

Sugar levy leaves bitter taste

A new government child obesity strategy, centred around a levy for high-sugar drinks, has been criticised for not doing enough to tackle the issue. We spoke to three psychologists about what had been missed, what better approaches there could be and what impact the existing strategy could have.

The UK-wide sugar tax will come into effect in April 2018, and drinks with more than 5g of sugar per 100ml will face a levy, while a higher tax will be placed on drinks with more than 8g per 100ml. Manufacturers have until that date to reduce the sugar content of their products, and money raised from the eventual levy will be put towards breakfast and sports clubs for children.

The strategy also recommends children get an hour of physical activity per day, half in school and half at home.

Many have said the strategy lacks power and gently 'suggests' or 'promotes' where changes should be more stringent in the face of a population where up to a third of children are overweight or obese.

Chair in Biological Psychology and Health Behaviour at the University of

Liverpool, Jason Halford, said he was particularly concerned about the strategy's focus on sugar. He explained: 'Both sugar and fat in the diet contribute to energy density, which in turn drives obesity in a twofold way. These types of food have weaker impact on appetite regulation and are also very palatable... both things drive increased consumption.'

Other than the tax, Professor Halford added, the strategy relies large on many voluntary aspects, an approach that is largely seen to have failed in the previous responsibility deal. This approach, introduced by the Department of Health in early 2011, asked food manufacturers to pledge to cut salt, fat and sugar content from foods: many believe it has done little to change eating habits.

Halford added: 'The new strategy said nothing about the promotion of high fat and sugar foods to children, which surprised me after the work of the Department of Health and Public Health England on the effects of marketing. This wasn't referred to at all. My impression is that it's been culled.'

Despite the health benefits of exercise, which the government encourages in its plans, Halford said a more efficient way to combat weight was first to focus on over-eating. He added: 'I'm not denying the many health and psychological benefits of exercise in any way, but getting people to eat less food has a greater impact on weight. You have

to do a lot of exercise to work off one unhealthy snack. It's an easier intervention to focus on energy in than energy out.'

Lou Atkinson, a health psychology researcher from Coventry University, who shared many of the concerns that the strategy didn't go far enough, suggested our battle against obesity should start from an even earlier point – in utero. Atkinson also pointed to the strategy's lack of two key pieces of evidence put forward by Public Health England, which encouraged the government to tackle both advertising of junk foods to children and price promotions of unhealthy foods in supermarkets.

Atkinson told us she was positive about the sugar levy but nervous that the government's approach did not go far enough: 'If you look at tobacco, alcohol and the carrier bag tax, there's good evidence that financial interventions affect people's behaviour in terms of choices they make and benefits to their health. Although the sugar tax is mostly untested, small trials on a city level show reasonably good results, but it's unproven at a national level. There's a good chance it will work, but unfortunately price promotions and the voluntary nature of the changes the government are pushing for, in terms of reducing sugar content, or reformulating recipes, might wipe out any benefit we get from the levy,' she said.

Atkinson pointed to a lack of help for



Professor Jason Halford

parents in the new strategy, and said many have a lack of self-efficacy and confidence in restricting their children's diets and resisting the urge to give in to tantrums and pester power where unhealthy foods are concerned.

Much of Atkinson's work focuses on pregnancy and a child's early years, and she suggested that earlier interventions could also have been included by the government. Evidence has shown that babies born to mothers who had a high BMI at the start of pregnancy, or those who gain too much weight during pregnancy, are more likely to have a high birthweight and become overweight or obese later in life. Awareness-raising of this, and support for women to make healthy choices during pregnancy, could be valuable in giving children the best start in life.

Atkinson added: 'Even in women who begin pregnancy with a healthy lifestyle, that lifestyle can get worse during pregnancy due to a number of perfectly understandable reasons, such as feeling nauseous, tired, and a relaxation of the social pressure to have a desirable body shape. Making healthy choices during pregnancy can be even more difficult than doing it outside of pregnancy, and yet it's so clearly linked to the trajectory of the offspring weight and health as they go through later life. The strategy has missed a trick there in providing support to mothers during this time.'

Professor in Health Psychology Jane Ogden (University of Surrey) said she was surprised the government hadn't fully acknowledged obesity as being a societal and environmental problem as much as an individual issue. News of the sugar tax (tinyurl.com/hlajdk7), she said, had given people the impression that the government would do more from a societal point of view. She added: 'I thought they'd start tackling the food industry, advertising and marketing, and take a higher-level approach. There'd been murmurings about that before the policy came out, but it looks like at

the last minute they changed their minds and decided to push the responsibility back down to the individual.'

The government, however, Ogden added, is in a tricky position: 'It's a political position between being a nanny state, being involved and interventionist and being more libertarian, or traditionally right-wing,' she said. Although on the surface obesity may seem like a simple thing to tackle, it goes much deeper than individual choice, Ogden said: 'It's all about messaging; eating behaviour and exercise are individual behaviours and individuals do have to make choices and take control of their own behaviour. But you have to acknowledge that the environment you live in can make it very difficult to make those choices.'

Ogden pointed to a recent debates about obesity being a problem of both genetics and society, rather than the individual. 'It's a really complicated issue, because what you tell people can sometimes be very different to how you have to treat them. You need to send the message that obesity is a problem for the individual to encourage them to

make healthy choices, whilst at the same time you also have to behave as if it's a social problem and tackle obesity at an environmental level,' she added.

According to Ogden, 'the environment needs to be changed in order for it to be easier to make healthier choices. For activity, this could be about providing cycle paths, better street lighting, or about public transport, schools increasing the numbers of hours of activity every day, or letting children do classes outside, just to be more physical. One of the

bits of evidence I always find compelling is the dangers of being sedentary, and there's a need to make people aware of that. There also needs to be a focus on creating an environment where it's easier to be more active. It doesn't have to be about expensive gyms or swimming pools, just encouraging people to walk more or cycle more by making the environment better. And for eating behaviour it has to take the form of tackling portion sizes, food prices and marketing.' ER

| You can read the government's strategy in full at tinyurl.com/h4pawkv



Professor Jane Ogden



YEARS OF BEDLAM

A new exhibition of the Wellcome Collection, 'Bedlam: The Asylum and Beyond', will explore how the experience of mental illness and notions of madness have been shaped over centuries, and imagine what the future might hold. Emphasising the lived experiences of individuals, the exhibition will feature over 150 objects and archival materials, including patient art from Adolf Wölfli, and Richard Dadd, alongside works by contemporary artists, including Eva Kot'átková and Shana Moulton.

'Bedlam' will trace the rise and fall of the asylum and how it has reflected the changing attitudes of the society around it, from the early days of the Bethlem Hospital to the modern post-asylum. Visitors will encounter scenes from successive incarnations of Bethlem, as well as other models of care from elsewhere in the UK and Europe.

The exhibition will open with a large-scale installation, *Asylum*, by artist Eva Kot'átková. This 2014 work was inspired by conversations with psychiatric patients and features live performers, evoking the tensions between protection and restraint that thread throughout the exhibition. Visitors will also be introduced to the alternative model of care offered by the town of Geel, Belgium, where sufferers in the Middle Ages were taken in by local families and became 'boarders', part of the community, a tradition that continues to this day (see our 'Looking back': tinyurl.com/hjhwwk2). ER

| 'Bedlam' will run at the Wellcome Collection until Sunday 15 January. A parallel exhibition curated by Sam Curtis, 'Reclaiming Asylum', will be held at the Bethlem Gallery, from Wednesday 21 September to Friday 11 November.

Dynamic research from PsyPAG

The 31st annual Psychology Postgraduate Affairs Group (PsyPAG) conference was held at the University of York this year, bringing together talks from both seasoned academics and postgraduate psychology students. Health Psychology PhD student (City University London) and PsyPAG Vice Chair Ryc Aquino, *The Psychologist* Editor Dr Jon Sutton and Journalist Ella Rhodes were there to report on the three-day event.

This year's conference kicked off with PsyPAG Chair Emma Norris welcoming the 150 delegates, followed by an inspiring talk by Professor Quentin

themselves closer to their friends as compared to when they watched videos that did not depict ostracism.

Parallel sessions included presentations on risk-taking, and in a series of workshops and symposiums to close the day Emma Norris and Tommy Van Steen led a systematic review workshop. Dr David Ellis led 'The Dynamic Researcher', imparting advice on securing one's first academic post.

On the second day Professor Daryl O'Connor (University of Leeds), who takes on a fairly punishing conference schedule himself, began his keynote with the Japanese concepts of *karoshi* (death from overwork) and *karojisatsu* (suicide from overwork). Closer to home, the figures are alarming: there were a quarter of a million new UK cases of work-related stress in 2015, and 23.2 million working days lost due to work-related ill-health or workplace injury. Work-related stress, depression and anxiety accounted for over nine million of these.

This is not a new problem, but there is increasing evidence to indicate that stress affects health both directly through autonomic and neuroendocrine responses and indirectly through health-related behaviours. Diet is a major factor in cardiovascular disease risk, and so health psychologist O'Connor has been looking into the effect of daily hassles and eating style on eating behaviour.

The traditional view is that stress will inhibit appetite and food intake, but the picture is actually more nuanced – we seem to consume fewer main meals, less veg, more high-fat snacks, and more high-sugar snacks on days when stressors are encountered. O'Connor highlighted a possible glucocorticoid mechanism behind this: those who release more cortisol in response to stress increase their high-fat snack intake even more when they encounter daily stressors. With colleagues, he developed a low-cost, easy to deliver intervention based on Gollwitzer's idea of 'implementation intentions', and 'if-then plans'. Participants chose a healthy snack alternative, linked it with a stressful situation, and visualised themselves acting out the plans. Unlike the control group, they did not significantly increase unhealthy snack intake on days when stressors occurred.

O'Connor then considered cortisol in relation to both chronic stress and suicidal behaviour. Cortisol is linked to various cognitive and emotional factors that are directly implicated in suicidal behaviour. In a review of the existing literature, he showed that hyperactivity in the hypothalamic–pituitary–adrenal axis is predictive of suicidal behaviour in patient samples, but in studies where the average age is greater than 40 the association completely flips so that low cortisol predicts suicidal behaviour. O'Connor said this was consistent with Bruce McEwen's notion of allostatic load; that is, 'wear and tear' on the stress response system. He finds that cortisol reactivity predicts suicidal ideation one month later. 'Some people are less equipped physiologically to cope with daily stressors,' O'Connor concludes. 'Psychological interventions are required to enable stress-protected, healthy lives.'

Also on the second day of the conference, we heard from Charlotte Wesson (University of Lincoln) about her research with users of dating app Tinder. Males who were higher on a measure of 'sexual risk' were faster at swiping right (to accept a potential match); the opposite was seen for women. People who were higher risk did meet up with more people on Tinder.

Rebecca McCartan (University of Strathclyde) used the Implicit Association Test with drivers, to find that the 'positive dimension' of explicit attitudes is important in dictating speeding behaviour. Behaviour change interventions should target these, for example questioning whether speeding really does get you to your destination quicker. And Alice Sanderson (Aberystwyth University) had an interesting take on multimodal aspects of teaching and learning, recording 11 sessions of musical theatre rehearsals over a five-week period. Students shifted between talking and non-verbal gestures, with gestures often used to complete questions (e.g. Do you want the note [point higher]?).

Whilst we are living in a golden age of face-perception research, said Professor Andy Young (University of York) in his keynote address on the closing day of the PsyPAG conference, not everything is perfect. He spoke about the data-driven approach he has begun to use in his research on the psychology of human face perception and why data-driven approaches can have wide applicability.

He pointed out that while he would be



The PsyPAG conference – a meeting of minds at the University of York

Summerfield (Head of Psychology, University of York). He emphasised the importance of embracing research impact, as well as the diversity that the field offers – we should all, he said, strive to strengthen this.

Professor Alan Baddeley (University of York) gave the first keynote, entitled 'Confessions of a Door Bore', which explored not only his love of doors, but also his extensive research on human memory inspired by this. The morning parallel sessions followed, covering a range of areas: relationships; health, and social and cognitive psychology.

Dr Harriet Over (also University of York) presented a keynote on social motivation in young children on the first afternoon, which demonstrated that when children were shown videos depicting ostracism, they then went on to draw

'saying some unpleasant things' about the way psychology research is often carried out, he has used many of the methods he was critical of. Young said while the standard method advocated by textbooks as the gold standard in the field requires researchers to find a question, formulate a hypothesis and devise a test that isolates the causal factor in that hypothesis, it may not be the best way to add to scientific knowledge in psychology.

A famous paper by Newell in 1973 pointed out that by asking binary questions about phenomena, for example whether something is nature or nurture, the answers to these questions become increasingly complicated. Young said: 'We end up saying "It's a bit of both" and move on to new phenomena.'

Newell asked whether this approach would actually lead to a cumulative increase in knowledge.

Young added that this was often the case in his own field. Researchers ask whether features of face perception reflect generic expertise or domain-specific ability, or whether we rely on facial features or configurations – all of which remain hotly debated issues. So perhaps a data-driven approach may reveal more than simply asking an either/or question.

He described some of the methods he and many other researchers have used to reveal more about human face perception – perhaps the richest source of social information we have. Modern technologies allow us to combine features across faces to create an 'average' face, for example.

Some of Young's own work saw him collect 1000 faces from the internet, ambient face images which were not standardised as they so often are in this type of research. Participants rated these faces on intelligence, attractiveness and trustworthiness and subsequently using computer image manipulation the most



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trustworthy, intelligent or attractive-looking faces can be combined to look for shared characteristics.

Using this data-driven approach Young concluded there are co-varying, rather than specific, features that make up the perception of a given characteristic. He said these approaches help researchers move away from asking questions they have come up with based on their own preconceptions and can instead find the features or characteristics participants use spontaneously.

He concluded that the advantages of data-driven approaches are particularly



useful when we want to get a real picture of how people see and categorise the world without bringing biases from one's own hypotheses. He concluded: 'This approach is useful when there's co-variation between many potential cues, although we tend to look for "the" critical cue for such things, it's more important to look at how different cues co-vary and how our brains can exploit this property.'

After a brilliant selection of sessions on health psychology and wellbeing and several workshops on statistical techniques, two of PsyPAG's award-winning researchers spoke about their work and career journeys so far. Lauren Bussey (Northumbria University) won the Masters Award and talked through her thesis study on the effects of rosemary and lavender essential oils on memory in older adults.

Bussey explored 'prospective memory': this can be time-based, such as remembering to do something at a certain time in the future, or event-based, such as remembering to withdraw money when walking past a bank. She tested 150 older participants, in a room with either lavender or rosemary or no aroma, on their prospective memory and asked them about their calmness, alertness and contentedness. To mask the true nature of the study, participants were asked to drink a cup of ordinary juice before the tasks, being told that the herb may or may not be contained within it.

Lavender, long known for its relaxing properties, impaired time-based prospective memory; rosemary, which appeared to increase alertness, enhanced both time- and event-based prospective memory. Bussey suggested in the future it would be interesting to study these effects in those with no sense of smell.

The winner of the Rising Researcher Award, Harriet Smith (Nottingham Trent University), explored whether we really can guess what a person looks like based on the sound of their voice. Smith said there were many contradictions in this area, some suggesting this was possible when participants see moving images but not static ones. Through some methodological tweaks Smith saw that in was, in fact, possible for participants to match faces to voices, even if these faces were static. She gave the gathered postgraduate students some advice based on her experiences: 'Try to send in potential papers early and self-promote them on Twitter, Facebook and ResearchGate. After my first paper was published I got a press release put together and it got picked up by radio stations. It really made me think about the potential implications of my study.'

The changing face of rest

A major new exhibition exploring rest and noise, tumult and work, through installations, performance, drawing, poetry, data, sound and music, opens at the end of September. *Rest & Its Discontents* draws on *Hubbub*, a two-year residency led by Durham University and undertaken by 50 international psychologists, artists, writers, social scientists, broadcasters, humanities researchers and mental health experts in The Hub at Wellcome Collection in London (tinyurl.com/jbq8vwk).

Highlights of the exhibition include a 'radio of rest' by Nina Garthwaite of *In The Dark* radio, which weaves together voices, sounds and music from within and beyond the show, broadcast as a series of live programmes, podcasts and web streams. Also Patrick Coyle's *The Floating Thirty-Nine* comprises 39 solar-powered objects floating on the large expanse of water immediately outside the gallery which alludes to the number of categories of labour prohibited on the Sabbath.

The exhibition is not confined to conventional artworks either; Lynne Friedli's investigations (tinyurl.com/je7xfn5) into anti-work struggles and politics will also be debated live with local campaign groups in the gallery. *Guerilla Science* will be carrying out a listening experiment taking exhibition visitors to a nearby 20-storey building to explore the psychogeography of rest in the capital's rapidly changing built environment.

Antonia Barnett-McIntosh's film *Breath*, will also be shown, it explores the concept of breath as musical rest and breathlessness as a form of exhaustion in a flute performance. *Teaching us to Relax*



Patrick Coyle's *The Floating Thirty-Nine* comprises 39 solar-powered objects floating on the large expanse of water immediately outside the gallery

by Ayesha Nathoo explores the 20th-century history of therapeutic relaxation surveying the messages, instructions and depictions of alternative relaxations as proposed by psychology, alternative health, physiotherapy, physical education and antenatal self-help books.

The exhibition will also be accompanied by an extensive programme of events including an exploration of the ramifications of the 1975 Iceland women's strike, a panel discussion about the anxiety generated by mass media and

rolling news, a cabaret of anti-work songs, and new music and poetry performances.

As *Rest & Its Discontents* opens, the results of the world's largest-ever survey into subjective experiences of rest, *The Rest Test*, will be announced on BBC Radio 4's *All In The Mind* by broadcaster, writer and associate director of *Hubbub* Claudia Hammond.

The exhibition, curated by Robert Devic, founder of GV Art London, runs from Friday 30 September to Sunday 30 October at The Mile End Art Pavilion. **ER**

TRAINING FOR CANCER SUPPORT WORKERS

University of Chester psychologists have been working alongside cancer support charity Maggie's to provide its staff with psychological support techniques. Professor Nick Hulbert-Williams and Dr Lee Hulbert-Williams at the university's Department of Psychology delivered training in acceptance and commitment therapy (ACT) to centre managers and cancer support specialists

from across the country.

The approach has been developed over the last 20 years and represents a major shift in supporting people going through life transition and psychological difficulties. ACT uses acceptance and mindfulness processes to accept what is out of a person's control.

In the case of cancer, this includes accepting their troubling

thoughts and difficult emotional responses; crucially, it is not about accepting the inevitability of illness or death. The applicability of ACT to people living through cancer has been shown by Professor Nick Hulbert-Williams' work at the University of Chester, over the last six years.

Both Professor and Dr Hulbert-Williams specialise in the use of ACT by non-therapists, and

this innovative training package aimed to translate the approach into an enhanced communication skills course.

Professor Hulbert-Williams, who is also Director of the Chester Research Unit of the Psychology of Health (CRUPH) at the University of Chester, said: 'I would argue that ACT is the most substantial and evidence-based recent development in the related

Engaging the public in applied health research

A group of psychologists at the University of Kent are making an impact on applied health research, finding innovative ways to involve the public through interactive activities on topics such as dementia, mindfulness and wellbeing.

Dr Kate Hamilton-West, a Chartered Psychologist and Senior Research Fellow at the University of Kent's Centre for Health Services Studies (CHSS), spoke to us about the importance of embedding

research and researchers within local communities and wider society. 'Applied health research often involves working as part of a multidisciplinary team, with academics and clinicians specialising in fields such as public health, primary care, health economics and statistics and with members of the public acting as lay advisers or experts-by-experience,' she said. 'This latter role is crucial for ensuring that researchers ask questions

which are relevant to end-users, that research methods are appropriate and outputs have the potential to be implemented into practice. Without appropriate public involvement researchers run the risk of investing time and resources into projects with limited public impact.'

Dr Hamilton-West was part of a team led by Amanda Bates, CHSS Public Engagement Officer and a PhD student in applied psychology at the University of Kent, which put on a 'Let's Talk About Health Research' event. Held in a community centre in Canterbury, the day also involved CHSS psychologists Sarah Hotham and David Lowery, as well as Nicola Enright, a service user who has long-standing links with CHSS, and Leah Thorn, a Leverhulme Trust Artist in Residence hosted within CHSS. Interactive activities included screenings of Thorn's film 'Watch', which explores the impact of dementia on a father/daughter relationship; a mindfulness eating exercise; and 'Picture of Health' (drawings by members of the



Members of the public illustrate what 'health' means to them

public illustrating what 'health' means to them). Researchers discussed research relating to these themes, and delegates were encouraged to share their perceptions and experiences of health research.

'More than 100 people attended the event and feedback was highly positive,' Dr Hamilton-West tells us. 'To help drive some of the day's ideas forward, we are developing a Patient and Public Involvement Group including local people willing to act as "critical friends" to our research. We're also showing our ongoing commitment to public engagement through a series of open lectures – the next one is 6 October, on remote video consultations.' JS

I To find out more about opportunities to get involved with CHSS research, see www.kent.ac.uk/chss/public/involve.html

Professor Nick Hulbert-Williams and Dr Lee Hulbert-Williams



fields of psychological therapy and coaching. We're excited to see Maggie's taking a lead in adopting a caring ethos that aligns with the

latest scientific evidence regarding how best to support people going through major life events.'
CRUPH at the University of

Chester conducts psychological research and consultancy to help improve professional practice and teaching in the fields of health and

wellbeing. The Unit collaborates with healthcare providers, third-sector organisations and renowned experts to ensure that its work addresses issues of both local and global importance. Researchers in CRUPH will be evaluating the implementation of this training over the coming months with a view to then rolling it out to other healthcare settings. ER

Letters from America

Our editor, **Jon Sutton**, reports on three days of the 2016 Annual Convention of the American Psychological Association, held in early August in Denver, Colorado

Day 1 What on earth is going on?

Beginning his keynote to officially open the American Psychological Association's gathering, Jonathan Haidt said: 'We come together at a time that is confusing.' Haidt's focus was the political polarisation, violence and intolerance in the US and beyond, but perhaps he was also acknowledging the aftershocks of the Hoffman Report into the Association's complicity with 'enhanced interrogation', described by current President Susan McDaniel here as an 'organisational tsunami'.

From my own personal perspective, adapting to the sheer scale of my first APA conference, I wondered if I could chart a path through the potential confusion of this opening day. In my own admittedly idiosyncratic choice of sessions, could I pull out connecting threads that are holding psychology together in its response to major societal challenges?

Well, perhaps the first is that some of the greatest minds psychology has to offer made no great claims for the privileged nature of their knowledge. Psychology doesn't have all the answers. But where it is perhaps unique, Albert Bandura argued via Skype link, is as a 'core discipline' that integrates knowledge from several other professions. So it was heartening to see

poets, political scientists, philosophers and many more pressed into service to understand the issues. And while some speakers reached deep inside for explanations of violence – with Diane Gartland, for example, drawing on psychoanalytic concepts to suggest that for a terrorist, the path to orgasm may run through death, not love, with the explosive incident as the climactic event – others were well schooled in social and historical antecedents, with Aaron Beck considering extremism as a carry-over of events that happened centuries ago, when (with some justification) Muslims started to perceive colonial powers as oppressive.

Haidt too demonstrated a keen knowledge of politics and social history, outlining many changes and trends that have interacted with our tribal nature. The 1990s in particular saw political parties in the States realign and 'purify' their offerings, with the advent of cable TV only increasing the 'echo chamber' nature of debate. A loss of the common enemy at the end of the Cold War, increased immigration and racial diversity and other polarising trends have been a 'ten-car freight train crashing down the line of our democracy', Haidt said, and figures on both sides of the political divide have

been powerless to stop it. The destination is tribal politics – we are far more full of 'passionate intensity' (Haidt invoked the W.B. Yeats poem 'The Second Coming').

One way this manifests itself is in the language we use about the 'other' group. Aaron Beck drew on observations from his early years in private practice to show how couples in marital counselling often had the image of the other person as highly unsavoury – 'demons' and 'devils'. 'Minds had been hijacked by a violent way of perceiving each other', Beck said, biases grotesquely destroying the image of another person. 'Perhaps what I learned in my practice with individuals and couples has some bearing on this wider context of conflict, violence, war, genocide,' Beck pondered. 'When a group is in competition with another group, each group seeing themselves as the victim, each group shows the same kinds of distortions I had seen in the couples.'

How does this play out in the current US political context? Albert Bandura strayed from his policy of not devoting any time to analysing Donald Trump by suggesting that 'his dominant mechanism is dehumanisation. He attacks people mercilessly, and this gets him in the media. Who wants to listen to moderates?' This shouldn't be news to any of us, but it was still surprising and shocking to see Haidt's graph showing that through the Bush and Obama years, warmth toward the other party has nosedived, the gap between that and warmth for own party growing by the year. Haidt is bracing himself for the more recent data.

For both Haidt and Bandura, morality appears to be the key. Quoting Voltaire, Bandura said: 'Those who can get you to believe absurdities can get you to commit atrocities.' The recent National Medal of Science winner is taking the fight to various industries that spread this moral disengagement, including the gun lobby and the tobacco industry. Take the latter. 'If you're going to be killing half a million people annually,' Bandura said, 'this is going to require a vast collection of disengagers' – that includes farmers, advertisers, lobbyists, lawyers, legislators... All making use of



APA President Susan McDaniel described the Hoffman Report as an 'organisational tsunami'

mechanisms which allow them to distance themselves from the affective reaction of self-contempt that usually keeps us in line with moral behaviour. For Haidt, the key point is that 'morality binds and blinds'.

Drawing on nature to illustrate this, Haidt showed that large structures in nature – think termites, bees – are always built by siblings, driven by that parental loyalty. Not so with humans. The first large structures we see in our societies are always temples: 'we circle around sacred objects and principles', Haidt explained. Or, as Durkheim put it, 'ritual generates social electricity'. The problem is, circling around shared values creates a 'moral electromagnet', where everything one side is all good and everything the other is all evil.

Extremist groups and political parties have learned to manipulate this, ramping up the 'us vs. them' rhetoric. Bandura might call it 'palliative comparison': in simple terms, terrorists see themselves as freedom fighters against evil forces of oppression. And Haidt described Donald Trump's campaign as a very open attempt to echo Richard Nixon's 1968, appealing to the conservative who values authority, loyalty and sanctity in 'troubled times'. Here, Haidt acknowledges the influence of Karen Stenner's thinking on the 'triad of racial, political and moral intolerance' that marks the authoritarian conservative out from the 'laissez faire' and 'status quo' varieties. Haidt's own data suggests this is playing out with Trump's current support, and he concludes that 'some people have an alarm button on their forehead – when that button is pushed, then they become authoritarian'.

Now, we can see a lot of these ideas playing out beyond the US as well. Haidt referred to the rise of far right parties across Europe, and demonstrated the centrality of morality in the fascinating statistic that views on the death penalty predicted Brexit voting far better than income did. But given that I'm in the US, could I pull out another connecting thread that might be specific to this nation? Aware of the risk of falling under its spell myself, could it be grandiosity? Earlier in the day, looking to understand acts of mass violence from a psychoanalytic perspective, Frank Summers argued that US culture treats violence as banal but glorifies it at the same time, trumpeting the overwhelming force of 'shock and awe' while quietly ignoring the people killed. Summers pointed the finger at the 'self-adulation' of Americans. 'The US is alone as viewing itself as a nation without flaws,' he claimed; 'any politician that ran on the

basis that the US has good points and bad points would be laughed at. Military might has become embedded in the concept of exceptionalism, of grandiosity.' Then again, this might not be America's problem alone, with Aaron Beck musing that mass murderers in general often seem to have 'grandiose ideas that they will have their day in the sun'.

So what do we do about all this? Can I find crumbs of comfort at the end of this path? Aaron Beck seemed positive. Learning from the historical antecedents, he said, we do have supranational organisations that have decreed that colonialism and expansionism are no longer acceptable. 'Peace is the natural state of the world', and 'the kind of killing that takes place today is simply a drop in the bucket', he said. Beck used the example of Vietnam: during the conflict, training programmes would show grotesque images of the enemy to overcome a natural inhibition against killing them. Decades later, Vietnam is a popular travel destination: education and experience has tackled that 'distorted negative image' and 'we see that they are no different from us'. Beck called for more integration of various populations of the world, a view shared by Haidt with an important proviso based on Stenner's ideas: the focus should be on an abundance of common and unifying beliefs, not on 'multiculturalism'.

As for Albert Bandura, he feels we have to make it hard for people to remove humanity from their behaviour; we have to inform the public of these mechanisms of moral engagement; and we need to build societies that value a sense of common humanity, where we link our self-satisfaction to that of others, rather than to the production and consumption of 'stuff'.

For that, we may well need brave, passionate, far-sighted psychologists. (Earlier, Craig Shealy James admitted 'I love my field, but the near-vision of psychology sometimes frustrates me.') But beware, Haidt would warn, the dark side of passionate intensity. 'Psychology too is full of passionate intensity', he says, quoting Buddhist wisdom: 'If you want the truth to stand clear before you, never be for or against. The struggle between "for" and "against" is the mind's worst disease.' Unfortunately, Haidt fears more than ever for political diversity within psychology. 'The left and the right live in different fields now,' he said. 'How would you feel if you met someone at this conference wearing a Trump badge? If a client, a patient, a student comes to see you, and it's clear they are voting Trump, could you treat that person fairly, equally?'

Haidt called on the assembled audience to become the change we seek, by being more humble, less judgemental, more accepting of diversity of viewpoint, and seeking to change things from the perspective of love, not hate. 'Yes, work for change,' he urged, 'but doing it in an angry, vindictive way tends to backfire.' (Hoffman's shadow again?)

Thankfully, there was a positive note to end this first day. Haidt drew on Abraham Lincoln's inaugural address to suggest that whatever the multitude of factors behind an era apparently defined by confusion and conflict, things will come good again. 'Though passion may have strained it must not break our bonds of affection. The mystic chords of memory, stretching from every battlefield and patriot grave to every living heart and hearthstone all over this broad land, will yet swell the chorus of the Union, when again touched, as surely they will be, by the better angels of our nature.'

Day 2 Look for clarity and creativity

After the diet of conflict and intolerance on day one, I needed a palate cleanser. Could I uncover a clear mind, beauty and aesthetics, a creative way of thinking?

The 8am session had promise. Dr Rita Bush works in the US Government Office of the Director of National Intelligence, 'bringing the best minds to bear on our problems'. Could her 'Intelligence Advanced Research Projects Activity' use gaming to train analysts to recognise and mitigate their cognitive biases? On her appointment, the need was pressing: referring to the commission that after the Iraq War looked at US intelligence capabilities regarding weapons of mass

destruction, Bush (not that one) noted that the report 'never used the word cognitive bias or groupthink, but it's all through it'.

Why games? They provide experiential learning, freedom to fail, and repetition. New intelligence analysts are likely to have grown up playing video games. Bush's team began a competitive process that one successful bidder, Matthew Rhodes, later called a 'virtually impossible project – to create effective, durable training in a short amount of time, on the very resistant problem of cognitive biases, that outperforms an alternative technique (training videos)

that was working pretty well, assessed using unknown materials by a team we don't know and can't have contact with'. Rhodes and his multidisciplinary team rose to the challenge, developing a game – CYCLES – where a 'teach-play-test' format proved effective in not only teaching analysts about common cognitive biases such as the representativeness bias – our lack of sensitivity to statistical properties of the world – but also reducing them.

Jeanette Cleveland (Colorado State University) then considered cognitive biases in performance appraisal at work. Anyone who has conducted such appraisals knows it can be a challenge, recalling and integrating a substantial amount of information over a long period of time, and in a 'noisy' environment with a lot of competing demands. According to Cleveland, a cognitive lens on performance appraisal has led to more nuanced training to give, for example, more emphasis on information gathering rather than on recall (using a diary to collect specific information as it occurs); and training methods to help raters develop a common understanding of the

task and the judgement they must make.

By 9am, violence had reared its ugly head again, with Joshua Correll giving a fascinating and unfortunately topical overview of his research into race and police armed response. In his comparison of trained officers and novices, using what he freely admits is a 'very crappy video game', Correll has demonstrated the impact of racial stereotypes on decisions whether to shoot in an ambiguous situation. In this lab scenario, there's what Correll calls a more 'trigger happy' orientation for black targets, as stereotypes such as 'athletic' and 'dangerous' are activated (as opposed to 'smart' and 'boring' for white targets). Expertise does not eliminate stereotypes, but it minimises their impact via effortful processing. But under an 'effortful load' design, where people carry out a concurrent task, the biases come back. And what could be more effortful than the current situation on the streets of the States? 'People are walking out there terrified', Correll said. 'If these biases can be brought back with a simple number-based task in the lab... I've been studying this for 16 years and I still don't think we have much idea of what is going on out there.'

In search of clear thinking in the consulting room, Scott Lilienfeld argued that in psychotherapy, the conditions for 'intuitive expertise' are rarely met. Feedback about client improvement tends to be of questionable validity, often ambiguous and extremely delayed. This may explain Walfish's finding that the average therapist rates themselves at the 80th percentile of all therapists in terms of effectiveness and skills, with none rating themselves below average. 'Smart, thoughtful people can be fooled by naive realism', Lilienfeld warned. 'Regression to the mean' is probably the main bias affecting them, he said: clients tend to come in when their condition is at its worst, and therapists often fail to recognise that life itself can be a very powerful therapist. As a first step, Lilienfeld says we should be making practitioners aware of biases, and that they don't just affect other people.

So much for a clear mind, what about beauty? I discovered that people in

a museum spend roughly the same time looking at a piece of art as they did 15 years ago (Lisa Smith, University of Otago), but now (depressingly) they take a selfie with every one. Then Jennifer Drake (University of New York) demonstrated how we value the process behind the work, by labelling art as 'made by hand' or 'made on computer' labels. People prefer computer images with no labels; when labelled correctly there's no real difference in judgements of preference or quality, but when the labels are switched people will prefer the incorrectly labelled 'made by hand'. Finally in this symposium, Pablo Tinio (Montclair State University) considered the photographic composition technique of 'leading lines' – an environmental aspect converging on a focal point. Tinio found that people's eyes darted over 'leading lines' images more, but didn't actually prefer them (although he admitted this could have been an artefact of his image manipulation).

Later in the day, Thalia Goldstein (Pace University) gave her perspective on another creative medium, acting and theatre. Acting is uniquely human and, Goldstein said, 'a strange phenomenon that we all take for granted'. There is little understanding of the psychological skills that make acting possible, and actors themselves aren't much help, often simply describing their trade as 'talking loudly and clearly while avoiding bumping into the furniture'. Goldstein explained that acting classes and exercises (in particular with children) can increase vocabulary, emotional control, and empathy. 'Acting may not be the only way to try to take on the perspectives of other people', she admitted, 'but it may be one of the better methods we have in an age when empathic concern has declined in American college students. Acting classes are a safe place which is widely available, where you can try to walk in the shoes of others and you can leave when it's over.'

Could considering creativity on a neural level give us a shortcut to it, boosting it as a state rather than a trait? Adam Green looked at the formation of analogies, such as 'infancy is to lifetime as sunrise is to day', in relation to activity in the left frontopolar cortex (which he creatively described as having 'a lot of sticky out parts, good for connecting things'). He found that simply cueing people to think more creatively improved performance on this task, but when people were cued and 'zapped' using tDCS, they were more creative still.

Moving beyond individual brain regions, Harvard's Roger Beaty assessed whether people high in the 'Openness to

MAKING AN IMPACT

Everett Worthington (Virginia Commonwealth University) is thinking big. 'Let's build a cathedral,' he urged. 'How do we influence the world with forgiveness?' Forgiveness, Worthington says, is not saying 'I forgive you'. It is about making a decision to behave differently towards people, and it can have cardiovascular, immune system, and cortisol benefits.

People can be helped to forgive via various interventions, and according to Worthington 'time trumps everything' – there's one tenth of a standard deviation of change per hour of intervention, regardless of which intervention it is. Nevertheless, he advocates his own REACH process (www.eworthington-forgiveness.com/research). Worthington feels that merely raising awareness about forgiveness can have an impact, and he concluded: 'Imagine the cathedral, imagine seeing this done in New York City, with eight million people.'

Worthington also cautioned that 'you may have to work through a lot of psychology before the person might be ready to forgive'. Kristina Coop Gordon (University of Tennessee) is working on this by taking a 'Marriage Checkup' out to people in their homes. 'Interventions can be effective, but you often still get affluent, white attendees. You have to go to them. Many parenting interventions that are highly effective have gone to the model of home visitation. We were able to get a sample that was about 50 per cent lower income. People thought there was no way they were going to improve in a couple of sessions, but the greater the distress, the more impact there was of the intervention.'

experience' personality construct are 'wired' for creative thought. The brain is composed of networks that interact 'at rest' and during cognitive tasks, and divergent thinking and artistic performance involve interactions among regions of the default and frontoparietal control networks. Beaty assessed whole-brain networks and dynamic connectivity patterns in order to identify five clusters or 'brain states' in the scanner, and found that people high in Openness did indeed 'dwell' in the predicted state for longer. It was the only significant predictor, in large samples in the US and China; other personality variables were not significantly related.

Perhaps the most clear, creative and refreshing thinking on day two, though, was to be found in James Pennebaker's talk on receiving the Distinguished Scientific Award for Applications of Psychology. Kate Sweeny's account of Pennebaker advising a student to 'go



Creative thinking has characterised Pennebaker's career

study real things' was the perfect introduction, as was his own 'I believe so deeply in psychology, and in particular the melding of theory and its application.'

Raised by a hypochondriac mother, Pennebaker says he was 'a little bit like that myself'. He became interested in physical symptoms and where they come from, and decided to investigate by 'asking people things nobody else had asked them'. Back in 1979, to ask about previous traumatic sexual encounters was 'really antithetical to my trade... It was ridiculous, and that's what made it so appealing.' Making that leap was a creative choice that helped to define the rest of Pennebaker's career, leading him to theorise that inhibition, keeping secrets, was the key to later physical symptoms. 'It's a beautiful theory,' he said. 'Turns out it's not true.' What was more compelling to Pennebaker was the beneficial effect of writing about such experiences, although he admits that all these years later there's still no single answer to why writing brings about change in health. 'If you ever stumble across a phenomenon that is big and compelling, make sure there is nothing that can explain it', he advised wryly.

People tell Pennebaker that the effect size of expressive writing is quite small, but he points out that it compares favourably to some pretty well established medical treatments, such as the effect of chemo on survival from cancer. In any case, he says, when you go outside the doors of your lab, effect sizes are by definition very small. 'It brings me great joy that the world seems almost random; there's so much yet to learn.'

Creative thinking has characterised Pennebaker's career: while everybody else ignored the 'junk words' that make up 70 per cent of the words we say – words like 'I', 'my', 'a' – he picked them up and found that they do a great job in

predicting all sorts of things. For example, you might think people who use 'I' a lot are confident narcissists – it turns out they are more likely to be self-effacing, depression prone, hyper-sensitive. Those who are suicidal use 'I' even more. 'We can start using language to get a sense of who people are and how they are connecting with others', Pennebaker enthused.

He now spends time trying to rethink what makes good science, and good education. Pennebaker's approach is multi-disciplinary, multi-method, multi-measurement. It is always grounded in reality. Take self-reports. They are just self-theories, Pennebaker says disparagingly. 'Always at the back of my mind I'm thinking "what are the behaviours that can be measured so that I don't even need to bother with self-reports?" Don't ask students "Have you become more cognitively flexible?" Ask whether they go to museums more, did they get a better paid job?' With echoes of Lilienfeld's talk, Pennebaker then encouraged the audience to 'be scientists at whatever we do. Test it out on yourself. Being a true believer undermines your ability to see things with accuracy.'

As the afternoon drew to a close, I listened to Anjan Chatterjee from the University of Pennsylvania quote Rudolf Arnheim's warning that 'Art may seem to be in danger of being drowned by talk'. Thalia Goldstein had just outlined how acting classes can increase narrative coherence, and I pondered whether talk and narrative was actually the thread holding this second day together. Words, talk, narrative, they sparkle throughout Pennebaker's glittering career. He now pays tribute to them and the power of social support by exhorting a new generation to 'go to lunch with someone who thinks differently from you'. That way lies clear, creative thinking, and isn't that what a conference is all about?

Day 3 A change is gonna come...

After entering this huge maze of a conference to confusion and conflict, and then forging on in search of clarity and creativity, could I find an exit on day three to concrete change?

The President of our own Society, Peter Kinderman, won't thank me for saying this, but the early morning symposium he participated in didn't fill me with optimism. It considered 'the future of diagnosis – ethics, social justice, and alternative paradigms', and as ever

with this topic there seemed little to disagree with. Yes, as Anthony Pavlo (Yale Program for Recovery and Community Health) said, we surely need 'recovery-oriented diagnostic practice'. We need to support people in their recovery journey, making their values and goals central to the process. Yes, Jeffrey Rubin, it's possible to capitulate to the requirement to put a DSM category on an insurance form, while still communicating with colleagues in a dogma-free common

language around 'concerns' rather than diagnosis. Yes, Peter Kinderman, we should be talking in plain and direct language to lawyers and anyone else that might listen, to show that these concepts of diagnosis and disorder are contested. 'Imagine there's no diagnosis,' Kinderman urged, 'it's easy if you try.' Simply talk and write in terms of experiences the person has had, and what they are now experiencing.

But as Lisa Cosgrove (University of

IN BRIEF

Curiosity might kill the cat, but could it protect the person? Evan Polman (University of Wisconsin-Madison) asked people to simply choose between two fortune cookies: a plain one and a chocolate-dipped sprinkled one. 80 per cent choose the more indulgent cookie, but Polman could reverse this preference just by saying 'if you choose the plain cookie, you will receive (in the cookie) something we know about you'. His team also posted the answers to trivia questions inside a stairwell, leading to a 10 per cent increase in stair use, and the 'Let's produce some healthy laughs' initiative hid punchlines to jokes amongst fruit and veg!

Advertisers often promote a 'mechanistic' view of the human body – take KitKat's 'Working like a machine?' campaign. But what impact does this have on health behaviour, versus a consideration of the human body as a natural system of affect-based states such as hunger? Szu-Chi Huang (Stanford) found that people low on health self-control who were exposed to a mechanistic picture of the body as a factory subsequently chose snacks of higher calorie content. They knew what they were being encouraged to do, but didn't see the goal as attainable. Those with high health self-control go the other way. 'This is not good news for policy makers,' Huang concluded, 'because most initiatives are aimed at those with poor health self-control. We need to improve attainability by emphasising similarities between humans and machines. Then the backfiring effect goes away.'

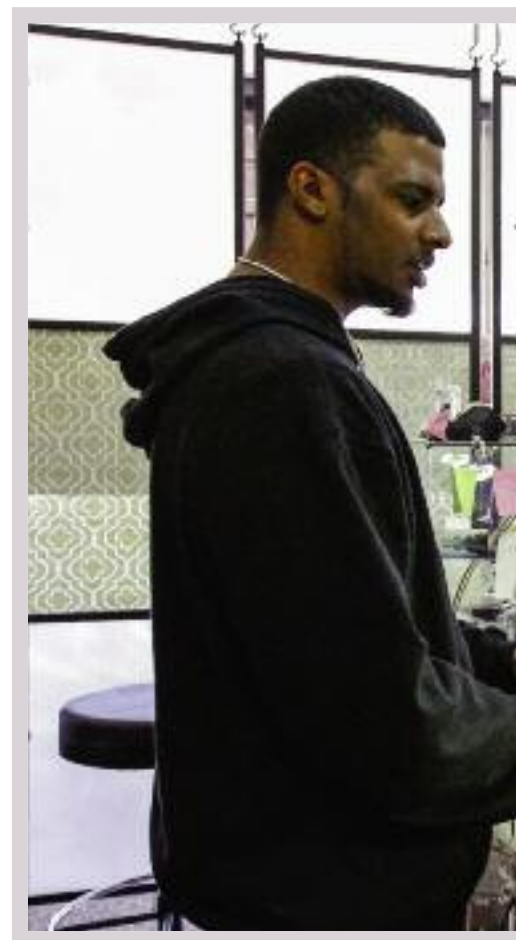
Adolescence is a critically important period, yet we have a poor understanding of it. So argued Jacquelynne Eccles (University of California, Irvine), whose focus is the 'person and stage environment fit'. 'We not only create bad environments for adolescents,' she argued, 'we don't let them get out.' We should be creating environments that create opportunities for emotional support, autonomy, mattering, responsibility, identity, engagement. 'If we are not, and adolescents find themselves in poor-fitting contexts, we should not be surprised if they reject us. It's an adaptive response on their part to withdraw from that setting.' Eccles highlighted examples of good practice, such as the Coca Cola Valued Youth Program, where adolescents judged to be at risk for school drop-out were allowed to tutor younger children in reading. 'It made the kid feel confident, empowered to help,' Eccles said. 'Why isn't everyone doing this? Because we don't trust teenagers, particularly so-called risky ones.'

Massachusetts) admitted, the dominance of clinical practice guidelines in the US, and their 'pharmaceuticalisation', make it hugely difficult to keep 'Big Pharma' out of the therapy room. As she pointed out, some changes in DSM-5 and in the recommendation of universal screening for major depressive disorder for everyone over 13 in the States mean we are likely to 'wind up with even more over-diagnosis and therefore over-treatment'. Acting as discussant, Donna Rockwell (Michigan School of Professional Psychology) asked 'How much power do we really have to make changes? How much is about control over the population, about capitalism?'

And yes, I know it's easy to be dismissive from the sidelines (although we have published several issues and articles on the topic) when these people have formed an international coalition to make real efforts at impact. And Rockwell did point to us Brits for positive signs, such as the rise of the case formulation approach, and the public engagement efforts of psychologist and voice hearer Eleanor Longden. All I'm saying is that for my quick fix of concrete change I think I'm going to have to look elsewhere.

Perhaps 'Big Pharma' was uppermost in my mind when I went to my next talk, from Courtney McLaughlin (Indiana University of Pennsylvania) on mapping mental health. She explained how, using ArcGIS GeoEvent Manager, she mapped the precise location of 130,000 public tweets in 1.5 days, trawling for the word 'depressed'. This suggests ethical interventions such as more efficiently targeting resources at areas that are emoting more, but all I could think about was a drug company partnering with Amazon Drones and dropping medication at your feet within minutes of tweeting 'feeling a bit depressed' for the fifth time in a week. As with much change, proceed with caution.

Maybe by 11am I was feeling more receptive to rousing optimism, or maybe APA President Susan McDaniel is particularly good at it. But inspired I was, and I thought it was particularly generous of her, when she is doing so much to improve people's lot through the integration of psychological and physical health care, to hand over much of her Presidential Address to the work of others (via video inserts). For example, we met Barbara Van Dahlen, who found herself with the skills to give help to others but no structure to do it in. 'So I built it.' Her 'Give an Hour' initiative has now persuaded mental health professionals to provide more than 192,000 hours of free service for veterans and their families. McDaniel urged



us to follow the example of Van Dahlen and others like her, using psychology as 'a disruptive influence to bring about positive change'. Perform a regular 'gut check', she said: 'Ask yourself, am I embracing change that could be constructive, or resisting it because it might negatively impact myself?' In another video, Benjamin Miller alluded to the importance of teamwork in change: 'Let's create an entire generation of fragmentation fighters. This is about comprehensive, complete, whole, different...'

A collaborator of McDaniel's, Eduardo Salas (Rice University), later drew on a 30-year journey to illustrate again that importance of teamwork in change. As with James Pennebaker yesterday, he has a clear passion for 'looking at real things in the real world'. When catastrophic mistakes led the USS Vincennes to shoot down an Iranian airliner in 1988, Salas was part of one of the most funded behavioural science programmes in history. How can psychology help turn a team of experts into an expert decision-making team? In this and many other challenges on the big stage, Salas and his teams have designed training that has demonstrated significant improvements in team behaviours, safety, cognition and wellbeing, even with experts. 'You can teach an old dog new tricks.'



Assistant Manager Jahni Denver, at Evergreen Apothecary in Denver. Carl Hart says 'Marijuana legalisation is not a cure, but it offers some relief. It has partially removed one tool used to racially discriminate.'

Salas tries to cut through the messy, dynamic environment of teamwork with 'more parsimonious, powerful theoretical engines, fewer variables'. He says that 'the number one killer of teamwork in any domain is that team members don't have clear roles and responsibilities. That's something that takes three minutes to fix.' Then teams need a compelling purpose to exist – a goal, vision, objective. A leader needs to promote, develop, reinforce that, in an environment of 'psychological safety' (mutual trust). Self-correct performance through huddles, debriefs – 'this is a most powerful yet under-utilised tool. Again, it can be just three minutes.' Salas is now turning his keen understanding of the science of teamwork to science teams themselves, pointing out that whereas patents and publications used to be a largely lone endeavour, the team is now completely central to scientific change and progress.

Appropriately, my day ended with a talk about an area where there has already been local change. Marijuana was legalised here in the Mile High City in 2014, but Carl Hart (Columbia University) wants much wider change. His reasoning, in a title he admitted was

provocative: 'Pot can cure racism'.

Hart explained that marijuana makes up half of drug arrests in the US, and at State level black people are four times more likely to be arrested despite similar levels of use. 'This is not a racial disparity, an implicit bias, this is racial discrimination.' Black males comprise 6 per cent of the general population but nearly 40 per cent of the incarcerated population. One in three black boys born in the US are projected to spend time in prison. Marijuana law enforcement plays a role in many deaths.

Black people are clearly a vulnerable group here, and Hart reminds us that psychologists are comfortable thinking about other vulnerable groups. 'We should think about black people in the same way in terms of drug law enforcement.' So what has happened in terms of the race data in Colorado? There has been a 38 per cent drop in Latino arrests; a 54 per cent drop in white arrests; but a 23 per cent drop in black arrests. Blacks are still three times more likely to be arrested than counterparts. 'Marijuana legalisation is not a cure,' Hart admits, 'but it offers some relief. It has partially removed one tool used to racially discriminate.'

Hart argues passionately that if laws were to change nationally, science can be used to educate and keep people safe. 'The main thing I have learned from a career of giving people drugs as a neuropharmacologist', he said, 'is that drugs are predictable. And as psychologists we know about dose, about user experience, about the importance of setting and of routes of administration.'

'What about the children?', Hart hears you cry. Yes it's true that most users of cocaine and heroin have used marijuana, but most don't follow that path. 'It's no more a gateway to heroin than it is a gateway to the White House!', Hart smiled, in front of photos of the last three Presidents (who have all admitted to smoking marijuana in the past). Hart acknowledged the numerous reviews on cannabis and psychosis – 'The Lancet really has become the marijuana/psychosis journal' – but said that his own review suggests cannabis does not in itself cause a psychosis disorder... It's just that both early use and heavy use of cannabis are more likely in individuals with a vulnerability to psychosis.

As for simple, concrete change, Hart would require law enforcement agencies to report and justify arrest data. 'As tax payers, we pay their salaries, we need to see this data. And we need to call out discrimination and those who support it.' We need better drug education, Hart says, and for more people to 'come out of the closet as drug users' in order to provide a more realistic picture of what a drug user looks like. He hopes that, along with legalisation, might 'allow us to focus on the real issues, and why some people are developing problems with drugs ... Psychosocial effects are so important, but they're just not sexy. You may have to have a picture of the brain to convince people that it's important.'

Rowing back from his title, Hart warned that 'we can't expect legalisation to make us un-American, and racial discrimination is as American as apple pie'. But he had a message for the younger members of the audience: 'Your generation must be impatient with the level of progress. You should push for society to be more progressive and change.'

If I had to pick out one thread from all three days, it would be that of a large number of individuals looking to create change, towards a progressive society, with all sorts of pressing real-world concerns. But also an acknowledgement from those individuals that they don't have all the answers – it's only through collaboration, and reaching out beyond our discipline, that 'a change is gonna come'. That's a pretty healthy message for any conference.