

Rounding up from Bournemouth

Fertile hunting ground for the green-eyed monster

PAUL REDFORD reports on cultural and evolutionary explanations of jealousy.

WHY do people become jealous? Across a number of cultures men tend to be jealous and upset over sexual infidelities of their partners, whereas women are more likely to be jealous and upset over the emotional side. Put simply, women ask their unfaithful partners 'Do you love her?'; men want to know 'Is he better than me in bed?'

Evolutionary psychologists argue that this sex difference is due to paternity uncertainty in men (they are never sure if the kid is theirs) and resource investment in women (they don't want the man to run off and invest their hard-earned cash with another woman). The rational beliefs model has challenged this explanation with the 'double shot' hypothesis, proposing that women and men have differing beliefs over the sexual and emotional relationships that each sex has. Men are more likely to report being upset by sexual infidelity in women because they

believe that in women this implies emotional infidelity (although not the reverse – men believe that women can be emotionally attached without having sex). Women are more likely to report being upset by emotional infidelity in men because they believe that this implies sexual infidelity (although not the reverse – women believe that men can have sex with someone without being emotionally attached).

Gary Brase (University of Sunderland) pointed out that when men and women are asked how jealous they would be in response to either emotional or sexual infidelity, the difference between these two ratings varies according to not only sex but also culture. The biggest difference between men and women was found in Brazil, the smallest in Japan.

Brase conducted a UK–Romanian comparison. The results supported the evolutionary explanation – women were always more upset by emotional infidelity than men. However, the size of the

difference between males and females was very small in Romania (effect size was .17).

Brase then aimed to unpack the influence of culture on jealousy by examining a number of cultural level variables that may account for the differences. After entering many different variables (e.g. GDP, divorce rate, per cent of population in urban setting), Brase found that the best predictor of the sex difference was the fertility rate of the country. Fertility rate correlated .91 with the size of the effect of the sex differences in jealousy. Where fertility rates are higher (e.g. Brazil), men are more likely to be upset by sexual infidelity and women are more upset by emotional infidelity. Where fertility rates are lower the sex difference is smaller. Other more modest predictors were beliefs about trust (lower trust, larger sex difference) and percentage of urban areas (high percentage urban, larger sex difference). Perhaps the green-eyed monster is alive and well, and living in Rio.

Disability and diversity

PAT FRANKISH reports on a symposium organised by the Standing Committee for the Promotion of Equal Opportunities.

IN this Year of the Disabled, SCPEO took the opportunity to invite a range of speakers to this symposium: people with experience of being a disabled psychologist, those doing research in the field, and people simply bringing ideas. The morning session looked at empowering learning-disabled people to choose where they live, and at the difficulties of providing services for brain-injured people in rural settings. These papers highlighted the lack of choice that disabled people have. These were followed by thought-provoking papers on models of disability that showed us how the model can be emancipatory if we change our mindset, and a model of transition, where the tendency is to

see disability as something that will go away instead of as a permanent state.

In the afternoon we heard from psychologists with disabilities about their struggle to secure employment or recognition and support from the Society. Even when successful in employment there is an assumption that they will work in the field of disability rather than in their preferred area. We heard from the Society's Ethics Committee about inequality and how this is being addressed, especially as it relates to disability. The symposium finished on a positive note with information about a proposed Society Section on inclusion. SCPEO was left with much food for thought.

IN BRIEF

EPILEPSY AND SOCIAL FUNCTIONING

People with epilepsy frequently report problems with their social functioning, yet to date there has been little research investigating the sociocognitive skills of this group. Jane McCagh (Liverpool John Moores University) and colleagues found that patients with right frontal lobe epilepsy were significantly worse than normal controls on theory of mind tasks and at understanding the meaning behind hints.

FAT'S NOT A GOOD IDEA

In times of stress people often turn to comfort eating – but this tendency might be moderated by particular personality traits. Daryl O'Connor (University of Leeds) and Rory O'Connor (University of Strathclyde) assessed 183 students during an exam stress condition and a control condition. In the exam condition lower scores on conscientiousness and higher levels of stress were associated with greater consumption of foods high in saturated fat.

AVOID STODGY THINKING

Is that post-lunch dip in alertness affecting your work? Switch to a high-protein meal. Rowena Handley, Louise Dye and Neil King (University of Leeds) found that this type of meal enhanced visual processing and avoided the negative impact on cognitive performance that high-carbohydrate meals had.

'THE CHILD IS FATHER OF THE MAN'

Ann O'Hanlon and Peter Coleman (University of Southampton) interviewed adults using the Adult Attachment Interview and the Attitudes to Ageing Interview. Providing more grist to the mill for the 'they f*** you up' brigade, they found that adults who have experienced problematic early relationships are significantly more likely to view their own future old age in negative ways.

A little bit of this

ANDY PARROTT took part in a symposium on the risks of a pick-and-mix approach to drug use.

It is rare to find recreational drug users who just take one type of drug, since most use a range of compounds. The aim of this symposium, organised by Jacqui Rodgers (University of Newcastle) and sponsored by the Psychobiology Section of the BPS, was to discuss neuropsychobiological aspects of polydrug use.

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The main focus was on Ecstasy/MDMA users, and in the first paper I outlined three main reasons for their multiple drug use. The first was that amphetamine, cocaine and

Ecstasy are all stimulatory 'dance' drugs, with broadly similar levels of perceived risk. Those who decide to use them report more intense moods and

heightened alertness while clubbing, followed by feelings of lethargy and depression during the subsequent period of neurotransmitter depletion.

The second reason is tolerance, which develops with all artificial stimulants. Ecstasy users complain of reduced efficacy followed by repeated use, and thus need to escalate their dosing. Experienced users may need five, ten, or more, Ecstasy tablets in a single session, and often combine it with amphetamine or cocaine in order to maintain the 'hit'. 'Candy flipping' (taking MDMA with LSD) is also reported.

The third reason is to relieve the unpleasant come-

The mother of all twin studies

SIMON BIGNELL reports on an invited symposium on cognitive abilities and disabilities in the early school years.

MORE than 15,000 pairs of twins and their families are currently involved in the largest twin study ever carried out in the UK. Researchers from the Institute of Psychiatry presented major new findings from this Twins Early Development Study (TEDS) at the Society's invited symposium 'Genetics and cognitive abilities and disabilities in the early school years'.

Owing to their differing amount of shared genetic material, identical and fraternal twin pairs can be compared to assess the effects of non-genetic influences such as education or parenting. TEDS uses this method in a large-scale examination of early development of the three most common psychological problems in childhood: communication disorders, mild mental impairment and behaviour problems.

Between 85 and 90 per cent of students with learning difficulties who receive support from special educational services have reading problems, explained Nicole Harlaar. Existing research studies show a substantial genetic element to reading disability. Along with her colleagues at the Institute of Psychiatry, Harlaar is using the TEDS sample to assess the

extent that genes contribute to children's reading abilities. She looked at the causes of early reading difficulty in the context of normal reading ability. Harlaar explained there is no single gene responsible for reading difficulties; the same influences responsible for the normal understanding of written text may be those that are involved in reading disability.

It is possible to predict low language ability from as early as two years, according to Bonamy Oliver. She is using the TEDS twins to predict school-age language problems from infancy and childhood, using the term 'retrodiction' to explain her method of looking at the twin pairs at seven years old and then going back to look at records from when they were two years old. This approach targets children with later language problems, some of whom may not have shown earlier problems. Oliver found that early behaviour problems were good indicators of later language problems and, surprisingly, non-verbal skills at three and four years are nearly as predictive as language measures. By examining early language and non-verbal ability along with behaviour difficulties, Oliver explained, we could add

fuel to early prediction of language outcomes.

Concluding the symposium was Robert Plomin, looking at how children differ in academic achievement. He explained that many studies have looked at the influence of home life (emphasising parental education, income and expectations), or at their school life (assessing teacher skills, class size and peer relations). Relatively few studies have investigated genetic influence. Plomin's findings show greater influence of genetics on academic achievement than the shared 'environmental' effects that most studies have looked at. Predictably, a high proportion of the genetic influence on academic achievement overlaps with intelligence scores, but interestingly half is specific to achievement.

The TEDS project is providing a major contribution to our understanding of childhood development of cognitive and language disorders, as well as providing a data set on which several other major projects have been established. Concluding, Plomin said that 'genetics plays a major role in academic achievement and genetic research has far-reaching implications for educational theory and practice'.

down effects, which may be fairly severe in heavy users. In London most users take cannabis afterwards, but recent reports from Oslo and Dublin have linked MDMA with opiates. One third of opiate users in Dublin first used heroin to provide symptomatic relief following MDMA, and some then progressed from 'chasing the dragon' (smoking heroin) to injecting. In Oslo a similar link with opiates emerged, while half of their young Ecstasy users were at risk of alcohol dependence.

Jacqui Rodgers (University of Newcastle) next described a large web-based study of self-rated memory ability, involving several hundred volunteers, from non-drug users to heavy users. Multiple regression demonstrated a double dissociation between the memory effects of Ecstasy, which was linked with prospective memory impairments (e.g. forgetting to meet a friend), and cannabis, which was linked to everyday 'here-and-now' memory problems. Past Ecstasy use was also linked to practical errors in completing the questionnaire, self-rated depression, anxiety, mood fluctuation, and weight loss.

Tom Heffernan (Northumbria University) then presented the alcohol findings from the same web study. The data demonstrated clear dose-response functions, with non-drinkers reporting the best memories, and heavy drinkers (over 25 units/week) the most impaired. Even moderate weekly drinkers (10–25 units/week) reported significantly worse memory scores than the non-drinkers. The large sample size allowed the effects of many further drugs to be investigated. Jon Ling (Teesside University) noted that nicotine was also linked to some aspects of memory impairment. See www.drugresearch.org.uk if you are interested in taking part in the research.

The alcohol findings are particularly relevant because many Ecstasy users commence a drug episode by drinking alcohol. As Fabrizio Schifano (St George's Hospital Medical School) noted, this may be because alcohol has been reported to intensify the acute effects of MDMA. Thus some regular Ecstasy users follow the polydrug sequence of initial alcohol, then stimulants, and finally various relaxants. Schifano then reviewed the two hundred Ecstasy-related deaths recorded by the National Programme of Substance Abuse Deaths between 1996 and 2002. Most autopsies revealed polydrug combinations, typically involving opiates, alcohol, amphetamine, cocaine or benzodiazepines. However, there were 34 fatalities involving just MDMA.

Next, Philip Murphy (Edge Hill College) described recent findings of impaired working memory in both current and former Ecstasy/MDMA users. This emerged in both the single- and dual-task paradigms, and showed that quitting Ecstasy is apparently not linked to recovery of cortical functioning.

The session discussant was Andy Scholey (Northumbria University), who summarised the main themes to emerge. These included the question of MDMA's rank position as a problematic drug, and whether pre-existing problems might be an important contributory factor in explaining why so many Ecstasy users display adverse neuropsychobiological profiles. Finally, there was the question of how polydrug use should be conceptualised and treated. Should it be seen as a nuisance factor and removed statistically, in order to estimate the effects of a single 'pure' drug? Or should it be investigated as an integrative factor that helps explain how patterns of psychoactive drug use change and evolve over time?

SOMETHING SMELLS DISHY

SIMON BIGNELL reports on a symposium on evolved sex differences in attitude and mate selection.

MOROCCAN emperor Moulay Ismail (1672–1727) holds the record for the largest number of children at 888; the record for a woman is 69. These figures convey a valuable message for evolutionary psychology: a man's reproductive potential is much greater than a woman's.

Because of the long-term parental investment of women it is essential that the limited number of children they produce survive. The best possible genes improve their chances, and this involves strategic mate selection. According to Ian Penton-Voak (University of Stirling), one cue to quality is physical symmetry. But although there is evidence that symmetrical men provide genes that are more advantageous to their offspring, they do come at a cost – symmetrical men have more affairs and invest less overall time in relationships.

Odour is a powerful cue in attractiveness, and Penton-Voak wondered whether symmetrical men smell differently from the more lopsided variety. He gave symmetrical men T-shirts to wear for two nights and then asked women to rate the smell. Curiously, women showed a preference for the smell of symmetrical men only when they were most likely to conceive (days 6–14 of their menstrual cycle). He explained that women also show a shift from actively favouring feminine male faces to favouring masculine male faces during this phase.

David Perrett (University of St Andrews) used a range of 'morphed' composite images of male and female faces to investigate these preferences. The more masculine male faces were associated with 'having fun', whereas the more feminine male faces were associated with paternal investment. Also, the more attractive a female was, the higher her preference for masculine-faced males seemed to be. Linking with odour research, he tested women's preferences for pheromones. Most women found the smell unpleasant, but the higher their liking for the pheromone the more they preferred masculine faces.

Evolved sex differences are not only apparent in mate selection but also in attitudes to aggression. According to Anne Campbell (Durham University), females generally believe that the cause of their aggression resides within them, and they attribute it to their own high stress or poor self-control. Women tend to view the aim of the anger as emotional discharge – this takes the form of crying or screaming, which they then regret or find frustrating. Males are different: they see the cause as external to themselves or as controlling others' misbehaviour. This often takes the form of hitting and is generally evaluated positively. The real difference between the sexes, explained Campbell, is that males are less inhibited about expressing aggression.

Richard Stevens (Open University) wrapped up by stressing the necessity of asking 'What can we do with these explanations and how can they be utilised for the benefit of us?' He called for the courage to apply evolutionary psychological explanations, but equally to refrain from them when necessary.

IN BRIEF**SPARKING INTO ACTION**

Those who are close to us not only enhance our performance at our goals but can also inhibit them, explained James Shah (University of Wisconsin). He found that reaction times on word identification tasks were quicker when preceded by the names of others who want us to do well rather than when preceded by someone who couldn't care. According to Shah, this suggests that significant others automatically ignite or extinguish pursuit of our goals, and this may depend on one's relationship and representation of the person that is close to you.

IT'S NOT OVER YET

Mood could serve as an important cue to stopping obsessive checking, according to Benie MacDonald (University of Sussex). Positive mood can often indicate we've achieved a goal and that it is time to stop that activity. In obsessive compulsive disorder a pervasive negative mood may perpetuate checking behaviour, because it indicates the task is not complete. In this way mood acts as important non-conscious information to let us know when our goals have been achieved.

AVOID STODGY THINKING

Joanne Lawson and Andy Field (University of Sussex) have been investigating how normal childhood fears could develop into phobias. Pairing unfamiliar marsupials with negative information led to increased fear beliefs in young children. Associating novel Pokémon-style cartoons with ice cream led to a positive shift in attitudes, but the character who ate Brussels sprouts was given short shrift. This research suggests that preferences in children can be learnt through classical conditioning. The next step is to see whether the preferences persist, and whether they can be unlearnt.

Seeking closure

PAUL REDFORD reports on how the need to understand the social world affects group behaviour.

UNDERSTANDING the social world around us is central to group and individual functioning. However, as Arie Kruglanski (University of Maryland) explained in this talk, people vary in how vital this understanding is to them.

Kruglanski and his collaborators have conducted many studies into 'need for cognitive closure'. He sees the need for cognitive closure in group situations as a desire for coherence, certainty, understanding and a sense of purpose. This desire for closure, Kruglanski argued, affects group processes in a number of ways.

In one study participants were required to role-play a committee. Half the participants were low and half were high on 'need for closure'. Among individuals high in need for closure, there was more pressure for uniformity in the committee. In a similar study where individuals played jurors they found that not only was need for closure an individual difference, it could also be manipulated by the social environment. Noise increased individuals' need for closure. The high-noise group had a higher need for consensus among group members, and their opinions shifted less when a confederate was introduced into the group.

High-need-for-closure groups and individuals also seem to prefer autocratic leadership style rather than a democratic group structure. These groups seem to take on a 'wheel' structure, where a central member takes control, influencing the group towards

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higher levels of asymmetry (uneven distribution of the discussion).

Furthermore, in groups where there is high consensus there are also higher levels of ingroup favouritism and outgroup derogation. In a study of football supporters a high need for closure was more strongly related to ingroup favouritism in homogeneous groups (where levels of support were fairly similar across the fans) when compared with heterogeneous groups.

In a further examination of the consequences of need for closure, Kruglanski cited a study examining need for closure in new immigrants. As need for closure motivates individuals to understand their social reality, there is an interaction between the numbers of people that migrate together, their integration and their need for closure. High-need-for-closure individuals who move to another country along with many other group members

will seek their social reality within this group, will maintain strong links to their 'home' culture, and will be more homesick. However, if high-need-for-closure individuals move to a new culture alone, they will seek the need for closure by integrating and learning about their new host culture. As a consequence they will be less homesick and demonstrate higher levels of sociocultural adaptation.

Kruglanski called these phenomena 'group centrism'. He argued that the diverse studies in both controlled experiments and real-world examples that have demonstrated the influence of need for closure, both at an individual level and as a consequence of environmental factors, highlight its robust nature. Furthermore, he suggested that the consequences of group centrism might give us greater understanding of real-world issues such as totalitarianism and groupthink.

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