

Towards an activity map of the brain

The Obama administration plans to invest in a project to create an activity map of the brain, the ambition of which is being compared to the space programme that landed a man on the moon. Delivering his State of the Union address in February, President Obama said: 'Every dollar we invested to map the human genome returned \$140 to our economy. Today, our scientists are mapping the human brain...'

And that was the only hint, until the next day the Director of the NIH, Francis Collins, tweeted 'Obama mentions the #NIH Brain Activity Map in #SOTU'. The following weekend, the scale, if not the detail, of the project was made clear in a front-page *New York Times* article that claimed the Obama administration is planning a decade-long project to 'build a comprehensive map of [the brain's] activity, seeking to do for the brain what the Human Genome Project did for genetics'. The news comes hot on the heels of a €multi-billion EU announcement to create a computer model of the entire brain (see February News).

At the time of writing in March, there has yet to be a formal announcement from the US project. However, further details have started to emerge from some of the scientists involved in the 'Brain Activity Map' (BAM). Miyoung Chun, Vice President for Science Programs at The Kavli Foundation in Oxnard, California, is a key player. She told *Nature Medicine* that the project arose out of a workshop held at the Kavli Royal Society International Centre in Chicheley, Milton Keynes in 2011, involving her own foundation together with the Allen Institute for Brain Science and the London-based Gatsby Charitable Foundation. 'We understand how brain activity works at the micro and macro levels, but we don't know the in-between,' Chun told *Nature Medicine*. 'It was clear from that very first day when the idea first came up that this was an unmet need.'

Clues to the nature of the project can also be found in a position paper published in the journal *Neuron* last year by many of the BAM scientists, including Chun (see tinyurl.com/bdc84f8). The abstract summarises the main idea: 'The function of neural circuits is an emergent property that arises from the coordinated activity of large numbers of neurons. To capture this, we propose launching a large-scale, international public effort,



President Obama referred to the project to map the human brain in his State of the Union address

the Brain Activity Map Project, aimed at reconstructing the full record of neural activity across complete neural circuits. This technological challenge could prove to be an invaluable step toward understanding fundamental and pathological brain processes.'

In the paper itself, the authors outline a five-year ambition to map the entire brain activity of the roundworm and a 10-year ambition to map the brain of the more complex fruit fly, 'or the CNS of the zebra-fish (around 1 million neurons), or an entire mouse retina or hippocampus, all under a million neurons.' Longer-term, the researchers refer to mapping the entire neocortex of an awake mouse and proceeding towards primates. 'We do not exclude the extension of the BAM Project to humans, and if this project is to be applicable to clinical research or practice, its special challenges are worth addressing early,' they add. According to *Science Insider*, this is exactly what's happened, with the initial proposals having been adapted with help from the White House Office of Science and Technology Policy and others so as to bring human applications to the fore.

Psychologists and neuroscientists have wasted no time in taking to the internet to share their thoughts about the ambitious plans. Writing for the *New Yorker*, Gary Marcus (Director of the NYU Infant Language Centre) at first suggested that Obama was backing the wrong plan. 'What we need is not simply

a wiring diagram of the brain...,' he said, 'but an understanding of how brain circuits work, the language the brain uses to encode information, and an understanding of how that circuitry works together to govern human behavior.'

However, in a later update Marcus sounded a more reassured tone after speaking to one of the BAM scientists, Rafael Yuste, co-director of Columbia University's Kavli Institute for Brain Science. Yuste explained that the aim is not to create a static wiring diagram (akin to the related Connectome project; see News, July 2012), but to visualise an entire brain as it functions. 'If the commonly-used fMRI technique peers at the earth from ten-thousand feet, the BAM project aims to finally land boots on the ground and watch the action from close up,' Marcus said.

Another NYU psychologist Steve Fleming used his *Elusive Self* blog (tinyurl.com/alpbo75) to highlight the need to study the mind alongside the brain. 'Studying one level without the other is rather like building the Large Hadron Collider without also investing in theoretical physics,' he said. 'The new technologies championed by the BAM scientists will produce a rich harvest of data about the brain, and they are a crucial part of a long-term investment in the brain sciences. But without similar investment in the mind sciences we will be left puzzling over how the pieces fit into our everyday lives.' ☐

Publishing psychology's 'dirty little secrets'

Several British psychologists, including BPS Associate Fellow Keith Laws and Dorothy Bishop, are on the editorial board of a new open-access psychology journal *BMC Psychology* (see www.biomedcentral.com/bmcpsychol) that sets out an explicit intention to 'put less emphasis on interest levels, provided that the research constitutes a useful contribution to the field'.

Writing for the *Guardian* website, Professor Laws at the University of Hertfordshire explained that the remit of the UK-based journal 'unquestionably includes null results and replications and the more central role they must play within the discipline. We cannot avoid the conclusion that psychologists, editors and reviewers have conspired to deny the rightful place of negative results and the importance of replication – psychology's dirty little secrets. We must change.'

Across the pond, similar initiatives are being put in place to ensure the scientific rigour of the discipline. In March, the journal *Perspectives in Psychological Science*, published by the Association for Psychological Science based in Washington DC, announced a new article type: 'Registered Replication Report', which will feature 'multi-lab, high-quality replications of important psychology experiments along with comments by the authors of the original studies'.

In its mission statement, the journal states that the new format 'fortifies the

foundation of psychological science by publishing collections of replications based on a shared and vetted protocol'. It further states that this will make it possible to estimate the true size of experimental effects (see psychologicalscience.org/index.php/replication).

These moves come after a series of research fraud scandals in psychology; concerns about widespread 'questionable' research practices; as well as rising doubts about the replicability of many reported psychological effects, especially in the field of social priming (see various *Psychologist* news reports over the last two years, and our special issue: tinyurl.com/psycho0512).

Also in March, the University of Virginia psychologist Brian Nosek launched the Center for Open Science (centerforopenscience.org). The Center plans to develop software tools that will make it easier for researchers to archive and share their work, bringing greater transparency to science. The Center unites projects already launched by Nosek, including the Open Science Framework (openscienceframework.org), which provides a way to share data and workflow, and the Reproducibility Project, which is in the process of conducting replications of psychology studies published since 2008 in the *Journal of Personality and Social Psychology*, *Psychological Science* and *Journal of Experimental Psychology: Learning, Memory, and Cognition*. CJ

NEW PSYCHOLOGY PRIZE

The National Academy of Sciences in America has established a new biennial \$200,000 prize to be awarded to an individual or individuals who have made recent 'fundamental contributions to the advancement' of psychological and cognitive sciences. The award has been made possible thanks to a gift of \$3.5 million from cognitive psychologist Richard C. Atkinson.

JOHN KARLIN (1918–2013)

John Karlin, the industrial psychologist who led research into the design of touch-tone phone keypads, has died aged 94. According to the *New York Times*, the insights provided by Karlin and his team at Bell Labs in New Jersey influenced not just telephone design, but also 'A.T.M.'s, gas pumps, door locks, vending machines and medical equipment'.

IN-HOUSE MENTAL HEALTH SERVICES

The House of Commons has announced it is to fund mental health services in Westminster for the benefit of MPs. The move comes after a debate last summer in which several MPs described their own mental health experiences. At present, MPs' only option for seeking help is in their constituencies. The charity Mind welcomed the news: 'Our aim is that all workplaces, and the House of Commons is no exception, strive for a mentally healthy working environment.' CJ

Psychosis in children guidelines

New NICE guidelines on the treatment of psychosis in children and young people reveal the urgent need for more research in this area. The guidelines recommend a combination of antipsychotic medication and psychological interventions for children diagnosed with prolonged psychosis or schizophrenia (such cases are rare, with onset of schizophrenia usually occurring in late adolescence or early adulthood).

Psychological therapies receiving endorsement from NICE include family interventions, CBT and art therapies – the last being recommended especially for the reduction of so-called 'negative symptoms' (e.g. the flattening of affect). It is not recommended routinely to offer psychotherapy or counselling, social skills training or adherence therapy.



However, the guidelines caution that there is little research into the efficacy of drug or psychological interventions for the treatment of psychosis in children. The new document calls for more research in this area, including the use of omega-3 fatty acids, which one limited trial found to be beneficial. There's also a need for more research into factors that predict the likelihood of milder psychosis-like symptoms becoming more serious.

Psychologists involved in the new document include Tony Morrison (University of Manchester and the Greater Manchester West Mental Health NHS Foundation Trust) and BPS Associate Fellow Dr Kirsty Smedley (Cheadle Royal Hospital). CJ
[I tinyurl.com/bqpg3wm](http://tinyurl.com/bqpg3wm)

Rifts develop on the divided brain

The RSA in London has published an ambitious new report linking society's ills to the bi-hemispheric nature of the human brain. *Divided Brain, Divided World: Why the Best Part of Us Struggles to Be Heard* is authored by Jonathan Rowson, director of the RSA's Social Brain Centre, and psychiatrist Iain McGilchrist, whose critically acclaimed book *The Master and His Emissary* provided the inspiration for the new report.

The RSA publication begins in the form of a conversation between Rowson and McGilchrist, with the latter expatiating on his theory that the two brain hemispheres have contrasting takes on the world, and that here in the West we've become dominated by the left-hemisphere way of looking at things.

Unfortunately, according to McGilchrist, the dominant left 'does not understand things', 'jumps to conclusions', 'is narcissistic', and its purpose is to 'use the world'. In fact, it 'sees everything – education, art, morality, the natural world – in terms of a utilitarian calculus only'. Worse still, McGilchrist says the left is 'the Berlusconi of the brain – a political heavyweight that controls the media. It does the speaking, constructs the arguments in its own favour.'

The right hemisphere has been side-lined, the RSA report claims, which is a shame, since it takes a more holistic, reasoned approach, understands context and is more interconnected with the body. In fact, McGilchrist says, it's the 'right hemisphere that sees more, that is more in touch with reality, and is more intellectually sophisticated'.

McGilchrist emphasises that these arguments are more than metaphor – his book draws on evidence from split-brain patients, brain-imaging studies and more, and took over 20 years to research and write. He sees the shift to predominantly left-hemisphere thinking as hugely consequential, invoking this brain change to explain all manner of Western societal problems from the recent financial crash to the rise in depression and environmental problems. 'We may be the least perceptive, most dangerous people that have ever lived, and at the same time we have more power, for good or ill,' he writes, going on to contrast our neurologically induced malaise with the

preferable situation in the East, where they 'draw on strategies of either hemisphere more or less equally'.

The second half of the report features responses from 13 academics and thinkers, some of whom attended a workshop at the RSA in November. Among them was Chartered Psychologist Professor Theresa Marteau, Director of the Behaviour and Health Research Unit at the University of Cambridge. She said



DIVIDED BRAIN, DIVIDED WORLD

WHY THE BEST PART OF US STRUGGLES TO BE HEARD

JONATHAN ROWSON AND IAIN MCGILCHRIST
FEBRUARY 2013

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McGilchrist's book was 'in a deserved class of its own for the breathtaking range and erudition of his account'. However, she noted that it outlines the 'provenance' of our problems and does not attempt to provide solutions. '[T]here is little of immediate application in this book ...,' she said. 'More is to be found in the behavioural sciences literatures...'

Adam Cooper, a neuropsychology PhD and Head of Social Science Engagement at the Department of Energy and Climate Change, saw parallels between McGilchrist's characterisation of left-hemisphere thinking and the use of economics in government, but he wondered: '...does it matter that there might be a neuropsychological underpinning to this effect...?'

The philosopher-medic Ray Tallis was more critical of the whole enterprise,

which he found 'self-undermining'. In particular he pointed out the irony of McGilchrist's work, with its painstakingly assembled detail and references, looking very much like the left-hemisphere in action. 'Does he repudiate his own work – given that he says that the left hemisphere "doesn't understand things but only processes them"?' Tallis also highlighted McGilchrist's 'gigantic generalisations', which 'overlook the teeming ocean of particulars that make up our shared world...'

The writer, broadcaster and cultural historian Kenan Malik, a graduate in neurobiology, took to his blog (tinyurl.com/cs9q3uc) to criticise McGilchrist for propagating what Indian historian Raghavan Iyer has called 'the dubious notion of an eternal East–West conflict, the extravagant assumption of a basic dichotomy in modes and thoughts and ways of life'. According to Malik (who was invited but unable to attend the RSA workshop), 'McGilchrist has taken a long-standing dubious argument about cultural differences and modernized it by locating it in the brain. Doing so has not made a dubious argument any less dubious.'

Report co-author Dr Jonathan Rowson told us: 'It is not news to say that the brain is physiologically both divided and profoundly asymmetrical, but this news has been a footnote rather than a headline fact in psychology and related disciplines because we have been looking at the nature of this asymmetry in the wrong way.' He said the main take-home message for psychologists was the shift in perspective, 'from asking what a hemisphere *does* to asking what the hemisphere is *like*'.

'I would therefore ask psychologists to give at least a few hours of their time to this work before deciding what you think about it,' Rowson added. 'It is a grand theory of sorts...[and] I deeply admire and respect the two decades of scholarship that succeeded in weaving together such diverse strands of knowledge. I remain unsure about the extent to which we can derive practical implications from this perspective, but it is been a lot of fun trying to figure it all out, and I would be very grateful for feedback and further explorations.' CJ

Download the RSA's *Divided Brain, Divided World* at tinyurl.com/c9w7jow and let us know what you think on psychologist@bps.org.uk

Common causation?

The largest analysis of its kind has identified several genetic markers that were each associated with the five psychiatric diagnoses studied – autism, ADHD, depression, bipolar disorder and schizophrenia (*The Lancet*; tinyurl.com/bmveboa). The Cross-Disorder Group of the Psychiatric Genomics Consortium, funded by the National Institutes of Health,

analysed the genetic code of 33,332 people of European descent with one of these diagnoses and 27,888 controls, and they found four distinct genetic variations (single-nucleotide polymorphisms) that were associated with all five conditions. Three had a similar strength of association across all the conditions; the fourth varied, being most strongly

associated with bipolar disorder and schizophrenia. Some of the identified markers are linked to genes involved in calcium signalling in the brain, which suggests a possible shared biological vulnerability that may underlie these diverse psychiatric diagnoses. 'Our results provide insights into the shared causation of psychiatric disorders,' the researchers said. **CJ**

Anorexia transition

The mother of a teenager who died while being treated in hospital for anorexia has told an inquest in Bristol of her concerns about the transition from child to adult services. Laura Willmott was discharged from Child and Adolescent Mental Health Services (CAMHS) shortly before turning 18 in February 2011. Her state of health declined profoundly through the year and she was eventually admitted to hospital in October. At the inquest, Willmott's mother Mrs Vickie Townsend, a nurse, decried the way she had been kept in the dark as soon as her daughter turned 18. 'I do not believe she was in a fit state to make decisions herself. I really struggle to see how Laura was any different at 17 years and 364 days than she was at 18 years and one day,' she said.

BPS Fellow Dr Lorraine Bell is Consultant Clinical Psychologist with Portsmouth Eating Disorders Service. She is unable to comment on the particulars of this case, but she told us that eating disorders clinicians are well aware of the need to manage the transition from CAMHS to adult services. 'AN is a severe psychological disorder or mental illness which can grossly impair one's capacity to look after oneself,' she explained. 'This impairment is at the very heart of the disorder. The important issues here are: How were the patient's risks monitored? Was the patient assessed under the Mental Health Act and, if so, was the outcome appropriate? Finally, a patient turning 18 should not preclude the involvement of relatives.' **CJ**

Games to do good

A pair of US psychologists have written a commentary in *Nature* calling for more collaboration between researchers and industry to create video games with cognitive and social benefits ([doi:10.1038/494425a](https://doi.org/10.1038/494425a)). Daphne Bavelier and Richard Davidson highlight, on the one hand, the increasing amounts of time that people spend playing video games (US children play an average of one hour, 13 minutes daily; nearly a third of game players are aged over 50); and on the other hand, the growing evidence for the games' beneficial effects. This includes shooting and action games being associated with improvements in attention, navigation and mental imagery,

and a helping game leading to real-life increases in prosocial behaviour.

The pair explain that game benefits are not always intuitive, and that it is difficult for academics to get games to market. 'An important challenge for both academics and the games industry', they said, 'is to collaborate on the development of games as compelling as those in which many young people now indulge, but that help cultivate positive qualities such as empathy and cooperation.' They also cautioned that this would not 'provide carte blanche for video-game bingeing' – beneficial effects documented to date are based on playing times that are a fraction of many young people's gaming habits. **CJ**

FUNDING NEWS

The ESRC has **Retail Knowledge Exchange** funding available to promote the application of social science within non-academic communities. Potential activities include:

- | user-led new applied research
- | setting up a network to encourage knowledge exchange between academics and retailers
- | an academic placement
- | developing tools to communicate the results of research to retailers
- | developing existing research to make it more applicable to the retail sector
- | holding seminars between academics and retailers

Applications close on 30 April 2013.

tinyurl.com/c6zarty

The International Brain Research Organization has **Research Fellowships** available to support **post-doctoral training** at good laboratories abroad. Applicants must be under the age of 45. Applications close on 1 June 2013.

tinyurl.com/cbdc33h

Nominations are open for the Australian Academy of Science Selby Fellowships for **distinguished overseas scientists to visit Australia for public lecture/seminar tours** and to visit scientific centres in Australia. Fellowships are tenable for visits of not less than two weeks and not more than three months. Applications close on 31 August 2013.

tinyurl.com/bqemug3

The National Institutes of Health (NIH) have a funding opportunity announcement to investigate **School Nutrition and Physical Activity Policies, Obesogenic Behaviours and Weight Outcomes** (R03) and companion funding opportunities R01 and R21. This seeks to fund multidisciplinary research that evaluates how policies can influence school physical activity and nutrition environments, youths' obesogenic behaviours and weight outcomes; understand how schools are implementing these policies and examine multi-level influences on adoption and implementation at various levels; and understand the effect of school nutrition and physical activity policies on the home, community environment and body weight. The next closing date is 16 June 2013. The funding stream will run until May 2016.

tinyurl.com/b4ujav2

info

For more, see www.bps.org.uk/funds. Funding bodies should e-mail news to Elizabeth Beech on elibee@bps.org.uk for possible inclusion

Witty people considered particularly suitable for a fling

What is humour for? Of all the explanations, among the better supported is the idea that it acts as a mating signal. Research with heterosexuals suggests that men, in particular, use humour to show-off their intelligence and good genes to women. A similar but alternative proposal is that wit



In *Personality and Individual Differences*

is used by a male or female joker to convey their sexual interest to a person they find attractive. A new study finds some support for the latter theory, in that wittier people were seen as particularly attractive for a short-term fling.

In a departure from the field's reliance on questionnaires, Mary Cowan (University of Stirling) and Anthony Little used real spontaneous humour, which they created by recording 40 undergrad psychology students (20 of them men) as they explained to camera which two items they'd take to a desert island, and why, choosing from: chocolate, hairspray, or a plastic bag. These 'actor' participants weren't told that the study was about humour, but nonetheless 19 of them gave the appearance of trying to be funny in their answers.

Next, 11 'rater' participants (five of them men) were played audio recordings of the actors' explanations, and their task was to rate them for funniness, and to rate the attractiveness of each actor for a short-term relationship (dates and one-night stands) and for a long-term relationship. After scoring the audio, the rater participants did the same for a simple head-shot photo of each actor, and then again for the full video version of their explanations.

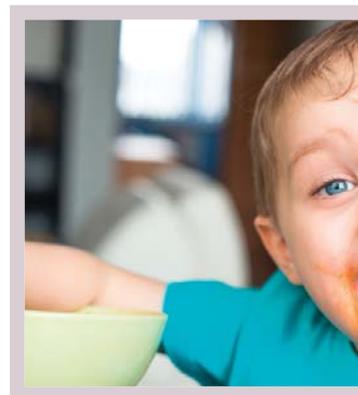
A key result is that attractive actors (based on the rating of their photo) were judged to be funnier in the video than in the audio, which suggests their physical attractiveness led them to be considered more funny.

Wit also boosted attractiveness. Across audio, photo and video, men who were considered funnier also tended to be considered more attractive for both short and long-term relationships, but especially short-term. The link between perceived funniness and attractiveness was not so strong for the female actors, although funniness did still go together with higher perceived attractiveness for short-term relationships. A follow-up study found that funniness ratings were very similar to ratings

for perceived flirtatiousness, and that this perceived flirtatiousness explained the link between funniness and appeal for a fling.

Male wit may be more attractive for shorter rather than longer relationships, the researchers surmised, 'because it nurtures an impression of not being serious or willing to invest in a mate'. Female wit, on the other hand, may be perceived by men as attractive for short-term relationships because it is taken as a sign that 'that she will be receptive to his advances'.

The use of authentic humorous displays is to be applauded, but the study is hamstrung by several weaknesses. Above all, the sample of rater participants was tiny. Also, the attractiveness ratings all tended to be low. This may be because the male and female raters (no information about their sexual orientation is given) were asked to judge the attractiveness of both men and women. For a study about people's judgements of attractiveness in a relationship context, it also seemed strange that no information was given about the gender and attractiveness of the researchers, who may have inadvertently influenced the participants' behaviour and judgements.



The jokes toddlers make

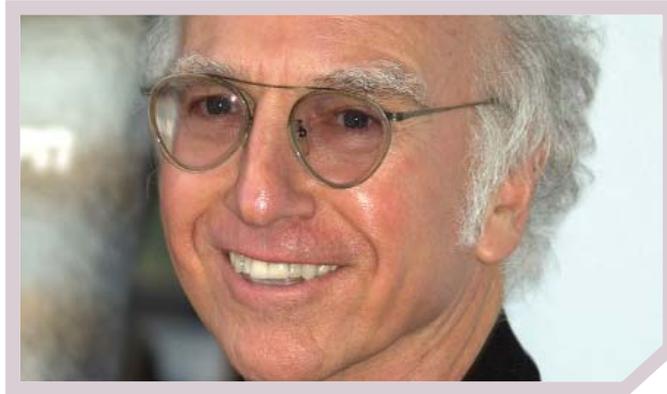
In the *British Journal of Developmental Psychology*

Few sounds can be as heart-warming as a chuckling toddler. Often they're laughing at a joke you or someone else has performed, but what about their own attempts at humour? To find out, Elena Hoicka and Nameera Akhtar filmed 47 parent-child pairs (just five involved dads) playing for 10 minutes with various toys. The kids were English-speaking and aged between two and three years.

Coding of the videos revealed seven forms of humour performed by the toddlers: using objects in an unconventional way (e.g. brushing a pot); deliberately mislabelling things (e.g. holding a cat but saying 'here's a fish'); making deliberate category errors (e.g. making a pig go 'moo'); breaching taboos (e.g. spitting and saying 'that's disgusting'); performing funny bodily actions (e.g. falling back and putting their legs in the air); tickling and chasing; and playing peekaboo.

There were signs of maturing humour abilities. The three-year-olds more often made conceptual humour than the two-year-olds, and they showed a trend towards more label-based humour. Two-year-olds depended predominantly on object-based humour. Moreover, whereas the two-year-olds were just as likely to copy or riff off their parent's jokes as to make their own original attempts at humour, the three-year-olds most often came up with original jokes.

There was also good evidence that the toddlers were



being deliberately humorous and not just making mistakes. When engaged in a funny behaviour versus an unfunny act, they were four times as likely to look and laugh at their parent, twice as likely to laugh without looking, and three times as likely to smile and look. 'Children only increased smiling in combination with looks to parents, indicating parents should share their humour,' the researchers said.

An online survey of 113 British parents (nine dads) about their children's humour largely supported the observational data, producing an extended timeline of humour-production. Before one year, infants mainly produced humour through peekaboo; from one year they graduated onto chasing and tickling and funny body movements; from two years they started object-based, conceptual and taboo-based jokes; and from age three they started label-based jokes.

The authors said the results showed that 'toddlers produce novel and imitated humour, cue their humour, and produce a variety of humour types'.

The new psychology of awkward moments

In Group Processes and Intergroup Relations

The fascination of socially awkward moments certainly hasn't been missed by comedy writers. Millions of us have cringed our way through series like *Curb Your Enthusiasm* and *The Office*. In contrast, psychology before now has largely neglected to study this fundamental part of social life.

In a new exploratory study, Joshua Clegg proposes a model. Social awkwardness, he posits, is what we feel when the situation threatens our goal of being accepted by others. The feeling prompts us to direct our attention inwards, to monitor our behaviour and attempt to behave in a way that will improve our chances of achieving acceptance.

Clegg invited 30 undergrad participants (13 men) into a carefully prepared room in groups of three. Each trio sat facing each other on chairs arranged in a triangle. They knew they were being filmed through a two-way mirror. There was also a table with a microphone and five cookies on.

For the first three minutes, the participants were given no instructions. Then another participant (actually a stooge working for Clegg) arrived with a chair and sat down with them. Three more minutes passed, a researcher appeared and instructed the trio to begin an ice-breaker task (the stooge exited at this point). After three minutes discussion he would ask each of them to introduce each other to the group. Once this was done, the participants left the room and moved to another where they watched back the footage of themselves. They used a slider box, like the kind used in audience research, to indicate how awkward they were feeling during the social interactions on a moment-by-moment basis.

Clegg noted those moments that participants recorded a dramatic increase in social awkwardness and he cross-checked with the videos to see what was happening at the time. Moments of feeling awkward fell into distinct situational categories, which we can probably all relate to. These included times when participants didn't know what was expected of them or what the social rules were (such as when they first sat down in the room without instructions); when a social norm was broken (e.g. one person interrupted another; someone infringing on another's personal space); a social standard wasn't obtained (e.g. a person stumbled with their speech, there was a long silence); norms around eating

were broken (e.g. spilling food from mouth while eating); negative social judgements were made by one person towards another, either explicitly or implicitly (e.g. by pulling a face); when names were forgotten or people weren't recognised; and when social processes were made explicit, such as during the ice-breaker task.

There were also five kinds of moment when social awkwardness plunged. This included: when people were sharing common interests, when one person helped another, when one person was positive about another, and humour. It's notable that a lot of the humour was actually about social awkwardness – joking about it seemed to make it go away.

The study is a tentative first step but Clegg argues it raises all sorts of interesting avenues for future investigation. Perhaps most significant is the similarity of participants' descriptions of social awkwardness to typical accounts of full-blown social anxiety – they talked about feeling 'pressured', 'anxious', 'nervous' and 'crazy'. In attempting to understand problematic social anxiety, Clegg said psychology has tended to focus on the individual, on traits like shyness and attention to the self. His new psychology of awkward moments, focusing on understanding the situations that trigger social discomfort in all of us, and how people deal with it, could provide new insight into why and how socially anxious people come to feel awkward nearly all of the time.



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