

## Incentivising healthy behaviours

Carrots and sticks were on the health menu in June as the National Institute for Health and Clinical Excellence (NICE) rolled out guidelines recommending minimum pricing for alcohol, and held a Citizens Council meeting on the use of incentives to boost healthy behaviours.

The recommendation for the introduction of a minimum price per unit of alcohol formed part of new guidance on preventing harmful drinking. Another recommendation was for reducing the availability of alcohol, for example by considering the number of outlets selling alcohol in a given area at particular times.

BPS member Robert West is Professor of Health Psychology and Assistant Director of the Health Behaviour Research Centre at UCL. He told us that the main drivers of alcohol consumption and alcohol-related harm in society are price and availability. 'This has been shown time and time again,' he said. 'Educational campaigns by contrast have been shown to be largely ineffective. So society has a choice: keep cheap alcohol and continue to suffer the consequences of death and misery from accidents, violence, heart and liver disease and cancer that results from it or pay more for drinks and see a reduction in toll of death and misery that results.'

The NICE Citizens Council brings the views of the public to the decision making

at NICE. At the latest meeting, 30 members of the public heard about the Give It Up For Baby scheme based in Dundee, which aims to reduce smoking in pregnant women with the incentive of grocery vouchers; the Pounds for Pounds financial incentive programme to encourage people in Kent to lose weight; and the successful Food Dudes intervention which uses rewards to encourage children to eat more fruit and vegetables (see [www.bps.org.uk/dudes](http://www.bps.org.uk/dudes)). The Council were also told about a Cochrane Collaboration review published in 2008, which found no evidence that 17 incentive schemes had increased smoking cessation rates over the long term. A report on the Council's views on incentives will be published on the NICE website in due course.

Professor West told us it's clear that incentives can increase healthy behaviours but there are two issues which need to be considered in each case: (1) will the incentives have the desired effect and (2) will they also have unwanted side-effects?

'They may not have the desired effect if they are too small or what is being rewarded is not precisely the behaviour you want,' West said. 'For example research into incentives for smokers to stop have so far not found effects that outlast the period when the incentives operate. So vouchers to encourage and help pregnant

smokers to stop during pregnancy looks to be a promising approach, but in other smokers there is little to commend it. Unwanted side-effects can involve people cheating to get the reward or becoming fixated on the reward and forgetting the other, more important, reasons for changing behaviour.'

For anyone considering developing an incentive scheme, another BPS member, Professor Theresa Marteau, Director of the Centre of Incentives in Health – a joint collaboration of King's College London, Queen Mary University of London, and the London School of Economics – published a *British Medical Journal* analysis last year with the following advice: 'Schemes targeting habitual behaviours such as smoking or physical inactivity may be more effective if they provide valued incentives for initial as well as sustained behaviour change, delivered intermittently and as part of effective behaviour change programmes. For schemes aimed at initiating relatively simple behaviours in low income populations such as clinic attendance... small incentives delivered immediately seem most effective.' CJ

**I NICE guidance on preventing harmful drinking:** <http://guidance.nice.org.uk/PH24>  
**BMJ analysis, 'Using financial incentives to achieve healthy behaviour':**  
<http://dx.doi.org/10.1136/bmj.b1415>

# Life and death at the Maudsley

Last year, 'right-to-die' campaigner Debbie Purdy, who has multiple sclerosis, helped prompt the publication of new guidelines on assisted suicide from the Director of Public Prosecutions. Purdy had been concerned that her husband would be sent to jail if he aided her reaching the Dignitas clinic in Switzerland. The clarified guidelines suggest that if his motives are compassionate he won't be charged. However, it still remains illegal for doctors in the UK to assist their patients to die. The 39th Maudsley debate held in April examined this issue with the house arguing that the existing law should be overturned to allow doctors to assist some people with suicide.

Proposing the motion was philosopher Baroness Mary Warnock. She argued that palliative care, while helpful and successful, is limited in many places such that many patients are left in considerable discomfort. The existing law, she said, is not respectful of people's freedom and decision making. A doctor may not believe it morally right to assist someone's death, but that judgement shouldn't be imposed on the patient.

Another Baroness, Ilora Finlay, a professor of palliative medicine, opposed the motion and said there were really two questions at hand: whether it should be legal for anyone to assist a person to die, and if so, whether doctors should be expected or allowed to do this.

On the first point, Finlay said it is not possible to legalise assisted dying and at the same time ensure public safety. 'What

about people being discreetly manipulated?' she asked. 'Or what about people acting voluntarily out of a desire to spare others the burden?' Moreover, Finlay argued that were assisted dying ever legalised, it should be kept separate from the healthcare system. Medicine is about saving people's lives, she said, and for doctors to assist in dying would pull them in opposing directions.

Next up, seconding the motion, was philosopher and medic Professor Ray Tallis. He confessed that he used to be sympathetic to those who are opposing the motion but that he'd looked at the empirical evidence and changed his mind.

For example, he said that increasing the availability of palliative care doesn't alleviate all suffering. Tallis pointed to the State of Oregon where assisted dying has been legalised. Oregon has some of the best palliative care in the country, Tallis noted, yet 90 per cent of those who sought assisted dying did so in that context. Neither does legalised assisted dying deter investment in palliative care, Tallis argued. In the Netherlands, assisted dying has gone hand in hand with increased investment in palliative care.

What about patient–doctor trust? Far from breaking down this trust, Tallis said that a survey of nine European countries found that patient–doctor trust was highest in the Netherlands. The current UK legal framework means that many people are currently assisted in dying via a 'clinical, ethical and legal fudge', for example through continuous sedation,

starvation and dehydration. Tallis argued that a change in the current 'unspeakably cruel' law would engender in patients a sense of control, even if they chose not to use it.

Last to speak, seconding the opposition to the motion, was Professor Rachel Jenkins, who quoted mental health survey data showing that only a minuscule proportion of people with suicidal ideation are free of mental illness. Once their underlying mental illness has been treated, Jenkins argued, 98 to 99 per cent of suicidal people no longer want to die. This translates to the palliative context, Jenkins said: if the right care is provided and fears are addressed, requests for assisted death reduce.

Jenkins also highlighted the fact that depression and other mental disorders impair people's judgement, even in mild and moderate cases. Combined with the fact that physicians are notoriously poor at detecting depression, especially in patients with physical illness, Jenkins said there was a significant risk of impaired capacity in patients seeking assistance to die. 'Palliative care knowledge is now excellent,' Jenkins said, 'we should be devoting our energy and skills towards this, not assisted suicide.'

Before the debate, 47 people voted for the motion, 32 against with five abstaining. Afterwards, equal numbers (43) opposed and supported the motion with three people abstaining. CJ

**I The Institute of Psychiatry welcomes suggestions for future debates. See <http://bit.ly/aCVCaQ>**

## The long and the short of journals impact

Short-form journal articles have more scientific impact per page than their longer cousins, according to an analysis by Nick Haslam at the University of Melbourne (published in *Perspectives on Psychological Science*: available at <http://bit.ly/bUldXB>).

Critics of established publishing practices in psychology, such as Denise Park at the University of Texas at Dallas and Shelley Taylor at the University of California, have argued that the house style of many journals is too long-winded and inaccessible, with drawn-out review

procedures. They've called for journals to publish more snappy, short-form articles (for example, see 'How can we improve psychological science', May issue of *The Psychologist*). In light of this, Haslam compared the citation impact of short articles published in *Psychological Science*, *Cognition* and the *Journal of Experimental Social Psychology* between 2002 and 2007 with the longer articles in those same journals.

Whilst for each journal the average longer article accrued more citations than the average shorter article, the shorter

articles achieved more citations per page – that is, they delivered more scientific bang for your buck.

'Although short articles tend to have less citation impact than their heavyweight cousins, they punch above their weight class – they are more efficient in converting journal pages into citation impact,' Haslam wrote. He added that this means a journal composed entirely of short articles would be expected to have greater...influence than one with the same page count that contained only long articles.' CJ

## VISIT OUR SCHOOLS

The Education and Employers Taskforce charity is planning a national campaign to persuade leaders from all sectors to visit state schools and colleges in order to help shape the motivation, skills and employability of young people. Taking part is completely free and only requires two hours of your time in the week of 18–22 October to visit a school/college in your locality.

See [www.visitourschools.org](http://www.visitourschools.org) for further information and to register.

## DEPRESSION GUIDE

The mental health charity Depression Alliance has launched a new guide, *Daring to Implement: Case Studies to Inspire Commissioning of Services for Depression and Anxiety*. The guide details eight examples of excellence in services for depression from across the country, and identifies challenges and recommendations for NHS commissioners and healthcare professionals.

Describing the key ingredients for a successful service Emer O'Neill, Chief Executive of Depression Alliance, said: 'Common to all the exceptional services identified by Depression Alliance for the report, was the acceptance that people with the depression need treatment and services to meet their needs and the offering of real choice in what and how people receive treatments.'

## ADOLESCENCE AWARD

The European Association for Research on Adolescence (EARA) has presented the 2010 Honorary Lifetime Award to Professor Leo B. Hendry (University of Glamorgan), a Fellow of the British Psychological Society. Professor Hendry received the award for outstanding contributions to the study of adolescence and for his important role in supporting and developing high quality research in Europe. In her eulogy, the EARA president, Professor Dr Inge Seiffge-Krenke, outlined Hendry's successes in crossing boundaries between countries, disciplines and research methodologies.

# New centre to study brain ageing

A £5 million grant has been awarded to a team aiming to understand how brain ageing in healthy people affects abilities such as language and memory.

Drawn from public health, clinical neurosciences and psychology at the University of Cambridge and the MRC Cognition and Brain Sciences Unit, the Biotechnology and Biological Sciences Research Council-funded group will be called the Cambridge Centre for Ageing and Neuroscience.

Professor Lorraine Tyler of the University of Cambridge, who is leading the research, said 'Our mental abilities don't suddenly start to decline as we enter retirement. In fact, many are retained right into our eighties and we are often too quick to attribute normal lapses like forgetfulness to the effects of age.'

Understanding the complexities of how ageing affects the brain will be crucial for older people to be able to live fulfilled lives and contribute fully to society. We hope that this research will not only add to this understanding, but will also

have an important impact on how we view the ageing process, as one of change, rather than inevitable deterioration.'

The study will recruit 3000 people aged 18–88 years from the general population to create a large library of information on how healthy brain ageing affects mental abilities to different degrees. The team hopes this will help in identifying older people who might be helped by therapies, and provide a lasting resource for future researchers to draw on. **JS**

# Royal Society Fellowship

Comparative psychologist Professor Nicola Clayton of the University of Cambridge was among 44 new Fellows elected to the Royal Society in May. 'It is my dream come true and I am on cloud nine,' Clayton told *The Psychologist*. The Royal Society cited Professor Clayton's contribution to our understanding of animal intelligence and her theory that intelligence evolved independently in apes and corvids, including crows and jays. 'First and foremost I am spellbound by a bird's-eye view on animal cognition,' Clayton said.

Among Clayton's current projects, she is collaborating with Mark Baldwin – Artistic Director of Rambert Dance Company – using future

planning by jays as inspiration for a contemporary dance piece (see <http://ht.ly/1Ptjg>).

Does she have any advice for budding researchers? 'Just to trust your instincts and if it

"smells right" then go for it,' Clayton said. 'I guess the other thing for me is balance – a healthy mind needs a healthy body. For me that combination is achieved by working hard by day on research I love, and dancing my socks off by night! I'm now able to combine the two thanks to becoming the Rambert Dance Company's Scientific Advisor.'

Professor Clayton joins several other psychologists previously elected to the Royal Society Fellowship including: Professors Uta Frith, Lawrence Weiskrantz, Endel Tulving, Tim Shallice, Alan Baddeley, Chris Frith, and the late Richard Gregory. **CJ**

## MRC research strategy 'Good news for psychologists'

The Medical Research Council (MRC) in its *Review of Mental Health Research* has warned that the worldwide funding for mental health research is not proportionate to the scale of the problem. However, it noted specific areas of UK research strength, many of them involving psychology researchers, on which future opportunities could be built.

Published in June, the review said that the computerised CANTAB neuropsychological battery, developed in the UK, is now used worldwide for cognitive assessment; that the development and evaluation of Cognitive Behavioural Therapy (CBT) is a UK strength; that there are pockets of excellence in ADHD and autism research; that the UK is at the forefront of neuroimaging research into social cognition, emotion and empathy; and that our country's expertise in the mental ill health and problem behaviours associated with intellectual disability 'does not exist elsewhere in the world.' The contribution of UK research in areas of biology and genetics was also highlighted.

The review was commissioned to advise the Office for Strategic Coordination of Health Research on priorities for the next two to seven years. Members of the review's steering group, including BPS members Professor Til Wykes of the Institute of Psychiatry and Professor Barbara Sahakian of the University of Cambridge, conducted workshops with academics, clinicians and representatives from government and charity.

Drawing on the UK's current strengths, the review advises that the country's medium-term priorities should be on prevention of mental disorder, promotion of well-

being, and accelerated research and development into new, more effective treatments for mental illness. Stigma and access to patient data are cited as potential obstacles. Specific recommendations for the future include developing an NHS-based large-scale data set, supporting multidisciplinary research, reducing stigma and enhancing research training, including boosting incentives for research careers.

'The MRC's new research strategy is good news for clinical, health, cognitive and developmental psychologists and anyone involved in providing health care' Professor Wykes, Director of the Mental Health Research Network, told *The Psychologist*. 'There is an emphasis on the life span and particularly on cognitive development and the implications of supporting and developing cognitive capacity. It also describes how the best research is based on multidisciplinary contributions where psychology has a key role to play.'

Wykes added that the new report acknowledges the importance of both applied and research psychologists in contributing to the development of therapies. 'The MRC report will guide the priorities in mental health research in the future within the National Institute of Health Research, the Economic and Social Research Council (ESRC) and the MRC, so it is vital for psychologists to engage with this research agenda,' she said. 'The report also acknowledges the lack of capacity for research in a number of disciplines and suggests increasing the capacity of clinical psychologists to take part in research.' CJ

**Access the report online:**  
<http://bit.ly/dwlClx>

## RESEARCH FUNDING NEWS

The Big Lottery Fund has funding available under the **Healthy Minds Northern Ireland** fund. To receive funding projects must meet at least one or more of the following themes and priorities:

- | Themes: older people and isolation; adult mental health; alcohol and its effect on families; life changes and transitions.
- | Projects: supporting activities that promote mental health and well-being; supporting projects from organisations that work directly with people with mental health and well-being issues; raising awareness of mental health and well-being.

Voluntary, community and statutory organisation in Northern Ireland can apply. Applications are now open and the closing date for applications is 23 March 2011.

| <http://bit.ly/9615wT>

The National Institute for Health Research Public Health Research Programme currently has funding available to answer the following research questions:

- | **Walking and Cycling to Work:** Do employer schemes to encourage employees to walk or cycle to work increase employees overall level of physical activity, and which components of schemes are predictive of success? This research seeks to assess the impact of existing schemes designed to encourage employees to be more physically active.
- | **Alcohol and Young People:** What is the effectiveness and cost-effectiveness of interventions based in educational establishments combined with community and/or family-based interventions in preventing hazardous drinking of alcohol by school-aged children and young people?

The closing date for both calls is 23 August 2010.

| <http://bit.ly/9DLIN0>

The ESRC is undertaking work to **assess the role new technology can have in enhancing older people's health and well-being** in supporting independent living. Social and behavioural studies are part of this, including understanding the low demand for new assisted living technology from individuals, families and organisations and how to address this. Expressions of interest are required by 29 July 2010.

| <http://bit.ly/9RWY55>

The Epilepsy Foundation has a range of **grants to support research into the treatment, prevention and cure of epilepsy**.

- | Pre-doctoral Research Training Fellowships: to provide support for dissertation research for those interested in establishing a career in epilepsy research. Psychology is an eligible area of interest.
- | Post-doctoral Research Fellowships: to develop research experience in basic laboratory research or in human clinical studies.
- | Research Grants: for early-career researchers to support biological or behavioural research into epilepsy.

The closing date for all applications is 31 August 2010.

| [www.epilepsyfoundation.org/research/grants.cfm](http://www.epilepsyfoundation.org/research/grants.cfm)

info

For more, see [www.bps.org.uk/funds](http://www.bps.org.uk/funds)  
Funding bodies should e-mail news to Elizabeth Beech on [elibee@bps.org.uk](mailto:elibee@bps.org.uk) for possible inclusion

# To work, rest and play in isolation

In a bid to boldly not go anywhere for longer than ever before, six highly trained men, three of them Russian, one Chinese, one French and one Italian-Columbian entered the confines of simulation spacecraft in June as the full Mars 500 project finally 'launched' (see also 'Mars attracts', News, September 2009).

The plan is for the men to remain entombed in their new home at the Moscow Institute for Medical and Biological Problems (IBMP) for the next 17 months, in a simulation of the mental and practical challenges involved in a crewed flight to Mars. The project will involve over one hundred experiments, many of them conducted by psychologists from around the world. To find out more, *The Psychologist* caught up with psychologist Tomáš Srb, Principal Investigator for the Sociomapping project at the Czech-based QED Group.

## Is the Mars 500 project unique?

There have been several similar isolation

experiments (e.g. HUBES, ECOPSY-95, SFINCSS) in which we also participated, but this experiment is unique in terms of simulating the whole journey to Mars and back, including landing on the surface of Mars [after the outward 'journey', half the crew will exit the craft and conduct experiments on a mock Mars surface for 30 days]. Altogether it is 520 days, so there has not been such a long experimental isolation done before. That's why there are more than 100 research studies involved in the experiment. This is also a unique opportunity for sharing experience and knowledge among research teams across almost the world.

## What are you hoping to find out?

We're studying the group dynamics and group cohesiveness using Sociomapping questionnaires that were validated in previous experiments. Our main task is to analyse and monitor relations among crew members and also their relations to the mission control centre. We will

provide regular feedback to the mission control centre and the crew. Using the Sociomapping method we will provide information which can be useful for the crew to perform better as a team and also information about potential misunderstandings or conflicts. This way we will try to ensure that the crew will not fail. In terms of the research tasks, we want to validate this specific system based on Sociomapping, which was developed for space flight research so it can be used in real long-range space flights. Our research is also focused on refining our understanding of the specific patterns in communication which can predict behaviour of the group in the near future (e.g. a conflict).

## How will you do that?

We collect the information we need through special electronic questionnaires directly from the crew. So all the crew members will regularly fill in this short questionnaire, in which they will evaluate

key factors, such as mutual communication, cooperation support, etc. This data will be encrypted and sent to our team which will analyse it using the Sociomapping method. Then we will send all the results (Sociomaps, reports, etc.) back to the psychological team in IBMP and also to the crew. The Sociomapping method enables us to analyse and visualise the current situation but also the changes in relations over time, so we will see all the changes in communication and cooperation as if we had synoptic maps of the kind used for weather forecasting.

#### When do you hope to have some results?

We will have the very first result after 14 days from the beginning of the experiment, so if there are any interesting findings we can potentially publish them even during the experiment. However, the real results of our research are expected after the experiment is over, at the end of 2011. Our results will be based on our own data and also on comparisons with the findings of other research teams, so Mars 500 offers us a good opportunity for our system to be cross-validated through data obtained from multiple sources. For example, the crew will be continuously monitored by electronic sensors so it will be possible to monitor their actual physical proximity to each other at all times. Obviously it will be very interesting and useful to correlate this physical spatial distance with the 'social distance' which is measured by Sociomapping.

#### Will your findings have relevance to team work in other fields outside of space travel?

We believe there is potential for our method to support the effective performance of isolated teams engaged in long-term missions. We also hope that after this experiment we will understand better how small groups and their members behave, especially under stressful situations. This can help develop our understanding of the prediction of group conflict, inform conflict resolution and ways to enhance team performance.

Sociomapping was developed through research almost 15 years ago on teams operating in stressful or extreme environments. Research with



**Tomáš Srb – will seek to use Sociomapping to reveal patterns in team behaviour**

Sociomapping has also informed the development of commercially available team assessment and development toolkits, which are currently available in Europe, the US and the UK. These toolkits have been used to support management teams as well as other

research projects. Team Sociomapping is also used in the area of sport psychology.

The Team Sociomapping technique is designed to reveal patterns in team behaviour and key performance indicators for team success over time providing a method for both monitoring and evaluating team dynamics. We've found this feature in particular to be a valuable way of supporting business clients with long-term support of team coaching and team development. Some of the results can be applied to any small group which is more or less isolated (submarines, combat troops or other team-working on special tasks).

In cooperation with the IBMP we also plan to participate in the ESA project CONCORDIA which is another isolation experiment held in Antarctica and which will provide us with further opportunities to extend the research and look for common factors. **CJ**  
**I For more on the psychology of space travel see New 'horizons', cover feature December 2008: <http://ht.ly/1U37J>**

## CHILD MORALITY AND RESPONSIBILITY

**Two boys aged 10 and 11 were found guilty in May of the attempted rape of an eight-year-old girl, once again posing awkward questions about child morality and responsibility.**

Whereas the child killers of James Bulger, and more recently the Edlington brothers, aged 11 and 12 (charged earlier this year for the abuse and torture of two other young boys), were widely demonised by the press, the boys accused of rape attracted a more mixed response.

Writing in *The Times*, for example, Ken Macdonald QC, former Director of Public Prosecutions, argued that it was inappropriate for children to be tried in adult courts. "‘You show me yours and I'll show you mine’ litters every playground in the country," he said. "When did we forget?"

Can psychology help resolve these kinds of cases, by addressing issues of sexual maturity and experimentation? Certainly pertinent research exists. For example, the defence in this case argued that one of the boys didn't even know what sex is. Yet this isn't perhaps as exculpatory as it seems. Research by Jennifer Brown, Professor of Forensic Psychology at the University of Surrey, and colleagues, compared adolescent child molesters and non-offenders and found that the molesters had less sexual knowledge than the controls (*Journal of Sexual Aggression*: <http://ht.ly/1U6vE>).

'It is hard to say with any precision without knowing the details, but there clearly is a difference between normal sexual experimentation and exploitation,' Brown told us. 'Ten and eleven does seem young for this apparent behaviour and there may be underlying causes for this precociousness.'

Another line taken by the defence and repeated in the press was to highlight the eight-year-old victim's retraction of her story on the witness stand. Pertinent here is psychology research showing that interviewer style can affect the suggestibility of child witnesses. To cite just one example, Jehanne Almerigogna and colleagues in 2008 found that children were more likely to answer leading questions affirmatively when interviewed by a fidgeting, unsmiling woman (*Journal of Experimental Child Psychology*: <http://bit.ly/apyK57>).

'Again it's difficult to say in a particular case,' Brown said, 'but willingness to please and susceptibility to trying to agree with what the adult suggests is not unusual and would in itself not imply a child had not had the experiences first claimed.' **CJ**

**I See also the article on p.556 by Jennifer Brown, with Miranda Horvath**

# The operatic brain

The idea that the brain changes and adapts according to how you use it, including through adulthood, is now widely accepted in psychology and neuroscience. Some of the most striking examples of this have come from studies of musicians. It has been shown, for instance, that string and keyboard players have more neural tissue given over to the control of the hands and

fingers than do non-musicians. However, little researched until now is the brain reorganisation associated with professional singing.

Like the playing of a musical instrument, singing involves skilled muscle movements – indeed, more than 100 muscles are used – but there are also some differences between singing and instrument playing. For example, you can watch your own fingers tap out a tune on a keyboard but you can't 'see' your muscle coordination whilst singing.

Boris Kleber's team had

10 professional opera singers, 21 singing students and 18 non-singer controls lie in a brain scanner and sing six phrases from the first stanza of the Italian aria 'Caro mio ben'.

The most striking finding was that greater experience with opera singing was associated with more activation of the somatosensory cortex whilst singing. This part of the brain processes incoming signals from the body, and the finding suggests that singing expertise is particularly associated with enhanced processing of where the vocal muscles are positioned in space. This makes sense given that you can't 'see' yourself sing and must instead rely on feedback from the vocal muscles.

As you might expect, studies with people who can play musical instruments have generally found increased activation of the primary motor cortex – a key brain area involved in sending commands to the muscles. However, in the current study, it was only the most experienced opera singers who showed exaggerated activity in this brain area.

Another neural characteristic associated with expertise in opera singing was more activity in the dorsolateral prefrontal cortex, an area involved in working memory. The researchers speculated this could be because opera singing usually involves singing and acting at the same time, so the experts may have developed 'more resources for performance monitoring'.

More singing experience was also linked with more activation in the inferior parietal cortex, possibly reflecting comparison of 'the actual kinesthetic feedback with the kinesthetic "expectation" for the produced sound', and with greater activation of the cerebellum, which is known to be involved in coordination.

'Opera singers must routinely adapt their vocal system to unusual postures during singing as part of their stage play,' the researchers said. 'It is likely that this group has a particularly developed adaptive system to cope with such demands, which might require increased cerebellar involvement.'

In the May issue of *Cerebral Cortex*

## Drawing out the truth

In the May issue of *Applied Cognitive Psychology*

Forget expensive fMRI-based lie detection or polygraph tests, give your suspect a pencil and paper and get them to draw what happened – a new study suggests their artistic efforts will betray whether they are telling the truth or not.

Aldert Vrij's new study involved 31 police and military participants going on a mock mission to pick up a package from another agent and then answering questions about the exchange. Crucially, they also drew the scene. Half the participants acted as truth-tellers, the others played liars.

Vrij's team reasoned that clever liars would visualise a different location and therefore forget to include the agent who participated in the exchange. This thinking proved shrewd: liars indeed tended not to draw the agent, whereas truth-tellers did. In fact, 80 per cent of truth-tellers and 87 per cent of liars could be correctly classified on the basis of this factor alone.

'These are high accuracy rates and will be difficult to exceed by any traditional verbal, nonverbal or physiological lie detection tool,' Vrij's team said. 'In fact, we would certainly expect such tools to fare worse.'

Another distinguishing factor was the perspective of the drawing. Fifty-three per cent of truth-tellers penned a drawing from a first-person perspective; 47 per cent opted for a birds-eye view. By contrast, 81 per cent of liars went for the birds-eye view and just 19 per cent for the first-person perspective.

## The big, the bad, and the boozed-up

In the July issue of *Journal of Experimental Social Psychology*

There are some obvious practical reasons why you might want to avoid provoking the big, drunk guy in the bar. After all, he's bigger than you. However, according to a new study, there's another more psychological reason to be wary – heavier men are, on average, more likely to be aggressive when drunk than are lighter men. Nathan DeWall (University of Kentucky) and colleagues say their finding is consistent with evolutionary theory and research on embodied cognition.

Over five hundred women (average weight 149 lb) and men (average weight 183 lb), aged 21 to 35, consumed either an alcoholic beverage or a placebo drink before taking part in a reaction time contest. The winner of each round had the opportunity to inflict an electric shock on their opponent. Their choices of how strong and long a shock to inflict was the measure of aggression. Unbeknown to the participants, their opponent was fictitious and the game was fixed so that they won 50 per cent of the rounds.

The key finding was that among the male participants only, alcohol interacted with body weight to predict aggression. That is, heavier men who had an alcoholic drink tended to be more aggressive than those who had an alcohol-free placebo drink. By contrast, having an alcoholic vs. placebo

drink made little difference to the aggression of lighter men.

Another way of looking at the results was that, among men who had the alcoholic drink, those who were heavier tended to be more aggressive. For the female participants, their weight bore no relation to their aggressiveness. These same findings were replicated in a second study with a further 327 men and women.

It makes sense in terms of evolutionary theory that bigger men should be more prone to aggression, the researchers said, because 'they're more able than weaker men to inflict costs on others in conflict situations.' The same isn't true for women because even those who are larger will usually be smaller and weaker than potential male adversaries.

An association between weight and aggression is also predicted by embodied cognition, the researchers said. This is the idea that the way we think about abstract concepts is rooted in physical metaphors. One example is that we think about importance in terms of weight, thus leading heavier people to feel more important and entitled to special treatment.

Consistent with both these theoretical arguments, past research has indeed found that physical size is related to aggression. However, DeWall's team said their new study is the first to show that weight is a predictor of alcohol-induced increases in aggression. 'It seems that alcohol reduced the inhibition for heavy men to "throw their weight around" and intimidate others by behaving aggressively,' they said.

## Introspection reborn

In the May issue of *Cognition*

Introspection – people reporting their subjective experience of their own mental processes – was a favoured technique among psychology's founding fathers. Today, by contrast, it has a poor reputation, often dismissed as unreliable and unscientific. But in a new paper published in the May issue of *Cognition*, Sebastien Marti and colleagues (Inserm Cognitive Neuroimaging Unit, France) argue that introspection can be accurate and illuminating, providing a useful addition to objective measures.

Ten participants completed a simple dual-task paradigm. First they listened to an auditory tone and pressed one of two keys as fast as possible to indicate whether the tone was high or low pitch. Straight after, they pressed one of two keys as fast as possible to indicate whether a 'Y' or 'Z' had subsequently appeared on a computer screen. When the second decision stage comes too soon after the first, reaction times to the second stage are prolonged – an established effect known as 'the psychological refractory period'.

The key twist in this study is that the researchers didn't just record participant reaction times, they also asked them to make several subjective estimates after each trial: how long they'd taken to respond to the tone; how long they'd taken to respond to the letter; how soon the letter appeared after the tone; and whether the letter appeared before or after they'd made their decision about the tone. Reaction times didn't vary

on introspection versus control trials, suggesting, importantly, that introspection didn't interfere with the basic cognitive processes required to complete the task.

Participants displayed the usual 'psychological refractory period' and their subjective estimates of their own reaction times and other factors, although underestimates, were mostly highly correlated with the objective measures. The accuracy of introspection only went awry when the letter appeared too soon after the auditory tone or simultaneously with it. On these trials, not only did participants' reaction times to the letter slow down, it seems they weren't able to start an internal recording of the duration of their reaction time (to the letter) until they had finished processing the tone. Their estimates of the gap between the tone and letter also became inaccurate. It's as if they weren't able to consciously

perceive the letter until they'd finished processing the tone. It was a similar story regarding their judgement about whether the letter appeared before or after their auditory decision. Participants were accurate when there was a big enough time delay between tone and letter, but their insight was compromised when the letter appeared too early.

'For the first time, we were able to reconstruct the sequence of conscious events in a psychological refractory period trial based on subjects' introspection,' the researchers said. 'Overall, the present study showed that quantified introspection is a powerful tool. After each trial, participants can answer multiple questions that provide remarkably coherent data which are not always objectively true, but can be used to paint a consistent picture of the subjective phenomenology of an average trial during a cognitive task.'



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# Children, psychology and the reality of TV

Kairen Cullen on ethical aspects of participation

When television and psychology, two major aspects of our social world, intersect, the opportunities and challenges are many. They are no more apparent than when children and young people are involved. Judging from various letters to *The Psychologist*, such as those generated last year by the Channel 4 series *Boys and Girls Alone*, many Society members hold deep concerns about the possible harmful effects resulting from young people's participation in TV productions. This has prompted others to share their work in the area, for example, Máire Messenger Davies and Nick Mosdell, whose 2001 report to the Broadcasting Standards Commission (available via <http://cmr.ulster.ac.uk/policy.php>) is required reading for anyone interested in joining the debate about children in reality programmes.

Davies and Mosdell's paper reviewed the relevant legislation, the regulatory and internal producer guidelines, and production company procedures. They made a number of recommendations for ensuring ethical professional practice, including allowing children to be given as much age-appropriate information about the project as possible, independently of parents/carers, along with the opportunity to ask questions and to withdraw if they so wish. Although references are made to the need for 'professional advice', the paper does not specify professional psychology input. This is not the case for guidance resulting from a recent inquiry into regulatory procedures for child participants, led by Sarah Thane. In her report to government (see <http://bit.ly/dehyTI>), Thane recommends that programme makers are advised to seek the advice of 'an appropriately qualified professional, such as a child counsellor or psychologist'.

The Society contributed to the Thane inquiry through work done by the media

ethics reference group chaired by John Oates. In this group, discussion highlighted the fact that relatively few psychologists are involved at the level of having editorial control. It seems more common for production companies to approach and commission psychologists either for front-of-camera presentation work or for screening and support of participants and production team prior to, throughout and after filming. My own involvement in the latter type of work has seen me contribute to productions on topics as diverse as obesity, public speaking, magic, and, more recently, an autism and theatre project.

Each project, of course, is different, but all involved want to ensure their young participants understand as fully as possible what the programme experience may entail, and to resolve worries or possible threats to potential participants' general psychological and overall well-being. I construe my work as research in practice, and in order to address the questions presented by programme makers and to satisfy the regulatory demands I have to work hard and usually quite rapidly, to clarify what the programme experience will entail. My methodology and methods are drawn from years of work with children and young people in many other educational, family and community contexts and generally involve a great deal of discussion, games, imagery and observation. Aims for the work include communicating at a level that is clear, engaging and child-centred, while accommodating the usually quite limited

time and location constraints and ensuring as thorough and systematic a job as possible. I am often asked to undertake 'standard' psychological screening in initial calls from television companies and have to explain the rationale for a customised approach. This was especially the case for the autism and theatre series, with additional needs affecting social communication, interaction and behaviour.

Although the field of professional psychology input to television work may be a relatively new and unfurrowed one, many of the core issues to be researched are familiar ones. There are a number of challenges, however, that are presented in this work, such as gathering relevant data as rapidly as possible from as wide a source as possible, clarifying with production staff exactly what the programme experience will entail, understanding where the entertainment factor lies and the related possible risks to the psychological well-being of participants and, in keeping with all good risk assessment, the implications for risk management. All of these aspects have to be identified, written up and fed back in next to no time, for production work is always time hungry and everything seems to have to happen at a prodigiously rapid rate. In addition, as an applied practitioner committed to working as systemically as possible, there is always the intention to not only inform work with the individual child but also to inform the programme as a whole and possibly the production team's approach for their work in general.

Television and psychology may represent two very different perspectives on the world, but as I see it they can contribute to and complement each other in many positive and fascinating ways for the benefit of viewers, participants and professionals alike. A 2009 special issue of the *British Journal of Developmental Psychology*, edited by Kevin Durkin and Mark Blades, was devoted to examining the contribution the media can make to cognitive, linguistic, social and civic development. Observing the experiences of many young people actually involved in television I would suggest that additionally, joy, inclusion and even a kind of healing may well result for some individuals. Therefore, when considering the ethical aspects of children and young people's participation, one question might be 'Is it ethical to *not* bring professional psychology and television together?'



contribute

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