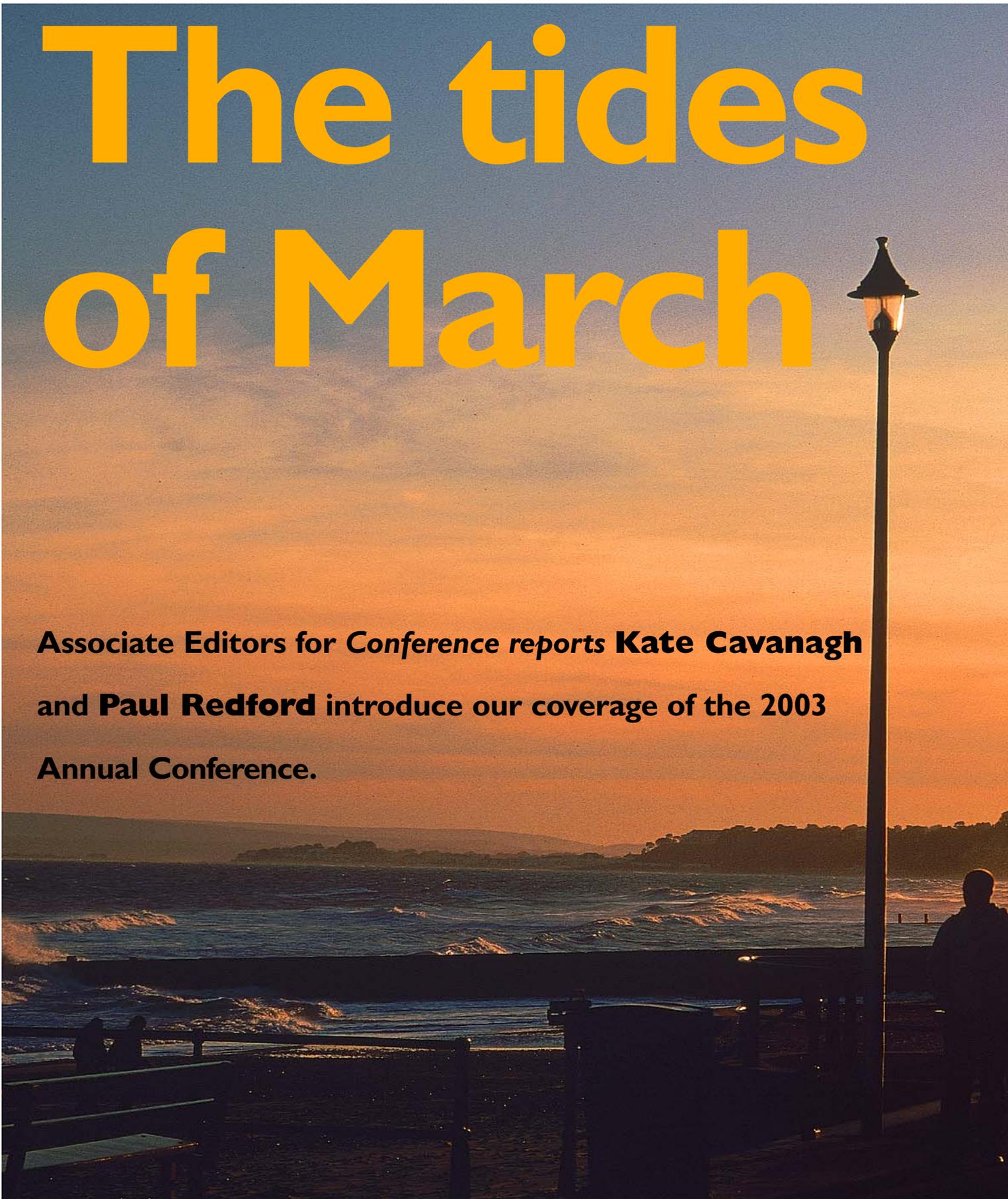


The tides of March



Associate Editors for *Conference reports* **Kate Cavanagh** and **Paul Redford** introduce our coverage of the 2003 Annual Conference.

From 13 to 15 March, the Bournemouth International Centre was home to 625 delegates at this year's Annual Conference. The main themes were genes, groups and memory, but as usual there was something for everyone – we hope that this diversity is reflected in the reports this month and next.

There were more Society award and memorial lectures than ever, and in the coming months many of these will appear as full articles in *The Psychologist*. We hope this month's reports give you a flavour of how the conference serves as a showcase of the science: from football referees to ingroup favouritism, from suicide to volunteering, from drug use to conspiracy theories.

IN BRIEF

WOUND UP BY WARNINGS?

Could on-screen warnings about media violence do more harm than good? In a study by Christina Gaitanou and Simon Moore (London Metropolitan University) participants who watched a violent eight-minute film with someone who was outspoken in condemning the violence subsequently rated themselves as feeling more violent, aggressive and disturbed than those who watched it alone or with a neutral viewer.

THEORY OF MIND

Leigh Harrington (Victoria University of Wellington, New Zealand) reported a study examining the links between theory of mind ability, the generation of explanations for intentional interpersonal actions, and delusional ideation in a subclinical population. Increasing paranoia and delusional ideation were both associated with poorer ToM performance independent of IQ and age, but only for verbal ToM tasks. Poorer ToM performance was also associated with an increased number of explanations for another's actions towards oneself.

FALSE IDENTIFICATION

In a study by Tim Perfect (University of Plymouth), participants were shown a series of faces associated with a particular crime, and then shown a second series and asked whether any had already been shown – in fact all were innocent bystanders. One week later, participants saw lineups containing one of the bystanders, and asked which person if any was a perpetrator from the previous week. Older adults were more likely than younger adults to falsely identify the mugshots in session 1, and misidentify the innocent bystander. Younger adults were more accurate when young faces were used.

Towards behavioural genomics

ASIFA MAJID saw an invited lecture by Robert Plomin.

ROBERT Plomin (Psychiatric Research Centre, Institute of Psychiatry, King's College London) marked the end of the conference with a discussion of common misapprehensions that people hold about genetics, genes and genomics. For psychologists, the study of genetics is the quantitative investigation of heredity and environmental factors, by using twin and adoption studies; the study of genes is the investigation of molecular genetics to identify specific genes; and the study of genomics is the attempt to understand the function of genes. As we come closer and closer to completing the human genome sequence, there still remain some major misunderstandings about what genetic research means for psychologists.

First, Plomin tackled the idea that genetics takes away the burden of individual responsibility; he argued that genetic information tells us about risk factors, not about the fated outcome. Another misunderstanding is that genetics undermines the concept of equality; yet another that the pursuit of genetic information is at the service of a political agenda. Plomin argued that it was important to remember that policies depend on values as well as information, and that the study of genetics is not irrevocably linked to a particular political agenda.

Plomin discussed some common medical conditions and mental illnesses, showing that in many cases the relationship between gene and disease was quite counterintuitive. For example, although 'epilepsy' describes a ragbag of symptoms it turns out to be highly heritable; Parkinson's disease has a clear symptomatology but is not heritable at all. Plomin claimed that mental illnesses show greater heritability than most medical conditions. Reading disability, major affective disorder and autism are all highly heritable. But the role of the environment is always there. If 50 per cent of identical twins share the diagnosis of schizophrenia, the key question for Plomin is why 50 per cent of identical twins do not develop schizophrenia given their genetic predisposition.

Future research has to adopt more sophisticated models of the relationship between genetics and behaviour. The old model of genetics posited 'one gene, one disorder' (OGOD). However, one-to-one correspondence has only turned out to be true for a handful of disorders (e.g. Huntington's disease). Most complex traits are the outcome of many genes. Consequently, the new model has to localise all those genes, which may operate probabilistically. For the future, Plomin advocated that there be two parallel strands studying the relationship between genes and behaviour. A bottom-up strand should investigate the molecular biological level of analysis, and the top-down psychological strand would now be behavioural genomics.

ALBERTO LINGRIA/POPPERFOTO

'Oi, ref!'

PAUL REDFORD on a much-maligned figure.

THEY get kicked, punched, shouted at, even shot. Every decision they make immediately annoys half the players and thousands of fans. They have to cover a distance of around 10km every game (18 per cent of it backwards), yet not touch a ball. Their average heart rate during games is 165 beats a minute. Until recently they were paid very little for a job that took them around the country, away from their friends and family, all on top of their full-time occupation. Even now, those lucky enough to be at the top of the profession will earn an average annual wage that is not far different from the average weekly wage of the players sharing the pitch. So why would anyone want to be a referee?

According to research on 63 referees in the Northern League presented by Nick Neave (Northumbria University), referees do it because they love football. They take pride in their game

and thrive on the challenge and excitement. But surely even a love of football cannot protect you from the stress that comes from refereeing a game? In fact, Neave and colleagues found that refs were not particularly bothered by the abuse they get from players, fans, coaches and managers. They attribute the abuse externally, believing it to be a consequence of a lack of understanding of the game, team bias and the heat of the moment. Moreover they did not rate the cognitive demands – such as the constant vigilance, the changes in regulations and the complex decisions they have to make – as particularly stressful. Situations that may appear stressful to an onlooker, such as sending a player off, awarding a penalty, refereeing a game with a crucial outcome or dealing with a hostile crowd, are not perceived as particularly stressful by referees.

So how do referees deal with these stressors? Neave

found that they are very confident in their own ability. Before a game they get excited, not stressed, and after the game they tend to believe that they have refereed well. They react positively to mistakes by trying to work out what they can do better. Importantly, all refs studied believed they were superior to other refs!

In a diary study Mark Nesti (Leeds Metropolitan University) and Dave Sewell (University of Hull) examined anxiety in rugby league referees and players, and elite-level netball players. Contrary to expectations they found that mood and anxiety scores were not related to sporting events, but to non-sport-related personal events. Anxiety scores were highest after the game, rather than in the six days before it. Poor performance did seem to be related to higher anxiety, but was related to sleep and energy levels. Nesti argued that sports psychologists need to look at both positive 'anticipation anxiety' and negative 'disappointment anxiety'. Work with referees should be post-match as well as pre-match.

Examining the role of the sports psychologist with referees, Craig Mahoney (University of Wolverhampton) presented an overview of his work with the 24 'select group'

Premiership referees. These referees are usually in their early to mid-forties, one third have degrees, they have mixed political views, are self-assured, outgoing and are often the eldest in their family. Contrary to popular belief, they are not failed players, although in an echo of Neave's earlier talk, Mahoney emphasised their love of football: they have often been introduced to it by their fathers or close friends.

Mahoney's work involved a mental-skills training programme dealing with issues such as coping with pressure and conflict, performance profiling, and relaxation and arousal strategies. He found over the course of a season there was an increase in mental skills and improved confidence in his pupils. Mahoney also examined the stressors of the referees and ways of dealing with these. The referees rated the course positively, demonstrating the success of applying sports psychology.

Both Alan MacPherson (University of Edinburgh) and Duncan Mascarenhas (University of Edinburgh) outlined the use of sports psychology in the training of referees in the rugby union elite refereeing unit. MacPherson developed a model of the skills needed to become an elite referee (such as high knowledge, management of players and the crowd, communication, fitness) and the factors that lead to the development of these skills. Building on this model, Mascarenhas demonstrated how the use of video feedback can be used to examine coherence between referees decision making. They found that even where there was a lack of coherence in terms of the decision awarded, there was still high confidence. This is a big problem in refereeing, and a key skill necessary for both player and crowd satisfaction. They developed

a training programme to improve coherence in decision making using an expert modelling approach, where referees made decisions and then saw the decisions made by the top referees.

In a further video intervention study Paul Holmes (Manchester Metropolitan University) demonstrated how the use of self-modelling (watching a video of one's own performance) increased skill acquisition and performance in the French national squad of gymnasts. However, this effect was not evident in a group of club gymnasts, who actually did not improve as much as the control group (who had a debrief rather than video feedback). This demonstrated that it is not only self-modelling but also the interaction of self-modelling and experience that

appears to be related to the success of this intervention.

Imagery has also been used to aid performance in a number of areas. However, as Dave Smith (University of Liverpool) argued, the mechanisms through which imagery affects motor performance are unclear. In a study examining the effects of imagery on motor performance (finger strength task), Smith found that the type of imagery used affected performance. Interestingly, an examination of the EEG results showed that the imagery seemed to demonstrate the same contingent negative variation (CNV) – the reduction in brain waves prior to performance – associated with actual motor practice. Smith argued that these results begin to unpick the mechanisms underlying the success of imagery on performance.

HELP OTHERS, HELP YOURSELF

SANDIE CLELAND reports on the effect of volunteering.

THIS year in the UK 22 million adults will engage in some form of volunteer work. For the NHS this counts for 27,000 hours a week. However, little is known about the effectiveness of volunteering interventions. Commissioned by the Home Office, Chris Bridle and colleagues (NHS Centre for Reviews and Dissemination) carried out a systematic review of research into volunteering in healthcare settings.

The authors' review of 22 studies suggested that volunteering does indeed benefit the receiver, but that volunteers themselves also benefit from the act of volunteering, particularly those providing 'psychosocial' interventions (e.g. dealing with caregiver stress). This all sounds promising; but the authors point out that the quality of research is rather poor, and most of it conducted outside the UK. They conclude there is still a need for good-quality research into the impacts and benefits volunteering interventions.

Into the deep

ASIFA MAJID was at an invited lecture by Fergus Craik (Rotman Research Institute, Toronto, Canada).

THREE decades ago Craik and Lockhart published their 'levels of processing' article, which provided a seminal framework for thinking about memory. Their approach contrasted with other paradigms in memory research, which tended to focus on structures and stores rather than processes.

Craik and Lockhart proposed that on hearing a word, several levels of processing may occur. Sensory processing occurs with the auditory signal, then phonemic processing takes the sensory information and maps it on to the sounds of the language, lexical processing then activates the correct word form, and finally semantic-associative

TONY DALE

processing accesses the meaning of the word from long-term memory stores. Sensory processing is the shallowest processing that can occur, while semantic processing is the deepest level of analysis. Craik and Lockhart demonstrated that recall was better for words that

were processed deeply than for words that were processed shallowly.

The core ideas that were articulated 30 years ago – remembering as processing and the hierarchical organisation of cognitive processes – are still crucial today in the levels of processing view. However, there have been revisions to the framework – it appears that 'depth is not enough'.

Craik pointed to many studies that show that recall and recognition are not just a function of the type of encoding, but also of the type of test. When the encoding conditions and the recall test are compatible (i.e. semantic-to-semantic, or rhyme-to-rhyme) then people show better

recall than if the encoding and recall conditions are incompatible. Memory is also better under full attention than it is under divided attention, even when the amount of processing and elaboration are the same. Once again, depth is not enough – it needs to be supplemented, perhaps with the amount of consolidation.

In the future Craik envisioned finding an independent measure of depth of processing from cognitive neuroscience. Already, there is evidence that the left ventral part of the frontal lobe is involved in processing semantic knowledge; further evidence suggests that the more processing there is in this area the greater the recall.

Examining student motivation

SANDIE CLELAND reports.

PREDICTORS of success in education and the effect that education has on students were addressed by a number of papers throughout the conference. Helen Jarvis (University of Durham) reported that working memory is linked with performance on National Curriculum tests at 11 and 14 years. This extended previous findings to show that both verbal and nonverbal working memory skills predict attainment in English, mathematics and science. Tracy Devonport (University of Wolverhampton) reported that students who scored high on self-efficacy were better at coping with final-year dissertation stress than students who scored low on self-efficacy. High self-efficacy students used 'active coping' strategies to get them through the year (e.g. seeking institutional support), whereas low self-efficacy students had rather less effective coping strategies (e.g. going down the pub). Devonport suggested that low self-efficacy students get themselves into a downward spiral through believing they can't cope, and that this might be

PAUL BOX (REPORT DIGITAL)

prevented with interventions enhancing self-efficacy.

Richard Remedios (University of Stirling) presented two papers looking at students' changing motivation through the education system. The first paper compared pupils sitting the Transfer Test in Northern Ireland (similar to the 11 plus) with pupils who were taught the same course material but did not have to sit the test. Before the test, the two groups showed similar levels of motivation. However, after the test the motivation levels of 'test' pupils decreased substantially regardless of their performance, without a corresponding decrease from the 'non-test' pupils.

In a second study Remedios looked at how university students' goals change through the course of their degree. Whereas first-year students cared more about understanding and mastering their subject, students in later years

were more concerned with performing well in their exams. Exams clearly have an effect on motivation – and not necessarily a good one!

I'm out with the in crowd

PAUL REDFORD was at an invited lecture by Dominic Abrams (University of Kent).

WE are surrounded by them. Some may say Tony Blair is one. Kenneth Clark definitely is. If I questioned the value of psychology, I could easily become one. So what is it like to hold views that are different from the views of the other members of the group that you belong to? There are many sayings that emphasise the pressure to conform to your ingroups, such as 'don't rock the boat' or 'the black sheep of the family'. But how are these 'ingroup deviants' perceived? An invited lecture explored the effects of ingroup and outgroup nonconformity.

Traditionally nonconformity has been examined in small group experimental situations. However, Dominic Abrams argued that we should focus on the perception and judgement of deviants in studies that manipulate the size and the direction of the opinion difference in both ingroups and outgroups. Describing a number of 'real-life' studies, he demonstrated the so-called 'black sheep effect'. This effect

is where ingroup members who express opinions divergent from the ingroup norm are perceived less favourably than other ingroup members and deviant outgroup members (outgroup members who express opinions different from the outgroup), though they remain preferred to non-deviant outgroup members.

Examining England and Germany football supporters, Abrams asked English children to evaluate members who either stated 'England are the best' (ingroup normative) or stated that they are an England supporter but will always clap and cheer Germany if they play well (ingroup deviant). Abrams found a developmental difference. The 5- to 6-year-olds preferred ingroup members to outgroup members (ingroup favouritism); and while rating ingroup deviants less favourably, they still rated them equally or more favourably than outgroup members. However, by the age of 11-12 the 'black sheep effect' was present - ingroup deviants were evaluated less

favourably than outgroup deviants.

However, it is seldom the case that you either are a deviant or are not. Some deviants may express pro-norm attitudes, where they exaggerate the group norm in a positive direction, whereas some may express anti-norm attitudes, where they display attitudes opposite to the group norm. For example in a study of bank workers, the pro-norm deviants, who expressed being fanatical about working for the bank (would work extra overtime, rated the bank extremely positively), were compared with anti-norm deviants, who were critical about working for the bank (the normative ingroup member was in between). Abrams found the direction of deviation to be important, rather than how far an opinion deviates from the norm. Individuals expressing pro-norm deviation (fanatics) are perceived more favourably than those expressing anti-norm deviation (critics), even though the fanatics' opinion may be further from the group norm.

Beliefs, attitudes and suicide

SIMON J. BIGNELL

reports on social-cognitive predictors of suicide.

IN the UK and the Republic of Ireland 6000 people a year kill themselves, and suicide is a major cause of death in the young male population second only to road accidents. Rory O'Connor (University of Strathclyde) rejects the view of suicidal behaviour as abnormal, instead preferring to use explanations derived from normal healthy behaviour. He investigated outpatients a few days after they had attempted suicide and again three months later. Influenced by existing models of planned behaviour he looked at social-cognitive aspects rather than just the clinical aspects long associated with suicidal behaviour, such as anxiety, hopelessness and depression. In studying the beliefs and attitudes of these patients, O'Connor and his colleagues have been able to construct a model that better accounts for and predicts the intention to engage in deliberate self-harm. He suggests that we should be using social-cognitive features along with other assessment techniques as screening tools.

In another study Abrams examined the effect of a member of a football team committing a foul and getting away with it (pro-norm deviant) compared with being penalised for it (anti-norm). Again, the pro-norm is acceptable and the anti-norm

is not. Therefore although Maradona's 'Hand of God' in the 1986 World Cup may have been cheating, it didn't stop Argentinians hero-worshipping him because he displayed pro-norm deviation (for the squad to win) rather than anti-norm deviation.

Furthermore, these preferences seem to be mediated by identification with the ingroup. Individuals who do not identify highly with the ingroup do not demonstrate this effect, whereas high identifiers become even stronger in their opinions and preference for the ingroup when they are confronted with anti-norm ingroup deviants. So Labour backbenchers who were against the war on Iraq may favour Kenneth Clark as opposed to Tony Blair. But also, because Tony Blair may see the anti-war Labour Party members as ingroup deviants, he may start to believe in his own opinion even more strongly!

Manic moods and memories

WARREN MANSELL took part in a symposium on bipolar disorder.

BIPOLAR affective disorder, otherwise known as manic depression, is not the rare preserve of a few flamboyant and sensation-seeking individuals: it is a common and severe mental illness. Peter Kinderman (University of Liverpool) began the symposium with this important reminder. Only recently have psychologists begun to tackle the complexities of this condition, and provide fully evaluated psychological treatments for it.

Kinderman described a detailed clinical case that helped dispel the further myth that manic depression involves a cyclical oscillation from high to low mood. He found that high and low mood were actually quite independent from

one another and fluctuated daily. The moods followed a formally 'chaotic' pattern – being low one day tended to be followed by being low again the next day, but there was no predictable pattern to the changes in mood.

Addressing a related question, Steven Jones studied circadian rhythms (sleep and activity levels) in a group of people with a diagnosis of bipolar affective disorder with remitted symptoms. They showed a greater variation in their levels of activity than matched healthy controls, who showed a more stable level of activity over time.

Rebecca Knowles (University of Manchester) presented the early phases of a study exploring those individuals at high risk of developing bipolar illness. Relative to people in the low-risk group, those on the 'bipolar spectrum' demonstrated more substance misuse, more variable and poorer sleep, lower and more variable self-esteem, and a tendency to show a greater vulnerability to an experimental mood-induction procedure. An experimental task demonstrated that their induced mood also coloured their perception of other people's facial expressions, supporting the role of mood on cognition that is addressed in cognitive behaviour therapy.

My own presentation was of a study of the autobiographical memories of people with bipolar affective disorder in remission. Compared with a group of people who had recovered from unipolar depression, the bipolar group retrieved past negative memories that were more general (i.e. of whole periods or classes of events rather than of specific incidents). They also had more frequent recurrence of these memories in their everyday lives. Sarah Tai (University of Liverpool) reported her study of thought disorder in bipolar affective disorder, and demonstrated that thought disorder is particularly enhanced when patients are prompted to talk about emotionally salient information. This effect even occurs to a smaller degree in non-clinical volunteers, suggesting that it may be on a continuum.

The recent interest in the psychology of bipolar affective disorder should lead to a better understanding of the condition. Steven Jones, who convened and chaired the symposium, explained how the Schematic Propositional Associative and Analogical Representational Systems framework, developed by Power and Dalgleish, may help account for the research findings to date. Future work is likely to lead to further models to aid developments in therapy.

Who shot the president?

SANDIE CLELAND found out why people believe conspiracy theories.

PATRICK Leman (Royal Holloway University of London) reported a study where people read a short fictional report of an attempted assassination of a president. He found that people were more likely to believe a conspiracy theory when the president had died, rather than having just been injured. This is known as the 'major event–major cause'

heuristic. In addition, people who had a prior history of believing conspiracy theories tended to doubt the truth of factual statements within the report. This distrust of factual evidence may explain why some people will believe a conspiracy theory despite counter-evidence. Leman suggested that a person's social identity as a 'believer' or 'non-believer' may also play a role.

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