

Beautiful explanations

Edge, the intellectual online salon founded and edited by literary agent John Brockman, has posed its latest annual question: 'What is your favourite deep, elegant, or beautiful explanation?' Alongside other scientists and thinkers, numerous psychologists have once again contributed their own thought-provoking answers.

Evolution by natural selection was a recurring theme. Susan Blackmore (University of Plymouth) said her choice 'had to be Darwin'. The reason no one thought of such an elegant idea before Darwin, she reasoned, is that evolution appears at first to be tautology: 'It seems as though you are saying nothing when you say that "things that survive survive" or "successful ideas are successful"'. To turn these tautologies into power,' she said, 'you need to add the context of a limited world in which not everything survives and competition is rife, and also realise that this is an ever-changing world in which the rules of the competition keep shifting.'

For John Tooby (University of California at Santa Barbara), the founder of evolutionary psychology, the theoretical lens of natural selection 'was a permanent revelation, populating the mind with chains of deductions that raced like crystal lattices through supersaturated solutions'. A conundrum for Tooby, who nearly became a quantum physicist, is how natural selection drives the emergence of complex organisms in a universe governed by the second law of thermodynamics, in which physical systems

always move towards greater entropy (or disorder). The answer, Tooby said, comes from different frames of reference – the fact that entropy exists in different domains, from cells to membranes. Natural selection, he explained, uses entropy in one domain to drive increased order in another. 'Entropy makes things fall, but life ingeniously rigs the game so that when they do they often fall into place.'

2012 : WHAT IS YOUR FAVORITE DEEP, ELEGANT, OR BEAUTIFUL EXPLANATION?

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"The World's Smartest Website."

— John Naughton, *The Observer*

Other contributors chose social psychology theories. The leading US psychology textbook author David G. Myers (Hope College) highlighted group polarisation – the tendency for initial opinions to become more extreme in like-minded groups. Our attraction to similar others combined with the facilitative effect of the internet means this process is leading to ever more polarised views. Myers pointed to the dramatic rise in the percentage of

landslide counties in the US: those voting 60 percent or more for one presidential candidate nearly doubled between 1976 and 2008. '... one elegant and socially significant explanation of diverse observations is simply this,' Myers said, 'opinion segregation + conversation = polarization'.

Adam Alter (Stern Business School) chose John Darley and Bibb Latane's bystander effect. Their classic experiments showed how in some situations, a person in the company of others, as opposed to alone, was less likely to act to help a victim or raise the alarm in an emergency. 'Their elegant insight', Alter said, 'was that human responses aren't additive in the same way that objects are additive. Whereas four light bulbs illuminate a room more effectively than three light bulbs...two people aren't always more effective than a single person. People second-guess situations, they stop to make sense of a chain of events before acting, and sometimes pride and the fear of looking foolish prevent them from acting at all.'

Stanislas Dehaene (Collège de France) focused on decision making. He described the way the mind functions according to Bayesian principles, in which available evidence is combined with prior knowledge and a decision is made once a threshold is exceeded. '...as a first approximation,' he

UNDERSTANDING MENTAL HEALTH

A free online mental health education pack has been launched by the Woking Mind branch of the national mental health charity Mind. Containing over 100 personal accounts about mental distress, the work was led by two volunteers, Tristana Smith, a Student Member of the BPS at Oxford, and Lexy Rose, a student from the Institute of Psychiatry.

The pack had input from Surrey Child and Adolescent Mental Health Services, researchers at the University of Oxford and the Royal College of Psychiatrists, teachers and mental health professionals.

The pack allows young people to understand and empathise with the experience of mental health problems. The pack fits within the PSHE curriculum, and includes teacher activity plans. JS

The pack can be downloaded from www.mentalhealtheducation.org.uk

A mushroom-fuelled

The whimsical flights and darker episodes of psychedelic experience have been studied before in detail, but the neural correlates of these experiences are largely unknown. For a new study, 30 participants took a mushroom-fuelled trip inside a brain scanner as part of the first ever fMRI study of the psychedelic state (PNAS: tinyurl.com/86whqj8).

The research team was led by Robin Carhart-Harris at Imperial College, London, and included David Nutt, the former head of the UK's Advisory Council on the Misuse of Drugs. The researchers used fMRI to observe brain changes in participants as they were injected intravenously with psilocybin, the active compound in magic mushrooms.

Two fMRI techniques were used. One relied on the BOLD response. This is the conventional fMRI methodology, which uses changes in the oxygenation of cerebral blood as a marker for local brain-activity fluctuations. The other technique involved

said, 'this law stands as one of the most elegant and productive discoveries of twentieth-century psychology: humans act as near-optimal statisticians, and any of our decisions corresponds to an accumulation of the available evidence up to some threshold.'

There were also contributions from developmental psychologists. Paul Bloom (Yale University) quoted D'Arcy Thompson 'Everything is the way it is because it got that way', which he said was a perfect motto for developmental psychology (the biologist PZ Myers also titled his contribution with the same quote). Bloom outlined a series of potential explanations for why adults end up the way they are – such as circumcision in infancy affecting men's pain sensitivity; first borns tending to develop into more intelligent adults than their younger siblings because their early environment is more intellectually sophisticated; and romantic attachments in adulthood being influenced by early bonds with one's parents. 'I don't know if any of these explanations are true,' Bloom said. 'But they are elegant and non-obvious, and some of them verge on beautiful.'

Simon Baron-Cohen said he enjoys deep, elegant and beautiful explanations in the factors that give rise to sex differences in the brain, including the, on average, 16 per cent greater number of neurons in the male brain and the typically larger planum temporale (a language area) in the female brain.

His favourite is the masculinising effect of fetal testosterone. Castrating a male rat shrinks his amygdala to the average size found in a female. A paper Baron-Cohen has in press links testosterone levels in the amniotic fluid of human mothers to the size

of the planum temporale in their child. In turn this fits with prior research linking amniotic testosterone with a child's vocabulary size at age two and is consistent with relative language precocity in girls compared with boys.

But it's tricky to measure testosterone levels in the womb. A non-invasive proxy is the relative length of the second and fourth digits of the hand (greater testosterone is associated with a lower second to fourth digit ratio). Baron-Cohen was sceptical about this, but last year a study showed 'how even in mice paws, the density of receptors for testosterone and oestrogen varies in the 2nd and 4th digits, making another beautiful explanation for why your finger ratio length is directly affected by these hormones. That same hormone that masculinizes your brain is at work at your fingertips.'

Some of the most famous names in psychology also contributed answers. Philip Zimbardo (Stanford University) focused on a topic that's occupied his research in recent years – time perspective theory. This states that each of us has a bias towards thinking in terms of either the past, the present or the future. In turn, each of these orientations comes in two forms – there's past positive and past negative; present-hedonistic and present-fatalistic; and goal setters versus those focused on the transcendental future. Recently the theory has been applied in a therapeutic context, helping veterans with PTSD acquire more positive time perspectives. 'It is so rewarding to see many of our honored veterans... discover a new life rich with opportunities, friends, family, fun and work by being exposed to this simple, elegant reframing of their mental orientation

toward the life of their time,' Zimbardo said.

On a related theme, your reporter's favourite contribution was from Elizabeth Dunn (University of British Columbia) on why in modern life we seem to feel more pressed for time than ever. Despite anecdotal reports, Dunn said there's no evidence from actual data to suggest we're working any longer or relaxing any less than we used to. She said that 'a beautiful explanation' for why we feel time pressured was offered recently by Sanford DeVoe, at the University of Toronto and Jeffrey Pfeffer, at Stanford, who've suggested that time comes to feel scarcer when it feels more valuable. And it feels more valuable when we're richer and capable of earning more. In studies, DeVoe and Pfeffer have taken this further and by inducing students to feel more affluent (through careful design of response categories on a questionnaire), they've led them to also feel more time pressured. A curious flipside of this explanation is that giving our time away (thereby devaluing it), should lead us to feel less time pressured. Some organisations are realising this. 'Companies like Home Depot provide their employees with opportunities to volunteer their time to help others,' Dunn said, 'potentially reducing feelings of time stress and burnout.'

Visit www.edge.org to read all the responses, including answers from more psychologists, such as Steven Pinker, Mihály Csíkszentmihályi, Bruce Hood and Alison Gopnik, and non-psychologists, including Eric Kandel and Richard Dawkins. CJ

| We'd love to hear your own views on the most elegant and beautiful explanations: e-mail psychologist@bps.org.uk

trip in a brain scanner

arterial spin labelling, which reveals changes in cerebral blood flow. In both cases, participants rested in the scanner as they were infused either with a moderate dose of psilocybin or a placebo. During the scans participants used a button to indicate the subjective intensity of their experience and afterwards they provided more detailed feedback. All psychedelic experiences (including 'I saw my surroundings change in unusual ways' and 'my imagination was extremely vivid') were rated higher in the psilocybin condition, with the exception of 'I felt afraid' and 'I felt paranoid'.

Both imaging techniques produce complementary results. Taking psilocybin was associated with widespread reductions in brain activity and reduced blood flow in a raft of cortical and subcortical regions. There was also marked decoupling between the posterior cingulate cortex and the medial prefrontal cortex – key hubs in the default mode network, which is thought to be

involved in consciousness and self-referential processing. Moreover, participants' subjective reports of trip intensity correlated with the observed regional decreases in neural activity.

Carhart-Harris and his colleagues noted that their findings contradicted the popular assumption that psychedelic drugs increase neural activity. However, they said the widespread dampening of brain activity was consistent with reports of the potential therapeutic benefits of taking psychedelic compounds. For example, depression is associated with heightened medial prefrontal cortex activity – a state that returns to normal after successful treatment.

'These studies offer the most detailed account to date of how the psychedelic state is produced in the brain,' the researchers concluded. 'The results suggest decreased activity and connectivity in the brain's connector hubs, permitting an unconstrained style of cognition.' CJ

Another twist in the Little Albert tale

The story of Little Albert – the baby whose conditioning by behaviourist John Watson is documented in every psychology textbook – has taken another sad twist, according to a new journal article.

Hall Beck at the Appalachian State University and his colleagues claimed in 2009 that they'd uncovered Albert's true identity and that he'd died in 1925 at just six years of age (the story was later documented in *The Psychologist*; see 'Finding Little Albert', May 2011). Now, based on fresh analysis of video footage of Albert, together with newly obtained medical records, it's been proposed by Beck and others that Albert was neurologically impaired at the time he was tested by Watson and Watson's assistant and mistress Rosalie Rayner in 1920 (*History of Psychology*: tinyurl.com/6t9gs2z).

The new claims build on the 2009 evidence, which pointed to Little Albert being Douglas Merritte, the son of Arvilla Merritte, a wet nurse at Johns Hopkins University. Douglas's nephew Gary Irons, a co-author on the new paper, has obtained medical records showing that Douglas fell seriously ill at just six weeks of age, and that he underwent a total of nine ventricular and lumbar punctures in the course of being diagnosed and treated for hydrocephalus (brain swelling associated with an excess of cerebral spinal fluid). Douglas also caught a cerebral infection (ventriculitis) from one of these investigations, and he contracted meningitis and measles.

The medical revelations are complemented in the new paper by a retrospective clinical assessment of Albert's behaviour as shown in the video of his testing by Watson and Rayner. The four minutes of footage are from Watson's film *The Experimental Investigation of Babies* (available on YouTube and similar sites).

Psychologist (and lead author) Alan Fridlund and paediatric neurologist William Goldie viewed the footage and both observed striking evidence of abnormalities. Albert appears alarmingly unresponsive, they said, showing impaired tracking, a lack of smiling, immature verbal skills and gaze behaviour, and signs of visual impairment. These behavioural abnormalities make sense if Albert is really Douglas, given that Douglas almost certainly would have suffered brain damage from his health problems. Indeed, anecdotal evidence from the Irons family suggests Douglas was never able to walk. Moreover, a comparison of Watson's availability, Douglas's periods of relative good health and availability, and Albert's age at testing, all match up, providing further evidence that it's the same person.

The new revelations contradict Watson and Rayner's claims that Albert was in perfect health, although the signs of unresponsiveness to some extent concur with the original description of Albert as 'stolid and unemotional'. Fridlund and his co-authors argue that it's 'almost inconceivable' that Watson wouldn't have known about Albert's

medical history and neurological impairment. They say this raises serious ethical questions about Watson's conduct and disclosure practices. 'As a violation of the norm of faithful and complete reportage in science,' not mentioning Albert's medical state 'would compromise "certification" of the knowledge... and render replication impossible. It would be impermissible in the science of his, or any, time.'



The new claims, if true, also further undermine the already questionable scientific merit of the research conducted by Watson and Rayner (see 'Foundations of sand', *The Psychologist*, September 2008). However, with regard to the ethics of testing an impaired child, Fridlund and

Early signs of autism?

The prospect of using brain activity recordings in infants as a way to predict their risk of autism may have come a step closer. A new longitudinal study, led by Mayada Elsabbagh at Birkbeck College, University of London, involved 54 babies aged 6–10 months with a family history of autism, and 50 age-matched controls, looking at dynamic faces that either turned their gaze towards the babies or away from them. A crucial finding was that recordings of the babies' surface brain activity during this task (and others) revealed group

differences (*Current Biology*: tinyurl.com/87zgpnc).

These early brain differences also had links with longer-term outcomes. The babies' families were contacted again at age 36 months, by which time 17 of the at-risk group had received a diagnosis of an autistic spectrum disorder (ASD). Looking back at the brain recordings taken at age 6–10 months, the researchers compared the subgroup who'd developed ASD against the at-risk babies who didn't develop ASD and the controls. Now brain

activity differences were found specifically in the ASD group versus the at-risk group with no ASD and the controls. This time the differences were observed during the gaze-shift task only, not the other conditions, such as looking at a static face vs. no face.

An important detail is that differences between the ASD group and the other babies were not observed in their eye-scanning behaviour, including how much time they spent looking at the eye region of the face stimuli. This suggests the observed differences in

co added that this practice was in keeping with the conventions of the time, in which learning disabled children were seen as a convenient subject pool. Watson, like his contemporaries, argued that the ends justified the means.

An obvious question is – how could Albert's alleged impairments have gone unnoticed for so long? 'Watson and Rayner's (1920) most effective conditioning may not have been of Albert but of their readership,' said Fridlund and his co-authors. 'Watching Little Albert with the stipulation that he was "healthy" and "normal" made it easy to overlook the infant's deficits.'

Not everyone is convinced by the new claims. Benjamin Harris is a historian of psychology at the University of New Hampshire who wrote a landmark paper in 1979 'Whatever happened to Little Albert?' about the way Albert's story has been told in psychology, rather than the literal location of Albert. Harris doubts that Douglas Merritte is Little Albert, although he says the boy's identity is of little interest to historians, a case he made in a paper published last year (tinyurl.com/6usb95j).

Acting as a journal reviewer, Harris advised against the publication of the new study by Fridlund et al. He's now highly critical of this research group, which he says has become closed and secretive. For example, he says they won't release the

medical records. 'By insisting on Douglas Merritte, the authors travel down a path that now requires them to accuse Watson of fraud, misconduct, terrible record keeping – to maintain their *idée fixe* about Douglas Merritte. It's their responsibility to open the records and let unbiased scholars judge,' he told us.

Other criticisms and concerns Harris has include: the lack of independence and appropriate historical expertise of the people who assessed the film footage of Little Albert ('...the current article features only the analysis of a fan of Beck and a friend of that fan,' he said); an ignorance of the details of Watson's study (e.g. the paediatrician Goldie observes the absence of an approach avoidance reaction in Albert, even though this behaviour is noted by Watson); poor historical scholarship (there are no quotes from the medical records); and a dependence on post-hoc logic ('Because Douglas Merritte had symptom "a" and "b" and "c", the authors worked hard and found those symptoms in Albert as filmed by Watson, although no one had seen them in the past 90 years,' Harris said).

Ultimately, Harris questions the fundamental claim in Fridlund et al.'s new paper that Albert's fate is one of the 'greatest mysteries in our discipline'. 'This is nonsense,' Harris said. '...how does Albert's fate compare with the mystery of what causes schizophrenia or the nature of memory or the score of other great scientific questions that psychologists toil over? Not well in my opinion.' CJ



brain activity were not simply a neural correlate of abnormal eye-movement patterns. However, the researchers do believe that the brain-activity differences they observed in the ASD infants are somehow related to social perception, leading to 'decreased attention to, or reduced interest in, the social world'. In turn, this is thought to

have downstream effects on the emergence of typical developmental milestones.

'Taken together, our findings potentially allow for the early identification of those infant siblings who are at highest risk for developing later impairments, paving the way for the more selective targeting of early intervention efforts and procedures,' the researchers said. CJ

HONOUR FOR CHAMPION

Jean Gross, until recently the Government's Communication Champion, received a CBE in the New Year's Honours List for her services to education. Mrs Gross began her career as a teacher and educational psychologist. She has been head of children's services in a large urban local authority, working closely with health services on joint commissioning for autism, speech and language and child mental health needs. Until 2005 she was Senior Director within the government's Primary National Strategy, responsible for its influential SEAL approach to developing children's social and emotional competences.

FREE A-LEVEL LECTURES

A new website funded by JISC provides dozens of free videos of university lecturers talking about topics on the psychology A-level syllabus. The Psychology Faculty (www.thepsychologyfaculty.org), says: 'In bringing the expertise of research scholars into the classroom, we stretch and challenge students, help them excel in their assessments, inspire deeper learning and smooth the transition from school to university.'

SMELLING OUT DIFFERENCE

How do cultures differ in the way they name and think about odours? BPS member Dr Asifa Majid of the Max Planck Institute of Psycholinguistics is to find out thanks to a Vici grant of €1.5 million from the Netherlands Organisation for Scientific Research. 'This project will break new ground in the study of olfactory language and cognition by studying people from a variety of communities in different environmental niches,' Majid said.

SCOTS ED PSYCH WORRIES

Funding may have been secured for educational psychology training in England, at least for the short term (see January News), but now concerns about funding for the profession have spread north of the border. The Educational Institute of Scotland (the country's largest teaching union) described government plans to axe future funding of educational psychology training as 'short sighted'. Education Secretary Mike Russell told the BBC that existing students would be unaffected by the decision.

FUNDING OPPORTUNITIES

For this month's funding opportunities, see www.bps.org.uk/funds. Funding bodies should e-mail news to elibee@bps.org.uk.

CREATIVITY

Why do people in organisations find it so difficult to release themselves, to be creative? That was the question posed in an interactive session at the Division of Occupational Psychology conference with 'miserably failed actor' (his words) Andrew Mallett, from Mind Gym. When times are tough, Mallett argued, we really do need something different to survive. Drawing on examples such as Kuoni, who applied a 'Tupperware party' approach to the dwindling holidays market, Mallett showed how creativity can be simple and quick.

Challenged with 'oppositional thinking' tasks such as 'find the opposite of a new topping for a pizza', the audience came to identify with Einstein's famous maxim 'If at first the idea is not absurd, there is no hope for it'. There were plenty of other examples from the business world too, including Google's rule that all employees must spend 20 per cent of their time on projects outside their normal role.

'Take a risk', Mallett concluded. 'Play – ask what would a child see, what would a comedian see?' JS

LEADERSHIP

Could C. Moustaka and colleagues, including Ian Bushnell at the University of Glasgow, be pioneering a new field of lifespan occupational psychology? Their poster asked 'Leadership starts young: Do attachment style, personality and narcissism predict emergent leadership?' Assessing late primary and early secondary school children during a visit to a science centre, the authors found that extraversion was the best single personality correlate of leadership, but that this was supported by experiences that may well include effective attachment. Aspects of so-called 'narcissistic performance', such as 'I am very good at making other people believe what I want them to believe', were associated with leadership performance on a 'build a tower' task. JS

Working on the glass cliff

Back in 2003, Michelle Ryan checked her pigeonhole and found an article from the business section of *The Times* in 2003, stating that the 'triumphant march of women into the country's boardrooms has wreaked havoc' on companies' performance. This was to be the spark for a line of inquiry that has borne years of fruitful research, and the story began her Division of Occupational Psychology conference keynote tour of the 'glass cliff'. The term plays on the metaphor of the glass ceiling – the invisible limit which prevents women from making it to the top of organisations. The glass cliff is an invisible risk, referring to the experience of women who make it to senior positions, only to discover they are unusually precarious.

Ryan began to perceive the glass cliff by scrutinising the claims of that newspaper article, deposited by an unknown friendly colleague. Historical data comparing 19 women appointed to the Board of Directors with a matched sample showed that appointments of women were indeed associated with slumps in share price, but that the slump preceded the appointment. The article had based its claims on a false assumption of causality, and it seemed instead that women were more likely to be appointed to companies in crisis.

Ryan then used experimental investigations involving hypothetical situations. She asked participants to decide how they would fill a position, such as company finance director, by choosing between two similar candidates who differed in gender. When the position was presented within a stable context – a growing company, a winnable political seat – then the candidates were similarly favoured. However, when the situation was presented as one with a high chance of failure – a company in crisis, or an unwinnable seat – the woman was a far more popular selection. People even favoured a female youth representative for a festival that was experiencing declining popularity.

Perhaps women are seen as better crisis managers than men? (Ryan quoted Eleanor Roosevelt: 'Women are like teabags. You don't know how strong they are until you put them in hot water.')

In another study, participants judged that a company in a stable context needs a leader who was assertive, competitive or possessed other traits judged to be stereotypically masculine by other participants in a pre-study phase. Meanwhile, leaders in crisis situations should be understanding, tactful, creative – more stereotypically feminine.

But what is it about crises that women are seen as suited for: taking control and improving performance, for instance? Not so; a follow-up that separated out different aspects of leading in crisis found female traits were only favoured for the purpose of soaking up criticism or enduring negative conditions. And another study showed that when the crisis situation had full support of senior leadership, there was no preference for women to take the role. The data suggests that women are preferred when the situation is not just risky but actively precarious, with likely negative repercussions for the situation and themselves.

What are the consequences for female board members? Well, there is evidence that female CEOs have far shorter tenures, which may reflect the fact that such positions are often set up to fail. Ryan concluded that in the pursuit of equal opportunity, we shouldn't be misled by the raw numbers of women in leadership positions; the nature of the role matters just as much.

In an interesting extension of her experimental work, Ryan and colleagues collected folk theories for the glass cliff via the BBC website. Women tended to believe that women are singled out for precarious positions, or that they have fewer opportunities and therefore accept riskier positions. The majority of men simply didn't believe that women are differentially placed on the glass cliff. AF

NATIONAL CULTURE AND PERSONALITY

If people of different nationalities score differently on a personality test, does this say something about national temperament, or simply that the test is biased? Dave Bartram took us through an interesting approach to this tricky issue: when 'national differences' in personality also correlate with other measures, we can be more confident they are the real deal.

Bartram worked with a big data set – one million participants all told – but as the correlations were made between countries, not individuals, they involved just 31 cases, a modest sample in which to detect patterns. He found that each personality measure correlated with one or more Hofstede dimension of national culture; for instance, emotional stability

tended to be higher in cultures that are less masculine, more individualistic, more tolerant of ambiguity, and have less power distance (meaning less acceptance of unequally distributed power).

The next analysis was neat, correlating the cultural dimensions with the standard deviation of personality scores in each country – whether scores



You're in the army now

The British Army loses nearly one third of its recruits to attrition, many leaving during the first 14 weeks of training. Its size means reducing this figure by a percentage point could save almost £750,000. MOD psychologist Natalie Fisher investigated the nature of this early attrition, taking a multi-layered approach, speaking to recruits at various stages around the training period.

In a series of five focus groups, Fisher drilled deeply into the experiences of successful trainees. She found that the majority had considered leaving at one point or other, due to missing their families or dissatisfactions, such as over basic wage levels. The reasons for pushing on were diverse, but commonly included the desire to serve overseas and a sense of not wanting to let the family down.

The focus groups identified a critical period around week seven of training, which proved particularly challenging

for leavers: this was the time when they were least likely to feel like a soldier or have a sense of belonging. It's probably no coincidence that this period coincides with the weekend home and the chance to catch up with the world left behind...

Interviewing recruits who left during training, Fisher found negative reasons for joining up, such as 'no career options', were more frequent than for those who stayed through training. The latter group more often cited being driven by expectations and having family support. The interviews with leavers also identified they were much more likely to feel homesickness from the first week in training onward. Fisher pointed out that the psychological literature on this is problematic, as it focuses on students and children away at camp, and may not be generalisable. Certainly, some of the recommendations from that research, such as 'get enough sleep', aren't entirely

compatible with the training experience. However, the advice to establish solid routines and ensure access to someone to speak with are pertinent.

The study raises many questions: for instance, of those who were recruited but never even made it to training, some had concrete reasons, such as illness or family need, but one third simply changed their mind at the last minute. Why? And Fisher spoke to training instructors, who identified some perceived characteristics of those who left, such as a dislike of discipline, but conceded many exits were simply unpredictable. Were they not getting something they were looking for in the role? Like most organisations, the British Army wants to warn off applicants who would be a poor fit, but also to prevent avoidable attrition of people who could have ultimately been a success in the role. In such high-stakes positions, this is a true balancing act. **AF**

tightly clustered or showed large variation – rather than with their average levels. This made it possible to explore the idea that some countries are culturally 'tighter' than others, giving less scope for individual difference. The analysis picked up several such effects. The higher the power distance of a culture, the more uniform its members were in terms of measures like agreeableness, conscientiousness or extroversion; the reverse was

true for countries high on another measure, individualism.

Correlation of personality with culture ratings might not strike you as objective enough to produce a verdict; perhaps they are both subject to a common confound. But how about correlations with hard measures such as GDP, life expectancy, UNESCO education index and the UNDP human development index? These measures were all found to correlate with standard deviations of personality scores,

for instance high GDP was related to larger ranges of openness to experience in the population.

This study doesn't answer whether national culture shapes typical personality or vice versa, although it's useful in honing hypotheses. But this cascade of correlations does suggest that personality differences between countries, although they are small, reflect something real, rather than meaningless measurement error.

CULTURE EATS STRATEGY

'Culture eats strategy for breakfast: the tale of a nomadic storyteller' was the intriguing title of a talk from Trixy Alberga, Head of Culture Change at the Highways Agency. Based on a comment made to her, the title reflected the belief that 'culture is more powerful than strategy, since it reveals how things are actually done, whether or not this was intended'.

The Highways Agency, part of the Department for Transport, promotes the more effective use of the strategic road network by addressing the causes of congestion and unreliability. A large workforce, with mixed backgrounds including culture and preferences brought from previous organisations with powerful cultures, led to clear challenges for Alberga. She reported that engagement scores had suggested there is real room for improvement, especially in leadership at all levels; there were persistent rumours and some data about behaviours regarding diversity; and a greater number of grievances, complaints and sickness than desirable.

Alberga recounted her struggle to tackle the 'multitude of conflicting stories' around the organisation's culture and systems. In attempting to agree a new vision, Alberga has worked towards 'one story to unite all'. The result – 'we take professional pride in keeping our roads moving safely' – is currently the subject of debate, but it was fascinating to hear Alberga describe the occupational psychology behind the choice of each word. Supporting this was a range of interventions including a diary study of how people actually feel about the communications they receive; a 'back to the floor' scheme for senior management; and new performance data to include cultural features. 'Still talking', concluded Alberga, and these stories from someone making sense of a major and complex organisation were well worth hearing. **JS**