

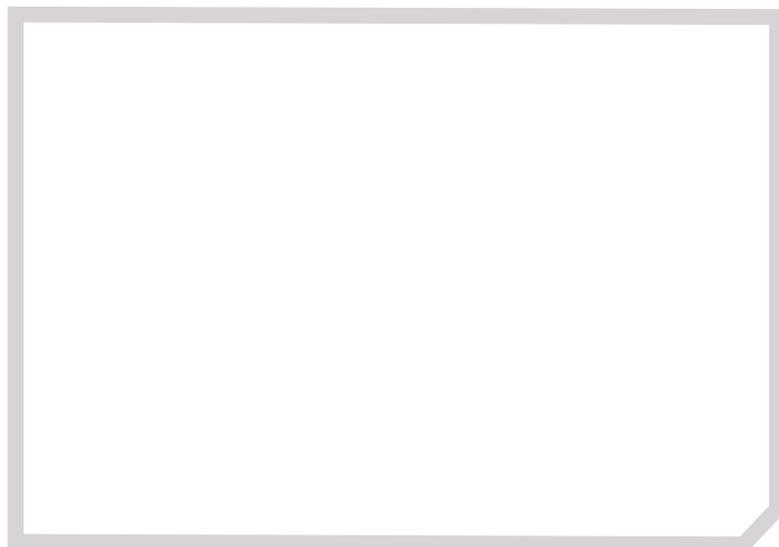
# When it comes to the crunch

In this timely symposium Stephen Lea (University of Essex) and Peter Cooper (CEO, CRAM International) discussed the potential contribution of psychology to our understanding of the current economic crisis. To begin with, what are the psychological factors that led us into this mess in the first place? Stephen Lea argued that it is crucial to appreciate the relationship between psychology and economics, and the fact that our financial decisions are not the result of rational choices. Rather, our decisions are

influenced by a variety of factors known to psychologists, particularly the use of heuristics. In understanding the mass psychology of the housing crisis, Lea outlined three disastrous heuristics that contributed to our predicament. First, there was the feeling, particularly in the US and the UK, that home ownership is always better than renting; an idea that ownership somehow equals happiness. This created a push towards people taking out mortgages that they should perhaps have avoided. Second, as house prices increased during the housing boom, homeowners fell prey to the illusion that they were becoming wealthier; in actual fact, having your house's price increase does not make you any wealthier if all other house prices are rising at the same time. Nevertheless, the illusion of wealth led people to take out loans against their property without

considering the consequences. The third disastrous heuristic was the rule of thumb that 'if you can afford the repayments, you can afford the loan'; when people made decisions about whether to take out a loan, they only considered the immediate affordability of repayments, without taking into account the fact that interest rates can change, and income can suddenly drop. Lea termed these three heuristics the 'MMM': Materialism, Money Illusion and Myopia, and argued that it was this potent mix of flawed thinking that ultimately led us to the recession. So how can we make things better? Lea argued that we have to encourage the people that can afford it to go out and spend. This will require building the confidence of those unaffected by the recession to the point where they feel safe enough to spend their money.

Peter Cooper discussed the impact of the economic crisis on mental health. Ongoing qualitative and quantitative research monitoring responses to the recession suggests that the reverse switch from massive prosperity to financial uncertainty leaves people showing symptoms that include depression, anxiety, anger, instability, disturbed sleep, unhealthy eating and physical stress. For those worst hit, the loss of employment can be psychologically devastating, bringing with it the additional loss of freedom, self-respect and meaning to life. Cooper spoke of a 'crisis ripple' emanating from those who have been



This year's Annual Conference in Brighton took place in the sunshine amongst gathering economic gloom

## DISTINGUISHING TRUTHFUL FROM INVENTED ACCOUNTS

Two schemes for analysing the veracity of eye-witness accounts, both of them based on the 'reality monitoring' (RM) approach, have demonstrated comparable levels of accuracy in distinguishing invented from truthful accounts. The RM approach draws on the idea that memories for real events will show consistently different characteristics from memories of imagined events, such as greater perceptual detail.

Amina Memon of the University of Aberdeen and her

colleagues staged an event in which a engineer was seen to damage a laptop – half the participants witnessed this happen, while the others were merely told about it and asked to pretend that they had really been there. All the participants were subsequently questioned using a face-face 'Cognitive Interview', and their answers were transcribed and coded using the criteria of either Aldert Vrij and colleagues or Kevin Colwell and colleagues.

Both schemes distinguished

truthful from invented accounts. For example, coding using the Colwell approach revealed more external, contextual and internal (e.g. meta-memories, such as 'I thought I would never find the room') detail in truthful accounts. The Vrij scheme found that auditory and temporal detail was greater in the truthful accounts, with a further trend towards more mention of cognitive operations (e.g. 'she was wearing a coat so it must have been cold').

Overall, the Vrij scheme demonstrated accuracy at 80 per

cent compared with 72 per cent for the Colwell scheme. However, Memon cautioned that there were some notable differences from real life – here, liars gave plenty of detail whereas in real life they usually tend to keep detail to a minimum. These differences emerge at least in part because it is so difficult to recreate in research the kinds of pressure and motivations that lead people to lie in real life. Regarding the forensic potential of these coding schemes, Memon concluded, 'We're not there yet.' CJ

directly affected (for example, through unemployment) to those who have been partially affected and those for whom there is more of an 'atmospheric' impact; perhaps the majority, who are influenced by the general mood of the country and media. Cooper argued that psychologists have an important part to play in helping people prepare and deal with the

consequences of the recession. Psychologists will be on the front line of providing counselling and therapy for those affected, and it may be that the most effective way to do this is in collaboration with bodies such as the Citizens Advice. Looking to the future, Cooper discussed the yearning for change that many people report; there is a general feeling that a

cause of the recession was the emphasis on economic well-being over psychological well-being. He argued that psychologists should be pushing for a role in deciding future policies and approaches to the economy; otherwise we run the danger of recovering our financial health, but remaining psychologically and physically sicker. **sc**

## More than 30 years of magic moments

Based on a teaching career spanning more than 30 years, Dorothy Coombs (Prior Pursglove Sixth Form College) is well placed to make recommendations for good practice. In this lecture on receiving the British Psychological Society's Award for Excellence in the Teaching of Psychology, she did just that via an account of changes in a career she has clearly loved.

Since the 1980s, A-level classes have tripled in size with specifications, exams and technology all changing constantly. Whilst recognising that expectations of students are varied, and without over-stressing equally vast expectations and demands of teachers, Coombs simply expects her students to learn to think rather than perform. Education is increasingly important in a competitive market, and it is important students learn the skills to differentiate themselves.

One of the biggest barriers to thinking may be student fear; commonly expressed as a fear of being selected to give an answer. Coombs combats this by stressing that her students can give her any answer, and she tries to circumnavigate a fixation on finding the *correct* answer by supplying the answer herself and then asking for suggestions as to the question. A sympathetic and understanding teaching approach is apparent, and Coombs freely admits that

she is still teaching today because of that magic moment 'when a pupil's puzzled gaze gives way to a smile of recognition'.

Coombs now feels that students are subject to an overwhelming array of resources, from YouTube, Google Scholar and Wikipedia to online libraries and resource centres. Although the students themselves haven't changed – they are

still young, exploratory people – there is a juxtaposition of the old learning and the new technology. Equipping students with the skills to deal with all the information is vital, and a new initiative is under way to provide tutorial support in good research skills. Students are being grounded in the skills required to promote independent thought, avoid plagiarism and use the wealth

of information available to their advantage.

Coombs noted how becoming a member of the Association for the Teaching of Psychology has allowed her to share good practice, including via the BPS, Science Learning Centre, Higher Education Academy and the European Federation of Psychology Teachers' Associations, which in turn is passed on to her students. **VB**

### SEGREGATION AND VIOLENCE

**Interest in the effects of religious segregation in Northern Ireland is of continual interest, rising to the forefront in recent months as religious and political events make headlines. With segregation occurring across educational, residential and occupational settings, Kareena McAloney's (Queen's University Belfast) studies of religious segregation and community violence were timely.**

**The first time many adolescents have sustained and meaningful contact outside their segregated environment is at university. Looking at measures of group identity and self-esteem, McAloney revealed some interesting effects of intergroup contact. The more students perceived they were the majority religion, the higher their self-esteem, identification with their group and outgroup rejection. Interestingly, Protestant students also had a higher perceived percentage of Catholic friends after contact in the university environment. However, Catholic students and those who lived on campus and were immersed in the integrated environment had poorer psychological well-being, which suggests support for a 'rejection-identification' model.**

**In 2004 one in four of Northern Ireland's youth had experience of sectarian abuse. Unsurprisingly, data suggest that this exposure to violence may be having a detrimental effect on adolescent health and well-being. This seems to be externalised in various ways, such as substance misuse, behavioural problems and depression. There is also a tradition of families telling stories about the violence, which may be continuing the cycle. It is therefore important to clarify whether this is also one of the ways young people are dealing with these experiences.** **VB**

## IN BRIEF

### Vicarious PTSD

There's already a literature showing that emergency workers can suffer PTSD-like symptoms after their exposure to the suffering of others. Could similar symptoms be provoked among the public by the scenes of suffering and devastation that are routinely broadcast on rolling TV news? Pam Ramsden's (University of Bolton) newly validated measure of vicarious PTSD revealed 20 per cent of 89 participants had signs of the condition following their exposure to news coverage of 9/11, the London 7/7 bombings and/or the stabbing of Abigail Witchalls. Participants who'd suffered traumatic events in their own lives had been excluded. Across the various events, those participants who had watched more coverage tended to exhibit more signs of distress. 'Vicarious PTSD is not recognised as much as it should be,' Ramsden said. **CJ**

### Mindfulness and mental control

An internet survey has generated preliminary evidence for the way regular meditation can change people's thinking habits for the better. Rebecca Semmens-Wheeler at the University of Sussex recruited 65 non-meditators, 25 infrequent meditators and 55 frequent meditators (three or more times per week), and found that the frequent meditators displayed less thought control and thought suppression than the non-meditators, alongside increased mindfulness and behavioural self-control. Semmens-Wheeler said her findings suggest meditation helps improve people's self-control because it increases their mindfulness, thus reducing their tendency to attempt to control their own thoughts – a habit that is known to backfire, and which is associated with many psychiatric conditions. **CJ**

### The acid test

Maternal nutrition during pregnancy affects fetal brain development and has been linked with psychopathology in the offspring. These findings have led to pregnant mothers being encouraged to focus on nutrition in the early stages of pregnancy, in particular taking folic acid supplements. Now in a prospective cohort study, Wolff Schlotz (University of Southampton) has found support for this practice. Maternal folate status and intake during early pregnancy was associated with hyperactivity and peer problems in their offspring at age 7–9 years, with the association mediated by fetal head growth. These results suggest that lower folate status during early pregnancy may impair fetal brain development, predisposing to behavioural difficulties in childhood. **VB**

# Attention and the senses

Most of you will know about the famous Stroop effect, in which interference from a colour name slows down our recognition of the ink colour. In the first of three presentations on attention, memory and perception, Oscar Kjell of the University of Westminster described some intriguing results arising from two multisensory versions of this classic task.

One task required participants to name the ink colour of a word while ignoring distraction in the form of the sight or sound of colour word names. The other required participants to identify the high or low pitch of a voice, while ignoring the sight or sound of the words 'high' or 'low'.

For the ink colour task, both written colour names and spoken colour names affected performance. By contrast, for the pitch identification task, only the spoken word affected performance; the written word did not. Kjell said this suggests that when it comes to controlling the influence of semantic information, the auditory

system is more efficient at filtering out irrelevant information than the visual system.

In the second presentation, Sam Culpeck of the University of Sussex described research that's built on earlier findings showing that attention can be cued by gaze direction. Past research has used static photographs, but in real life, of course, gaze is always moving. In an attempt to create a more ecologically valid paradigm, Culpeck and her colleagues used static photos with moving eyes. They demonstrated that a moving shift in gaze direction has a more powerful cueing effect (for both button press and eye movement responses) than fixed gaze direction.

A final experiment compared the cueing influence of a shifting gaze against the cueing power of arrows, with moving arrow-heads. The findings here suggested there really is something special about eyes and faces – the shifting gaze condition, but not the shifting arrows

# An ebbing tide

There's a prevailing view that mindfulness training is harmful for people with psychosis. But this is based on a narrow evidence base made up of just a few case studies. That's according to Professor Paul Chadwick (Royal South Hants Hospital & University of Southampton), this year's recipient of the Society's Distinguished Contributions to Professional Psychology Award. He and his colleagues set out to develop a mindfulness intervention that would be acceptable to people with psychosis. Sessions were limited at 10 minutes as compared with the usual half an hour; they were guided so that silence lasted no more than 30–60 seconds at a time; and comments from the guide

were tailored so as to be relevant (e.g. 'If you hear a voice, just let it pass').

Two outcome studies – one involving 11 patients who undertook six or seven weekly sessions of 90 minutes each, the other involving 22 patients who undertook two sessions per week, plus home practice with a CD – both demonstrated significant pre-post improvement.

The sessions were delivered in groups and generally involved a period of practice, followed by a reflective session in which participants considered how they currently react to their symptoms, how it feels to relate mindfully to those symptoms, and finally what this says about themselves and their psychosis. For many, the idea of letting go of their

usual coping methods can be terrifying, leading to fears that the symptoms might come back stronger. One approach of the training sessions, therefore, has been to ask participants to view the practice as a form of experiment – to test their beliefs about what will happen against what really happens.

These ideas were made vivid when Professor Chadwick played a DVD testimony of a patient with psychosis who has found mindfulness training beneficial. 'It's like an ebbing tide without me fixing on any one thing,' she said of the mindfulness approach. 'In and out. Whether this is a voice or other sensations. It stops the voices becoming the sole focus.' **CJ**

condition, showed a significant 'magnitude effect'. That is, response times when eye gaze was congruent with target location were significantly reduced compared with when gaze and target location were incongruent, whereas this contrast was not significant for the arrows condition.

Last up, Julie Castronovo (University of Leeds) turned our attention to number processing by blind people. She began by reminding us of some well-known effects in the field of numerical processing. For example, there's the size effect, in which we're slower when comparing larger numbers. There's the distance effect, in



PAUL DOWE (PHOTOGRAPHY)

**Do blind people use numbers more? For example when faced with stairs, blind people may learn to count the number of steps**

auditory tasks, in which congenitally or early blind participants had to compare the magnitude of heard numbers against

which we're slower at comparing numbers that are nearer each other in magnitude. And there's also the SNARC effect (spatial-numerical association of response codes), which suggests there's a link between spatial magnitude and space, akin to a number line.

Castronovo said two

either 5 or 55, showed that these kinds of distance and size effects also occur in blind people. In other words, blind people and sighted people appear to represent numbers in a similar way despite the fact that blind people have not experienced numbers in the visual domain. This challenges the assumption made by some psychologists that the spatial representation of numbers is somehow linked to the visual experience of numerosity.

Another study compared the ability of early blind and sighted participants to generate a certain number of key presses without the chance to count them, and to estimate how many tones they had heard. Both groups showed evidence of Weber's law, becoming less accurate with higher numbers. Furthermore, the blind participants outperformed the sighted participants. This suggests that the experience of blind people with numbers may actually be advantageous compared with the experience of sighted people. One reason for this could be that blind people use numbers even more than sighted people do. For example, when faced with stairs, blind people may learn to count how many steps there are until they reach the top. CJ

## Understanding heteronormativity

Gay men in the UK are at disproportionately high risk of contracting a sexually transmitted illness. By some estimates, just 2.8 per cent of men had sex with another man in the last five years, and yet 45 per cent of new cases of gonorrhoea in Scotland and 80 per cent of new cases of syphilis were among the gay male population. In 2007, 41 per cent of new cases of HIV in the UK were among gay men.

These were just some of the striking statistics outlined by Paul Flowers of Glasgow Caledonian University as part of a seminar on heteronormativity and health. But Flowers argued that this

increased risk cannot be explained away by traditional health behaviour factors, such as gay men's attitudes or beliefs about risks.

Rather, the increased risk, he believes, is linked to the fact that gay sex tends to be disassortative, with initial contact made via the internet, gay bars, clubs and saunas, whereas heterosexual sex is more assortative. Disassortative mating involves people from diverse locations and communities coming together, whereas assortative mating is seen when people from within the same communities get together. The former increases exposure to sexually transmitted diseases,

Flowers explained, even with an equal number of sexual contacts. Moreover, he argued, this pattern of mixing among gay men is driven at least in part by heteronormativity – the need for gay men to migrate to limited places and spaces to find suitable partners.

'Understanding some of these issues shifts culpability for pathological burden to those who are homophobic rather than placing it on the vulnerable,' Flowers said. Although he cautioned that there is also 'a need to examine aspects of our [gay] communities too – for example, the prevalence of sexual consumerism.'

Also in this seminar, Lyndsey Moon argued that lesbian, gay and bisexual training for therapists remains inadequate; Ian Rivers shared data showing that 'same-sex-attracted' students experience more loneliness and harbour more hostility than their 'opposite-sex-attracted' peers; and the film *Homoworld* was shown. This short training film, co-produced by clinical psychologist Catherine Butler, turns heteronormativity on its head, portraying a fantasy world in which a heterosexual couple struggles to cope with a world dominated by homosexuality. Free copies are available via the University of East London. CJ

# Plants and the brain

Talk of plant extracts and aromatherapy may conjure in your mind images of witches and pseudoscience but this symposium showed how psychologists are conducting serious experiments to elucidate the important psychological effects of various plant phytochemicals. Such an endeavour is particularly urgent, David Kennedy (Northumbria University) explained, as synthetic drugs are failing in a number of areas. Just recently the National Institute of Health and Clinical Excellence withdrew its endorsement of a synthetic cholinergic-based treatment for Alzheimer's disease on the basis of a lack of efficacy and too many side-effects.

Kennedy went on to describe a number of metabolites in plants that act on the human cholinergic system, some of which may provide a viable alternative to synthetic compounds. These include alkaloid poisons from plants like deadly nightshade and henbane, but also safer 'terpenoid' alternatives such as from lemon balm and sage. Several promising studies have shown that these extracts can lead to improved memory and mood. 'Plants offer a huge range of potentially effective secondary metabolites, especially among the terpenoids and phenolics, rather than the poisonous alkaloids,' Kennedy said.

Perhaps one of the better known plants used medicinally is St John's wort, which is widely taken as an antidepressant. Sarah Canning at the University of Leeds described her randomly controlled trial of St John's wort as a treatment for premenstrual symptoms. Thirty-four women were assessed over 10 menstrual cycles with the use of daily symptom reports. Behavioural symptoms such as insomnia, and physical symptoms were improved by taking St John's wort compared with placebo, but the plant had no effect on psychological symptoms such as low mood. Canning speculated that the plant may have exerted its effects via the serotonergic system.

What about lavender? A problem testing the psychological effects of lavender is that participants soon guess the purpose of research once they detect its soothing scent. Belinda Bradley at the University of Central Lancashire solved this problem in her test of the plant's anxiolytic effects by administering it

orally to men and women in a double-blind trial. Using neutral, positive and scary video clips, Bradley showed that lavender was mildly beneficial in reducing anxiety in women, and aided their recovery to a relaxed state. By contrast, lavender appeared to have the opposite

performance. By contrast the higher 993mg dose actually had some deleterious effects. Before we get too excited it's worth noting that the lower dose would actually require consumption of about five chocolate bars! The lower 500mg dose of resveratrol also improved cognitive



## Lemon balm may help improve memory and mood

effect on men. It's possible that the plant interacts with hormones in women, thus explaining the differential effect across sexes. Bradley concluded that there was a need now for a longer-term study.

Two sources of plant polyphenols that are often in the health column of newspapers for obvious reasons are red wine and chocolate, with research suggesting they may have beneficial antioxidant and vasodilatory properties. Crystal Haskell (Northumbria University) presented the results of two randomly controlled trials she's conducted looking at the acute cognitive and subjective effects of resveratrol (found in red wine) and cocoa flavanol.

Using tests such as the serial three subtractions task (participants have to keep subtracting three from a target number) Haskell showed that a lower 520mg dose of cocoa flavanol led to reduced fatigue and improved cognitive

performance but came with the undesirable side-effect of increased mental fatigue.

Last up, Ed Okello (Newcastle University) presented a wide-ranging overview of research findings on the effects of plant based products as treatments for dementia. His survey took in numerous plants, including ginkgo biloba, club moss, sage, lemon balm, green tea and curcumin, to name but a few. Okello said the search for plant-derived treatments is now a £100 million business in the UK and that the largest clinical trials under way for Alzheimer's disease treatments all involve plant extracts. Four decades of conventional neurobiological research had led to few effective prescription drugs for dementia, Okello said, whereas plant based treatments are increasingly demonstrating efficacy and safety, with their mechanisms of action gradually being elucidated. **CJ**

# Having a crack at psychology

Opening this invited keynote, critical health psychologist Kerry Chamberlain (Massey University, Auckland) stated his intention to 'have a crack at psychology', which he considers has been 'too good at ducking away from critiques'.

Taking aim in particular at the 'globalised, Americanised, anglicised version of psychology', Chamberlain said that just about everything we study is complex – we can't have simple theories. More than 60 years ago, Henry Murray and Clyde Kluckhohn said that 'Every man is in certain respects (a) like all other men, (b) like some other men, (c) like no other man'. Chamberlain feels that psychology has never found a solution to this, and the psychological sciences have inevitably struggled to find a unifying agenda. He sees the rise of qualitative methods as a good thing, as such research forces a return to epistemological considerations and a recognition that knowledge is a function of how we find it out. But Chamberlain also worries that we are 'just a science of fads and fashions', concentrating our resources in the wrong areas. He pointed to the area of paired associate learning as one where thousands of studies were conducted which perhaps said 'more about publication strategies and careers than a quest for knowledge'.

There is also the question of who psychology does its research with. Jeffrey Arnett has talked of the 'neglected 95 per cent', and Chamberlain feels that no other science proceeds with such a narrow base.

We 'atomise' constructs, start researching the components rather than the big picture: 'theoretical discourse is replaced by statistical discourse', and the 'pathology of flow charting'. The result is a huge number of 'facts' that are largely just correlational associations.

Chamberlain says that psychologists need to make friends with their data. 'Perhaps there is no such thing as a "health behaviour";' he says, but (as Frances Mielewczyk and Carla Willig have said) exploring the differences between 'having sex', 'making love' and 'fucking' may help us understand why condom use may be compatible with one but not another of these practices.

So can the turn to qualitative research save us, Chamberlain asked. It's still a minority enterprise, he warned, and it's difficult to get the mainstream involved in debates. 'It can't breach the inertia', he said, and unfortunately 'the flight from theory is still evident in qualitative research'. Many publications code and categorise the data, asking what's in the data and how it fits together, but they often fail to progress to the 'what do I make of this?' stage. Chamberlain feels that current practices are serving to trivialise much of our research, and we need to 'raise the bar so that people are making a contribution with their research. 'We need to reinstate the centrality of the phenomenon. We should be training critical, reflexive and innovative researchers. It's time for a change.' JS

# Sisters are doing it for their siblings

Growing up with a sister may be good for our psychological health, regardless of whether we are male or female. Liz Wright (De Montfort University) and Tony Cassidy (University of Ulster) studied whether siblings have a protective effect in times of crisis; in particular they looked at whether siblings modulate psychological distress arising from parental divorce. Data collected with a questionnaire survey revealed that female siblings had a protective positive effect across a number of measures. For example, levels of achievement motivation were higher for people with sisters than people with brothers. Conversely, psychological distress was higher for people with brothers than it was for those with sisters. This pattern held for both men and women. Wright speculated that this protective effect of having a sister is because female siblings promote an expressive atmosphere within families, and this may provide a natural support system during times of crisis. SC

## VISIBLE DIFFERENCE

Alyson Bessell (University of the West of England) presented results from a trial of a computerised psychosocial intervention for people with a 'visible difference' or disfigurement. Outcomes were measured post-treatment and at three- and six-month follow-up. Those receiving the intervention, whether by computer or face-to-face, showed reduced anxiety and depression, and a reduction in appearance concerns, relative to the no-treatment control. There was no difference between the face-to-face and computer groups, and reports of acceptability and usefulness were high in both groups.

Bessell said future research will test whether the computer intervention works just as well when it is completed remotely in people's homes, rather than at the clinic or university. There are also plans to improve the graphics and add e-mail and chat facilities. CJ

## PEDAGAMING

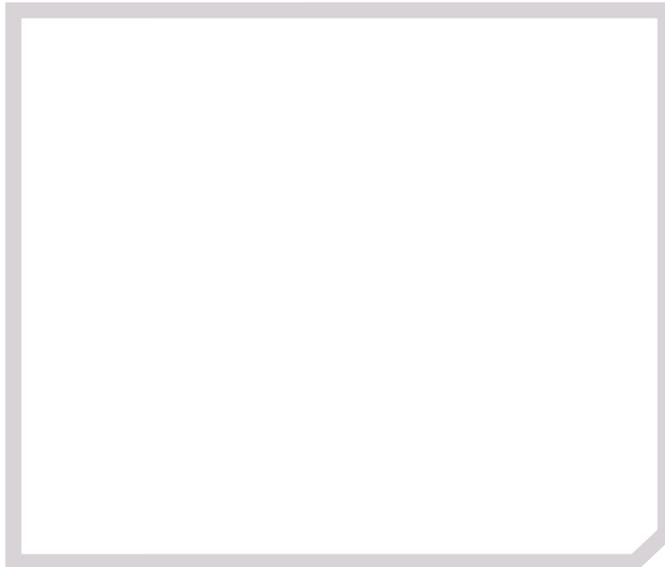
From the University of Bristol, Paul Howard-Jones introduced us to 'pedagaming', which seeks to exploit research on the addictive quality of games so as to make learning more rewarding and effective. In a recent study, Howard-Jones and his colleagues devised a quiz-style game in which participants selected a box, were told how many points that box contained, before being given the question they'd need to answer to win those points. Questions answered incorrectly would appear again later following feedback of the correct answer. The researchers found they were able to predict the likelihood of a participant answering a question correctly second time round, based on their estimation of the state of that participant's dopamine system (dopamine is a neurotransmitter involved in reward) when the same question was first encountered. Dopamine release was estimated based on 'positive prediction error' – the mismatch between expected and received reward.

It's early days but Howard-Jones said that pedagaming could prove a fruitful research avenue. CJ

# In search of the optimal self

Humans are not naturally passive beings: we actively meet ongoing challenges to create an optimal self. Self-determination theory (SDT) identifies three basic needs that allow our optimal selves to flourish, the absence of which can increase vulnerability and lead to passivity and a lack of motivation. Dr Richard Ryan (University of Rochester) described these basic needs as a tenet of SDT in a keynote talk.

According to Ryan and SDT, autonomy, competence and relatedness are innate and universal needs: crucial for well-being, even if not necessarily consciously valued or pursued. When a person acts with autonomy, they are not necessarily 'in control' or independent of external influences: the key to being truly autonomous lies in internalising external influences and assimilating them with one's own values. Competence leads to feelings of self-efficacy, and relatedness creates a sense of belonging. In contrast, day-to-day events, such as deadlines, controlling



Dr Richard Ryan spoke about self-determination theory in his keynote lecture

rewards, competitive pressure and surveillance, are the antipathy of all three needs and therefore least beneficial for optimum mental health.

Ryan discussed the degree to which external motivation appears as a continuum rather than a separate concept and as representing variations of autonomy. In support of this,

he and his colleagues have found that the experience of autonomy is not moderated by cultural membership and is positively related to well-being. Identification reflects a conscious valuing of a regulation and the action then becomes personally important. These values can then be made congruent with other values already held, and action becomes autonomous.

Autonomous behaviour appears to have no downside with research showing positive correlations between quality of life, mental health and intrinsic motivation. Even in moderation, behaviour supportive of autonomy creates effects apparent across domains and across cultures. Strong relations exist between patient autonomy and taking of oral medication, between provision of autonomous support and smoking cessation and possibly prosocial behaviour; if you help for autonomous reasons the recipient receives more benefits than if helping under duress or by external controls. Autonomy support from

teachers helps create a preference for challenge, greater persistence and creativity and an orientation towards mastery behaviours, which results in a curiosity for learning and intrinsic motivation.

Behaviour driven by such inherent satisfaction, rather than external rewards, leads to greater well-being and functioning. Intrinsic motivation is important from an early age: small children play because it's fun, but in doing so they also gain social and cognitive benefits. If this behaviour is controlled or contingent on external rewards, the learning experience is not internalised and the volition to undertake a task can be undermined. Strategy and goal choice, positive feedback, empathy and an absence of external pressure all facilitate internal motivation and are all provided by meeting the three basic psychological needs of self-determination theory.

Balancing the meeting of these three basic needs and pressures of everyday life with its varied and constant external demands is not plain sailing, yet Ryan creates a compelling picture that should serve to strengthen our resolve to nurture autonomy and allow our optimal self to thrive. **VB**

## GENETICS OF LEADERSHIP STYLE

Differences in leadership style can be traced to a gene that's involved in dopamine metabolism and social cognition. That's according to a study conducted by Carl Senior (Aston University) and colleagues as part of an emerging field of organisational cognitive neuroscience. One hundred and fifteen students completed leadership questionnaires and supplied cheek swabs for genetic analysis. Students with two copies of the methionine allele of the COMT gene (catechol-O-methyltransferase), which is associated with less effective dopamine metabolism at the synapse, scored significantly lower on transformational leadership, and higher on transactional leadership, than students with two copies of the more effective valine allele. Transformational leadership is associated with charisma and the ability to develop followers to their full potential. By contrast, transactional leaders control their followers via punishment and reward. 'The fact that there was a genetic difference between transformational and transactional leadership is very exciting and the next stage of this work is to examine specific leaders and CEOs who are actually working at the moment,' Senior told *The Psychologist*. **CJ**

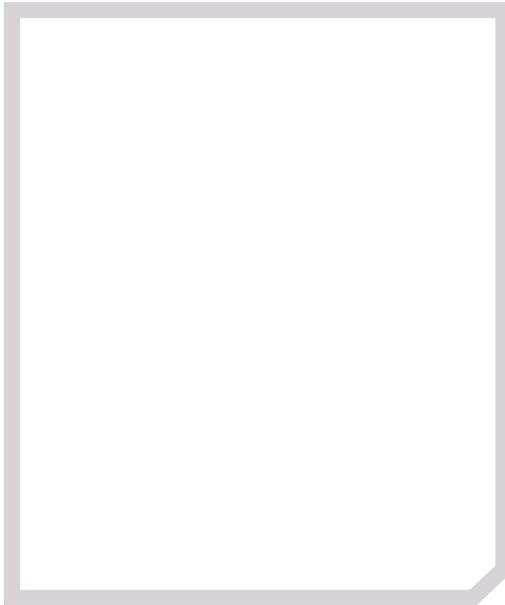
# Approaching adversity

How is it that some children face challenging situations yet emerge as well-rounded, balanced adults whilst similar others battle mental health problems? Resilience, seen as a dynamic buffer against adversity, may provide the answer. But what strategies mediate the relationship between adversity and resilience?

Research by Sophie Leontopoulou (University of Ioannina) hypothesised that coping strategies and emotion regulation will be differentially linked to various types of attachment, which in turn will mediate resilience and adaptive outcomes. In an exploratory study Leontopoulou found a relationship between avoidant coping, emotion suppression and lowered well-being. Approach coping strategies, such as cognitive reappraisal, were linked to less avoidant attachment and less emotional suppression, and were therefore more effective in promoting resilience and protecting against maladaptation. Both avoidance and approach coping strategies linked with attachment to mediate the relationship between adversity and well-being. Results also showed that emotion regulation was a significant predictor of mental health problems. Although not a straightforward causal relationship, there is an interesting pattern of mediators that combine in promoting resilience.

Following on from this talk, Kay Mathieson (University of Sussex), looked at the interplay between temperament, emotion

understanding and peer play and the factors that may form the starting point for adaptive coping strategies in nursery-age children. Importantly, Mathieson wanted to utilise the special knowledge that parents have about their offspring alongside the practitioner's view, and she



found an unexpected convergence of views around a child's prosocial behaviours. Effortful control such as self-regulation and delayed gratification showed a positive association with prosocial and interactive play characteristics, and social competence positively correlated with emotion recognition. Children in high-quality care settings were more likely to identify emotions, perhaps indicating that better-quality care provision perhaps modelled emotion understanding more effectively. The next step is to build upon the importance of parental interaction in day care and look at how this knowledge can be combined with practitioners to inform interaction with children to

best promote adaptive prosocial behaviours.

Continuing the theme of a relationship between emotion and social abilities, Joanne Emery (Cambridge Assessment) presented data linking emotional intelligence (EI) and attainment at GCSE level. Many schools in UK are involved in a government initiative to teach EI, not only to improve interactions and behaviour but also attainment. Looking at a sample of almost 2000 GCSE students, Emery found that total trait EI scores were a strong predictor of GCSE attainment. However, not all children showed the same EI achievement effects in all exam results. EI acted as the strongest predictor where prior attainment was

lowest, indicating that EI perhaps acts as a buffer against previous disappointment. Self-motivation and low impulsivity were the strongest trait predictors across the range of exam results. Questions arise about causal direction, and whether EI can be improved in school. **VB**

## KEEPING AN EYE ON THE TRUTH

Rates of malingering (in other words, feigning deficits that are not there) are thought to lie between 20 and 25 per cent for patients who seek financial compensation. However, detecting malingering for cognitive deficits is extremely difficult. Becky Heaver (University of Sussex) reported promising evidence that pupil size may provide a useful tool in detecting people who fake amnesia. She reported a study in which participants took part in an 'old/new' recognition memory task. During a test phase, participants were presented with items and asked to indicate whether these items had been presented previously or not. It has been reported that pupil size changes during recognition memory tasks as a function of whether items are old or new, with pupil sizes greater for old items. Heaver investigated the effect of asking participants to deliberately give wrong answers during the recognition phase, a situation akin to somebody trying to feign amnesia. She found that behaviour was changed for the recognition task; however, pupil size was not under voluntary control. Pupil size changes to old and new items remained constant regardless of the actual responses provided by participants. In other words, our pupils cannot lie; this finding has the potential to help identify individuals who have a better memory function than they claim. **SC**

## YOUR REPORTERS, AND WEB EXTRA

These reports were brought to you by Victoria Bonnett, Sandie Cleland, Christian Jarrett and Jon Sutton. Numerous extras can be found in the html version at [www.thepsychologist.org.uk](http://www.thepsychologist.org.uk), and much more from the conference will appear over the coming months in the form of source material for articles. The 2010 Annual Conference will be held in Stratford-upon-Avon on 14-16 April.