with and to suggest the questions and dialogues to engage in. Think how long it takes to get to know someone and understand their fit to a workplace setting – and I am thinking weeks if not months – and then think that, if you can speed that understanding up, the time savings but also the improved quality of the dialogues and decisions that we, as professional psychologists, and clients will experience.

You mentioned your work on computer-based assessments. How important is technology to assessment today and for the future?

Critical, and this is one area of focus for me and my team in tackling the issues of unsupervised Internet testing. Let's skip a technical discussion of item banking and psychometric models and move to organisational need – in other words, let's start with a business issue and then look at how we can solve that problem by applying our science to address that issue.

We know that organisations are squeezing their processes ever harder to maximise their returns. We also know that technology is key to realising efficiencies and returns, and HR or people processes are no different. So, just as organisations have moved to technology and on-demand HR processes, mainly through web applications and Application Service Provider (ASP) or outsourced models, why should assessment be any different. Also, we know that dynamics in the labour or talent markets have also changed, with potential candidates using technology more and more to enable their job searches and to touch organisational processes such as, say, recruitment. So, online assessment is an inevitability.

To date, technology has enabled greater efficiencies and quality of assessment, but has still deployed the supervised or proctored model with people attending assessments in bricks-and-mortar settings. But, with organisations moving to the web, a shift in this model is inevitable and has already happened, and by that I mean a move to unsupervised Internet testing (UIT). Now, when you mention this the general reaction is cautious or is comfortable with self-report assessments such as personality questionnaires, though they have to have cheat resistance to be effective in delivering valid results from UIT. When you mention ability tests, then the reaction is even more cautious and that is understandable given that this class of assessment is the one where each question generally has only one correct answer, and the issue of cheating which has been in the UK as well as other nations' press recently.

So, business need meets potential threat to the validity of test scores. Well, we can apply our science to addressing this issue by building cheat resistance into the tests, by applying recent advances in science such as data forensics to beef up test security, by applying psychometric verification as well as applying some common sense and logic in how we establish an assessment contract with the candidate. After all, the convenience factor for the candidate plus the speed, efficiency and reach of online testing should actually pull on the value of testing to organisations, and therefore, rather than standing back and taking a "cautious expert view", we need to engage with the problem and show that we can address it. That's what I have been working on for the past couple of years and rather than fill up space by elaborating this here, readers can access a white paper that gives that detail via http://www.shl.com/SHL/en int/Thought_Leadership/White_Papers/White-Papers.aspx. Now I know some will say I am just promoting the company I am working for, but I offer this to make transparent my and my colleagues thinking on this issue and, I hope, to move the discussion on beyond commercial boundaries so that we as a profession have an informed view that we can then share with the wider user base.

So, where do you see assessment going in the future?

Well, clearly technology will continue to have an impact, and I don't necessarily mean with new whiz-bangs, of which we need to be careful until their worth has been proven, but I do mean in terms of the deployment and use of assessments. I hope that we will see new developments in terms of different models of assessment, but I do see us expanding our understanding of the role of personality at work, with less emphasis on the predictors or personality models, and more on understanding what we are trying to predict – I mean what behaviours in the workplace make a difference in terms of outcomes. I see this going beyond current models of competency to areas such as attitudinal factors related to job satisfaction, well being, commitment and the darker-side of organizations such as misbehaviours in organizations also known as MBOs, eg absenteeism is one of those MBOs. Also, I can see that we are going to join up predictors from assessments, behaviours and attitudes in the workplace with outcomes as we get a better handle on the whole issue of job, role, environment and organisational fit. Take Gary Latham's basic model that performance = ability X motivation, and let's cast that slightly differently to performance = capability X engagement = effective talent. We know a lot about capability which for me is a more traditional view of competencies and our comfort zone in terms of the outcome measures we tend to use to validate ability tests, personality and motivation questionnaires. Where we can make a real impact is in the area of engagement which takes us to motivation and issues such as satisfaction, well-being, commitment et cetera.

One of the best presentations I have seen this year was from a senior partner from a Big 3 consultancy who, once a year, takes his young son to his office so he can see what his father does. After the last visit, he asked his son what he thought of where he worked. His son's answer was that it was OK but he wasn't sure he would want to work there. When the father asked the son why not, he answered that he wanted to work somewhere where people smiled from hello to goodbye. Now, the presenter was an experienced businessmen and I would not confuse being nice with weakness in his case, and if we could promote more of that behaviour in organizations then we, occupational psychologists and users of our tools and services, would know that something was right. I think unpacking the engagement element of performance will lead to more people smiling between hello and goodbye in the workplace, and will show that we can offer even more value to organizations.

Eugene Burke

Eugene is a Practitioner member of the Division of Occupational Psychology and current Chair of the Division as well as co-convener of the Division's Publications and Promotions Subcommittee, and the founder of POW! He holds the position of Director of Design and Innovation at SHL where he is responsible for developing business applications of psychometrics and designing assessment products. His career began as a research psychologist for the Royal Air Force including a two and half year exchange with the US Air Force, as well as leading and contributing to various NATO working groups on pilot selection and computer-based assessment. He still works in the area of pilot selection and is the author of the Pilot Aptitude Tester or PILAPT (www.pilapt.com). On leaving the MoD, he set up the Occupational Psychology Unit of the London Fire Brigade working on competency models, assessment processes as well as training design. In addition to back office roles at SHL, he has also held the positions of Director of Consultancy in the UK company and Product Director. He is a past Chair of the BPS Steering Committee on Test Standards, a past Council Member of the International Test Commission, and the author of over 150 book chapters, journal articles and conference papers on psychometrics, assessment, personality, executive derailment, decision-making under stress and various applications of occupational psychology to organisational issues.

Web-based Staffing Assessment Innovations in the United States Labour Market

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Staffing processes in the United States have recently changed from largely manual to primarily web-based methods. More than 100,000 job applications are submitted to US companies each day via the internet. This electronic hiring activity has created an active marketplace of over 200 assessment vendors offering a variety of online tools to improve staffing effectiveness. These range from simulations using technology created within the past few years to electronic versions of ability tests containing content that is more than 40 years old.

For the purposes of this article, innovative assessments are defined as those that are fundamentally different from methods commonly used before the year 2000. Table 1 lists several innovative assessments I have seen in the US staffing market.

Table 1. ASSESSMENT INNOVATIONS

Assessment Process Innovations
Integrated Assessment Systems
Closed Loop Validation and Optimization
Assessment Scoring Innovations
Non-linear Data Modeling
Natural Language Parsing
Computer Adaptive Testing
Assessment Content Innovations
Simulations
Cognitive Tasks
Multiple Item Formats
Pre-Screening Questionnaires
Situational Judgment Tests
Conditional Reasoning Tests

Assessment Process Innovations.
Two significant innovations in staffing assessment do not reflect changes in assessment design, but are innovations in how assessments are used with the larger hiring process. These innovations are:

Integrated assessment systems.
Historically, different types of assessments have been used relatively independently of one another. Companies maintained independent contracts with multiple assessment vendors each supplying a few specific types of assessments. But with the advent of automated, online staffing systems companies are no longer viewing assessments as independent tools, but as steps in a single integrated staffing process. This system level approach serves to create assessment processes that are more seamless and efficient for both candidates and hiring managers alike.

This integration is forcing assessment vendors to look beyond their particular products when engaging with clients. Rather than simply providing a standalone set of tests or screening tools, companies want vendors who can integrate multiple types of assessments to support their full range of assessment needs.

Closed loop assessment processes. Many US companies deploy assessments as part of larger "applicant tracking systems" (ATS). ATS are used to automate the staffing process from the initial posting of job requisitions to enrolling newly hired employees into the payroll system. Some systems track workforce data throughout the entire employment lifecycle, starting with an employee's initial application, through their hiring, on-the-job performance, and eventual termination. Companies are starting to use this data to turn staffing from what has traditionally been a series of isolated hiring events into a data driven, continuous improvement process. The result is a staffing assessment process that systematically "learns from experience".

Assessment Scoring Innovations.
The move to web-based staffing practices has generated a lot of data about candidates and their subsequent job performance. This data has facilitated several innovations in the methods used to score assessments, including:

Non-linear data modelling. Companies with large hiring volumes can often amass assessment and post-hire tenure and performance data on thousands of employees over a relatively short amount of time. These large datasets enable use of non-linear "data mining" methods to improve assessment scoring, instead of the more traditional, linear based techniques commonly employed in validation studies using smaller data sets. These methods allow companies to more accurately identify whether candidates possess unique combinations of attributes, experiences, and qualifications that are associated with superior job performance.

Dr. Steven Hunt

Dr. Steven Hunt is a Chief Scientist for Kronos Talent Management Division (formerly Unicru, Inc.). He received a bachelors degree in Applied Mathematics and Psychology from the University of California at San Diego, and Masters and PhD in Industrial-Organizational Psychology from The Ohio State University. He is also certified as a Strategic Professional of Human Resources (SPHR) by the Society of Human Resource Management. Dr. Hunt has designed and deployed assessment processes that have guided and improved the accuracy of over 100,000 hiring decisions for positions ranging from entry level staff to senior level executives. He has worked with a variety of automated staffing tools and methods including applicant tracking and pre-screening systems, employee reliability and customer service measures, predictors of culture fit and retention, interactive job simulations, and assessments of leadership potential. Emphasizing the alignment of staffing methods with other strategic human resource practices, Dr. Hunt has worked with companies in the US, Europe, and South America ranging from members of the Fortune 100 to small non-profit organizations. His work experience spans a range of industries including retail, manufacturing, dining, information technology, health care, hospitality, and public organizations.

Use of these non-linear data modelling techniques is likely to become increasingly common both for increasing assessment accuracy and for providing insight into the complex nature of the relationships between candidate attributes and job performance.

Natural Language Parsing. One of the early challenges created by the move to web-based staffing was the difficulty of sorting through thousands of electronic resumes. Key word search engines initially developed for this task had a variety of limitations, such as mis-interpreting words and overlooking synonyms. Some assessment providers have addressed these limitations using natural language parsing technology that incorporate sophisticated ontological methods to evaluate the quality of applicant resumes. Unfortunately, other than work done by vendors themselves, relatively little validation work has been done to systematically examine the accuracy of these tools, but we can expect to see greater use of this scoring.

Computer Adaptive Testing. Computer adaptive testing based on item response theory has been talked about as the "next big thing" in assessment for over 30 years. However until recently very few staffing assessments in the private sector utilized computer adaptive techniques. This has started to change within the last few years. There are now a range of staffing assessments available on the web that use computer adaptive methods to assess knowledge, skills, and ability. There is also increasing interest in use of computer adaptive techniques to measure personality.

Assessment Content Innovations.
One of the main advantages of conducting assessments online is it allows for the use of interactive, dynamic forms of assessment content that are impossible or highly impractical in a paper and pencil format. This has led to the creation of completely new types of assessments, as well as greater use of some types of content that traditionally received less attention in paper-based tests.

Simulations. Companies are increasingly utilizing online simulations as part of their assessment processes. These simulations include things such as audio simulations of customer phone calls, video simulations of vignettes illustrating various work related situations, work samples where candidates are asked to perform various tasks. These simulations can provide applicants with an engaging, realistic preview of the job while simultaneously evaluating their ability to perform work tasks. But they can also be expensive to develop and time consuming to administer. It also remains unclear if they provide greater levels of predictive validity than simpler and typically shorter assessments such as personality, knowledge and ability tests.

Cognitive Tasks. Cognitive tasks involve having applicants perform simple computer tasks that depend on specific mental skills and abilities. Cognitive tasks have yet to be used widely in the general marketplace, but have shown value for predicting performance in specialized jobs such as air traffic controllers and emergency response operators. One of the more interesting features of cognitive tasks is that performance on them is often asymptotic. After a short amount of practice people reach stable performance levels that reflect their underlying cognitive ability levels. This is a desirable feature for assessments used over the internet where it is difficult to control performance differences due to candidates' previous familiarity with the assessment. Cognitive tasks represent an interesting assessment method, although more research is needed to explore whether they have differential validity from more standard ability tests.

Multiple item formats. The growing number of vendors creating assessments for use over the internet has led to increased use of diverse item types. Various types of forced choice, multiple response option, and rank order items may offer several advantages over the "true false" and Likert "agree-disagree" items used in many traditional measures of personality, motives, and values. They may be more resistant to faking, which is a particularly problematic area for assessments delivered in unproctored settings over the web. They also allow assessment developers to match the nature of items to the nature of the constructs they are measuring. It will be interesting to see whether assessments using more diverse item formats show higher levels of predictive validity over assessments that rely on more traditional item types.

Pre-screening Questionnaires. Many applicant-tracking systems allow companies to create simple questions to screen candidates based on work qualifications, experiences, and interests (e.g., will you work Saturdays?, "how fast do you type?", "how many years of experience do you have in sales?"). Responses to these pre-screening questionnaires are often scored and used to evaluate candidates in a manner similar to weighted application blanks. While the concept of pre-screening is old, online pre-screening questionnaires represent a new form of assessment in the sense that they are often created by hiring managers or recruiters with no formal training in assessment design. Because they are simple to create and commonly available, pre-screening questionnaires have become one of the most frequently used assessments in the US, but almost no studies have been conducted to explore their predictive accuracy.

Situational Judgment Tests. Situational judgment tests (SJTs) present candidates with written descriptions of work scenarios and ask them to choose various responses reflecting how they would react to the situation. There has been considerable growth in the use of SJTs over the past several years. Research conducted over the past few years examining SJTs appears to have created more interest and comfort toward the use of these assessments. Candidates also tend to react relatively favourably toward SJTs, which makes them an attractive option in an increasingly scarce labour market where companies want to avoid using assessments that may offend applicants.

Conditional Reasoning Tests. Strictly speaking, this method should probably not be included because very few companies are actually using it. However it is such an innovative approach to personality assessment that I feel compelled to mention it. Conditional reasoning tests evaluate personality and values by presenting people with questions that appear to be critical thinking measures with a right or wrong answer. But the answers people are likely to choose as being "right" actually depend in part on underlying values and beliefs about the world. Research suggests that conditional reasoning tests can have high levels of predictive validity, particularly for counterproductive behaviours such as theft
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Towards a future where we select for fit

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Since we've started looking at recruitment and selection as occupational psychologists, we've known that in the 'real world', organisational selectors make two types of assessment of job applicants:

- Can they do the job (or be easily trained to do it)?
- Will they fit in (and be happy at work)?

As you know, most of our focus has been on the first of these forms of assessment. Analogous tests, structured, competency and situational interviews, work sampling, and in-tray exercises are examples of tests that we have honed for the assessment of external candidates' knowledge, skills and other abilities (KSAs). And for the assessment of internal applicants' KSAs, we have, amongst others, supervisor ratings, 360˚ assessment, and performance appraisal. We have underpinned all these with sophisticated competency frameworks, job analyses, personality tests, statistical software, and assessment centres. As a result, we can be reasonably confident that we can reliably assess the KSAs of applicants.

Assessing the fit of applicants is another matter entirely. Despite organisational selectors' enduring desire to select for fit, we have not developed any methods for its formal assessment. Instead, selectors have to assess 'fit' subjectively relying on impressions gained during face-to-face contacts (interviews, assessment centres etc). As a result, it has been easy for us to dismiss the assessment of fit and associate it with pejorative labels such as 'cloning', 'biased' and 'non-scientific' assessment.

In this short article, I want to do three things. First, I want to explain what fit is and why we should take the assessment of fit seriously. Second, I want to describe how we can assess fit 'scientifically' putting the focus on how we could do this in selection settings: i.e. how would we predict someone's fit? Third, I want to explain how the assessment of fit intertwines with the assessment of KSAs.

What is this thing called fit?

Fit has been conceptualised in two different ways. Some researchers treat fit as a set of statistical and methodological ideas for comparing individual level variables with organisational level variables. For example, one study compared people's pay preferences with organisational pay systems. Other researchers think about fit as a psychological construct that influences individuals' behaviour. Importantly, it has been found that fit influences individuals' decisions to accept and stay in jobs, as well as being related to a vast array of other psychological constructs such as organisational commitment and job satisfaction and it is strongly associated with tenure.

As a result, there is a growing sense that fit is different from other psychological constructs because it provides the psychological backdrop against which other psychological constructs are set. This accords with the primacy that fit has in selection decisions and explains why both applicants and selectors are so keen to assess it. If the fit is right, good things flow. But if it is wrong, people make strenuous efforts to extricate misfits from their predicaments.

In the research we've been carrying out at the Open University (please go to www.fitproject.co.uk for details), we found that fit was even more complex than described in the literature. We discovered that employees' sense of fit is influenced by their sense of fit across sixteen different domains, which we have clustered into five groups:

- **Job:** Skills and knowledge; nature of the work; behavioural; sense of achievement; and, vocation and profession
- **Organisation:** Values; mission; organisational reputation; and, organisational behaviour
- **People:** Supervisor; colleagues; and, the team
- **Employment:** Physical environment; conditions of employment; and, opportunities for growth and development
- **Work/life balance**

Dr. Jon Billsberry

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In talking to people about their fit, many things have surprised us. We have noticed how fragile people's fit is. Just one incident can have an enormous influence on someone. We also noticed that people who became misfits were usually people who had spent a long time as a 'fit'. The events causing this switch from fit to misfit usually involved someone's line manager endorsing different organisational values to those accepted by the employee. We find ourselves forced to the conclusion that having a positive sense of fit is essential for effective individual performance and, therefore, something that recruiters must take seriously.

Assessing fit

There are two ways of assessing people's fit. The first is simply to ask them a question like "How well do you fit this organisation?" This direct form of investigation has the advantage that it captures individuals' own perceptions of their fit, which guide behaviour.

There is one big limitation with these direct forms of investigation: they are used to capture the 'here and now', i.e. people's perceptions of their current circumstances. This is a problem for selection as their answers are speculative and based on the most fleeting of experiences in the 'artificial' selection environment where everyone is on their best behaviour. Some researchers have asked applicants how well they think they will fit the organisation they are applying to, and the answers predict their desire to accept a job from the organisation, but as yet there have been no longitudinal studies seeing whether these predictions are accurate.

The main alternative to direct assessments of fit is, obviously, indirect methods. These compare one or more qualities of the individual with qualities of the organisation. Basically, two measurements are taken, one from the individual and one from the organisation, and these are compared to determine the level of fit. One of the most widely examined forms of indirect fit is known as value congruence, which, as the name suggests, involves a comparison of the values of individuals and organisations. This has been shown to predict turnover, commitment and satisfaction, but is only moderately associated with direct assessments of fit (which further highlights the complexity of fit).

In addition to looking at the similarity between individual and organisational variables (which is known as 'supplementary fit'), fit can be thought of in complementary terms. This is fit in the sense of one party making the other whole, or fitting with the requirements of the other party: Does the organisation supply what I need? Do I have the abilities the organisation requires me to have? Earlier I mentioned that we have already identified sixteen domains of fit. When these are combined with the different forms of supplementary and complementary fit, it is clear that the assessment of fit in selection settings will be hugely complex.

Given this complexity, we might conclude that assessing fit in selection settings will prove to be a fruitless venture. An alternative might be to abdicate responsibility for these decisions and to hand it over to applicants. And this is what some recruiters do when they include realistic job previews, site visits, informal interviews, and multiple selection episodes in their selection process.

However, I am not so pessimistic about the future of assessing fit in selection settings. I know of one initiative that is looking at the behavioural competences that individuals need to exhibit to thrive in the organisation. Another is focusing on values. And my own work is taking a broader approach. All of these hold the promise of allowing us to assess fit in real and meaningful situations in a rigorous manner. All of these are based on indirect assessments of fit and show a lot of promise.

The future?

The sorts of developments I have outlined in this paper are several years away yet. First we need to test that the hypotheses are correct (e.g. that fit measured during selection influences future behaviour). Once that is done, we can develop tests that will work effectively in selection settings. I expect and hope that this work can be done in less than ten years, possibly a lot quicker.

To my eyes, selecting for fit will never replace selecting for KSAs. Instead, I see the two working alongside each other. As mentioned earlier, selectors want to answer two questions: Can they do the job (or be easily trained to do it) and whether they fit in (and be happy at work). Applicants also want to know the answers to these questions as the last thing they want to do is join a company where either they do not fit in or are incapable of doing the work. Consequently, I foresee a world in which the inability to do the job (or be trained for it) and the inability to fit will both be seen as critical flaws. Failure in either category will be sufficient to cause an applicant to be rejected. Success in both categories will make the applicant appointable.

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How does Emotional intelligence (Ei) add value beyond IQ, Personality and Competencies?

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There has been a massive growth in popularity of Emotional Intelligence since Daniel Goleman's publication "Emotional Intelligence. Why it can matter more than IQ" (1996). With this growth has come some misuse and misunderstanding of the concept, in particular confusion with IQ, personality, and competencies.

What is Emotional Intelligence (Ei)?

A brief definition of Ei is "using thinking about feeling (or feeling about thinking) to guide behaviour". In practice this involves managing our behaviour to be personally and interpersonally effective.

Being emotionally intelligent is characterised by a combination of skills, attitudes and habits that distinguish superior performance from run-of-the- mill performance both in life as a whole and at work. It is made up of two parts:

- **Intrapersonal Intelligence** - being intelligent in picking up what is going on inside us (self-awareness) and doing what we need to do about it (self management)
- **Interpersonal Intelligence** - being intelligent in picking up what is going on in other people and between people (other awareness) and doing what we need to do about that (relationship management)

Ei Vs IQ
Ei has been shown to predict performance as much as or more than IQ (Goleman 1996, MHS 2000). Cognitive ability is important to the extent that we need a minimum level to operate in certain tasks but we can largely compensate for lower natural aptitude by working harder to master skills. One argument being, that if we are good at managing relationships, then we can get other bright sparks to do the bits we are less capable of doing ourselves i.e. team work.

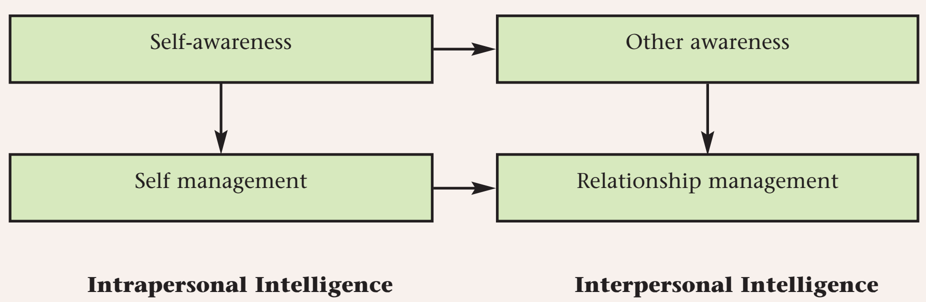
The emphasis on IQ is task related thinking while the emphasis of Ei is self and people related thinking. There is some overlap, but the essential part to Ei is the awareness of feeling states. Howard Gardner illustrates this difference in his model of 'multiple intelligence's' where he refers to social and cognitive intelligence being separate.

Ei Vs Personality
Emotional Intelligence is often confused with personality. The major personality models assume personality to be relatively fixed (trait and type theory) while Ei is something we can change.

In giving feedback on a personality measure the recipient can be left with the thought "so what, what can I do about it?" The answer is not to say, "change your personality" but instead, "learn to manage your behaviour". Being able to manage our behaviour requires Emotional Intelligence, in other words, understanding the motivation behind our behaviour. Motivation is little more than feelings; being aware of our desires, fears, needs, wants, likes, dislikes etc. that cause our behaviour is Emotional Intelligence.

For example an Extraverted person(ality) who finds it difficult to listen without interrupting may need to learn to recognise their impulsive feeling to speak, learn to manage this feeling and then choose their behavioural response to this feeling, rather than allowing their feelings to dictate their behaviour.

The elements of emotional intelligence are related like this:



Jo Maddocks
Product Director at JCA

Jo Maddocks is the product director at JCA Occupational Psychologists. He has developed two new generation Emotional Intelligence measures (Individual and Team Effectiveness Questionnaires (www.ie-te.co.uk)

Jo joined JCA in 1994, and has since worked across the UK as a trainer and consultant. His particular area of interest in recent years has been in designing innovative assessment strategies and approaches. This has included the design of the MAPS Indicator, for working with de-motivated individuals, two Emotional Intelligence measures – individual and team effectiveness questionnaires (one being the first dedicated team measure of EI), a work life balance questionnaire, as well as a series of self-assessment methods.

Jo is a chartered Occupational Psychologist with over 15 years consultancy experience. He is a qualified NLP practitioner, is a Level B course verifier for the British Psychological Society and has publications in a variety of reputed journals.

Ei Vs competencies
One of the real tendencies and misuses of Ei is to include all the desirable behaviour imaginable. For example - assertiveness, listening, communication. Attractive as these are, they are not to be confused with Emotional Intelligence. They are in fact skills or competencies that focus on learnt behaviours. They may result from developing aspects of Ei but should not be included as core elements of Ei.

Ei looks at the roots underpinning our behaviour. For example, learning to be assertive, to say no and ask for what you want is unlikely to be sustained if underneath you still feel low self-regard.

In summary, any assessment or development process should integrate the parts to the whole. Ei is likely to add most value by helping the individual to understand and direct their motivation to achieve their goals for themselves and with others.

In a nutshell:

- Competence is about what I can do (Skills)
- IQ is about what I could do (Cognitive potential)
- Personality is about how I do it (Style)
- Ei is about why I do it (Motivation)

“The emphasis on IQ is task related thinking while the emphasis of Ei is self and people related thinking.”

Continued from page 2
There is little in the way of research to provide guidelines for improving score reporting practices. Ultimately, if we can't provide scores in ways that they are understood, then all of the other good technical work we have done is for nothing. We need to see more involvement of graphic designers, more use of focus groups, think-aloud experiments, field-testing, and experiments (to compare variations) to improve our score reports and the score scales we use.

What innovations do you expect in the way we assess people in the future?

Well, I think computers and the internet are changing assessment practices right now and those changes will continue as technology overcomes the security concerns that are evident at the moment. I'm also expecting to see some breakthroughs from the field of cognitive psychology in identifying important new constructs and how they might be measured. Applications to diagnostic testing are especially important and many people seem to be working on these topics today.

What do you see as the key challenges ahead in the field of psychometrics?

For me, the biggest challenge of all is the shortage of well-trained people. In the US, there are probably only 8 to 10 established training programs for psychometricians; in England there seem to be even fewer centres of excellence at major universities. In contrast, The Netherlands is doing a great job, with five or six centres of excellence in the field, which is impressive for such a small country. I am encouraged too by evidence of training programs in Spain but there is no doubt that we have too few psychometricians to cope with the growing demand for these skills.

In the US, there are five times more jobs than good people to fill them, so we need more and better training programs.

Continued from page 4
add, say, 10% to the value of their shares by cutting their recruitment and retention costs? I am not just talking here about using assessment methods to select employees who are more talented than those an organisation normally employs or those who are a better fit to the work. Employers in many business sectors often do not pay enough to be so selective. I am talking about understanding and describing a dynamic system involving the systematic integration of assessment results with other HR decisions and process relating to salary, benefits, training, job design and the like. The US I/O psychologist and author, Wayne Cascio has described a compelling example of two employers who are direct competitors and where one of them has created an HR system that gives that employer one of the most loyal and productive workforces in all of retailing. That employer generates sales turnover similar to and profits greater than those of its competitor but with one-third fewer employees and less than one third of the employee turnover.

The future of assessment does not lie in the creation of radical new assessment methods and the technology that makes them easier to use. If we continue to go solely in that direction, it will lead us to greater a commoditisation of assessment services and a dilution of professional standards. A better future lies in striving to measure the links between productivity and profitability when our current instruments are used to inform a whole system of employee attraction, motivation and retention. Let us put our innovation into collecting good data and creating new models in order to demonstrate to employers that through psychometric assessment, we can help each of them create greater capability and a unique employer brand that will give them a better chance of beating their competitors.

The standard test: its final exit?

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Alphonse Binet developed the first intelligence test around 1905. So, tests as we know them have been around for a mere century. During this period, not much has changed. An ability test still comprises scales; scales are made up from questions showing multiple choice answers and answers given are scored as correct or incorrect. The sum of the correct answers is the raw score, which is then compared with a selected sample of people, called the norm group. In fact, this standard test is a step back from the original Binet test, as his test was 'adaptive', implying that not every test-taker gets the same questions, but the selection of questions is dependent on previous answers. In our time, we see a 'revival' of the adaptive test. More innovations are possible, partly as a result of computer technology and internet availability. Some of these ideas are discussed below.

Adaptive testing

The idea behind adaptive testing is rather straightforward: why bother smart people with dumb items and vice versa? In psychometric lingo you would say: let's optimise the information we get from administering a specific item to this person. Items are chosen in such a way that they obtain maximum information about the ability of the test-taker. The number of items being administered decreases as non-informative items are not selected for administration. The potential resulting problem that different test-takers encounter different item sets but still must remain comparable regarding the underlying trait, has been elegantly solved by the harnessing of Item Response Theory (IRT), to replace Classical Test Theory (CTT). Without delving too deep into this new psychometric, theoretical basis underpinning (adaptive) testing, we now can be sure that when test-takers have done different items in an adaptive test, their scores are still comparable, which is hardly viable when using CTT-based tests. The second advantage of adaptive testing is that one can set the reliability of the measurement depending on the purpose for which the test is deployed. For instance, when one wants higher reliabilities around a cut-score, algorithms can be set in such a way to increase the reliability of the measurement around this cut-score. Increasing the reliability around this point maximises the utility of the testing program by decreasing wrong decisions about test-takers (e.g. false positives, false negatives). So, that's two points for the adaptive tests!

A couple of drawbacks surround the development and usage of adaptive tests. The first one is the number and quality of the items in the item bank. As all the items have to conform to the strict statistical properties of a model stemming from IRT, this is hard to obtain. Many items have to be developed, tested, rewritten, retested, before they can be added to the item bank. This adds to the costs and development time of the test. But, suppose we have developed such an item bank containing a couple of hundred items, which makes adaptive testing the IRT-way possible. What would be the effect on the test-taker being tested adaptively? The first effect is that every test-taker has to perform - during test administration – at the top of his/her game. Every item presented does an appeal on the ability of the test-taker which is exactly at the brink of failure/success, regardless of the ability level. Everyone is tested at his/her own level, failing half of the items presented. This could have a detrimental motivational effect. A second effect of adaptive testing is that most adaptive tests are so called power-tests, implying no time limit is employed. As every test-taker in an adaptive test is operating at maximum performance level – as the items presented are tuned to the level of the test-taker – this might lead to longer administration times, which also differ per test-taker. This could be called a 'productivity paradox': although the information per item is optimised, the time spent on each item increases. Let's say, all square for the adaptive test compared to the traditional CTT-test.

Partial credit

Every teacher knows that some (wrong) answers on a multiple choice test are 'more wrong' than other answers. In a test containing many items, some alternatives given are definitely wrong whereas some alternatives are 'somewhat closer to the truth'. Let us take a look at the following item plus alternatives:

Wouter Schooman

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Q. 5 x 10 x 100 = ?

A. 115	**B. 500**
C. 5000	**D. 150000**

One could argue that alternative B is 'less wrong' than A and D. So test-takers opting for alternative B could be given partial credit to reward their partial knowledge. How much partial credit is given can be set arbitrarily or be empirically derived. By giving partial credit, the information available is used more efficiently.

Item generation

Most standard tests use a fixed set of items in a fixed order. This type of test is called serial, as every test-taker gets the same items in the same order. A risk of this type of test is the leaking of correct answers (the key). This is not an unrealistic scenario! Some years ago, a multinational ICT-company found out that the (correct) answers of their entry selection test were available on the internet! The amount of damage by recruiting the wrong candidates is unknown, but the company started using other tests the moment they found out. When using computer based tests, one could still use serial tests but during the administration the order of the alternatives is randomised. This is a simple form of fraud protection. A more sophisticated way of protecting the security of a test is by means of item generation. Each item is generated on the fly by a computer program. Each item is generated following a set of rules that determine which item is acceptable and which is not. In this way, each test-taker receives a unique set of items. To determine whether the rules are sufficient one should have a clear definition of the domain involved and know which mental operations are required in solving the item. To determine the equivalence empirically, a test-retest design can be used. Research shows that high reliabilities indicate that the generated versions indeed are interchangeable. One of the advantages of item generation is that it makes distance testing by means of the internet easier. The test-taker can take the test where and when s/he wants. The test results can be used when sifting large numbers of applicants against low costs. A large German company uses this technique to test 25,000 applicants per annum. Those applicants that pass the screening test can be invited to repeat the 'same' test under supervised conditions at the company. Examples of products that use item generation can be found at www.cut-e.com.

Conclusion

The standard ability test with fixed items, fixed alternatives and a fixed order of administration of the items seems old fashioned. New technology and methodology make it possible to vary every aspect of the test. The available alternatives within an item can be presented in random order, and (calibrated) item banks can be used to realise adaptive testing. Adaptive testing offers the possibility of increasing the reliability of the measurement where it matters most, for instance round a critical cut-off score. When using partial credit schemes the use of information is optimised further. A fascinating new area of testing is item generation whereby items per se no longer exist, rather they are generated on the fly when needed. The integrity of the test is secured and distance testing becomes feasible, using a re-test when needed. These new possibilities will not be the end of innovation, however. Video based, interactive testing (simulations) including automated scoring seem the next steps towards authentic, valid and cost effective assessment. It's just a pity Binet cannot witness the progress that has been made since his initial invention!

Continued from page 9

and hostility that depend largely on differences in moral and ethical beliefs. But these assessments are very labour intensive to create and relatively little research has been done to examine how well they fare when used with actual applicants.

What is fuelling this innovation?

The eleven innovations in Table 1 reflect fairly significant changes in assessment design and use. All of these innovations were driven by a combination of one or more of the following:

Predictive Validity. In a highly competitive market, assessment vendors must develop tools that provide significant value over other methods available to clients. This frequently means developing assessments with higher levels of predictive validity. All the innovations mentioned here are driven in part by a desire to increase predictive validity, but closed loop validation and non-linear data modelling are probably the most significant advances in this area.

Applicant Reactions. The decreasing supply of labour in the US is causing companies to pay more attention to applicant reactions. Assessments that are perceived by applicants as being job relevant and engaging are likely to positively influence efforts to attract and hire quality candidates. Applicant reactions are also a concern given the US legal environment surrounding assessments perceived as non-job relevant or overly invasive. Situational judgement tests and simulations are two particularly effective innovations that serve to improve applicant reactions to assessments.

Operational Efficiency. One major change created by web-based staffing has been a massive increase in the number of applicants for jobs. Many companies sort through hundreds and even thousands of applicants each day. This volume has made operational efficiency a critical component of staffing process design. Increased operational efficiency is a major reason for innovations such as integrated staffing assessment processes, natural language parsing of resumes, and computer adaptive testing.

Technological Capabilities. One of the benefits of moving to web-based staffing is the ability to do a lot of things that simply were not possible using paper and pencil assessment methods. Freed from paper-based constraints, assessment developers have begun to explore new and different ways to evaluate candidates. Advances in technological capability are directly responsible for greater use of simulations, non-linear data modelling, and cognitive tasks. But of the four reasons for innovation provided here, technological capability is probably the least compelling. Just because we can do something differently does not necessarily mean that it is better than what we were doing before. There is a tendency to become enthralled with new assessment techniques simply because they are new, without adequately exploring whether these new methods are substantially better than existing methods in terms of predictive accuracy, applicant reactions, and operational efficiency.

Summary

The current creativity around assessment design in the US is a welcome change from what historically has been a tendency to use a fairly small set of assessments over and over again. It is forcing developers to look beyond their particular areas of assessment expertise to see how they compare against other methods for evaluating candidate. Growing concerns around operational efficiency and applicant reactions are driving development energy toward assessment techniques that do not just predict performance but do it more efficiently in a manner that is acceptable to candidates, and in some cases even enjoyable.

Asking the right questions

Dr George Sik
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At **eras ltd**, one of our challenging and less conventional projects concerned a need identified by a local government client. The council was, on an almost continual basis, recruiting carers to work in various kinds of homes, sometimes with adults and sometimes with teenagers. The carers were of varying age and background - often of very limited educational qualification - but had to share certain features of personality in order to be able to perform their jobs effectively.

In such a situation, one possible solution that would spring to mind would be using some sort of personality questionnaire, but here it was felt that standard questionnaires would probably be too long for the attention spans of some of the applicants. Furthermore, they would also be asking a set of standard questions relating to quite a few aspects of personality, many of which would not be directly relevant for the role concerned. What was sought, therefore, was something simple and yet something highly specific, a tool that would ask the right questions and no more. Clearly something of a bespoke nature was required.

It was decided to design a short behavioural questionnaire, concentrating on five key competencies identified as important in the role. To establish what these were, extensive interviewing took place of managers of some of the care homes concerned. 'Critical Incidents Interviewing', concentrating on how those already doing the job had been particularly successful (or particularly unsuccessful!) in the course of carrying it out, helped to focus on what was really required. This is distinct from what, to the outsider, might have been an apparently obvious requirement but really wasn't one at all - the outsider sometimes imagining clichés which were unreflected in the reality of the role. For example, one might imagine that a carer was always helping people out directly, solving all their problems for them. This, however, is quite contrary to what was required. In order to encourage self-sufficiency, to help residents of care homes 'help themselves', a culture of empowerment was required, rather than one of dependency. Thus one of the questions which appeared was about 'always being keen to do everything for other people', but it was applicants who disagreed that this was the way they behaved that were scored as being more in tune with what was required for the role. One area in which a lot of current incumbents struggled was in keeping on top of paperwork - constant recording being very much a feature of the job. Once again, very specific questions were written around this requirement.

It was in this way that a questionnaire with very clear construct validity was written, based around a small number of questions and measuring only a finite number of directly relevant behavioural competencies (five, in fact). Given the specificity of the questions, it was decided to offer the intellectual rights for the questionnaire to the client, should they wish to adapt it in the future, put in on-line etc. Its flexibility allowed it to be used over the phone as well as on a face-to-face interview basis. It was easy for the managers of care homes to score (as they were the ones who would conduct the interviews, but were not trained in psychometric interpretation). It was made clear that a low score for a particular competency would not necessarily mean automatic exclusion, but would represent a realistic concern.

As it turned out, two separate questionnaires were written, one for carers working with adults and one for those working with teenagers, as the requirements differed subtly. It was this subtlety that was the attraction of the approach - because questions were written directly with a specific role in mind, validity was considerably enhanced, yet the overall process of using the questionnaire took very little time.

The quality of those recruited using the new questionnaire was seen as an improvement on what had gone before and the retention rate increased. Since then, the questionnaire has experienced little adaptations in line with gradual changes in the role.

We have since used this approach for other lower-level roles within the same council, as well as for other clients, including a national chain of snack bars and a major rail organisation. The trick has always been to make the questions subtle and specific, a trick, in fact, at the heart of all psychometrics… asking the right questions for what is required.

> “The quality of those recruited using the new questionnaire was seen as an improvement on what had gone before and the retention rate increased.”

Dr George Sik

Dr George Sik is a psychologist employed by eras ltd, the Norfolk-based consultancy. He specialises in assessment, particularly in the area of personality profiling and has co-written and validated many well-known personality questionnaires, including The Quest Profiler. He is perhaps best known as a trainer in psychometrics and has trained more people on Level A and B (Intermediate) courses than probably anyone else in the world. He is also known for applying personality profiling in the world of sport, particularly football. Prior to joining eras ltd, George was at SHL for thirteen years.

The Apprentice – the next big thing is assessment

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Love it or loathe it, the hit BBC series The Apprentice has become the most famous assessment process ever. The second series became essential viewing as the candidates' fortunes were discussed in offices around the country. From cringe making sycophancy to outright bullying and aggression, the candidates showed the full repertoire of human work place behaviour which made audiences wince in the same way as Ricky Gervais' The Office. Sir Digby Jones, then chairman of the CBI, declared the series a shocking reflection of British Industry. But when the bluster dies down, what can The Apprentice teach us that is useful in real assessment situations? Recently, my colleague Kathy de Beer and I presented an Occupational Psychologist's review of the Apprentice format to an Association of Graduate Recruiters MasterClass. Here is what we said.

As a viewer, it is easy to connect with the highs and lows of the candidates, especially when Sir Alan Sugar points at them and says, “You're fired!” But behind all the melodrama, there are some interesting issues to explore, for graduate recruitment and beyond.

As Larry Hochman put so forcefully in the last issue of POW, the world of work is changing. “People who are successful in today's organisations need to…adapt and change…collaborate…fit with culture…be passionate…have courage…be optimistic and energetic.” So how well has assessment adapted and changed? The most sophisticated method of assessment we use today is the multi-assessors, multi-exercise, multi-criteria Assessment Centre that was first used widely in the 1940's and 1950's. Designed in an era of hierarchy and command and control, the Assessment Centre shone because it objectively assessed candidates' behaviours in a standardised way through compartmentalised exercises to assess specific snippets of performance. The drawback of the Assessment Centre is that this standardised approach means it struggles to assess a candidate's passion, adaptability, courage and collaboration – the competencies that drive leadership in modern organisations.

Let's examine one of these competencies in more detail, collaboration. This is a subject dear to my heart as I spend a lot of my time at the Centre for Team Excellence trying to develop collaborative teams. The group exercise in a standard Assessment Centre is often seen as the weak link because it is vulnerable to impression management. Group exercises have changed little in 60 years, whilst the new generation of internet savvy candidates have. Armed with briefings from the web and coaching from career services, every candidate who wants a job can arrive at your assessment centre knowing exactly what you are looking for and well practised in showing you they have what it takes. Both they and we know that their group exercise bears little resemblance to a real team meeting because the outcomes do not matter. What matters is the impression they create and that's exactly what the candidates concentrate on.

In the Apprentice format, however, team performance really matters because some candidates from the losing team will not progress to the next round. Now candidates have a real dilemma; “Behave as I think I should and risk being on the losing team, or show my true colours in the hope that my team wins.” Most will behave as they would in any competitive situation; arrogance, conflict, and indecision will be on display, as well as collaboration, patience, flexibility, courage, energy and lots of passion. The candidates who have what it takes will succeed.

To be successful, the challenge will need to be carefully chosen (and condensed into a day or two), so that success is more likely if a team shows the competencies that need to be assessed. This is well within the capabilities of an Occupational Psychologist who can design challenges that have face and content validity in a similar vein to work sample tests (consistently shown to have the best criterion validity of any assessment method). A subsidiary benefit could be the end of the long running debate about the “exercise effect”. More importantly, the format means that assessors spend more time with the best candidates and less time with the poorer performers making the process more cost effective than a standard Assessment Centre.

So, since our presentation, why has our door not been beaten down by companies in search of this new, dynamic assessment approach? Perhaps the answer lies in conservatism or caution amongst recruitment managers who do not have the authority or remit to pioneer a new approach. But I think that much more constraining is the image of The Apprentice and a genuine concern that to be associated with it will damage an employer's brand. Of course, if the employer brand you seek is competitive, innovative, dynamic and passionate, the Apprentice format could be the answer you're looking for.

In my opinion, the Apprentice format should be a catalyst for new and more flexible thinking in the recruitment world. Does it work? Well, Sir Alan's first Apprentice is apparently still going strong whilst his second has already quit. Meanwhile, Jo Cameron, the emotional rollercoaster HR manager has apparently embarked on a successful “motivational speaking” career. It's a funny old world, but I can't help thinking that a skilled Occupational Psychologist guiding Sir Alan would have led to some better decisions. Any volunteers?

Jeremy Holt

Jeremy Holt BA(Hons) MSc C.Psychol FRSA graduating in social psychology with a first class honours degree, Jeremy worked for 7 years in the advertising industry. In 1993 he returned to psychology, completing an MSc in Occupational Psychology at Cranfield. As the MD of the Centre for Team Excellence, Jeremy specialises in helping organisations to improve team performance by applying theories on group process and systemic family therapy. His clients include American Express, Aon, Barclays Bank, Canon, Centrica, Citigroup, JPMorgan and Novartis. He has also designed graduate Assessment Centres, currently used by two investment banks.

Benefits of e-Tray for the Fast Stream graduate selection process

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One of the key contributors to the effective functioning of the government is the recruitment of highly talented individuals into the Civil Service. For this reason, each year, the Cabinet Office hosts the Fast Stream graduate selection process, one of the best known and well-established graduate schemes of its kind. The aim of this programme is to recruit some of the country's top graduates for approximately five hundred new graduate positions in government across a number of disciplines.

Recognising the need for change

Faced with a recruitment and selection process that was creating significant resourcing demands and was not felt to be sufficiently focused on its target population, the Cabinet Office took the decision to initiate a comprehensive transformation programme that would update the approach to Fast Stream recruitment and selection.

The Cabinet Office appointed Cubiks to develop a series of bespoke psychometric assessment measures to enable the fast identification of the most suitable candidates. This included the development of an e-Tray exercise – a computer-based work sample exercise that assesses a candidate's ability to deal with a series of work issues presented in the form of e-mail messages. The e-Tray exercise is an updated version of the traditional in-tray approach, which incorporates automated scoring elements alongside traditional assessor-scored written output.

The key drivers guiding the change process

The e-Tray exercise was introduced to help address the Cabinet Office's key drivers of change:

- **Speed and efficiency:** In today's highly competitive graduate recruitment market, it is vital that the Fast Stream process enables the government to get its fair share of the top talent available. Thus the Cabinet Office was keen to capitalise on the benefits afforded by the e-Tray exercise's automated scoring component to save valuable assessor time.
- **Employer brand and candidate experience:** The Cabinet Office was keen to design the new process in a way that would allow candidates to gain a realistic understanding of working life within the Fast Stream, which is assisted by the in-depth nature of the e-Tray exercise scenario and the realistic inbox interface.
- **Fairness and objectivity:** The Cabinet Office maintains the highest standards of fair recruitment and therefore needs to be confident that the assessments it uses are designed to rigorous standards and are capable of withstanding close scrutiny. The Cubiks e-Tray exercises are developed using a structured process designed to ensure reliability and validity, reassuring the Cabinet Office of the e-Tray exercise's suitability for inclusion in the Fast Stream process.
- **Diversity and best practice:** The re-design of the process provided the Cabinet Office with an opportunity to further reach out to minority groups traditionally under-represented within the Fast Stream. One of the attractions of the e-Tray exercise for the Cabinet Office was its ability to show less Adverse Impact than is typically seen with cognitive ability tests.

The bespoke e-Tray exercise development process

The e-Tray exercise scenario was designed to reflect the nature of the Fast Stream roles and the decisions Fast Streamers might typically face. Cubiks developed the exercise in close consultation with the Cabinet Office via the following stages:

- **Data gathering:** Once the initial idea for the exercise scenario had been chosen, Cubiks' psychologists interviewed job experts from relevant government departments and non-governmental organisations. The aim was to build an understanding of the challenges and issues of the roles, along with behavioural examples of situations that Fast Stream graduates might face.
- **Scenario development:** Based on the information collected, Cubiks' psychologists then drafted a series of messages and background content to support them. Each message was designed to elicit evidence for one of the Fast Stream competencies. For each message, a set of responses was generated reflecting varying levels of effectiveness in dealing with the issue presented. The exercise was reviewed thoroughly by an expert review team within the Cabinet Office to ensure the scenario and decisions were realistic and reflected the desired behaviours that Fast Stream graduates should display.
- **Pilot trials:** The exercise was trialled initially using Fast Stream graduates to verify the scoring key. Any messages where the Fast Stream graduates disagreed with the proposed scoring key were discussed and resolved, either by amending the key or revising the message content.
- **Online trials:** A second trial involving over 100 participants was conducted after modifications from the pilot trial. Undergraduate and graduate volunteers were involved so that the difficulty of the exercise could be assessed. Alongside this, a further sample of Fast Stream graduates also completed the exercise so their performance could be compared with that of the volunteers. The trial was also used to gather information to check the clarity of the instructions, the timing and the perceived difficulty of the different components of the exercise.
- **Standardisation:** The automated scoring element of the exercise was then standardised as soon as sufficient data from the live applicant sample were available.

The e-Tray exercise

The e-Tray exercise was designed to be included as an additional stage, after the initial sift, to identify the most suitable 1000 candidates to progress to the assessment centre. The exercise is completed online under supervised conditions at a testing centre. This allows a reduction in the number of candidates being invited to the more costly assessment centre stage of the process, without the need for implementing higher cut-off scores on the reasoning tests that are used as part of the initial sift, which would have had a negative outcome regarding Adverse Impact towards traditionally disadvantaged groups.

Louisa Tate

Dan Hughes

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Louisa Tate MA (Oxon) MSc C.Psychol is a Principal Consultant in the Innovation, Products and Technology team at Cubiks. She has experience of both bespoke and generic psychometric products. Working with clients in the private and public sectors. Her main area of expertise is in the design of psychometric assessment tools, and she has experience of using both Classical Test Theory and Item Response Theory (IRT) methodologies. Prior to joining Cubiks, she held positions at PSL, SHL and QinetiQ.

Dan Hughes BSc MSc C.Psychol is a Principal Consultant working at Cubiks in the Innovation, Products and Technology team. His work focuses on the development of objective assessment measures, with a particular interest in the design of work simulation exercises and psychometric tests. He has worked with clients on the development of bespoke psychometric assessments, including several e-Tray exercises. He has also worked on psychometric assessment products published by Cubiks.

Mark Powell BSc MSc C.Psychol is the Chief Psychologist at the Cabinet Office. His key responsibilities are for the Civil Service Fast Stream assessment and advising on centrally run projects that require objective assessment. Prior to this, Mark was Global Head of Assessment at UBS where his role involved liaising with the global business to implement standards and systems for selection, and assessment tools for high potential individuals, and rolling out a global competency framework.

Cubiks developed the e-Tray exercise to consist of the following three tasks:

1. Familiarisation task
2. E-mail response task
3. Written analysis task

Before starting the exercise, candidates are taken through a short tutorial familiarising them with the e-Tray interface. They then have ten minutes to read the background information about the exercise.

In the e-mail response task, candidates are presented with an inbox full of e-mails, each of which includes a set of multiple choice response options, reflecting different ways that the candidate can respond. Candidates must choose the response they believe is the most effective and the response they think is least effective. New e-mails arrive during the course of the exercise in 'decision chains', where the timing of the release of a new e-mail is dependent upon when another e-mail is responded to, giving a life-like, real time impression.

In the written analysis task, candidates are presented with a more in-depth task, which is related to information that has already been viewed, but not dependent on the quality of decisions already made as part of the e-mail response task.

The e-mail response task was designed so that it could be scored automatically, to generate both an overall score and also sub-scores on each of the competency areas measured by the exercise. The written analysis task was designed so that it is not scored as part of the sift stage, but used to provide additional information at the assessment centre for candidates who were successful in reaching this stage.

The exercise was also made available in different forms for candidates with disabilities.

Benefits to the Cabinet Office

There have been several benefits from the introduction of the Fast Stream e-Tray exercise:

- **Recruitment time-cycle reduced:** By introducing automated scoring for both the e-Tray exercise and some of the other online assessments, the Cabinet Office saw enormous efficiency gains. The recruitment time-cycle was shortened by four months and there were corresponding gains in terms of the time and resource investment demanded by the process.
- **Candidate job preview improved:** The realistic nature of the e-Tray exercise helped to give candidates an improved understanding of the nature of Fast Stream roles. Furthermore, the face validity of the exercise has helped to decrease the number of unsuccessful applicants questioning the process.
- **Greater objectivity and validity achieved:** The combination of automated scoring of the e-mail response task and extensive training for assessors who mark the written analysis task has afforded the process greater objectivity. The e-Tray exercise has also shown promising validity, with significant correlations with subsequent assessment centre performance. Evidence from the development trials has also indicated that the Fast Stream graduates performed significantly better on the exercise than the undergraduate / graduate volunteers.

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Profiling for Performance at BMW

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Our basic premise
Almost a decade ago PCL researched and published UK editions of the three Hogan personality questionnaires. During this period we have developed a style of organisational research, based on the premise that performance in any role is likely to be facilitated or impeded by an individual's temperament as reflected in their personality profile.

BMW project overview
As part of its recruitment process for sales executives, BMW partnered with PCL to create a customised selection profiling system based on the Hogan Personality Inventory. The original BMW scoring template was based on an initial validity study carried out in the year 2000 involving BMW sales executives. This was refined through further validation work in 2003 – again comparing the performance of sales executives against their Hogan Personality Inventory profiles. For the dealership network to benefit from the logistical advantages of the internet, questionnaire administration was online and scoring, report generation and dispatch were fully automated.

Original research
In the original validity study in 2000 the 'ideal' BMW Sales Executive profile was that of a well adjusted person, someone who was fairly self-confident and untroubled by self-doubt, a reliable and conscientious worker, someone who was well-informed and keen to take on responsibilities.

There was remarkable enthusiasm and wide acceptance of the instrument and it was rapidly established as a key recruiting tool. It is estimated that two thirds of the dealerships have used it at some time and half the dealerships always use it when selecting sales executives. Over 2000 administrations were completed between 2000 and 2003 and the process was extended, with modifications to the template, for other operational posts such as Managers and Dealer Principals as well as for MINI sales executives.

Reasons for the re-analysis:
In 2003 we carried out additional research to further refine the system.

There were two reasons for this:

- Firstly, the original template was already 4 years old, and BMW, its products, its aspirations and its market were changing – BMW has dramatically increased its range of cars and its sales revenues.
- Secondly, much more detailed and objective performance data was now available.

The objectives of this second wave of research were:
- To reflect the current and future sales executive roles at BMW
- To review the linkage between performance and personality
- To identify necessary changes and to update the template

This phase of the research involved 94 sales executives for whom we had both performance and personality data. The performance data had been collected through the BMW Centre for Development as part of a wider performance management project and was particularly detailed.

Findings 1 – HPI scales predictive of performance
Analysing the data at the personality scale level we were able to identify a number of aspects of personality that could contribute to prediction of performance. The Adjustment, Ambition and Managerial Potential scales of the HPI all positively and significantly correlated with sales figures while HPI Prudence was positively correlated with separate ratings of employee performance that were largely based on good attendance and punctuality. So the general profile of a more successful BMW Sales executive is a well adjusted, calm, composed individual who is achievement-oriented and socially self-confident. Such people tend to be hard working individuals who are keen to take on responsibility, are self-motivated and will take the initiative. Those Sales Executives who prove to be more reliable employees from the attendance and punctuality perspective tend to have personality profiles that suggest they are more conscientious, conventional and conforming.

Findings 2 – HPI customized scales predictive of performance
Each of the HPI scales is made up of a number

Gillian Hyde

Gillian is a chartered occupational psychologist who has worked in the field of assessment since 1989. She has been involved in the UK development of a number of tests – for example the Watson-Glaser Critical Thinking Appraisal Form C and the Hogan suite of personality questionnaires.

Gillian has served on the Steering Committee for Test Standards for The British Psychological Society and has co-reviewed a couple of personality questionnaires for the 'Review of Personality Assessment Instruments (Level B) for Use in Occupational Settings 2nd edition', published by the BPS.
At PCL since 1994, Gillian's responsibilities encompass research and development, designing bespoke selection systems for clients and delivering training in the HDS, an assessment of derailers.

of smaller subthemes and when we analysed the data at this level we were able to build customised scales to predict performance for different sales roles within BMW. Specifically, for New Cars, Used Cars and Corporate Cars – as well as a general customised BMW Sales scale to be used when applicants are being assessed when their exact role designation is not known prior to assessment, or for smaller dealerships where they may have to sell across these categories. These customised scales and the inferences that we would draw from them are detailed below.

BMW New Car Sales BMW New Car Sales scale identifies individuals who are likely to sell more new cars. High scorers on this scale will seem edgy and driven but at ease and self-confident when talking to others. They will be able to negotiate without worrying too much about other people's sensitivities and they are probably well-informed about products and their technical specification.

BMW Used Car Sales The BMW Used Car Sales scale identifies individuals who are likely to sell more used cars. High scorers on this scale will seem empathic, even-tempered and consistent in mood, and they will be socially self-confident.

BMW Corporate Car Sales The BMW Corporate Car Sales scale identifies individuals who are likely to sell more corporate cars. High scorers on this scale will seem even-tempered and consistent in mood, they will have a positive outlook on life, appearing upbeat and sociable and outgoing – people who are likely to enjoy being in the company of others.

BMW Sales The BMW Sales scale is a composite scale identifying individuals who are likely to sell more new and used cars. High scorers on this scale will seem even-tempered and consistent in mood, they will have a positive outlook on life, appearing upbeat and happy, and they will be socially self-confident. They also enjoy being the centre of attention, are able to negotiate without worrying too much about other people's sensitivities, and are not afraid to act on their own initiative even if it means risking others' disapproval.The selection system was subsequently implemented and managed by BMW's independent recruitment agent KHA who have been extremely successful in selling the system to the dealerships.

A word from BMW
Earlier this year I asked Jeff Jennings, Manager, Centre for Development at BMW, what he felt were the biggest challenges facing the sales executives at BMW. Jeff felt it was the soft skills part of the job that was the most challenging, and he has implemented a Sales Certification Scheme to train the Sales Executives in specific sales and customer service techniques. Asked what he thought BMW were looking for in a sales person, Jeff felt that they needed people who are more self-actualising, the kinds of people who are "learners in charge of their own destiny". This view coincides with several of the themes that emerged from PCL's research and the general finding that personality has a significant role to play in distinguishing the most effective BMW Sales Executives from the rest. Clearly, in recruiting staff as with anything else, you need to know what you are looking for to have any chance of finding it. Perhaps the greatest benefits of the approach illustrated above are (a) that it helps to identify the key characteristics (knowing what you are looking for) that can consistently be targeted across all aspects of the selection process and (b) that it establishes a feedback loop that ensures continuous learning based on the performance of those appointed against the back-drop of an ever changing commercial environment.

Continued from page 5
We know that the applicants find the online assessment process very user-friendly and easy to engage with too."

Store perceptions have also indicated that online assessment is a huge improvement on the time-consuming psychometric tests which had been used in previous years. The reports are widely viewed as user friendly, with minimal time and space resources required at store level. Steve Bryan, Store Director and JVP at Specsavers in Liverpool, said: "Having a screening procedure is a good starting point for the face-to-face interview. When we were opening a sister store in Liverpool we were recruiting for five staff at once, and the online assessment system helped get numbers down to a manageable level."

Adopting a bespoke, integrated online recruitment process at the application stage helps maximise efficiency without losing out on rich and valuable information about applicants' suitability. Both ASDA and Specsavers were able to maximise the efficiency of their selection processes without compromising on the quality of the information gathered.

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- **Minority groups achieve greater representation:** As a result of changes to the process, the proportion of candidates from minority groups reaching the later stages of the assessment process has increased. Despite a considerable proportion of candidates being screened out at the e-Tray stage of the process, there is no Adverse Impact against females and the Adverse Impact against ethnic minority groups is less than typically found with reasoning tests.

Efforts to improve the e-Tray exercise element of the Fast Stream process have not stopped there.

Not only has a new version of the exercise been developed each year to minimise any security risks of over-exposure of content, each year changes have been made to minimise Adverse Impact and improve the validity of the exercise. An example e-Tray exercise has also been created, and is available on the Fast Stream website, to help ensure that all candidates have similar levels of familiarity with this novel type of exercise.

And the winner is....

Practitioners of the Year: Ronny Lardner (left) and Richard Scaife from the Keil Centre

Noel Hadden (Deutsche Bank)

The 21st September 2006 marked the first in what the DOP hopes will become an annual event that recognises true excellence in the practice of Occupational Psychology. It also represented the culmination of a lot of hard work by the Publications and Promotions Sub-Committee of the DOP who were responsible for planning and implementing all aspects of the event from advertising and nominations, right through to the winners gold envelope!

The idea for the award has been a long time in its gestation. No doubt the concept had been discussed by many DOP members in huddles at conferences, CPD groups, committee meetings and within organisations. Turning the concept into reality involved taking a pragmatic approach, keeping things simple with the intention of building upon a small and straightforward event with a view to progressing to a grander more wide ranging affair in years to come.

So for this year, we decided to make only one overall award; to the person or people that had, in the view of judges, provided evidence of work that best represented the profession and the benefit it can bring to our clients. The Pall Mall headquarters of the Institute of Directors proved to be an ideal setting to hold the drinks reception, and we were grateful for generous contributions towards our costs by our two sponsors for this year, Kenexa and Reed Consulting.

In late May we began to publicise the award and invited Occupational Psychologists and the users of our services, to nominate people they felt had conducted projects that demonstrated excellent professional practice and resulted in real business benefit. We received a healthy number of these and all were of a very high quality. The nominations were evaluated using a standardised assessment criteria and a shortlist of five was generated.

What was most heartening about the process was the level of enthusiasm, and willingness to participate, that so many of our fellow professionals demonstrated when asked to help out. Our three short list judges, Binna Kandola, David Towner and Richard Kwiatkowski tackled the unenviable task of selecting the winner with characteristic rigour and healthy debate. A client of our services, Noel Hadden, Head of Learning and Development at Deutsche Bank, took very little persuading to come along to the event in his own time and give an inspiring and thought provoking talk about what he and his colleagues really want from Occupational Psychologists.

The winning nomination came from Ronny Lardner and Richard Scaife from the Keil Centre for their project "Preventing accidents at work: using human factors analysis tools to understand and influence safety behaviour." They had worked with two major UK employers to develop a practical set of human factors analysis tools (HFAT) which could be rolled out worldwide to all their incident investigators via a two-day training workshop. These tools were underpinned by the existing literature on applied behaviour analysis, cognitive information processing and intentional and unintentional behaviour. A year on from the training, investigators reported that HFAT had significantly enhanced their understanding of human behaviour and that they had been able to make better recommendations to help prevent future incidents.

This year's event should be seen as the start of things to come. Next year we are hoping to involve more of our members, publicise the event more widely to users and potential users, and hold a bigger event with an expanded range of award categories. We hope to see you there!

The Division is very grateful to Claudia Nuttgens for organising the first of these awards, which was no mean feat. For details of this award going forward and for opportunities to get involved, get nominated or to sponsor, please contact Claudia on **Claudia.nuttgens@basis.co.uk**

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