Associate Editor for *Conference reports* **KATE CAVANAGH** **introduces our coverage of the 2000 London Conference.**

The unprecedented growth of new technologies is changing our understanding of who we are and how we behave. As developments in imaging techniques provide insight into the structure and processes of the brain, the rise in mobile and electronic communications and the growth of virtual environments promise to radically alter the structure and process of social relationships.

The symbiotic relationship between psychology and new technologies is demonstrated through the sheer volume of human–computer interactions is our daily routines. From the technology that drives your toaster through to your mobile phone and laptop, new technologies are woven into our lives. The main theme of the 2000 London Conference was to address this relationship. Specifically, how can psychologists understand the impact that these new technologies are having on our lives, and how can psychologists get involved in this relationship so that we can make the most out of this technological revolution?

Beyond the conference theme other contemporary topics were presented, notably ageing and frailty in later life, the public image of psychology, and racism. The reports in this section give an overview of some of the take-home messages.

Love them or hate them

KATE CAVANAGH *hears about computer addiction and phobia.*

WITH the increasing use of computing technology in work, rest and play looms the spectre of computing psychopathology. As both games and work software become more engaging and impressive and the internet provides information and entertainment with every click, scare stories about computer addiction are ubiquitous. The worrying flipside to computer addiction may be computer phobia. Presentations by John Charlton (Bolton Institute) and Julie Norris (University of Surrey) addressed these concerns, and suggested we may have less to worry about than previously thought.

Studies indicate that 8 per cent of the population may have problems with liking computing a little too much. But is computer addiction really a behavioural addiction like those for gambling or for exercise? Charlton sought to clarify the nature of computer addiction by looking at more than 400 student's responses to items tapping attitudes to computers.

The items focused on computer addiction (e.g. 'When I am not using a computer

Julie Norris

I often feel agitated'), computer anxiety ('I feel nervous using a computer') and computer engagement ('When I see a computer I feel drawn towards it').

Charlton looked at the clustering of responses and found that the boundaries between addiction and engagement are blurred. Scale items tapping purportedly addictive characteristics, such as tolerance, euphoria and salience, may simply reflect

an enjoyment in computing that is non-pathological. More rigorous behavioural addiction criteria such as withdrawal symptoms and relapse following abstention from computing suggest that only 4 per cent of the students questioned were really addicted to computers.

However, if you think you are safe because you are only 'engaged' take heed – Charlton warned that computer engagement may be an important stage in the development of computer addiction.

Norris's presentation on computer phobia highlighted that prevalence surveys from the 1980s and 1990s suggest that as many as one in three people suffer from severe computing fears. However, the definition of computer phobia used in several widely cited studies appears unclear or inadequate.

Norris argued that using 'deviation from the norm' criteria or cut-off scores on questionnaire measures tells us little about the prevalence of computer phobia or its impact on computer-based task performance. Looking at lexical decision type computer tasks (where a string of letters is flashed

briefly on to a computer screen and the participant has to indicate quickly and accurately whether or not it is a word), Norris found no association between task performance and widely used indices of computer phobia – the Computer Aversion Scale and the Computer Anxiety Rating Scale. Only when the cut-off score was the top 10 percentile of participants were any differences found on task performance – and then only in reaction times for neutral words.

Norris suggested that these findings indicate the prevalence of computer phobia at around 8 per cent in her student sample, much lower than the widely cited papers from the past two decades. Whether this means that anxiety measures are becoming more accurate or we are becoming a more computer-friendly society remains unclear.

However, whilst using performance criteria instead of arbitrary statistical cut-off points is a step in the right direction towards defining computer phobia; whether there is a level of psychopathology commensurate with diagnostic criteria is yet to be established.

The myth of the modular mind?

ASIFA MAJID *reports from the Neil O'Connor Award Lecture.*

DR Chris Jarrold (University of Bristol) received the Neil O'Connor Award for his work on 'Individual differences in domain specificity in developmental cognitive neuroscience'. The dominant view of the mind, until recently, has been that there are a number of modules responsible for different cognitive functions. Each module is domain specific; for example, if object perception is modular then in order to perform its operations quickly and efficiently, the object perception module works independently of the modules dealing with language, music, mathematics, and so on. But Jarrold presented work on both autism and Williams syndrome suggesting that there are cross-domain interactions, and therefore problems with a strictly modular view of the mind.

Autism has been linked to a deficit in theory of mind and a weak central coherence. Strong central coherence means that a global impression has been formed, while weak central coherence means that more attention is paid to local information. When asked to find a 'blue triangle' within

a complex picture of a motorbike, people with weak central coherence find it easier to pay attention to detail and locate the triangle, whereas people with strong central coherence find it difficult to disengage their attention from the whole motorbike.

Jarrold showed that there is a relation between theory of mind and central coherence. Deficits on theory of mind tasks are associated with good local perceptual processing. Therefore, Jarrold argues there is cross-domain interaction between these two abilities.

Similar cross-domain interaction is observed in people with Williams syndrome, a condition involving an impairment in visuospatial cognition but a relative sparing of language. However, Jarrold showed that children with Williams syndrome are not spared in all aspects of language. Instead, there is impairment in language that describes spatial relations, suggesting interaction between these two domains. Together, the findings from autism and Williams syndrome are problematic for a strict view of the modularity of mind.

Psychologists, racism and the Lawrence

ASIFA MAJID *was at a roundtable discussion on the role of psychologists and the Society in tackling racism.*

DESPITE the fact that psychologists have been active researchers in racism since the 1920s, there was not a single psychologist involved in the MacPherson Report on the murder of Stephen Lawrence. This roundtable discussion aimed to address this silence by looking at what psychological research can contribute to our understanding of racism; how (if at all) that research can be applied; and whether the charge of 'institutional racism' can be levelled at The British Psychological Society.

With regard to research on racism, Margaret Wetherell (Open University) and Steve Reicher (University of St Andrews) both advocated a shift in research strategy. They argued that instead of treating racism as the result of something within the individual, we have to look at the wider context. People are part of a culture, which is social, situated and dynamic. Therefore, research should move beyond the individual in a vacuum and treat the individual as being embedded in practices, routines and modes of interaction. For example, Wetherell looked at examples of "racist talk" quoted in the MacPherson report, used to show that four of the defendants in the

From left to right: Margaret Wetherell, Ann Phoenix and Steve Reicher

case were racist. However, Wetherell pointed out that there was no attempt to see how other people talk about race in the same context as the defendants were in, or how the defendants talked about race when they were not with their friends.

Furthermore, Ann Phoenix (Open University) argued that by taking the individual in isolation, culture was pathologised. Instead, psychologists should normalise race by investigating how people develop their cultural and racial identity. Importantly, this means studying how racial identity is constructed amongst the ethnic majority as well as amongst minorities. Psychologists have to start thinking differently about difference.

The second theme of the discussion

was how and when research that has been conducted on racism could and should be applied. Whereas sociologists have taken an active role in shaping social policy and were heavily involved in the MacPherson Report, psychologists are not as prominent. Susan Condor (University of Lancaster) listed reasons why this may be the case.

One reason featuring prominently in the discussion was the lack of willingness by psychologists to present their research within the public domain. Susan Condor made a distinction between the 'scientist' and the 'expert'. The scientist does not allow closure and is continually challenging the existing findings. On the other hand, the expert relays 'truths' that are closed statements, and that are deemed to be best-fit descriptions of facts. She suggested that psychologists are reluctant to take off their 'scientist hat' to don their 'expert hat'. There was agreement among attendees that psychologists should speak politically, both by making research more available and by implementing the findings of their research.

Finally, the question of whether the Society is culpable of institutional racism was raised. According to the MacPherson Report, institutional racism is 'The collective failure of an organisation to

The frontal lobe as global patroller

PAUL REDFORD *reports on John Duncan's Broadbent Lecture 'A frontal lobe system for mental focus and control'.*

THIS year's Broadbent Lecture began with John Duncan (MRC Cognition and Brain Sciences Unit, Cambridge) illustrating the influence of Broadbent on his own work and life, relating an incident when he signed Broadbent's name instead of his own!

The understanding of selective attention was central to Broadbent's work and has been developed by Duncan and his collaborators. Duncan's lecture examined the role of the frontal lobe in mental focus and control – the selection of relevant components and the filtering out of irrelevant components to achieve a goal. The frontal lobe is central to this process, although the precise mechanisms are not well understood.

Duncan reviewed early work that examined the role of the prefrontal cortex in problem solving. This work showed the

mental distortions in problem solving that resulted from pre-frontal cortex damage (such as unexpected intrusive thoughts, or the disregard of a subgoal in achieving a solution). Duncan also demonstrated the myriad of psychological functions that the frontal lobe has been linked with.

Duncan presented four separate areas of work that have illuminated the functioning of the frontal lobe. Recent advances in neuroimaging have proved invaluable in understanding brain functioning, and areas that appear to be involved in various different cognitive demand experiments (such as perceptual tasks and working memory tasks) have been highlighted. These experiments demonstrated a specific clustering of activity within the frontal cortex.

Duncan suggested that these diverse cognitive tasks are similar to fluid intelligence tests. Results from examining

brain activity during intelligence tests were remarkably similar to the previous studies. He also suggested that individuals with low 'g' demonstrate distortions in cognitive demand tests similar to individuals with lesions within this area.

Duncan provided evidence that demonstrated the adaptability of neurons in the frontal lobe. In working memory studies involving monkeys, neurons have been identified that carry information about *what* an object is, but can also adapt when necessary to carry information about *where* an object is. Furthermore, neurons need to filter out what is necessary to be selected for the specific tasks. Duncan tentatively suggested that some sort of 'global patroller' was needed to help with this selective attention. He concluded by suggesting that the prefrontal cortex could serve this role.

Inquiry

The psychobiology of ageing

MARK WETHERELL *attended a symposium on the brain and cognitive function across the lifespan.*

provide an appropriate and professional service to people because of their colour, culture or ethnic origin'. This has obvious applications to an organisation of clinicians, teachers and researchers.

Despite positive movements from the Society to overcome such problems, the discussion suggested that there were still areas of concern. For example, it was argued that there is a distinct lack of help from the institution (and externally) for research on racism. There was also concern about psychologists as practitioners. As in research, practitioners believe they are objective about issues such as race when this may not be the case. For example, in the consultation room or the classroom a loudly spoken white man may be perceived as being passionate, while the same behaviour displayed by a black man may be seen as aggressive. Deep concerns were raised about the consequences of these kinds of bias, particularly in the clinical setting.

Once again, as in the research domain, it was argued that psychologists have to begin to treat differences differently. Instead of ignoring or pathologising race, ethnicity and culture and the process of racialisation, psychologists have to attend to this process and normalise it.

RELIABILITY OF ASSESSMENT

ALEX LINLEY *is comforted by good agreement between markers.*

THE good news for psychology students and graduates is that psychology degree results are a reasonable reflection of student achievement…well, at least in Northumbria. Chris Dracup (University of Northumbria) presented an examination of the reliability of assessment for the psychology degree class of 1993. The study indicated that there was very little difference between marks awarded by first and second markers. Furthermore, longitudinal evidence from 13 class cohorts suggested remarkable consistency in marker reliability over time.

THIS psychobiology symposium addressed three major perspectives in the area of ageing: memory, cognitive ability, and the brain basis of the ageing process.

Keith Wesnes (Cognitive Drug Research, Reading) discussed the effects of ageing on aspects of memory. Wesnes assessed aspects of memory in more than 2000 healthy adults, aged between 18 and 87, through a battery of tests representing everyday tasks (e.g. the ability to remember names).

The good news (depending on how old you are) is that the time taken to perform such tasks remains relatively constant until the mid-forties, after which reaction times tend to slow. Unfortunately, the same cannot be said for the accuracy of such tasks, which shows a consistent decline as age increases. To make matters worse, many disease states (such as coronary heart disease, diabetes, schizophrenia and epilepsy) can accelerate this decline.

Other factors such as alcohol consumption can also produce deficits. For example, a healthy 18-year-old will demonstrate reaction time deficits equivalent to a healthy 60-year-old following two to three units of alcohol – the amount of alcohol where driving behaviour begins to be impaired.

However, help could be at hand. Wesnes reported findings from studies using herbal remedies such as ginkgo and ginseng. Such remedies produced marked improvements in aspects of cognitive functioning in healthy young adults. Future research will focus upon the use of these remedies in older and diseased adults, to assess whether similar improvements are observed.

In the second presentation, Ian Deary (University of Edinburgh) presented findings from a study on cognitive ageing that would be the envy of anyone who has ever attempted longitudinal research. In Scotland in 1932 almost 90,000 eleven-year-old children had their IQ assessed with the Moray House Test. In 1998 Deary and colleagues recruited 500 of the original participants for retesting. The participants who have been retested demonstrate a highly stable score over time. That is, despite their lack of experience at aged 11, and the influence of 66 years of life experience, their performance on the same

tests of mental abilities remain relatively unchanged. However, of more interest were those individuals who showed either a marked improvement or decline on their previous scores.

In order to understand longitudinal changes in cognitive performance the research team assessed participant's levels of a protein associated with Alzheimer's disease. Although no relationship was found between the protein and lifetime changes in performance, those people without the protein showed less decline over a one year period in old age. The research team also assessed

Keith Wesnes

levels of white matter in the brain. Those individuals with more white matter showed accelerated cognitive decline in old age. Increases in white matter could be caused by atherosclerosis of blood vessels and therefore this finding could link in with the deficits observed by Wesnes in individuals with heart disease.

After the effects of ageing on cognitive functioning were presented, James Semple (Addenbrookes Hospital) explained what is going on in the brain during the ageing process through the discussion of advancements in magnetic resonance imaging (MRI) techniques. Semple and colleagues observed that those with Alzheimer's disease lose more than double the brain volume per annum than do healthy individuals. Moreover, in healthy individuals this loss is very general; in Alzheimer's disease the loss targets specific areas of the brain. In particular, there is greater enlargement of brain ventricles, to the extent that this loss can efficiently identify those people that are healthy and those with the disease.

Patients with Alzheimer's disease also show marked declines in the number of nerves connecting different parts of the brain. It is these declines that are probably responsible for the cognitive deficits discussed in the symposium. Future work in MRI is therefore likely to involve relating MRI scans to cognitive functioning.

Virtually human

KATE CAVANAGH *finds out about friendships with our computers and then looks at a symposium examining the role of other social and emotional factors in online communication.*

COMPUTING technologies are rapidly changing. The internet took just four years from conception to reach 50 million people worldwide. At present 55 per cent of adults in the USA have access to the internet, and universal access for this population is envisaged by 2005.

The nature of human interaction and human–computer interaction is changing. Relationships are made and sustained by online messaging, e-mail, chatrooms, news groups and video-conferencing. Moreover, computers are no longer simply a tool for communication but may be a social entity themselves. Your search engine can really be your friend!

Social and communicative technologies can also impact on social development and dynamics. The rise of the 'teenage guru' as a source of home computing expertise may radically alter family dynamics. Just like television, emerging communicative technologies are mirrored by shrinking social circles, and interactive virtual friends may reduce the desire for interpersonal experience further.

Contemporary relationship design raises a fascinating new agenda for psychologists, one that embraces computing technology as a favoured method of communication. Relationship design draws on the idea that technologically driven relationships may work in very different ways to traditional ones, but that the success of new relationships will almost certainly rely on social and emotional interaction rather than simple functionality. Moreover, the e-commerce implications of online relationships means that the way in which they emerge and develop is not being left to chance.

In an engaging presentation Pam Briggs (University of Northumbria) examined the nature of relationships underpinned by these advances in technology. Briggs argued that successful contemporary relationships that are generated or supported by computing technology have three core features: trust, heed and fun.

Defining trust is not easy, especially in the case of trust online. Briggs suggested that it can be measured in terms of

CHRIS CHAPERON

With toys like this, who needs friends?

predictability and anticipated success. We trust sources of information that provide expected and consistent goods or information, more so if the goods and information makes us happy. We trust cash machines more than we trust fruit machines. We trust powerful brands more than those we have not heard of before.

Heed embodies the ways in which communication technologies offer a voice to people who might otherwise go unheard. Studies of the impact of the internet on socially disadvantaged families in the USA suggest it is a very positive medium. Amongst the reported user outcomes were increased self-esteem, knowledge and skill acquisition and transfer; improved student achievement; and a loss of fear. Computers can also provide an empowering source of information and communication for other groups such as the elderly and people with learning difficulties.

Successful computer mediated relationships must also be fun. Autotelic experiences (those that are pleasurable and involving in and of themselves) are being designed to enhance interaction – through, for example, feedback, goals and a sense of

presence. Social and communicative technology must be designed with playfulness in mind. We won't continue to interact unless the experience in enjoyable, exciting, charming and engaging. Of course, one person's pleasure is another's pain – online relationships need to be tailored to our individual desires.

The attraction and growth of interactive toys, such as TecknoDog, Furby and Amazing Ally, is evident from sales figures and wish lists. As TecknoDog and Furby become increasingly attractive alternatives to real pets, Amazing Ally is becoming a virtual alternative to a real friend. Ally plays games and learns information about her human buddy and later recalls and reminisces about life events (birthdays, holidays) and play adventures ('remember when we made a sandcastle?'). What more could a girl ask for?

The possibility of having a computer as a friend might radically alter social development. Whilst traditional relationships can be enormously rewarding they also tend to have their ups and downs and are essentially characterised by compromise. Relationships with computers are more malleable. If your computer buddy becomes difficult or disagrees with you – you can just switch them off.

In conclusion, Briggs emphasised that 'relationship design' is happening now, and the pace of change is phenomenal. It is far from clear whether these new technologies are a blessing or a curse. Either way, psychology needs to have a proactive agenda to address them.

Computer-mediated communication

THE rapid growth of the internet as both a means of communication and a source of information prompts an exciting new agenda for psychologists and scientists from other disciplines. In the case of e-commerce, the development of relationships with remote consumers is vital to maintaining customer loyalty. Customers using the web are only one click away from a competitor. To attract and retain consumers, computers are

no longer seen as a tool but as an agent for social and humanistic interaction. Information technology has transformed into relationship technology.

As a new social world is emerging on the web, the race is on to build computer interfaces with personality. Paula Lynch (NCR Knowledge Lab) discussed the development of social agents such as avatars (e.g. the Microsoft 'Paperclip') and chatterbots (e.g. psychoanalyst 'Eliza') on

the internet, which aim to generate naturalistic communication and give the impression of talking to a real person.

Lynch went on to describe some of the factors that make social agents on the web successful. Illustrating the presentation with introductions to Ananova (Orange's virtual newscaster) and Cor@ (the virtual guide to Deutsche Bank), Lynch talked about the effect of social agents on consumer behaviour. On the positive side, Lynch suggested, social agents render a computer more human-like, engaging and motivating. On the negative side they can be distracting and annoying.

To evaluate the effectiveness of social agents, Lynch argued that we need to go beyond traditional notions of usability. The first step in this process will be to identify the dimensions that make successful social agents.

'Granny' is one of the NCR Knowledge Lab's pilot projects and a key research tool in the development of understanding social agents on the web. Granny is a friendly cartoon avatar designed to aid cash machine transactions. As customers interact with Granny they are guided through both typical banking transactions and a wider range of services on a cash machine interface.

Lynch's research investigated the ways in which people think of Granny in comparison to traditional sources of banking. A group of computer-literate users tried Granny and were then asked to generate adjectives to describe Granny, a traditional cash machine and a human bank teller. Semantic analysis of the adjectives generated revealed three dimensions attributed to these banking sources: functional, social and aesthetic. Whilst 60 per cent of the adjectives used to describe a traditional cash machine were functional, 60 per cent of those used to describe Granny were social. People also perceived Granny more positively on aesthetic and social attributes than the traditional cash machine.

Lynch concluded that social agents such as Granny provide a promising solution to enhance consumer relationships, and that it is imperative that psychologists drive the design of social agents.

In the second presentation Nicola Millard (BT exaCT Research) focused on the development of social agents to aid customer relationship management in call centres. In the case of call centres computer-based social agents can be used to assist and amuse the phone operator, which in turn may improve the customer experience. Millard demonstrated prototype software systems which display customer

information, aid collaborative work, allow the call operator to control aspects of their environment, and provide some stress relief. It is hoped that these 'motivational user interfaces' will help to reduce staff turnover in call centres.

Norman Alm (University of Dundee) talked about the use of computers to facilitate better social interaction in situations where it would otherwise be difficult or impossible. Slow rates of verbal production are an important barrier to communication for many people. Computer-mediated communication can overcome

Paula Lynch

production bottlenecks by using prestored texts based on predictable patterns in conversation. For example, using icons to generate typical phrases to open and close conversations and to enable rapid feedback to a speaker can enable satisfying conversations that flow more smoothly. Furthermore, enacting scripts and telling stories can be aided by using visual cues such as common scenes (e.g. in a restaurant).

Alm described some applied work on a multimedia reminiscence tool developed for elderly people with short-term memory problems. The use of scrapbooks, tapes, videos, songs and quizzes to aid reminiscence was found to be very motivating and useful for both the elderly and their carers. The benefits of computer-mediated communication are not restricted to the elderly: they may be valuable for people with autistic spectrum disorder, and in situations where the subject matter is distressing or embarrassing (e.g. in rape crisis centres).

The growing market for computer-mediated communication brings with it the important task of evaluating media quality. There is clearly an important role for psychologists in helping to find the best fit between the physical quality of media and user needs. Angela Sasse (University College London) discussed the methodologies used to assess quality needs in video-conferencing and championed the

use of physiological as well as subjective measures in interface research. Subjective measures suggest that people are quite poor at detecting gross differences in the physical qualities of video-conference when they are engaged with the task. However, when physiological measures are employed heart rate increases are seen when quality shifts from high to low frame rate. These findings indicate that poor video quality has a stressful physiological impact that we may not have conscious insight into.

The final presentation in this session looked at gender differences in computer-mediated communication. Alan Durndell (Glasgow Caledonian University) argued that attitudinal research into computers has typically demonstrated that males have more positive attitudes towards computers, higher computer self-efficacy and lower computer anxiety than females. Moreover, the majority of computer 'addicts' are male, as are more than 80 per cent of computing students.

Gender differences in interaction patterns have been demonstrated in both face-to-face communication and computer-mediated communication. Variously labelled 'report versus rapport' or 'adversarial versus attenuated', analysis of transcripts from males and females suggests very different styles of communication.

Durndell presented the findings from a study looking at discussions from 'asynchronous conferences' (i.e. bulletin boards) used by Clyde Virtual University for the discussion of course topics in introductory psychology. Of 224 course members (79 per cent female), 84 posted a message on at least one of three discussion groups. Over nine-weeks 379 messages were posted in total. Whilst no differences were found in the number or length of postings between males and females, several interesting gender differences in communication were found. First, all of the participating males used their real name as a username, whereas 71 per cent of the females chose to use a numerical ID. Second, females were more likely to 'lurk' (read the postings without contributing) than males. Finally, male postings elicited more responses than did female postings, accounting for less than a quarter of postings, but more than a third of responses.

Durndell concluded that gendered power differentials in communication style are found in computer-mediated communication just as in other mediums. These differences need to be addressed with the development of communication futures.

'Barebacking', HIV risk and health promotion

SIAN WILLIAMS *went to a symposium reviewing gay men's behavioural responses to HIV/AIDS.*

RECENT research suggests that government attempts to reduce risk behaviour may have had the opposite effect and have fostered an increase in dangerous practices. 'Barebacking' – the high-risk behaviour of unprotected anal sex – was the topic of a highly thought-provoking symposium introduced by Adrian Coyle (University of Surrey).

Paul Flowers (Glasgow Caledonian University) began the symposium. He suggested that the categorisation of people at high and low risk for AIDS has changed over the last two decades. These changes can be represented in three distinct phases. The first, in the early 1980s, Flowers names the 'confused' period, when AIDS was regarded by most as a homosexual male disease, and this 'social body' was considered at high risk. In the late 1980s and early 1990s there was a shift to a more 'somatic' period. Here, with the discovery of HIV and the development of the HIV test, the individual became the focus for risk management. At present, Flowers suggests that we are in a 'technological' period where new drugs and treatments are being developed and the shift in risk management is towards identifying groups of gay men who might be at high risk.

To highlight groups of gay men who are putting themselves at risk through having unprotected sex, Zoë Meek (University of Luton) presented the results of a survey carried out in various pubs, clubs and gay saunas. The results showed that men with a regular partner were more likely to use condoms with both long-term and short-term partners, and that younger gay men were more likely than their older counterparts to have unprotected sex. These findings may help in developing appropriate sexual health services and directing them at appropriate target groups.

Although the emergence of free and confidential HIV testing has given a hope of minimising the spread of AIDS, research by Jonathon Elford and colleagues (Royal Free and University College Medical School) indicates that this is having the opposite effect. Individuals who have repeated HIV tests are more likely to have unprotected sex and are more likely to develop the disease than gay men who had not previously tested for HIV. Elford suggested that repeatedly receiving a negative result may have provided clients with reassurance and may have a disinhibiting effect, reinforcing risky behaviour.

Another reinforcer of unprotected anal sex could be the health promotions designed specifically to reduce the behaviour. Michelle Crossley (University of Manchester) presented a compelling account of why this might be the case. Utilising a qualitative design, she sought to find out why gay men were intentionally putting themselves at risk of HIV. Analyses of the discourses used by gay men found that feelings of autonomy and a desire to act against authorities such as health services may increase risk behaviour rather than reduce it. Crossley argues that a new approach to health promotion is needed.

The final speaker in the symposium, Gary Taylor (University of Sussex), further highlighted the change in discourse of HIV/AIDS risk management and the effect this has had on gay men's behaviour. He interviewed gay men with and without HIV, all of whom had participated in unprotected anal sex in the past year, to hear their accounts of unsafe sex. Nearly all of the men accounted for their behaviour by referring to the advancement of treatments over the past 10 years and a perception of the reduced seriousness of HIV/AIDS. However, Taylor notes that these are likely to be *post hoc* justifications rather than the causes of behaviour.

The symposium highlighted important issues that health promotion agencies need to address, not only in HIV/AIDS risk management, but over a whole spectrum of issues where government attempts to reduce negative behaviours seem to be failing.

A tower of achievement

SIMON J. BIGNELL *heard Gerry Altmann's 2000 Book Award Lecture.*

THE Society's Book Award for 2000 went to Gerry Altmann (University of York) for his book *The Ascent of Babel: An Exploration of Language, Mind, and Understanding* (1998, Oxford University Press). In his address Altmann presented current research and controversial theories from the field of psycholinguistics. He described how, as speakers, we go about accessing the meanings of words as sentences unfold in time. In addition, he explored how and when we figure out who did what to whom when we listen to other peoples' speech. Finally, Altmann engaged the audience with explanations of the origins of language itself: how it is that infants first go about learning to make sense of words.

Altmann draws the analogy between Breugel's 'Tower of Babel' (which depicts the construction of a tower reaching towards heaven) and the progression of language development that we each undergo from birth onwards. We may see the final painting and what it represents, but the painting does not reflect how it was painted: just as spoken language does not reflect the way in which it is constructed. Altmann's fascination lies with the ascent of Babel, our developmental pathway from raw sounds to a construction of meaning.

In his talk, as in his book, Altmann identifies some common principles of language and especially of the beginnings of language during infancy. His use of humour and analogy assist understanding by gently introducing his audience to often complicated issues such as functional imaging, artificial networks, and the statistical properties of language.

Psychology, technology and ethics

JUDITH SIXSMITH *reports on a symposium of cutting-edge work from Liverpool Hope University College.*

THIS symposium presented technology as both an object and a tool of research in psychology from an ethically grounded perspective. Researchers working at the interface of psychology and technology at Liverpool Hope University College discussed a diverse range of issues confronting them.

Jezz Foxx began with an overview of the ways in which the internet can aid research using a questionnaire methodology. He outlined the advantages (e.g. time and cost) and disadvantages (e.g. specialist knowledge required) of the development and administration of such research in the context of accessing survey-based information in the highly sensitive area of self-harming behaviour. He warns that attention to issues of psychological harm and anonymity are essential within the context of internet-based questionnaire administration, suggesting that a dedicated web page for study results be made accessible alongside the opportunity for participants to contact researchers personally through e-mail addresses.

Moving away from issues of the internet as a research medium, Chris Burwood talked about his research into public attitudes to CCTV. Using a focus group discussion methodology, he accessed people's views about privacy and surveillance and the links between crime and CCTV. Interestingly, issues of civil liberty were not high on the agenda of people's concerns, whereas issues of aesthetics were: CCTV was deemed to detract from attractive street architecture. More importantly, participants voiced concern over perceived feelings of safety engendered by the technology. They felt that CCTV may heighten feelings of safety and so encourage people to use areas they normally would avoid. However, without immediate police presence CCTV can only record crime, not ultimately prevent it. Chris argues that the ever-increasing use of CCTV may have unintended consequences, which calls into question the assumed relationship between the technology and crime deterrence.

Anna Warm presented her work on video-game playing and levels of aggression. Computer gaming is a fast-growing leisure time activity for children and, increasingly, for adults. Her experiments with boys and girls aged 11–16 showed that hostile cognitions were linked not just to violent game playing, but also to high-paced games (such as driving simulator games). Hostile cognitions were

Jezz Foxx

evident in the short-term period immediately following play. Warm highlighted ethical issues by urging care over recruitment and debriefing of children, given that their participation in the research may induce negative affect.

The impact of engagement with gaming was taken further by Craig Murray. Virtual environments are increasingly designed to improve feelings of presence by providing a fuller sensorial experience including visual photo-realism, auditory and tactile information. This improves the vividness and interactivity of 'embodied' presence in the environment. The possible psychosocial consequences of such experiences have not been fully researched and need immediate empirical attention in the light of developing games involving high levels of violence (such as those in which the user plays a serial killer). If virtual reality is to progress in an ethically sensitive manner, argues Murray, then we need to know how immersion in virtual environments translates into thoughts, feelings and behaviours in the real world.

Finally, Michael Gordon discussed the ethical implications of computer-based learning in education, reporting two studies on the relationship between computer anxiety and academic achievement. He found that 48 per cent of undergraduates taking course options in statistics experienced computer anxiety, while a further 26 per cent had negative thoughts about computers. Surprisingly, more males than females reported computer anxiety. Students who were most anxious about computers performed worse on assignments than other students.

Gordon suggested that computer anxiety may have an indirect effect on academic achievement, as students develop computer-avoidant behaviours that can result in late work and subsequent time penalties. The ethical implications of student failure linked to computer anxiety need to be addressed within university departments.

Taken together, the symposium raised many questions concerning the pervasive influence of technology in our everyday (and virtual) world environments, and the ways in which psychology can offer insights into the development and use of technology within an ethical context.

Press * for a personality

SIAN WILLIAMS *learns about our feelings for automated phone services.*

'PLEASE press the star key now…' What does that voice do for you? Is it merely providing you with the information you asked for or is it doing so with attitude? A paper presented by Steve Love from the University of Portsmouth suggests that we do indeed make value judgements when we hear these automated voices, and that we don't much like their 'personalities'.

Love's participants listened to both a real and synthesised version of the same human voice and were asked to rate the voices on the 'Big-Five' personality traits, as well as other descriptors. He found that people rated the synthesised voice as being more introverted and less open to experience than the human voice. Love also found that the synthesised voices were perceived as being more dogmatic and lazy, less positive and more disagreeable. Contrary to popular belief, it seems the speaking clock wouldn't give you the time of day.

Turning the roundtables on psychologists

PAUL REDFORD *reports on a discussion about what others think of our behaviour.*

DO conversations stop when you tell people what you do? This lively roundtable discussion addressed the public image of psychology and why psychologists might be viewed as more odd than other professionals.

In a review of research examining public perceptions of psychologists and psychology, Caroline Watt (Edinburgh University) found that during the last 60 years psychology has had a poor public image. There seems to have been a major miscommunication between psychologists and the public about what we do and the implications of psychological research.

Psychiatrist Raj Persaud (Maudsley Hospital and the Institute of Psychiatry), presented a personal view of the public image of psychology based on his extensive experience in the media. He began by suggesting that psychology and psychiatry do have roles to play within public life, but that psychology continues to have a poor image even among the movers and shakers of society. According to Persaud, psychologists are perceived as having no expertise and living in 'ivory towers', where the research they conduct is actually less useful than common sense. Persaud referred to a recent meeting with a Premiership football manager, who was sceptical about the value of sports psychology.

Persaud argued that the negative perception of psychology is, in part, brought about by the fact that people can be amateur psychologists (they have theories about why people do things) more than they can be, for example, amateur chemists. Furthermore, it may be difficult or threatening for an individual to accept that psychologists as a group could have a better understanding of their behaviour than they do themselves.

The problem with the public perception of psychology is exacerbated by our dealings with the media. Psychologists are often called upon to summarise the findings of research so that the public can digest it. According to Persaud, this has two possible effects, both of which reaffirm the public image of psychology. The finding may be 'watered down' so that it appears 'blindingly obvious', reaffirming the belief that psychologists have no better understanding than common sense. Alternatively, a complex presentation of the research may reaffirm the belief that psychologists conduct research that makes no sense and is therefore less useful than common sense.

The solution, according to Persaud, is to train psychologists to use the media. Also, he suggests that the media have not been given a sufficiently high priority within academia: psychologists are often critical

I remember 'Yesterday'

MARK WETHERELL *hears how music can aid autobiographical recall in dementia.*

MUSIC is often played in care centres for the elderly, either for enjoyment or relaxation. However, it is unknown whether certain psychological benefits of music can be attributed to the music itself or just to auditory stimulation. Research by Elizabeth Valentine and Nicholas Foster (Royal Holloway, University of London) suggests a role for music in aiding autobiographical recall in people with dementia.

Patients with dementia were asked to recall information about their lives in four conditions. Reminiscence occurred whilst listening to familiar music, novel music, cafeteria noise or silence. Recall of events was better during noise than in quiet, and the greatest recall occurred whilst listening to music. Surprisingly, no differences were found between the familiar and novel music conditions.

It was suggested that these improvements result from increased arousal and ability to focus attention facilitated by the background music. Future research will look at individually selected music, in an attempt to improve recall through music associated with particular eras.

of 'pop' psychology. However, what is really important is how effectively psychologists communicate with the public, not what other psychologists think of these communications.

Stephen White (the Society's Publications and Communications Directorate Manager) then gave a more positive view of the relationship of psychology with the media. As recently as the mid-1980s the Society's headquarters received only two or three calls from journalists each week, which generated approximately one press cutting. Now the press office receives around 50–70 calls a day generating around 300 press cuttings a week – impressive figures compared with the coverage of other scientific disciplines. Furthermore, White suggested that the startling growth within psychology as a discipline at both university and school level in the last 15 years is, in many ways, a result of the relationship that the Society has established with the media.

However, White acknowledged that there is still more to be done. The Society's successful media training scheme continues, and the Society is becoming more proactive in terms of sending out press releases and providing expert opinion for government (such as effectively stopping the use of the polygraph 'lie detector' in Britain). The 'Bringing psychology to society' slogan of the centenary should foster links with the public and reduce the miscommunication concerning psychology.

Mike Page (University of Hertfordshire)

then provided information regarding one way psychologists can get exposure within the media. The SciArt project was established by the Wellcome Trust and provides funding for scientists to collaborate with artists to increase understanding of both science and art. Page suggested that not only have psychologists been successful in obtaining funding through this scheme, but also artists are often interested in matters psychological (e.g. the mind, perception, and memory are all dominant themes within art).

In the final presentation Richard Wiseman (University of Hertfordshire) demonstrated the success of the mass-participation experiments which he conducted in collaboration with a number of media sources (such as Megalab with BBC's *Tomorrow's World* and *The Daily Telegraph*). Wiseman argued that these mass-participation experiments, generating responses from tens of thousands of viewers, serve to entertain as well as to communicate the experimental process.

As the discussion turned to the floor, many issues were raised concerning the relationship between psychologists and the media. One such issue concerned how the public can differentiate between reliable sources within the media (including the web). As Persaud pointed out, at present anyone can call themselves a psychologist and provide an opinion that may be seen as expert. The Society's push towards statutory registration for psychologists was seen to be vital in this respect.

The awakening of a community

ALEX LINLEY *attended a vibrant address for the Annual Award for*

Distinguished Contributions to the Teaching of Psychology 2000.

INTRODUCING Joss Griffiths (Newcastle under Lyme College), Tommy MacKay (BPS President) paid tribute to how he had challenged inequality of opportunity and raised the profile of psychology. On the basis of Griffiths' presentation, one could easily see how this had been achieved: he inspired the audience as he described the transformation of psychology under his leadership.

On Griffiths' appointment in 1984, it is fair to say that there was room for improvement. For the first time, lessons in psychology were planned, and students were given the official exam board syllabus and a more student-friendly copy. The importance of homework and self-directed

learning were emphasised, with the reasons for failure to submit always investigated in a compassionate rather than punitive way.

Acceptable and unacceptable behaviour was defined and agreed, respect for peers encouraged, and respect for lecturers was earned and then reciprocated through an 'open door' policy. Encouragement reaped rewards: once on the 'spiral of improvement', students were reluctant to get off. The College now has approximately 435 psychology students, the largest percentage take-up of any discipline within its catchment area, and boasts a psychology pass rate of over 90 per cent in A-level and equivalent exams (compared with a national average of 71 per cent).

Painful subject

How does mood and anxiety affect pain?

MARK WETHERELL *grins and bears it.*

PAIN is attention grabbing, especially when you are feeling down. Edmund Keogh (Goldsmiths College, University of London) explained how mood mediates the experience of pain, showing that pain is more likely to be reported whilst in a negative mood. Moreover, individuals with a high fear of pain are more likely to attend to and subsequently report feelings of pain, to the extent that the fear of pain can be more disabling than the pain itself.

Keogh and colleagues classified individuals as having either a low, medium or high fear of pain before presenting them with a series of either pain related, socially threatening, positive or neutral words. Those individuals with a high fear of pain paid greater attention to the pain related words, suggesting a bias in their attentional processes. Further understanding of these biases could improve pain management techniques: reducing fear and anxiety could minimise attention towards pain stimuli, which may decrease the experience of pain.

The report writers:

Simon J. Bignell is an undergraduate at the University of Sussex

Dr Kate Cavanagh is Associate Editor: Conference reports and is based at Glasgow University

Alex Linley is an undergraduate at the University of Leicester

Asifa Majid is a postgraduate at the University of Glasgow

Dr Paul Redford is a lecturer at King Alfred's College, Winchester, and is Assistant Associate Editor: Conference reports

Dr Judith Sixsmith is a senior lecturer at Manchester Metropolitan University

Mark Wetherell is a postgraduate at the University of Plymouth

Sian Williams is a postgraduate at the University of Sussex